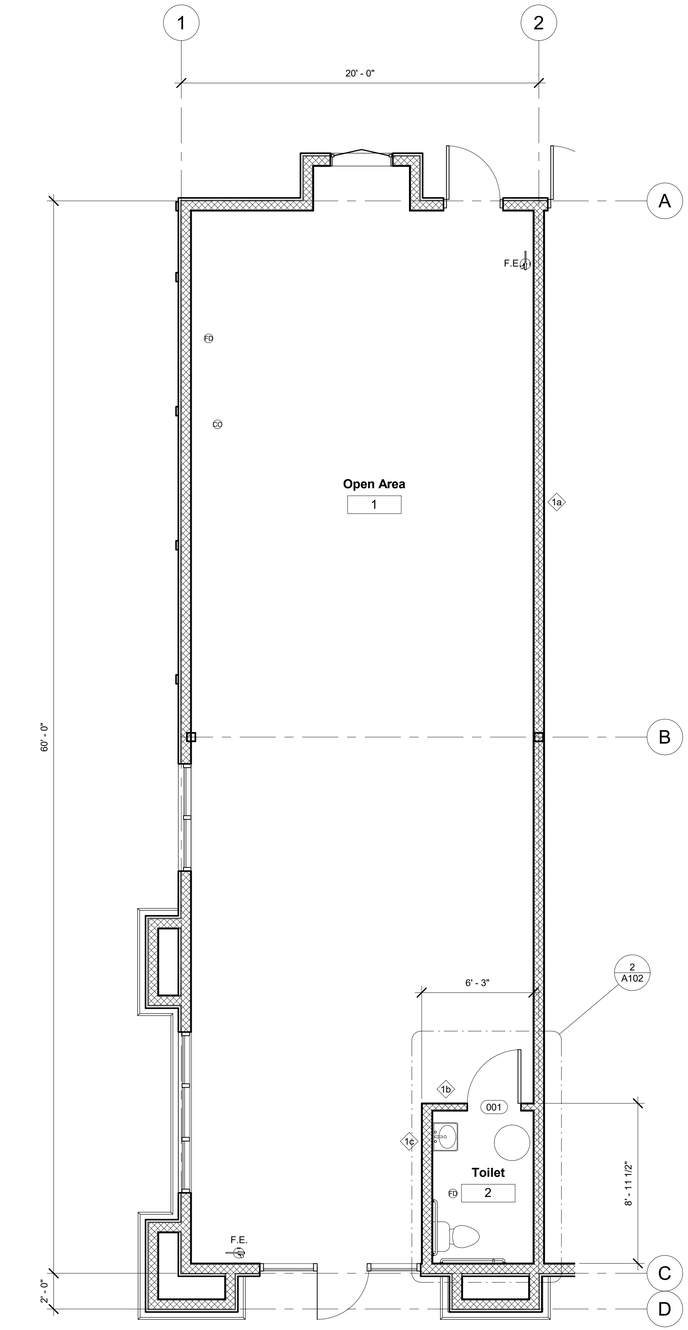


1 Floor Plan
1/4" = 1'-0"

BUILDING CODE SUMMARY

APPLICABLE CODES
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FIRE CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2017 NATIONAL ELECTRICAL CODE
2017 ICC/ANSI A117.1

SUMMARY OF WORK
NEW WHITE BOX TENANT FINISH IN EXISTING SHELL BUILDING, FOR A FUTURE SMOOTHIE KING. THE TENANT WILL SUBMIT THEIR OWN PLANS SEPARATELY. THIS IS JUST FOR LANDLORD WORK AND WE DO NOT ASK FOR A C.O. FOR THIS PHASE OF THE WORK, JUST A FINAL INSPECTION.

FIRE SUPPRESSION SUMMARY
NONE

OCCUPANCY CLASSIFICATION
TO BE DETERMINED

TYPE OF CONSTRUCTION
V-B, NON - SPRINKLED

FLOOR AREA
TENANT AREA: 1,200 SQ.FT.

OCCUPANT LOAD
TO BE DETERMINED

EXITS REQUIRED
TO BE DETERMINED

EXITS PROVIDED
TWO

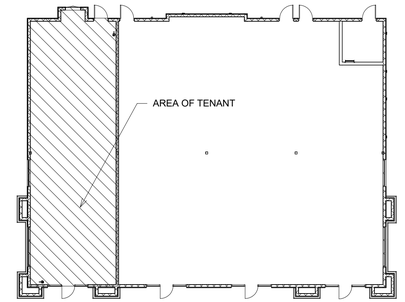
TOILET FACILITIES REQUIRED
TO BE DETERMINED

TOILET FACILITIES PROVIDED
ONE UNISEX TOILET (ADA)

INTERIOR FINISH REQUIREMENTS
FLOOR FINISHES: CLASS I or CLASS II
WALL FINISHES: CLASS A (non-sprinkled)
CEILING FINISHES: CLASS A (non-sprinkled)

EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

PREMISES SHALL BE IDENTIFIED ON ALL EXTERIOR DOORS, WITH NUMBERS AND/OR LETTERS. EACH CHARACTER SHALL BE NOT LESS THAN 6" HIGH WITH A MINIMUM STROKE WIDTH OF 1.0" INCHES. THEY SHOULD BE INSTALLED ON A CONTRASTING BACKGROUND. STREET FACING DOORS SHALL HAVE ADDRESSES THAT ARE PLAINLY LEGIBLE AND VISIBLE FROM THE STREET FRONTING THE PROPERTY. ADDRESS NUMBERS AND/OR LETTERS SHALL BE ARABIC NUMBERS OR ALPHABETIC LETTERS.



2 Key Plan
1/16" = 1'-0"

Door Schedule

Number	Family	Type	hardware type	Door type	Frame Type
001	Single-Flush	3 x 7 Toilet	Latchset w/ lever handles, strike plate, 1 1/2 pair hinges, closer	WD	HM

HM = 16 GA. HOLLOW METAL, PAINTED
WD = SOLID CORE RED OAK, STAINED
AL = ANODIZED ALUMINUM
IRP = IMPACT RESISTANT PLASTIC

HARDWARE SHALL BE MEDIUM DUTY COMMERCIAL GRADE. DOOR HARDWARE SHALL CONSIST OF BUTTS, LATCHSET OR LOCKSET, SILENCERS, SMOKE GASKETING FOR RATED DOORS, CLOSERS WHERE NOTED, PANIC DEVICES WHERE NOTED. EXTERIOR DOORS SHALL ALSO HAVE THRESHOLD, WEATHERSTRIPPING, SWEEP AND KEYED LOCK. CONTRACTOR SHALL COORDINATE ALL LATCH/LOCK FUNCTIONS AND KEYING OF LOCKS WITH OWNER. MAX. THRESHOLD = 1/2". ALL HARDWARE TO BE LEVER TYPE OR PUSH/PULL. ALL DOORS IN EGRESS PATHWAYS SHALL BE FREE TURNING FOR EXITING. ALL EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. FURTHER, ALL EGRESS DOORS FROM ROOMS AND EXTERIOR EGRESS DOORS, FOR GROUP A AND GROUP E OCCUPANCIES SHALL NOT HAVE A LOCK OR LATCH OTHER THAN PANIC HARDWARE. ALL DOOR THRESHOLDS SHALL BE A MAX. OF ½" ABOVE FLOOR LEVEL AND BOTH SIDES SHALL BE BEVELED AT A SLOPE OF 1:2. SCHLAGE OR EQUAL STANDARD DUTY HARDWARE (SATIN CHROME) WITH LEVERS.

GLASS IN DOORS AND SIDELIGHTS SHALL BE SAFETY GLASS PER IBC SEC. 2406.1

1

Wall Schedule

Type Mark	Type	Type Comments
1a	Interior Partition -Demising	6" 20 ga. metal studs at 16" o.c. w/ 6" fiberglass batt insulation and (1) layer 5/8" gyp. board each side. To roof deck with slip track. See sheet A101.1 for one hour configuration.
1b	Interior Partition-Metal Stud	3-5/8" Metal studs @ 16" o.c. w/ 3 1/2" fiberglass batt insulation and (1) layer 5/8" gyp. board each side. To 6" above ceiling
1c	Interior Partition -wet wall	6" metal studs at 16" o.c. w/ 6" fiberglass batt insulation and (1) layer 5/8" gyp. board each side. To 6" above ceiling

Room Schedule

Number	Name	Base Finish	Wall Finish	Floor Finish	Ceiling Finish
1	Open Area	None	Painted gyp. b'd	Concrete	None
2	Toilet	6" rubber cove	Epoxy Paint	VCT	2x4 Suspended Acoustical

CEILING HEIGHT TO BE 9'.0" AFF

FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY CONSTRUCTION

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J.Jeffry Schroeder Mo. Licence A-4226
Herman Scharhag Co., Arch. Cert. of Authority A-22

STATE OF MISSOURI
J. JEFFREY SCHROEDER
NUMBER A-4226
REGISTERED ARCHITECT
1/31/23

No.	Description	Date
1	City Comments	1.31

Revision Schedule

Floor Plan

Project number 2496
Date 01.16.2023

A101

Scale As indicated

1/31/2023 2:08:37 PM

UL Product iQ™

BXUV.U404 - Fire-resistance Ratings - ANSI/UL 263

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

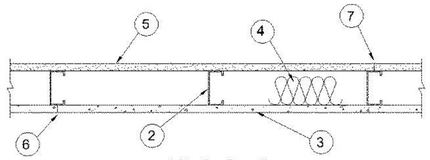
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. U404

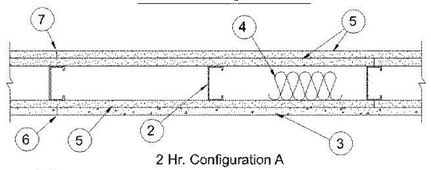
December 22, 2020

Nonbearing Wall Rating — 1 and 2 Hr (See Items 3 and 5)

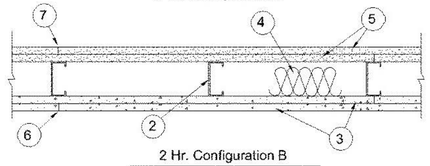
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



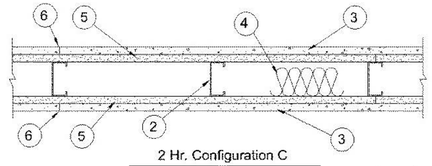
1 Hr. Configuration



2 Hr. Configuration A



2 Hr. Configuration B



2 Hr. Configuration C

1. Steel Floor and Ceiling Runners — (Not Shown) — Channel shaped, 3-1/2 in. wide by 1-1/4 in. deep, fabricated from min 20 MSG (0.0329 in., min bare metal thickness) galvanized steel. Attached to floor and ceiling with steel fasteners spaced 24 in. OC max.

2. Steel Studs — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min width, min 1-1/2 in. flanges and 1/4 in. return, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

3. Cementitious Backer Units* — 1/2 in. or 5/8 in. thick, applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with corrosion resistant, chamfered, ribbed wafer head screws with a minimum head diameter of .400 inch. For nonbearing systems, fastened to studs and bottom runners with the uppermost screws placed 1/2 in. to 2 in. below the bottom edge of the leg of the top runner. Horizontal joints need not be backed by framing. **1 Hr System - Screws** shall be min 1-1/4 in. long and spaced a max of 8 in. OC. All vertical joints staggered one stud cavity from gypsum board vertical joints on the opposite side of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. **2-Hr System** - For the base layer in Configuration B, the screws shall be min 1-1/4 in. long and spaced a max of 12 in. OC. For the face layers, screws shall be 1-5/8 in. long and spaced a max of 8 in. OC. All face layer joints offset min 12 in. from underlying base layer joints. Joints in either layer need not be staggered from joints on the opposite side of the wall.
UNITED STATES GYPSUM CO — Type DCB

4. Batts and Blankets* — Min 3 in. thick mineral wool insulation batts, friction-fitted between studs.
INDUSTRIAL INSULATION GROUP L L C — Type SAFB

JOHNS MANVILLE — Type SAFB

ROCKWOOL — Type AFB, min. density 1.8 pcf / 28.8 kg/m³

THERMAFIBER INC — Type SAFB, SAFB FF

5. Gypsum Board* — 5/8 in. thick, with square or tapered edges, applied vertically or horizontally with vertical joints centered over studs. Horizontal joints need not be backed by framing. Fastened with Type S-12 screws. **1-Hr System** - For vertical application, fastened to studs and runners with 1 in. long screws spaced max 8 in. OC at vertical edges and spaced max 12 in. OC in the field. For horizontal application, fastened to studs and runners with 1 in. long screws spaced max 8 in. OC. Vertical joints staggered one stud cavity from cement board vertical joints on opposite side of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. **1-Hr System with ULIX:** fastened with 1 in. long screws, spaced 12 in. OC in the field and perimeter when panels are applied horizontally or vertically. Vertical joints staggered one stud cavity from cement board vertical joints on opposite side of studs. Horizontal edge joints and horizontal butt joints

on opposite sides of studs need not be staggered. **2-Hr System** - Base layer with an overlying gypsum board face layer, fastened with 1 in. long screws spaced max 16 in. OC to studs and runners. Base layer with an overlying cement board face layer, fastened with 1 in. long screws spaced max 12 in. OC to studs and runners. Face layers fastened with 1-5/8 in. long screws spaced max 16 in. OC to studs and runners with screws offset 8 in. from face layer screws. Face layer joints offset min 12 in. from base layer joints. Joints in either layer need not be staggered from joints on the opposite side of the wall. When used in widths other than 48 in., gypsum panels to be installed horizontally.
CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, SGX, ULIX, ULX, USGX, WRC or WRX (Joint tape and compound, Items 6 and 7, optional for use with Type USGX).

UNITED STATES GYPSUM CO — Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, WRC, WRX, USGX (Joint tape and compound, Items 6 and 7, optional for use with Type USGX).

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX (Joint tape and compound, Items 6 and 7, optional for use with Type USGX).

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX (Joint tape and compound, Items 6 and 7, optional for use with Type USGX).

5A. **Gypsum Board*** — (As an alternate to Item 5 may be used as the base layer on one or both sides of wall, For direct attachment only) - Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
RAY-BAR ENGINEERING CORP — Type R8-L8G

5B. **Gypsum Board*** — (As an alternate to Item 5 may be used as the base layer on one or both sides of wall, For direct attachment only). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco

5C. **Gypsum Board*** — (As an alternate to Item 5) For Direct Application to Studs Only- For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in OC in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Fasteners for face layer gypsum panels (Item 5) when installed over lead backed board to be min 2-1/2 in.
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

5D. **Gypsum Board*** — ((As an alternate to Items 5 may be used as the base layer on one or both sides of wall, For direct attachment only)) For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Item 5) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel.
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

6. **Joints —** Covered with glass fiber mesh tape and latex modified Portland cement mortar or basecoat, or Type I organic adhesive.

7. **Joints —** When tapered edge gypsum board is used, face layer joints covered with joint compound and paper tape. As an alternate, gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with joints reinforced. When square-edge gypsum board is used, treatment of joints is optional.

8. **Vapor Retarder, Water Barrier or Weather Resistive Barrier —** (Optional — Not shown) — As required.

9. **Lead Batten Strips —** (Not Shown, For use With Item 5A) - Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5A) and optional at remaining stud locations. Required behind vertical joints.

9A. **Lead Batten Strips —** (Not Shown, for use with Item 5C) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of .0140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5) and optional at remaining stud locations.

10. **Lead Discs or Tabs —** (Not Shown, For use With Item 5A) - Used in lieu of or in addition to the lead batten strips (Item 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

10A. **Lead Discs —** (Not Shown, for use with Item 5C) Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

11. **Lead Batten Strips —** (Not Shown, For Use With Item 5B) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations.

12. **Lead Tabs —** (Not Shown, For Use With Item 5B) 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5B) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2020-12-22

1

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Herman Scharhag Co., Arch. Cert. of Authority A-22

STATE OF MISSOURI
JEFFREY SCHROEDER
NUMBER A-4226
REGISTERED ARCHITECT
1/31/23

No.	Description	Date
1	City Comments	1.31

Revision Schedule

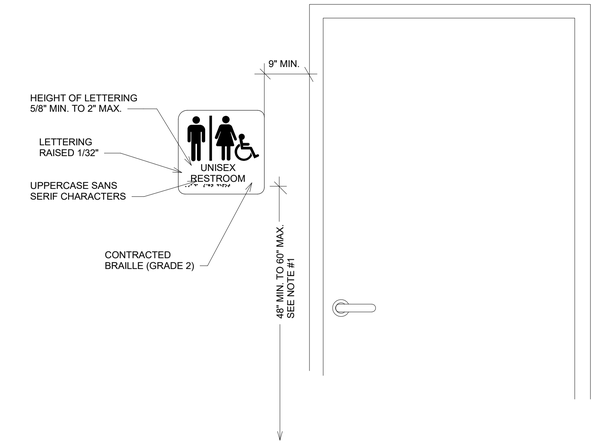
UL Wall Details

Project number 2496
Date 01.16.2023

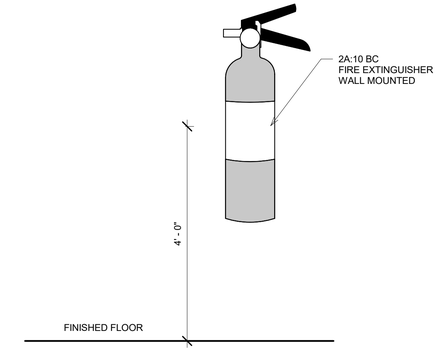
A101.1

Scale 1/2" = 1'-0"

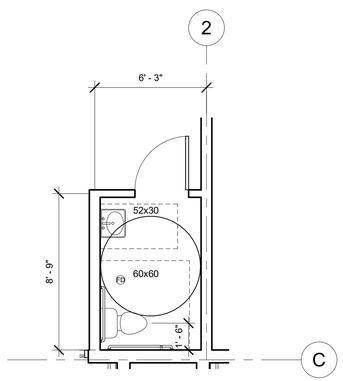
1/31/2023 2:08:38 PM



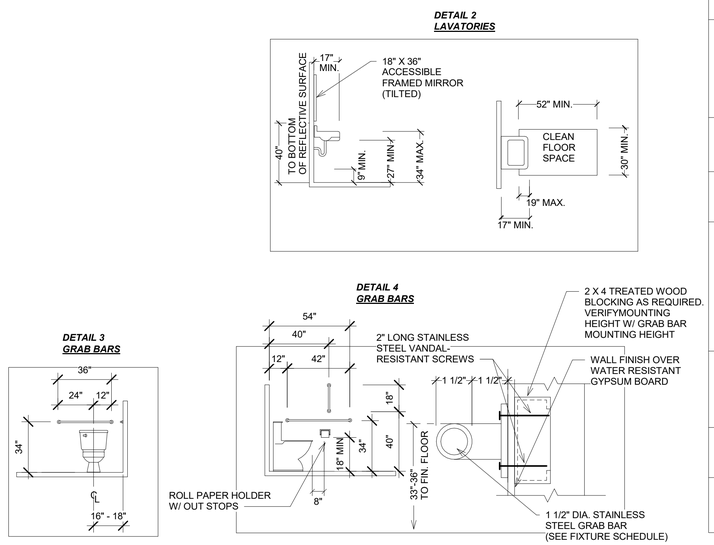
4 Unisex Handicapped toilet door detail
1/32" = 1'-0"



3 Fire Extinguisher Detail
3/4" = 1'-0"



2 ADA Toilet Detail
1/4" = 1'-0"



1 ADA Toilet Details
1/4" = 1'-0"

SANITARY FACILITIES ICC/ANSI A117.1-2017

1.	***GENERAL*-PROVIDE SUFFICIENT SPACE IN THE BATHROOM FOR A WHEELCHAIR MEASURING 30" WIDE X 48" LONG TO ENTER THE ROOM AND PERMIT THE DOOR TO CLOSE. THERE SHALL BE ROOM FOR A 67" DIA. TURNING CIRCLE AS SHOWN ON PLAN. THE WATER CLOSET SHALL BE LOCATED IN A SPACE WHICH PROVIDES A 60" WIDE CLEAR SPACE FROM A FIXTURE OR A WALL AT ONE SIDE AND 60" OF CLEAR SPACE IN FRONT OF THE WATER CLOSET.**
2.	***DOORS*-SANITARY FACILITY DOORS SHALL HAVE AN AUTOMATIC CLOSING DEVICE & BE 3'.0" WIDE**
3.	***GRAB BARS*- GRAB BARS SHALL BE AS PER DETAIL 3 & 4 AND SHALL BE CAPABLE OF CARRYING 250 LBS PER FT.**
4.	***LAVATORY* - LAVATORY HEIGHTS AND CLEARANCES SHALL COMPLY WITH DETAIL 2. INSULATE HOT WATER AND DRAIN PIPES UNDER LAVATORIES. NO SHARP OR ABRASIVE SURFACES ARE ALLOWED UNDER LAVATORIES. FAUCET CONTROLS AND OPERATING MECHANISMS ARE REQUIRED TO BE OPERABLE WITH ONE HAND AND CAN NOT REQUIRE GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS IS NOT TO EXCEED 5 LB. LEVER-OPERATED, PUSH-TYPE, AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.**
5.	***ACCESSORIES* - IF MIRRORS, PAPER TOWEL, SANITARY NAPKIN, WASTE RECEPTACLES AND SIMILAR DISPENSING AND DISPOSAL FIXTURES ARE PROVIDED, AT LEAST ONE OF EACH TYPE IS TO BE LOCATED WITH BOTTOM MAX. 40 INCHES ABOVE THE FLOOR.**
6.	***FINISHES* - FLOOR FINISH SHALL BE VCT WITH 6" RUBBER COVE BASE. WALL FINISHES WILL BE EPOXY PAINT**
7.	***URINAL* - IF PROVIDED, URINAL LIP SHALL BE MAX. 17" ABOVE FLOOR WITH A CLEAR SPACE OF 30" WIDE X 52" IN FRONT OF URINAL.**

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Herman Scharhag Co., Arch. Cert. of Authority A-22

STATE OF MISSOURI
J. JEFFRY SCHROEDER
NUMBER A-4226
1/16/23
REGISTERED ARCHITECT

No.	Description	Date
	Revision Schedule	

Architectural Details

Project number	2496
Date	01.16.2023

A102

Scale As indicated

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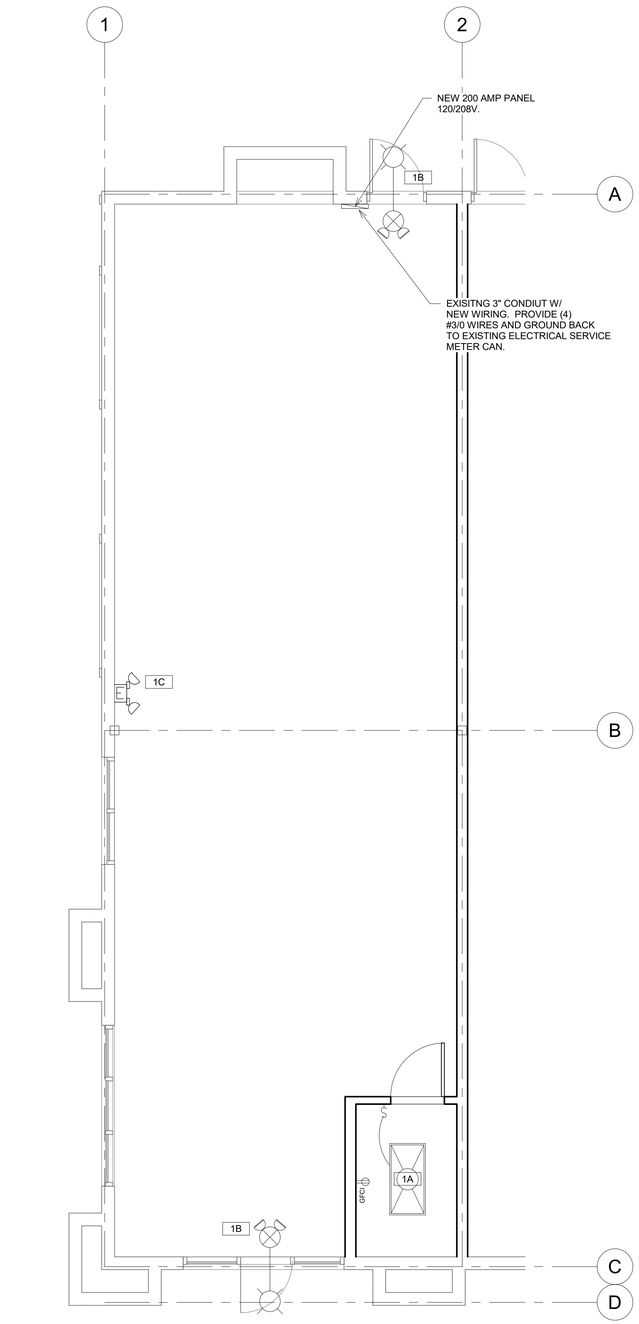

2 Electrical Plan
1/4" = 1'-0"

Electrical Fixture Schedule		
Type	Description	Count
Single GFCI	110 V. Duplex outlet - GFCI	1
Single Switch	Switch (42" aff)	1

Lighting Fixture Schedule			
Type Mark	Type	Type Comments	Count
1A	Lithonia LED Recessed Troffer	EPANL-2X4-5400L-80CRI-40K-MIN10-ZT-MVOLT, 40 WATT	1
1B	Exit Light- Exterior	Combo exit and emergency LED light w/ remote exterior head. All with 90 min. battery backup. With remote head	2
1C	Emergency Light	Two sealed beam lamps, LED w/ battery backup with 90 minute miminum operation on battery, battery charger, battery test button and light. 120 volt. Wall mounted	1

ELECTRICAL NOTES:

ALL ELECTRICAL LIGHT AND POWER WIRE SHALL NOT BE SMALLER THAN #12 AWG. ALL LIGHTING AND POWER WIRING #10 AWG AND SMALLER SHALL BE SOLID. ALL CONDUCTORS SHALL BE COPPER ONLY. NO ALUMINUM IS ALLOWED

ALL CONDUITS SHALL BE SIZED IN ACCORDANCE WITH THE LATEST NEC TABLES. MINIMUM CONDUIT SIZES SHALL BE ¾". ALL CONDUIT IN AND UNDER FLOOR SLAB SHALL BE SCHEDULE 40 PVC

ALL POWER WIRING IN ALL AREAS SHALL BE IN EMT CONDUIT, BOTH IN WALLS AND THROUGH EXPOSED JOISTS. MC CABLE AND ARMORED CABLE ARE ALSO ALLOWABLE IN AREAS WHERE CONDUITS ARE NOT EXPOSED

ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT, FOR WORK DESIGNATED AS HIS RESPONSIBILITY, ALL WIRE, WIRE WAY, CONDUIT, CONNECTORS, OUTLETS, ETC. NECESSARY TO ACHIEVE A COMPLETE ELECTRICAL INSTALLATION. WHERE AN ELECTRICAL DEVICE IS REQUIRED BY CODE BUT NOT SHOWN, IT SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR AS THOUGH FULLY SHOWN AND SPECIFIED. ALL LABOR, TOOLS, MATERIALS, EQUIPMENT SHALL BE PROVIDED AS NECESSARY TO PROVIDE AND INSTALL A COMPLETE SYSTEM. ALL WORK SHALL BE PER CURRENT CODE. COORDINATE ALL WORK WITH OTHER TRADES

ELECTRICAL CONTRACTOR SHALL CIRCUIT FIXTURES AND SHALL PROVIDE AND INSTALL CIRCUIT DIRECTORY WITH TYPED CIRCUIT DESIGNATION CARD UNDER PLASTIC COVER ON THE INSIDE OF EACH PANEL DOOR. ELECTRICAL CONTRACTOR SHALL ALSO FURNISH AND INSTALL NAMEPLATES ON ALL DISCONNECT SWITCHES AND PANEL BOARDS

ALL CONDUIT, JUNCTION BOXES, ETC. ABOVE CEILINGS SHALL BE SUPPORTED FROM STRUCTURE

ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING, ALL CONTROL WIRING AND ALL STARTERS, DISCONNECTS AND THERMAL OVERLOAD SWITCHES NOT SUPPLIED WITH THE EQUIPMENT

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STATE OF MISSOURI
JOHN WILLIAM SCHROEDER
NUMBER E-14375
REGISTERED PROFESSIONAL ENGINEER
1/16/23

No.	Description	Date
	Revision Schedule	

Electrical

Project number 2496
Date 01.16.2023

E101

Scale As indicated

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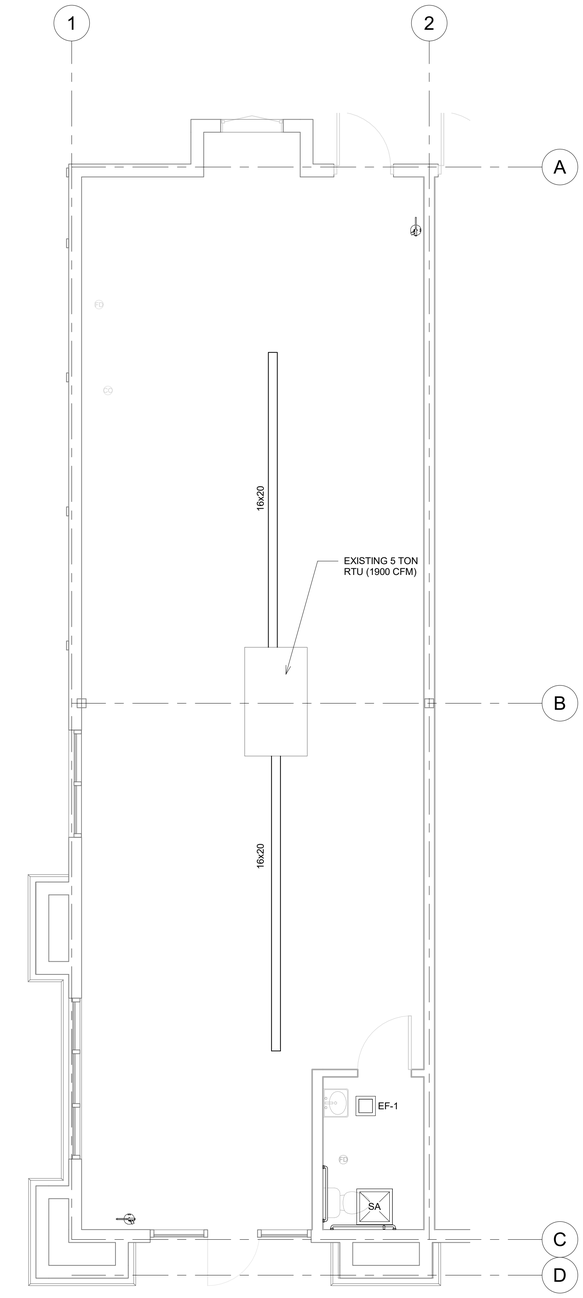

2 Mechanical Plan
1/4" = 1'-0"

HVAC NOTES

MAIN DUCTWORK SHALL BE STEEL GALVANIZED SEALED AIR TIGHT.

SHEET METAL GUAGES SHALL BE PER SMACNA AND NO LESS THAN 24 GA. INSULATED DUCTS WITH ½" - 3# INSULATION.
DO NOT LINE TOILET/SHOWER EXHAUST DUCTS.

GRILLES AND DIFFUSERS SHALL BE TITUS, TUTTLE & BAILEY OR EQUAL. SEE ARCHITECTURAL OR ELECTRICAL DRAWINGS FOR CEILING GRID.
ALL SHALL BE 4-WAY.

FLEX BRANCH CONNECTIONS SHALL HAVE INSULATED FLEX DUCT, SPIN COLLARS WITH ADJUSTABLE DAMPER AND 90 DEGREE ELL
AT DIFFUSER TO PREVENT KINKS, IN BOTH SUPPLY AND RETURN.

COORDINATE ALL WORK WITH OTHER TRADES. ALL WORK SHALL COMPLY WITH CURRENT BUILDING CODE LISTED IN THE CODE ANALYSIS.
ENTIRE SYSTEM SHALL BE TESTED AND BALANCED AT COMPLETION OF WORK.

ALL FLUES FROM GAS FIRED EQUIPMENT SHALL BE TYPE B DOUBLE METAL WALL TYPE WITH GALVANIZED EXTERIOR SHELL
AND ALUMINUM INTERIOR LINER AS MANUFACTURED BY METALBESTOS OR EQUAL. ALL FLUES SHALL BE KEPT AT LEAST 1" FROM COMBUSTIBLE MATERIALS.

FLEX DUCT SIZES (MAX. 8' RUN)

500 – 600 CFM 12" DIA. FLEX
400 CFM 10" DIA. FLEX
300 – 200 CFM 8" DIA. FLEX
100 – 150 CFM 6" DIA. FLEX

Mechanical Equipment Schedule			
Type Mark	Type	Type Comments	Count
EF-1	75 CFM Exhaust Fan	Broan ceiling mounted exhaust fan rated at 75 CFM. Provide 4" dia. duct through roof with weatherhood and birdscreen. switch with lights.	1
SA	24" x 24"Supply	As Located per plans	1

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STATE OF MISSOURI JOHN WILLIAM SCHROEDER NUMBER A-14378 REGISTERED PROFESSIONAL ARCHITECT 1/16/23

No.	Description	Date
	Revision Schedule	

Mechanical

Project number 2496
Date 01.16.2023

M101

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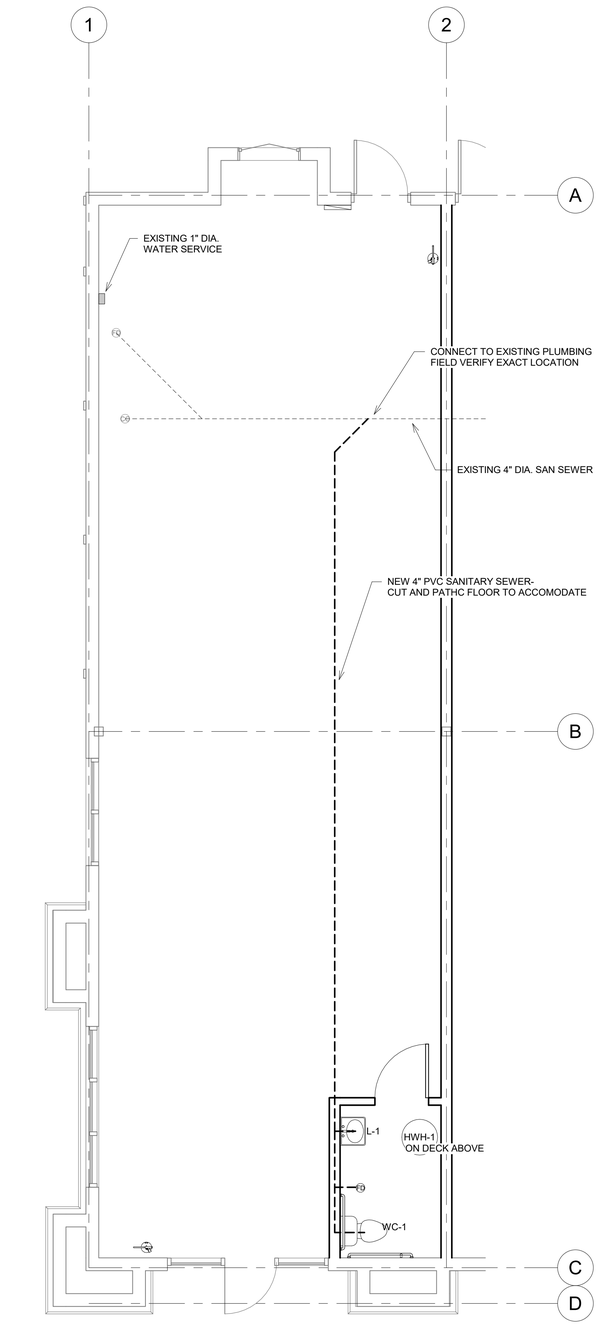

2 Plumbing Plan
1/4" = 1'-0"

Plumbing Fixture Schedule		
Type Mark	Type	Description
FD	Floor Drain	Anco #FD-1000-ER. Extended rim drain w/ lacquered allcast iron body. serrated clamping flange w/ integral double drainage weep holes and adjustable satin nickel brone strainer w/ extended rim. provide "P" trap size as shown on plans.
HWH-1	Electric Water Heater	6 gallon electric water heater. A.O. Smith or equal with expansion tank and tempering valve
L-1	Lavatory (handicapped)	Lavatory: Handicap accessible wall mount lavatory with carrier, Toto model LT155#01,vitreous china, white, self-rimming counter top. Toto TL362SD12 ADA compliant faucet, SS flex suply risers with chrome plated stop valves, P-trap with cleanout and escutcheons. Insulated with "Handi-Lav-Gluard" model 102, or equal.
WC-1	Handicapped Toilet	Water Closet, (handicapped) American Standard #208.408 "Elongated Cadet Water Saver". Siphon jet flush action, 18" rim height. Provide w/ open front seat less cover, 2'bolt caps, chrome angle valve and supply riser.

FIXTURE PIPING SCHEDULE

FIXTURE	WASTE	VENT	CW	HW
WC	4	2	1/2	0
Lavatory	2	1 1/2	1/2	1/2
Sink	2	1 1/2	1/2	1/2
Urinal	2	1 1/2	3/4	0
EWC	1 1/2	1 1/2	1/2	0
Shower	2	1 1/2	3/4	3/4
FD	2	1 1/2	0	0
Hose Bib	0	0	3/4	0

PLUMBING NOTES:

PIPING DRAWINGS ARE SCHEMATIC ONLY. PLUMBING CONTRACTOR TO DETERMINE EXACT ROUTING AND LOCATIONS OF ALL PIPING ON JOB SITE IN COMPLETE COORDINATION WITH ALL OTHER TRADES INVOLVED. HE SHALL ALSO VERIFY EXACT FLOOR PLAN LAYOUT, FIXTURE LOCATIONS, STRUCTURAL CONDITIONS AND ALL DIMENSIONS ON ARCHITECTURAL DRAWINGS.

PROVIDE ALL FIXTURES SHOWN ON THE DRAWINGS, COMPLETE WITH HOT AND COLD WATER, WASTE AND VENT CONNECTIONS AS REQUIRED. EACH FIXTURE SHALL HAVE SHUTOFF VALVES FOR HOT AND COLD WATER. HOT AND COLD WATER LINES TO HAVE WATER HAMMER ARRESTOR CONFORMING TO ASSE 1010. PIPING SHALL BE INSTALLED PROPERLY TO ELIMINATE CROSS CONTAMINATION OR SIPHONING OF WASTE MATERIAL INTO THE SUPPLY WATER SYSTEM. PIPING SHALL BE PITCHED TO VENT AND/OR DRAIN. VERIFY EXACT LOCATIONS AND REQUIREMENTS BEFORE BEGINNING THE INSTALLATION.

ALL SINKS AND SHOWERS TO HAVE MIXING VALVE W/ LOW TEMPERATURE CUTOFF.

ALL VENTS SHALL BE INCREASED TO A MIN. OF 3" BEFORE PASSING THROUGH THE ROOF.

THOROUGHLY CLEAN ALL ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL FOR SANITARY JOINT.

TEST WATER SYSTEM UNDER 150 PSIG HYDROSTATIC PRESSURE FOR FOUR HOURS MINIMUM. ALL WORK SHALL BE IN ACCORDANCE WITH CURRENT CODE.

PIPING MATERIALS:

DOMESTIC WATER BELOW GRADE: TYPE 'K' SOFT TEMPER COPPER WITH FLARE FITTING CONNECTIONS, EXCEPT NO FITTINGS TO BE USED BELOW FLOOR SLAB. USE LONG RADIUS BENDS ONLY.

DOMESTIC WATER BELOW SLAB: TYPE 'K' SOFT TEMPER COPPER WITH FLARE FITTING CONNECTIONS, EXCEPT NO FITTINGS TO BE USED BELOW FLOOR SLAB. USE LONG RADIUS BENDS ONLY.

DOMESTIC WATER ABOVE SLAB: TYPE 'L' HARD TEMPER COPPER WITH SWEAT SOLDER CONNECTIONS. USE NO-LEAD TYPE SOLDER. PEX MAY BE USED IF ALLOWED BY JURISTICTION.

ALL WATER LINES ABOVE SLAB SHALL BE INSULATED WITH EXPANDED CELL OR MOLDED SECTIONAL FIBEROUS GLASS WITH FACTORY APPLIED UL LISTED VAPOR BARRIER JACKET. FLAME SPREAD FOR INSULATION SHALL BE 25 OR LESS.

SANITARY WASTE AND VENT: CAST IRON NO-HUB CONNECTIONS ABOVE SLAB. CAST IRON WITH SLIP CONNECTIONS BELOW SLAB. SCHEDULE 40 PVC PIPING MAY BE USED IN ALL LOCATIONS WHERE PERMITTED BY LOCAL AUTHORITIES, HOWEVER PVC MAY NOT BE USED IN ABOVE CEILING PLENUM RETURN AREAS.

GAS PIPING TO BE TYPE 'S' SEAMLESS GRADE B SCHEDULE 40 BLACK OR ASTM A53 STEEL PIPE, TYPE 'E' ELECTRIC RESISTANT WELDED. WHERE INSTALLED BELOW GRADE, PIPE MUST BE COATED AND WRAPPED AND HAVE CATHODIC PROTECTION. ALL CAST IRON PIPE THAT IS OVER 3" DIAMETER AND NOT EXPOSED, MUST BE WELDED PIPE

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Plumbing

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P101

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