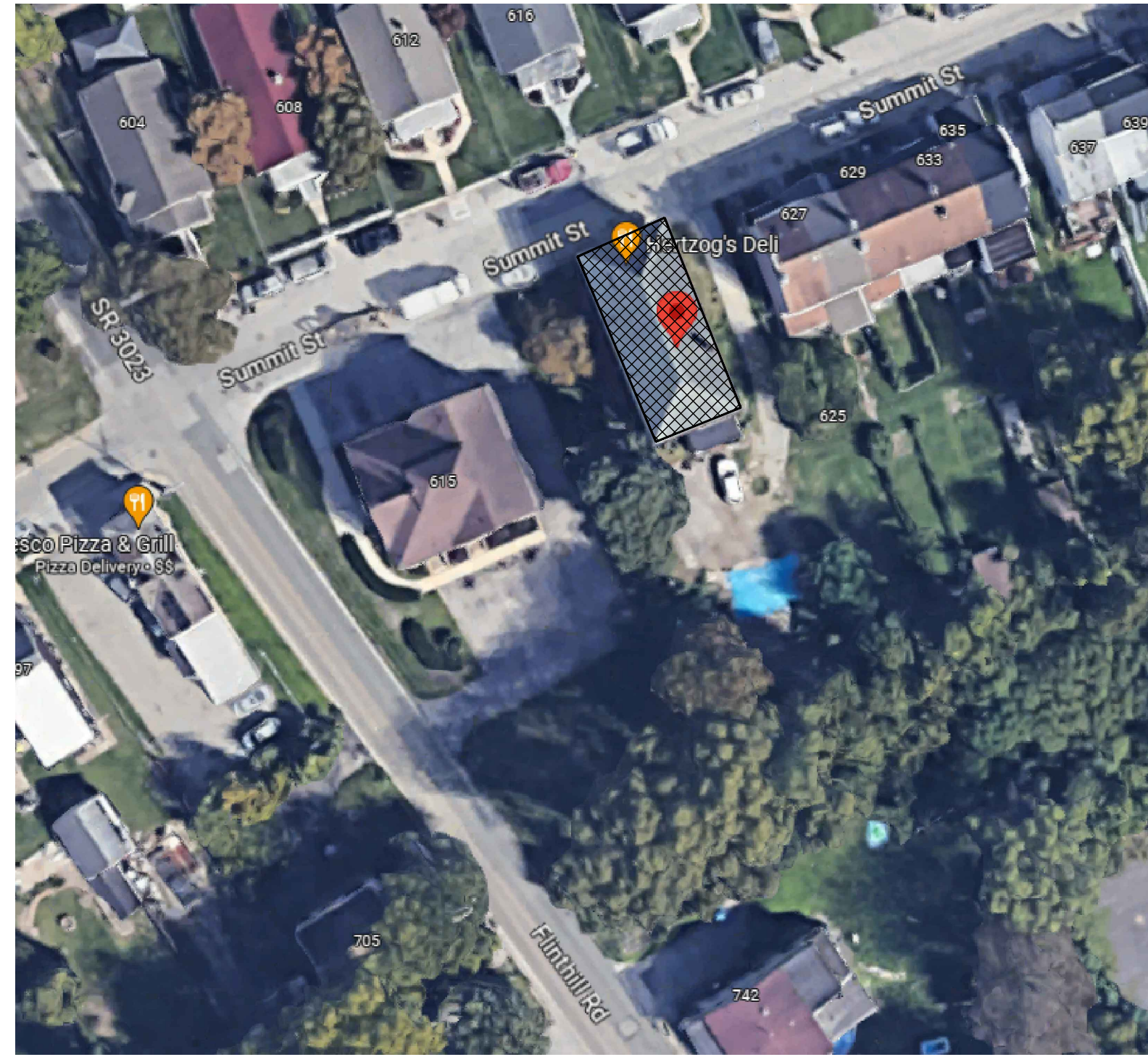


PROPOSED JAPANESE TAKE-OUT RESTAURANT ON FIRST FLOOR AND RENOVATION OF ONE UNIT RESIDENTIAL ON SECOND FLOOR

621 SUMMIT ST.
KING OF PRUSSIA, PA 19406



LOCATION MAP

SCALE: N.T.S.

PROJECT DESCRIPTION

FIRST FLOOR:

THIS PROJECT CONSISTS OF RENOVATION OF AN EXISTING RESTAURANT TO A TAKE-OUT JAPANESE RESTAURANT. THE SCOPE OF WORK INCLUDES FOLLOWING:

- ARCHITECTURAL:**
- INSTALLATION OF NEW PARTITIONS.
 - INSTALLATION OF ACOUSTICAL CEILING TILES AND CERAMIC FLOOR TILES AS NECESSARY.
 - PAINT NEW WALLS.
 - INSTALLATION OF NEW COUNTER.
 - INSTALLATION OF NEW EQUIPMENTS.

- ELECTRICAL:**
- INSTALLATION OF NEW LIGHTING FIXTURES.
 - INSTALLATION OF NEW RECEPTACLES.
 - INSTALLATION OF NEW ELECTRICAL CONNECTION OF ELEC. EQUIPMENTS.
 - INSTALLATION OF NEW MOTORS FOR THE TOILET CEILING EXHAUST FAN.

- MECHANICAL:**
- INSTALLATION OF NEW TOILET EXHAUST FAN.
 - INSTALLATION OF NEW HVAC DUCT.

- PLUMBING:**
- INSTALLATION OF NEW TOILET ROOM FIXTURES.
 - INSTALLATION OF PLUMBING CONNECTION TO NEW SINKS, WATER HEATER.

SECOND FLOOR:

THIS PROJECT CONSISTS OF RENOVATION OF ONE UNIT RESIDENTIAL. THE SCOPE OF WORK INCLUDES FOLLOWING:

- ARCHITECTURAL:**
- REPLACE ALL FLOORING.
 - REPAIR AND PAINT ALL CEILING AS NECESSARY.
 - PAINT NEW WALLS.
 - RELOCATE KITCHEN TO REAR AREA.
 - CREATE 3 BATHROOMS ON SECOND FLOOR.

- ELECTRICAL:**
- INSTALLATION OF GFCI RECEPTACLE AND LIGHT IN BATHROOM AND KITCHEN ROOM.
 - INSTALLATION OF RECEPTACLES IN BEDROOM.
 - INSTALLATION OF NEW LIGHT.
 - ADDITION A NEW ELECTRICAL METER FOR SECOND FLOOR.

- MECHANICAL:**
- INSTALLATION OF NEW BATHROOM EXHAUST FAN.
 - INSTALLATION OF NEW HVAC DUCT.

- PLUMBING:**
- INSTALLATION OF NEW BATHROOM AND KITCHEN FIXTURES.
 - INSTALLATION OF PLUMBING CONNECTION TO FIXTURES, WATER HEATER.

- FIRE PROTECTION:**
- INSTALLATION OF NEW BATTERY POWERED SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS.

CODE CLASSIFICATION

- PA UNIFORM CONSTRUCTION CODE
- 2018 INTERNATIONAL BUILDING CODE CHAPTER 11 & APPENDIX E
- 2021 INTERNATIONAL BUILDING CODE CHAPTER 11 & APPENDIX E
- 2018 INTERNATIONAL BUILDING CODE (IBC)
- 2018 INTERNATIONAL RESIDENTIAL CODE (IRC)
- 2018 INTERNATIONAL PLUMBING CODE (IPC)
- 2018 INTERNATIONAL MECHANICAL CODE (IMC)
- 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- 2018 INTERNATIONAL FUEL GAS CODE (IFGC)
- 2017 NATIONAL ELECTRICAL CODE (NFPA 70)
- 2017 ICC/ANSI A117.1
- 2009 ICC/ANSI A117.1

PROJECT DATA

FIRST FLOOR:

- TOTAL SQUARE FOOTAGE: 1,953 ± SQ. FT.
- CONSTRUCTION TYPE: III-B
- FIRE SPRINKLER SYSTEMS: YES
- STORY: 2
- USE/OCCUPANCY CLASSIFICATION (302): B
(NON ACCESSORY ASSEMBLY USE- A BUILDING OR TENANT SPACE USED FOR ASSEMBLY PURPOSED BY LESS THAN 50 PERSONS SHALL BE CONSIDERED A GROUP B OCCUPANCY, PER IBC 303.1.1)
- BUILDING OCCUPANCY PER (IBC TABLE 1004.5) REQUIREMENTS
BUILDING OCCUPANCY CALCULATIONS FOR LIFE SAFETY

OCCUPANT LOAD					
SPACE DESCRIPTION	SEATING TYPE	AREA	AREA PER OCCUPANT	QTY.	CALCULATED OCCUPANT LOAD
SERVICE AREA		184 SF	200	N/A	1
KITCHEN AREA		630 SF	200	N/A	3
2nd FLOOR FOR R-3 ASSEMBLY					7
TOTAL					11

SECOND FLOOR:

- TOTAL SQUARE FOOTAGE: 1,760 ± SQ. FT.
- CONSTRUCTION TYPE: III-B
- OCCUPANCY CLASS: R-3
- STORIES: 2

INTERIOR FINISH SCHEDULE

SPACE DESCRIPTION	TOE BASE COVING	FLOOR	CEILING	WALL	
BASEMENT	EXISTING NO CHANGE				
1ST FLOOR	DINING AREA	CERAMIC TILE	CERAMIC TILE	GYPSUM BOARD CEILING, PAINTED W/2-COATS OF EPOXY PAINT, SMOOTH SURFACE, WASHABLE, LIGHT-IN COLOR.	GYPSUM FIRECODE PAINTED W/2-COATS OF EPOXY PAINT, SMOOTH SURFACE, WASHABLE
	TOILET AREA	CERAMIC TILE	CERAMIC TILE	GYPSUM BOARD CEILING, PAINTED W/2-COATS OF EPOXY PAINT, SMOOTH SURFACE, WASHABLE, LIGHT-IN COLOR.	CERAMIC TILE FINISHED, SMOOTH SURFACE, WASHABLE.
1ST FLOOR	SERVICE AREA	QUARRY TILE	QUARRY TILE	GYPSUM BOARD CEILING, PAINTED W/2-COATS OF EPOXY PAINT, SMOOTH SURFACE, WASHABLE, LIGHT-IN COLOR.	GYPSUM FIRECODE PAINTED W/2-COATS OF EPOXY PAINT, SMOOTH SURFACE, WASHABLE
	KITCHEN & PREPARE AREA	QUARRY TILE	QUARRY TILE	GYPSUM BOARD CEILING, PAINTED W/2-COATS OF EPOXY PAINT, SMOOTH SURFACE, WASHABLE, LIGHT-IN COLOR.	STAINLESS STEEL BEHIND HOOD AREA AND FRP PANELING IN OTHER AREA.
2ND FLOOR	STAIR, BEDROOM, CLOSET, HALLWAY	WOOD	HARDWOOD	PAINTED DRYWALL	PAINTED DRYWALL
	BATHROOM, KITCHEN ROOM	CERAMIC TILE	CERAMIC TILE	PAINTED DRYWALL	PAINTED DRYWALL

NOTE:
ALL FINISHED SURFACES SHALL BE SMOOTH, EASILY CLEANABLE AND NON ABSORBENT. ALL DAMAGE CREATED OR DISCOVERED IN THE PROCESS OF THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE PROPERLY REFINISHED IN AN APPROVABLY MANNER. ALL SURFACE PENETRATIONS, CRACKS AND CREVICES ARE TO BE SEALED TO ELIMINATE VERMIN HARBORAGE AREAS.

ALL PLUMBING PIPES, ELECTRICAL CONDUITS, GAS LINES, ETC. SHALL BE KEPT WITHIN THE WALL CAVITIES, ABOVE THE CEILING OR UNDER THE FLOOR. IF THE GAS LINE MUST BE RUN OUTSIDE OF THE WALLS, THEN A CLEANABLE BRACKET MUST BE USED THAT WILL BRACE THE PIPE AT LEAST 1" OF THE WALL AND AT LEAST AT 12" OFF THE FLOOR. UTILITY LINES SHOULD BE STUBBED OUT OF THE WALLS, FLOORS OR CEILINGS AT EACH PIECE OF EQUIPMENT SERVED.

1ST FLOOR FINISH NOTES

CLASS A: FLAME SPREAD 0-25, SMOKE DEVELOP 0-450
CLASS B: FLAME SPREAD 26-75, SMOKE DEVELOP 0-450
CLASS C: FLAME SPREAD 76-200, SMOKE DEVELOP 0-450

- INTERIOR FINISH SHALL COMPLY WITH IBC 801.2 & 801.3 & 803. & 804.
- INTERIOR WALL AND CEILING FINISH:
 - VERTICAL EXIT AND EXIT PASSAGEWAYS: CLASS A
 - EXIT ACCESS CORRIDORS AND OTHER EXIT WAYS: CLASS B
 - ROOMS AND ENCLOSED SPACES: CLASS C
- INTERIOR FLOOR FINISH IN VERTICAL EXITS, EXIT PASSAGEWAYS AND EXIT ACCESS CORRIDORS SHALL NOT LESS THAN CLASS II.
- ALL DECORATIVE MATERIALS SUSPENDED FROM WALLS OR CEILINGS SHALL MEET IBC 801.4 and 806.

GENERAL NOTE

- THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THAT FURNISHED BY SUBCONTRACTORS.
- DIMENSIONS TAKE PRECEDENCE OVER DRAWINGS, DO NOT SCALE DRAWINGS TO DETERMINE ANY LOCATION. THE OWNER SHALL BE NOTIFIED IF ANY DISCREPANCY OCCURS PRIOR TO CONTINUING WITH WORK.
- ALL CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE BUILDING CODES AND LOCAL RESTRICTIONS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING MECHANICAL AND ELECTRICAL SERVICES AND DISTRIBUTION SYSTEMS WHETHER SHOWN OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE PERFORMANCE OF THE WORK.
- ALL WORK SHALL BE ACCOMPLISHED WITH QUALITY WORKMANSHIP OF THE HIGHEST INDUSTRY STANDARDS. ALL MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS. MATERIALS AND METHODS SHALL CONFORM TO THE APPROPRIATE NATIONAL TRADE BOOKS; I.E. TILE COUNCIL OF AMERICA, HANDBOOK FOR CERAMIC TILE INSTALLATION; ARCHITECTURAL WOODWORK INSTITUTE, "QUALITY STANDARDS." ETC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SAFETY, AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE SAFETY OF WORKERS AND OCCUPANTS AT ALL TIMES.
- ALL ELECTRICAL, MECHANICAL, AND PLUMBING WORK SHALL CONFORM TO STATE AND LOCAL REQUIREMENTS.
- REMODEL WORK SHALL NOT OBSTRUCT, OR CAUSE TO BE INOPERATIVE, EXISTING FIRE PROTECTION SYSTEMS. MODIFICATION TO FIRE PROTECTION SYSTEMS SHALL BE PERFORMED BY A FIRE PROTECTION CONTRACTOR, WHO SHALL OBTAIN A PERMIT FROM FIRE LOSS MANAGEMENT PRIOR TO WORK.
- DECORATIVE MATERIALS, DRAPES, HANGINGS, ETC., SHALL BE NON FLAMMABLE OR FLAME-PROOF PER STATE FIRE MARSHALL REQUIREMENTS.
- MINIMUM FLAME SPREAD CLASSIFICATION OF INTERIOR FINISH SHALL CONFORM TO THE BUILDING CODE AND LOCAL GOVERNING BUILDING CODES/ORDINANCES.
- ALL WORK SHALL BE REQUIRED TO MEET THE LATEST INTERNATIONAL CODES AND PA L&T FIRE AND PANIC REGULATIONS, WHETHER SHOWN ON THESE PLANS OR NOT.

HEALTH DEPARTMENT NOTE

- FURNISH 140° F WATER TO ALL FIXTURES RECEIVING HOT WATER, EXCEPT HAND WASHING LAV. MAY SUPPLIED WITH AT LEAST 110° F WATER THROUGH A MIXING VALVE OR COMBINATION FAUCET.
- PROVIDE SOAP AND SANITARY TOWELS AT HAND WASHING LAV. IN FOOD PREPARATION AND UTENSIL WASHING AREAS, SOAP AND HAND DRYING DEVICE WILL BE USE IN THE TOILET ROOM.
- COUNTER-MOUNTED EQUIPMENT ON 4 INCH LEGS, SEALED TO COUNTER, OR PORTABLE.
- FLOOR-MOUNTED EQUIPMENT ON 6 INCH LEGS, ON CASTERS, OR SEALED TO THE FLOOR.
- EQUIPMENT NOT CASTERS OR NOT PORTABLE SHALL BE SEALED TO THE WALL AND/OR JOINING EQUIPMENT, OR SPACED TO FACILITATE CLEANING.

DEFERRED SUBMITTAL

- HOOD FIRE SUPPRESSION: HOOD FIRE SUPPRESSION CONTRACTOR SHALL SUBMIT HOOD FIRE SUPPRESSION SHOP DRAWING FOR APPROVAL AND PERMIT.
- SPRINKLER SYSTEM: SPRINKLER CONTRACTOR SHALL SUBMIT SPRINKLER SYSTEM AND A FIRE MONITORING SYSTEM SHOP DRAWING FOR APPROVAL AND PERMIT.

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- A-3 WALL DETAIL & PENETRATION DETAIL
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REVISIONS	BY
11-19-2023	
02-23-2024	
02-28-2024	

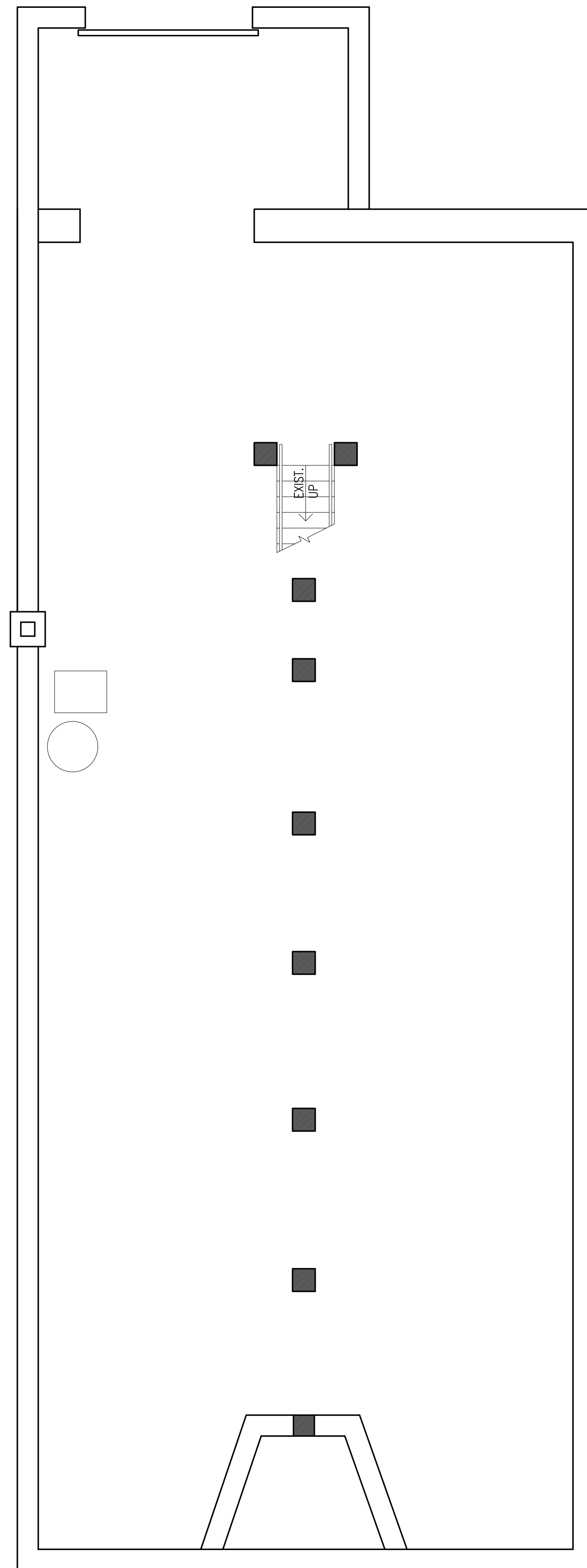
HAIGANG B. LI
328 PRICE AVE. NARBERTH, PA 19072
TEL: (484) 557-2168

PROPOSED JAPANESE TAKE-OUT RESTAURANT ON FIRST FLOOR AND RENOVATION OF ONE UNIT RESIDENTIAL ON SECOND FLOOR
621 SUMMIT STREET, KING OF PRUSSIA, PA 19406

DATE: 08/28/2023
SCALE: AS NOTES
JOB NO.: 202331

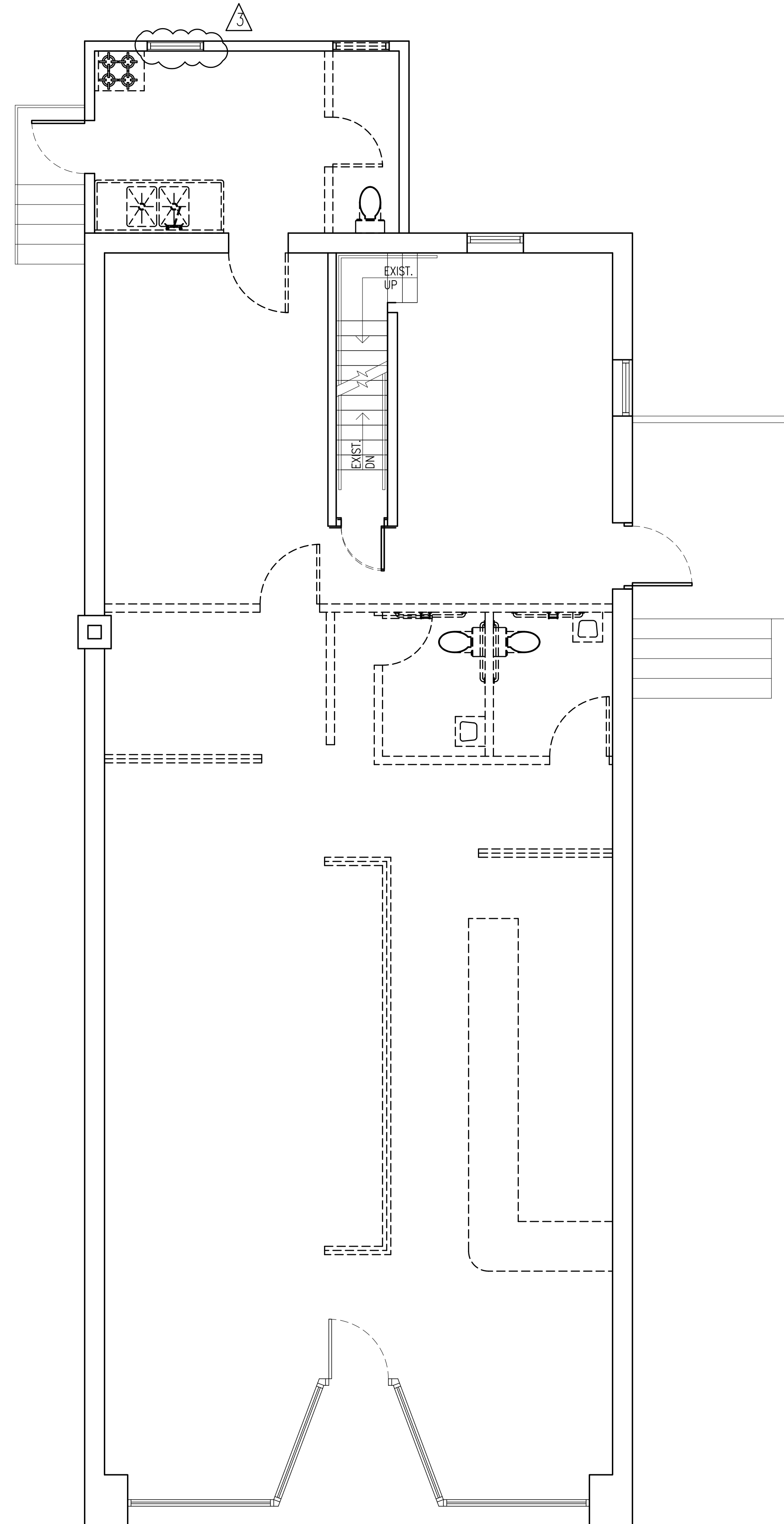
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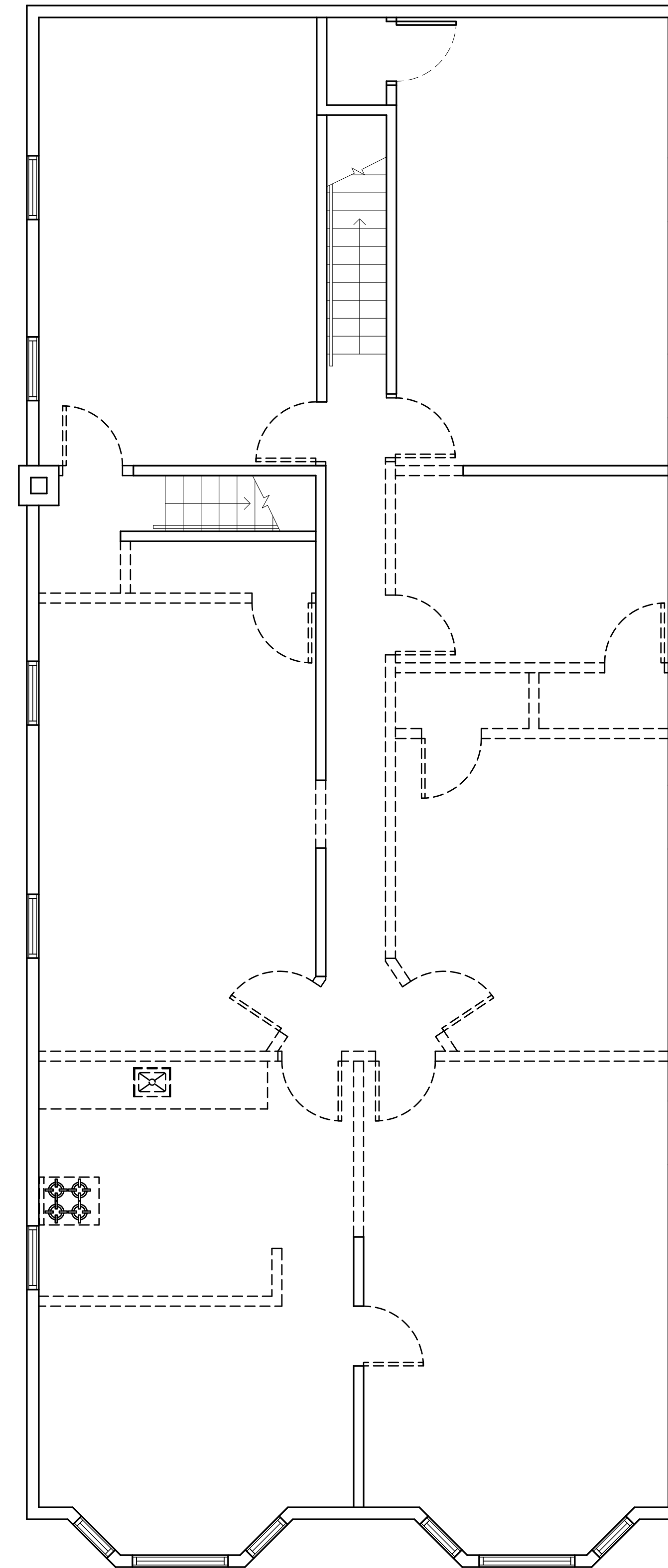
EXISTING BASEMENT

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



EXISTING FIRST FLOOR PLAN

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



EXISTING SECOND FLOOR PLAN

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

REVISIONS BY

02-28-2024

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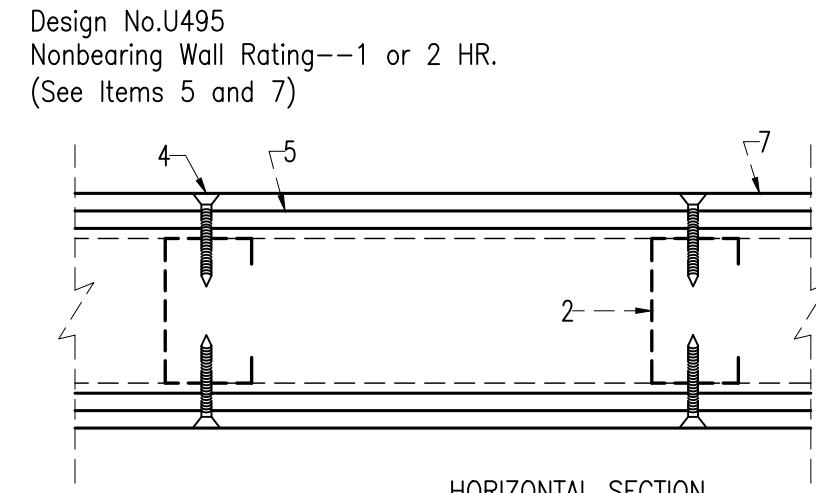
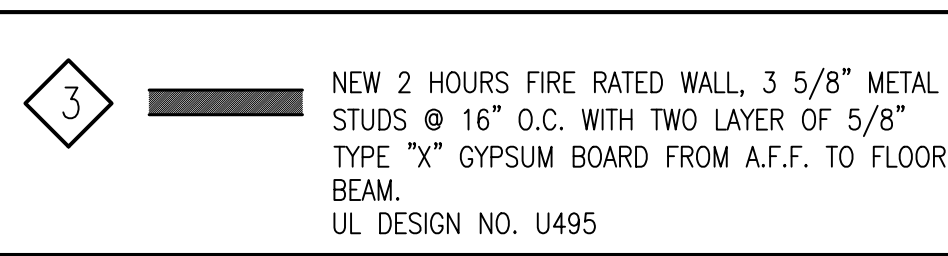
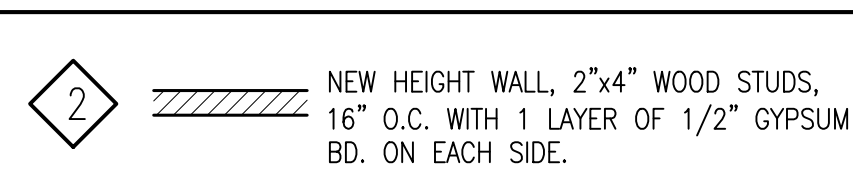
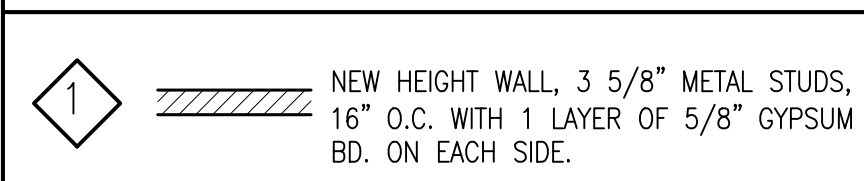
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JOB NO.: 202331

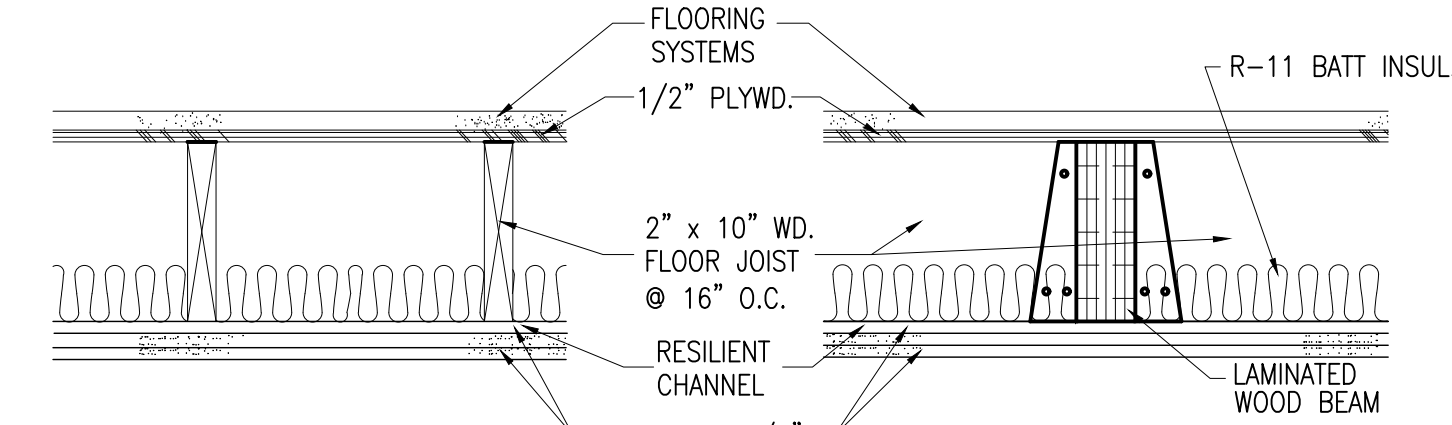
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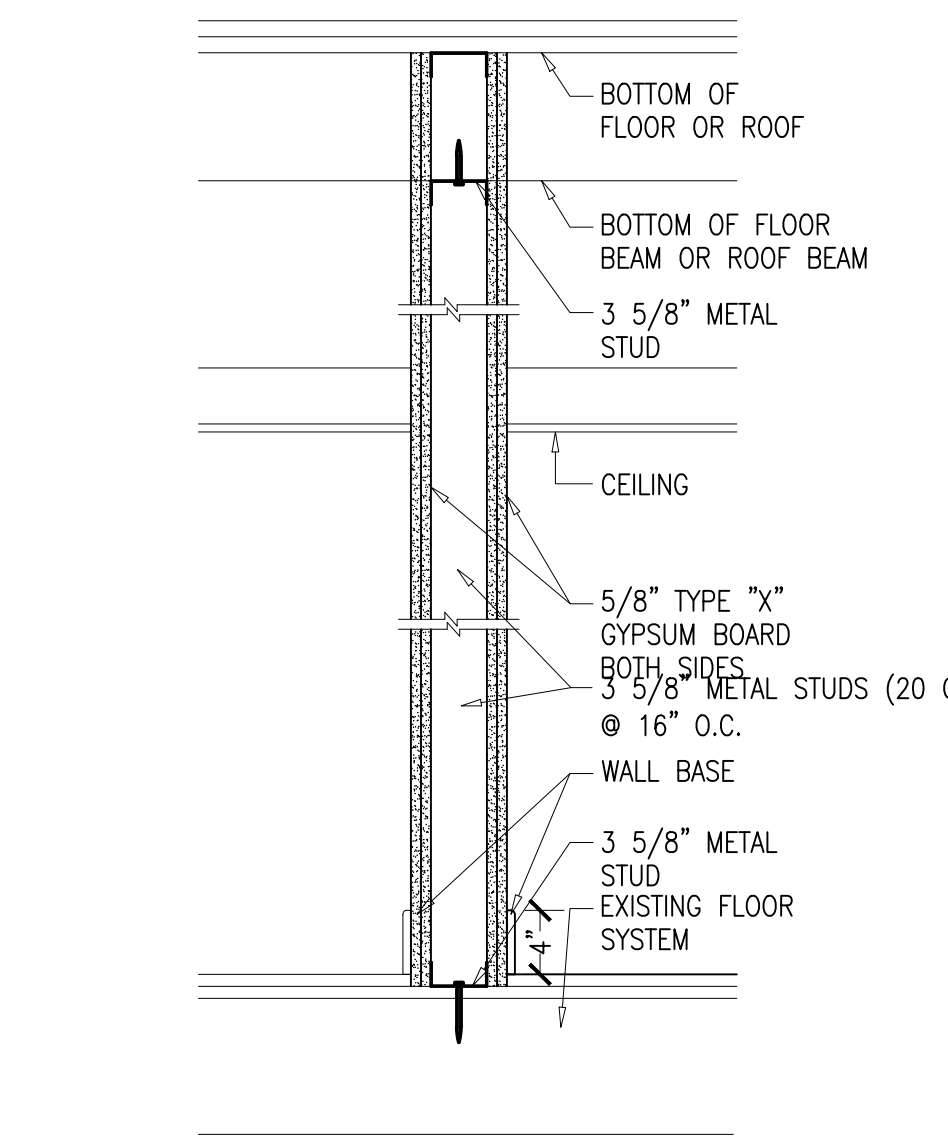
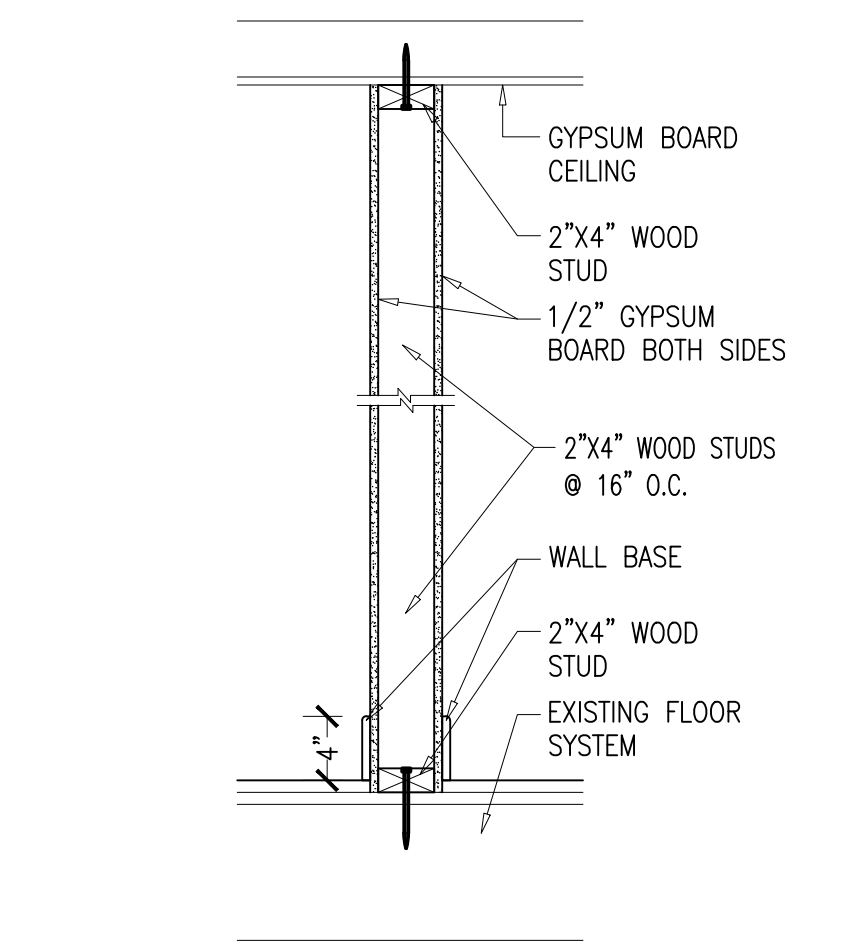
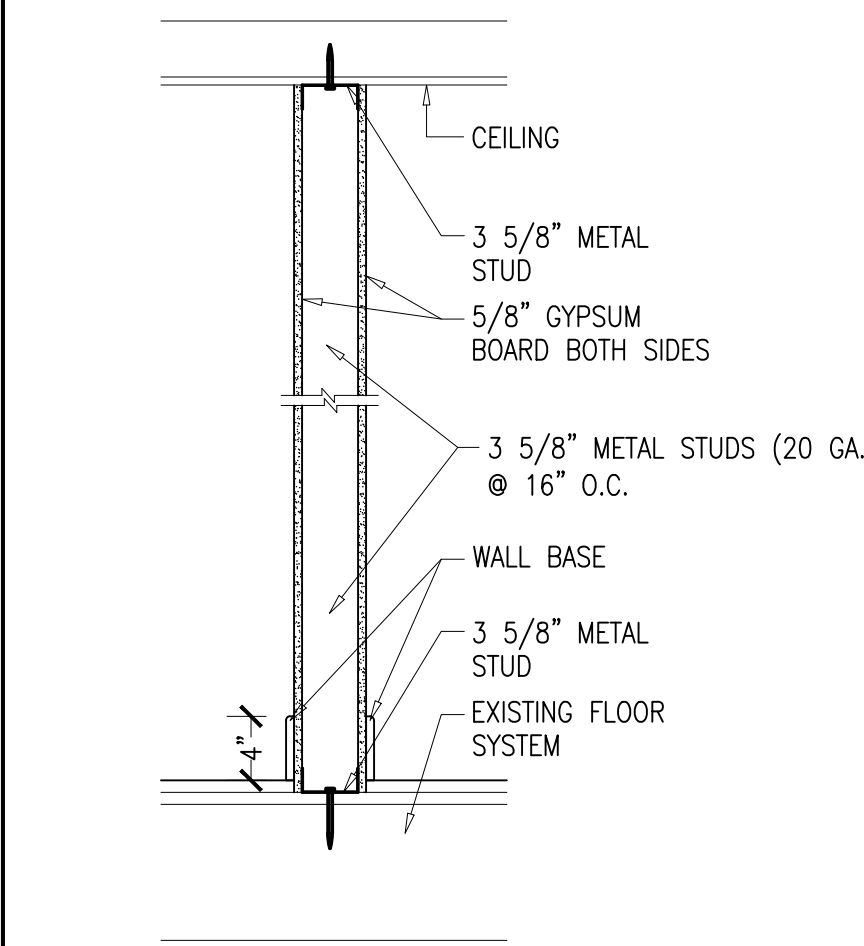
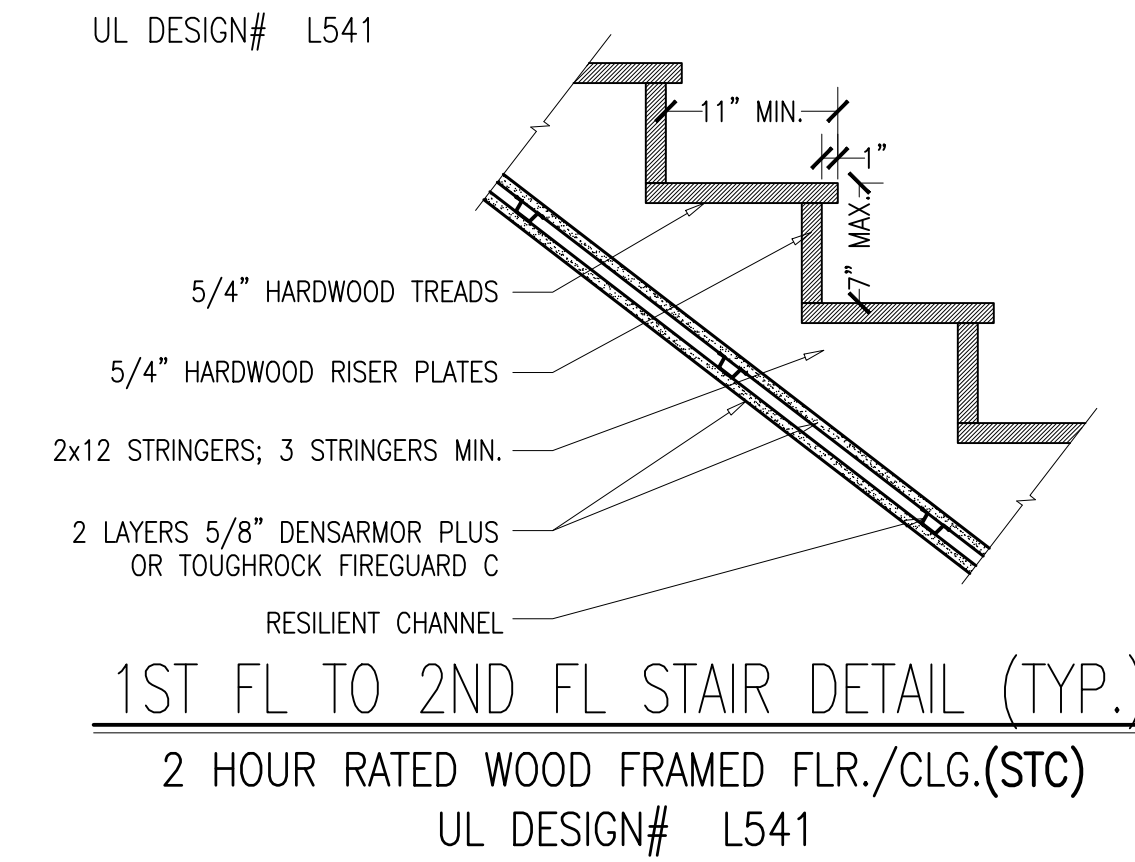
WALL DETAIL



1. Floor and Ceiling Runners--(Not Shown)--Channel-shaped runners, 3-5/8 in. wide (min). 1-1/4 in. legs, formed from No.25 MSG(min) galv steel, attached to floor and ceiling with fasteners spaced 24 in.OC, max.
2. Steel Studs--Channel-shaped 3-5/8 in. wide (min), 1-1/4 in. legs, 3/8 in. folded back returns, formed from No. 25 MSG (min) galv steel, spaced 24 in. OC max.
3. Batts and Blankets*--(Optional, not shown)--Mineral wool or glass fiber batts partially or completely filling stud cavity. See Batts and Blankets (BZJ) category for names of Classified Companies.
4. Screws --Type S self-tapping screws, 1-1/4 or 2 in. long, (1 Hr) and 2-1/2 in. long (2 Hr).
5. Building Units*--For 1 Hr Rating--Nom 5/8 or 3/4 in. thick, 4 ft wide faced gypsum wallboard panels with the faced side on the interior wall cavity. Panels attached to studs and floor and ceiling runners with screws spaced 8 in. OC along the edges of the panel and 12 in. OC in the field of the panel. Joints oriented vertically and staggered on opposite sides of the assembly. General Electric Company--Type Coreguard National Gypsum Co., Charlotte, NC--Type Gold Bond Fire-Shield Type X Hi-Impact Wallboard or Gold Bond Fire-Shield Type X Kal-Kore Hi-Impact Plaster Base.
6. Joint Tape and Compound--(Not shown)--Vinyl, dry or premixed Joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints.
7. Wallboard, Gypsum*--For 2 Hr Rating--any Classified 5/8 in. thick (minimum), 4 ft wide, wallboard applied over exterior face of Building Unit (Item 5). Wallboard to be applied vertically with joints staggered 24 in. from Building Unit (Item 5) and attached to studs and floor and ceiling runners with screws spaced 8 in. OC. See Wallboard, Gypsum (CKNX) Category for names of manufactures. *Bearing the UL Classification Marking



2 HOUR RATED WOOD FRAMED FLR./CLG. (STC RATING 58)
UL DESIGN# L541



System No. F-C-3013
XHEZF-C-3013
Through-penetration Firestop Systems

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 Listed or Classified 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 as Classified, Listed, or Recognized.

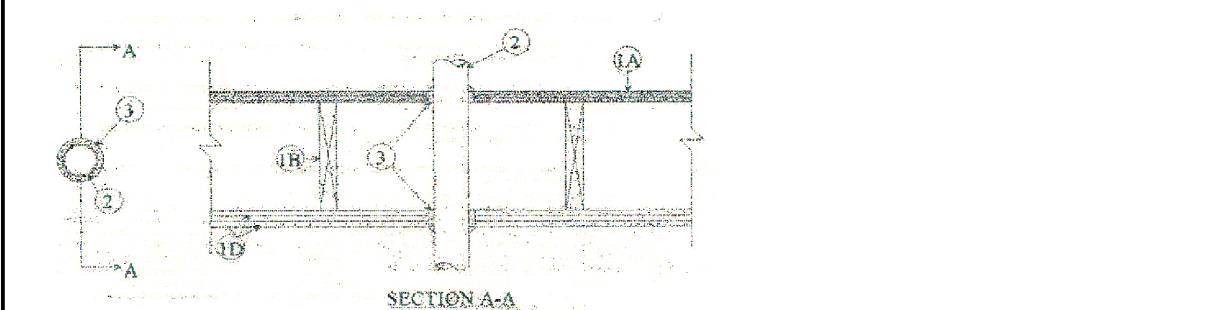
Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. F-C-3013

August 18, 2011

F Ratings - 1 and 2 Hr (See Item 2A)
T Ratings - 3/4, 1 and 2 Hr (See Item 2A)
L Rating At Ambient - Less than 1 CFM/sq ft
L Rating at 400 F - Less than 1 CFM/sq ft



1. Floor-Ceiling Assembly - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

A. Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 2 in.

B. Wood Joists* - For 1 hr fire-rated floor-ceiling assemblies nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped. For 2 hr fire-rated floor-ceiling assemblies, nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped.

C. Furring Channels - (Not Shown) - In 2 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between first and second layers of gypsum board (Item 1D). Furring channels spaced max 24 in. OC. In 1 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between gypsum board and wood joists as specified in the individual Floor-Ceiling Design. Furring channels spaced max 24 in. OC. In 1 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between gypsum board and wood joists as specified in the individual Floor-Ceiling Design. Furring channels spaced max 24 in. OC.

D. Gypsum Board* - Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. First layer of gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Second layer of wallboard (2 hr fire-rated assembly) screw-attached to furring channels as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 2 in.

1.1 Chase Wall - (Not Shown, Optional) The through penetrants (Item 2) may be routed through a fire-rated single, double or staggered wood stud/gypsum board chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
A. Studs - Nom 2 by 6 in. or double nom 2 by 4 in. lumber studs.

B. Sole Plate - Nom 2 by 6 in. or parallel 2 by 4 in. lumber plates, tightly butted.

C. Top Plate - The double top plate shall consist of two nom 2 by 6 in. or two sets of parallel 2 by 4 in. lumber plates, tightly butted. Max diam of opening is 2 in.

D. Gypsum Board* - Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

2. Cables - One or more cables to be installed either concentrically or eccentricity within the firestop system. Cable(s) to be installed approximately midway between wood joist. Diam of openings hole-sawed through flooring system and through gypsum wallboard ceiling to be min 3/8 in. larger than the outside diam of cable or cable bundle. The annular space within the firestop system shall be a min 0 in. (point contact) to a max 1-1/4 in. Cables to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of cables may be used:

A. Max 100 pair No. 24 AWG (or smaller) copper conductor telephone cables with polyvinyl chloride (PVC) insulation and jacket materials.

B. Max 3/0 (with ground) No. 2/0 (or smaller) AWG aluminum conductor service entrance cable with PVC insulation and jacket materials.

C. Max 3/0 (with ground) No. 12 AWG (or smaller) copper conductor nonmetallic sheathed (Romex) cable with PVC insulation and jacket materials. The number of cables allowed within the opening is dependent upon the type and size of cable as tabulated in Item 2A.

2A. Through Penetrating Product* - (Not Shown) - As an alternate to Item 2, through-penetrating product to be installed either concentrically or eccentricity within the firestop system. One cable to be installed approximately midway between wood joist. Diam of openings hole-sawed through flooring system and through gypsum board ceiling to be min 3/8 in. larger than the outside diam of cable. The annular space within the firestop system shall be a min 0 in. (point contact) to a max 1-1/4 in. Through-penetrating product to be rigidly supported on both sides of a floor-ceiling assembly. The following types of through-penetrating products may be used:

A. Max four copper conductors No. 2/0 AWG (or smaller) aluminum or steel Armored Cable# or Metal-Clad Cable+.

B. Two or more twisted copper conductor No. 6 AWG (or smaller) Power Limited Circuit Cable+ with or without a jacket under a metal armor.

C. Two or more twisted copper conductor No. 10 AWG (or smaller) Power Limited Fire Alarm Cable+ with or without a jacket under a metal armor.

D. Two or more twisted copper conductor No. 12 AWG (or smaller) Non Power Limited Fire Alarm Cable+ with or without a jacket under a metal armor.

FLOOR/CEILING PENETRATION DETAIL FOR 2" PIPE OR LESS

System No. F-C-2020
XHEZF-C-2020
Through-penetration Firestop Systems

Design/System/Construction/Assembly Usage Disclaimer

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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 as Classified, Listed, or Recognized.

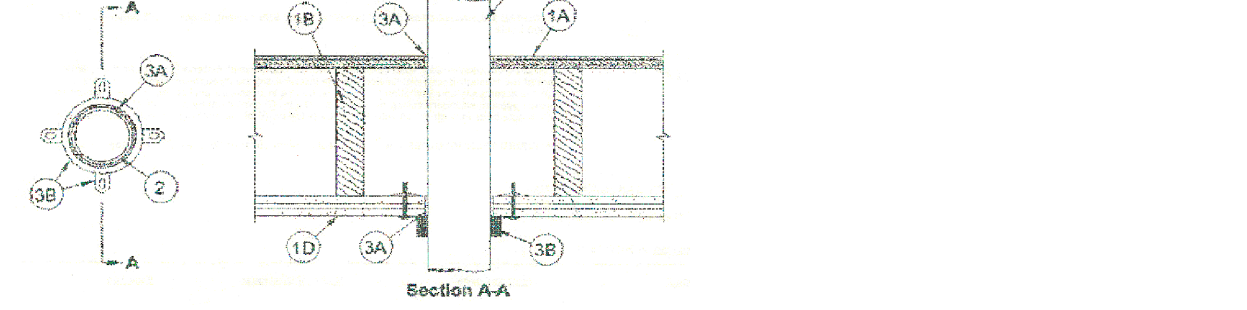
Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. F-C-2020

June 16, 2010

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



1. Floor-Ceiling Assembly - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. The F and T Ratings of the firestop system are equal to the hourly fire rating of the floor-ceiling assembly. The general construction features of the floor-ceiling assembly are summarized below:

A. Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diam of floor opening to be min 1/2 in. (13 mm) to max 1 in. (25 mm) larger than outside diameter of penetrant. Max diam of floor opening is 5 in. (127 mm).

B. Wood Joists* - For 1 hr fire-rated floor-ceiling assemblies, nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped. For 2 hr fire-rated floor-ceiling assemblies, nom 2 by 10 in. (51 by 254 mm) lumber joists spaced max 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped.

C. Furring Channels - (Not Shown) - In 2 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 1D). Furring channels spaced max 24 in. (610 mm) OC. In 1 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between wallboard and wood joists as specified in the individual Floor-Ceiling Design. Furring channels spaced max 24 in. (610 mm) OC.

D. Gypsum Board* - Nom 4 ft (1.22 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of wallboard secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Second layer of wallboard (2 hr fire-rated assembly) screw-attached to furring channels as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening to be min 0 in. (0 mm, continuous point contact) to max 1/2 in. (13 mm) larger than outside diameter of penetrant. Max diam of ceiling opening is 5 in. (127 mm).

2. Through Penetrants - One nonmetallic pipe or conduit to be installed approximately midway between wood joists and centered within the firestop system. Diam of openings hole-sawed through flooring system to be min 1/2 in. (13 mm) to max 1 in. (25 mm) larger than outside diameter of penetrant. Diam of opening hole-sawed through gypsum board ceiling to be min 0 in. (0 mm, continuous point contact) to max 1/2 in. (13 mm) larger than outside diameter of penetrant. Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

A. Polyvinyl Chloride (PVC) Pipe - Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B. Rigid Nonmetallic Conduit+ - Nom 4 in. (102 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70).

C. Chlorinated Polyvinyl Chloride (CPVC) Pipe - Nom 4 in. (102 mm) diam (or smaller) SDR13.5 or Schedule 80 CPVC pipe for use in closed (process or supply) piping systems.

3. Firestop System - The firestop system shall consist of the following:
A. Fill, Void or Cavity Material# - Sealant - Fill material forced into annulus to fill space to max extent possible, flush with top surface of floor and bottom surface of ceiling.

SPECIFIED TECHNOLOGIES INC - SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

*Bearing the UL Classification Mark

+Bearing the UL Listing Mark

*Bearing the UL Classification Marking

FLOOR/CEILING PENETRATION DETAIL FOR 2"-4"

System No. F-C-2019
XHEZF-C-2019
Through-penetration Firestop Systems

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 Listed or Classified 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 as Classified, Listed, or Recognized.

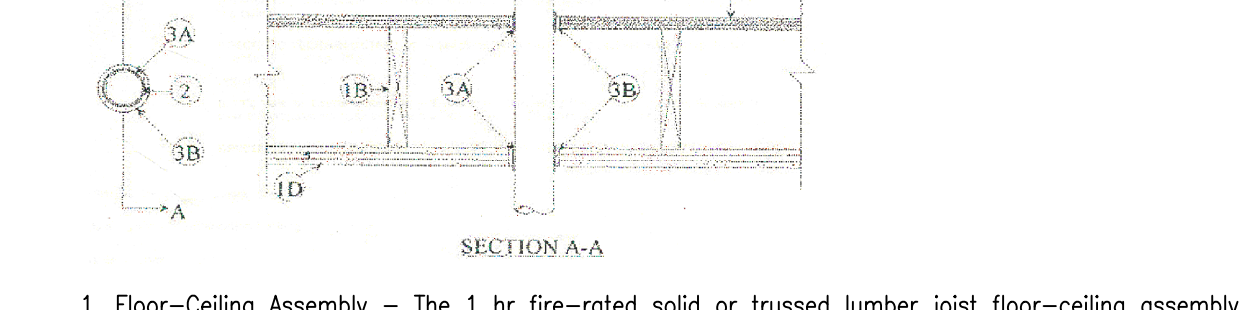
Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. F-C-2019

December 08, 2008

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



1. Floor-Ceiling Assembly - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. The F and T Ratings of the firestop system are equal to the hourly fire rating of the floor-ceiling assembly. The general construction features of the floor-ceiling assembly are summarized below:

A. Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 3 in. (76 mm).

B. Wood Joists* - For 1 hr fire-rated floor-ceiling assemblies, nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped. For 2 hr fire-rated floor-ceiling assemblies, nom 2 by 10 in. (51 by 102 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped.

C. Furring Channels - (Not Shown) - In 2 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 1D). Furring channels spaced max 24 in. (610 mm) OC. In 1 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between gypsum board and wood joists as specified in the individual Floor-Ceiling Design. Furring channels spaced max 24 in. (610 mm) OC.

D. Gypsum Board* - Nom 4 ft (1.22 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Second layer of gypsum board (2 hr fire-rated assembly) screw-attached to furring channels as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 3 in. (76 mm).

2. Through Penetrants - One nonmetallic pipe or conduit to be installed approximately midway between wood joists and centered within the system. Diam of openings hole-sawed through flooring system and through gypsum board ceiling to be nom 5/8 in. (16 mm) larger than the outside diam of through-penetrant. Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

A. Polyvinyl Chloride (PVC) Pipe - Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

B. Rigid Nonmetallic Conduit+ - Nom 2 in. (51 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70).

C. Chlorinated Polyvinyl Chloride (CPVC) Pipe - Nom 2 in. (51 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.

D. Electrical Nonmetallic Tubing (ENMT)+ - Nom 2 in. (51 mm) diam (or smaller) ENMT formed from PVC and installed in accordance with Article 331 of the National Electrical Code.

3. Firestop System - The firestop system shall consist of the following:
A. Fill, Void or Cavity Material# - Wrap Strip - Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips or nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (51 mm) wide strips. One layer of wrap strip is wrapped around the through-penetrant at its egress from both sides of the floor-ceiling assembly with ends butted and held in place with two layers of 2 in. (51 mm) wide by 3 mil (0.08 mm) thick aluminum foil tape. The bottom edge of the wrap strip shall extend 5/8 in. (16 mm) below the flooring system and 1/4 in. (6 mm) below the ceiling.

SPECIFIED TECHNOLOGIES INC - SpecSeal BLU Wrap Strip, SpecSeal BLU2 Wrap Strip or SpecSeal RED Wrap Strip

B. Fill, Void or Cavity Material# - Sealant - Fill material forced into annulus to fill space to max extent possible, flush with top surface of floor and bottom surface of ceiling.

SPECIFIED TECHNOLOGIES INC - SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

+Bearing the UL Listing Mark

*Bearing the UL Classification Marking

REVISIONS	BY

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328 PRICE AVE. NARBERTH, PA 19072
TEL: (484) 557-2168

PROPOSED JAPANESE TAKE-OUT RESTAURANT ON FIRST FLOOR AND RENOVATION OF ONE UNIT RESIDENTIAL ON SECOND FLOOR
621 SUMMIT STREET, KING OF PRUSSIA, PA 19406

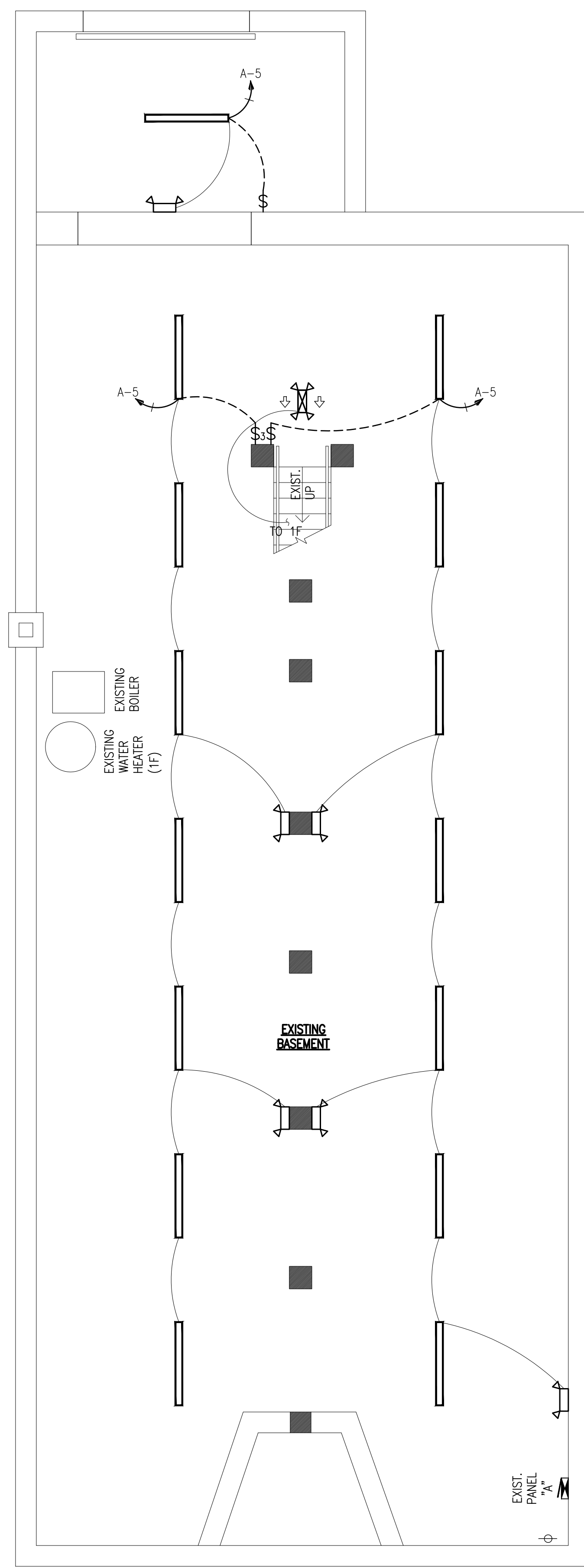
DATE:	08/28/2023
SCALE:	AS NOTES
JOB NO.:	202331
SHEET	

REVISIONS	BY

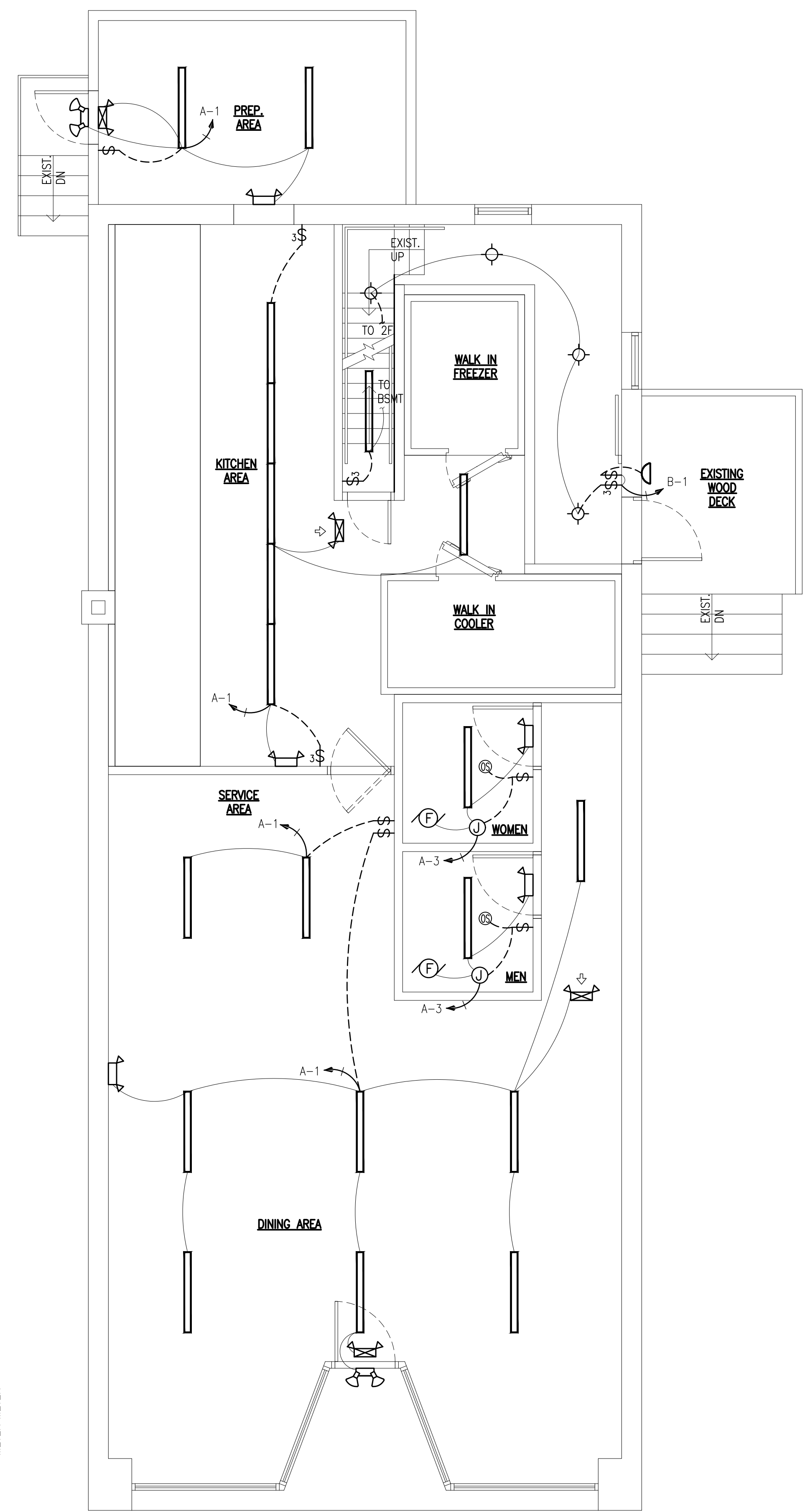
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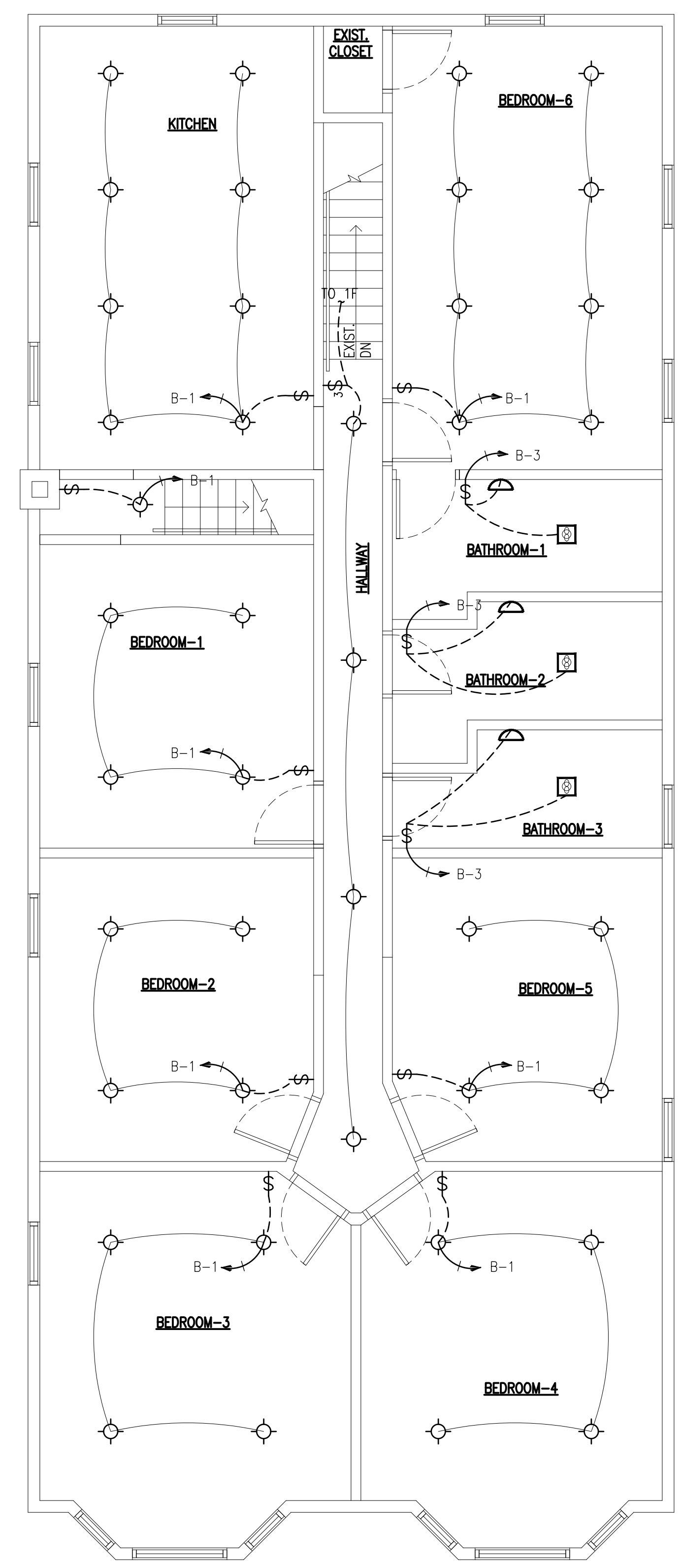
DATE: 08/28/2023
 SCALE: AS NOTES
 JOB NO.: 202331
 SHEET



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



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



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

LEGEND

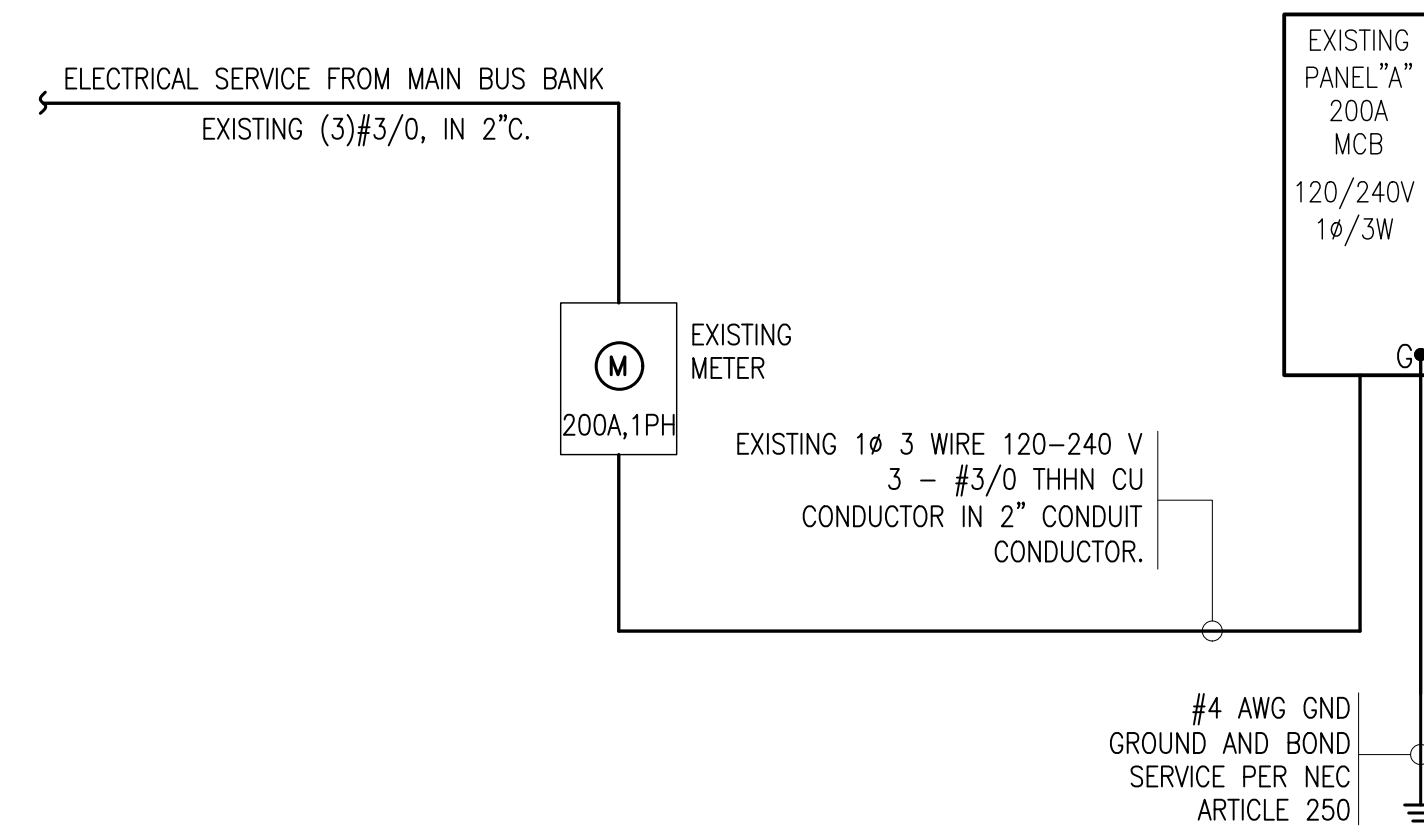
- ⑤ SMOKE DETECTOR – 110V, HARD WIRE LOW VOLTAGE BATTERY BACKUP, INTERCONNECTED INSTALL ONE EACH LEVEL.
- ⑥ CARBON MONOXIDE – 110V, HARD WIRE LOW VOLTAGE BATTERY BACKUP, INTERCONNECTED INSTALL ONE EACH LEVEL.
- EXIT/EMERGENCY LIGHT W. BATTERY BACK-UP.
- EMERGENCY LIGHT W. BATTERY BACK-UP.
- REMOTE HEAD
- PANEL – SIZE AS NOTED
- CKT. HOMERUN (A INDICATES PANEL) "1" DESIGNATES CIRCUIT NUMBER
- ⊕ DUPLEX RECEPTACLE, MTD. +18" AFF
- ⊕ DUPLEX RECEPTACLE – IN WEATHER PROOF ENCLOSURE OR COVER, GROUND FAULT CIRCUIT INTERRUPTER.
- ⊕ JUNCTION BOX, FLUSH IF POSSIBLE
- ⊕ JUNCTION BOX, FLUSH IF POSSIBLE
- ⌚ SINGLE POLE SWITCH, MTD +47"
- ⌚ 3 POLE SWITCH, MTD +47"
- ⊙ CEILING LIGHTING FIXTURE
- RECESSED LIGHTING FIXTURE
- ⊔ WALL MOUNT LIGHTING FIXTURE
- ⊔ TOILET FAN WITH LIGHTING FIXTURE
- WHITE INTEGRATED LED FLUSH MOUNT LIGHT, LITHONIA 40W, 2380 LUMENS
- DISCONNECT SWITCH
- WALK-IN COOLER & FREEZER LIGHTS
- WASHER & ELECTRIC DRYER COMBO
GE GUD27ESMMWW
240V, 30A

ELECTRICAL NOTES & REQUIREMENTS

1. ALL WIRING TO COMPLY WITH N.E.C., 2017 AND UCC OR LATEST ADOPTED, AND LOCAL REQUIREMENTS.
2. MINIMUM CIRCUIT TO BE 20 AMP. BREAKER, (2) #12 IN 3/4" CONDUIT (+GND) UNLESS SHOWN OTHERWISE.
3. WIRE SIZES BASED ON THW COPPER, A.W.G.
4. PROVIDE DISCONNECTING MEANS AT ALL MOTOR LOADS.
5. VERIFY ALL REQUIREMENTS FOR KITCHEN EQUIPMENT WITH EQUIPMENT SUPPLIER.
6. MAKE ALL FINAL CONNECTIONS.
7. MOUNT ALL ELECTRICAL DEVICES AND SWITCHES AS REQUIRED BY THE ADA AND THE LOCAL STATE BARRIER FREE RULES.
8. FUSE ALL MOTORS AND MOTOR ASSEMBLIES IN A ACCORDANCE WITH THE N.E.C. 2017 AND MANUFACTURER'S RECOMMENDATIONS.
9. BALANCE THE LOADS EVENLY BETWEEN THE PHASES OF THE SYSTEM. MAXIMUM UNBALANCE OF 3%.
10. MAINTAIN A MAXIMUM VOLTAGE DROP OF 5% THROUGHOUT THE ENTIRE SYSTEM.
11. COORDINATE ALL WORK WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING TRADES IN FIELD.
12. VERIFY ALL EXISTING JOB CONDITIONS AND ACCOMMODATE AS REQUIRED FOR A COMPLETE INSTALLATION.
13. ELECTRICAL PANEL SHALL BE SURFACE MOUNT TO THE WALL.

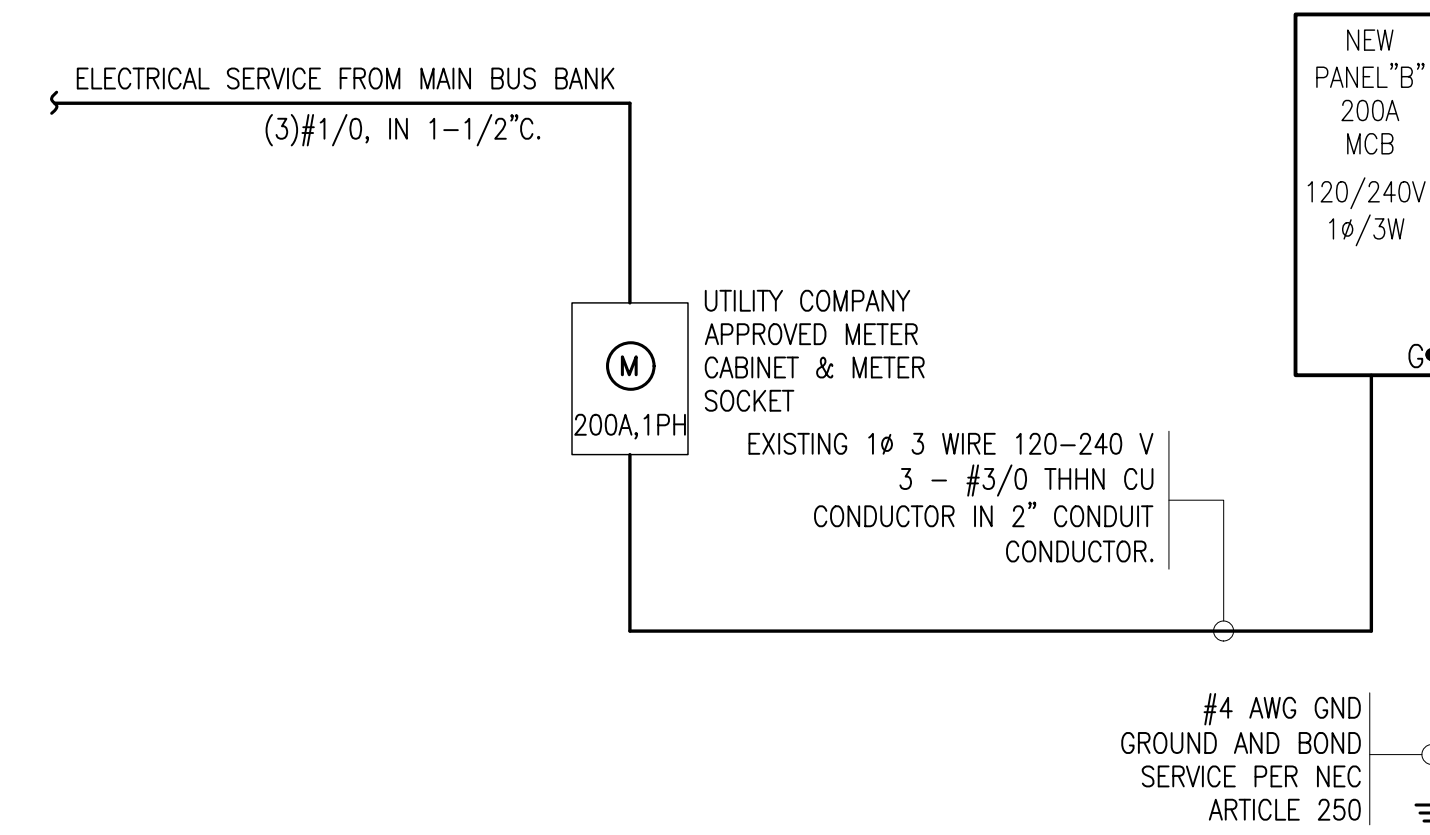
LIGHTING NOTES

1. PROVIDE A MIN. 50 FOOT- CANDLES OF LIGHT ON ALL WORKING SURFACES IN THE FOOD PREPARATION AREAS, EQUIPMENT AND UTENSIL WASHING AREAS, AT HAND WASHING LAVATORIES, AND IN TOILET ROOMS.
2. PROVIDE A MIN. 20 FOOT- CANDLES OF LIGHT AT A DISTANCE OF 30 INCHES ABOVE THE FLOOR IN WALK-IN COOLERS AND FREEZERS, DRY STORAGE AREAS, AND IN ALL OTHER AREAS.
3. ALL LIGHTING FIXTURES AND LIGHT BULBS LOCATED WITHIN FOOD PREPARATION AND STORAGE AREAS SHALL BE SHIELD OR SHATTERPROOF.



1F ELECTRICAL RISER DIAGRAM

SCALE: N.T.S.



2F ELECTRICAL RISER DIAGRAM

SCALE: N.T.S.

EXISTING PANEL: A (BASEMENT & 1ST FL.)										PANEL SCHEDULE									
MAINS: 200A MCB				VOLTAGE: 120/240V				PHASE: 1		WIRE: 3				MOUNTING: SURFACE					
DESCRIPTION	BREAKER			WATTS			CKT NO.	CKT NO.	BREAKER			DESCRIPTION							
	WIRE	POLE	AMP	LIGHT	RECP.	EQUIP.			MECH.	AMP	POLE		WIRE						
LIGHTING (1ST FL.)	12	1	20	698			1	2			4116	60	2	6	HP-1				
LIGHTS & FAN (TOILET ROOM)	12	1	20	300			3	4			4116				*				
LIGHTING (BASEMENT)	12	1	20	600			5	6			552	20	1	12	AHU-1				
RECEPT. (DINING AREA)	12	1	20		1800		7	8		2400		30	2	10	ICE MAKER				
RECEPT. (TOILET ROOM)	12	1	20		720		9	10		2400					*				
RECEPT. (OUTDOOR)	12	1	20		720		11	12		1800		20	1	12	(3)WORKTOP REF.				
RECEPT. (SERVICE AREA)	12	1	20		1080		13	14		936		20	1	12	SANDWICH UNIT				
RECEPT. (COUNTER)	12	1	20		720		15	16		1440		20	1	12	DISHWASHER				
RECEPT. (KITCHEN AREA)	12	1	20		1440		17	18		1000		20	1	12	UC REF. & SUSHI CASE				
RECEPT. (PREP. AREA)	12	1	20		1080		19	20		1300		20	1	12	RICE WARMER				
RECEPT. (BASEMENT)	12	1	20		1080		21	22		1300		20	1	12	RICE WARMER				
RECEPT. (BASEMENT)	12	1	20		1440		23	24		756		20	2	12	WALK IN COOLER CU				
EF-1	8	2	40			3696	25	26		756					*				
*						3696	27	28		509		20	1	12	W.I.C LGT & EVAP				
MUA-1	8	2	40			3696	29	30		666		20	2	12	WALK IN COOLER CU				
*						3696	31	32		666					*				
HOOD LIGHTS & CONTROL	12	1	20		1000		33	34		509		20	1	12	W.I.C LGT & EVAP				
SPACE							35	36		360		20	1	12	RECP. (UNDER HOOD)				
SPACE							37	38							SHUNT TRIP BREAKER				
SPACE							39	40							SPACE				
SIGN	12	1	20	1200			41	42							SPACE				
SUB-TOTAL				2798	10080	15784	0		0	360	16438	4668	SUB-TOTAL						
TOTAL CONNECTED (LEFT & RIGHT)				2798	10440	32222	4668	WATTS											
TOTAL DEMAND				3498	10220	19333	4668	WATTS											
TOTAL LOAD				37719	WATTS	157.16	AMPS												

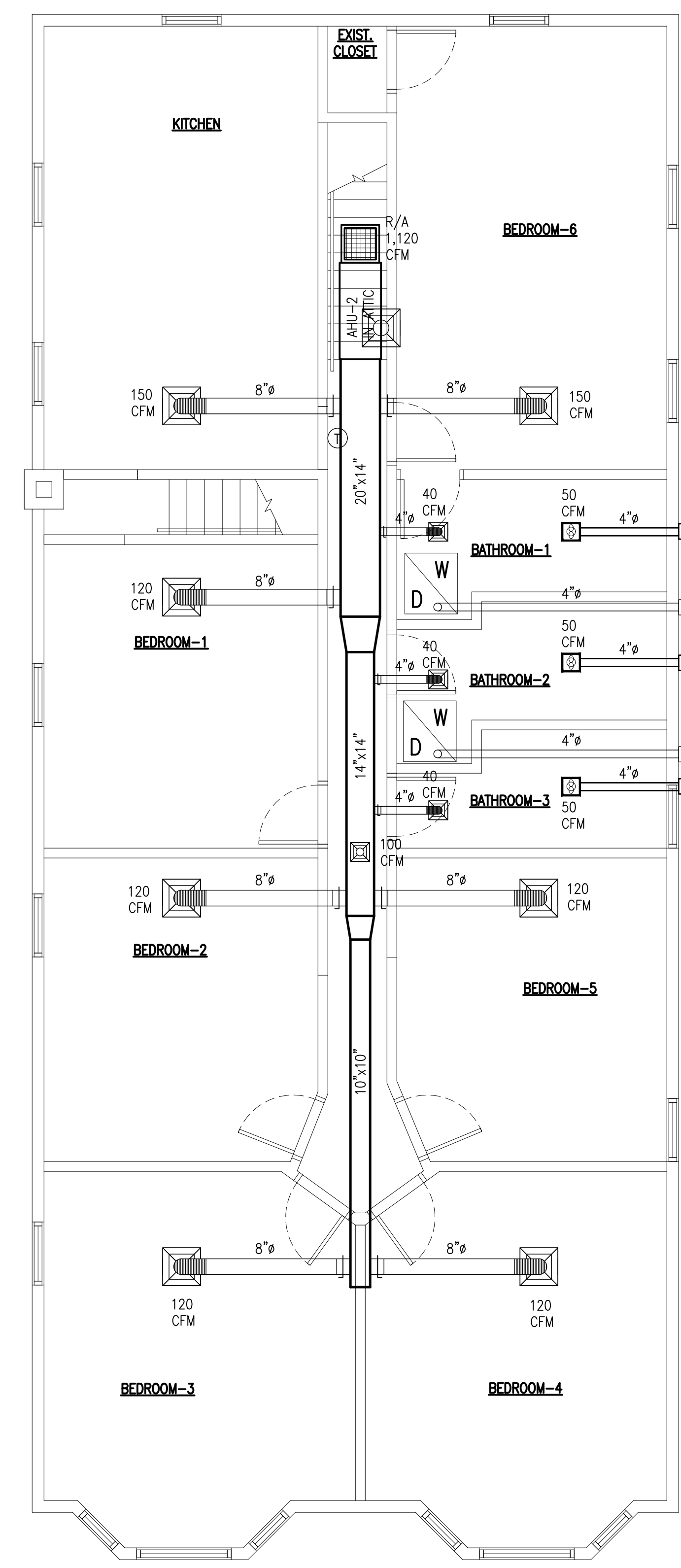
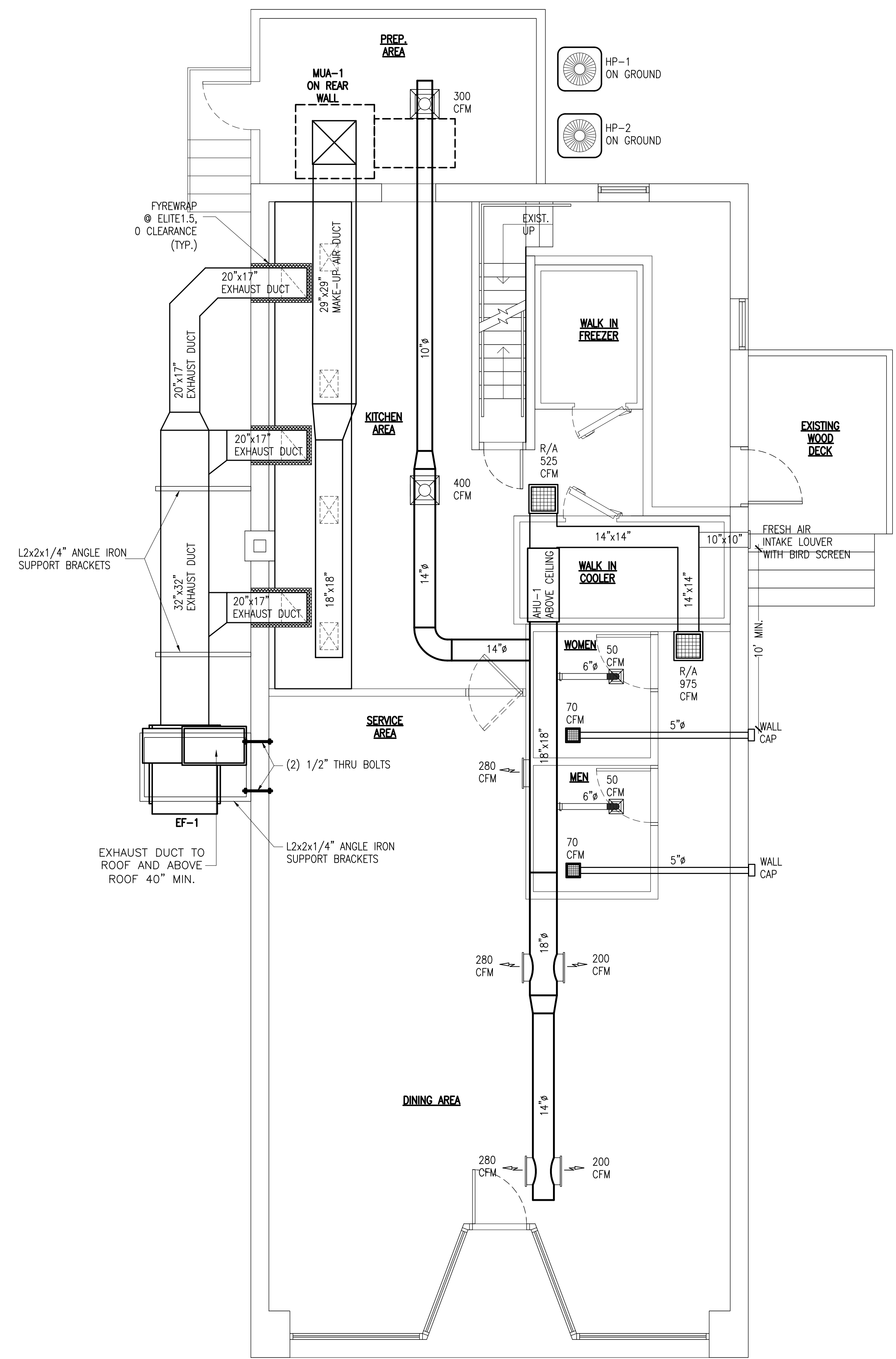
NEW PANEL: B (2ND FL.)										PANEL SCHEDULE									
MAINS: 200A MCB				VOLTAGE: 120/240V				PHASE: 1		WIRE: 3				MOUNTING: SURFACE					
DESCRIPTION	BREAKER			WATTS			CKT NO.	CKT NO.	BREAKER			DESCRIPTION							
	WIRE	POLE	AMP	LIGHT	RECP.	EQUIP.			MECH.	AMP	POLE		WIRE						
LIGHTING	14	1	15	396			1	2			0				SPACE				
LIGHTS & FAN (BATHROOM)	12	1	20	420			3	4			0				SPACE				
RECEPT. (BATHROOM)	12	1	20		1080		5	6		1200		20	1	12	REFRIGERATOR				
RECEPT. (KITCHEN ROOM)	12	1	20		1440		7	8		1500		20	1	12	RECEPT, Small-Appliance				
RECEPT. (KITCHEN ROOM)	12	1	20		1440		9	10		1500		20	1	12	RECEPT, Small-Appliance				
RECEPT. (BEDROOM-1)	12	1	20		1440		11	12			2424	35	2	8	HP-2				
RECEPT. (BEDROOM-2)	12	1	20		1440		13	14			2424				*				
RECEPT. (BEDROOM-3)	12	1	20		1440		15	16			480	15	1	12	AHU-2				
RECEPT. (BEDROOM-4)	12	1	20		1800		17	18		1800		20	1	12	RECEPT. (HALL, STAIR)				
RECEPT. (BEDROOM-5)	12	1	20		1440		19	20		1800		20	1	12	RECEPT. (BEDROOM-6)				
WASHER & DRYER	8	2	40			3600	21	22		1800		20	1	12	EXISTING WASHER (BASEMENT)				
*						3600	23	24		1800		20	1	12	EXISTING DRYER (BASEMENT)				
WASHER & DRYER	8	2	40			3600	25	26							SPACE				
*						3600	27	28							SPACE				
SPACE							29	30							SPACE				
SUB-TOTAL				816	11520	14400	0		0	6600	4800	5328	SUB-TOTAL						
TOTAL CONNECTED (LEFT & RIGHT)				816	18120	19200	5328	WATTS											
TOTAL DEMAND				1020	14060	19200	5328	WATTS											
TOTAL LOAD				39608	WATTS	165.03	AMPS												

REVISIONS	BY

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PROPOSED JAPANESE TAKE-OUT RESTAURANT ON FIRST FLOOR AND RENOVATION OF ONE UNIT RESIDENTIAL ON SECOND FLOOR
621 SUMMIT STREET, KING OF PRUSSIA, PA 19406

DATE: 08/28/2023
SCALE: AS NOTED
JOB NO.: 202331
SHEET



- ### MECHANICAL NOTES
- THE CONTRACTOR SHALL EXAMINE ALL OTHER SPECIFICATIONS, DRAINING AND ALL OTHER FEATURES OF BUILDING CONSTRUCTION WHICH MAY AFFECT HIS WORK AND BE GOVERNED BY THESE SPECIFICATIONS, INCLUDING THE GENERAL CONDITIONS AND PARTICULAR INSTRUCTIONS TO ALL BIDDERS AND SUPPLIERS.
 - ALL WORK SHALL BE EXECUTED AND INSPECTED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND/ OR STATE CODES, LAWS, ORDINANCES, RULES, AND REGULATIONS APPLICABLE TO THIS PARTICULAR CLASS OF WORK, AND EACH CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL SERVICE CHARGES, FEES, PERMITS, ROYALTIES, TAXES, AND OTHER SIMILAR COST IN CONNECTION THEREWITH.
 - PRIOR TO FABRICATION OF DUCTWORK, CONTRACTOR SHALL EXAMINE AND VERIFY ALL CONDITIONS ABOVE AND BELOW THE CEILING WHICH MAY INTERFERE WITH THE DUCT SYSTEM AND NOTIFY THE ARCHITECTS OF ANY CONFLICT ENCOUNTERED. CONTRACTOR SHALL PROVIDE ALL OFFSETS ETC. WHICH MAY BE REQUIRED.
 - ALL SHEET METAL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH "SMACNA" LOW PRESSURE DUCT CONSTRUCTION STANDARDS.
 - TURNING VANES SHALL BE INSTALLED IN ALL BENDS EXCEED 30 DEGREES.
 - ALL DUCTS SHALL BE SUPPORTED WITH 1" WIDE, 16 GAUGE GALVANIZED STEEL BANDS.
 - ALL RECTANGULAR DUCT SHALL BE INSULATED WITH A MINIMUM OF 1" INTERNAL LINER, 2 LB. DENSITY. ALL ROUND DUCT AND DIFFUSER TOP SHALL HAVE A MINIMUM OF 2" FOIL BACKED BLANKET TYPE INSULATION WITH ALL JOINTS BUTTED AND TAPED. INSULATION "R" VALUES SHALL COMPLY WITH GOVERNING ENERGY EFFICIENCY REQUIREMENTS.
 - ALL DUCT DIMENSIONS SHOWN ON PLANS ARE SHEET METAL DIMENSIONS. ALLOWANCE HAS BEEN MADE FOR LINER.
 - CONTRACTOR SHALL COORDINATE LOCATION OF ALL SUPPLY AND RETURN AIR REGISTERS, DUCT, GRILLES, AND DIFFUSERS WITH LIGHTS AND CEILING PATTERNS.
 - SUPPLY AIR DIFFUSERS SHALL BE KRUEGER MODEL 1104 WITH OPPOSED BLADE DAMPERS AND FRAME 23 FOR LAY-IN CEILING.
 - MOUNT THERMOSTAT AT 48" MAXIMUM ABOVE THE FINISHED FLOOR.
 - PROVIDE U.L.F.D. AT ALL DUCT OR AIR DISTRIBUTION PENETRATIONS OF RATED WALLS, FLOORS, OR CEILING ASSEMBLIES W/ ACCESS.
 - PROVIDE CONDENSATE DRAIN W/ TRAP AT UNITS WITH DRAIN TO OPENING BY PLUMBING CONTRACTOR. COORDINATE W/ PLBG. CONTRACTOR.
 - MECHANICAL CONTR SHALL CONFER W/ ELECTRICAL CONTR & COORDINATE ALL POWER REQUIREMENT POINTS OR CONNECTION ETC. COORDINATE W/ PLBG. CONTRACTOR TO INSURE PROPER CONDENSATE DRAINS.
 - COVERINGS AND LININGS, COVERINGS AND LININGS, INCLUDING ADHESIVES WHEN USED, SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50, WHEN TESTED IN ACCORDANCE WITH ASTM E 84. DUCT COVERINGS AND LININGS SHALL NOT FLAME, GLOW, SMOLDER OR SMOKE WHEN TESTED IN ACCORDANCE WITH ASTM C 411 AT THE TEMPERATURE TO WHICH THEY ARE EXPOSED IN SERVICE. THE TEST TEMPERATURE SHALL NOT FALL BELOW 250°(121°).

LEGEND

- S/A HVAC SUPPLY AIR GRILL
- S/A HVAC SUPPLY AIR GRILL
- R/A HVAC RETURN AIR DIFFUSER GRILL
- FLEXIBLE AIR DUCT WITH DAMPER
- PROGRAMMABLE TYPE THERMOSTAT
- TOILET FAN WITH LIGHTING FIXTURE
- TOILET EXHAUST DIFFUSER GRILL

NOTE:
SHUT SWITCH SHALL SHUT DOWN FAN MOTOR UPON ALARM SIGNAL FROM ALARM SYSTEM.
EXHAUST FAN SHALL BE 10' AWAY OR 36" ABOVE ANY INTAKE AIR FAN.

UPON ACTIVATION, THE SMOKE DETECTORS SHALL SHUT DOWN THE AIR DISTRIBUTION SYSTEM. AIR DISTRIBUTION SYSTEMS THAT AREA PART OF A SMOKE CONTROL SYSTEM SHALL SWITCH TO THE SMOKE CONTROL MODE UPON ACTIVATION OF A DETECTOR.

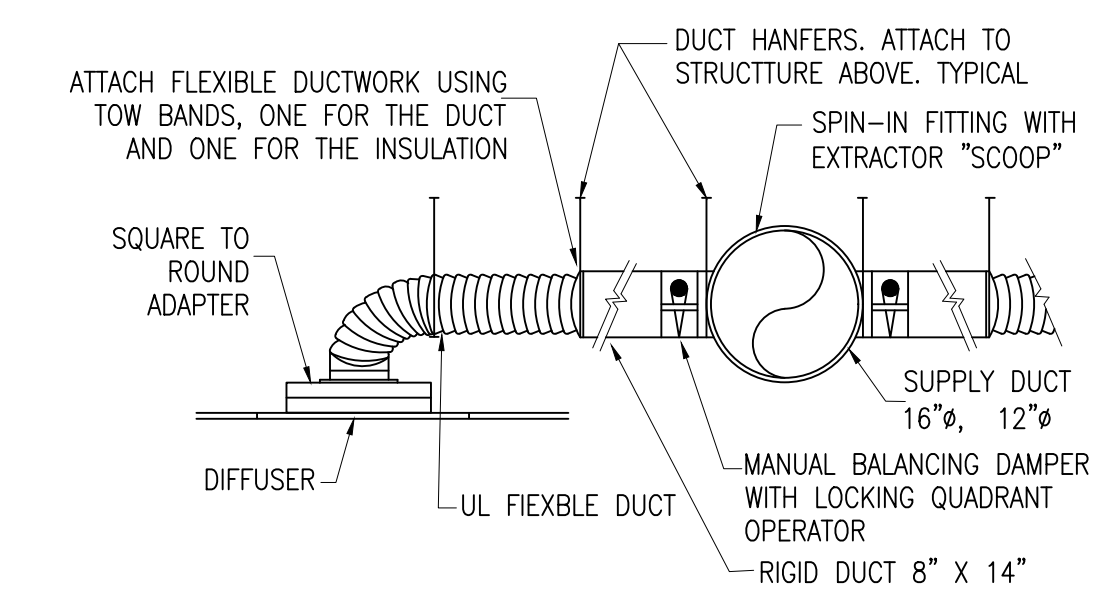
AIR DISTRIBUTION DUCT		
Ø	FROM (CFM)	TO (CFM)
10"	221	400
12"	401	680

AIR HANDLER UNIT SCHEDULE

SYM	MFG.	MODEL NO.	AIR QUANTITY		E.S.P. *W.C.	FAN MOTOR H.P.	VOLTS-Ø-Hz	MCA	MDCP	WEIGHT	SIZE (WxDxH)
			S. A.	D. A.							
AHU-1 (HEAT PUMP)	GOODMAN	ARUF61C14	2000	500	0.5*	3/4	208/230-1-60	4.6	15	155	24.5x21x58
AHU-2 (HEAT PUMP)	GOODMAN	ARUF36C14	1120	0	0.3*	1/3	208/230-1-60	4.0	15	116	21x21x49

HEAT PUMP SCHEDULE

SYM	MFG.	MODEL NO.	VOLTS-Ø-Hz	MCA	MDCP	COOLING CAPACITY	HEATING CAPACITY	SEER	COP	WEIGHT
HP-1	GOODMAN	GSZ140601	208/230-1-60	34.3	60	60,000 BTUH	60,000 BTUH	14.0	3.66	277
HP-2	GOODMAN	GSZ140361	208/230-1-60	20.2	35	36,000 BTUH	36,000 BTUH	14.0	3.66	173



DUCT CONNECTION DETAIL
SCALE: N.T.S.

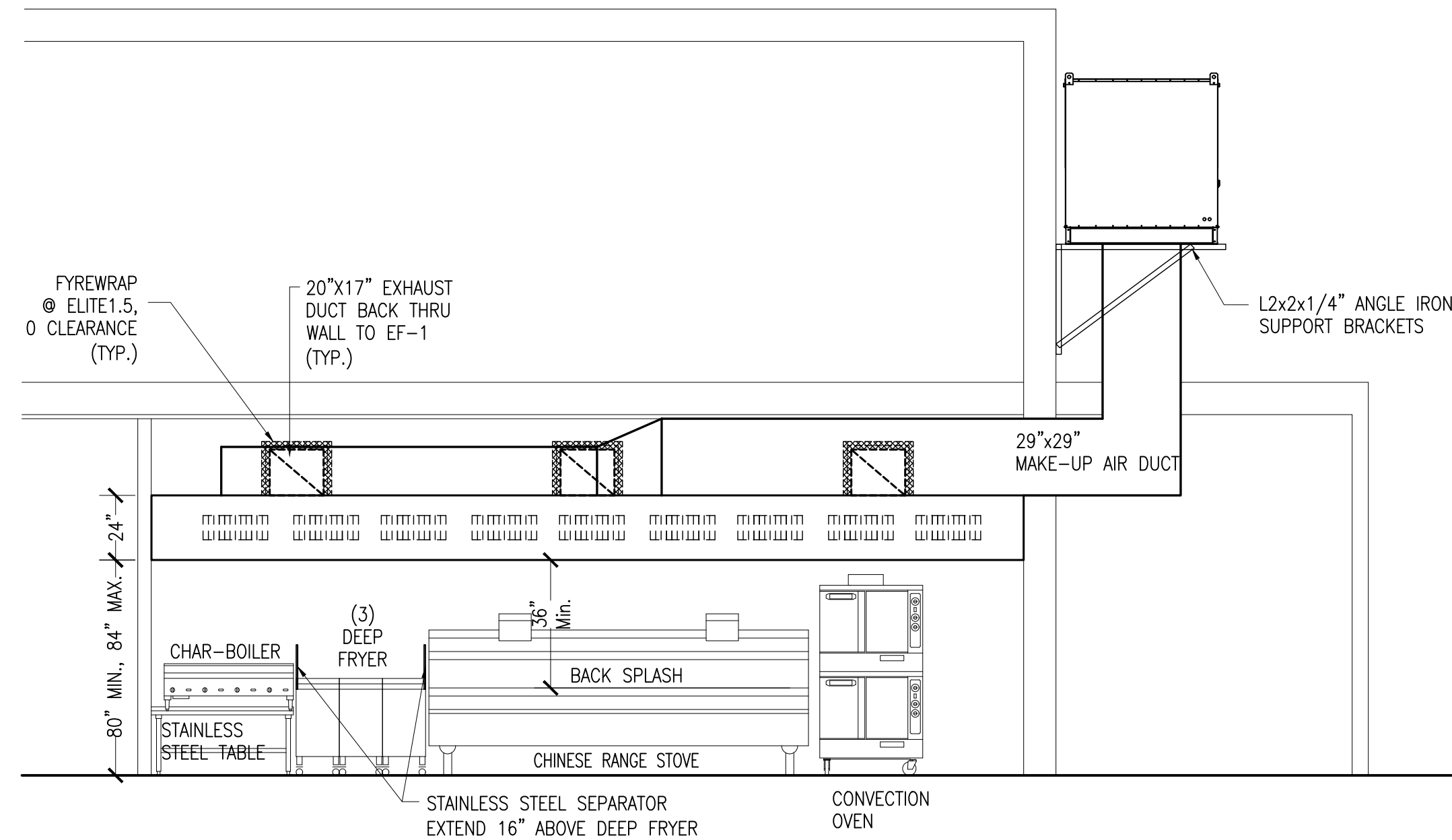
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PROPOSED JAPANESE TAKE-OUT RESTAURANT ON FIRST FLOOR AND RENOVATION OF ONE UNIT RESIDENTIAL ON SECOND FLOOR
621 SUMMIT STREET, KING OF PRUSSIA, PA 19406

DATE:	08/28/2023
SCALE:	AS NOTED
JOB NO.:	202331
SHEET	

M-1



VENTILATION PLAN

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

EXHAUST FAN INFORMATION

FAN UNIT NO	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	MCA	MOCP	WEIGHT (LBS)	SDNES
EF-1	1	FABI36DD-RM-S	FLOAIRE	10,800	1.000	637	DDP, PREMIUM	5.000	3.27	1	208	30.8	40	1,200	18.8

MUA FAN INFORMATION

FAN UNIT NO	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	MCA	MOCP	WEIGHT (LBS)	SDNES
MUA-1	1	SA30D	FLOAIRE	10,260	0.500	1,047	DDP, PREMIUM	5.000	4.31	3	208	30.8	40	550	21.3

Access Door - High Temp (LHTAD)

Detail

- Provides easy access to high temperature duct systems and grease duct.
- Tested to 28" w.g. with no leakage noted.
- Tested to negative 30" w.g. with no leakage noted.
- Meets NFPA 96.
- Available in 10x14, 12x16 and 16x17.
- Stamped from 16 gauge.
- Ceramic fiber gasket (2,300°F) ensures an air tight seal.
- Zinc coated wing nuts are easily turned by hand.
- Self adhesive neoprene is provided for easy installation.
- Zinc coated conical springs installed between the inner and outer door.
- Available in galvanized, black iron and stainless steel.
- Available in double seal.
- The LHTAD access doors have also been qualified for use with FireWrap's fire rated grease duct enclosure systems. Listed by Intertek Testing Services, approved for FireWrap Elite 1.5 Duct Insulation systems tested per ASTM E-2336 and UL 1976.

Profile

- Available sizes: 10x14 Flat, 12x16 Flat, 16x17 Flat, 10x14 Flat, 12x16 Flat, 16x17 Flat, 10x14 Flat, 12x16 Flat, 16x17 Flat.

CONTACT

Office: 888.933.7800
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 Suite 1102
 Canonsburg, PA 15317
 www.cleveland.com

UNIFRAX Product Information Sheet

FireWrap® Elite™ 1.5 Duct Insulation - Grease Duct ASTM E2336 System

Introduction
 Unifrax's FireWrap® Elite™ 1.5 Duct Insulation is a two-layer flexible enclosure for one- and two-hour rated commercial kitchen grease ducts and hazardous exhaust ducts including chemical fume ducts. FireWrap Elite 1.5 Duct Insulation is tested per ASTM E-2336 and is acceptable as an alternate to a traditional fire-rated shaft. Installed as a two-layer system, FireWrap Elite 1.5 complies with AC101 and the 2006 Edition of the International Mechanical Code (IMC). FireWrap Elite 1.5 Duct Insulation offers the following product features:

- Complies with 2006 IMC and UMC
- Tested per ASTM E-2336
- Two-layer system; inner layer utilizes butt joint
- High-temperature, bioleakage insulation
- Zero clearance to combustibles, at any location
- 2-hour fire endurance rating
- Alternate to shaft enclosure
- GREENGUARD listed for Microbial Resistance

Product Components
 Core Material: FireWrap Elite 1.5 incorporates Insulfrax® Thermal Insulation as its core material. Insulfrax is a high-temperature insulation made from a silica, magnesia, silica chemistry designed to enhance bioleakage. It provides excellent insulation in a noncombustible blanket product form.

Encapsulating Material: The core insulation blanket is completely encapsulated in an aluminum foil Respacas reinforced scrim covering. This scrim provides additional handling strength as well as protection from moisture absorption and tearing.

Typical Product Properties

Intertek Laboratories (IPL) Listed	File 14870, Design No. UNIFRAX 120-05, UNIFRAX 120-17, UNIFRAX 120-16
ASTM E-2336 (AC101)	Zero Clearance to Combustibles at all locations on wrap
ASTM E-2336 (AC101) Internal Grease Duct Test	Zero Clearance to Combustibles at all locations on wrap
ASTM E-119 Full Scale Enclosure Test	2-hour Fire Resistance Rating
ASTM E-119 Vertical Wall Test	2-hour Fire Resistance Rating
ASTM E-845-723 Surface Burning Characteristics	UL Class 0 - Non-combustible
ASTM E-814 Firestop Test	1- and 2-hour Fire Resistance Ratings
ASTM E-159 Non-Combustibility Test	Passes
ASTM C-518 Durability Test	Passes
ASTM C-518 Thermal Resistance	R Value = 6.19 (413 per inch)
ASTM D-5520-03 Microbial Resistance	Resistant to Mold Growth

Data are average results of tests conducted under standard procedures and are subject to variation. Results should not be used for specification purposes.

Complies with NFPA 96 (as amended), 1997 ICBO Uniform Mechanical Code (UMC), 1997 ICBO Uniform Building Code (UBC), 2000, 2003 and 2006 International Mechanical Code (IMC), 2000, 2003 and 2006 APBO UMC Uniform Mechanical Code.

California State Fire Marshal Listing No. 2440-1428-100

CALCULATIONS

PER 2018 IMC, 507.5.3
 WALL MOUNT CANOPY: 400 CFM PER LINEAR FOOT

EXHAUST HOOD:
 EXHAUST AIR: 27' X 400 = 10,800 CFM
 EXHAUST DUCT SIZE: 32" X 32" / 144 = 7.11 SQ. FT.
 EXHAUST DUCT AIR VELOCITY: 10,800 / 7.11 = 1,519 FPM

MAKE-UP AIR: 85% X 10,800 = 9,180 CFM
 MAKE-UP AIR DUCT SIZE: 29" X 29" / 144 = 5.84 SQ. FT.
 MAKE-UP AIR DUCT AIR VELOCITY: 9,180 / 5.84 = 1,572 FPM

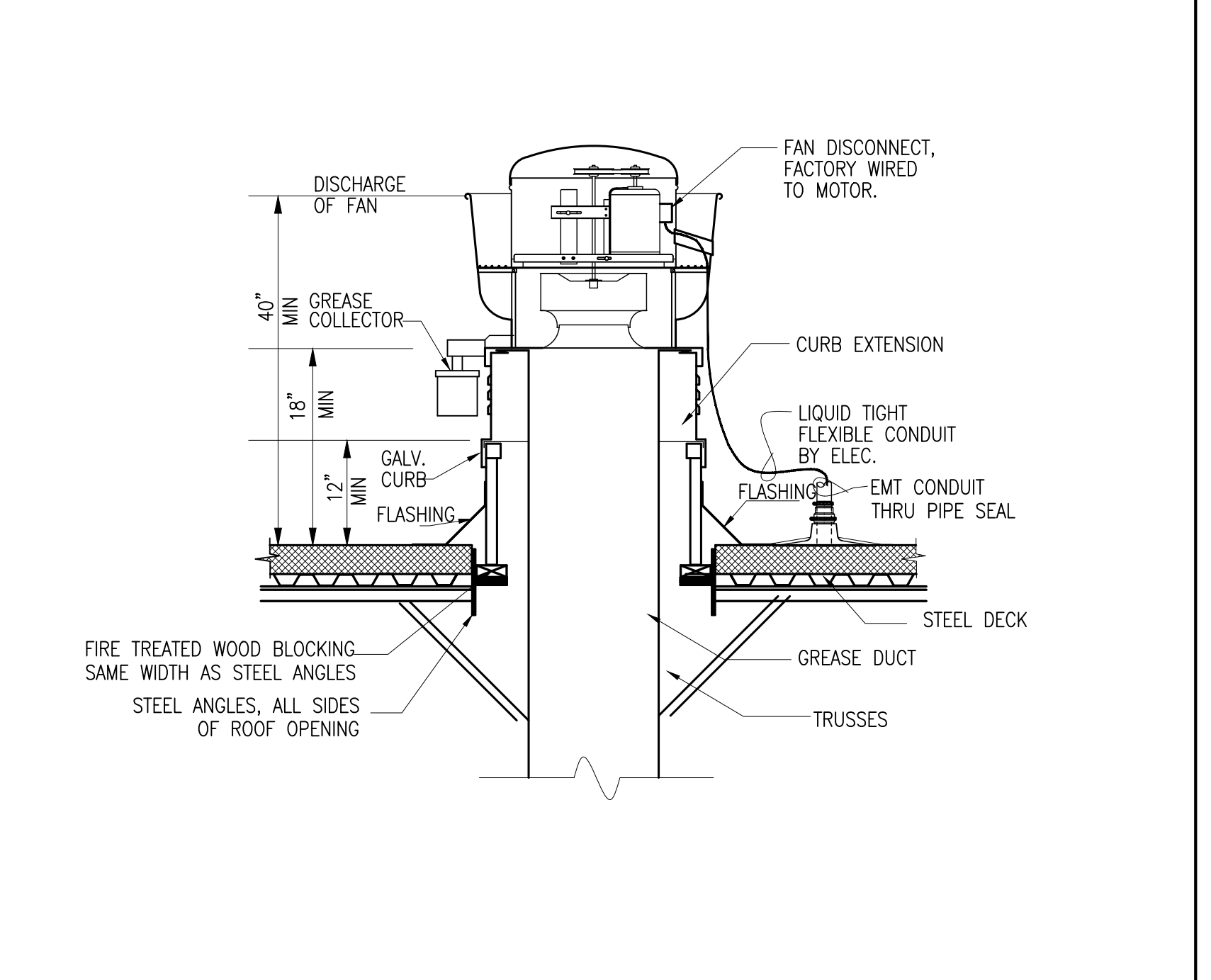
NOTES

- HOOD FIRE SUPPRESSION CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE CODE COMPLIANCE FOR APPROVAL AND PERMIT SEPARATELY.
 - EXHAUST DUCT SHALL BE 18" AWAY FROM ANY COMBUSTIBLE MATERIAL.
 - EXHAUST FAN SHALL BE 10' AWAY OR 36" ABOVE ANY INTAKE AIR FAN.
- SYSTEM INTERCONNECTION (IMC 507.2.1.1)**
 EXHAUST HOODS SHALL AUTOMATICALLY OPERATE DURING COOKING OPERATIONS IN COMMERCIAL KITCHEN BY MEANS OF HEAT SENSORS

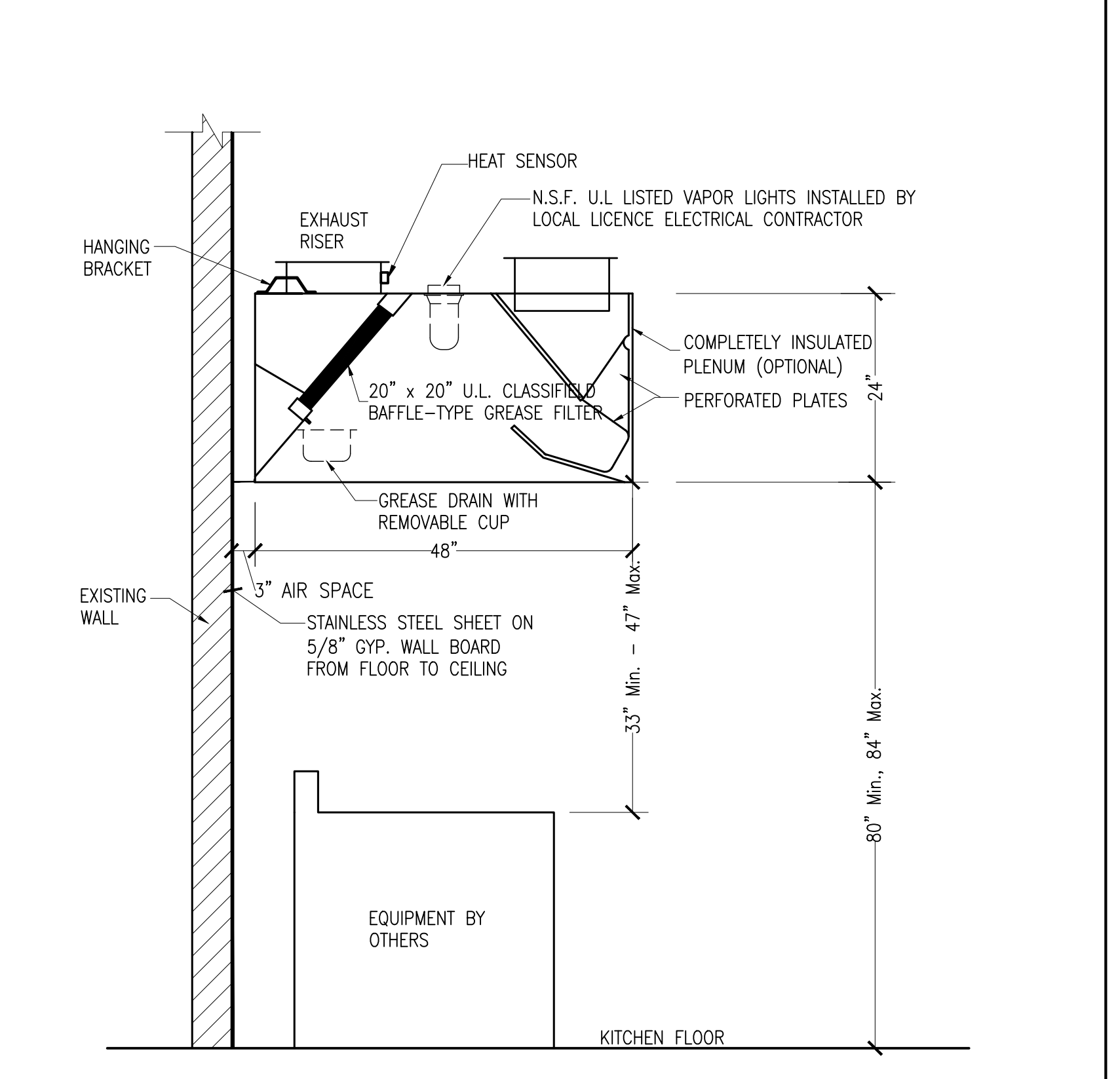
GENERAL NOTES

- VENTILATORS & DUCT SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SECTION 506.3.1 THROUGH 506.3.13.3 OF 2018 INTERNATIONAL MECHANICAL CODE.
- EXHAUST HOOD SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SECTION 507.1, 507.2, 507.4, 507.6, 507.7 THROUGH 507.17.
- TYPE I HOODS SHALL BE CONSTRUCTED OF STEEL NOT LESS THAN 0.043 INCH (1.09MM) (NO. 18 MSG) IN THICKNESS, OR STAINLESS STEEL NOT LESS THAN 0.037 INCH (0.94MM) (NO. 20 MSG) IN THICKNESS (507.4).
- EXHAUST FAN HOUSINGS SERVING TYPE I HOODS SHALL BE CONSTRUCTED OF STEEL (506.3.1). EXHAUST FAN MOTORS SHALL BE LOCATED OUTSIDE OF THE EXHAUST AIRSTREAM (506.3.1.1).
- GREASE DUCTS SERVING TYPE I HOOD SHALL BE CONSTRUCTED OF STEEL NOT LESS THAN 0.055 INCH (1.4MM) (NO. 16 GAUGE) IN THICKNESS OR STAINLESS STEEL NOT LESS THAN 0.044 INCH (1.1 MM) (NO. 18GAUGE) IN THICKNESS (506.3.2). ALL SEAMS, JOINTS, AND PENETRATION OF GREASE DUCTS SHALL BE MADE WITH A CONTINUOUS LIQUID-TIGHT WELD OR BRAZE MADE ON THE EXTERNAL SURFACE OF THE DUCT SYSTEM (506.3.3). DUCT JOINTS SHALL BE BUTT JOINTS OR OVERLAPPING DUCT JOINTS OF EITHER THE TELESCOPING OR BELL TYPE PER 506.3.3.1. DUCT-TO-HOOD JOINTS PER 506.3.3.2, DUCT-TO-EXHAUST FAN CONNECTIONS PER 506.3.3.3, VIBRATION ISOLATION CONNECTOR FOR CONNECTING A DUCT TO A FAN SHALL BE PER 506.3.3.4, AND GREASE DUCT SUPPORTS PER 506. 3.4.
- GREASE DUCT SYSTEMS SERVING A TYPE I HOOD SHALL HAVE A CLEARANCE TO COMBUSTIBLE CONSTRUCTION OF NOT LESS THAN 18 INCHES (457 MM) (506.3.7).
- THE FIRE EXTINGUISHER SYSTEM MUST BE INSTALLED BY A LOCAL LICENSED COMPANY, SEPARATE PLAN MUST BE SUBMITTED TO LOCAL FIRE DEPT. FOR APPROVAL.
- ALL ELECTRICAL WORK MUST BE DONE BY LOCAL LICENSED ELECTRICIAN.

ROOF TOP UNIT SUPPORT DETAIL



HOOD SECTION VIEW (TYP.)



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M-2

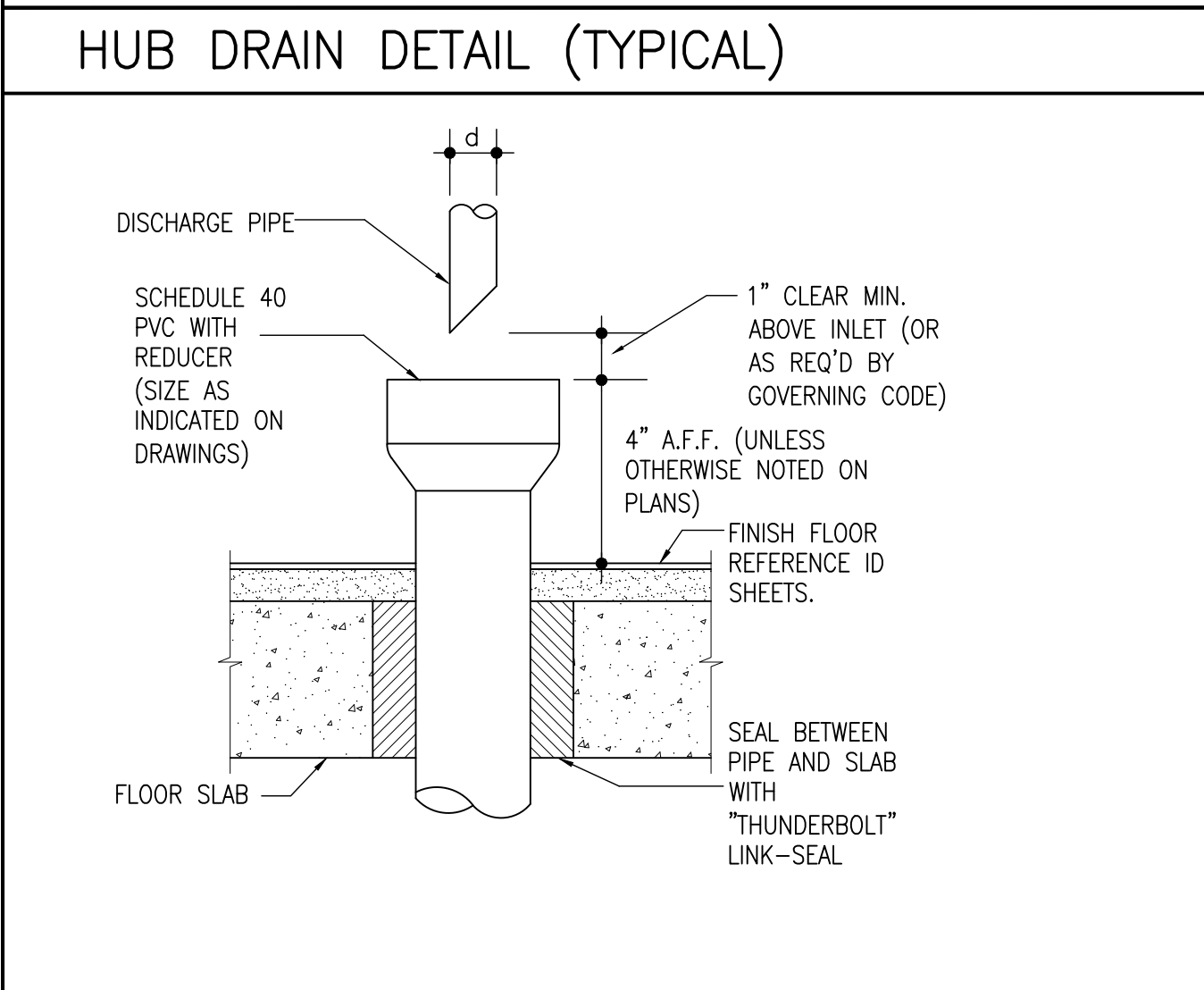
PLUMBING REQUIREMENTS

- ALL PLUMBING SHALL COMPLY WITH THE LOCAL PLUMBING & HEALTH DEPARTMENT.
- INSULATE ALL HOT & COLD WATER LINES ABOVE GRADE WITH 3/4" FIBERGLASS PIPE INSULATION WITH VAPOR BARRIER.
- VERIFY ALL FINAL CONNECTION TO KITCHEN EQUIPMENT WITH KITCHEN SUPPLIER VERIFY ROUGH-IN REQUIREMENTS WITH SAME.
- MATERIALS SHALL BE AS FOLLOWS:
 - WATER PIPING TO BE TYPE "K" COPPER BELOW GRADE. TYPE "L" COPPER ABOVE GRADE.
 - WASTE PIPING TO BE CAST IRON, PVC OR ABS PLASTIC PIPE.
 - VENTS TO BE CAST IRON, GALVANIZED STEEL, OR PVC PLASTIC PIPE.
 - GAS PIPING TO BE SCHEDULE 40, BLACK STEEL PIPE. PROVIDE AUTOMATIC GAS SHUT-OFF
- ALL INDIRECT WASTES EXCEEDING 24" IN LENGTH SHALL BE TRAPPED.
- PROVIDE CLEANOUTS REQUIRED, AND AT THE BASE OF ALL STACKS.
- ALL MATERIALS USED WITHIN RETURN AIR PLENUMS SHALL BE APPROVED FOR SUCH USE.
- PROVIDE FIXTURE STOPS AT ALL PLUMBING FIXTURES.
- PROVIDE ALL FITTING & ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.
- HOT WATER SUPPLIED TO LAVATORY FIXTURES SHALL NOT EXCEED 109°F. WATS MMV-US M1 OR EQUAL (COMPLY WITH ASSE-1070) SHALL BE PROVIDED ON HAND SINK & LAVATORY.
- HANDICAP PLUMBING FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE ADA REQUIREMENT & LOCAL STATE BARRIER FREE REQUIREMENTS.
- COORDINATE ALL WORK IN FIELD WITH ARCHITECTURAL, MECHANICAL & ELECTRICAL TRADES.
- VERIFY ALL EXISTING JOB CONDITIONS & AS REQUIRED FOR A COMPLETE INSTALLATION.

EQUIPMENT SCHEDULE

* ALL APPLIANCES AND FIXTURES SHALL BE LISTED, LABELED AND INSTALLED ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS OR THE ADOPTED CODES WHICH EVER IS MOST RESTRICTIVE.

NO.	QTY.	DESCRIPTION	MANUFACTURE	MODEL	LISTED	ELECTRICAL				GAS		WATER			WASTE	
						VOLT	PHS.	HP.	KW	SIZE	BTUH	C.W.	H.W.	DIR.	IND.	
001	1	KITCHEN HOOD	WIN SUPPLY	27' LONG	N.S.F.											
101	1	WATER HEATER (EXISTING)			N.S.F.											
102	1	CHINESE RANGE STOVE	WIN SUPPLY	WR-600	N.S.F.					2"	600,000 BTU	1/2"			3"	
103	3	DEEP FRYER	PICTO	SG-14	N.S.F.					3/4"	110,000 BTU					
104	1	CHAR-BROILERS	STAR	8048CB	N.S.F.					3/4"	160,000 BTU					
105	1	CONVECTION OVEN	MOFFAT	G32D5 DOUBLE STACKED	N.S.F.	115	1		0.12	3/4"	33,000 BTU					
106	1	FOOD WARMER	WIN SUPPLY	WR-600	N.S.F.					3/4"	20,000 BTU	1/2"			3"	
201	1	ICE MAKER	MANITOWOC	SD-0853W	N.S.F.	208	1		4.8			1/2"			3"	
202	3	WORKTOP REF.	TRUE	TWT-48	N.S.F.	115	1	1/5	0.6							
203	1	SANDWICH UNIT	TRUE	TSU-60-18M-B	N.S.F.	115	1	1/3	0.936							
204	1	DISHWASHER	ECOLAB	ES-2000 (LOW TEMPERATURE)	N.S.F.	115	1	3/4	1.44			1/2"			3"	
205	1	UNDER COUNTER REF.	TRUE	TUC-48	N.S.F.	115	1	1/5	0.6							
206	1	SUSHI DISP. UNIT	HOSHIZAKI	HNC-120AA	N.S.F.	115	1	1/4	0.4							
207	2	RICE COOKER	ZOJIRUSH	NYC-36	N.S.F.	115	1									
208	1	WALK-IN COOLER	AMERIKOOLER	6'-0" x 12'-0"	N.S.F.	208	1	3/4	1.512							
209	1	WALK-IN FREEZER	AMERIKOOLER	8'-0" x 6'-0"	N.S.F.	208	1	3/4	1.332							

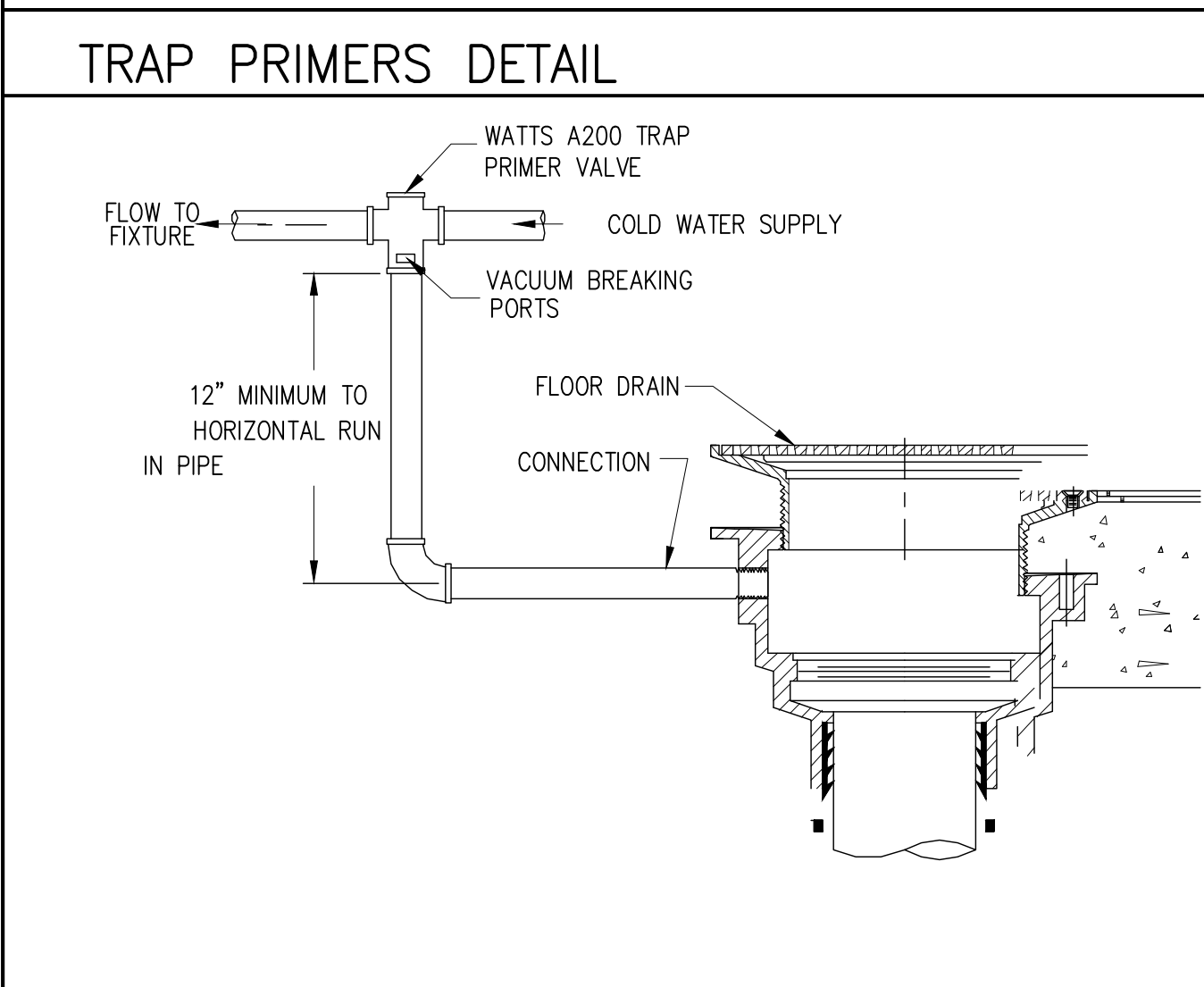


301	1	3-COMP. SINK	EAGLE	414-18-3-12 L&R	N.S.F.							3/4"	3/4"	3"
302	3	HAND SINK	EAGLE	HSA-10-F-LRS	N.S.F.							1/2"	1/2"	2"
303	1	1-COMP. SINK	EAGLE	414-18-1	N.S.F.							3/4"	3/4"	3"
304	1	MOP SINK	EAGLE	F1916	N.S.F.							1/2"	1/2"	3"
305	1	CLEAN DISHTABLE	EAGLE	CDTL-24-16/4	N.S.F.									
306	1	SOILED DISHTABLE	EAGLE	SDTR-30-16/4	N.S.F.									
307	1	SPRAY SINK	EAGLE	SR19-16-8-1	N.S.F.							3/4"	3/4"	3"
401		TABLE (Stainless Steel)	EAGLE	T3048B-BS & T3060B-BS	N.S.F.									
402		SHELF (Stainless Steel)	EAGLE	2442Z, 2460Z & 2472Z	N.S.F.									
403		WALL MOUNT SHELF (Stainless Steel)	EAGLE	PWE-14-4C, PWE14-3C	N.S.F.									

GREASE TRAP CALCULATION

CALCULATION FOR GREASE INTERCEPTOR (PER PDI-G101):
 CUBIC CONTENT OF THE FIXTURE (LENGTH X WIDTH X DEPTH)/231 CUBIC INCHES.
 ACTUAL DRAINAGE LOAD = 75% OF FIXTURE CAPACITY, CALCULATE FLOW RATE FOR 1 MINUTE PERIOD.

QTY.	FIXTURE	LENGTH (INCHES)	WIDTH (INCHES)	DEPTH (INCHES)	NUMBER OF BAYS	TOTAL VOLUME (GALLONS)	TOTAL VOLUME (X 0.75)	DRAIN TIME (MINUTES)	GPM	TOTAL REQUIRED (GPM)	TOTAL PROVIDED (GPM)
1	3 BAY SINK	24	18	13.5	3	75.74	56.81	1	56.81		
1	SPRAY SINK	19	19	6	1	9.38	7.03	1	7.03	76.82	100
1	WOK SINK	12	12	10	1	6.23	4.68	1	4.68		
1	MOP SINK	20	16	8	1	11.08	8.31	1	8.31		



MIFAB XL-MI-G LARGE CAPACITY GREASE INTERCEPTOR

Specification: MIFAB Series XL-MI-G sanitary epoxy coated inside and outside fabricated 10 gauge steel grease interceptor with flow rating of (indicate) and grease holding capacity of (indicate). Unit shall include: removable baffle assembly and cross bar, deep seal trap covered by lid, sewer gas stopper, securing bolt(s), stainless steel calibrated orifice plate, internal air relief by-pass, and steel powder epoxy coated non skid rectangular gasketed lid(s).

Function: Used in large restaurants, kitchens, institutions, industrial facilities such as food processing and packaging plants and other types of food processing areas where fat, oil and grease (FOG) drains with the wastewater. Interceptor may be installed on the ground, semi recessed or flush with the floor. Standard powder epoxy coated lid ensures maximum protection from contaminants. Sewer gas stopper prevents foul odors from entering the kitchen area through the interceptor.

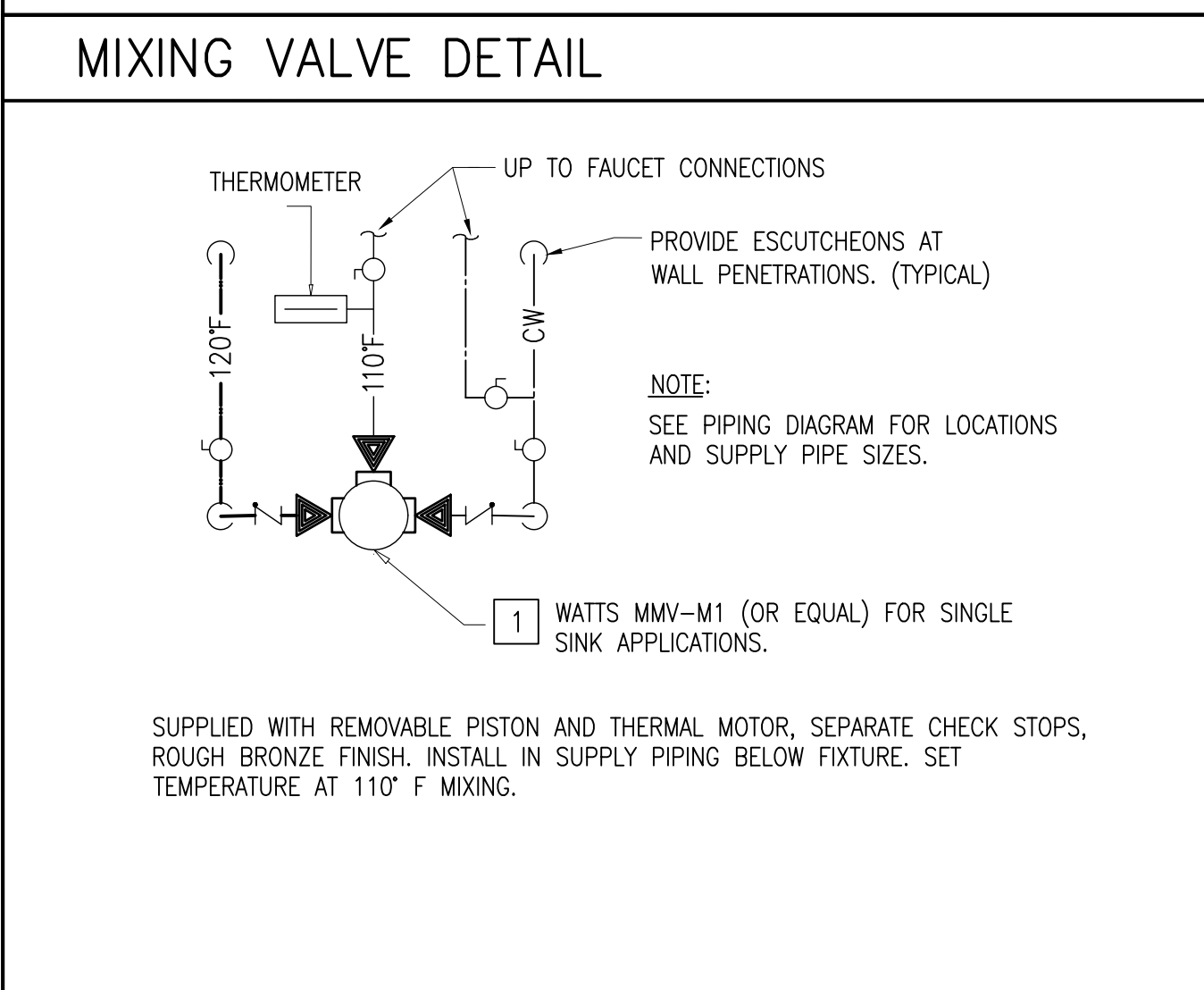
Note: The "C" dimension detailed above is from either the middle of the inlet or the outlet to the top the interceptor. The inlet and outlet dimensions are always the same.

MODEL NO.	US GPM	CAP LBS	A	B	C	D	E	F	NO. OF LIDS	NO. OF BOLTS	SHIPPING WEIGHT (LBS.)	WEIGHT WHEN FILLED WITH WATER (LBS.)
XL-MI-G-0	75	150	42 (1067)	28" (711)	6" (152)	36" (914)	3"	4 1/2"	2	8	350	1200
XL-MI-G-1	100	200	55 (1397)	37" (940)	8" (203)	26" (660)	3"	4" (102)	2	8	520	2131
XL-MI-G-2	125	250	58 (1473)	38" (965)	8" (203)	28" (711)	3"	4" (102)	3	12	600	2496
XL-MI-G-3	150	300	61" (1549)	39" (991)	8" (203)	30" (762)	3"	4" (102)	3	12	700	2911
XL-MI-G-4	200	400	70" (1778)	44" (1112)	10" (254)	34" (854)	4"	4" (102)	6	24	1050	4356
XL-MI-G-5	250	500	75" (1905)	46" (1168)	10" (254)	38" (965)	4"	4" (102)	6	24	1160	5343
XL-MI-G-6	300	600	77" (1956)	49" (1245)	12" (305)	40" (1016)	5"	4" (102)	6	24	1240	6085
XL-MI-G-7	350	700	80" (2032)	51" (1295)	12" (305)	40" (1016)	5"	4" (102)	6	24	1360	6475
XL-MI-G-8	400	800	84" (2133)	56" (1422)	14" (356)	44" (1118)	5"	4" (102)	8	32	1540	8107
XL-MI-G-9	500	1000	92" (2337)	61" (1549)	14" (356)	54" (1372)	6"	4" (102)	8	32	2150	11945
XL-MI-G-10	600	1200	102" (2591)	74" (1880)	14" (356)	62" (1575)	7"	4" (102)	9	36	3000	18105
XL-MI-G-11	750	1500	108" (2743)	79" (1990)	14" (356)	66" (1676)	8"	4" (102)	9	36	3280	20870

Note: Reduce the "A" and "B" dimensions by 1" (25) to determine the actual body length and width dimensions. The lid overhangs the body by 1/2" (13) on all four sides.

OPTIONAL VARIATIONS:

<input type="checkbox"/> Aluminum lid(s)	<input type="checkbox"/> SUFFIX -AL	<input type="checkbox"/> Special size inlet and outlet specify	<input type="checkbox"/> SUFFIX -HD
<input type="checkbox"/> Anode pack	<input type="checkbox"/> -AP	<input type="checkbox"/> Anchor flange	<input type="checkbox"/> -FL
<input type="checkbox"/> Enzyme port	<input type="checkbox"/> -EP	<input type="checkbox"/> H-20 traffic rated lid	<input type="checkbox"/> -H-20
<input type="checkbox"/> Extension "C" as required	<input type="checkbox"/> -C	<input type="checkbox"/> Flow control fitting	<input type="checkbox"/> -FLC
<input type="checkbox"/> Dual inlets	<input type="checkbox"/> -DI	<input type="checkbox"/> Anchor flange and membrane clamp	<input type="checkbox"/> -FLM
		<input type="checkbox"/> Heavy duty reinforced lid(s)	<input type="checkbox"/> -HD
		<input type="checkbox"/> Sediment bucket	<input type="checkbox"/> -SB
		<input type="checkbox"/> Stainless steel interceptor	<input type="checkbox"/> -SS
		<input type="checkbox"/> I.P.S. female threaded inlet and outlet	<input type="checkbox"/> -T
		<input type="checkbox"/> Lid (s) to receive tile or terrazzo	<input type="checkbox"/> -TL



- ### LEGEND:
- SW — SANITARY WASTE LINE
 - GW — GREASE WASTE LINE
 - VENT — VENT LINE
 - CW — COLD WATER LINE
 - HW — HOT WATER LINE 110'
 - ⊙ HD HUB DRAIN INDIRECT WASTE
 - CO CLEAN OUT
 - WCO WALL CLEAN OUT
 - BT BATHTUB
 - WC WATER CLOSET
 - LAV LAVATORY
 - LAV LAVATORY
 - DIS DISPOSAL
 - OPD OPEN SIGHT DRAIN

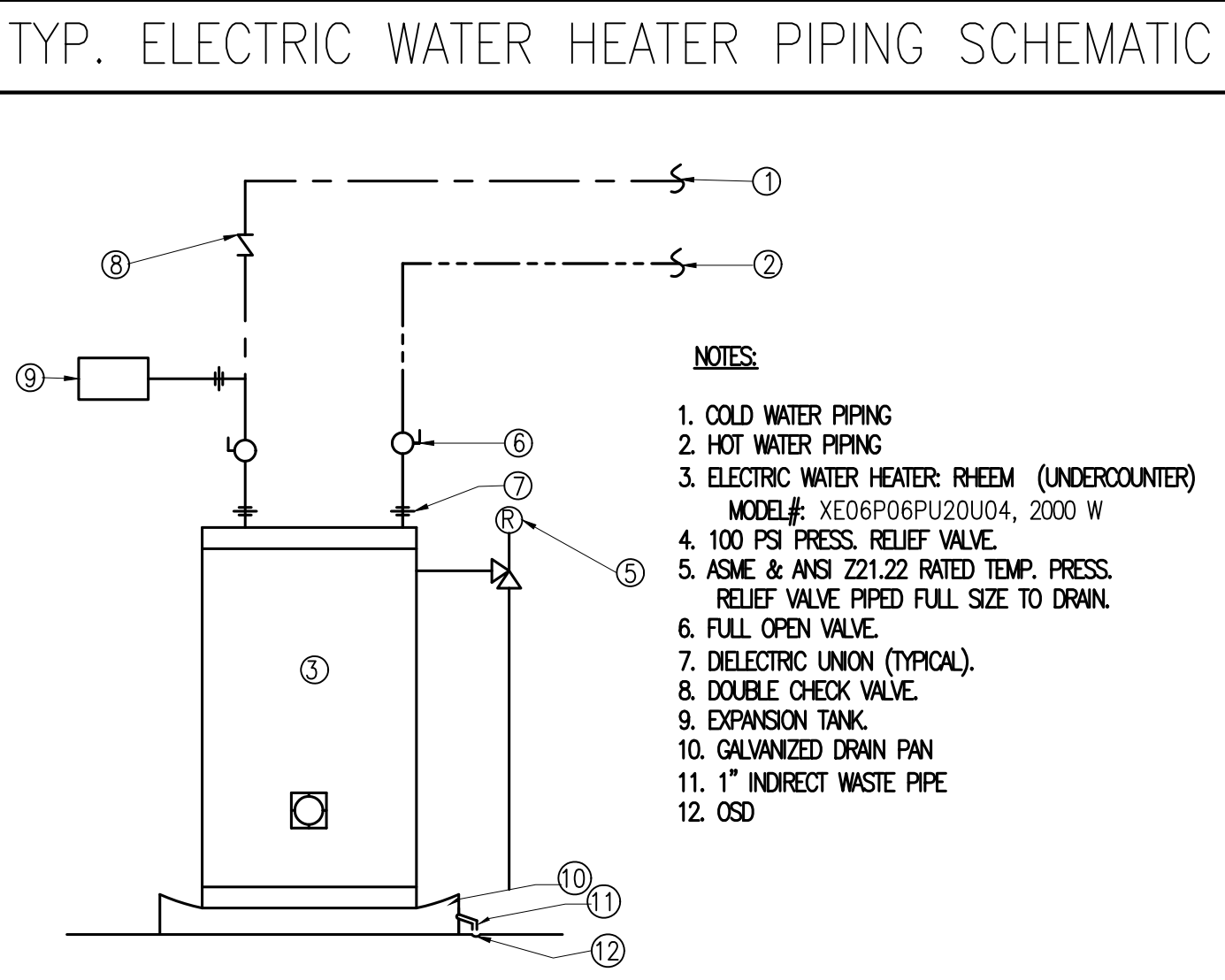
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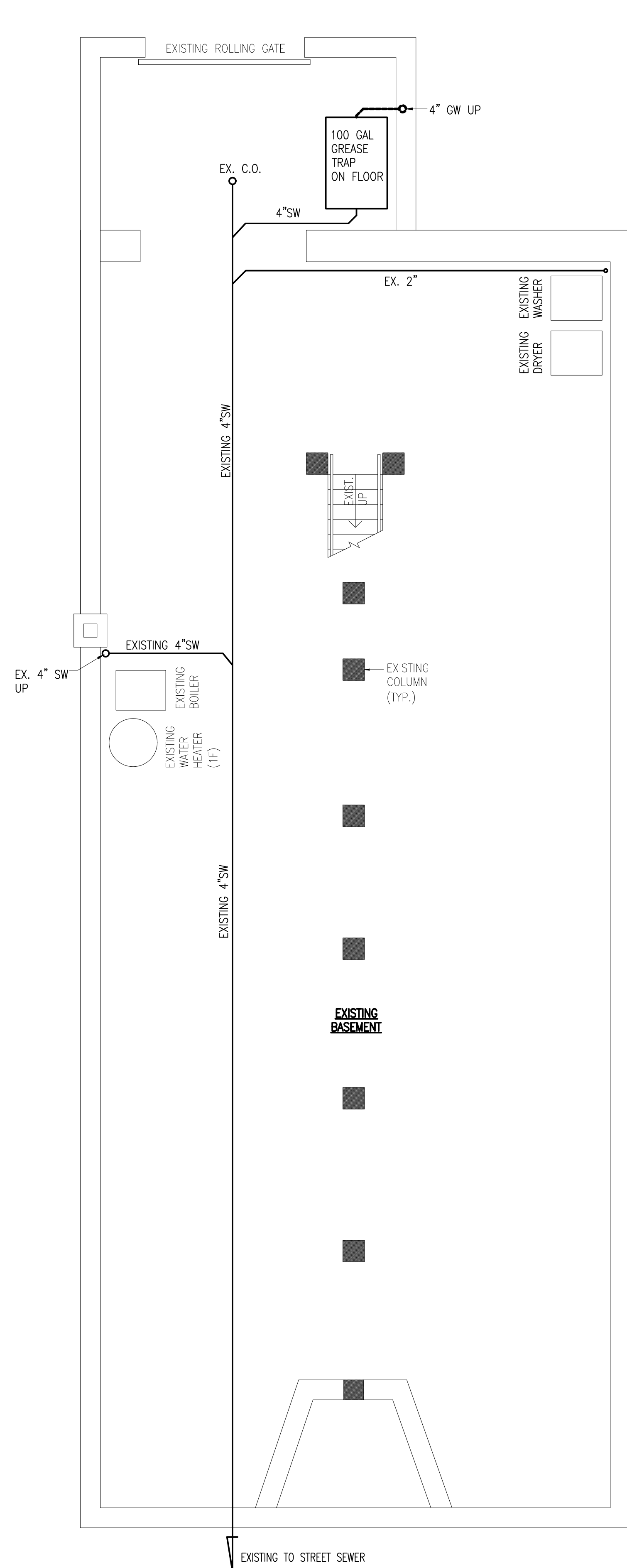
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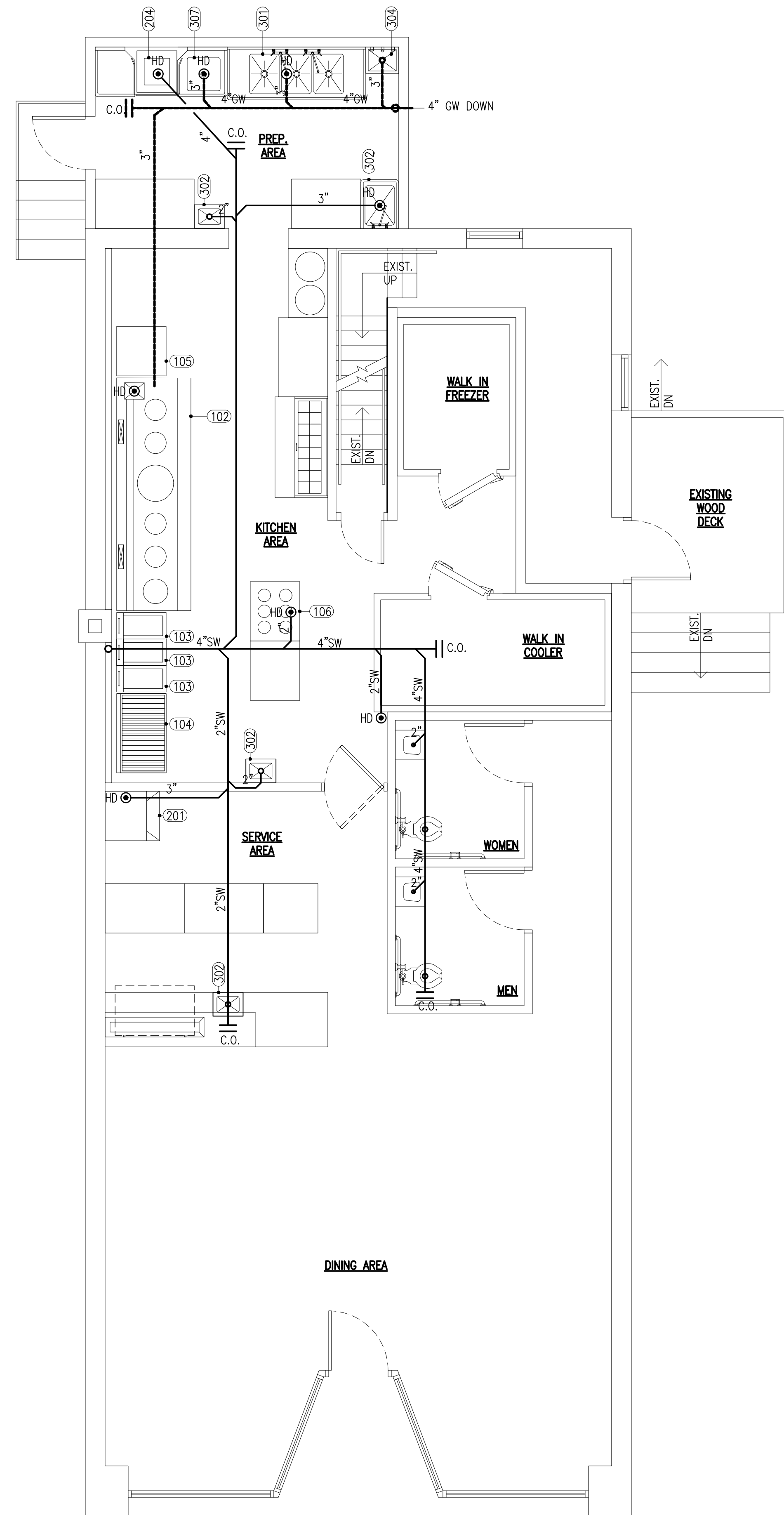
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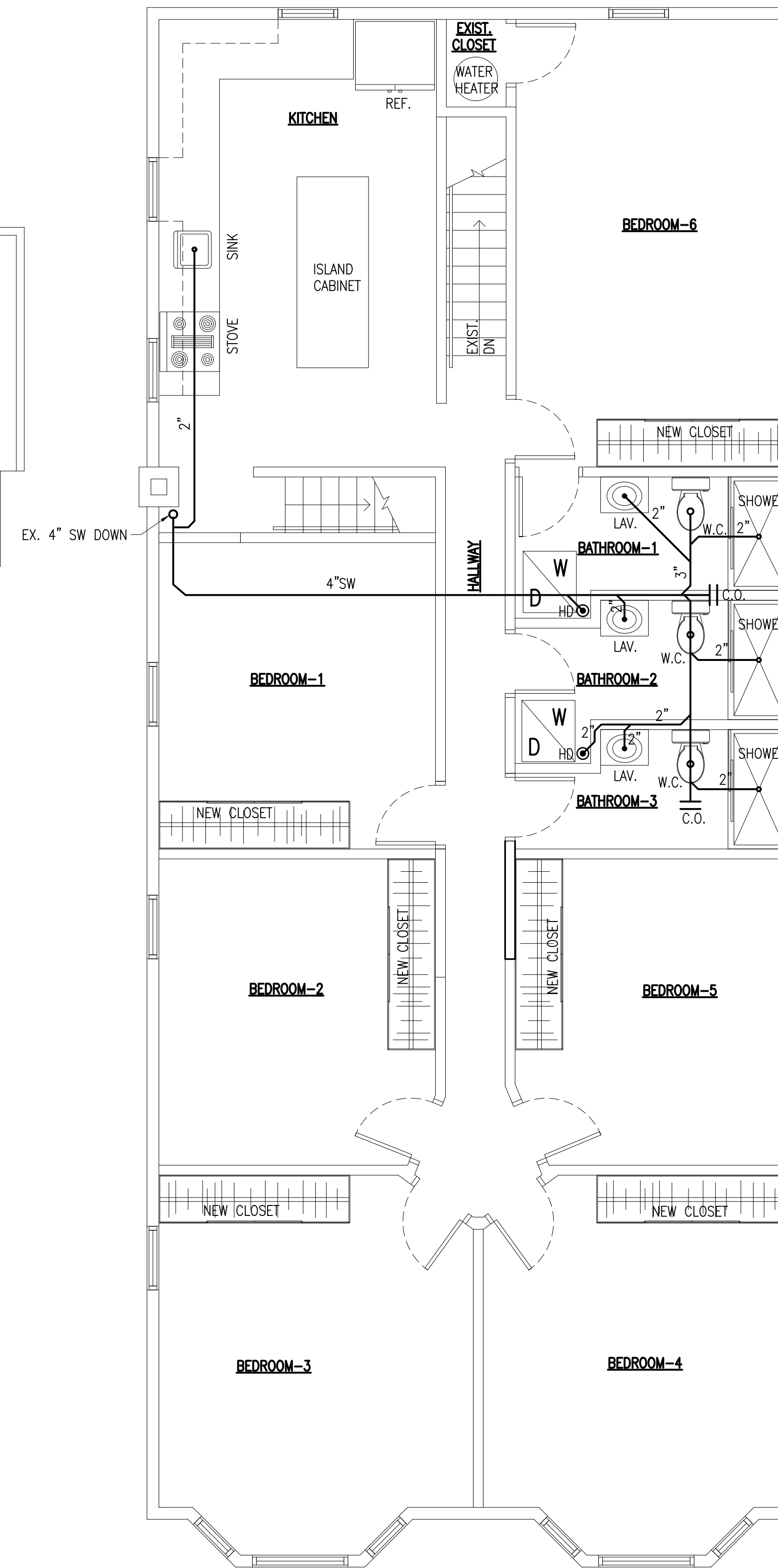
BASEMENT PLUMBING PLAN

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



FIRST FLOOR PLUMBING PLAN

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



SECOND FLOOR PLUMBING PLAN

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

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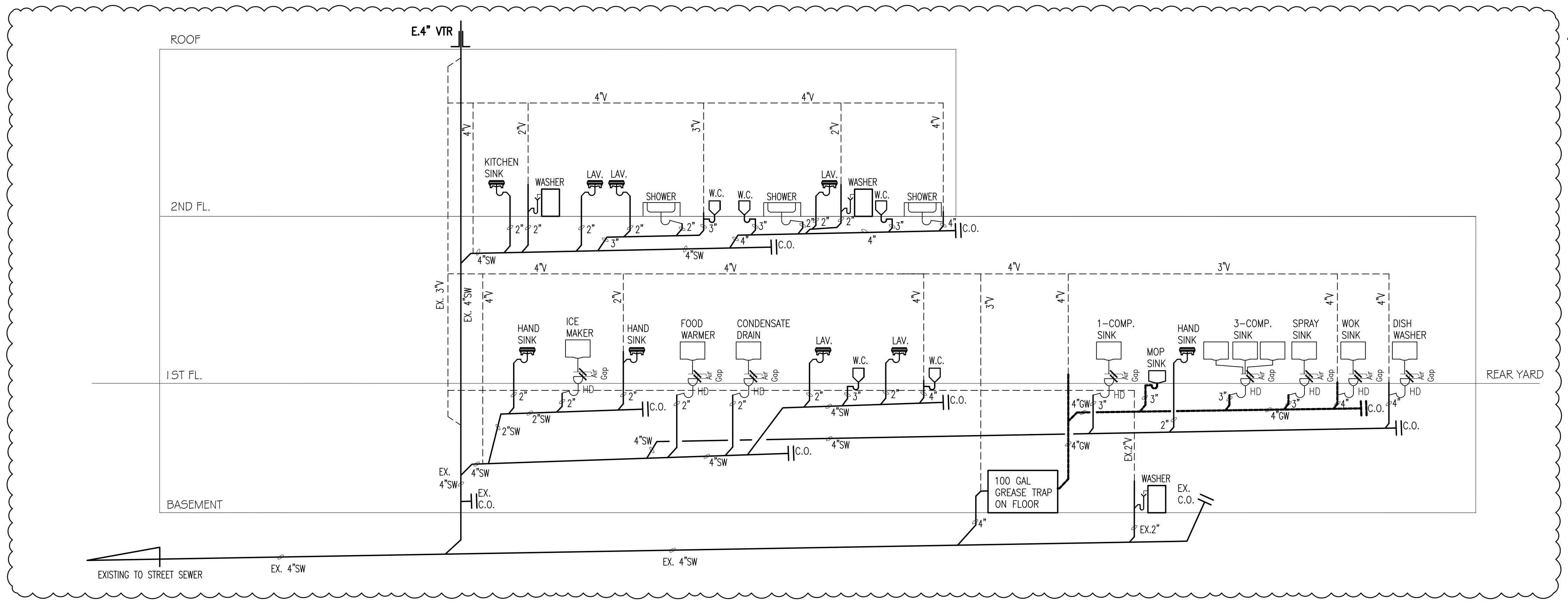
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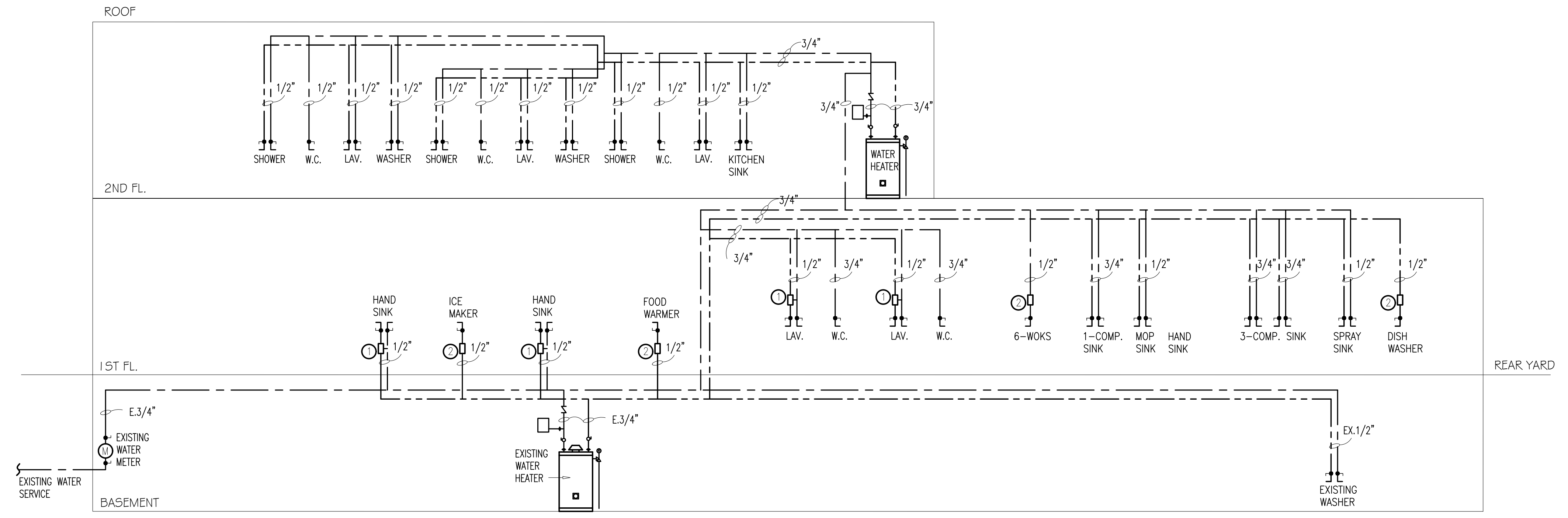
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PROPOSED JAPANESE TAKE-OUT RESTAURANT ON FIRST FLOOR AND RENOVATION OF ONE UNIT RESIDENTIAL ON SECOND FLOOR
 621 SUMMIT STREET, KING OF PRUSSIA, PA 19406

DATE: 08/28/2023
 SCALE: AS NOTES
 JOB NO.: 202331
 SHEET



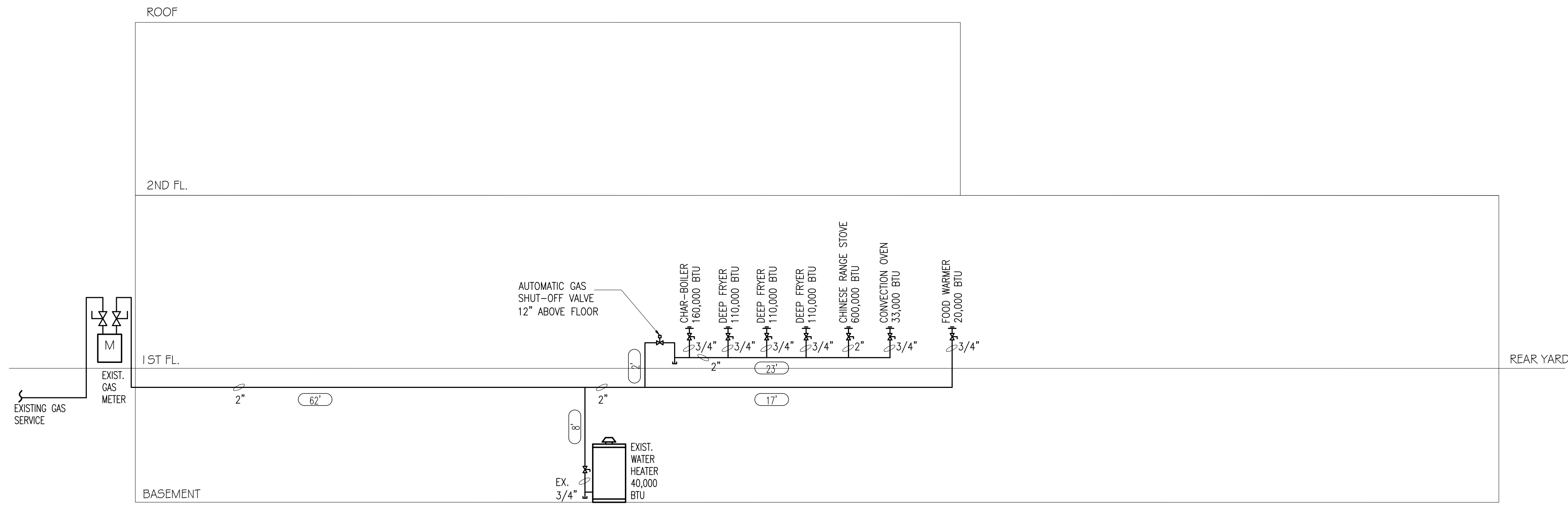
PLUMBING RISER DIAGRAM SCALE: N.T.S.



WATER RISER DIAGRAM SCALE: N.T.S.

BACKFLOW PREVENTION SCHEDULE			
DEVICE	LOCATION OR USE	DEVICE REQUIRED	STANDARD
①	MIXING VALVE	WATTS MMV-US M1 (OR EQUAL) FOR SINGLE SINK APPLICATIONS.	ASSE-1070
②	FOOD AND BEVERAGE EQUIPMENT	REDUCED PRESSURE ZONE BACKFLOW PREVENTER WATTS # 909 (OR EQUAL)	ASSE-1024

REVISIONS	BY



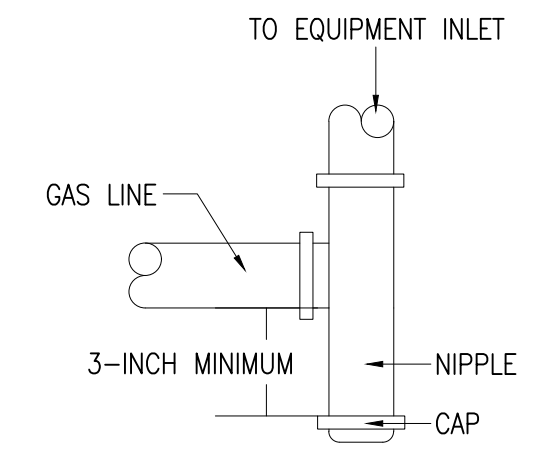
GAS RISER DIAGRAM SCALE: N.T.S.

EQUIPMENT	EACH (BTUH)	QTY	TOTAL (BTUH)
CHINESE RANGE STOVE	600000	1	600000
FOOD WARMER	20000	1	20000
DEEP FRYER	110000	3	330000
CHAR-BROILERS	160000	1	160000
CONVECTION OVEN	33000	1	33000
EXIST. WATER HEATER	50000	1	50000
TOTAL			1193000

GAS PIPING CALCULATION BASED ON TABLE 402.4 (2) OF IFGC-2018 EDITION MAXIMUM CAPACITY OF PIPE IN CUBIC FEET OF GAS PER HOUR FOR GAS PRESSURE LESS THAN 2 PSI AND A PRESSURE DROP OF 0.5 INCH WATER COLUMN.
 (BASE ON A 0.60 SPECIFIC GRAVITY GAS)
 TOTAL RUN FROM POINTS OF DELIVERY TO THE REMOTE OUTLET 90 FT.
 TOTAL BTUH = 1,193,000 BTUH

- NOTE: (IFGC 2018, SECTION 410.2)
- A TEE FITTING WITH ONE OPENING CAPPED OR PLUGGED SHALL BE INSTALLED BETWEEN THE MP REGULATOR AND ITS UPSTREAM SHUTOFF VALVE. SUCH TEE FITTING SHALL BE POSITIONED TO ALLOW CONNECTION OF A PRESSURE-MEASURING INSTRUMENT AND TO SERVE AS A SEDIMENT TRAP.
 - A TEE FITTING WITH ONE OPENING CAPPED OR PLUGGED SHALL BE INSTALLED NOT LESS THAN 10 PIPE DIAMETERS DOWNSTREAM OF THE MP REGULATOR OUTLET. SUCH TEE FITTING SHALL BE POSITIONED TO ALLOW CONNECTION OF A PRESSURE-MEASURING INSTRUMENT.

SEDIMENT TRAP DETAIL



NOTE:
 SEDIMENT TRAP SHALL BE INSTALLED ON THE SUPPLY GAS PIPE FOR HVAC UNIT AND EACH APPLIANCE EXCEPT RANGES.

HAIGANG B. LI
 328 PRICE AVE. NARBERTH, PA 19072
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