INTERIOR UP-FIT FOR
VEF HOLDINGS I, LLC

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVENUE - UNIT 1
DENVER, COLORADO 80220

STORE #: 6087

SCHEDULE OF RESPONSIBILITY

NOTE: SEE EQUIPMENT SCHEDULE FOR DIVISION OF EQUIPMENT ORDERS, SUPPLY AND INSTALLATION RESPONSIBILITY

		LANDLORD		CONTRACTOR		MARCO'S OWNER VENDOR	
		FURNISH	INSTALL	FURNISH	INSTALL	FURNISH	INSTALL
FLOOR WORK DEMO	SAWCUT SLAB FOR NEW IN-FLOOR PLUMBING			X	X		
	REPAIR, LEVEL AND SLOPE FOR FINISHES AND TRANSITION			X	X		
	INSTALL NEW CONC. SLAB			X	X		
FLOOR COVERINGS	VINYL COMPOSITION TILE						
	CERAMIC TILE, BASE AND GROUT			X	X		
	QUARRY TILE, BASE AND GROUT			X	X		
DEMISING WALLS	FRAMING & GYPSUM BOARD	X	X				
	U.L. PENETRATION CAULKING AT RATED ASSEMBLIES			X	X		
	INSTALL GYPSUM BOARD ON EXISTING FRAMING						
	ADDITIONAL PLYWOOD AND GYPSUM			X	X		
INTERIOR PARTITIONS	F.R.P. PANELS, WAINSCOTS, AND TILE WAL			X	X		
	PAINTING AND STAINING			X	X		
	GYPSUM BOARD CEILING AND SOFF			X	X		
	LAY-IN CEILING WITH SUSPENSION SYSTEM			X	X		
	DOORS, FRAMES AND HARDWARE			X	X		
	MENU BOARD SOFFIT			X	X		
STORE-FRONT	RELOCATE EXISTING DOOR/ADD NEW DOOR						
	NEW CANVAS AWNING						
	PATCH AND REPAIR EXISTING/FINISH TO MATCH EXISTING						
FURNISHINGS/ EQUIPMENT	MILLWORK			X	X		
	COUNTERS			X	X		
	FURNITURE			X	X		
	KITCHEN EQUIPMENT				X	X	
	EXHAUST HOOD, FANS				X	X	
	OUTDOOR TABLES / CHAIRS / UMBRELLAS						
SIGNAGE	EXTERIOR SIGN (SEPERATE PERMIT)					X	X
	MENU BOARDS				X	X	
	INTERIOR WALL GRAPHICS				X	X	
HVAC	NEW A.C. UNIT, SUSPENSION AND MOUNTING SYSTEM			X	X		
	WIRING AND CONNECTION			X	X		
	DUCTWORK AND DAMPERS			X	X		
	HVAC GRILLS			X	X		
	THERMOSTATS AND CONTROLS			X	X		
	CONTROL WIRE (LOW VOLTAGE			X	X		
	TOILET EXHAUST FAN			X	X		
PLUMBING	EXISTING WATER SERVICE TO SPACE			X	X		
	EXISTING METER NOT TO SPACE						
	FINAL CONNECTION			X	X		
	HVAC CONNECTIONS			X	X		
	GAS PIPING A/C			X	X		
	WATER HEATER			X	X		
	RESTROOM PLUMBING FIXTURES			X	X		
	GREASE INTERCEPTOR			X	X		
ELECTRICAL	MAIN ELECTRICAL PANEL TO SPACE			X	X		
	NEW ELECTRICAL SUB-PANEL			X	X		
	EQUIPMENT ROUGH-IN AND FINISH			X	X		
	LIGHT FIXTURES, MOUNTING, ACCESSORIES, AND LAMPS			X	X		
	DATA CABINET					X	X
	EXIT/EMERGENCY LIGHT SYSTEM			X	X		
	ALARM SYSTEM					X	X
	P.O.S. CONDUIT, JACKS, & CABLES (CAT5e)			X	X		
	P.O.S EQUIPMENT INSTALLATION					X	X

GENERAL NOTES:

1. THESE DRAWINGS ARE AN INSTRUMENT OF CONDITIONAL SERVICES. THE ARCHITECT TAKES NO RESPONSIBILITY FOR ACTUAL FIELD CONDITIONS AND CONSTRUCTION. THESE DRAWINGS ARE TO CONVEY DESIGN INTENTIONS AND CODE COMPLIANCE ONLY. ACTUAL LOCATIONS AND DIMENSIONS TO BE FIELD VERIFIED.
2. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH ALL LOCAL CODES, ORDINANCES, ETC. INCLUDING:
   - 2018 INTERNATIONAL BUILDING CODE
   - 2021 INTERNATIONAL EXISTING BUILDING CODE
   - 2021 INTERNATIONAL FIRE CODE
   - 2021 INTERNATIONAL PLUMBING CODE
   - 2021 INTERNATIONAL MECHANICAL CODE
   - 2021 INTERNATIONAL FUEL GAS CODE
   - 2023 NATIONAL ELECTRICAL CODE
   - 2021 INTERNATIONAL ENERGY CONSERVATION CODE
   - 2017 ANSI A117.1
3. ALL CONSTRUCTION MATERIAL AND INSTALLATION OF MECHANICAL, ELECTRICAL, & PLUMBING SHALL BE IN STRICT ACCORDANCE WITH ALL LOCAL CODES & ORDINANCES.
4. ALL CONSTRUCTION MATERIAL AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE 2010 AMERICAN NATIONAL STANDARD INSTITUTE (ANSI) HANDICAP CODE AND THE (ADA) AMERICAN DISABILITIES ACT.
5. COORDINATION OF ALL TRADES IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND IS ESSENTIAL TO THE COMPLETION OF THE PROJECT.
6. BY EXECUTING THE CONTRACT, THE CONTRACTOR REPRESENTS THAT HE HAS VISITED THE SITE FAMILIARIZED HIMSELF WITH THE EXISTING CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
7. NO CHANGE ORDERS WILL BE ISSUED FOR CHANGES REQUIRED IN THE WORK DUE TO AN INCOMPLETE FIELD VISIT BY THE CONTRACTOR PRIOR TO BIDDING.
8. NO CHANGE ORDERS WILL BE ISSUED FOR CHANGES REQUIRED IN THE WORK AFTER CONSTRUCTION HAS COMMENCED UNLESS SPECIFICALLY AUTHORIZED BY AN OWNERS REPRESENTATIVE.
9. AN ERROR OR OMISSION IN THESE DOCUMENTS RESULTING IN A CHANGE ORDER FOR ADDITIONAL COST AND / OR TIME SHALL NOT BE CONSIDERED A HARDSHIP OR DAMAGE TO THE OWNER TO THE EXTENT THAT THE ADDITIONAL COST AND TIME WOULD HAVE INCREASED THE BASE BID PRICE AND / OR TIME HAD THERE BEEN NO ERROR OR OMISSION IN THE DOCUMENTS AD THE TIME BIDS WERE RECEIVED. THE OWNER ACKNOWLEDGES THAT THE WORK ASSOCIATED WITH THE ERROR OR OMISSION, HAD IT BEEN INCLUDED IN THE BASE BID, WOULD HAVE AFFECTED THE TIME AND COST OF THE ORIGINAL BASE BID PRICE. THE OWNER IN NOT ENTITLED TO BENEFIT FROM FREE OR REDUCED COST OR TIME FOR WORK THAT WOULD HAVE OTHERWISE INCREASED THE CONTRACT TIME AND OR COST OF THE BASE BID HAD NO ERROR OR OMISSION BEEN IN THE BID DOCUMENTS.

Bid Set provided by:

ACT CONSTRUCTION

Submit bids to:

sgonzalez@actconstruction.com

Or by fax (972) 436-0102

GENERAL CONSTRUCTION NOTES:

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

NATIONAL ACCOUNT CONTACTS

ALL items in this section to be provided and installed by the General Contractor (GC). The GC is to contact the vendor during bid for accurate pricing.

GREASE INTERCEPTORS
SCHIER PRODUCTS
Sean Molen
National Accounts Manager
Phone 816-506-3203
Email sean.molen@schierproducts.com

*Engineered into plans. To be purchased by GC. GC to contact rep during bid for accurate pricing.

HVAC
Rheem Air Conditioning
Josh Plummer
Email: josh.plummer@rheem.com
Cell: 469-390-1139

AIR CURTAINS (if applicable)
*Engineered into plans. To be purchased by GC. GC to contact rep during bid for accurate pricing.
POWERED AIRE, INC.
Rodenbaugh
RFQ | 888.321.2473
General 724.588.3305
Cell | 724.301.7438
e-mailphilr@poweredaire.com

FRP FOR KITCHEN
MARLITE
Craig Stein
Business Development Manager
Phone 330-243-7187
Email cstein@marlite.com

FLOOR & WALL TILE
Daltile
Terrie Miller
Phone 216-409-3153
Email terrie.miller@daltile.com
*National account pricing is available nationwide.

CEILING GRID & TILE (KITCHEN & DINING)
L&W SUPPLY
Deb Sottile
Phone 773-704-7157
Email dsottile@lwsupply.com
*National account pricing is available nationwide.

PAINT
SHERWIN WILLIAMS
CJ Handwerk
Sherwin-Williams
216-390-1857
Clifton.J.Handwerk@sherwin.com
Account Number: 5528-7463-8 (New Account number coming Jan. 30th 2022, ask for Marcos Account in interim)

*National account pricing is available nationwide.

LIGHTING
CAPITOL LIGHT
Beth Ribe
Project Manger
P: 860-449-4502
Email: Beth.Ribe@capitollight.com
*National account pricing is available nationwide.

QUARTZ COUNTERTOP
WILSONART
Leslie Humphrey, LEED AP ID+C
National Account Manager
614-893-6853
humphrl@wilsonart.com

INDEX OF DRAWINGS

○ ISSUED FOR REVIEW
● REVISED & REISSUED DRAWING

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

GP|N

CHECKED BY: DKH
DRAWN BY: DKH

STATE OF COLORADO LICENSED ARCHITECT 401357

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	04-28-2025	CLIENT REQUESTED CHANGES	DKH

PROJECT NAME: 6087 INTERIOR UP-FIT
MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:
COVER SHEET & INDEX OF DRAWINGS

PROJECT NUMBER 25-025

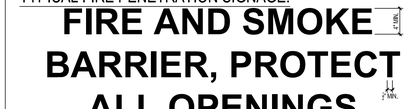
DATE 04-16-2025

SHEET NO.

G-1.0

SHEET 1 OF 3

TYPICAL FIRE PENETRATION SIGNAGE:



GENERAL NOTES:

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

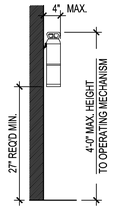
FIRE EXTINGUISHER ANALYSIS

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

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

2. FIRE EXTINGUISHER SPECIFICATION :

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



KEY NOTES

1. MAXIMUM DIFFERENCE IN FLOOR ELEVATION ON BOTH SIDES OF ALL EGRESS DOORS TO REMAIN AT ½" MAX. IN ACCORDANCE WITH THE CODE, TYP.
2. 3'-0" CLEAR AREA IN FRONT OF ELECTRICAL PANELS
3. NOT USED.
4. NOT USED
5. WALK-IN COOLER
6. FIRE EXTINGUISHERS

NOTES

PER THE 2021 INTERNATIONAL FIRE CODE (SEE G-1), SECTION 1011.3 A TACTILE SIGN STATING 'EXIT' AND COMPLYING WITH ICC A117.1 (RAISED LETTERING AND BRAILLE) IS TO BE PROVIDED ADJACENT TO EACH DOOR TO AN EGRESS STAIRWAY, AN EXIT PASSAGEWAY, THE EXIT DISCHARGE, AREA OF RESCUE, AND EXTERIOR AREA FOR ASSISTED RESCUE. SIGNS SHALL BE PLACED ON THE WALL, ON THE LATCH SIDE OF THE DOOR, 48 TO 60 INCHES OFF OF THE FLOOR.

BUILDING DATA

NAME OF PROJECT: MARCO'S PIZZA (INTERIOR ALTERATION)
ADDRESS: 6160 EAST COLFAX AVENUE - UNIT 1
DENVER, COLORADO 80220

THIS PROJECT WAS DESIGNED UNDER:
THE 2021 INTERNATIONAL BUILDING CODE (SEE GEN. NOTE 2 ON G-1)

PROPOSED USE: RESTAURANT (UNDER 50 OCCUPANTS)
CODE ENFORCEMENT JURISDICTION: CITY OF DENVER, COLORADO
GROSS AREA TENANT SPACE: 1,638 S.F. (EXISTING)
CONSTRUCTION TYPE: IIB NON-SPRINKLERED
OCCUPANCY CLASSIFICATION: B
OCCUPANT LOAD: 14 PERSONS (SEE LIFE SAFETY PLAN ON G-2)
EGRESS WIDTH REQUIRED: 14 PERSONS x .2" = 2.8" (MIN. 36" REQUIRED)
EGRESS DOORS PROVIDED: 1
(1) 4'-0" x 7'-0" STOREFRONT DOOR

PLUMBING FIXTURES REQUIRED / PROVIDED:
PLUMBING FIXTURES REQUIRED / PROVIDED PER 2902.2 (2021 I.B.C.):
REQUIRED: UNISEX: 1 TOILET & 1 LAV.
PROVIDED: UNISEX: 1 TOILET & 1 LAV.
PER SECTION 2902.3 EXCEPTION 2, PUBLIC TOILET FACILITIES ARE NOT REQUIRED AND THIS OCCUPANT LOAD HAS NOT BE USED IN THE DETERMINATION OF THE REQUIRED FIXTURE COUNT.

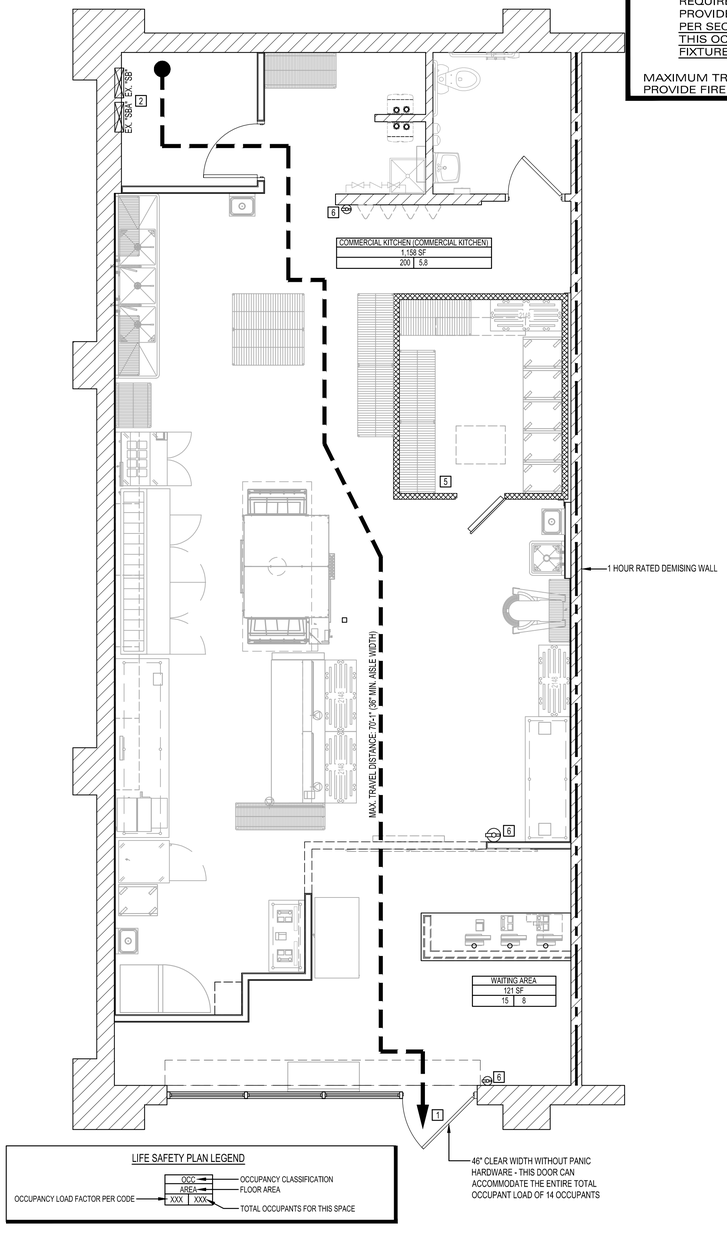
MAXIMUM TRAVEL DISTANCE: 75'-0"
PROVIDE FIRE EXTINGUISHERS IN ACCORDANCE WITH N.F.P.A. 10

DEFERRED PERMITS

THE GENERAL CONTRACTOR SHALL SUBMIT PLANS AND DOCUMENTATION FOR THE FOLLOWING ITEMS TO THE BUILDING / FIRE PLAN REVIEW OFFICES FOR THE FOLLOWING ITEMS:

1. HOOD FIRE SUPPRESSION SYSTEM
2. EXTERIOR SIGNAGE

2 KEY PLAN
1/4" = 1'-0"

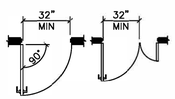


1 LIFE SAFETY PLAN
1/4" = 1'-0"

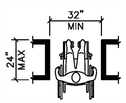
STATE OF COLORADO
401357
LICENSED ARCHITECT

LIFE SAFETY PLAN

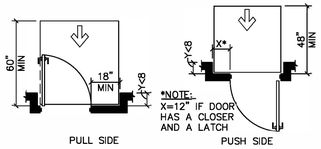
G-2.0



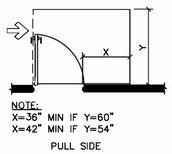
CLEAR DOORWAY



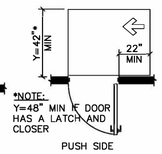
CLEAR DOORWAY WIDTH AND DEPTH

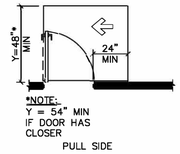


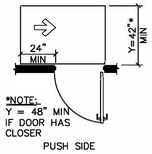
FRONT APPROACHES SWINGING DOORS



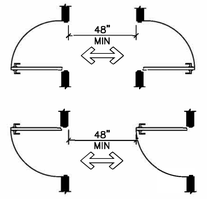
HINGE SIDE APPROACHES SWINGING DOORS





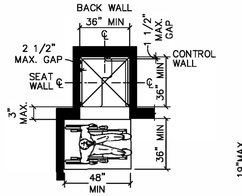


LATCH SIDE APPROACHES SWINGING DOORS

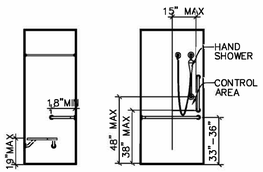


TWO HINGED DOORS IN SERIES

DOORS



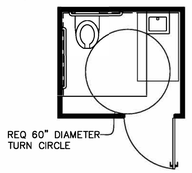
TRANSFER TYPE SHOWER COMPARTMENT



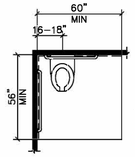
CONTROL WALL

SHOWERS

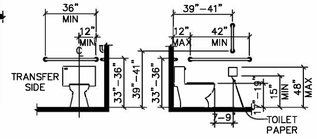
NOTE:
SEE FIXTURE AND ACCESSORY REQUIREMENTS THIS SHEET.



SINGLE OCCUPANT TOILET



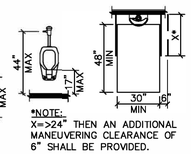
CLEAR FLOOR SPACE AT WATER CLOSETS



GRAB BARS AT WATER CLOSETS

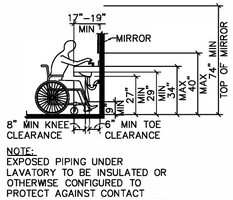
TOILET ROOMS

WATER CLOSETS

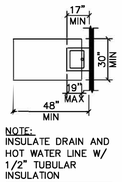


HEIGHT AND CLEAR FLOOR SPACE

URINALS

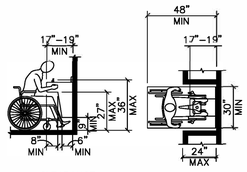


LAVATORY CLEARANCE

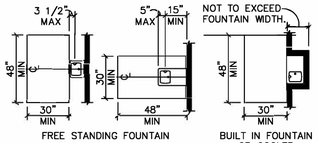


CLEAR SPACE FOR LAVATORIES

LAVATORIES AND MIRRORS



KNEE CLEARANCE CLEAR FLOOR SPACE

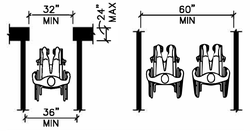


FREE STANDING FOUNTAIN BUILT IN FOUNTAIN OR COOLER

DRINKING FOUNTAIN AND WATER COOLERS

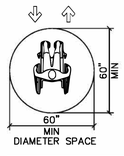
MOUNTING LOCATION

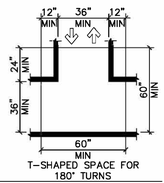
SIGNAGE



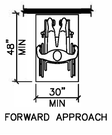
MINIMUM CLEAR WIDTH FOR SINGLE WHEELCHAIR

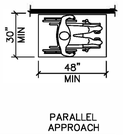
MINIMUM CLEAR WIDTH FOR TWO WHEELCHAIRS



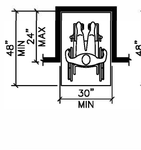


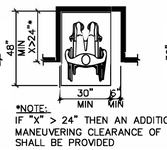
WHEELCHAIR TURNING SPACE



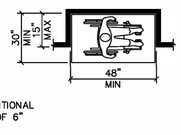


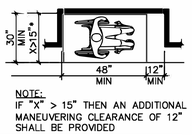
CLEAR FLOOR SPACE

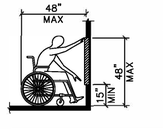


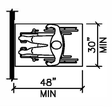


CLEAR FLOOR SPACE IN ALCOVES



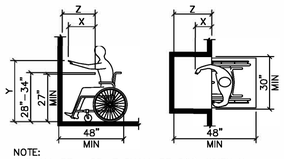




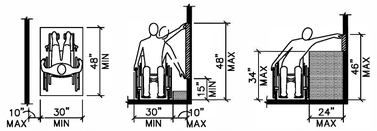


HIGH FORWARD REACH LIMIT

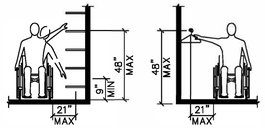
SPACE ALLOWANCES AND REACH RANGES



MAXIMUM FORWARD OVER AN OBSTRUCTION

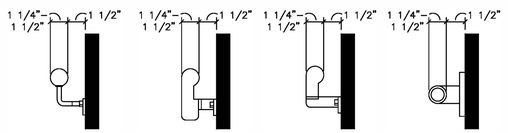


SIDE REACH



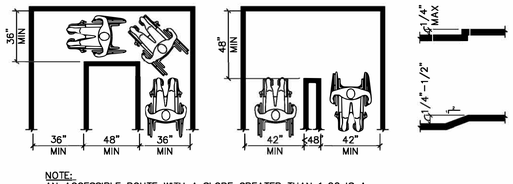
STORAGE SHELVES AND HANGRODS

SPACE ALLOWANCES AND REACH RANGES CONTINUED



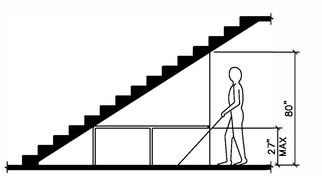
NOMINAL SIZE AND SPACING OF HANDRAILS AND GRAB BARS

HANDRAILS AND GRAB BARS

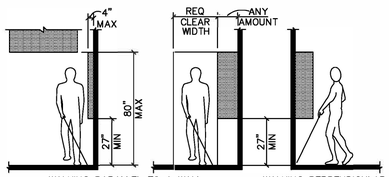


90° TURN TURN AROUND OBSTRUCTION CHANGES IN LEVEL

ACCESSIBLE ROUTE

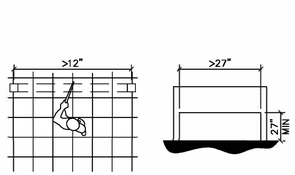


OVERHEAD HAZARDS

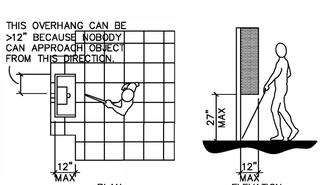


WALKING PARALLEL TO A WALL WALKING PERPENDICULAR TO A WALL

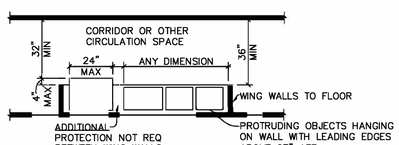
PROTRUDING OBJECTS



FREE-STANDING OVERHANGING OBJECTS



OBJECTS MOUNTED ON POSTS OR PYLONS



EXAMPLE OF PROTECTION AROUND WALL MOUNTED OBJECTS AND MEASUREMENTS OF CLEAR WIDTHS

PROTRUDING OBJECTS

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

GP|N

DRAWN BY: DKH

STATE OF COLORADO
401357
LICENSED ARCHITECT

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

ACCESSIBILITY DETAILS

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

G-3.0

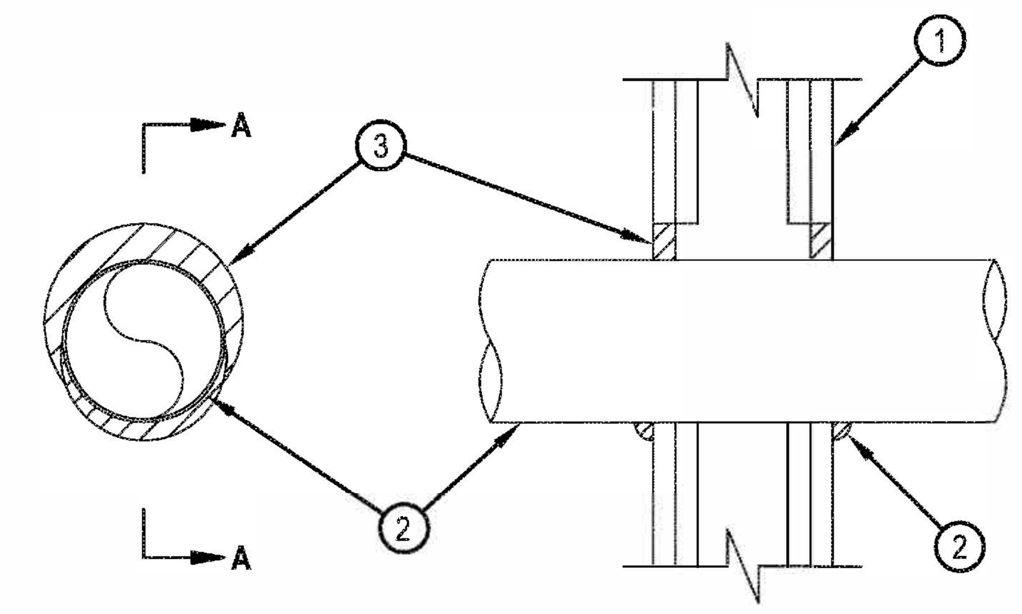
SHEET 3 OF 4

System No. W-L-1175

WL 1175

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

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



SECTION A-A

1. Wall Assembly — The 1 or 2 hr fire rated wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features.

   A. Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.
   B. Gypsum Board* — Nom 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the Fire Resistance Directory. Max diam of opening is 5-1/2 in.
   The hourly F and T Ratings of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through Penetrant — One metallic tubing or conduit installed concentrically or eccentrically within the firestop system. Tube or conduit to be rigidly supported on both sides of wall assembly. The annular space between the tube or conduit and periphery of the steel sleeve shall be min 0 in. (point contact) to max 1 in. The following types and sizes of metallic tube or conduit may be used:

   A. Conduit — Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.

3. Fill Void or Cavity Material* — Putty — Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At point contact location between penetrant and wall, a 1/4 in. crown of fill material shall be applied at the conduit/wall interface on both sides of the assembly, lapping 1/4 in. on the conduit and 1/4 in. beyond the periphery of the opening.
HILTI INC — CP618 Putty Stick

*Bearing the UL Classification Mark

Hilti Firestop Systems

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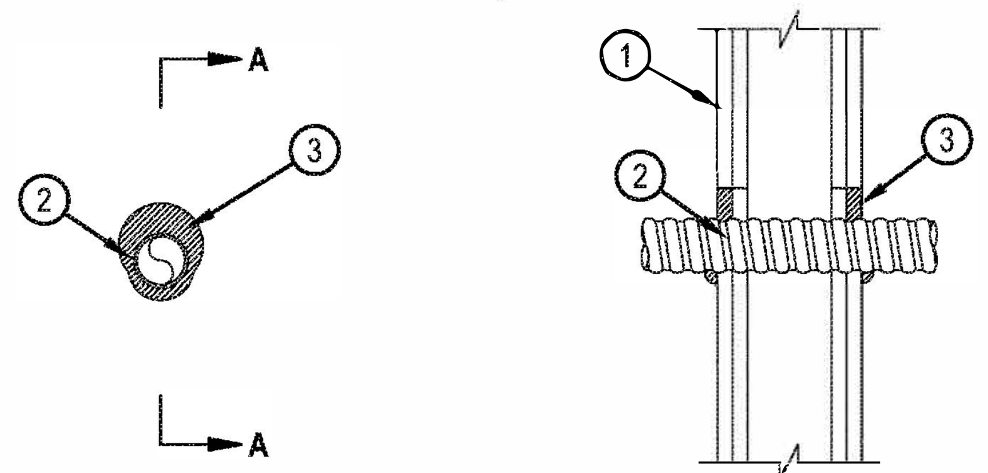
February 08, 2006

System No. W-L-1243

WL 1243

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Rating — 0	FT Rating — 0
L Rating At Ambient - 5 CFM/sq ft	FH Ratings — 1 and 2 Hr (See Item 1)
L Rating At 400 F - Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
	L Rating At Ambient - 5 CFM/sq ft
	L Rating At 400 F - Less Than 1 CFM/sq ft



SECTION A-A

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

Hilti Firestop Systems

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January 23, 2015

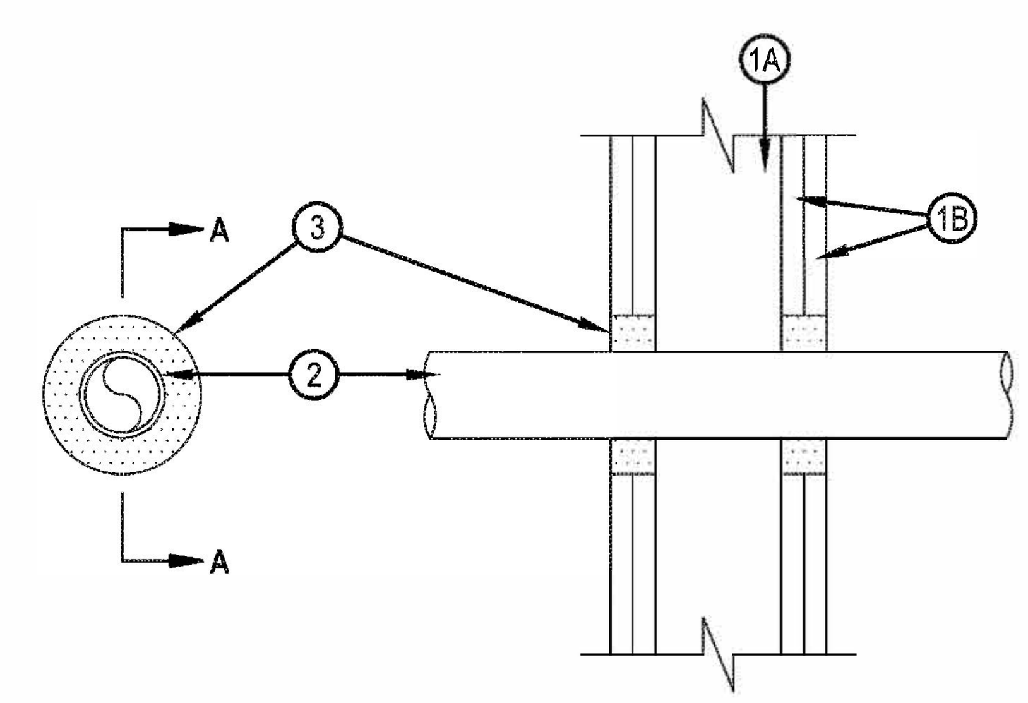
Page: 1 of 2

System No. W-L-2098

WL 2098

Underwriters Laboratories, Inc. to UL 1479

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



SECTION A-A

1. Wall Assembly — The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tappered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 4-3/8 in. (111 mm).
   The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
2. Through Penetrants — One nonmetallic pipe installed within the firestop system. Pipe to be rigidly supported on both sides of floor or wall assembly. The space between pipe and periphery of opening shall be min 3/4 in. (19 mm) to max 1-1/4 in. (32 mm). Pipe to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of nonmetallic pipes may be used:
   A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 PVC pipe for use in closed (process or supply) piping system.
   B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) piping systems.
3. Fill, Void or Cavity Materials* — Sealant — Installed to completely fill the annular space between the pipes and gypsum wallboard on both sides of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Hilti Firestop Systems

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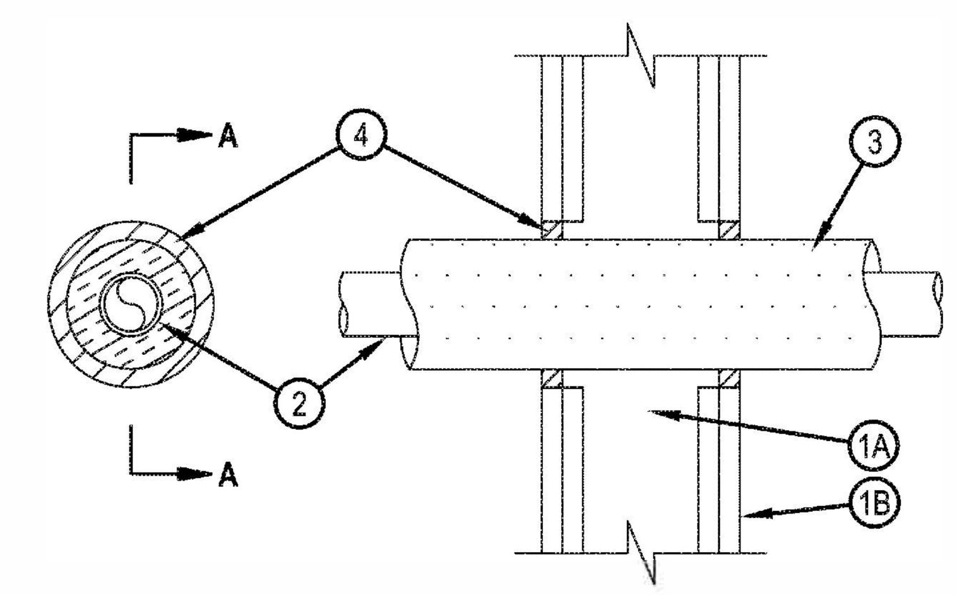
Underwriters Laboratories, Inc.
January 26, 2015

System No. W-L-5293

WL 5293

Classified by Underwriters Laboratories, Inc. to UL 1479

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



SECTION A-A

1. Wall Assembly — The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* — Thickness, type, number of layers and orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 5 in. (127 mm).
   The hourly F, T, FT, FH and FTH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
2. Through Penetrants — One Chlorinated Polyvinyl Chloride (CPVC) Pipe nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. Nom 1-1/2 in. (38 mm) diam (or smaller) SDR 11 or SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems. Pipe to be rigidly supported on both sides of wall.
3. Pipe Covering* — Nom 1 in. (25 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56/kg/m3) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space between the insulated pipe or tubing and periphery of the opening shall be min. 1/4 in. (6 mm) to max 7/8 in. (22 mm).
   See Pipe and Equipment Covering —Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
4. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of sealant applied within annulus, flush with both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Hilti Firestop Systems

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Underwriters Laboratories, Inc.
January 26, 2015

GP|N

CHECKED BY: DKH
DRAWN BY: DKH

STATE OF COLORADO LICENSED ARCHITECT 401357

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

MARCO'S PIZZA

6087

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

UL DESIGN DETAILS

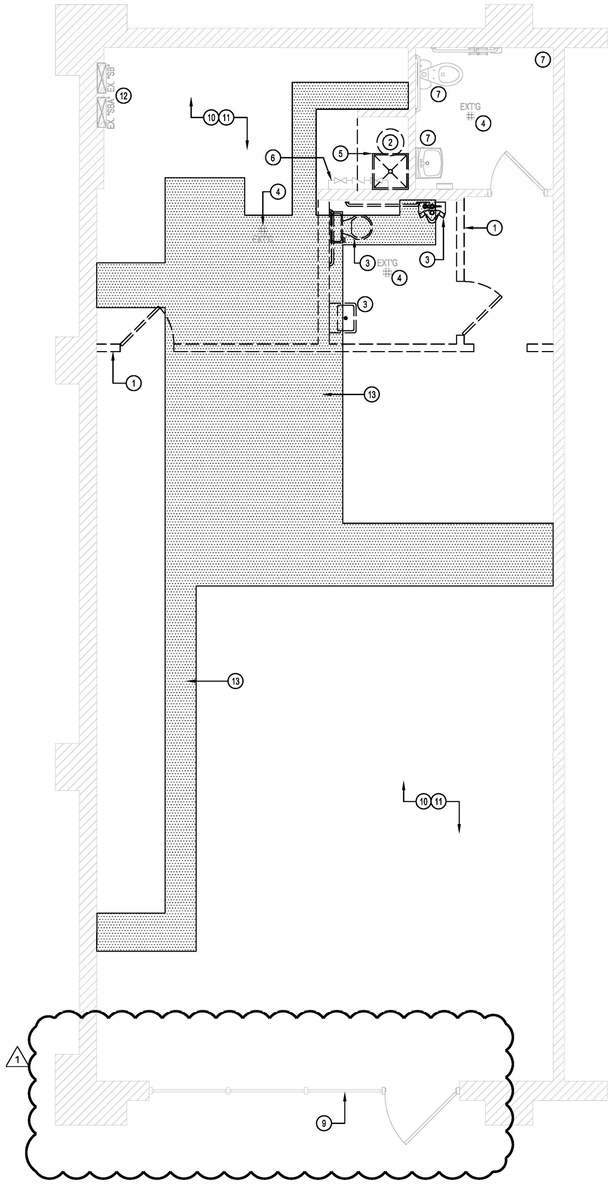
PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

G-4.0

SHEET 4 OF 4



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

GENERAL DEMOLITION NOTES

A. COORDINATE ALL DEMOLITION WITH PJI CONSTRUCTION PROJECT MANAGER. ALL DEMOLITION WORK TO COMPLY WITH CONSTRUCTION PROCEDURE AND REGULATIONS AS SET FORTH BY LOCATION IN WHICH WORK IS BEING DONE.

B. VERIFY ALL DEMOLITION DIMENSIONS PRIOR TO DEMOLITION AND COORDINATE VERIFIED DIMENSIONS WITH NEW WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES DISCOVERED INCLUDING THE NEED TO RELOCATE ITEMS SUCH AS LIGHT SWITCHES, FIRE ALARMS, EXIT LIGHTS, OUTLETS, ETC. NOT SHOWN ON DRAWINGS. DISCREPANCIES SHALL BE RESOLVED PRIOR TO BEGINNING DEMOLITION WORK.

C. THE CONTRACTOR SHALL REFER TO AND COORDINATE WITH THE MEP DRAWINGS FOR RELATED DEMOLITION WORK.

D. THE PURPOSE OF THESE DEMOLITION PLANS, AS MADE PART OF THE CONTRACT DOCUMENTS, IS TO GIVE THE GENERAL CONTRACTOR A GENERAL IDEA AS TO THE SCOPE OF ARCHITECTURAL DEMOLITION WORK REQUIRED. THE CONTRACTORS SHALL VISIT THE FACILITY, THOROUGHLY EVALUATE THE EXISTING FACILITY AGAINST THE DRAWINGS AND ACTUAL SITE CONDITIONS.

E. REVIEW ALL CONTRACT DOCUMENTS AND ARRIVE AT THE SCOPE OF DEMOLITION WORK REQUIRED TO ACHIEVE THE INTENDED RESULTS AND FINISHED PRODUCT. ALL DEMOLITION WORK SHALL BE INCLUDED IN THE BASE SCOPE OF WORK.

F. NOTIFY THE APPROPRIATE UTILITY LOCATION SERVICE PRIOR TO ANY SITE EXCAVATION OR TRENCHING

G. THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND ITEMS TO BE REMOVED. ITEMS IDENTIFIED BY THE OWNER TO BE SALVAGED AND TURNED OVER TO THE OWNER ARE TO BE REMOVED BY THE GENERAL CONTRACTOR AND DELIVERED TO A MUTUALLY AGREED UPON LOCATION ON THE JOB SITE.

H. REMOVE ITEMS IN SUCH A WAY AS TO NEITHER DAMAGE ADJACENT MATERIALS NOR COMPROMISE THE STRUCTURAL INTEGRITY OF EXISTING BUILDING. CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING OF EXISTING CONSTRUCTION AS REQUIRED TO PERFORM THE PRESCRIBED WORK. THE CONTRACTOR SHALL ENGAGE THE SERVICES OF AN ENGINEER, AT THE CONTRACTOR'S EXPENSE.

I. ALL HOLES AND OPENINGS IN FLOOR SLABS AS A RESULT OF EXISTING MECHANICAL, PLUMBING, OR ELECTRICAL UTILITY REMOVAL ARE TO BE FILLED IN. ALL DEPRESSIONS ARE TO BE LEVELED UNLESS INDICATED OTHERWISE.

J. ALL ABANDONED, NONESSENTIAL OR OTHERWISE NOT SPECIFICALLY SHOWN TO BE REUSED, MECHANICAL, PLUMBING, OR ELECTRICAL UTILITIES THAT ARE EXPOSED AFTER THE CEILING OR WALL REMOVAL, ARE TO BE REMOVED AND CAPPED AT POINT OF ORIGIN. CONSULT ARCHITECT IF QUESTIONS ARISE AS TO WHETHER A SERVICE IS TO BE ABANDONED OR IS TO REMAIN. COORDINATE WITH FIELD CONDITIONS AND PROJECT AND FACILITY MANAGERS.

K. COVER RETURN AIR DUCTS AS NECESSARY BEFORE AND DURING CONSTRUCTION. UNITS WITH COVERED RETURN GRILLS ARE TO BE TURNED OFF.

L. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING PORTIONS OF THE BUILDING TO REMAIN. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGES TO THE EXISTING PORTIONS OF THE BUILDING TO REMAIN, WHICH ARE CAUSED BY THE CONTRACTOR, OR CONTRACTORS

M. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING FIRE EQUIPMENT, EMERGENCY LIGHTING, EXITING, SECURITY, AND ALARMS FOR THE ENTIRE SITE. ANY VARIATIONS OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER. ALL ISSUES REGARDING PUBLIC SAFETY, AND MUST TAKE ALL NECESSARY PRECAUTIONS PRESCRIBED BY ALL LAWS, ORDINANCES, CODES, REGULATIONS AND ALL AUTHORITIES HAVING JURISDICTION TO PREVENT INJURY TO ANY PERSONS ON, ABOUT, OR ADJACENT TO THE CONSTRUCTION SITE.

N. THE CONTRACTOR SHALL IMMEDIATELY REPORT THE DISCOVERY OR SUSPICION OF OR THE PRESENCE OF ANY HAZARDOUS MATERIALS TO THE OWNER PRIOR TO PROCEEDING WITH DEMOLITION WORK.

O. THE PURPOSE OF THE DEMOLITION DRAWINGS ARE STRICTLY LIMITED TO GENERALLY INDICATING AREAS AND/ OR ITEMS TO BE REMOVED. THE CONTRACTOR IS ENTIRELY RESPONSIBLE FOR THE MEANS, METHODS, SEQUENCE AND EXACT EXTENT OF DEMOLITION NEEDED FOR NEW CONSTRUCTION.

P. ALL FURNISHINGS SHALL BE REMOVED BY OWNER PRIOR TO DEMOLITION PROCEDURES.

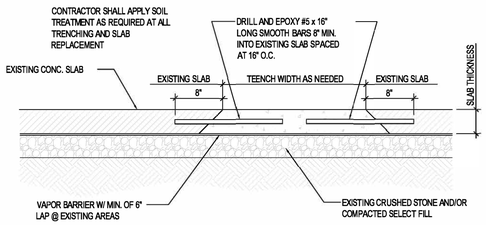
Q. WHEREVER EXISTING EQUIPMENT, PIPING, DUCTS, ETC., ARE REQUIRED TO BE REMOVED, SUCH REMOVAL SHALL INCLUDE ALL ANCHORS, HANGERS, FOUNDATIONS, ETC.

R. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REGULAR REMOVAL OF ALL WASTE MATERIAL FROM THE PROJECT SITE. ALL AREAS ADJACENT TO THE DEMOLITION ARE SHALL BE KEPT CLEAN. ALL DEMOLITION AREAS SHALL BE CLEANED AND READY FOR NEW CONSTRUCTION AT THE END OF THE DEMOLITION.

S. DO NOT ALLOW MATERIALS AND DEBRIS GENERATED BY DEMOLITION ACTIVITIES TO ACCUMULATE. ALL ITEMS AND MATERIALS REMOVED FROM THE SITE SHALL BE DISPOSED OF AS SPECIFIED. ON SITE BURNING IS PROHIBITED.

DEMO PLAN KEYNOTE LEGEND (X)

1. DASHED LINES INDICATE EXISTING FULL WALL OR KNEEWALL TO BE REMOVED FROM TOP TO BOTTOM OF WALL. UNLESS OTHERWISE NOTED, REMOVE ALL EXISTING DECOR, TRIM, DOORS, WINDOWS, UTILITIES AND/OR EQUIPMENT ON OR WITHIN WALL.
2. REMOVE EXISTING TANK TYPE WATER HEATER & PLATFORM
3. REMOVE EXISTING TOILET, LAVATORY & URINAL THEN TERMINATE ALL UNUSED PLUMBING AS REQUIRED
4. EXISTING FLOOR DRAIN(S) TO REMAIN
5. REMOVE MOP SINK, INSTALL NEW PLUMBING THEN REINSTALL EXISTING MOP SINK || SEE PLUMBING
6. BACK-FLOW EQUIPMENT TO REMAIN || SEE PLUMBING
7. EXISTING PLUMBING FIXTURES, ACCESSORIES & FINISHES SHALL REMAIN
8. - - - -
9. EXISTING STOREFRONT / WINDOW TO REMAIN. PROTECT DURING DEMOLITION AND CONSTRUCTION.
10. REMOVE EXISTING FLOORING AND BASE (THROUGHOUT) THEN PREPARE THE SUBSTRATE FOR THE INSTALLATION OF THE NEW FINISHES.
11. REMOVE THE CEILING IN THIS AREA ALONG WITH ALL LIGHT FIXTURES, HVAC DUCTWORK & HVAC DIFFUSERS. THIS INCLUDES ALL ABANDONED UTILITIES SERVICING THESE DEVICES.
12. EXISTING ELECTRICAL PANELS TO REMAIN || SEE ELECTRICAL
13. DEMO HATCHED FLOOR SLAB AREAS TO ACCOMMODATE NEW PLUMBING SYSTEM, DATA CONDUIT & ELECTRICAL CIRCUITS AND REPLACE PER 2/A-0.1.



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

GP|N

CHECKED BY: DKH
DRAWN BY: DKH

STATE OF COLORADO
DANIEL P. KLEIN
401357
LICENSED ARCHITECT

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	04-28-2025	CLIENT REQUESTED CHANGES	DKH

6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

SLAB / DEMO PLAN

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

A-0.1

SHEET 1 OF 12

DOOR SCHEDULE

MARK	DOOR TYPE	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICKNESS	DOOR FINISH	FRAME TYPE	FRAME FINISH	HARDWARE SET	NOTES
101E	A	4'-0"	7'-0"	– –	EXISTING	EXISTING	EXISTING	EXISTING	1, 4
102E	C	3'-0"	7'-0"	– –	P-1	EXISTING	P-1	EXISTING	1, 2, 3
103	C	3'-0"	7'-0"	1 3/4"	P-1	H.M.	P-1	4	2, 3
104E									
105									
106									

NOTES:
1. EXISTING DOOR TO REMAIN.
2. PAINT DOOR, REFER TO INTERIOR ELEVATIONS.
3. PAINT FRAME, REFER TO INTERIOR ELEVATIONS.
4. PROVIDE LETTERING ON DOOR (3.4SS ABOVE HANDLE READING "DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS."
5. 1" TEMPERED INSULATED/GLAZING TO MATCH EXISTING & DOOR FRAME & FINISH TO MATCH EXISTING
6. ELVADON ECP-3 (OR EQUAL) IN GYP. BD. FRAME W/ ACRYLIC VIEW PANEL, STAINLESS STEEL FINISH & ALL HARDWARE IS PROVIDED BY MANUFACTURER
7. HOLLOW METAL FRAME ONLY

DOOR HARDWARE SCHEDULE

SET NO. 1	EXTERIOR - FRONT
3 BUTT HINGES	EXISTING
CLOSER	EXISTING
THRESHOLD	EXISTING
WEATHER STRIPS	EXISTING
DOOR SWEEP	EXISTING
DRIP CAP	EXISTING
LOCKSET	EXISTING
LATCH GUARD	EXISTING
SET NO. 2	RESTROOM
3 STANDARD HINGES	MCKINNY, MPB79 4–1/2"X4–1/2" US10B
SURFACE CLOSER	DORMA 38616 AF86P FC 690
DOOR HANDLE	FALCON B10IS GRADE 2 LEVER PRIVACY SET
DEADBOLT	––
KICK PLATE	ROCKWOOD #K1050 12"X34"
WALL DOOR STOP	ROCKWOOD #477 US26D
DOOR SILENCER	ROCKWOOD #608 SILENCER

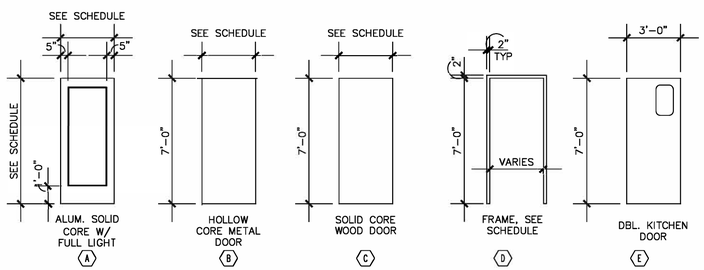
SET NO. 3	EXTERIOR - DRIVER'S DOOR
3 BUTT HINGES	STANLEY FBB179 4 1/2" x 4 1/2" X NRP
CLOSER	CORBIN RUSSWIN DC2210
THRESHOLD	NATIONAL GUARD PRODUCTS 424 – 36" x 1/2" x 4"
WEATHER STRIPS	NATIONAL GUARD PRODUCTS 134N5 – 3070
DOOR SWEEP	NATIONAL GUARD PRODUCTS 198N – 36
DRIP CAP	NATIONAL GUARD PRODUCTS 16AD – 40
LOCKSET	INTERIOR LEVER LATCH W/ LEVER ACTIVATED DEADBOLT
LATCH GUARD	
ALARM	
SET NO. 4	OFFICE
3 STANDARD HINGES	MCKINNY, MPB79 4–1/2"X4–1/2" US10B
SURFACE CLOSER	DORMA 38616 AF86P FC 690
DOOR HANDLE	FALCON B10IS GRADE 2 LEVER SET
KICK PLATE	ROCKWOOD #K1050 12"X34"
WALL DOOR STOP	ROCKWOOD #477 US26D
DOOR SILENCER	ROCKWOOD #608 SILENCER

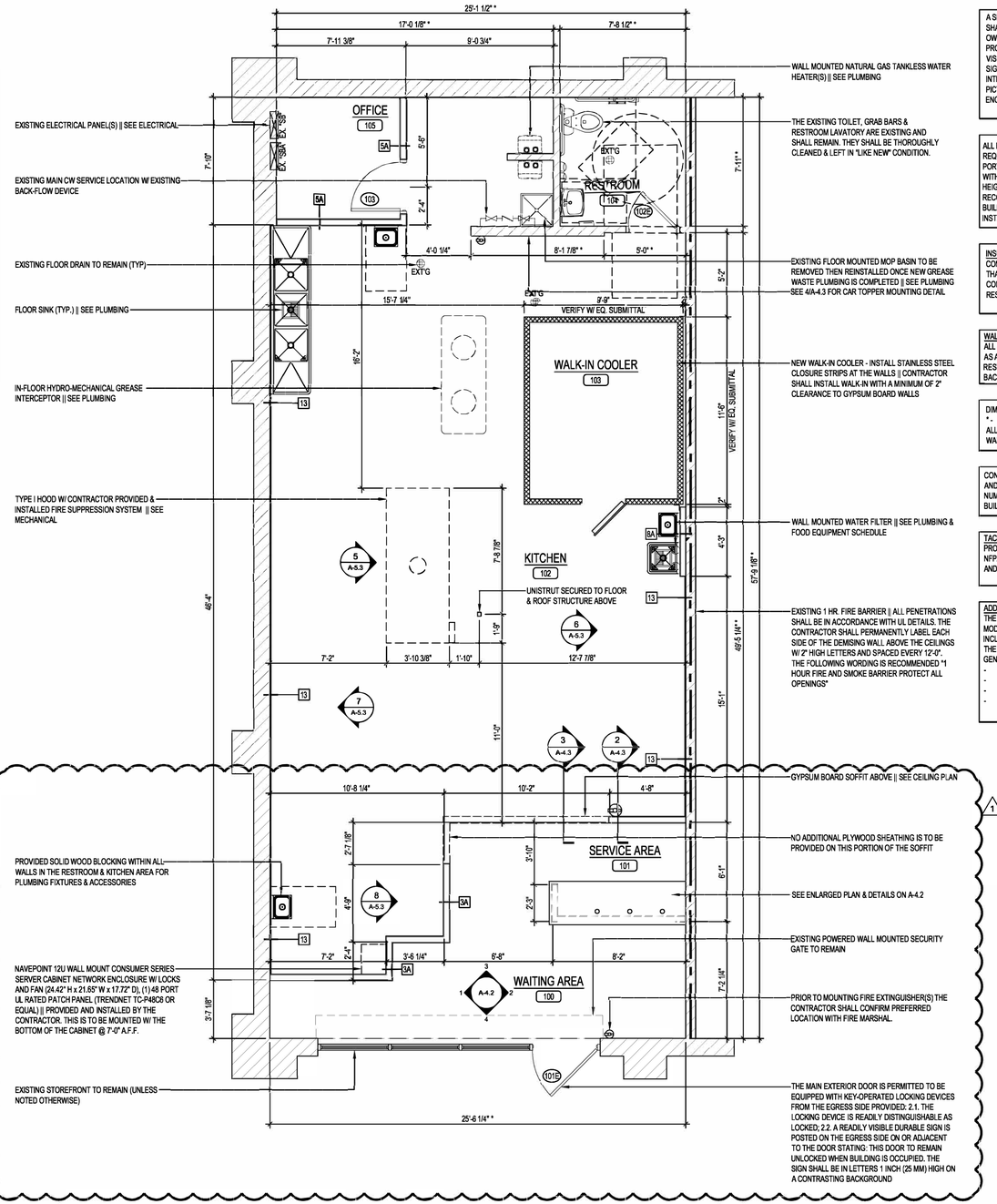
NOTES:
1. DOOR HARDWARE SCHEDULE FOR REFERENCE ONLY. SEE DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
2. ADJUST OPENING AND CLOSING FORCE FOR ALL CLOSERS TO MEET ADA REQUIREMENTS.
3. DOORS SHALL MEET THE ADA REQUIREMENTS FOR THRESHOLDS AND DOOR HARDWARE.
3. STANDARD FINISH FOR ALL HARDWARE TO BE 626 SATIN CHROME.
4. EXTERIOR DOOR SHALL BE MASTER KEYED.
5. PROVIDE EXTRA HEAVY DUTY EXIT DEVICE & KICK PLATE AT DRIVERS' EXIT DOOR.

DOOR SPECIFICATION

TYPE	DESCRIPTION	SPECIFICATION	FINISH
A	ALUMINUM SOLID CORE W/ FULL LIGHT	EXISTING ALUMINUM STOREFRONT	EXISTING
B	HOLLOW CORE METAL DOOR	WELDED HOLLOW METAL FRAME & INSULATED HOLLOW METAL DOOR	P–1
C	SOLID CORE WOOD DOOR	CPD–PC – PREMIUM DOOR, HARDWOOD EDGES; FLUSH PANEL; BONDED PARTICLE CORE	SEE INTERIOR ELEVATIONS

DOOR TYPES





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

A SIGN CLEARLY STATING THAT SMOKING IS PROHIBITED SHALL BE CONSPICUOUSLY POSTED BY THE BUILDING OWNER, AGENT, OPERATOR, PERSON IN CHARGE OR PROPRIETOR AT EACH ENTRANCE OR IN A POSITION CLEARLY VISIBLE UPON ENTRY INTO THE BUILDING. ACCEPTABLE SIGNS SHALL DISPLAY EITHER "NO SMOKING" OR THE INTERNATIONAL "NO SMOKING SYMBOL (CONSISTING OF A PICTORIAL REPRESENTATION OF A BURNING CIGARETTE ENCLOSED IN A RED CIRCLE WITH A RED BAR ACROSS IT).

ALL BUSINESS TRANSACTION AREAS MUST MEET THE REQUIREMENTS OF THE ACCESSIBILITY CODE WITH A PORTION OF EACH TRANSACTION COUNTER CONSTRUCTED WITH A SECTION OF THE COUNTER HAVING A MAXIMUM HEIGHT OF 34" FOR A MINIMUM LENGTH OF 36". IT IS RECOMMENDED THAT THIS ISSUE IS DISCUSSED WITH THE BUILDING INSPECTOR PRIOR TO CONSTRUCTION AND/OR INSTALLATION.

INSULATION NOTE:
CONTRACTOR SHALL INSULATE ALL FURRED OUT WALLS THAT ARE AGAINST INTERIOR AND EXTERIOR MASONRY / CONCRETE WALLS. CONTRACTOR SHALL ALSO INSULATE ALL RESTROOM WALLS AND CEILINGS.

WALL BLOCKING/ BACKING NOTE:
ALL WALLS WITH SHELVING IN THE KITCHEN AREA AS WELL AS ANY WALL WITH A WALL MOUNTED T.V. AND ANY RESTROOM WALL WITH A MOUNTED FIXTURE SHALL HAVE BACKING AND BLOCKING. (U.N.O.)

DIMENSIONAL NOTE:
*- EXISTING DIMENSION TO BE FIELD VERIFIED - ALL DIMENSIONS PULLED FROM EXISTING BUILDING WALLS ARE FROM THE FACE EXISTING MATERIAL.

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

TACTILE SIGNAGE:
PROVIDE EXIT TACTILE SIGNAGE IN ACCORDANCE WITH NFPA-101:7.10.1.3, INTERNATIONAL FIRE PREVENTION CODE AND ANSI A117.1, 2009 EDITION.

ADDITIONAL STRUCTURAL SUPPORT:
THE CONTRACTOR SHALL INCLUDE STRUCTURAL MODIFICATIONS TO THE EXISTING ROOF SYSTEM TO INCLUDE STRUCTURAL ENGINEERING, IF REQUIRED FOR THE FOLLOWING ITEMS. SEE A-7.0 & MECHANICAL FOR GENERAL DETAILS.
- ADDITIONAL HVAC UNIT(S)
- ROOF MOUNTED HOOD FAN(S)
- SUPPORT OF THE EXHAUST HOOD
- ROOF MOUNTED CONDENSING UNIT FOR THE WALK-IN COOLER

THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS.

THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ACTUAL CONDITIONS, CONSTRUCTION AND/OR USE THEREOF. THIS DRAWING IS TO CONVEY DESIGN INTENTIONS AND/OR CODE COMPLIANCE ONLY.

GP|N

CHECKED BY: DKH
DRAWN BY: DKH

STATE OF COLORADO
401357
LICENSED ARCHITECT

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	04-28-2025	CLIENT REQUESTED CHANGES	DKH

6087
MARCO'S PIZZA
INTERIOR UP-FIT
MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:
FLOOR PLAN & SCHEDULE

PROJECT NUMBER 25-025

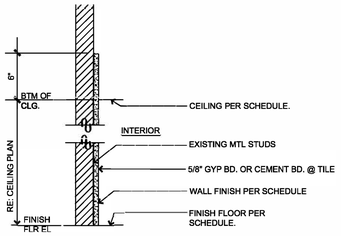
DATE 04-16-2025

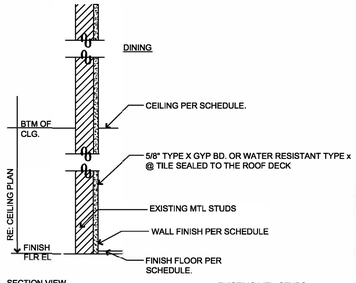
SHEET NO.

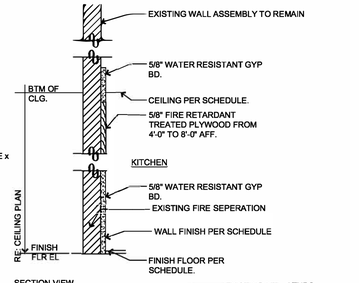
A-1.0

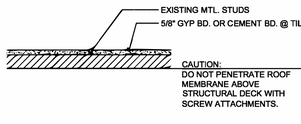
SHEET 2 OF 12

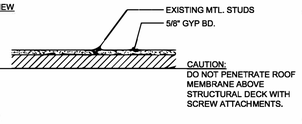
ALL WALL TYPES ARE NOT REQUIRED FOR EVERY PROJECT. SEE A-1.0 FOR WALL TYPE DESIGNATIONS AND REQUIRED LOCATIONS.

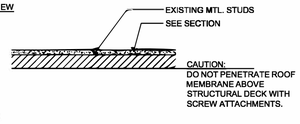




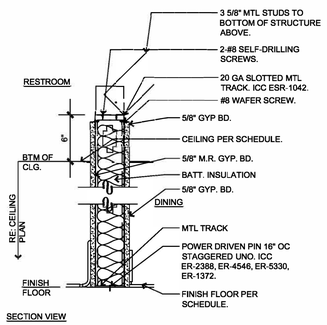


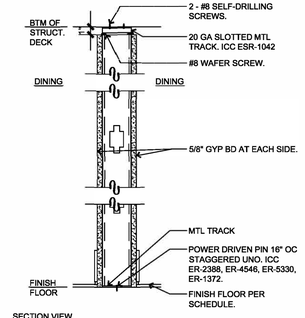


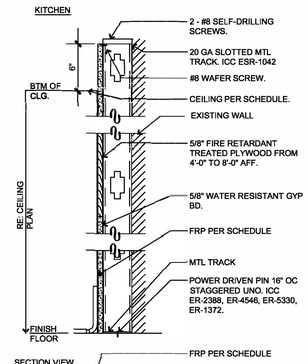


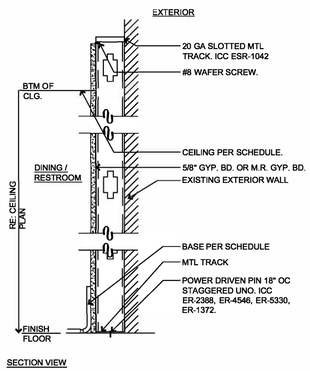


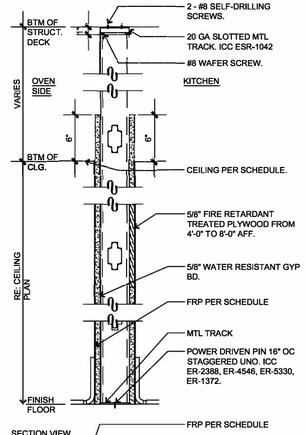
PARTITION TYPE #10 | PARTITION TYPE #11 | PARTITION TYPE #13



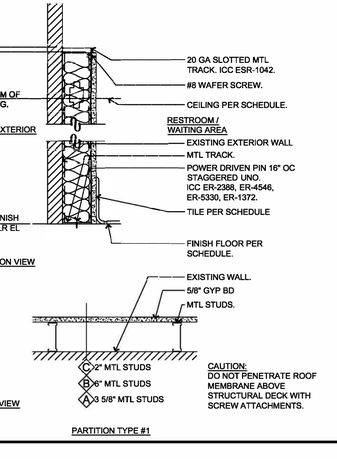


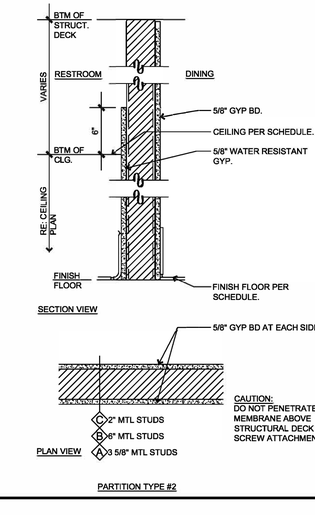


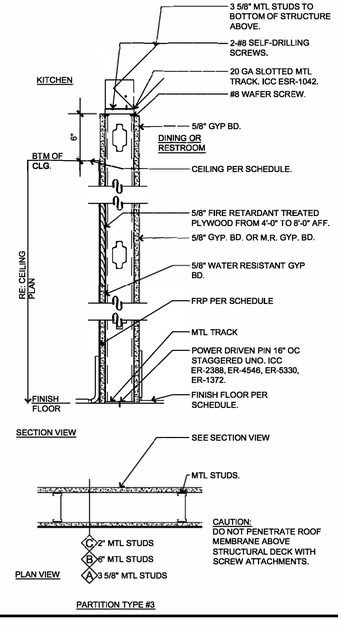


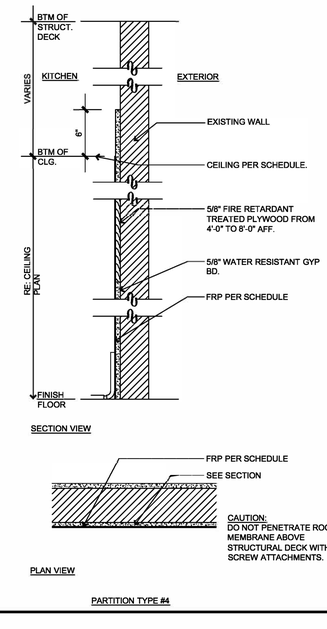


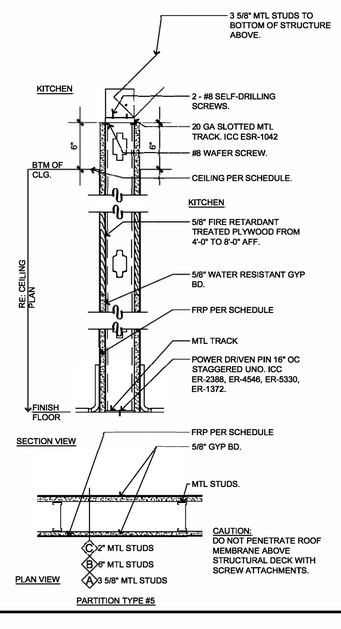
PARTITION TYPE #6 | PARTITION TYPE #7 | PARTITION TYPE #8 | PARTITION TYPE #9 | PARTITION TYPE #12











PARTITION TYPE #1 | PARTITION TYPE #2 | PARTITION TYPE #3 | PARTITION TYPE #4 | PARTITION TYPE #5

GP|N

CHECKED BY: DKH
DRAWN BY: DKH

STATE OF COLORADO
James P. Kaz
401357
LICENSED ARCHITECT

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

WALL TYPES

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

A-1.1

SHEET 3 OF 12

REFLECTED CEILING LEGEND

CT-1	2'x2' USG FROST - SEE FINISH MATERIAL SCHEDULE	LT2	NOT USED
CT-2	VINYL FACED GYP. BOARD PANELS WHITE - 2'x4' (KITCHEN CEILING) STAINLESS STEEL PANELS AROUND EXHAUST DUCTS	LT3	NOT USED
	2x2 (4-WAY) SUPPLY AIR GRILL SEE PLAN FOR FIXTURE DETAILS	LT4	NOT USED
	2x2 RETURN AIR GRILL SEE PLAN FOR FIXTURE DETAILS	LT5	CEILING MOUNTED TRACK LIGHTING (ARTWORK)
	PRELIMINARY SPRINKLER HEAD LOCATIONS	LT6	NOT USED
	EXHAUST FAN		
	WALL OR CEILING MOUNTED EXIT SIGN SEE PLAN FOR FIXTURE DETAILS	LT7	2x4 FIXTURE LAY-IN FIXTURE (VIF)
	WALL MOUNTED EMERGENCY LIGHT W/ EMERGENCY LIGHT	LT8	RECESSED CAN LIGHT - BLACK SEE ELEC. LIGHTING PLAN FOR DETAILS

CEILING NOTES

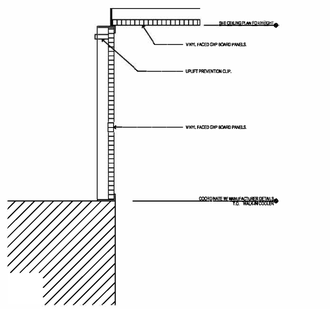
1. WORK SHALL FULLY COMPLY WITH GOVERNING CODES, ORDINANCES, RESTRICTIONS, AND NATIONAL ELECTRIC CODE. TAKE ALL NECESSARY SAFETY MEASURES AND COMPLY WITH LOCAL BUILDING DEPARTMENT REQUIREMENTS FOR PUBLIC PROTECTION (BARRICADES, SIGNS, DUST BARRIERS, ETC.)
2. REFERENCE EXTERIOR ELEVATIONS FOR FURTHER INFORMATION ON LIGHTING AND ACCESSORIES ON EXTERIOR OF BUILDING.
3. IN ACCORDANCE WITH ASTM 84, GROUP A-2, INTERIOR WALL AND CEILING FINISHES TO MEET CLASS B FLAME SPREAD RATING OF 26-75; SMOKE DEVELOPED 0-450 FOR EXIT ENCLOSURES AND EXIT PASSAGEWAYS AND CORRIDORS IN SPRINKLERED BUILDINGS
4. IN ACCORDANCE WITH ASTM 84, GROUP A-2, INTERIOR WALL AND CEILING FINISHES TO MEET CLASS C FLAME SPREAD RATING OF 76-200; SMOKE DEVELOPED 0-450 FOR ROOMS AND ENCLOSED SPACES IN SPRINKLERED BUILDINGS.
5. GENERAL CONTRACTOR TO CONFIRM HEIGHTS AND COORDINATE WITH EXISTING CONDITIONS. NOTIFY OWNER AND ARCHITECT IF SPECIFIED HEIGHT CANNOT BE ACHIEVED.
6. CEILING HEIGHTS ARE TO FINISHES SURFACE. GYPSUM BOARD OR CEILING TILE, AS APPLICABLE.
7. GYPSUM BOARD CEILINGS AND SOFFIT TO HAVE A SMOOTH FINISH UNLESS NOTED OTHERWISE.
8. RELOCATE ANY HVAC GRILLES THAT CONFLICT WITH THE LOCATION OF A NEW LIGHT FIXTURE.
9. THE SUSPENDED TILE CEILING PANELS IN KITCHEN AREAS ARE WASHABLE.
10. RECESSED CAN LIGHT FIXTURES TO BE CENTERED WITHIN CEILING GRID/TILE UNLESS DIMENSIONED OTHERWISE.
11. REFERENCE MECHANICAL AND ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION AND COORDINATION OF SYSTEMS NOT SHOWN ON THIS PLAN.
12. THERE WILL BE NOT BE PROJECTIONS LESS THAN 6'-8" FROM THE CEILING. REFERENCE ALSO INTERIOR ELEVATIONS.

KITCHEN/FOOD PREP LIGHTING LEVELS:

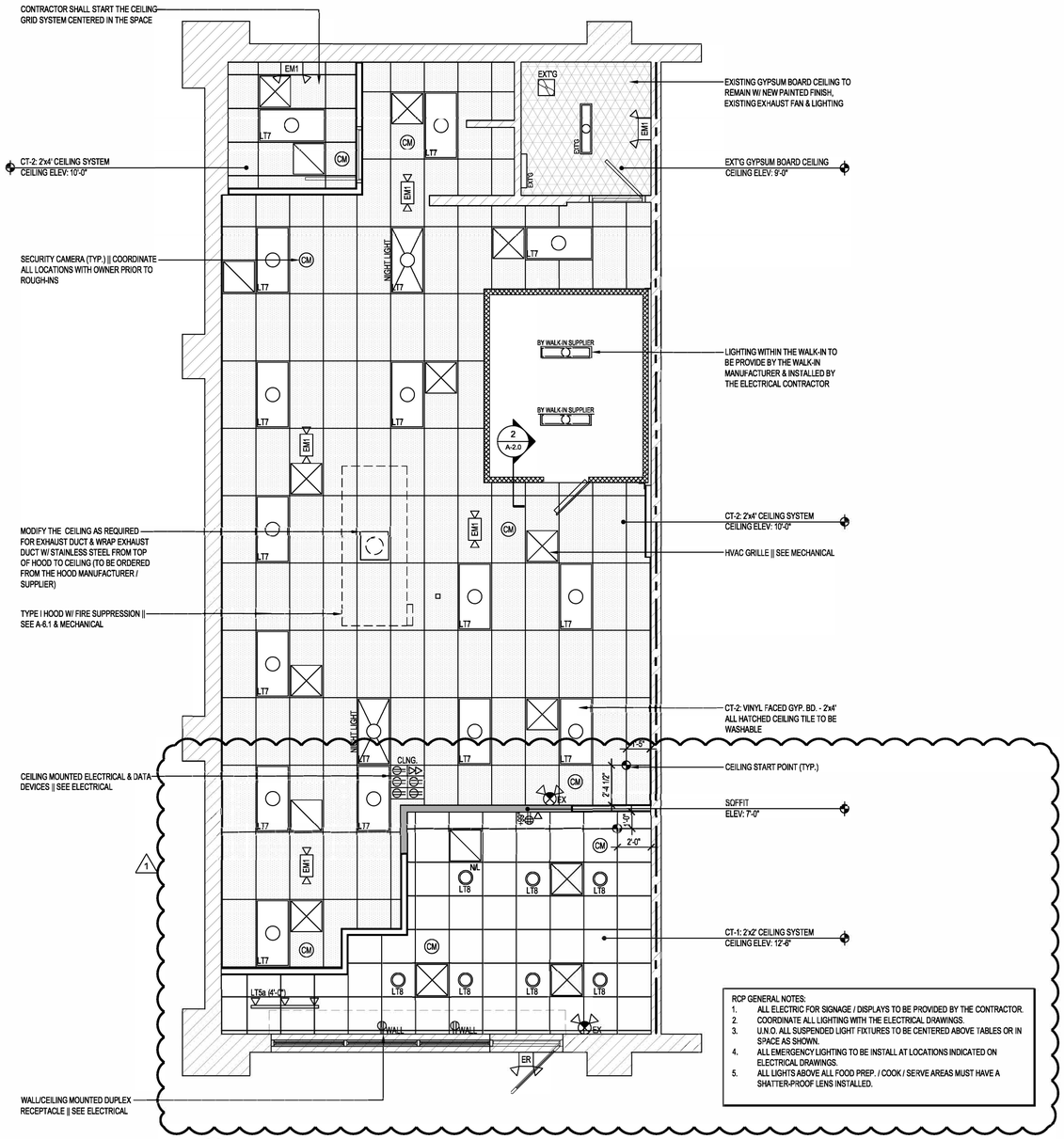
ADJUST LIGHTING PER LOCAL COD

MINIMUM LIGHTING REQUIREMENTS ARE:

- AT LEAST 10 FOOT CANDLES (110 LUX): AT A DISTANCE OF 30 INCHES (75CM) ABOVE FLOOR, IN WALK-IN REFRIGERATION UNITS AND DRY FOOD STORAGE AREAS AND IN OTHER AREAS AND ROOMS DURING PERIODS OF CLEANING.
- AT LEAST 20 FOOT CANDLES (220 LUX): AT A SURFACE WHERE FOOD IS PROVIDED FOR CONSUMER SELF SERVICE SUCH AS BUFFETS AND SALAD BARS OR WHERE FRESH PRODUCE OR PACKAGED FOODS ARE SOLD OR OFFERED FOR CONSUMPTION; INSIDE EQUIPMENT SUCH AS REACH IN AND UNDER COUNTER REFRIGERATORS; AT A DISTANCE OF 30 INCHES (75CM) ABOVE FLOOR IN AREAS USED FOR HAND WASHING, WARE WASHING, AND EQUIPMENT AND UTENSI STORAGE, AND IN TOILET ROOMS
- AT LEAST 50 FOOT CANDLES (540 LUX) AT SURFACE WHERE A FOOD EMPLOYEE IS WORKING WITH FOOD OR WORKING WITH UTENSILS OR EQUIPMENT SUCH AS KNIVES, SLICES, GRINDERS, OR SAWS WHERE EMPLOYEE SAFETY IS A FACTOR.



2 A.C.T. @ WALK-IN COOLER
NOT TO SCALE



RCP GENERAL NOTES:
1. ALL ELECTRIC FOR SIGNAGE / DISPLAYS TO BE PROVIDED BY THE CONTRACTOR.
2. COORDINATE ALL LIGHTING WITH THE ELECTRICAL DRAWINGS.
3. U.N.O. ALL SUSPENDED LIGHT FIXTURES TO BE CENTERED ABOVE TABLES OR IN SPACE AS SHOWN.
4. ALL EMERGENCY LIGHTING TO BE INSTALL AT LOCATIONS INDICATED ON ELECTRICAL DRAWINGS.
5. ALL LIGHTS ABOVE ALL FOOD PREP. / COOK / SERVE AREAS MUST HAVE A SHATTER-PROOF LENS INSTALLED.

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

GP|N

DRAWN BY: DKH

STATE OF COLORADO
401357
LICENSED ARCHITECT

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	04-28-2025	CLIENT REQUESTED CHANGES	DKH

PROJECT NAME: 6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

REFLECTED CEILING PLAN

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

A-2.0

SHEET 4 OF 12

FINISH MATERIAL LEGEND (BASED ON JULY 9, 2021 - INTERIM STANDARDS)

TAG	DESCRIPTION	MANUFACTUREER	ITEM #	NAME/COLOR	SIZE TYPE	NOTES
F-1	FLOOR TILE	DALTILE	SD14636S1PR	SADDLEBROOK || FARMHOUSE	6"X36"	1, 5
F-2	FLOOR TILE	DALTILE	DT03661P	ASHEN GRAY	6"X6"	2, 6
F-3	NOT USED					
B-1	FLOOR TILE	DALTILE	SD14636S1PR	SADDLEBROOK || FARMHOUSE	6"X36"	1, 16
B-2	COVE TILE BASE	DALTILE		ASHEN GRAY	5"X6"	2, 13
B-3	NOT USED					
T-1	WALL TILE	DALTILE	VV103631P	VITRUVIAN WHITE GLOSSY	3"X6"	4
T-2	NOT USED					
TR-1	TRIM TILE	SCHLUTER	Q 100E	QUADEC - SS	3/8"	11
TR-2	TRIM TILE	SCHLUTER	Q 80 E	QUADEC - SS	5/16"	12
TR-3	COVE BASE TRIM	SCHLUTER	AHK 1S 100 AE	DILEX-AHK	3/8"	16
P-1	PAINT	SHERWIN WILLIAMS	SW 9165	GOSSAMER VEIL	SATIN / EGGSHELL	--
P-2	PAINT	BENJAMIN MOORE	PM-11	ESSEX GREEN	SATIN / EGGSHELL	--
CT-1	CEILING TILE	--	--	USG FROST - SLB 640 - PROFILE A	2'X2'	7
CT-2	CEILING TILE	--	--	VINYL FACED GYP BOARD PANELS	2'X4'	9
SF-1	SURFACE	MSI QUARTZ	--	CALCUTTA LEON	2 CMSLAB	18
SF-1 (ALT)	SURFACE	WILSON ART	Q4008	QUARTZ, HAIDA	2 CMSLAB	--
SF-2	WOOD WALL TREATMENT	MDF BOARD	--	PRIMED	1" x 2" x 8'-0"	19
SF-3	WOOD WALL TREATMENT	MDF BOARD	--	PRIMED	1" x 3" x 8'-0"	20
SF-4	WOOD CHAIR RAIL	MDF BOARD	--	PRIMED	1" x 3" x 8'-0"	21
SF-5	NOT USED					
SF-5 (ALT)	NOT USED					
SF-6	LAMINATE	WILSONART LAMINATE	BLACK 1595	FINISH: 60 MATTE	4'x8'	--
SF-7	FRP	MARLITE	P-199	FIBRE REINFORCED PLASTIC, BRITE WHITE	PEBBLE	

FINISH SCHEDULE KEY NOTES:

1. GROUT FOR FLOOR TILE TO BE MAPEI ULTRACOLOR PLUS CACOA #79 (3/16" JOINT)
2. GROUT FOR FLOOR TILE TO BE MAPEI ULTRACOLOR PLUS CHARCOAL #47(3/8" JOINT)
3. GROUT FOR FLOOR TILE TO BE MAPEI ULTRACOLOR PLUS CHARCOAL #47 (3/16" JOINT)
4. GROUT FOR WALL TILE TO BE MAPEI KERACOLOR IRON #107 (1/4" JOINT)
5. ORIENTATION TO BE HORIZONTAL TO THE FRONT COUNTER WITH 1/3 STAGGER
6. ORIENTATION TO BE STACKED
7. GRID TO BE PROFILE "A" AND TILE TO HAVE SLB (SHADOWLINE BEVEL) PROFILE.
8. --
9. GRID TO BE 5/16" COMMERCIAL QUALITY
10. --
11. TRIM FOR USE BETWEEN DIFFERENT ADJACENT TILES AND TILE TO GYP. BD. TRANSITIONS
12. TRIM FOR USE AT OUTSIDE CORNERS
13. INSIDE AND OUTSIDE CORNERS TO BE USED.
14. BAR TOPS TO HAVE 1/4" RADIUS TOP & BOTTOM WITH 1/4" RADIUS CORNERS. THE FINISH IS TO BE NATURAL WITH PREMIUM POLYURETHANE. ALL LEG SUPPORTS SHALL BE 2" DIA. WITH ESCUTCHEON PLATES @ TOP AND BOTTOM AND HAVE BLACK CRINKLED FINISH. THE BAR TOPS AND SUPPORTS SHALL BE PROVIDED BY THE TABLE VENDOR.
15. --
16. TR-3 AND ALL REQUIRED TRIM ACCESSORIES FOR FLOORING INSTALLATION
17. --
18. CONTACT RAFAEL BERNAL @ RAFEAL.B@MSISURFACES.COM OR 248.930.3459
19. 1x2 MDF OR SIMILAR TO BE MOUNTED TO THE WALL @ 13 1/2" O.C. SPACING VIA CONSTRUCTION ADHESIVE AND CONCEALED HARDWARE || ANY NAIL / SCREW HOLES ARE TO BE FILLED, EDGES TO BE CAULKED || TRIM & WALL TO BE PAINTED P-1 || IT IS RECOMMENDED TO SAND THE WALLS, PRIME AND THEN INSTALL THE TRIM
20. 1x3 MDF OR SIMILAR TO BE MOUNTED TO THE WALL VIA CONSTRUCTION ADHESIVE AND CONCEALED HARDWARE || ANY NAIL / SCREW HOLES ARE TO BE FILLED, EDGES TO BE CAULKED || TRIM & WALL TO BE PAINTED P-1 || IT IS RECOMMENDED TO SAND THE WALLS, PRIME AND THEN INSTALL THE TRIM
21. 1x3. MDF OR SIMILAR TO BE MOUNTED TO THE WALL VIA CONSTRUCTION ADHESIVE AND CONCEALED HARDWARE || ANY NAIL / SCREW HOLES ARE TO BE FILLED, EDGES TO BE CAULKED || TRIM & WALL TO BE PAINTED P-1 || IT IS RECOMMENDED TO SAND THE WALLS, PRIME AND THEN INSTALL THE TRIM

PLAN NOTES

A. REFERENCE MATERIAL RESOURCES AND SCHEDULE SHEET FOR FINISH SELECTIONS AND ADDITIONAL INFORMATION.

B. PROVIDE THRESHOLDS, TRANSITION STRIPS, EDGINGS, ETC. AT CHANGES IN FLOORING MATERIAL. USE ALUMINUM PROFILE BY SCHLUTER SYSTEMS AS DICTATED BY FIELD CONDITION.

C. PRIOR FLOOR FINISH AND FLOOR COVERING MATERIALS SHALL NOT BE LESS THAN CLASS N GROUPS A.

D. CONTRACTOR TO GET OWNER AND ARCHITECT APPROVAL ON MATERIAL MATCH PRIOR TO PURCHASE AND INSTALLATION. PROVIDE SAMPLES.

E TILE EXPANSION JOINTS PER TCNA EJ171. ALIGN WITH SLAB CONTROL SILICONE SEALANT AND JOINT FILLER.

F. INTERIOR FLOOR FINISHES SHALL BE DESIGNED WITH A CRACK CONTROL JOINT ALONG THE LENGTH OF EXISTING POUR STRIPS AT THE COLD JOINT WHERE THE POUR STRIPS CONNECT TO THE MAIN BUILDING SLAB.

G. WALK-IN COOLER PROVIDED WITHOUT A FLOOR. REFERENCE WALK-IN COOLER SHOP DRAWINGS.

H. FIELD VERIFY DIMENSIONS OF WALLS TO RECEIVE WALL COVERINGS, MURALS, OR WAINSCOT PRIOR TO INSTALLATION.

I. INTERIOR FINISH CLASSIFICATIONS:

FOR SPRINKLERED BUILDINGS:
INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS - CLASS B
CORRIDORS AND ENCLOSURES FOR EXIT ACCESS STAIRWAYS AND RAMPS - CLASS C
ROOMS AND ENCLOSED SPACES - CLASS C

FOR NON-SPRINKLERED BUILDINGS:
INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS - CLASS A
CORRIDORS AND ENCLOSURES FOR EXIT ACCESS STAIRWAYS AND RAMPS - CLASS B
ROOMS AND ENCLOSED SPACES - CLASS C

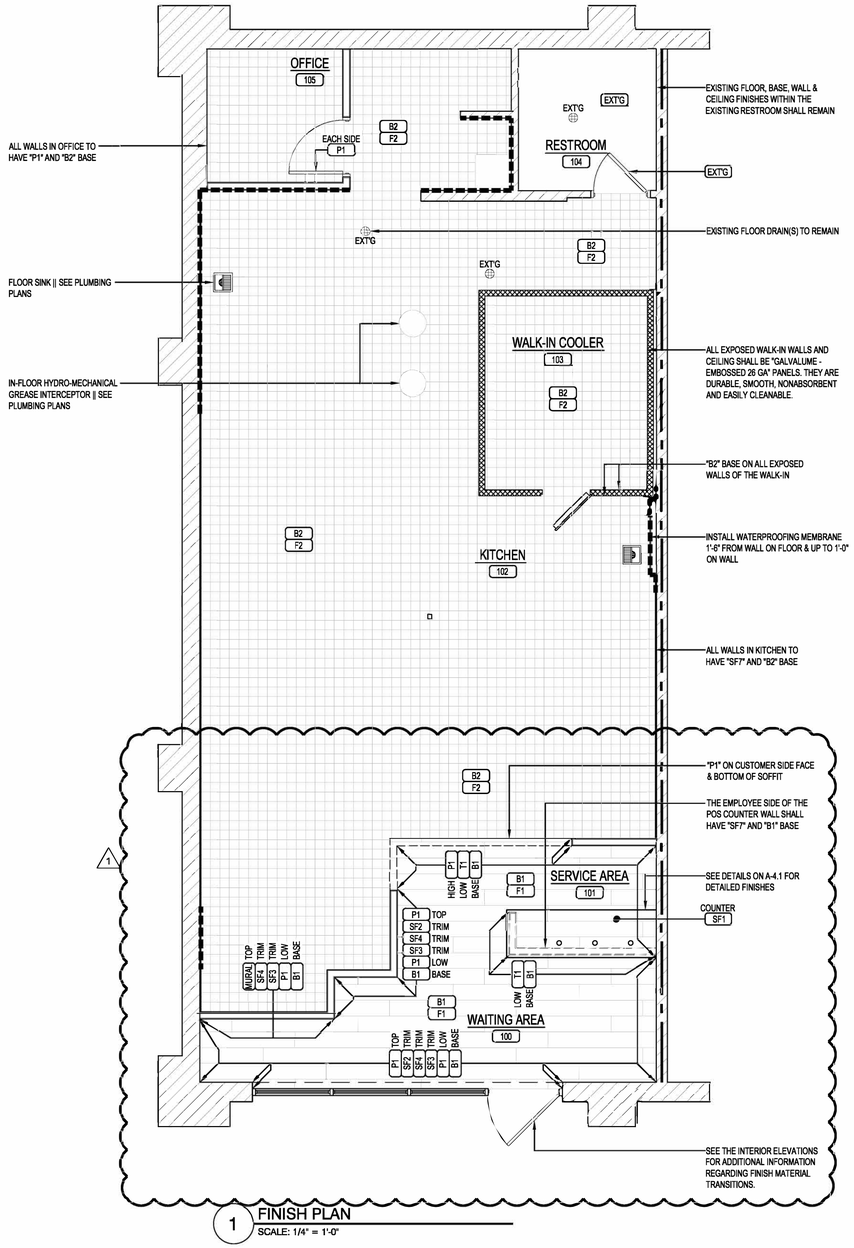
CLASS A: = FLAME SPREAD INDEX 0-25; SMOKEDEVELOPED INDEX 0-450
CLASS B: = FLAME SPREAD INDEX 26-75; SMOKEDEVELOPED INDEX 0-450
CLASS C: = FLAME SPREAD INDEX 76-200; SMOKEDEVELOPED INDEX 0-450

ROOM FINISH SCHEDULE

	ROOM	FLOOR	BASE	WALLS	CEILING MATERIAL	CEILING HEIGHT	NOTES
100	WAITING AREA	F-1	B-1	T-1, SF-2, SF-3, SF-4, P-1, P-2	CT-1	12'-6"	2
101	SERVICE AREA	F-1	B-1	T-1, P-1, SF-7	CT-1	12'-6"	2
102	KITCHEN	F-2	B-2	SF-7	CT-2	10'-0"	
103	WALK-IN COOLER	F-2	B-2	--	--	9'-0"	
104	RESTROOM	EXT'G	EXT'G	EXT'G	EXT'G	9'-0"	3
105	OFFICE	F-2	B-2	P-1	CT-2	10'-0"	

ROOM FINISH SCHEDULE KEY NOTES:

1. --
2. SEE INTERIOR ELEVATIONS FOR THE HEIGHTS TO TRANSITION THE WALL COLORS AND MATERIALS.
3. EXISTING FINISHES TO REMAIN



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

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

GP|N

CHECKED BY: DKH
DRAWN BY: DKH

STATE OF COLORADO
CHRISTOPHER P. KNOX
401357
LICENSED ARCHITECT

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	04-28-2025	CLIENT REQUESTED CHANGES	DKH

6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

FINISH PLAN & MATERIAL SCHEDULE

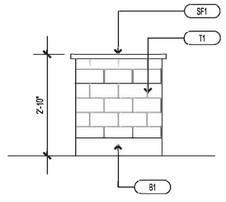
PROJECT NUMBER 25-025

DATE 04-16-2025

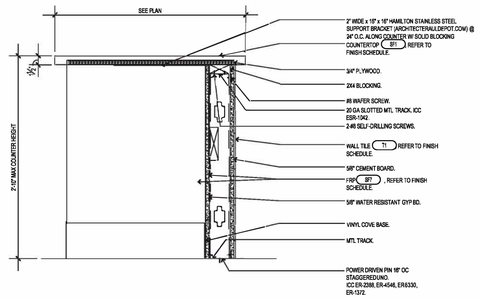
SHEET NO.

A-3.0

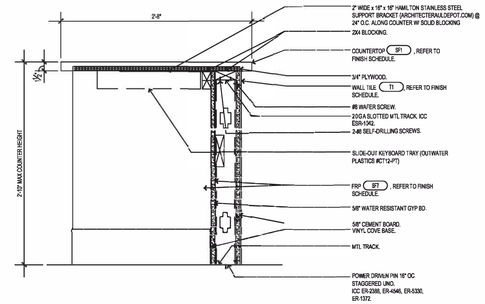
SHEET 5 OF 12



4 POS COUNTER ELEVATION (END)
SCALE: 1/2" = 1'-0"



5 MILLWORK DETAIL (REGISTER COUNTER)
SCALE: 1" = 1'-0"



6 MILLWORK DETAIL (CASH DRAWER)
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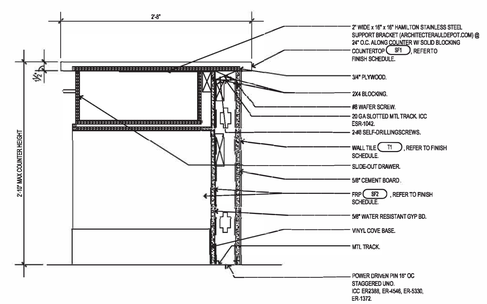
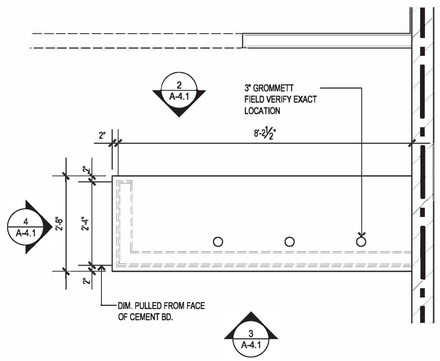
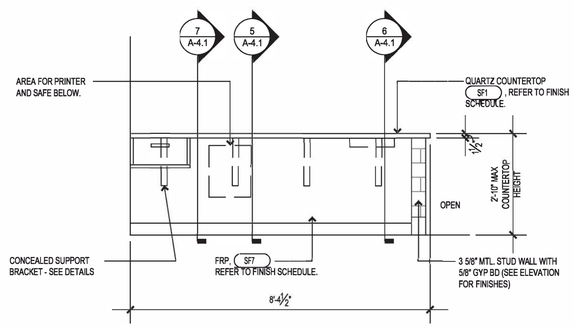


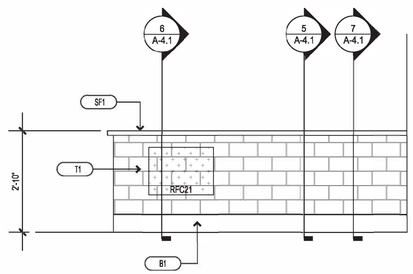
7 MILLWORK DETAIL (DRAWER)
SCALE: 1" = 1'-0"



1 POS COUNTER ENLARGED PLAN
SCALE: 1/2" = 1'-0"



2 POS COUNTER ELEVATION (EMPLOYEE SIDE)
SCALE: 1/2" = 1'-0"



3 POS COUNTER ELEVATION (CUSTOMER SIDE)
SCALE: 1/2" = 1'-0"

GP|N

CHECKED BY: DKH
DRAWN BY: DKH

STATE OF COLORADO
401357
LICENSED ARCHITECT

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME:

6087
MARCO'S PIZZA
INTERIOR UP-FIT
MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

POS DETAILS

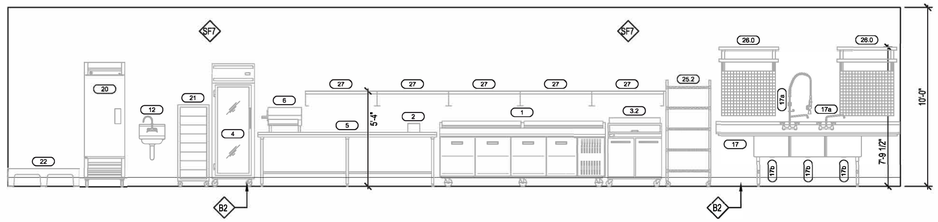
PROJECT NUMBER 25-025

DATE 04-16-2025

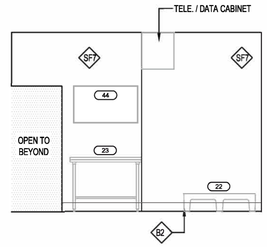
SHEET NO.

A-4.1

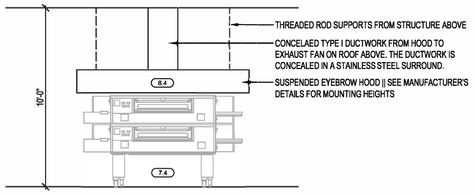
SHEET 9 OF 12



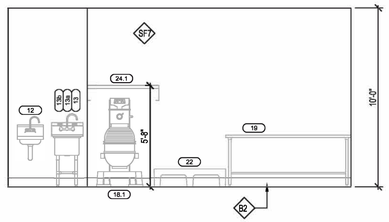
7 INTERIOR ELEVATION
SCALE: 1/4"=1'-0"



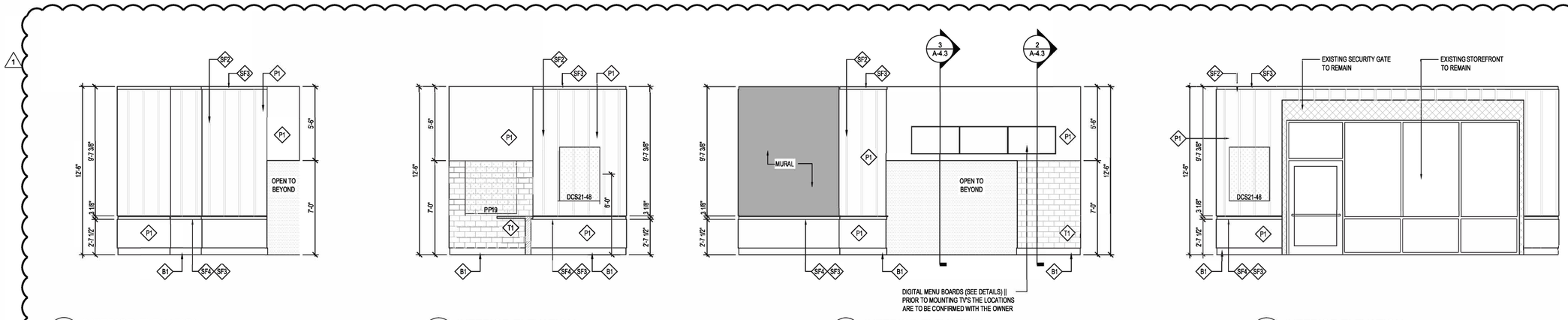
8 INTERIOR ELEVATION
SCALE: 1/4"=1'-0"



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



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



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

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

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

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

GP|N

CHECKED BY: DKH
DRAWN BY: DKH

STATE OF COLORADO
401357
LICENSED ARCHITECT

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	04-28-2025	CLIENT REQUESTED CHANGES	DKH

PROJECT NAME:

6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

INTERIOR ELEVATIONS

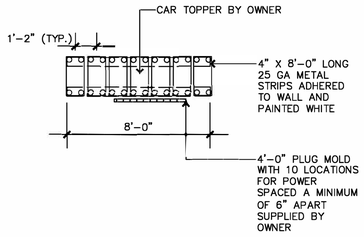
PROJECT NUMBER 25-025

DATE 04-16-2025

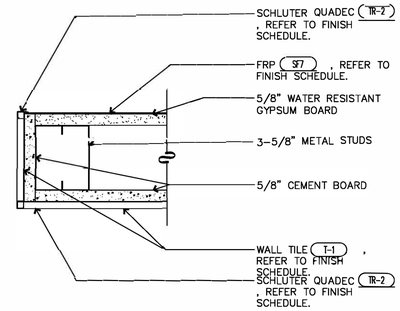
SHEET NO.

A-4.2

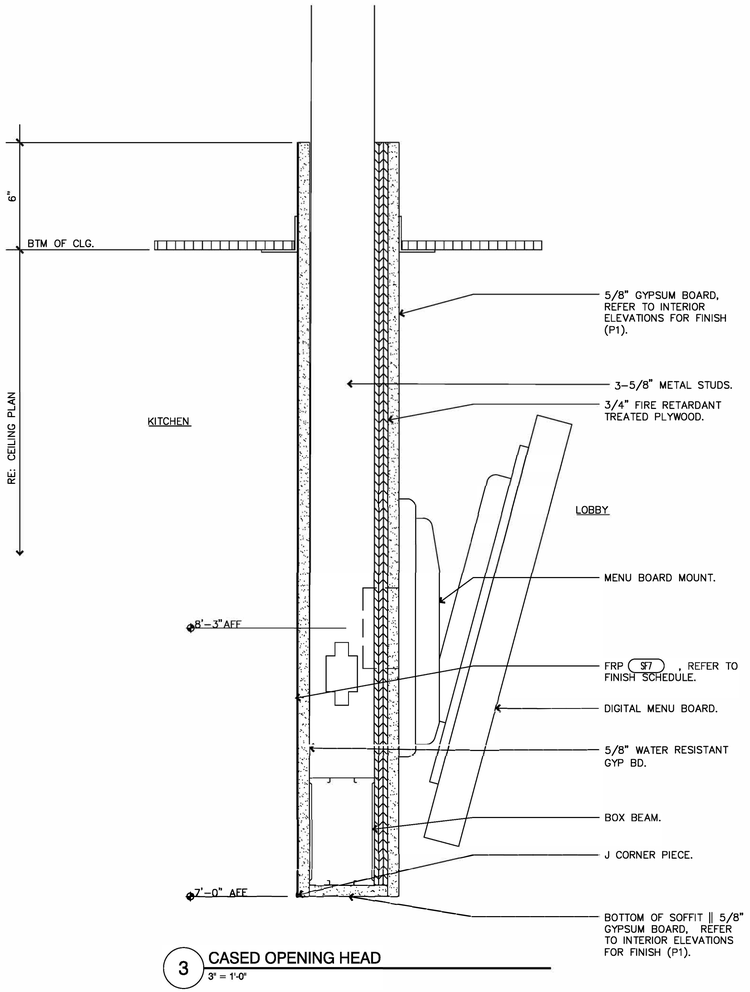
SHEET 10 OF 12



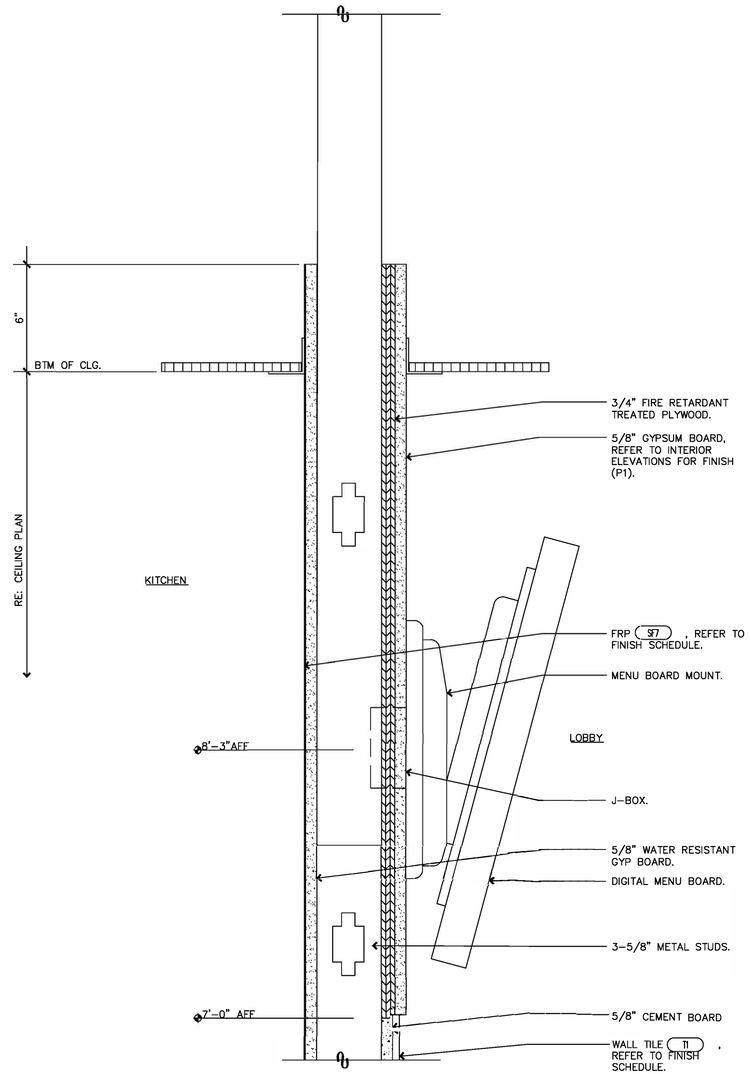
4 CAR TOPPER MOUNTING DETAIL
1/4" = 1'-0"



1 CASED OPENING JAMB
3" = 1'-0"



3 CASED OPENING HEAD
3" = 1'-0"



2 CASED OPENING WALL
3" = 1'-0"

GP|N

CHECKED BY: DKH
DRAWN BY: DKH

STATE OF COLORADO
401357
LICENSED ARCHITECT

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

FRANCHISEE NAME:

PROJECT NAME: 6087
MARCO'S PIZZA
INTERIOR UP-FIT
MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:
MISC. DETAILS

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.
A-4.3

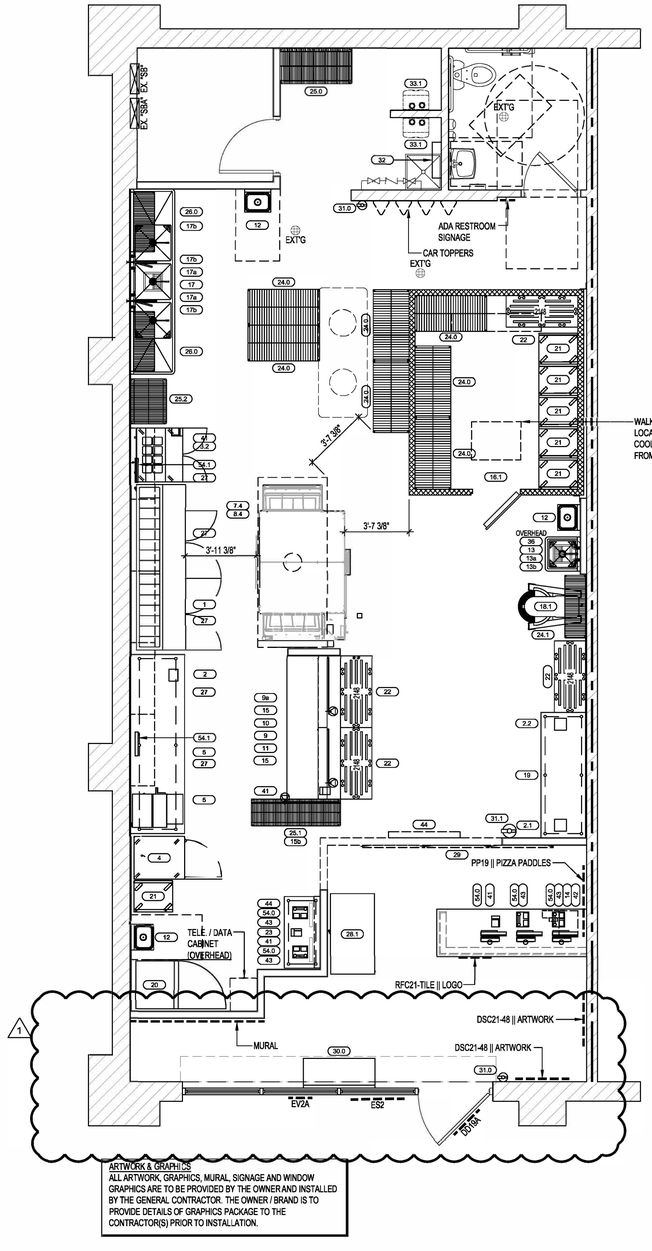
SHEET 11 OF 12

EQUIPMENT SCHEDULE

Item No	Qty	Equipment Category	Manufacturer	Model Number	Amps	KW	HP	Volts	Phase	Cycle	Direct	Plug	NEMA	Electrical AFF (in)	Electrical Rough-In	Cold Water Size (in)	Cold Water AFF (in)	Hot Water Size (in)	Hot Water AFF. (in)	Direct Drain Size (in)	Direct Drain AFF (in)	Indir. Drain Size (in)	Indir. Drain AFF. (in)	Gas Size (in)	MBTUH	Gas AFF (in)
1	1	Refrigerator, Pizza Prep	Randell	84111N	12.8		0.6	120	1	60		X	5-20P	8												
2	1	Scale, Portion, Digital	Doral Scale	7400																						
2.1	1	Easy Slicer, Manual	Nemco	N55200AN-6																						
2.2	1	Can Opener	Edlund	#1																						
3.2	1	Refrigerator, Sandwich/Salad Prep	Continental Refrigerator	SW36N8	6.3		0.2	115	1	60		X	5-15P	7												
4	1	Display Case, Refrigerated	Continental Refrigerator	1RE-GD	6.9		0.2	120	1	60		X	5-15P	82.25												
5	1	Table, Work	Eagle Group/Metal Masters	UT36120B																						
6	1	Dough Roller	Somerset	CDR-500	6.8		0.5	115	1	60		X	5-15P													
7.4	1	Oven, Conveyor	Edge Ovens	3870-2	9.5			120	1	60		X	L6-20P	39										1.25	185	21
					9.5			120	1	60		X	L6-20P	57										1.25	185	41
8.4	1	Type I Hood System	Edge	Edge EEH-23																						
9	1	Custom Pizza Table	Select Stainless Products	8MTC-36-L-CUSTOM																						
9a	1	SS Screen Catcher Box	Select Stainless Products	Custom																						
10	1	Maple Bakers Top (96" x 36")	Michigan Maple																							
11	1	Cutting Table Overshelf	Select Stainless Products	Custom																						
12	3	Sink, Hand, Wall Mount	Krowne Metal	HS-2																						
13	1	Sink, Scullery, 1 Compartment	Universal Stainless	1N18												0.5	38.5	0.5	38.5			1.5	22			
13a	1	Faucet, Wall Mount	Krowne Metal	14-801L																						
13b	1	Drain, Lever Handle	Krowne Metal	22-304																						
14	1	Safe	McGunn	QD1613P	COORD. W/ VENDOR																					
15	2	Warmer, Food Overhead	Hatco	GRA-48	6.7	0.8		120	1	60	X															
15b	2	Warmer, Food Overhead	Hatco	GRA-60	8.8	1.0		120	1	60	X															
16.1	1	Walk-In Cooler w/ Remote Condenser	T.B.D.	9'-9" x 11'-6" x 8'-4"(h)																						
17	1	Sink, Scullery, 3 Compartments	Universal Stainless	3N24-2D24												0.5	38.5	0.5	38.5			1.5	22			
																0.5	38.5	0.5	38.5			1.5	22			
																						1.5	22			
17a	2	Pre-Rinse Faucet, Wall Mount	Krowne Metal	17-109WL																						
17b	3	Drain, Lever Handle	Krowne Metal	22-304																						
18.1	1	Mixer, Pizza	Globe Food Equipment	SP62P	12.0		3.0	208	3	60		X	L15-20P	44												
19	1	Table, Work	Eagle Group/Metal Masters	T3084E W/ 2 Drawers																						
20	1	Freezer	Kelvinator	KFS220LH	6.2		0.2	115	1	60		X	5-15P	7												
21	6	Bun Sheet Pack Rack	Kelmax	ARE25-182.5																						
22	4	Rack, Dunnage	Cambro	DRS480480																						
23	1	Table, Work	Eagle Group/Metal Masters	UT2448B																						
24.0	7	Wire Shelving, Epoxy Coated	Advance Tabco	EG-2448																						
24.1	1	Wire Shelving, Epoxy Coated	Advance Tabco	EG-1442																						
25.0	1	Shelving, Wire	Metro	2448NC																						
25.1	1	Shelving, Wire	Metro	1860NC																						
25.2	1	Shelving, Wire	Metro	2430NC																						
26.0	2	SmartWall, Epoxy Coated	Metro	40" SmartWall G3																						
27	5	Shelf, Wall Mount	TBD	16x48 SS Wall Shelf																						
28.1	1	Display Case, Refrigerated	True Mfg. - General Foodservice	GDM-47-HC-LD	8.5	1.0	1/2	115	1	60																
29	1	Menu Board System	Howard Co	Menu Board System	COORD. W/ VENDOR																					
30.0	1	Furniture	By Others	4'-0" Bench Seat																						
31.0	2	Wall Hung Dry Chemical Fire Extinguisher	Larsens	5 Lb.																						
31.1	1	Wall Hung Dry Chemical Fire Extinguisher Per Code	Larsens	Type K																						
32	1	Mop / Broom Rack	Rubbermade	RM1992																						
33.1	2	Tankless Water Heater	Rinnai	See Plumbing																						
36	1	Dual-Housing Water Treatment System With Drop-in Cartridges	Optipure	FX11+CR																						
41	4	Computer Equipment	By Vendor	Receipt Printer	COORD. W/ VENDOR																					
42	1	Computer Equipment	By Vendor	Report Printer	COORD. W/ VENDOR																					
43	4	Computer Equipment	By Vendor	Phone	COORD. W/ VENDOR																					
44	2	Computer Equipment	By Owner	55" TV (Wall Mounted)	COORD. W/ VENDOR																					
54.0	5	Computer Equipment	By Vendor	POS / Computer	COORD. W/ VENDOR																					
54.1	2	Computer Equipment	By Vendor	Bump Screen	COORD. W/ VENDOR																					

GENERAL FOOD EQUIPMENT NOTES:

1. PRIOR TO ANY UTILITY ROUGH-IN(S) THE G.C. AND SUB-CONTRACTORS SHALL REVIEW THE PROJECT SPECIFIC EQUIPMENT CUT SHEETS AND SUBMITTAL PROVIDED BY THE CLIENT AND FOOD EQUIPMENT COMPANY TO DETERMINE ALL UTILITY INFORMATION PROVIDED IN THE DESIGN DRAWINGS IS ACCURATE.
2. THE CONTRACTOR SHALL INCLUDE IN THEIR BID THE UNLOADING, STORAGE, UNCRATING, ASSEMBLING & INSTALLATION (INCLUDING FINAL UTILITY CONNECTIONS) OF ALL OWNER SUPPLIED FOOD EQUIPMENT.
3. THE CONTRACTOR SHALL REQUEST THE MOST RECENT MANUFACTURER'S LITERATURE FOR THE OVENS AND HOOD. THEY SHALL PROVIDE & INSTALL ALL NECESSARY ITEMS TO COMPLETE THE FULL INSTALL INCLUDING BUT NOT LIMITED TO THE DUCT SHROUD ABOVE , SUSPENSION SYSTEM & THE FIRE SUPPRESSION SYSTEM.



ARTWORK & GRAPHICS
ALL ARTWORK, GRAPHICS, MURAL, SIGNAGE AND WINDOW GRAPHICS ARE TO BE PROVIDED BY THE OWNER AND INSTALLED BY THE GENERAL CONTRACTOR. THE OWNER / BRAND IS TO PROVIDE DETAILS OF GRAPHICS PACKAGE TO THE CONTRACTOR(S) PRIOR TO INSTALLATION.

THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS.

THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ACTUAL CONDITIONS, CONSTRUCTION AND/OR USE THEREOF. THIS DRAWING IS TO CONVEY DESIGN INTENTIONS AND/OR CODE COMPLIANCE ONLY.

GP|N

CHECKED BY: DKH
DRAWN BY: DKH

STATE OF COLORADO
401357
LICENSED ARCHITECT

04-28-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	04-28-2025	CLIENT REQUESTED CHANGES	DKH

PROJECT NAME:
6087
MARCO'S PIZZA
INTERIOR UP-FIT
MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:
EQUIPMENT PLAN & SCHEDULE

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.
A-5.0

SHEET 12 OF 12

PLUMBING SYMBOL LIST

SAN	SANITARY SEWER (ABOVE FLOOR)
SAN	SANITARY SEWER (UNDERGROUND)
EX.SAN	EXISTING SANITARY SEWER (UNDERGROUND)
GW	GREASE WASTE (UNDERGROUND)
FW	FILTER WATER PIPING
V	VENT PIPING
G	GAS PIPING
CW	COLD WATER PIPING
HW	HOT WATER PIPING
EX.CW	EXISTING COLD WATER PIPING
EX.G	EXISTING GAS WATER PIPING
HWR	HOT WATER RETURN PIPING
	P-TRAP
	PIPE UP
	PIPE DROP
	CLEANOUT
	PLUGGED OUTLET/CLEANOUT
	SHUT-OFF VALVE
	POINT OF CONNECTION
	ANGLE VALVE
	RECIRCULATION PUMP
	BALANCING VALVE

PLUMBING ABBREVATIONS

CO	CLEANOUT
CW	COLD WATER
HW	HOT WATER
HWR	HOT WATER RETURN
SAN	SANITARY
V	VENT
LAV	LAVATORY
WC	WATER CLOSET
TYP.	TYPICAL
DN	DOWN
FD	FLOOR DRAIN
N.I.C.	NOT IN SCOPE
GW	GREASE WASTE
ET	EXPANSION TANK
RCP	RECIRCULATING PUMP
G	GAS

PLUMBING DRAWING LIST

BUILDING DEPARTMENT PLUMBING NOTES

1. ALL PLUMBING SYSTEMS (SANITARY WASTE, VENT, WATER) AND ASSOCIATED EQUIPMENT SHALL BE INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF 2021 INTERNATIONAL PLUMBING CODE.
2. INSTALLATION OF UNDERGROUND PIPING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF 2021 INTERNATIONAL PLUMBING CODE SECTION 704.
3. PROTECTION OF PIPING AND PLUMBING SYSTEM COMPONENTS AS PER 2021 INTERNATIONAL PLUMBING CODE SECTION 305.
4. TRENCHING, EXCAVATION AND BACKFILL AS PER 2021 INTERNATIONAL PLUMBING CODE SECTION 306.
5. RODENT PROOFING AS PER 2021 INTERNATIONAL PLUMBING CODE 304.
6. MATERIALS USED IN PLUMBING SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF 2021 INTERNATIONAL PLUMBING CODE SECTION PC 303, 605, 702, AND 902.
7. DEEP SEAL TRAPS FOR FLOOR DRAINS SHALL BE PROVIDED AS PER 2021 INTERNATIONAL PLUMBING CODE SECTION 1002, AND CLEAN-OUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 708.
8. VERTICAL AND HORIZONTAL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF 2021 INTERNATIONAL PLUMBING CODE SECTION 308.
9. WATER SUPPLY SYSTEMS SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF 2021 INTERNATIONAL PLUMBING CODE CHAPTE 6 SECTION 601-603, 604, 605, 606, 607, 608, 610.
10. THE SANITARY DRAINAGE SYSTEM SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF 2021 INTERNATIONAL PLUMBING CODE CHAPTE 7 SECTION 701, 704, 705, 706, 707, 708, 711.
11. VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF 2021 INTERNATIONAL PLUMBING CODE CHAPTER 9 SECTIONS 917.
12. INSPECTION AND TESTING OF PLUMBING SYSTEMS SHALL BE IN ACCORDANCE WITH 2021 INTERNATIONAL PLUMBING CODE SECCTION 312.

APPLICABLE CODES

A. 2021 INTERNATIONAL BUILDING CODE

B. 2021 INTERNATIONAL MECHANICAL CODE

C. 2021 INTERNATIONAL PLUMBING CODE

D. 2021 INTERNATIONAL FIRE CODE

E. 2023 EDITION OF THE NATIONAL ELECTRICAL CODE

F. 2021 INTERNATIONAL ENERGY CONSERVATION CODE.

PLUMBING SPECIFICATIONS

1. BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS

1.01 SCOPE

A. PROVIDE ALL MATERIAL, TOOLS, SUPERVISION AND LABOR INCLUDING ALL MISCELLANEOUS AND INCIDENTAL ITEMS REQUIRED FOR COMPLETE AND OPERABLE PLUMBING INSTALLATIONS AS SHOWN OR DESCRIBED ON THE DRAWINGS AND IN THESE SPECIFICATIONS.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING AND NEW CONDITIONS AND MATERIALS WITHIN THE CONSTRUCTION AREA. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE OWNER'S SATISFACTION.

C. OBTAIN ALL PERMITS, PAY ALL PERMIT FEES AND SCHEDULE ALL REQUIRED INSPECTIONS. COPIES OF ALL PERMITS AND INSPECTION CERTIFICATES SHALL BE FORWARDED TO THE OWNER FOR RECORD.

D. THE GENERAL CONDITIONS OF THE CONTRACT AND ALL DIVISION 1 REQUIREMENTS APPLY TO THE WORK OF THIS SECTION.

E. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING BID TO DETERMINE CONDITIONS AND THE EXTENT OF THE WORK. BY COMMENCING WORK, THE CONTRACTOR ACKNOWLEDGES HIS CONFIRMATION OF ALL CONDITIONS AS ACCEPTABLE WITH REFERENCE TO HIS CONTRACT, SCOPE OF WORK AND BID PRICE SUCH THAT NO ADDITIONAL COMPENSATION SHALL BE FORTHCOMING FOR UNFORESEEN EXISTING CONDITIONS.

F. IN ALL AREAS SUBJECT TO FREEZING CONDITIONS, THE CONTRACTOR SHALL PROVIDE FREEZE PROTECTION FOR ALL DOMESTIC WATER PIPING INSTALLED UNDER HIS CONTRACT.

G. ALL ELECTRICAL REQUIREMENTS SHALL BE COORDINATED WITH THE CONTRACTOR FOR ELECTRICAL WORK. THIS CONTRACTOR IS RESPONSIBLE FOR ALL LOW VOLTAGE WIRING FOR EQUIPMENT INSTALLED UNDER HIS CONTRACT. THE CONTRACTOR FOR ELECTRICAL WORK IS RESPONSIBLE FOR LINE VOLTAGE POWER WIRING ONLY.

H. COLOR AND FINISH SELECTIONS FOR ALL MATERIALS, INCLUDING PAINTING OF PIPING, SHALL BE AS DIRECTED AND/OR APPROVED BY THE ARCHITECT.

I. MINOR DETAILS NOT SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER AND ACCEPTABLE CONSTRUCTION, INSTALLATION OR OPERATION OF ANY PART OF THE WORK AS DETERMINED BY THE ENGINEER SHALL BE INCLUDED AS IF SPECIFIED OR INDICATED ON THE DRAWINGS.

J. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIREMENTS FOR THE INSTALLATION, CONNECTION, EXTENSION OR MODIFICATION TO ALL UTILITY SERVICES WITH RESPECTIVE PROVIDERS INCLUDING PAYMENT OF ALL ASSOCIATED FEES.

K. THE CONTRACTOR IS RESPONSIBLE FOR ALL PAINTING ASSOCIATED WITH CUTTING AND PATCHING. ALL PAINTING IN AREAS WITH COMPLETE FINISH RENOVATIONS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.

1.02 SUBMITTALS

A. SUBMITTAL REQUIREMENTS SHALL BE COORDINATED WITH THE ARCHITECT AND AUTHORITIES HAVING JURISDICTION. UNLESS OTHERWISE DIRECTED, CONTRACTOR SHALL PROVIDE SUBMITTALS AS LISTED BELOW.

1. PIPE AND FITTINGS
2. VALVES
3. HANGERS AND SUPPORTS
4. PLUMBING PIPING LAYOUT
5. TESTS
6. PLUMBING FIXTURES
7. WATER HEATERS & ACCESSORIES
8. MIXING VALVES
9. ALL SCHEDULED PLUMBING EQUIPMENT

B. SUBMITTALS FROM SUPPLIERS OR MANUFACTURERS WHICH DO NOT BEAR THE STAMP OF THE SUBMITTING CONTRACTOR INDICATING THAT THE CONTRACTOR HAS REVIEWED THE SUBMITTAL FOR CONFORMANCE WITH THE PROJECT REQUIREMENTS WILL BE RETURNED REJECTED.

C. THE ENGINEER'S REVIEW OF SUBMITTALS IS A COURTESY WHICH DOES NOT RELIEVE THE CONTRACTOR FROM CONFORMING WITH THE CONSTRUCTION DOCUMENTS, REGARDLESS OF THE ACTION INDICATED BY THE SHOP DRAWINGS STAMP.

D. REVIEW OF SHOP DRAWINGS BY THE ENGINEER SHALL BE LIMITED TO THE INITIAL REVIEW, AND A SECOND REVIEW OF ANY REQUIRED RESUBMITTED DATA. IF THE ENGINEER IS REQUIRED TO REVIEW SHOP DRAWINGS FOR A THIRD (OR MORE) SUBMISSION OF THE SAME ITEM, THE CONTRACTOR SHALL BE LIABLE FOR COMPENSATING THE ENGINEER FOR THESE SUBSEQUENT REVIEWS AS PER THE ENGINEER'S CURRENT HOURLY RATE SCHEDULE.

E. SUBMIT PROOF OF APPROVAL AND/OR CONFIRMATION OF SATISFACTORY TEST RESULTS TO THE OWNER AND THE ARCHITECT.

F. SUBMIT TO THE OWNER'S MAINTENANCE PERSONNEL OPERATION AND MAINTENANCE DATA FOR ALL SYSTEM COMPONENTS, SERVICING REQUIREMENTS, INSPECTION DATA, REPLACEMENT PART NUMBERS AND AVAILABILITY AND CONTACT INFORMATION FOR SERVICE/SUPPLY COMPANY.

G. FOR ALL BELOW GRADE PIPING WHERE ACTUAL INSTALLATION DEVIATES FROM CONSTRUCTION DRAWINGS, THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS INDICATING BELOW GRADE PIPE LOCATIONS DIMENSIONED TO NEAREST COLUMN LINES.

H. RECORD AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE OWNER/TENANT AFTER COMPLETION OF THE WORK SHOWING ANY ALTERATIONS, ADDITIONS AND/OR DELETIONS TO THE SYSTEM(S) INSTALLED.

1.03 SUBSTITUTIONS

A. ALL EQUIPMENT SHALL BE PRODUCTS OF THE SPECIFIED MANUFACTURER OR MANUFACTURERS. ALL BIDS SHALL BE BASED ON THE SPECIFIED MANUFACTURER OR MANUFACTURER'S EQUIPMENT. FOR SUBSTITUTIONS OF OTHER MANUFACTURER'S EQUIPMENT TO BE CONSIDERED, THE SUBSTITUTION MUST BE INDICATED PRIOR TO BIDDING WITH THE REASON FOR THE PROPOSED SUBSTITUTION IDENTIFIED, AND THE PROPOSED CREDIT TO THE OWNER INDICATED. THE ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF ANY PROPOSED SUBSTITUTIONS.

B. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR COORDINATING THE WORK OF OTHER TRADES WHICH MAY BE AFFECTED BY SUBSTITUTIONS, INCLUDING ALL RELATED COSTS.

1.05 DEFINITIONS

A. FURNISH: TO PURCHASE, PROCURE, ACQUIRE AND DELIVER, COMPLETE WITH RELATED ACCESSORIES.

B. INSTALL: TO ERECT, MOUNT AND CONNECT, COMPLETE WITH RELATED ACCESSORIES.

C. PROVIDE: TO FURNISH AND INSTALL.

D. PLUMBING CONTRACTOR, THE CONTRACTOR, THIS CONTRACTOR: THE CONTRACTOR FOR PLUMBING WORK WHICH IS SPECIFIED HEREIN AND SHOWN ON THESE DRAWINGS.

1.06 DRAWINGS

A. THE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO ILLUSTRATE THE GENERAL ARRANGEMENT AND ROUTING OF PIPING AND GENERAL LOCATIONS OF EQUIPMENT. PRECISE LOCATIONS OF EQUIPMENT, RISERS AND STACKS, AND ROUTING AND ELEVATION OF ALL PIPING SYSTEMS SHALL BE COORDINATED IN THE FIELD WITH THE ARCHITECT, ARCHITECTURAL DRAWINGS, THE WORK OF OTHER TRADES, EXISTING AND NEW BUILDING CONDITIONS AND/OR THE PREFERENCES OF THE OWNER/TENANT AS CONSTRUCTION PROCEEDS. ALL PIPING SHALL BE INSTALLED CONCEALED IN FINISHED SPACES, UNLESS NOTED OTHERWISE.

B. PROVIDE ALL NECESSARY INCIDENTAL MATERIALS AND ACCESSORIES REQUIRED TO MAKE THE WORK COMPLETE IN ALL RESPECTS, EVEN IF NOT PARTICULARLY SHOWN OR SPECIFIED.

C. REFER TO PLUMBING EQUIPMENT/FIXTURE SCHEDULE ON THE DRAWINGS FOR ALL FIXTURE AND EQUIPMENT SPECIFICATIONS.

D. REFER TO FIXTURE CONNECTION SIZE SCHEDULE FOR ALL FIXTURE ROUGHING SIZE REQUIREMENTS.

E. VERIFY ALL INDICATED CONDITIONS BEFORE STARTING WORK AND REPORT ANY DISCREPANCIES. THE DRAWINGS REFLECT CONDITIONS WHICH CAN BE REASONABLY INTERPRETED FROM THE EXISTING VISIBLE CONDITIONS OR FROM DRAWINGS AND INFORMATION FURNISHED BY THE OWNER.

F. LOCATE ALL FIXTURES AND EQUIPMENT AS PER THE FINAL ARCHITECTURAL DRAWINGS.

1.07 PRODUCTS

A. SANITARY AND VENT PIPING:

1. ABOVE GRADE PIPING SHALL BE HUB AND SPIGOT CAST IRON PIPE AS PER ASTM A74 WITH STAINLESS STEEL COUPLINGS AND ELASTOMERIC GASKETS WITH A MINIMUM 4 BANDS PER COUPLING.
2. SLOPE OF DRAINAGE SYSTEM SHALL BE 1/8" PER FOOT OF RUN FOR PIPE OVER 3" (I.D.) AND 1/4" PER FOOT OF RUN FOR PIPE 3" AND SMALLER (I.D.). VENT PIPING SHALL BE PITCHED TO DRAIN.
3. ALL CAST IRON SOIL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND BE LISTED BY NSF INTERNATIONAL.

B. DOMESTIC WATER PIPING:

1. ABOVE GRADE WATER PIPING SHALL BE TYPE 'L' HARD-DRAWN COPPER TUBE.
2. FITTINGS IN DOMESTIC WATER PIPING SHALL BE COPPER OR COPPER ALLOY
3. JOINTS SHALL BE MADE WITH LEAD-FREE SOLDER.
4. THE ENTIRE DOMESTIC WATER DISTRIBUTION SYSTEM SHALL BE INSULATED INCLUDING ALL VALVES, FITTINGS, ETC.
5. COMPLY WITH NSF 61 FOR MATERIALS FOR WATER-SERVICE PIPING AND SPECIALTIES FOR DOMESTIC WATER.
6. AS PER 2021 INTERNATIONAL ENERGY CONSERVATION CODE C404.4, PIPING FROM A WATER HEATER TO THE TERMINATION OF HEATED WATER FIXTURE SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE C403.12.3 OF MINIMUM PIPE INSULATION THICKNESS.

MINIMUM PIPE INSULATION THICKNESS							
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU.IN./ (H.FT2.°F)	MEAN RATING TEMPERATURE, °F	<1	1 to < 1½	1½ to < 4	4 to < 8	≥8
141-200	0.25-0.29	125	1.5	1.5	2	2	2
105-140	0.21-0.28	100	1.0	1.0	1.5	1.5	1.5
40-60	0.21-0.27	75	0.5	0.5	1.0	1.0	1.0

7. HOT WATER SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER 2021 INTERNATIONAL ENERGY CONSERVATION CODE C404.5.1 THE HOT WATER VOLUME FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER MAXIMUM PIPING LENGTH TABLE.

NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPING LENGTH (FEET)	
	PUBLIC LAV	OTHER FIXTURES
½"	2'	43'
¾"	0.5'	21'
1"	0.5'	13'
1¼"	0.5'	8'
1½"	0.5'	6'
2" OR LARGER	0.5'	4'

8. AS PER 2021 INTERNATIONAL ENERGY CONSERVATION CODE C404.6.1, AUTOMATIC CONTROLS SHALL BE INSTALLED THAT LIMITS THE OPERATION OF A RECIRCULATING PUMP AND THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE.
9. AS PER 2021 INTERNATIONAL ENERGY CONSERVATION CODE C404.7, PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING:

-THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE.

-THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO 104°F (40°C).

C. HANGERS AND SUPPORTS:

1. HANGERS SHALL BE STANDARD STEEL, MALLEABLE OR WROUGHT IRON, AS MANUFACTURED BY GRINNELL OR APPROVED EQUAL, SUITABLE FOR THE TYPE OF CONSTRUCTION. PIPING SHALL NOT BE HUNG FROM OTHER PIPE.
2. SECTIONS OF INDIVIDUAL PIPE RUNS SHALL BE SUPPORTED BY CLEVIS HANGERS.
3. ALL EQUIPMENT SHALL BE PROVIDED WITH APPROVED SUPPORTS.
4. PROVIDE SEISMIC RESTRAINTS IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND STANDARDS AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. SUPPORTS SHALL BE PROVIDED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE PIPING MANUFACTURER.

D. VALVES:

1. PROVIDE GATE VALVES, BUTTERFLY OR BALL VALVES FOR SHUT-OFF DUTY ON MAIN AND BRANCH SUPPLY LINES. FOR ALL PIPE RUNS 2" AND SMALLER, PROVIDE BALL FOR ALL PIPE RUNS LARGER THAN 2" AND SMALLER THAN 4", PROVIDE GATE VALVES. PIPING 4" AND LARGER, PROVIDE BUTTERFLY VALVES FOR SHUT-OFF DUTY.
2. ALL FIXTURES WITH THE EXCEPTION O FLUSHOMETER-EQUIPPED WATER CLOSETS AND URINALS SHALL HAVE STOP VALVES TO CONTROL SUPPLY TO THE FIXTURE. WHERE SUPPLIES ARE EXPOSED PROVIDE CHROME-PLATED STOPS WITH CHROME-PLATED ESCUTCHEONS ON PIPING PENETRATIONS.
3. ALL PLUMBING FIXTURES AND EQUIPMENT TO HAVE SHUT-OFF VALVES ON SUPPLY LINES.
4. ALL BRANCH LINES TO HAVE SHUT-OFF VALVES.
5. ALL VALVES SHALL BE ACCESSIBLE.PROVIDE ACCESS DOORS WHERE REQUIRED FOR VALVE ACCESS.
6. PROVIDE GLOBE VALVES FOR THROTTLING/BALANCING OF THE HOT WATER CIRCULATING SYSTEM.

E. INSTALL PIPING TO CONSERVE BUILDING SPACE. DO NOT INTERFERE WITH USE OF BUILDING SPACE AND THE WORK OF OTHER TRADES. ALL PIPING RUN IN CEILING SHALL BE INSTALLED TIGHT TO THE STRUCTURE ABOVE.

F. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS OR CONNECTED EQUIPMENT. PROVIDE PIPE ANCHORS, GUIDES AND EXPANSION JOINTS OR LOOPS IN ALL HOT WATER AND HOT WATER CIRCULATING MAIN SUPPLY PIPING AND SEGMENTS OF SUCH PIPE THAT EXCEED 30'-0" IN LENGTH.

G. IN ALL AREAS WITH FINISHED SURFACES, SYSTEM PIPING AND COMPONENTS SHALL BE CONCEALED ABOVE OR WITHIN FINISHED SURFACES.

H. REDUCTIONS IN PIPE SIZES SHALL BE MADE WITH ONE-PIECE REDUCING FITTINGS. BUSHINGS ARE NOT ACCEPTABLE. USE FLANGED FITTINGS AT THE BASE OF RISERS.

I. VENT PENETRATIONS THROUGH THE ROOF SHALL BE FLASHED.

J. IF WATER PRESSURE EXCEEDS 80 PSI, A WATER PRESSURE REDUCING VALVE SHALL BE INSTALLED IN WATER PIPING AT CONNECTION TO MAIN.

K. PIPE BACKFLOW PREVENTER DRAINS TO FLOOR DRAIN OR OTHER APPROVED INDIRECT WASTE SOURCE.

L. PROVIDE ACCESS DOORS/PANELS FOR SERVICE AND ACCESS TO ALL VALVES AND OTHER SYSTEM COMPONENTS ENCLOSED IN WALLS AND CEILINGS. ACCESS DOORS SHALL BE FURNISHED BY THIS CONTRACTOR, INSTALLED BY THE GENERAL CONTRACTOR.

M. ALL FIXTURES REQUIRING VACUUM BREAKERS SHALL BE EQUIPPED WITH INTEGRAL VACUUM BREAKERS.

N. ANY PENETRATIONS THROUGH FIRE RATED PARTITIONS, FLOORS, OR CEILINGS SHALL BE STEEL SLEEVED AND SEALED WITH 3M BRAND UL RATED FIRE BARRIER CAULK OR APPROVED EQUAL.

O. WHEN THE WATER PIPING SYSTEM IS COMPLETE, THOROUGHLY FLUSH ALL DIRT, SEDIMENT, SOLDER, ETC., OUT OF THE SYSTEM, REMOVING ALL STRAINERS, VALVE STEM SEATS, ETC., REQUIRED TO ACCOMPLISH THE FLUSHING.

P. AT ALL INDIRECT WASTE DRAINS, MAINTAIN AIR GAP AS REQUIRED BY CODE.

Q. INSTALL SLEEVES FOR ALL PIPES WHICH PASS THROUGH WALLS, FLOORS, AND CEILINGS. WHERE PIPES ARE TO BE INSULATED, THE SLEEVE SHALL BE LARGE ENOUGH TO ACCOMMODATE INSULATION. SLEEVES SHALL BE FLUSH WITH FINISHED SURFACES AT BOTH ENDS. ON FINISHED SURFACES IN EXPOSED AREAS PROVIDE ESCUTCHEONS COMPATIBLE WITH FINISH.

2. INSTALLATION

2.01 GENERAL

A. ALL WORK WHICH REQUIRES DISRUPTION OF THE ROOFING SHALL BE DONE BY A CONTRACTOR CERTIFIED BY THE ROOFING MANUFACTURER AS REQUIRED TO MAINTAIN ANY EXISTING ROOF WARRANTIES.

B. EXTERIOR INSTALLATIONS TO BE WEATHER PROOF IN ALL RESPECT.

C. EXTERIOR MATERIALS AND EQUIPMENT SHALL BE PAINTED TO PREVENT CORROSION, COLOR PER ARCHITECT.

D. COORDINATE THE PLUMBING WORK WITH ALL OTHER AFFECTED WORK AND THE CONSTRUCTION SCHEDULE.

E. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN AND FERROUS END PIPE.

F. REMOVE SCALE AND FOREIGN MATERIAL, FROM INSIDE AND OUTSIDE, BEFORE ASSEMBLY.

G. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES AND UNIONS.

H. COORDINATION WITH THE WORK OF OTHER TRADES IS REQUIRED. PROVIDE OFFSETS IN PIPING SYSTEMS OR MINOR DEVIATIONS TO THE INDICATED PIPE ROUTING IN ORDER TO COORDINATE THE PLUMBING WORK WITH THE WORK OF ALL OTHER TRADES AND THE GENERAL BUILDING CONDITIONS.

I. NO DOMESTIC WATER PIPING SHALL BE INSTALLED IN UNHEATED SPACES.

J. PRIOR TO DISCONNECTING AND CONNECTING NEW WORK TO EXISTING SYSTEMS, THE PLUMBING CONTRACTOR SHALL NOTIFY THE PROPERTY MANAGER AND OFFER A PROPOSED SCHEDULE OF WORK. ESB WILL AUTHORIZE CONNECTIONS AND COORDINATE NECESSARY SHUT DOWNS AND DRAIN DOWNS AS REQUIRED. SHUT DOWNS AND DRAIN DOWNS MAY BE PERFORMED BY THE PLUMBING CONTRACTOR ONLY AFTER RECEIVING ESB AUTHORIZATION, AND SHOULD BE PERFORMED UNDER SUPERVISION OF ESB PERSONNEL THREE (3) DAYS ADVANCE NOTICE TO THE PROPERTY MANAGER IS REQUIRED.

K. THE PLUMBING CONTRACTOR IS ADVISED THAT DUE TO THE NATURE OF THE OPERATIONS AND TENANT REQUIREMENTS, CONNECTIONS TO EXISTING SYSTEMS MAY HAVE TO BE MADE AFTER REGULAR WORKING HOURS. THE PROPERTY MANAGER WILL ADVISE THE PLUMBING CONTRACTOR OF THE TIME CONSTRAINTS UPON RECEIPT AND APPROVAL OF THE PLUMBING CONTRACTOR'S REQUEST FOR SHUT DOWN AND CONNECTION TO EXISTING SYSTEMS.

L. WHEN CONNECTING TO EXISTING STACKS AND RISERS, PROVISION IS TO BE MADE FOR FUTURE CONNECTIONS BY PROVIDING CAPPED AND VALVED OUTLETS ON DOMESTIC WATER RISERS AND PLUGGED OUTLETS ON THE SANITARY AND VENT STACKS.

2.02 ABOVE GRADE

A. INSTALL PLUMBING PIPING IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PIPING COMPLIES WITH REQUIREMENTS AND SERVES INTENDED PURPOSES.

B. ROUTE PIPING IN AN ORDERLY MANNER, PLUMB AND PARALLEL TO BUILDING STRUCTURE. MAINTAIN GRADIENT. SLOPE PIPING AND ARRANGE SYSTEMS TO DRAIN. IN DOMESTIC WATER SYSTEMS, PROVIDE DRAIN VALVES AT MAIN SHUT-OFF VALVES AND ALL LOW POINTS IN PIPING.

C. USE EXISTING CONNECTIONS AT MAINS WHERE AVAILABLE FOR NEW BRANCH PIPING. LOCATE ALL RISERS AND PIPING BEFORE CONSTRUCTION COMMENCES AND TAKE CARE NOT TO DAMAGE SAME. ANY DAMAGE OCCURRING TO THE EXISTING PIPING WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

3. TESTING

A. AT THE COMPLETION OF THE PLUMBING WORK, COMPLETELY TEST THE ENTIRE INSTALLATION OF ALL SYSTEMS FOR PROPER OPERATION AND COMPLIANCE WITH APPLICABLE CODES AND LOCAL REQUIREMENTS. CORRECT ALL DEFICIENCIES FOUND.

B. TESTING OF THE INSTALLED SYSTEMS SHALL BE MADE BY THE CONTRACTOR IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER.

C. THE CONTRACTOR SHALL NOT COVER UP OR PERMANENTLY CONCEAL PIPING, DEVICES OR ANY PORTION OF NEWLY CONSTRUCTED PLUMBING SYSTEM(S) UNTIL SUCH SYSTEM, OR PORTION OF THE SYSTEM, HAS BEEN TESTED IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER AND INSPECTED BY THE LOCAL INSPECTOR AND APPROVED IN WRITING, EXCEPT PIPING PASSING THROUGH FLOORS, WALLS, PARTITIONS, OR BEAMS, FOR DISTANCES EQUAL TO THE THICKNESS OF SUCH FLOOR, WALL, PARTITION OR BEAM.

D. THIS CONTRACTOR SHALL NOTIFY THE VARIOUS DEPARTMENTS, BUREAUS AND INDIVIDUALS AT LEAST TWO WEEKS IN ADVANCE OF THE TIME THAT THE TESTS ARE TO BE CONDUCTED.

E. ALL DEFECTIVE PARTS SHALL BE REPLACED OR CORRECTED BY THIS CONTRACTOR AND AN EXTRA TEST OR TESTS SHALL BE MADE UNTIL THE OPERATION IS SATISFACTORY. ALL ARRANGEMENTS AND EXPENSES NECESSARY TO CONDUCT ALL TESTS REQUIRED BY THESE SPECIFICATIONS AND THE VARIOUS AGENCIES HAVING JURISDICTION OVER THE WORK INSTALLED UNDER THIS CONTRACT SHALL BE MADE BY THIS CONTRACTOR. NO EXTRA COMPENSATION WILL BE ALLOWED FOR THESE TESTS, THE COST THEREOF BEING INCLUDED IN THE LUMP SUM BID FOR THIS CONTRACT.

F. WHERE ANY EVIDENCE OF STOPPAGE IS FOUND IN PIPING OR EQUIPMENT, THIS CONTRACTOR SHALL DISCONNECT, CLEAN, REPAIR AND RECONNECT ALL OBSTRUCTED PIPING OR EQUIPMENT AND SHALL ALSO PAY FOR ALL NECESSARY CUTTING AND REPAIRS TO ADJOINING WORK.

G. ALL PIPING AND EQUIPMENT SHALL BE THOROUGHLY CLEANED INSIDE AND OUT, OF DIRT, CUTTINGS, OILS AND OTHER FOREIGN SUBSTANCES AND SHALL BE LEFT CLEAN.

H. ALL REQUIRED TESTS SHALL BE WITNESSED BY LOCAL AUTHORITIES AND THE OWNER'S REPRESENTATIVE.

J. ALL EQUIPMENT WILL BE FACTORY TESTED.

I. CONTRACTOR SHALL IDENTIFY TO THE OWNER'S REPRESENTATIVE ANY LEAKS OR DAMAGE THAT OCCURS AS A RESULT OF SYSTEM TESTING. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO LIMIT ANY POTENTIAL DAMAGE. CORRECTIVE ACTION REQUIRED AS A RESULT OF TESTING SHALL BE PERFORMED IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.

K. REPORT IN WRITING TO AUTHORITIES HAVING JURISDICTION, THE ARCHITECT AND THE OWNER THE RESULTS OF ALL TESTING.

L. TESTING REQUIREMENTS
   a. TEST ALL DOMESTIC WATER PIPING HYDROSTATICALLY TO 125 PSIG.
   b. HYDROSTATIC TEST PRESSURES SHALL REMAIN CONSTANT WITH NO VARIATION FOR 120 MINUTES.
   c. TESTS SHALL BE WITNESSED BY THE BUILDING ENGINEER.
   d. THE PLUMBING CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGE DUE TO TEST FAILURES AND LEAKAGE IN THE TEST AREA AND ADJACENT TENANT OR ESB SPACES.

M. REFILL ENTIRE POTABLE HOT AND COLD WATER SUPPLY SYSTEM WITH CHLORINE SOLUTION (HTH OLIN CHEMICAL CORP.) AT A STRENGTH TO MEET STANDARDS OF THE DEPARTMENT OF HEALTH, AND FOR A PERIOD OF RETENTION AS STIPULATED.

N. THOROUGHLY FLUSH PIPING SYSTEM WITH FRESH WATER IMMEDIATELY PRIOR TO FINAL ACCEPTANCE.

GP|N

CHECKED BY: DKH
DRAWN BY: NYE

COLORADO LICENSED
MICHAEL D TOMAS
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

FRANCHISFE NAMF·

PROJECT NAME: 6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

PLUMBING NOTES, SYMBOLS, ABBREVATIONS, & SPECIFICATIONS

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

P-0.1

SHEET 1 OF 6

4. WARRANTY

A. EQUIPMENT, MATERIALS AND WORKMANSHIP FURNISHED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR SHALL KEEP THE WORK IN GOOD REPAIR FOR ONE YEAR AFTER THE DATE OF FINAL APPROVAL. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROMPTLY CORRECT AND REPAIR ANY AND ALL BREAKS, FAILURES OR WEAR DUE TO FAULTY MATERIALS, WORKMANSHIP OR EQUIPMENT. ALL SETTLEMENTS OF SURFACES THAT MAY OCCUR WITHIN THAT PERIOD SHALL ALSO BE PROMPTLY REPAIRED.

B. GAS TANKLESS WATER HEATERS

1. TANKLESS WATER HEATERS SHALL HAVE 150 PSI WORKING PRESSURE AND BE EQUIPPED WITH EXTRUDED HIGH DENSITY ANODE.

2. ALL INTERNAL SURFACES OF THE HEATER EXPOSED TO WATER SHALL BE GLASS-LINED WITH AN ALKALINE BORO SILICATE COMPOSITION THAT HAS BEEN FUSED-TO-STEEL BY FIRING AT A TEMPERATURE RANGE OF 1400°F TO 1600°F.

3. ELECTRIC HEATING ELEMENTS SHALL BE LOW WATT DENSITY GOLDENROD 1" SCREW-IN TYPE.

4. EACH ELEMENT SHALL BE CONTROLLED BY AN INDIVIDUALLY MOUNTED THERMOSTAT AND HIGH TEMPERATURE CUT-OFF SWITCH. ALL INTERNAL CIRCUITS SHALL BE FUSED. THE OUTER JACKET SHALL BE OF BAKED ENAMEL FINISH AND SHALL BE PROVIDED WITH FULL SIZE CONTROL COMPARTMENT FOR PERFORMANCE OF SERVICE AND MAINTENANCE THROUGH HINGED FRONT PANEL AND SHALL ENCLOSE THE TANK WITH FOAM INSULATION. ELECTRICAL JUNCTION BOX WITH HEAVY DUTY TERMINAL BLOCK SHALL BE PROVIDED. THE DRAIN VALVE SHALL BE LOCATED IN THE FRONT FOR EASE OF SERVICING.

GAS PIPING NOTES:

1. GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE 2021 INTERNATIONAL FUEL GAS CODE.

2. GAS PIPING SHALL BE TESTED IN ACCORDANCE WITH THE PROCEDURES SCRIBED IN NFPA NO 54. ANY OTHER TEST AS REQUIRED BY THE LOCAL GAS INSPECTION DEPARTMENT OR GAS COMPANY SHALL ALSO BE PERFORMED.

3. MINIMUM GAS PIPING SIZING SHALL BE 3/4".

4. GAS PIPING COLOR/LABELS:
EXTERIOR:
A. LABEL ALL GAS PIPING "GAS/PRESSURE ON PIPE AT 5'-0" CENTERS.
B. COLOR: ON ROOF PAINT WITH TWO COATS OF YELLOW ENAMEL, ON VERTICAL WALLS PAINT TO MATCH WALL COLOR.
INTERIOR:
A. LABEL ALL GAS PIPING "GAS/PRESSURE", SPACING AND COLOR PER ANSI/ASME A13.1 CODE REQUIREMENTS.

5. GAS PIPING SUPPORTS:
EXTERIOR:
A. PIPING ROUTED ON ROOF SHALL BE STRAPPED TO MANUFACTURED SUPPORTS "QUICK-BLOCK" OR EQUAL. GAS SUPPORTS SPACED PER NFPA 54 7.2.5.2.
INTERIOR:
A. PIPING TO BE SUPPORTED BY CLEVIS HANGERS W/ THREADED ROD OR UNI-STRUT SYSTEM. GAS SUPPORTS SPACED PER NFPA 54 7.2.5.2.

6. GAS VALVES SHALL BE ANSI/CSA APPROVED, 125 PSI RATED, 2 PIECE, FULL PORT, BALL VALVES W/BRASS BODY AND BALL. PROVIDE W/ LEVER HANDLE.

7. PROVIDE UNIONS, FLANGES OR COUPLINGS AT CONNECTION TO ALL VALVES AND EQUIPMENT. DO NOT USE DIRECT WELDED OR THREADED CONNECTIONS TO VALVES, EQUIPMENT OR OTHER APPARATUS.

8. PROVIDE NON-CONDUCTING DIELECTRIC UNIONS WHENEVER CONNECTING DISSIMILAR METALS.

9. PROVIDE DIRT LEG, GAS VALVE AND GAS REGULATOR AT EACH PIECE OF EQUIPMENT INSTALLED IN ACCESSIBLE LOCATION WITH-IN 36" OF EQUIPMENT. USE VENT-LESS REGULATORS INDOORS WHEN POSSIBLE. ROUTE VENTED REGULATOR VENTS TO EXTERIOR.

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P:

CHECKED BY: DKH
DRAWN BY: NYE

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MICHAEL D TOMAS
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PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

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MARCO'S PIZZA
INTERIOR UP-FIT
MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

PLUMBING SPECIFICATIONS

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

P-0.2

SHEET 2 OF 6

WATER GENERAL NOTES:

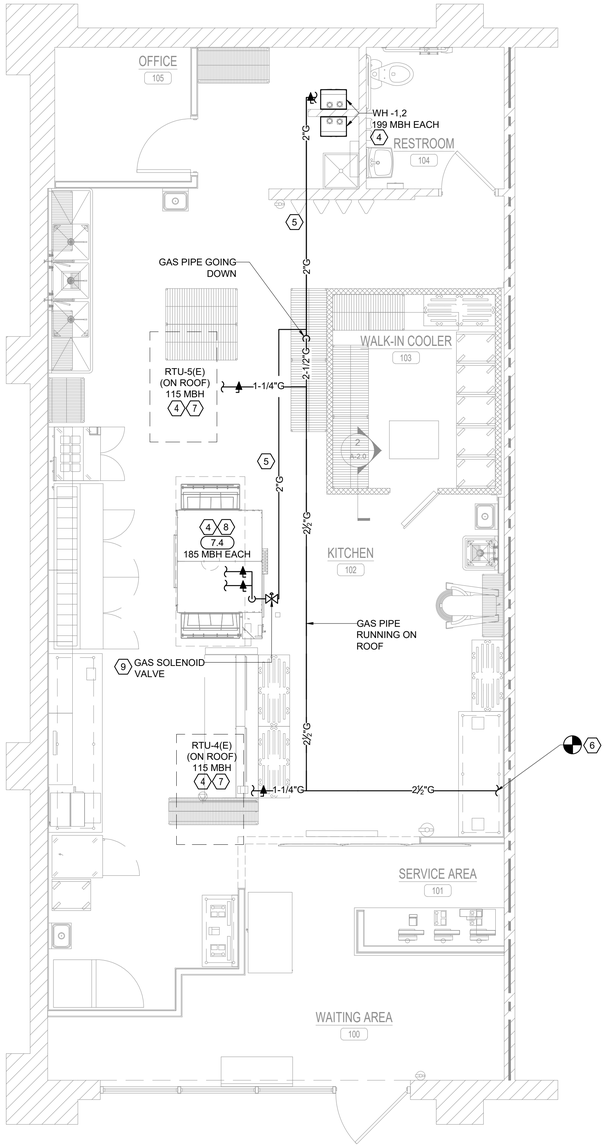
1. CW/HW PIPING TO BE PROVIDED WITH INSULATION AS PER 2021 ENERGY CONSERVATION CODE.
2. PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
3. PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTOR & SHUT-OFF VALVES AS REQUIRED.
4. REFER RISER DIAGRAMS FOR ALL PIPE SIZES.

WATER KEY NOTES: (#)

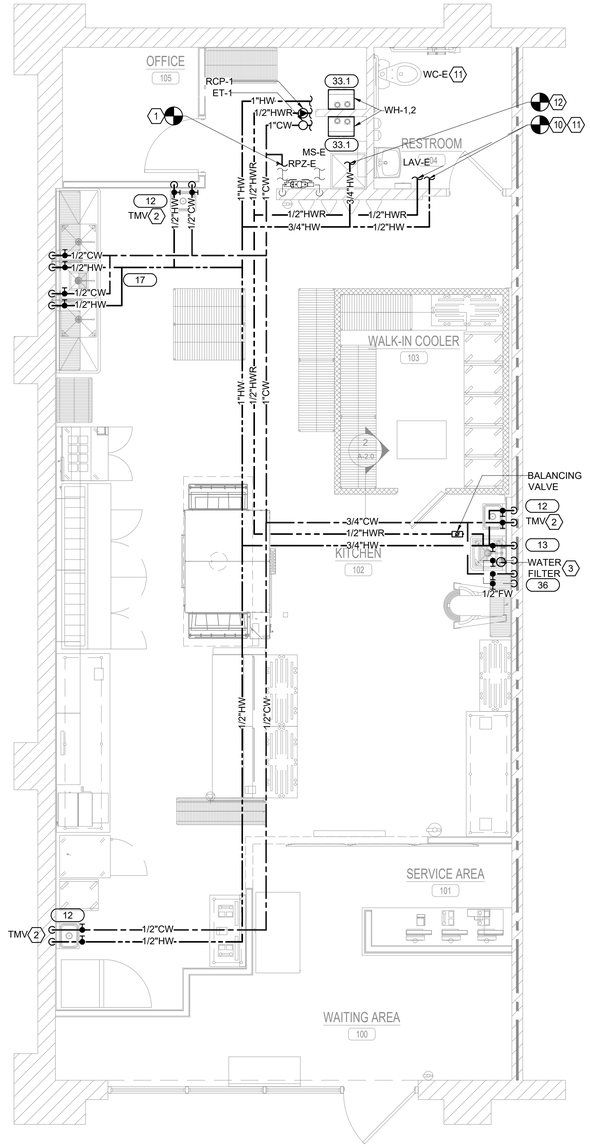
1. CONNECT NEW 1" CW PIPING TO THE EXISTING COLD WATER STUB IN SPACE WITH EXISTING WATER METER AND BACKFLOW PREVENTER. CONTRACTOR TO FIELD VERIFY THE SIZE, ROUTING AND LOCATION OF EXISTING CW LINE.
2. PROVIDE A TEMPERATURE MIXING VALVE FOR HAND SINK. SET TEMPERATURE TO A MAXIMUM OF 110°F.
3. CONTRACTOR TO COORDINATE WITH VENDOR FOR EXACT MOUNTING LOCATION OF WATER FILTRATION SYSTEM.
4. CONTRACTOR TO MAKE SURE THAT ADEQUATE INLET PRESSURE PROVIDED FOR GAS FIRED RTU-5(E),RTU-4(E), WH-1,2 & OVEN.
5. GAS PIPING RUNNING THROUGH CEILING, SHOWN ON PLAN FOR REFERENCE.
6. EXTEND AND CONNECT NEW 2½" GAS LINE TO THE NEW GAS METER.THE GAS METER SHOULD HAVE THE MINIMUM CAPACITY OF 998 CFH. CONTRACTOR TO VERIFY IN FIELD THE EXACT LOCATION OF NEW GAS METER, PRESSURE AVAILABLE.
7. EXISTING MECHANICAL EQUIPMENT RTU-4(E) & RTU-5(E) TO REMAIN WITH NEW GAS PIPING, ASSOCIATED FITTINGS AND ACCESSORIES.
8. PROVIDE MINIMUM 2" GAS LINE TO OVENS.
9. PLUMBING CONTRACTOR SHALL INSTALL GAS SOLENOID VALVE (NO)ABOVE CEILING. TIE VALVE INTO HOOD FIRE SUPPRESSION SYSTEM. VALVE SHALL CLOSE UPON HOOD SUPPRESSION ACTIVATION. PROVIDE MANUAL RESET.
10. EXTEND AND CONNECT NEW 1/2" HW/HWR TO EXISTING LAVATORY WITH EXISTING HW/HWR PIPING CONNECTION, ASSOCIATED ACCESSORIES & FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
11. EXISTING WATER CLOSET AND LAVATORY TO REMAIN WITH EXISTING CW PIPING,ASSOCIATED ACCESSORIES AND FITTINGS CONTRACTOR TO FIELD VERIFY CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
12. EXISTING MOP SINK TO REMAIN WITH EXISTING CW/HW PIPING, ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.

TANKLESS WATER HEATER CALCULATIONS

SR. NO.	FIXTURE	QUANTITY	FLOW RATE (GPM)	
			PER FIXTURE	TOTAL
01	3 COMPARTMENT SINK	2	1	2.0
02	1 COMPARTMENT SINK	1	1	1.0
03	HAND SINK	3	0.5	1.5
04	MOP SINK	1	1.5	1.5
05	LAVATORY	1	0.5	0.5
	TOTAL FLOW RATE (GPM)			6.5



2 GAS FLOOR PLAN
1/4" = 1'-0"



1 WATER FLOOR PLAN
1/4" = 1'-0"

GP|N

COLORADO LICENSED
MICHAEL D TOMAS
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

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PROJECT NAME:

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MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

PLUMBING WATER & GAS FLOOR PLAN

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

P-1.0

SHEET 3 OF 6

SANITARY GENERAL NOTES:

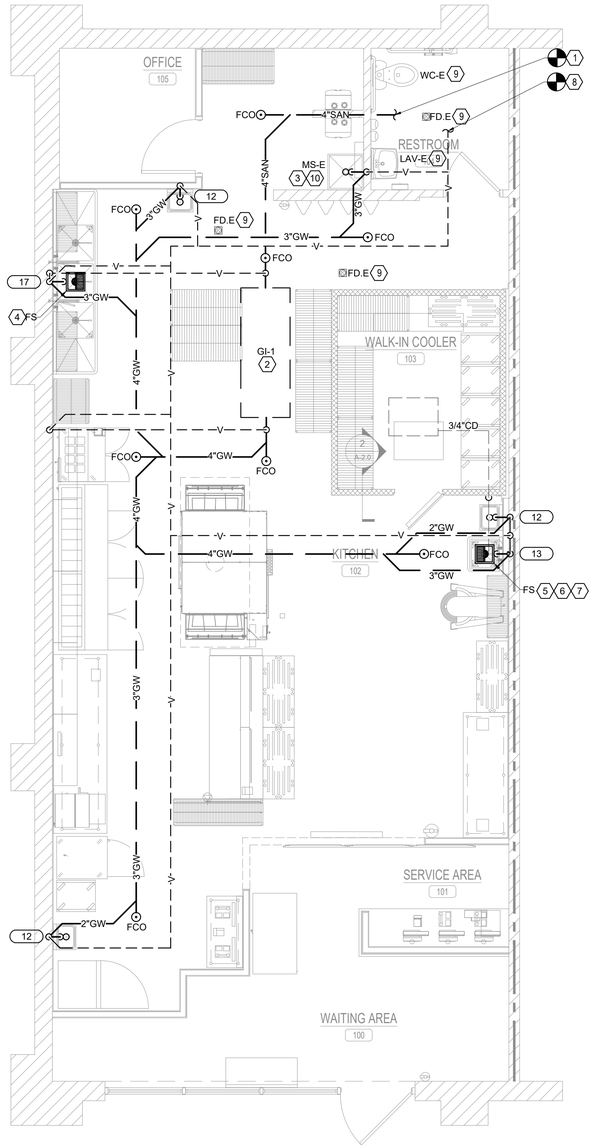
1. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
2. REFER RISER DIAGRAMS FOR ALL PIPE SIZES.
3. THE VENT SHALL RISE 6 INCHES VERTICALLY ABOVE THE FLOOD RIM LEVEL OF THE FIXTURE BEING VENTED BEFORE OFFSETTING HORIZONTALLY OR VERTICALLY DOWNWARD BEFORE CONNECTING TO THE OUTSIDE VENT TERMINAL.

SANITARY AND VENT KEY NOTES: (#)

1. CONNECT NEW 4" SANITARY WASTE PIPING TO EXISTING 4" SANITARY PIPE IN SPACE. CONTRACTOR TO FIELD VERIFY EXACT SIZE, ROUTING AND INVERT OF EXISTING PIPE ON SITE.
2. INDOOR RECESSED GREASE INTERCEPTOR SCHIER GB-250 OR SIMILAR. CONTRACTOR TO INSTALL GI-1 AS PER MANUFACTURER'S INSTRUCTIONS AND LOCAL GUIDELINES. COORDINATE WITH LANDLORD FOR FINAL LOCATION
3. ROUTE INDIRECT CONDENSATE DRAIN FROM WATER HEATERS AND EXISTING RPZ TO MOP SINK WITH APPROVED AIR GAP.
4. ROUTE INDIRECT DRAIN FROM 3-COMPARTMENT SINK TO FLOOR SINK WITH APPROVED AIR GAP.
5. ROUTE INDIRECT DRAIN FROM 1-COMPARTMENT SINK TO FLOOR SINK WITH APPROVED AIR GAP.
6. ROUTE INDIRECT DRAIN FROM WATER FILTRATION SYSTEM TO FLOOR SINK WITH APPROVED AIR GAP.
7. ROUTE CONDENSATE DRAIN LINE FROM WALK-IN COOLER TO FLOOR SINK WITH APPROVED AIR GAP.
8. CONNECT NEW 3" VENT PIPING TO EXISTING VTR IN SPACE. CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING VTR PIPE ON SITE. UPGRADE THE EXISTING VTR, IF REQUIRED.
9. EXISTING PLUMBING FIXTURE TO REMAIN WITH EXISTING SANITARY AND VENT PIPING. CONTRACTOR TO FIELD VERIFY CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
10. EXISTING MOP SINK SHALL BE REMOVED AND REINSTALLED. CONNECT NEW GREASE AND VENT PIPING AFTER REINSTALLATION.

GREASE TRAP (GI-1) SIZING CALCULATIONS

SR. NO.	FIXTURE	QUANTITY	DIMENSIONS (INCHES)			VOLUME		PERCENTAGE USAGE	ACTUAL USAGE	FLOW RATE (GPM)	
			LENGTH (L)	WIDTH (W)	DEPTH (D)	CUBIC INCHES	GALLONS			1 MINUTE	2 MINUTES
1	3 COMPARTMENT SINK	1	24	24	14	24,192	105	0.75	78.75	78.75	39.37
2	HAND SINK	3	10	14	05	2,100	9	-	9	9	4.5
3	MOP SINK	1	22	22	10	4840	21	0.75	15.75	15.75	7.87
4	1 COMPARTMENT SINK	1	18	18	14	4536	20	0.75	15	15	7.5
TOTAL										118.5	59.25
PROPOSED GREASE REMOVAL DEVICE										SCHIER GB-250	
AS PER 2018 INTERNATIONAL PLUMBING CODE SECTION 1003.3.5, PROPOSED GREASE INTERCEPTOR MODEL. PROVIDE SCHIER SV24-O OR EQUIVALENT SAMPLING PORT ON THE DISCHARGE SIDE OF GREASE INTERCEPTOR AS SHOWN ON PLAN.											



1 SANITARY FLOOR PLAN
1/4" = 1'-0"

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

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MICHAEL D. TOMAS
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PROFESSIONAL ENGINEER

04-30-2025

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MARCO'S PIZZA INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
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DENVER, COLORADO 80220

SHEET TITLE:

PLUMBING SANITARY FLOOR PLAN

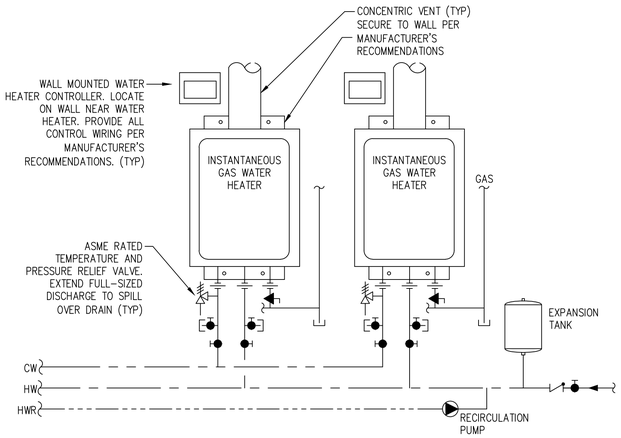
PROJECT NUMBER 25-025

DATE 04-16-2025

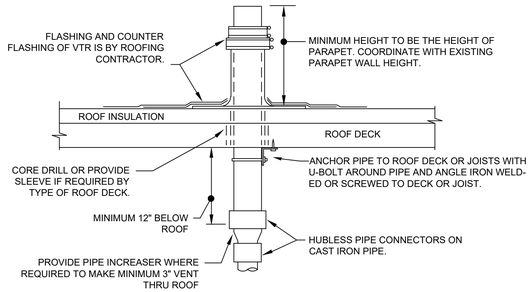
SHEET NO.

P-1.1

SHEET 4 OF 6

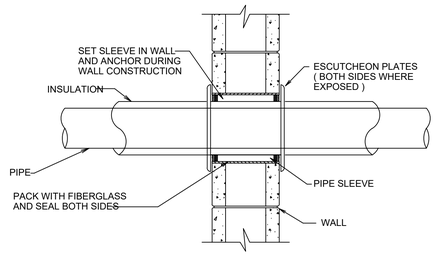


1 WATER HEATER DETAIL
SCALE: N.T.S.

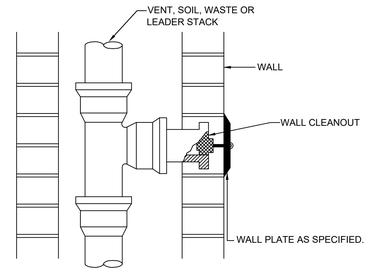


COMMENTS:
1. REFER TO PLANS FOR VTR PIPE SIZES AND LOCATIONS. LOCATE VTR MINIMUM THREE FEET FROM PROPERTY LINE, OR TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, OR ONE FOOT FROM ANY VERTICAL SURFACE. LOCATE VTR MINIMUM 18" FROM PARAPET, EXPANSION JOINT, EQUIPMENT CURB, ETC. OFFSET IN CEILING SPACE WHERE REQUIRED TO MEET THESE CONDITIONS.

2 VENT THRU ROOF DETAIL
SCALE: N.T.S.



3 PIPE SLEEVE THRU WALL SECTION
SCALE: N.T.S.



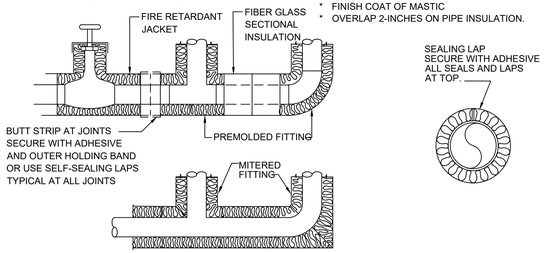
4 WALL CLEANOUT DETAIL
SCALE: N.T.S.

CONCEALED VALVES AND FITTINGS

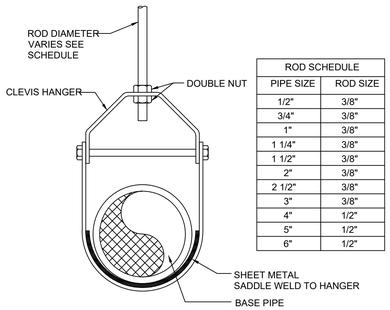
- WRAP WITH 1-INCH THICK, 1-POUND DENSITY TO REQUIRED PIPE INSULATION THICKNESS
- SECURE WITH WIRE OR TAPE.
- VAPOR SEAL COLD WATER, CHILLED WATER AND STORM WATER PIPING.

CONCEALED VALVES AND FITTINGS

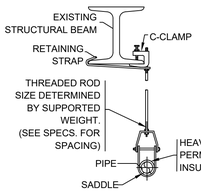
- PREMOLDED FIBER GLASS OR RADIAL MITERED PIPE INSULATION
- SKIM COAT OF INSULATION CEMENT
- COAT OF MASTIC
- WRAP WITH FIBER GLASS REINFORCING CLOTH.
- FINISH COAT OF MASTIC
- OVERLAP 2-INCHES ON PIPE INSULATION.



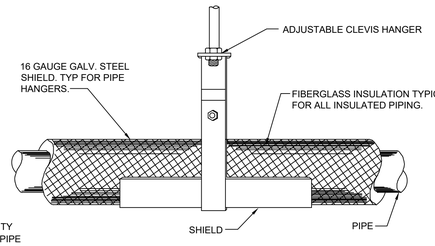
5 INSULATION FOR EXPOSED AND CONCEALED LOCATIONS
SCALE: N.T.S.

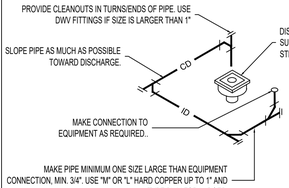


ROD SCHEDULE	
PIPE SIZE	ROD SIZE
1/2"	3/8"
3/4"	3/8"
1"	3/8"
1 1/4"	3/8"
1 1/2"	3/8"
2"	3/8"
2 1/2"	3/8"
3"	3/8"
4"	1/2"
5"	1/2"
6"	1/2"



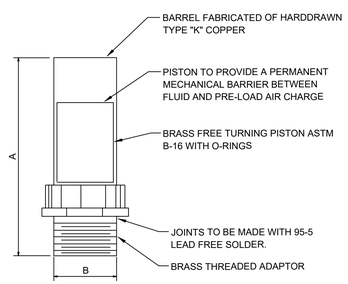
6 HANGER DETAIL
SCALE: N.T.S.





ROUTE PIPE INCONSPICUOUSLY AND UNOBTRUSIVELY. HANG PIPE AS REQUIRED. DO NOT INSULATE INDIRECT DRAIN PIPE WHEN INSTALLED EXPOSED IN FOOD SERVICE FACILITY. REFER TO LOCAL CODES FOR FURTHER INFORMATION.

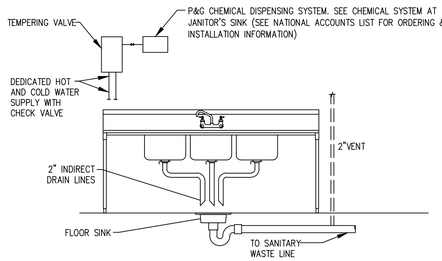
7 INDIRECT WASTE DETAIL
SCALE: N.T.S.



PIPE SIZE	P.D.I. SYMBOL	FIXTURE UNIT RATINGS	A SIZE	B SIZE
1/2"	A	1 - 11	5"	1/2"
3/4"	B	12 - 32	5"	3/4"
1"	C	33 - 60	7"	1"
1-1/4"	D	61 - 113	7"	1-1/4"
1-1/2"	E	114 - 154	9"	1-1/2"
2"	F	155 - 330	9"	2"

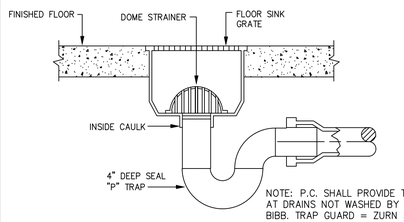
NOTE: LOCATE ONE FOR EACH BANK OF FLUSHOMETER FIXTURES AT LAST FIXTURE PROVIDE A STAINLESS STEEL ACCESS DOOR FOR EACH SUFFICIENT IN SIZE TO ALLOW REPLACEMENT OF ARRESTOR AT A FUTURE DATE.

8 WATER HAMMER ARRESTOR DETAIL
SCALE: N.T.S.



COMMENTS:
1. COORDINATE INDIVIDUAL BAY DRAINAGE , AIR GAP, & DRAIN FUNNEL WITH LOCAL CODE REQUIREMENTS.

9 THREE COMPARTMENT SINK DETAIL
SCALE: N.T.S.



NOTE: P.C. SHALL PROVIDE TRAP GUARD AT DRAINS NOT WASHED BY A HOSE BIBB. TRAP GUARD = ZURN #Z1072. PROVIDE TRAP PRIMER IF REQUIRED BY AHJ. PRIMER = ZURN MODEL #Z1022 OR APPROVED EQUAL.

10 FLOOR SINK DETAIL
SCALE: N.T.S.

GP|N

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SHEET TITLE:

PLUMBING DETAILS

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

P-2.0

SHEET 5 OF 6

PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE TYPE	HW	CW	VENT	WASTE	DESCRIPTION	REMARK
FS	FLOOR SINK	--	--	2"	3"	FLOOR SINK SHALL BE EQUAL TO ZURN MODEL #FD2376-T, ¾ GRATE. PROVIDE FLOOR SINK WITH P-TRAP.	PROVIDE TRAP PRIMER CONNECTION AS REQUIRED.
FCO	FLOOR CLEANOUT	--	--	--	--	FLOOR CLEANOUT SHALL BE EQUAL TO ZURN MODEL #ZS-1400-VP. CLEANOUT.	GAS/WATER TIGHT ABS PLUG
WCO	WALL CLEANOUT	--	--	--	--	WALL CLEANOUT SHALL BE EQUAL TO ZURN MODEL #ZS-1468, ACCESS COVER AND PLUG.	GAS/WATER TIGHT ABS PLUG
TP	TRAP PRIMER	--	--	--	--	FLOOR CLEANOUT SHALL BE EQUAL TO ZURN MODEL #Z1021 WATER SAVER, P TRAP PRIMER.	
MS-E	MOP SINK	3/4"	--	2"	3"	EXISTING MOP SINK TO BE REMOVED AND REINSTALLED.	

FOOD SERVICE PLUMBING SCHEDULE

TAG	FIXTURE TYPE	HW	CW	VENT	WASTE	GAS MBH	REMARK
7.4	OVEN , DOUBLE	--	--	--	--	370	2 UNITS (DOUBLE)
12	HAND SINK	1/2"	1/2"	1-1/2"	2" - DIRECT		2 UNITS, PROVIDE MIXING VALVE MV-1
13	SINK, 1 COMPARTMENT	1/2"	1/2"	2"	FS - INDIRECT		
17	SINK, 3 COMPARTMENT	1/2"	1/2"	2"	FS - INDIRECT		

PLUMBING EQUIPMENT NOTES:

1. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MAKE ALL FINAL CONNECTIONS FROM KITCHEN/BAR EQUIPMENT TO THE PLUMBING MAINS SHOWN ON THIS PLAN.
2. THE PLUMBING CONNECTION SCHEDULE ON THIS PLAN RELATES REQUIRED CONNECTIONS TO INDIVIDUAL EQUIPMENT ONLY.
3. PLUMBING CONTRACTOR SHALL REFER TO "KITCHEN EQUIPMENT COMPANY" CUT SHEETS FOR ALL ROUTING OF FINAL CONNECTIONS TO EQUIPMENT AND EXACT ROUGH-IN LOCATIONS.
4. PLUMBING CONTRACTOR SHALL MOUNT ALL FLOOR SINKS FLUSH WITH FINISHED FLOOR ELEVATION.
5. ALL FLOOR DRAINS ARE WASHED BY HOSE BIBBS LOCATED IN BATHROOMS AND KITCHEN.

INSTANTANEOUS GAS WATER HEATER SCHEDULE

TAG	UNIT TOTAL	STORAGE GALLONS	MAX.FLOW RATE	EWT DEG. F	LWT DEG. F	BTU/HR	MANUFACTURER & MODEL NO.	REMARKS
WH-1,2	2	0	6.5 GPM	50	140	199 (EACH)	RINNAI CX199i	--

RECIRCULATION PUMP SCHEDULE

TAG	DESCRIPTION	TYPE	CAPACITY		ELECTRICAL DATA				SELECTION BASED ON		REMARKS/OPTIONS
			GPM	HEAD (ft.)	HP	V	PH	HZ	MANUFACTURER	MODEL NUMBER	
RCP-1	HOT WATER RECIRC. PUMP	IN-LINE	2.5	7	1/12	120	1	60	BELL & GOSSETT	PL-30-B	NOTE 1,2

OPTIONS (ALL RCP UNITS)
- AQUA-STAT & NIGHT TIMER
- FLANGED PUMP
- BALANCING VALVE & CHECK VALVE
- MAINTENANCE BALL VALVES ON BOTH SIDES OF PUMP

OPTIONS (ALL SUMP UNITS)
- 30"X30"X30" BASIN BY G.C.
- DISCHARGE CHECK VALVE
- DISCHARGE BALL VALVE

ADDITIONAL OPTIONS (UNITS AS NOTED)
A: OIL-MINDER ALARM/CONTROL SYSTEM

NOTES:
1 . SET AQUA-STAT WITH SET POINT 10 DEGREES BELOW SYSTEM SUPPLY TEMP.
2 . INSTALL RECIRCULATION PUMP PER MANUFACTURERS REQUIREMENTS.

GAS PIPE SIZING

TABLE : 2021 INTERNATIONAL FUEL AND GAS CODE (IFGC 2021), SECTION 402 (IFGC) PIPE SIZING, 402.4(2) MAXIMUM GAS DEMAND, TABLE 402.4(2) SCHEDULE 40 METALLIC PIPE.

INLET PRESSURE : LESS THAN 2.0 PSI

PRESSURE DROP : 0.5 IN.W.C.

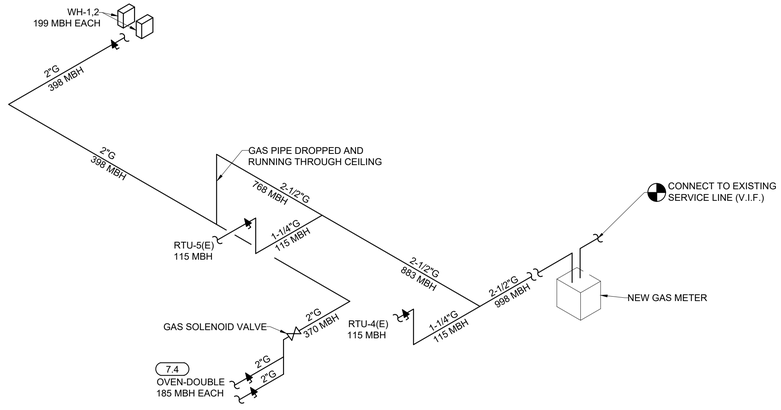
FITTINGS FACTOR : 40%

TOTAL EQUIVALENT LENGTH : 176 FT

PIPE SIZE (INCHES)	CAPACITY (MBH)
1/2"	34
3/4"	71
1"	134
1-1/4"	275
1-1/2"	412
2"	794
2-1/2"	1270

GAS LOAD REQUIREMENTS

TAG	DESCRIPTION	QTY	INPUT MBH	TOTAL CFH
RTU-4(E)	ROOFTOP UNIT	1	115	115
RTU-5(E)	ROOFTOP UNIT	1	115	115
OVEN	OVEN	2	185	370
WH-1,2	WATER HEATER	2	199	398
TOTAL				998



3 GAS RISER DIAGRAM
N.T.S.

PLUMBING PIPE MATERIAL SCHEDULE

PIPING SYSTEM	ABBREVIATION	PIPING MATERIAL
SANITARY DRAINAGE & VENT (ABOVE GRADE)	SAN OR V	SCH.40 PVC*/ CAST IRON / COPPER
SANITARY DRAINAGE & VENT (BELOW GRADE)	SAN OR V	SCH.40 PVC*/ CAST IRON / COPPER
POTABLE WATER (ABOVE GRADE)	CW, HW OR HWR	TYPE L HARD-DRAWN COPPER PIPE AND FITTINGS (CPVC PIPING AND FITTINGS OR PEX PIPING AND FITTINGS ALLOWED IF AHJ AND LANDLORD PERMITS).
POTABLE WATER - 2" & SMALLER (BELOW GRADE)	CW, HW OR HWR	TYPE K SOFT ANNEALED COPPER

*ALL PLUMBING SYSTEMS (SANITARY, WASTE, VENT,GAS, WATER DISTRIBUTION PIPING SYSTEMS) AND ASSOCIATED EQUIPMENT SHALL BE INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF 2021 INTERNATIONAL PLUMBING CODE. PVC ONLY WHERE ALLOWABLE PER LOCAL AHJ. PVC SHALL NOT BE USED WHERE EXPOSED IN RETURN AIR PLENUM, OR WHERE WATER TEMPS EXCEED 140°F

EXPANSION TANK SCHEDULE

TAG	DESCRIPTION	VOLUME (GALLONS)	DIAMETER (INCHES)	HEIGHT (INCHES)	SELECTION BASED ON		REMARKS
					MANUFACTURER	MODEL NUMBER	
ET-1	BLADDER TYPE	2.0	8"	12 1/2"	AMTROL	ST-5C-DD	NOTE 1

NOTES:
1. INSTALL EXPANSION TANK ON IN-COMING COLD WATER PER MANUFACTURERS REQUIREMENTS.

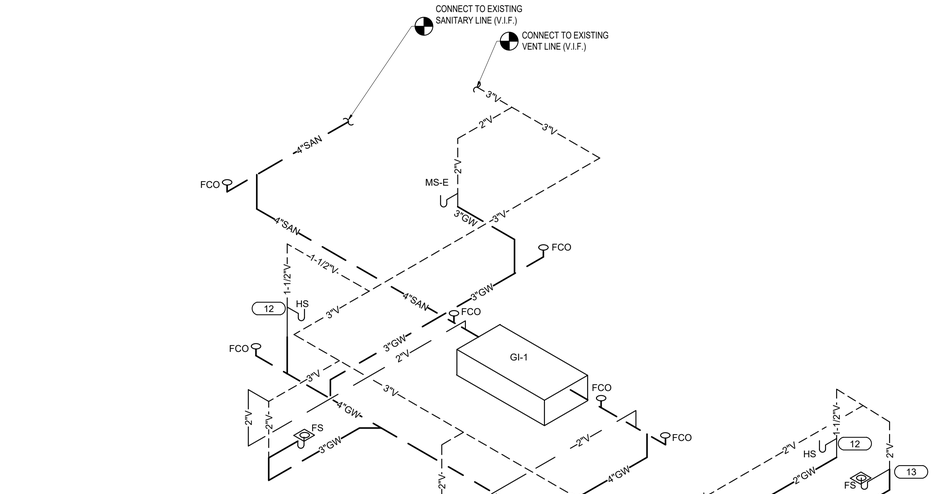
THERMOSTATIC MIXING VALVE SCHEDULE

TAG	DESCRIPTION	MAXIMUM GPM	MINIMUM GPM	PRESSURE LOSS	SELECTION BASED ON		REMARKS/OPTIONS
					MANUFACTURER	MODEL NUMBER	
TMV	THERMOSTATIC MIXING VALVE	3.5	0.25	5	LEONARD	270-LF	NOTE 1, A

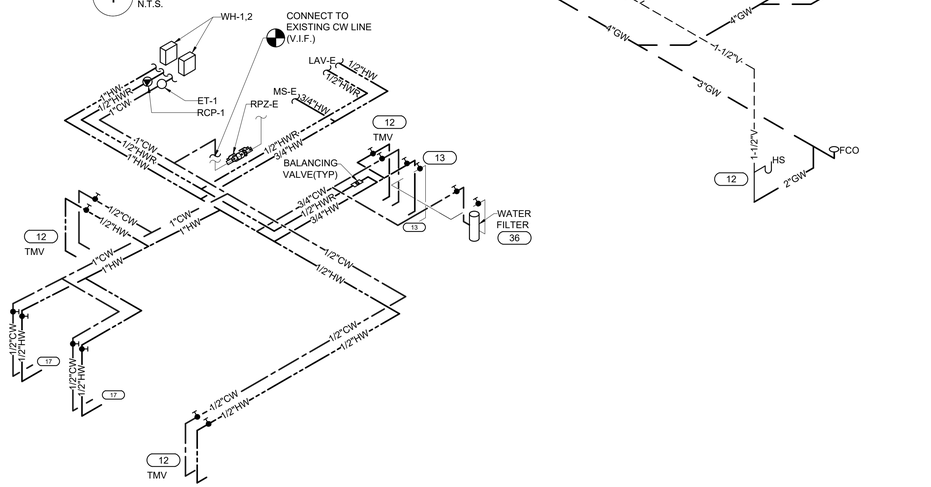
OPTIONS (ALL UNITS)
- LEAD FREE NSF APPROVED
- PROVIDE T'STAT ON TEMPERED LINE

ADDITIONAL OPTIONS (UNITS AS NOTED)
A: ASSE 1070 APPROVED, SET @110°F, ¾" INLET/ ¾" OUTLET, MOUNT BELOW FIXTURE.

NOTES:
1. INSTALL MIXING VALVE PER MANUFACTURERS REQUIREMENTS. PROVIDE ALL PIPING AND VALVES PER O&M MANUAL.



1 SANITARY AND VENT RISER DIAGRAM
N.T.S.



2 WATER RISER DIAGRAM
N.T.S.

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

GP|N

C
D

COLORADO LICENSED
MICHAEL D TOMEI
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

PLUMBING SCHEDULE AND RISER DIAGRAMS

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

P-3.0

SHEET 6 OF 6

MECHANICAL SYMBOLS LIST

ROOF TOP UNIT

ROOF MOUNTED FAN

CEILING MOUNTED FAN

AIR DEVICES

CEILING DIFFUSER SUPPLY

CEILING DIFFUSER RETURN/EXHAUST

DUCT ACCESSORIES

VOLUME DAMPER W/ ACCESS DOOR

BACKDRAFT DAMPER

MOTORIZED DAMPER W/ ACCESS DOOR

FIRE SMOKE DAMPER W/ ACCESS DOOR

CONTROLS AND SENSORS

THERMOSTAT

TEMPERATURE SENSOR

MANUAL PULL STATION

DUCTWORK

RECTANGULAR DUCT (WIDTH X DEPTH)

FLEXIBLE DUCT

FLEXIBLE CONNECTION

ROUND DUCT (DIAMETER)

ROUND DUCT CROSS SECTION

SUPPLY AIR RECTANGULAR DUCT GOING UP/DOWN

RETURN AIR RECTANGULAR DUCT GOING UP/DOWN

APPLICABLE CODES

A. 2021 INTERNATIONAL BUILDING CODE

B. 2021 INTERNATIONAL MECHANICAL CODE

C. 2021 INTERNATIONAL FIRE CODE

D. 2021 INTERNATIONAL ENERGY CONSERVATION CODE.

MECHANICAL DRAWING LIST

MECHANICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AL	ACOUSTIC LINING
BD	GRAVITY DAMPER
CD	CONDENSATE DRAIN
CDE	CEILING DIFFUSER EXHAUST
CDR	CEILING DIFFUSER RETURN
CDS	CEILING DIFFUSER SUPPLY
CFM	CUBIC FEET OF AIR PER MINUTE
DN	DOWN
E	EXISTING
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
FC	FLEXIBLE CONNECTION
FD/AD	FIRE DAMPER W/ACCESS DOOR
FD	FIRE DAMPER W/FUSIBLE LINK
FSD	FIRE SMOKE DAMPER
IEER	INTEGRATED ENERGY EFFICIENCY RATIO
MD	MOTORIZED DAMPER
N	NEW
RA	RETURN AIR
RAD	RETURN AIR DUCT
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SAD	SUPPLY AIR DUCT
SAE	SAME AS EXISTING
SEER	SEASONAL ENERGY EFFICIENCY RATIO
VIF	VERIFY IN FIELD
VD	VOLUME CONTROL DAMPER

FIELD VERIFY ALL CONDITIONS

DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS. THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST. BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF INTERNATIONAL BUILDING CODE 2021 AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

1. THE CONTRACTOR SHALL ENGAGE THE SERVICES OF A PROFESSIONAL ENGINEER TO PROVIDE THE REQUIRED SPECIAL INSPECTIONS AND TESTS.
2. TESTS WILL BE CONDUCTED UNDER DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS. THE TESTS WILL SHOW COMPLIANCE WITH 2021 INTERNATIONAL BUILDING CODE .
3. THE LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS AND CONDUCTING SUCH TESTS WILL FILE DOCUMENTATION AND REPORTS OF TESTS THAT THE SYSTEM COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE LAWS.
4. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION MC 107 AND THE FOLLOWING SECTIONS OF THE 2021 INTERNATIONAL MECHANICAL CODE:
   A. VENTILATION SYSTEM - 2021 IMC 401
5. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD INTERNATIONAL MECHANICAL CODE:
   A. STANDARDS OF HEATING - 2021 IMC 309.1
   B. DUCT CONSTRUCTION AND INSTALLATION- 2021 IMC 603
   C. AIR INTAKES EXHAUSTS AND RELIEF - 2021 IMC 401.5
   D. AIR FILTERS - 2021 IMC 605
6. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
7. VENTILATION FOR ALL AREA SHALL COMPLY WITH 2021 IMC 401.
8. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY 2021 IMC 403.3
9. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
10. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
11. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
12. SMOKE DETECTOR SHALL MEET UL268A.
13. MECHANICAL SYSTEM COMMISSIONING SHALL BE DONE AS PER 2021 INTERNATIONAL ENERGY CONSERVATION CODE SECTION C408 IF TOTAL INSTALLED MECHANICAL EQUIPMENT CAPACITY IS MORE THEN 480,000 BTU/H COOLING CAPACITY AND 600,000 BTU/H HEATING CAPACITY.

THERMOSTATIC CONTROL NOTES

C403.4.1 THERMOSTATIC CONTROLS
THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, NOT FEWER THAN ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.

C403.4.1.2 DEADBAND
WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5°F (2.8°C) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.

C403.4.1.3 SETPOINT OVERLAP RESTRICTION
WHERE A ZONE HAS A SEPARATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, A LIMIT SWITCH, MECHANICAL STOP OR DIRECT DIGITAL CONTROL SYSTEM WITH SOFTWARE PROGRAMMING SHALL BE CONFIGURED TO PREVENT THE HEATING SETPOINT FROM EXCEEDING THE COOLING SETPOINT AND TO MAINTAIN A DEADBAND IN ACCORDANCE WITH SECTION C403.4.1.2.

C403.4.2 OFF-HOUR CONTROLS
EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM.

C403.4.2.1 THERMOSTATIC SETBACK
THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).

C403.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN
AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR NOT FEWER THAN 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CONFIGURED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.

C403.4.2.3 AUTOMATIC START AND STOP
AUTOMATIC START AND STOP CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE AUTOMATIC START CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY. AUTOMATIC STOP CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM WITH DIRECT DIGITAL CONTROL OF INDIVIDUAL ZONES. THE AUTOMATIC STOP CONTROLS SHALL BE CONFIGURED TO REDUCE THE HVAC SYSTEM'S HEATING TEMPERATURE SETPOINT AND INCREASE THE COOLING TEMPERATURE SETPOINT BY NOT LESS THAN 2°F (-16.6°C) BEFORE SCHEDULED UNOCCUPIED PERIODS BASED ON THE THERMAL LAG AND ACCEPTABLE DRIFT IN SPACE TEMPERATURE THAT IS WITHIN COMFORT LIMITS.

GENERAL NOTES

1. CONTRACTOR SHALL SURVEY THE AREA OF THIS WORK BEFORE SUBMITTING A BID AND SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT OF ANY CONDITIONS WHICH WOULD PREVENT THE INSTALLATION OF THE WORK AS SHOWN ON DRAWINGS.
2. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
3. BEFORE PROCEEDING WITH ANY WORK IN OCCUPIED OR USED AREAS, THE CONTRACTOR SHALL APPLY TO OWNER FOR PERMISSION TO ENTER SUCH AREAS. THE CONTRACTOR IS OBLIGED TO PERFORM HIS WORK ONLY AT THE TIMES DESIGNATED BY OWNER. THERE WILL BE NO ADDITIONAL COMPENSATION FOR THE WORK PERFORMED AFTER HOURS OR ON OFF-DAYS WITHOUT PRIOR WRITTEN APPROVAL.
4. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.
5. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK IN OVERTIME AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.
6. CONTRACTOR SHALL ASCERTAIN THE APPROPRIATE METHOD FOR BRINGING THE UNITS INTO AND THROUGH THE BUILDING TO POSITION UNIT IN LOCATION SHOWN ON THE PLANS. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH RESTRICTIVE SPACES. COORDINATE WITH BUILDING OWNER APPROPRIATE TIMES OF DAY SUCH EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.
7. DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL MAKE ALLOWANCE IN PRICING FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL OF ARCHITECT. COORDINATION WITH THE OTHER TRADES IS REQUIRED.
8. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OR SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. INSERTS SHALL BE STEEL, SLOTTED TYPE AND FACTORY PAINTED. SINGLE ROD SHALL BE SIMILAR TO GRINNELL FIG. 281. MULTI-ROD SHALL BE SIMILAR TO FEE & MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS. MAXIMUM LOADING INCLUDING PIPES, DUCTWORK CONTENTS AND COVERING SHALL NOT EXCEED 75% OF RATED INSERT CAPABILITY. WHEN SUPPORTING FROM BUILDING USE BEAM CLAMPS IN APPROVED MANNER.
9. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, LOUVERS, CONDUIT, AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.
10. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL (FIBERGLASS INSULATION IS NOT ACCEPTABLE).
11. WHERE PENETRATIONS THROUGH FIRE RATED WALLS ARE NOT FIRE PROOFED THIS CONTRACTOR SHALL BE RESPONSIBLE TO SEAL SAME TO MAINTAIN THE RATED INTEGRITY.
12. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
13. ACCESS DOORS ARE REQUIRED FOR ALL BUILDING SERVICE VALVES THAT RUN THROUGH THE SPACE, AND ACCESS DOOR SHALL HAVE THE EQUAL RATED CAPACITY (1HR, 2HR, ETC.) AS WALL. COORDINATE ALL LOCATIONS OF ACCESS DOORS WITH THE ARCHITECT.
14. REMOVABLE ACCESS TILE AND/OR ACCESS DOOR ARE REQUIRED IN HUNG CEILINGS, SHAFTS AND WALLS FOR ALL VOLUME AND FIRE DAMPERS, AUTOMATIC DAMPERS AND ALL OTHER MECHANICAL EQUIPMENT AND DEVICES. HVAC CONTRACTOR TO FURNISH ACCESS LOCATION REQUIREMENTS TO GENERAL CONTRACTOR. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS, AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.
15. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.
16. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
17. ALL EQUIPMENT SHALL BE PROVIDED WITH ONE YEAR WARRANTY PARTS AND LABOR AND FIVE YEARS ON COMPRESSORS. WARRANTY PERIOD BEGINS UPON PROJECT ACCEPTANCE
18. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK WITH ITS COMPLETION AND FINAL ACCEPTANCE AND SHALL REPLACE ANY OF THE SAME WHICH MAY BE DAMAGED, LOST, OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FAILURE OF ANY DUCTWORK SYSTEM OR EQUIPMENT TO FUNCTION PROPERLY UPON COMPLETION OF HIS WORK UPON SAID SYSTEM OR EQUIPMENT.
21. SUBMIT SHOP DRAWING OF ALL WORK WHICH MUST BE APPROVED BY THE ARCHITECT AND ENGINEER BEFORE WORK COMMENCES.
22. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS THE CONTRACTOR SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.
23. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, BALANCED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.
24. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.
25. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS, THE SPECIFICATIONS OR ANY OTHER CONSTRUCTION DOCUMENT, THE ONE WITH THE MOST STRINGENT REQUIREMENT(S) SHALL APPLY.

DEFINITIONS:

1) "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
3) "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.

SCOPE OF WORK

SCOPE OF WORK

1. THE WORK UNDER CONTRACT INCLUDES ALL LABOR, MATERIALS AND APPLIANCES NECESSARY FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS AS DESCRIBED IN THE SPECIFICATIONS, FLOOR PLAN(S) DESIGN, DETAIL DRAWINGS, NOTES, RFI'S, ETC. FOR THIS PROJECT. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.
2. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.
3. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES, BY OWNER, INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

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J

COLORADO LICENSED
MEHMET D TOMAC
0060432
MECHANICAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. -- UNIT 1
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SHEET TITLE:

MECHANICAL SYMBOL, ABBREVIATION & NOTES

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

M-0.1

GENERAL HVAC NOTES

1. PROVIDE ALL MATERIAL AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.

2. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC, PLUMBING, AND FIRE PROTECTION) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.

3. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.

4. WHEN MECHANICAL WORK (HVAC, PLUMBING, SHEET METAL, FIRE PROTECTION, ETC.) IS SUBCONTRACTED, IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUBCONTRACTORS AND THE ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE MECHANICAL CONTRACT OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE MECHANICAL CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE MECHANICAL CONTRACTOR, WHOSE DECISION SHALL BE FINAL.

5. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.

6. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.

7. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.

8. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.

9. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND ELECTRICAL DIVISION OF THE SPECIFICATION.

10. PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.

11. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO, AND WITHIN 50 FT. OF, ISOLATED EQUIPMENT (EXCEPT AT BASE ELBOW SUPPORTS AND ANCHOR POINTS).

12. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH THE STRAIGHT SECTION OF PIPE OR DUCT UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.

13. WHERE BEAMS ARE INDICATED TO BE PENETRATED WITH DUCTWORK OR PIPING, COORDINATE DUCTWORK AND PIPING LAYOUT WITH BEAM OPENING SIZE AND OPENING LOCATIONS. COORDINATION SHALL BE DONE PRIOR TO THE FABRICATION OF DUCTWORK, CUTTING OF PIPING, OR FABRICATION OF BEAMS.

14. ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN THE DETAILS FOR PIPING, DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.

15. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS, AND OTHER CONCEALED MECHANICAL EQUIPMENT. ACCESS PANELS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR FOR INSTALLATION. ACCESS PANELS SHALL HAVE THE EQUAL RATED CAPACITY (1HR, 2HR, ETC.) AS WALL.

16. MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHALL NOT BE SUPPORTED FROM A METAL DECK.

17. ALL EQUIPMENT, PIPING, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED, SPECIFIED AND REQUIRED TO PROVIDE A VIBRATION-FREE INSTALLATION.

18. ALL DUCTWORK, PIPING, AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. THE USE OF C-CLAMPS SHALL NOT BE PERMITTED.

19. ALL ROOF-MOUNTED EQUIPMENT CURBS/STEEL RAILS FOR EQUIPMENT PROVIDED BY THE MECHANICAL CONTRACTOR SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.

20. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.

21. ALL OPENINGS IN FIRE WALLS DUE TO DUCTWORK, PIPING, CONDUIT, ETC., SHALL BE FIRE STOPPED WITH A PRODUCT SIMILAR TO 3M OR APPROVED EQUAL.

22. ALL AIR CONDITIONING CONDENSATE DRAIN LINES FROM EACH AIR HANDLING UNIT SHALL BE PIPED FULL SIZE OF THE UNIT DRAIN OUTLET, WITH "P" TRAP, AND PIPED TO THE NEAREST DRAIN. SEE THE DETAILS SHOWN IN THE DRAWINGS OR THE CONTRACT SPECIFICATIONS FOR THE DEPTH OF THE AIR CONDITIONING CONDENSATE TRAP.

23. REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION.

SPECIFICATIONS

SECTION 0001 - NOTICE TO BIDDERS

1.1 BIDDERS REPRESENTATIONS

A. THE BIDDER BY MAKING A BID REPRESENTS THAT:

THE BIDDER HAS READ AND UNDERSTANDS THE BIDDING DOCUMENTS, TO THE EXTENT THAT SUCH DOCUMENTATION RELATES TO THE WORK FOR WHICH THE BID IS SUBMITTED, AND FOR OTHER PORTIONS OF THE PROJECT, IF ANY, BEING BID CONCURRENTLY OR PRESENTLY UNDER CONSTRUCTION.

B. THE BID IS MADE IN COMPLIANCE WITH THE BIDDING DOCUMENTS.

C. THE SPECIFICATIONS AND DRAWINGS ARE INTENDED TO SERVE JOINTLY AS A BASIS FOR THE BIDDER TO SUBMIT A CONTRACT PRICE FOR THE MATERIAL AND LABOR.

D. SHOULD CONFLICTS OR DISCREPANCIES OCCUR WITHIN THE BIDDING DOCUMENTS, THE ITEM OR ITEMS IN DISPUTE THAT REPRESENT THE GREATER COST SHALL PREVAIL IN THE FINAL BID.

E. THE BID IS BASED UPON THE MATERIALS, EQUIPMENT AND SYSTEMS REQUIRED BY THE BIDDING DOCUMENTS WITHOUT EXCEPTION.

1.2 EXISTING CONDITIONS AND COORDINATION

A. THE BIDDER HAS VISITED THE SITE, BECOME FAMILIAR WITH LOCAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND HAS CORRELATED THE BIDDER'S PERSONAL OBSERVATIONS WITH THE REQUIREMENTS OF THE PROPOSED BIDDING DOCUMENTS.

B. THE BIDDER SHALL PROPOSE COORDINATION OF WORK SUCH THAT CONFLICTS WITH OTHER TRADES AND SPACE ALLOCATIONS ARE AVOIDED.

1.3 RESPONSIBILITIES

A. THE BIDDER UNDERSTANDS THAT ANY CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE TIMELY COMPLETION AND ACCEPTANCE OF THEIR WORK AND THAT ANY ITEMS DAMAGED, LOST OR STOLEN DURING TIME OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED WITHOUT ANY ADDITIONAL COST TO THE OWNER.

B. THE BIDDER UNDERSTANDS THAT ANY PROPOSED WORK IN OCCUPIED TENANT SPACES SHALL BE PERFORMED DURING TIMES OF NON-TENANT OCCUPANCY OR AS SCHEDULED OR DIRECTED BY THE BUILDING MANAGER.

C. THE BIDDER UNDERSTANDS THAT ANY PROPOSED SHUT-DOWN OF EXISTING SYSTEMS DURING CONSTRUCTION SHALL BE PRE-ARRANGED WITH THE BUILDING MANAGER AND THAT SUCH SHUT-DOWNS ARE TO BE KEPT TO A MINIMUM.

END OF SECTION 0001

SECTION 0101 - QUALITY OF WORK

1.1 WORKMANSHIP

A. ALL WORK SHALL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.

B. ALL DEFECTS WHICH DEVELOP OR ARE DISCOVERED WITHIN THIS PERIOD SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ARCHITECT OR BUILDING MANAGER AT NO ADDITIONAL COST TO THE OWNER.

C. UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL REMOVE FROM THE SITE, ALL TOOLS, DEMOLISHED APPLIANCES AND ANY SURPLUS MATERIAL.

1.2 CODE COMPLIANCE

A. ALL WORK SHALL MEET ALL STATE AND LOCAL CODES HAVING JURISDICTION.

END OF SECTION 0101

SECTION 0102 -REQUIRED DOCUMENTS

1.1 SHOP DRAWINGS

A. A SET OF PRINTS FOR ANY MECHANICAL WORK INCLUDING BUT NOT LIMITED TO, DUCTWORK AND PIPING LAYOUT SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO CONSTRUCTION OR PURCHASE OF MATERIALS.

1.2 SUBMITTALS

A. EQUIPMENT SUBMITTALS OF ALL PROPOSED MECHANICAL AND ANCILLARY EQUIPMENT INCLUDING ALL ACCESSORIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ALL PERTINENT MODELS, SIZES, ACCESSORIES AND CHOICES SHALL BE CLEARLY CHECKED, PRINTED OR OTHERWISE INDICATED ON THE SUBMITTALS.

1.3 RECORD DRAWINGS

A. UPON COMPLETION OF THE WORK, A RECORD DRAWING SHALL BE SUBMITTED TO THE OWNER DEPICTING ALL SUBSEQUENT CHANGES, ADDITIONS AND OR CORRECTIONS TO THE CONTRACT DRAWINGS AND OR CONTRACT SCOPE MADE DURING CONSTRUCTION. THIS DRAWING SHALL REPRESENT A COMPLETE RECORD OF THE WORK INSTALLED.

1.4 EQUIPMENT OPERATING INSTRUCTIONS

A. ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS,EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE-RING BINDERS WITH CLEAR ACETATE COVERS. THE CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE ELECTRONIC COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BE ORGANIZED IN SECTIONS, WITH ONE SECTION PER SYSTEM. THE COVER OF THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND PHONE NUMBER OF THE PROJECT, ARCHITECT, ENGINEER, MECHANICAL CONTRACTOR AND SUBCONTRACTORS.

END OF SECTION 0102

SECTION 078413-PENETRATION FIRE-STOPPING

1.1 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: AN FM GLOBAL-APPROVED FIRE-STOP CONTRACTOR OR A UL-QUALIFIED FIRE-STOP CONTRACTOR.

B. FIRE-TEST-RESPONSE CHARACTERISTICS: UL, INTERTEK ETL SEMKO OR FM GLOBAL

1.2 PENETRATION FIRESTOPPING

A. PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS: F-RATINGS PER ASTM E 814 OR UL 1479.

B. PENETRATIONS IN HORIZONTAL ASSEMBLIES: F- AND T-RATINGS PER ASTM E 814 OR UL 1479:

C. PENETRATIONS IN SMOKE BARRIERS: L-RATINGS PER UL 1479.

D. W-RATINGS: PER UL 1479.

1.3 INSTALLATION

A. IDENTIFICATION: PREPRINTED METAL OR PLASTIC LABELS.

1.4 FIELD QUALITY CONTROL

A. INSPECTION OF INSTALLED FIRE-STOPPING: BY OWNER-ENGAGED AGENCY ACCORDING TO ASTM E 2174.

1.5 THROUGH-PENETRATION FIRESTOP SYSTEM SCHEDULE

WHERE UL-CLASSIFIED SYSTEMS ARE INDICATED, THEY REFER TO SYSTEM NUMBERS IN UL'S "FIRE RESISTANCE DIRECTORY" UNDER PRODUCT CATEGORY XHEZ.

FOR THE FOLLOWING SYSTEMS:

METALLIC AND NON-METALLIC PIPES, CONDUIT, OR TUBING, ELECTRICAL CABLES, CABLE TRAYS WITH ELECTRIC CABLES, MISCELLANEOUS ELECTRICAL PENETRANTS, INSULATED PIPES, GROUPINGS OF PENETRANTS, USE ON OR MORE THE FOLLOWING MATERIALS:

a. LATEX SEALANT
b. SILICONE SEALANT
c. INTUMESCENT PUTTY
d. MORTAR
h. SILICONE FOAM
i. PILLOWS/BAGS
j. INTUMESCENT WRAP STRIPS
k. INTUMESCENT COMPOSITE SHEET

1.6 MANUFACTURERS

A. HILTI CONSTRUCTION CHEMICAL, INC

B. TREMCO INC.

C. 3M FIRE PROTECTION PRODUCTS

END OF SECTION 078413

SECTION 230517 - SLEEVES AND SLEEVE SEALS FOR HVAC PIPING

1.1 SLEEVE-SEAL SYSTEMS

A. FIELD-ASSEMBLED, MODULAR SEALING-ELEMENT UNIT FOR FILLING ANNULAR SPACE BETWEEN PIPING AND SLEEVE.

1. SEALING ELEMENTS: EPDM RUBBER OR NBR.
2. PRESSURE PLATES: CARBON STEEL, PLASTIC, STAINLESS STEEL.
3. CONNECTING BOLTS AND NUTS: CARBON STEEL WITH CORROSION-RESISTANT COATING, STAINLESS STEEL.

B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. ADVANCE PRODUCTS & SYSTEMS, INC.
2. CALPICO, INC.
3. METRAFLEX COMPANY (THE).
4. PIPELINE SEAL AND INSULATOR, INC.

1.2 SLEEVE-SEAL FITTINGS

A. MANUFACTURED PLASTIC, SLEEVE-TYPE, PLASTIC OR RUBBER WATER-STOP ASSEMBLY MADE FOR IMBEDDING IN CONCRETE SLAB OR WALL.

1.3 GROUT

A. NON-SHRINK, FACTORY PACKAGED.

1.4 SLEEVE AND SLEEVE-SEAL SCHEDULE

A. USE SLEEVES AND SLEEVE SEALS FOR THE FOLLOWING PIPING-PENETRATION APPLICATIONS:

1. INTERIOR PARTITIONS:
   a. PIPING SMALLER THAN NPS 6 (DN 150): GALVANIZED-STEEL-PIPE SLEEVES, PVC-PIPE SLEEVES.
   b. PIPING NPS 6 (DN 150) AND LARGER: GALVANIZED-STEEL-SHEET SLEEVES.

END OF SECTION 230517

SECTION 230529 - HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

1.1 PERFORMANCE REQUIREMENTS

A. DELEGATED DESIGN: DESIGN TRAPEZE PIPE HANGERS AND EQUIPMENT SUPPORTS, INCLUDING COMPREHENSIVE ENGINEERING ANALYSIS BY A QUALIFIED PROFESSIONAL ENGINEER, USING PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED.

B. STRUCTURAL PERFORMANCE: HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED ACCORDING TO ASCE/SEI 7.

1. DESIGN SUPPORTS FOR MULTIPLE PIPES CAPABLE OF SUPPORTING COMBINED WEIGHT OF SUPPORTED SYSTEMS, SYSTEM CONTENTS, AND TEST WATER.
2. DESIGN EQUIPMENT SUPPORTS CAPABLE OF SUPPORTING COMBINED OPERATING WEIGHT OF SUPPORTED EQUIPMENT AND CONNECTED SYSTEMS AND
3. DESIGN SEISMIC-RESTRAINT HANGERS AND SUPPORTS FOR PIPING AND EQUIPMENT AND OBTAIN APPROVAL FROM AUTHORITIES HAVING JURISDICTION.

1.2 SUBMITTALS

A. SHOP DRAWINGS: SIGNED AND SEALED BY A PROFESSIONAL ENGINEER

1.3 QUALITY ASSURANCE

A. AWS D1.1/D1.1M, "STRUCTURAL WELDING CODE - STEEL."

1.4 COMPONENTS

A. METAL PIPE HANGERS AND SUPPORTS: CARBON OR STAINLESS STEEL

B. FIBERGLASS PIPE HANGERS: -CLEVIS, CENTURY COMPOSITES, COOPER B-LINE

D. METAL FRAMING SYSTEMS: MFMA MANUFACTURER

E. FIBERGLASS STRUT SYSTEMS: COOPER B-LINE

F. THERMAL-HANGER SHIELD INSERTS:

G. FASTENER SYSTEMS: POWDER-ACTUATED FASTENERS OR MECHANICAL-EXPANSION ANCHORS

H. PIPE STANDS: COMPACT, LOW TYPE, SINGLE PIPE, HIGH TYPE, SINGLE PIPE, HIGH TYPE, MULTIPLE PIPES, CURB-MOUNTED TYPE

I. EQUIPMENT SUPPORTS.

END OF SECTION 230529

SECTION 230548 - VIBRATION CONTROLS FOR PIPING AND HVAC EQUIPMENT

PART 1 - GENERAL

1.1 PERFORMANCE REQUIREMENTS

A. SEISMIC-RESTRAINT LOADING:

1. SITE CLASS AS DEFINED IN THE IBC: A, B
2. ASSIGNED SEISMIC USE GROUP OR BUILDING CATEGORY AS DEFINED IN THE IBC: I II III
   a. COMPONENT IMPORTANCE FACTOR: 1.0
   b. COMPONENT RESPONSE MODIFICATION FACTOR: 2.5
   c. COMPONENT AMPLIFICATION FACTOR: 2.5.
3. DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS (0.2 SECOND) 18%
4. DESIGN SPECTRAL RESPONSE ACCELERATION AT 1-SECOND PERIOD: 8%

1.2 COMPONENTS

A. VIBRATION ISOLATORS:

1. ISOLATOR PADS: NEOPRENE, RUBBER, HERMETICALLY AND/OR SEALED COMPRESSED FIBERGLASS
2. MOUNTS: DOUBLE-DEFLECTION TYPE.
3. RESTRAINED MOUNTS: ALL DIRECTIONAL MOUNTINGS WITH SEISMIC RESTRAINT; CAST-DUCTILE-IRON HOUSING.
4. SPRING ISOLATORS: FREESTANDING, LATERALLY STABLE, OPEN-SPRING TYPE.
5. RESTRAINED SPRING ISOLATORS: FREESTANDING, STEEL, OPEN-SPRING TYPE WITH SEISMIC RESTRAINT.
6. HOUSED SPRING MOUNTS: DUCTILE-IRON OR STEEL HOUSING, WITH INTEGRAL, VERTICALLY ADJUSTABLE SEISMIC SNUBBERS.
7. ELASTOMERIC HANGERS: DOUBLE-DEFLECTION TYPE.
8. SPRING HANGERS: COMBINATION COIL-SPRING AND ELASTOMERIC-INSERT HANGERS WITH SPRING AND INSERT IN COMPRESSION.
9. SPRING HANGERS WITH VERTICAL-LIMIT STOP: COMBINATION COIL-SPRING AND ELASTOMERIC-INSERT HANGERS WITH SPRING AND INSERT IN COMPRESSION AND WITH VERTICAL-LIMIT STOP.
10. PIPE RISER RESILIENT SUPPORT: ALL-DIRECTIONAL, ACOUSTICAL PIPE ANCHOR.
11. RESILIENT PIPE GUIDES.

B. AIR-MOUNTING SYSTEMS:

1. AIR MOUNTS: FREESTANDING, SINGLE OR MULTIPLE, COMPRESSED-AIR BELLOWS.
2. RESTRAINED AIR MOUNTS: HOUSED COMPRESSED-AIR BELLOWS.

C. RESTRAINED VIBRATION ISOLATION ROOF-CURB RAILS: FACTORY-ASSEMBLED, FULLY ENCLOSED, INSULATED, AIR- AND WATERTIGHT CURB RAIL; WITH SPRING ISOLATORS MOUNTED ON ELASTOMERIC ISOLATION PADS, AND SNUBBER BUSHINGS.

D. VIBRATION ISOLATION EQUIPMENT BASES:

1. STEEL BASE: FACTORY-FABRICATED, WELDED, STRUCTURAL-STEEL BASES AND RAILS.
2. INERTIA BASE: FACTORY-FABRICATED, WELDED, STRUCTURAL-STEEL BASES AND RAILS READY FOR FIELD-APPLIED, CAST-IN-PLACE CONCRETE

1.3 FIELD QUALITY CONTROL

A. TESTING: BY EITHER: OWNER-ENGAGED AGENCY, CONTRACTOR-ENGAGED AGENCY, OR CONTRACTOR.

PART-2 PRODUCTS

1.4 VIBRATION ISOLATORS & SEISMIC-RESTRAINT DEVICES

A. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

1. ACE MOUNTINGS CO., INC.
2. AMBER/BOOTH COMPANY, INC.
3. CALIFORNIA DYNAMICS CORPORATION.
4. COOPER B-LINE, INC.; A DIVISION OF COOPER INDUSTRIES.
5. HILTI, INC.
6. ISOLATION TECHNOLOGY, INC.
7. KINETICS NOISE CONTROL.
8. LOOS & CO.; CABLEWARE DIVISION.
9. MASON INDUSTRIES.
10. TOLCO INCORPORATED; A BRAND OF NIBCO INC.
11. UNISTRUT; TYCO INTERNATIONAL, LTD.
12. VIBRATION ELIMINATOR CO., INC.
13. VIBRATION ISOLATION.
14. VIBRATION MOUNTINGS & CONTROLS, INC.

END OF SECTION 230548

GP|N

COLORADO LICENSED
MICHAEL D' TOMASO
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

MECHANICAL SPECIFICATIONS (1 OF 2)

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

M-0.2

SHEET 2 OF 9

SPECIFICATIONS

SECTION 230593 - TESTING, ADJUSTING, AND BALANCING FOR HVAC

1.1 SUMMARY

A. TESTING, ADJUSTING, AND BALANCING FOR THE FOLLOWING:

1. MOTORS.
2. CONDENSING UNITS.
3. AIR SYSTEM: CONSTANT VOLUME
4. KITCHEN HOOD AND FANS

1.2 QUALITY ASSURANCE

A. THE CONTRACTOR SHALL PROCURE THE SERVICES OF A TESTING, ADJUSTING AND BALANCING (TAB) SPECIALIST WHO SPECIALIZES IN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS. THE TAB AGENT SHALL HAVE THE FOLLOWING QUALIFICATIONS: AABC, NEBB OR TABB CERTIFIED.

1.3 EXECUTION

A. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL EXISTING AIR AND HYDRONIC SYSTEMS THAT ARE TO REMAIN OR TO BE INCORPORATED INTO NEW WORK PRIOR TO THE STARTING OF WORK IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.

B. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL NEW AIR AND HYDRONIC SYSTEMS AS LISTED ABOVE IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.

C. THE REPORT SHALL INDICATE A SCHEMATIC DIAGRAM INDICATING LOCATIONS OF ALL EQUIPMENT TESTED AND MEASUREMENT LOCATIONS.

D. PRIOR TO FINAL INSPECTION OF THE WORK, THE TAB SPECIALIST SHALL BALANCE ALL SYSTEMS AS INDICATED ABOVE TO THE REQUIREMENTS OF THE DESIGN.

E. THE CONTRACTOR SHALL HAVE FURNISH AND INSTALL ALL ADDITIONAL BALANCING EQUIPMENT, PRESSURE TAPS, GAUGES AND OTHER EQUIPMENT AS REQUIRED FOR A PROPERLY BALANCED SYSTEM AT NO ADDITIONAL COST TO THE OWNER. SUCH ADDITIONAL EQUIPMENT SHALL ADHERE IN STRICT ACCORDANCE WITH THE RESPECTIVE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.

F. THE CONTRACTOR SHALL HAVE THE TESTING AND BALANCING SPECIALIST COORDINATE ALL WORK OF THIS S3ECTION WITH THE BUILDING MANAGER. BALANCING WORK SHALL NOT CONFLICT WITH OTHER WORK SO AS TO MAINTAIN COMPLETION WITHIN THE SPECIFIED TIME.

G. ALL INSTRUMENTS USED FOR TAB SHALL BE MAINTAINED IN GOOD WORKING CONDITION AND ACCURATELY CALIBRATED.

H. TOLERANCES: PLUS OR MINUS 5 PERCENT OF DESIGN VALUES.

I. INSPECTIONS: RANDOM CHECKS BY OWNER OR ARCHITECT TO VERIFY FINAL TESTING, ADJUSTING, AND BALANCING REPORT.

J. ADDITIONAL TESTS: RANDOM TESTS WITHIN 90 DAYS OF COMPLETING TAB TO VERIFY BALANCE CONDITIONS AND SEASONAL TESTS.

END OF SECTION 230593

SECTION 233713 - DIFFUSERS, REGISTERS, AND GRILLES

1.1 PRODUCTS

A. DIFFUSERS, REGISTERS AND GRILLES SHALL BE FURNISHED AND INSTALLED FOR CAPACITIES AND IN LOCATIONS INDICATED ON DRAWINGS. ALL REGISTERS AND DIFFUSERS SHALL BE PRIME COATED STEEL OR EXTRUDED ALUMINUM FINISHED UNLESS OTHERWISE NOTED IN BAKED WHITE ENAMEL.

B. MANUFACTURERS: PRICE

1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT BY ONE OF THE FOLLOWING:

a. HART & COOLEY INC.

b. KRUEGER.

c. METALAIRE, INC.

d. RUSKIN

C. ALL DIFFUSERS SHALL HAVE CONTROLLING/EQUALIZING GRID AND OPPOSED BLADE DAMPER UNLESS OTHERWISE NOTED.

D. ALL DUCTED RETURN REGISTERS SHALL HAVE AN OPPOSED BLADE DAMPER UNLESS OTHERWISE NOTED.

END OF SECTION 233713

SECTION 233113 - METAL DUCTS

1.1 CONSTRUCTION

A. EACH DUCT SYSTEM SHALL BE CONSTRUCTED FOR THE SPECIFIC SMACNA DUCT PRESSURE CLASSIFICATIONS SHOWN ON THE CONTRACT DRAWINGS. WHERE NO PRESSURE CLASSES ARE SPECIFIED BY THE DESIGNER, THE SMACNA 1 INCH WG PRESSURE, SEAL CLASS "A".

B. ALL DUCTWORK SHALL BE CONSTRUCTED TO SMACNA 1" WG DESIGN AND NOT LESS THAN THE FOLLOWING STANDARDS:

1. CONSTRUCT SO THAT ALL INTERIOR SURFACES ARE SMOOTH. USE SLIP AND DRIVE OR FLANGED AND BOLTED CONSTRUCTION WHEN FABRICATING RECTANGULAR DUCTWORK. USE SPIRAL LOCK SEAM CONSTRUCTION WHEN FABRICATING ROUND SPIRAL DUCTWORK. SHEET METAL SCREWS MAY BE USED ON DUCT HANGERS, TRANSVERSE JOINTS AND OTHER SMACNA APPROVED LOCATIONS IF THE SCREW DOES NOT EXTEND MORE THAN 1/2 INCH INTO THE DUCT.
2. SHEET STEEL SHALL COMPLY WITH ASTMA653 STANDARD SPECIFICATION FOR STEEL SHEET METAL, ZINC COATED (GALVANIZED) OR ZINC IRON ALLOY-COATED (GALVANINEALED) BY HOT DIP PROCESS, AND A924 STANDARD SPECIFICATION FOR GENERAL REQUIREMENT FOR SHEET METALLIC-COATED BY HOT DIP PROCESS. ALL ANGLE IRON USED FOR SUPPORT SHALL BE GALVANIZED. CONNECTIONS TO WALLS OR FLOOR SHALL BE AIR TIGHT WITH ANGLE IRON AND CAULKING. SEAL ALL DUCT SEAMS, TRANSVERSE AND LONGITUDINAL, AIR TIGHT. PROVIDE TURNING VANES ALL 90° ELBOWS.
3. USE ELBOWS AND TEES WITH A CENTER LINE RADIUS TO WIDTH OR DIAMETER RATIO OF 1.5 WHEREVER SPACE PERMITS. WHEN A SHORTER RADIUS MUST BE USED DUE TO LIMITED SPACE, INSTALL SINGLE WALL SHEET METAL SPLITTER VANES IN ACCORDANCE WITH SMACNA PUBLICATIONS, TYPE RE 3. WHERE SPACE WILL NOT ALLOW AND THE C VALUE OF THE RADIUS ELBOW, AS GIVEN IN SMACNA PUBLICATIONS, EXCEEDS 0.31, USE RECTANGULAR ELBOWS WITH TURNING VANES AS SPECIFIED IN SECTION 23 33 00. SQUARE THROAT-RADIUS HEEL ELBOWS WILL NOT BE ACCEPTABLE. STRAIGHT TAPS OR BULLHEAD TEES ARE NOT ACCEPTABLE.
4. WHERE RECTANGULAR ELBOWS ARE USED, PROVIDE TURNING VANES IN ACCORDANCE WITH SECTION 23 33 00.
5. PROVIDE EXPANDED TAKE-OFFS OR 45 DEGREE ENTRY FITTINGS FOR BRANCH DUCT CONNECTIONS WITH BRANCH DUCTWORK AIRFLOW VELOCITIES GREATER THAN 700 FPM. SQUARE EDGE 90-DEGREE TAKE-OFF FITTINGS OR TRAIGHT TAPS WILL NOT BE ACCEPTED.
6. BUTTON PUNCH SNAP-LOCK CONSTRUCTION WILL NOT BE ACCEPTED ON ALUMINUN DUCTWORK.

C. WHERE LATEST EDITION OF SMACNA DOES NOT CLEARLY STATE GAUGES AND/OR STIFFENERS TO BE USED OR, WHERE SMACNA STANDARDS REQUIRE INTERPRETATION, THE FOLLOWING MINIMUM METAL GAUGES AND BRACING SHALL BE USED.

SUPPORT SCHEDULE - DUCTWORK

USG	MAX SIDE INCHES	TRANSVERSE JOINT AND BRACING
22	UP TO 12	S SLIP, DRIVE, ONE INCH POCKET ON 8 FOOT
22	13 TO 24	1"X1"X1/8" ANGLES ON 4 FOOT CENTERS
20	25 TO 35	1"X1"X1/8" ANGLES ON 2 FOOT CENTERS

D. FLAT OVAL OR ROUND DUCTWORK MAY BE PROVIDED IN LIEU RECTANGULAR DUCTWORK WITH THE REINFORCEMENT FOR FLAT SIDES SAME AS SPECIFIED FOR THE RECTANGULAR DUCTWORK, AND AS PER SMACNA FLAT OVAL DUCT CONSTRUCTION STANDARDS

E. ALL DUCTWORK SHALL BE SEALED TO CLASS "A" AND LEAK TESTED TO MEAT SMACNA CLASS 6 FOR RECTANGULAR AND CLASS 3 FOR ROUND DUCTS.

1.2 MATERIALS

A. SINGLE-WALL RECTANGULAR DUCTS AND FITTINGS.

B. SINGLE-WALL ROUND AND FLAT-OVAL DUCTS AND FITTINGS.

C. SHEET METAL MATERIALS:

1. GALVANIZED SHEET STEEL.
1. STAINLESS-STEEL SHEETS.
2. ALUMINUM SHEETS.
3. FACTORY-APPLIED ANTI-MICROBIAL COATING.

D. DUCT LINER:

1. FIBROUS GLASS, TYPE I, FLEXIBLE WITH ANTI-MICROBIAL EROSION-RESISTANT COATING.
2. FLEXIBLE ELASTOMERIC.
3. NATURAL FIBER.

E. SEALANT MATERIALS:

3. TWO-PART TAPE SEALING SYSTEM.
4. WATER-BASED JOINT AND SEAM SEALANT.
5. SOLVENT-BASED JOINT AND SEAM SEALANT.
6. FLANGED JOINT SEALANT.
7. FLANGE GASKETS.
8. ROUND DUCT JOINT O-RING SEALS.

1.3 DUCT CLEANING

A. CLEAN EXISTING DUCT SYSTEM(S) BEFORE TESTING, ADJUSTING, AND BALANCING.

B. CLEAN THE FOLLOWING ITEMS:

1. AIR OUTLETS AND INLETS.
2. SUPPLY, RETURN, AND EXHAUST FANS.
3. AIR-HANDLING UNITS.
4. COILS AND RELATED COMPONENTS.
5. RETURN-AIR DUCTS, DAMPERS, ACTUATORS, AND TURNING VANES.
6. SUPPLY-AIR DUCTS, DAMPERS, ACTUATORS, AND TURNING VANES.
7. DEDICATED EXHAUST AND VENTILATION COMPONENTS AND MAKEUP AIR SYSTEMS.

1.4 DUCT SCHEDULE

A. ALL DUCTS SHALL BE GALVANIZED STEEL EXCEPT AS FOLLOWS:

1. MOIST ENVIRONMENT DUCT MATERIAL: ALUMINUM.

END OF SECTION 233113

SECTION 230713 - DUCT INSULATION

INSULATION - GENERAL REQUIREMENTS

A. ALL INSULATION MATERIALS, INCLUDING JACKETS, FACING, ADHESIVE, COATINGS, AND ACCESSORIES ARE TO BE FIRE HAZARD RATED AND LISTED BY UNDERWRITERS LABORATORIES, INC. USING STEINER TUNNEL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, STANDARD UL 723 (ASTM E-84), (ASA A2.5-1963). FLAMESPREAD: MAXIMUM 25. FUEL CONTRIBUTED AND SMOKE DEVELOPED: MAXIMUM 50. FLAMEPROOFING TREATMENTS SUBJECT TO DETERIORATION FROM MOISTURE OR HUMIDITY ARE NOT ACCEPTABLE.

B. DEFINITIONS:

1) EXPOSED: INDOOR DUCTS, PIPING OR EQUIPMENT LOCATED IN MECHANICAL EQUIPMENT ROOMS AND IN AREAS WHICH WILL BE VISIBLE WITHOUT REMOVING CEILINGS OR OPENING ACCESS PANELS.
2) CONCEALED: INDOOR DUCTS, PIPING OR EQUIPMENT WHICH IS NOT EXPOSED.
3) OUTDOOR: DUCTS, PIPING OR EQUIPMENT WHICH IS EXPOSED TO THE WEATHER.

DUCTWORK INSULATION

A. INSULATE ALL DUCTWORK IN ACCORDANCE WITH INSULATION SCHEDULE EXCEPT AS OTHERWISE NOTED.

INSULATION SCHEDULE - DUCTWORK

SERVICE	LOCATION	R-VALUE	TYPE	FINISH
SUPPLY/RETURN	CONCEALED	R-6	D-1	VAPORSEAL
SUPPLY/RETURN	EXPOSED	R-12	D-1	VAPORSEAL
INTAKE	ALL	R-12	D-1	VAPORSEAL
SUPPLY	EXTERIOR	R-12	D-1	VAPORSEAL
KITCHEN EX.	INTERIOR	1.5" (2 LAYER)		3M FIRE MASTER DUCT WRAP

B. REINSULATE ALL DUCTWORK AND PIPING WHICH IS EXISTING TO REMAIN AND WAS DAMAGED DURING CONSTRUCTION OR SHOWN OR REQUIRED TO BE RELOCATED. INSULATE WITH SAME MATERIAL AND THICKNESS.

C. NON-INSULATED DUCTWORK:

1) WHERE SOUND LINING IS OF MINIMUM THICKNESS SPECIFIED FOR INSULATION.

2) AIR CONDITIONING RETURN AIR DUCTWORK EXPOSED IN AIR CONDITIONED SPACES AND INSTALLED IN HUNG CEILINGS WHERE SPACE IMMEDIATELY ABOVE AND BELOW ARE BOTH AIR CONDITIONED.MATERIAL:

D. MATERIAL:

1) TYPE D-1: MINIMUM 1-LB DENSITY FIBERGLASS BLANKET, MAXIMUM 0.28 K-FACTOR AT 75 ADEG F MEAN TEMPERATURE WITH FACTORY-APPLIED FOIL-SKRIM-KRAFT FACING SIMILAR TO MANVILLE MICROLITE.

2) TYPE D-2: 3 LB. FIBERGLASS BOARD. THE MAXIMUM K FACTOR SHALL BE 0.23 AT 75 DEG F MEAN TEMPERATURE WITH A MINIMUM DENSITY OF 3 LB. THE INSULATION
SHALL BE PROVIDED WITH A FACTORY-APPLIED ALL PURPOSE OR ALL SERVICE FACING. THE INSULATION SHALL BE EQUAL TO MANVILLE TYPE 814 SPIN-GLAS AP.

3) TYPE D-3: MINIMUM 6 LB FIBERGLASS BOARD. MAXIMUM 0.22 K-FACTOR AT 75 DEG F MEAN TEMPERATURE WITH FACTORY APPLIED ALL PURPOSE OR ALL SERVICE FACING. SIMILAR TO MANVILLE 817 SPIN-GLAS AP

E. FINISH:
1) TYPE F-1: FITTING COVER, MOLDED WHITE PVC JACKET, UL CLASS 1, MAXIMUM PERMEANCE 0.05 SIMILAR TO MANVILLE ZESTRON.
2) TYPE F-2: WHITE VAPOR BARRIER COATING WITH 10X10 OR 20X20 MESH WHITE GLASS, POLYESTER OR NYLON CLOTH REINFORCING MEMBRANE, MINIMUM 31 MIL DRY FILM THICKNESS, SIMILAR TO FOSTER TITE-FIT, UL LABEL.
3) TYPE F-4: ALUMINUM JACKETING WITH MINIMUM 0.016 IN. WALL THICKNESS AND LONGITUDINAL JOINTS WITH LOCK SEAMS.
4) TYPE F-6: WHITE FINISHING AND INSULATING CEMENT APPLIED OVER HEXAGONAL WIRE MESH. CEMENT SIMILAR TO KEENE SUPERSLICK.

F. INSTALLATION:

a. FIBERGLASS BLANKET: 2 IN. LAP STRIPS AT ALL SEAMS. SECURE BOTTOM OF ALL DUCTS OVER 24 IN. WIDE WITH MIN 2 ROWS OF WELD PINS 12 IN. ON CENTER. SECURE ALL SEAMS WITH FOIL VAPOR BARRIER TAPE AND VAPORSEAL ADHESIVE.

b. FIBERGLASS BOARD: SEAL JOINTS AND BREAKS IN FACING WITH 3 IN. WIDE TAPE TO MATCH FACING AND ADHERE WITH VAPOR SEAL ADHESIVE. APPLY 5 IN. WIDE TAPE AT CORNERS, WELD PINS ON TOP, SIDES AND BOTTOM.

G. ACOUSTICAL TREATMENT

ACOUSTICALLY LINE THE FIRST 10'-0" OF BOTH SUPPLY AND RETURN MAIN DUCTS, LOW PRESSURE DUCTWORK SHALL BE LINED WITH 1.5" THICK R-6 AS MANUFACTURED BY DUCTMATE. 1-1/2 POUND MINIMUM DENSITY, NEOPRENE COATED, FLEXIBLE FIBERGLASS DUCT LINER. LINING SHALL COMPLY WITH NFPA 90A AND SHALL HAVE A FLAME SPREAD CLASSIFICATION OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING NOT MORE THAN 50. DUCT SIZES WHERE LINING IS INDICATED ON PLANS ARE MINIMUM INSIDE CLEAR DIMENSIONS REQUIRED,

GP|N

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04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

MECHANICAL SPECIFICATIONS (2 OF 2)

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

M-0.3

GENERAL NOTES:

A. ALL WORK SHALL COMPLY WITH ALL LOCAL AND STATE CODES AND AUTHORITIES HAVING JURISDICTION.

B. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND ARRANGE ALL REQUIRED INSPECTIONS.

C. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS AND TRADES.

D. THESE DRAWINGS, AS PREPARED, ARE DIAGRAMMATIC BUT SHALL BE FOLLOWED AS CLOSELY AS CONSTRUCTION OF THE PROJECT AND THE WORK OF THE TRADES WILL PERMIT. EQUIPMENT LOCATIONS INDICATED ARE APPROXIMATE. COORDINATE EXACT LOCATIONS AND REQUIRED CLEARANCES WITH EQUIPMENT SUPPLIER AND ALL TRADES PRIOR TO INSTALLATION.

E. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL THE EQUIPMENT INDICATED WITHIN THE MECHANICAL DRAWINGS UNLESS OTHERWISE NOTED. ALL EQUIPMENT SHALL BE UL LISTED. VERIFY LOCATION AND DIMENSIONS IN THE FIELD PRIOR TO FABRICATION AND / OR INSTALLATION.

F. EACH UNIT GENERATING CONDENSATE SHALL BE PROVIDED WITH A CONDENSATE DRAIN WITH EXTERNAL, 4" DEEP P-TRAP. EXTEND DRAIN TO A ROOF MOUNTED SPLASH PAD OR AN ACCEPTABLE LOCATION REQUIRED BY CODE.

G. DUCT SIZES SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSION.

H. ALL DUCTWORK SHALL BE FABRICATED, INSTALLED, SEALED, AND INSULATED PER THE LATEST ISSUE OF SMACNA LOW-VELOCITY DUCT MANUAL.

I. ALL FLEX DUCT SHALL BE TESTED IN ACCORDANCE WITH UL 181. AND DUCT SHALL BE LISTED AND LABELED AS CLASS 1. MAXIMUM LENGTH TO BE 5'-0" PER DROP OR PER LOCAL CODE.

J. THE CONTRACTOR SHALL COORDINATE DIFFUSER LOCATIONS ON SITE WITH THE MOST RECENT REFLECTED CEILING PLAN.

K. THE CONTRACTOR IS TO MAKE ALL LOW-VOLTAGE WIRING CONNECTIONS FOR ALL HVAC EQUIPMENT INCLUDING TEMPERATURE CONTROLS, ROOF TOP UNITS, SMOKE DETECTORS AND CONTROL PANEL.

L. PROVIDE AND INSTALL SMOKE DUCT DETECTORS IN EACH AIR CONDITIONING UNIT RETURN DUCT GREATER THAN 2000 CFM. CONTRACTOR SHALL PROVIDE INTERCONNECTION AND WIRE TO THE FIRE ALARM CONTROL PANEL IF REQUIRED. DUCT DETECTORS SHALL HAVE REMOTE TEST STATIONS LOCATED IN THE OFFICE NEAR THE RESPECTIVE THERMOSTATS. VERIFY CODE REQUIREMENTS FOR DUCT DETECTORS IN BOTH THE SUPPLY AND RETURN AIR STREAMS.

M. THE ENTIRE INSTALLATION SHALL BE GUARANTEED FREE OF DEFECTS AND CONTRACTOR SHALL REPAIR AND / OR REPLACE ANY DEFECTIVE MATERIALS OR EQUIPMENT AT NO COST TO THE OWNER FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY ARCHITECT OR ENGINEER.

N. ALL WORK SHALL BE SUBJECT TO THE ACCEPTANCE AND APPROVAL OF THE ARCHITECT AND OWNER. THE ARCHITECT SHALL BE NOTIFIED OF ANY AND ALL DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. FAILURE OF PROPER NOTIFICATION DOES NOT RELIEVE THE CONTRACTOR. THE CONTRACTOR SHALL CORRECT ANY AND ALL WORK ARISING FROM SUCH FAILURE TO COORDINATE DISCREPANCIES TO THE SATISFACTION OF THE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER.

O. THE CONTRACTOR SHALL, UPON COMPLETION OF PROJECT, PERFORM A COMPLETE TEST AND BALANCE OF ALL EQUIPMENT. PROVIDE A WRITTEN REPORT TO THE ARCHITECT. ALL CAPACITIES MUST BE SET TO WITHIN ±10% OF AMOUNTS INDICATED ON THE FLOOR PLAN AND SCHEDULES.

P. PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/ BARRIERS. COORDINATE WITH ARCHITECTURAL DRAWING FOR FIRE RATING OF THE WALLS.

Q. PROVIDE VOLUME DAMPER IN ACCESSIBLE CEILING AND PROVIDE CORD OPERATED DAMPER IN INACCESSIBLE CEILING.

R. FLEXIBLE CONNECTION SHALL BE INSTALLED BETWEEN EQUIPMENT AND CONNECTING DUCTWORK.

KITCHEN EXHAUST NOTES:

A. PROVIDE CLEAN OUT AT ALL ELBOWS AND BOTTOM OF RISER AND EVERY 15 FEET HORIZONTAL KITCHEN EXHAUST DUCT.

B. COMMERCIAL KITCHEN GREASE DUCTS SHALL BE DESIGNED FOR THE TYPE-1 OF COOKING APPLIANCE AND HOOD SERVED.

C. PROVIDE FACTORY BUILT COMMERCIAL GREASE DUCT LISTED AND LABELED WITH UL-1978. IF NOT THEN KITCHEN EXHAUST DUCT SHALL BE CONSTRUCTED OF 0.0575-INCH NO.16 GAUGE STEEL OR 0.0450-INCH NO. 18 STAINLESS STEEL.

D. JOINTS, SEAMS AND PENETRATIONS OF GREASE DUCTS SHALL BE MADE WITH A CONTINUOUS LIQUID TIGHT WELD OR BRAZE MADE IN THE EXTERNAL SURFACE IF THE DUCT SYSTEMS.

E. DUCT TO EXHAUST FAN CONNECTIONS SHALL BE FLANGED, GASKETED AND BOLTED TO THE INLET OF THE FAN FOR SIDE-INLET UTILITY FANS APPROVED FLEXIBLE CONNECTIONS MAY BE PROVIDED.

F. A VIBRATION ISOLATION CONNECTOR FOR CONNECTING A DUCT TO A FAN SHALL CONSIST OF NON-COMBUSTIBLE PACKING IN A METAL SLEEVE JOINT OF APPROVED DESIGN OR SHALL BE A COATED-FABRIC FLEXIBLE DUCT CONNECTOR LISTED AND LABELED FOR THE APPLICATION. VIBRATION ISOLATION CONNECTORS SHALL BE INSTALLED ONLY AT THE CONNECTION OF A DUCT TO A FAN INLET OR OUTLET.

G. GREASE DUCT BRACING AND SUPPORTS SHALL BE OF NON-COMBUSTIBLE MATERIAL SECURELY ATTACHED TO THE STRUCTURE AND DESIGNED TO CARRY GRAVITY AND SEISMIC LADS WITHIN THE STREET LIMITATIONS. BOLTS, SCREWS, RIVETS AND OTHER MECHANICAL FASTENERS SHALL NOT PENETRATE DUCT WALLS.

H. THE CLEANOUTS FOR HORIZONTAL GREASE DUCT SHALL BE LOCATED ON THE SIDE OF THE DUCT WITH THE OPENING NOT LESS THAN 1.5" ABOVE THE BOTTOM OF THE DUCT AND NOT LESS THAN 1" BELOW THE TOP OF THE DUCT.

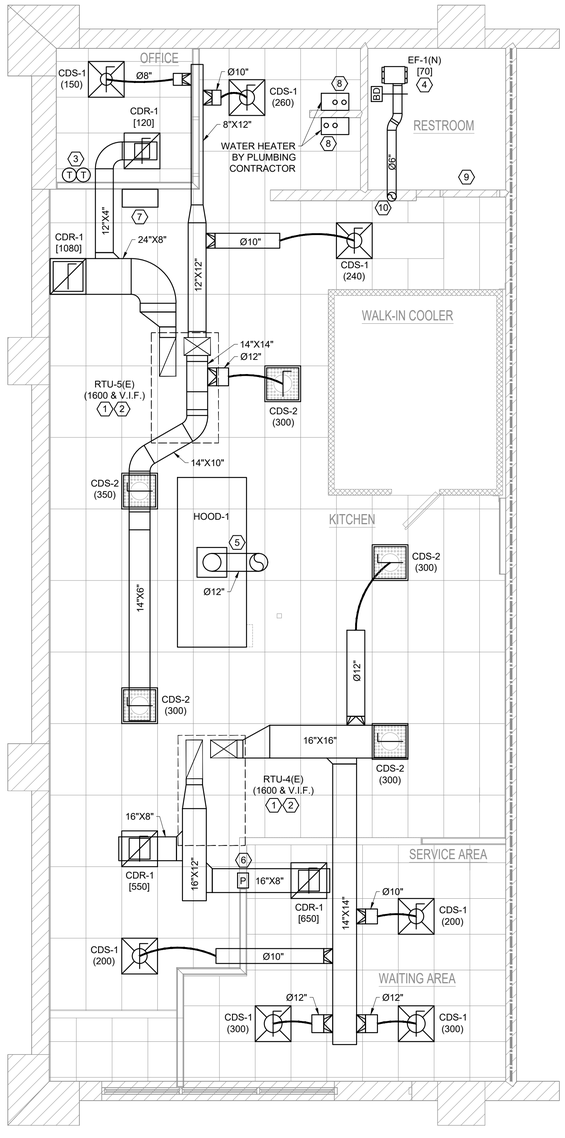
I. GREASE DUCT SHALL BE PERMITTED TO BE ENCLOSED IN ACCORDANCE WITH APPLICABLE BUILDING CODE REQUIREMENT FOR SHAFT CONSTRUCTION. SUCH GREASE DUCT SYSTEM AND EXHAUST EQUIPMENT SHALL HAVE A CLEARANCE TO COMBUSTIBLE CONSTRUCTION NOT LESS THAN 18 INCHES AND SHALL HAVE A CLEARANCE TO NONCOMBUSTIBLE CONSTRUCTION AND GYPSUM WALLBOARD ATTACHED TO NONCOMBUSTIBLE STRUCTURES OF NOT LESS THAN 6 INCHES.

J. PROVIDE 2 LAYERS OF 1.5" FIRE WRAP AROUND KITCHEN EXHAUST GREASE DUCTS.

K. PROVIDE MANUAL PULL STATION IN EGRESS PATH IN CASE OF EMERGENCY FOR SHUTTING OFF HOOD AND FANS.

(#) KEYED NOTES:

1. EXTEND FULL SIZE SUPPLY AND RETURN DUCTWORK FROM ROOFTOP UNIT TO SPACE, EXTEND AS SHOWN. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND SIZE. ACOUSTICALLY LINE THE FIRST 10'-0" OF BOTH SUPPLY AND RETURN MAIN DUCTS.
2. PROVIDE REMOTE TEMP SENSOR MOUNTED IN RETURN DUCT AND WIRE BACK TO T-STAT.
3. RELOCATE THE EXISTING THERMOSTAT AT SHOWN LOCATION. IF NOT REUSABLE, PROVIDE NEW 7-DAY PROGRAMMABLE THERMOSTAT. MOUNT ON WALL AT 48" A.F.F. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN. PROVIDE LOCKABLE COVER.
4. CEILING MOUNTED EXHAUST FAN. FAN SHALL BE SUSPENDED FROM STRUCTURE ABOVE. VERIFY EXACT LOCATION OF STRUCTURAL MEMBERS PRIOR TO INSTALLATION.
5. TYPE-I HOOD. RUN SHEET METAL DUCT FROM CONNECTION ON HOOD TO EF-2(N). OFFSET AND TRANSITION AT CONNECTIONS IF NEEDED. VERIFY DIMENSIONS PRIOR TO FABRICATION OR INSTALLATION. USE FACTORY-MANUFACTURED PIPE AND FITTINGS ONLY. VERIFY LOCATION ON SITE WITH MOST RECENT KITCHEN PLANS. DUCT SHALL BE SLOPED 1/4" UNIT VERTICAL IN 12" UNIT HORIZONTAL TOWARDS HOOD.
6. PULL STATION FURNISHED AND INSTALLED BY HOOD FIRE SUPPRESSION CONTRACTOR MOUNTED @60" AFF. PROVIDE FINAL CABLING AND CONNECTION TO HOOD FIRE SUPPRESSION CABINET AND MECHANICAL GAS VALVE.
7. HOOD CONTROL PANEL AND FIRE SUPPRESSION SYSTEM FURNISHED BY HOOD SUPPLIER AND INSTALLED ON WALL BY HVAC CONTRACTOR. HOOD FIRE SUPPRESSION SYSTEM FURNISHED AND INSTALLED BY LICENSED FIRE SUPPRESSION CONTRACTOR. F.S. CONTRACTOR TO SUBMIT PLAN AND OBTAIN APPROVAL UNDER SEPARATE PERMIT APPLICATION PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR TO COORDINATE & CONFIRM FINAL LOCATION OF CONTROL & FIRE SUPPRESSION PANEL ON FIELD.
8. 2XØ3" VENT FOR COMBUSTION AIR INTAKE/EXHAUST FROM GAS FIRED EQUIPMENT TO ROOF. TERMINATE AS PER MANUFACTURER RECOMMENDATION. ROUTE PIPING WITH MINIMAL AMOUNT OF BEND AND LENGTH AS REQUIRED BY RESPECTIVE UNIT MANUFACTURERS'S REQUIREMENT.
9. PROVIDE 1" DOOR UNDER CUT OR 12"X6" DOOR GRILLE.
10. Ø6" TOILET EXHAUST DUCT UP TO ROOF.



1 MECHANICAL FLOOR PLAN
1/4" = 1'-0"

GP|N

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PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

MECHANICAL FLOOR PLAN

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

M-1.0

SHEET 4 OF 9

MECHANICAL GENERAL NOTES:

A. COORDINATE LOCATIONS AND SIZES OF ROOF OPENINGS WITH OWNER AND LL ROOFING CONTRACTOR. PROVIDE NEW OPENING IF REQUIRED AND CLOSE USED OPENINGS.

B. EQUIPMENT SIZES, DIMENSIONS AND REQUIRED CONNECTIONS SHALL BE VERIFIED WITH THE ACTUAL EQUIPMENT SELECTED VENDOR DRAWINGS AND SITE BEFORE FABRICATION OF DUCTWORK, PIPING ETC.

C. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL HVAC BASED ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.

D. CONTRACTOR SHALL COORDINATE EQUIPMENT WEIGHTS AND SUPPORTS BASED ON ACTUAL EQUIPMENT SELECTED.

E. COORDINATE ALL EQUIPMENT WITH STRUCTURAL DRAWING.

F. MAINTAIN ALL CODE AND MANUFACTURERS RECOMMENDED CLEARANCE AROUND ALL ROOF EQUIPMENT.

G. ALL ROOF PENETRATION AND MEMBRANE ROOF REPAIRS ARE TO BE ACCOMPLISHED BY THE LANDLORD'S ROOFING CONTRACTOR FOR WARRANTY PURPOSES.

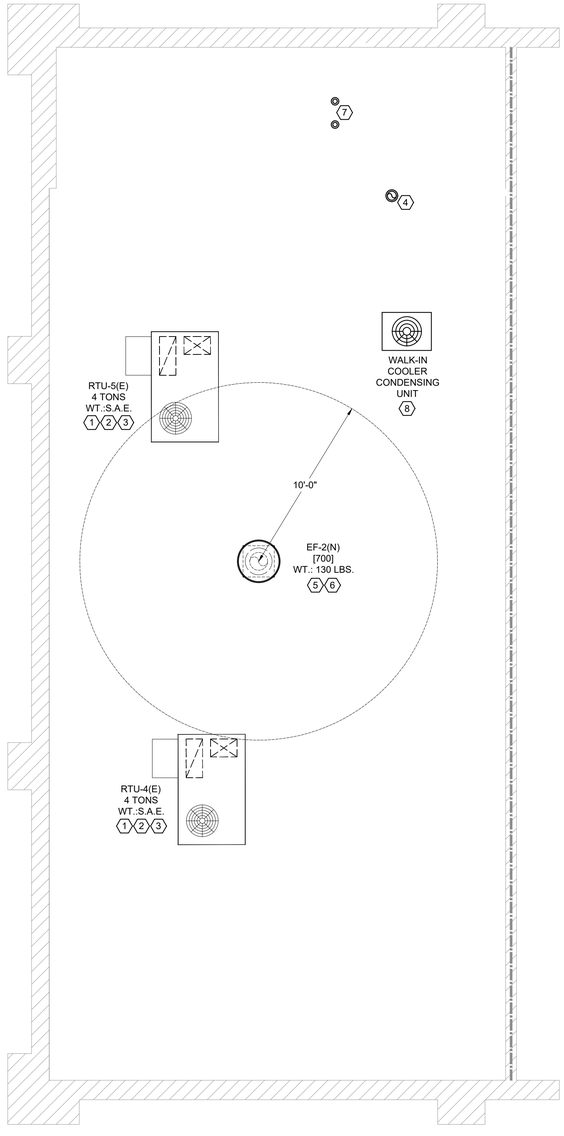
H. ROOF REPAIR UNIT PRICES SHOULD BE SUBMITTED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

I. CONTRACTOR SHALL ENSURE THAT ALL NEW ROOFTOP MOUNTED EQUIPMENT IS INSTALLED WITHIN ANY EXISTING REINFORCED STRUCTURAL AREAS OR ZONE THAT ARE DESIGNATED FOR FUTURE MECHANICAL EQUIPMENT. COORDINATE WITH ALL EXISTING STRUCTURAL CONDITIONS PRIOR TO BEGINNING ANY WORK. GENERAL CONTRACTOR NEEDS TO COORDINATE WITH STRUCTURAL ENGINEER/ARCHITECT FOR ADDITIONAL BRACING OR SUPPORTS FOR NEW UNITS.

J. CONTRACTOR TO COORDINATE WITH STRUCTURAL ENGINEER AND ADD BLOCKING TO ENSURE PROPER LOAD DISTRIBUTION ON EXISTING TRUSSES.

(#) KEYED NOTES:

1. EXISTING MECHANICAL ROOFTOP UNIT TO REMAIN ALONG WITH ALL ACCESSORIES. CLEAN AND REFURBISH TO LIKE NEW CONDITION. REPAIR/REPLACE ANY ACCESSORIES AS REQUIRED TO PROVIDE FULLY FUNCTIONING VERIFY PRIOR TO BID. SET OUTSIDE AIR AS INDICATED ON ROOFTOP UNIT SCHEDULES. MECHANICAL CONTRACTOR SHALL SCRIBE INTO UNIT POSITION OF OUTSIDE AIR DAMPER AND LABEL OUTSIDE AIR VOLUME AND PERCENT OF OUTSIDE AIR.
2. CONDENSATE DRAIN TO BE REMAIN AS IT IS FOR EXISTING RTU. CONTRACTOR TO FLUSH THE EXISTING DRAIN. CONTRACTOR TO CLEAN/REPAIR/REPLACE DRAIN IF FOUND DAMAGED.
3. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF EXISTING RTU.
4. Ø6" EXHAUST AIR DUCT FROM FIRST FLOOR TERMINATE WITH GOOSENECK AND BIRD SCREEN. MAINTAIN MINIMUM 10'-0" DISTANCE FROM ANY OUTSIDE AIR INTAKE SOURCE.
5. CONTRACTOR TO INSTALL NEW EXHAUST FAN AS PER MANUFACTURER'S RECOMMENDATION. EXHAUST FAN AND ROOF CURB PROVIDED BY THE KITCHEN EQUIPMENT SUPPLIER AND INSTALLED MECHANICAL CONTRACTOR. COORDINATE THE INSTALLATION OF ANY NEW STRUCTURAL SUPPORT AS REQUIRED. CONNECT EXHAUST DUCT FROM BELOW. MAINTAIN MIN 10'-0" DISTANCE FROM ANY OUTSIDE AIR INTAKE SOURCE ON ROOF.
6. 12"Ø KITCHEN EXHAUST DUCT FROM BELOW. CONNECT EXHAUST DUCT TO EF-2(N).
7. 3"/5"Ø CONCENTRIC VENT FOR COMBUSTION AIR INTAKE/EXHAUST FROM GAS FIRED EQUIPMENT TO ROOF. TERMINATE AS PER MANUFACTURER RECOMMENDATION. MAINTAIN MINIMUM 10' DISTANCE FROM MECHANICAL AIR INTAKE.
8. WALK-IN COOLER CONDENSING UNIT TO BE INSTALLED ON ROOF OVER WALK-IN COOLER. COOLER PROVIDED BY OWNER, INSTALLED BY MECHANICAL CONTRACTOR.



1 MECHANICAL ROOF PLAN
1/4" = 1'-0"

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

GP|N

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MICHAEL D TOMAS
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04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA® INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

MECHANICAL
ROOF PLAN

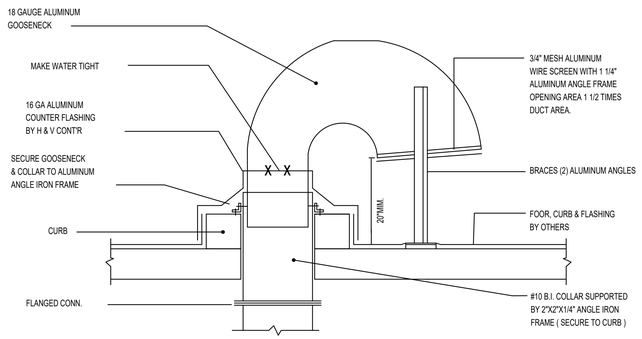
PROJECT NUMBER 25-025

DATE 04-16-2025

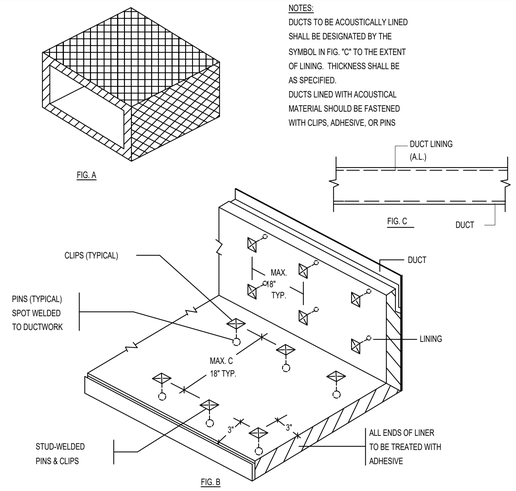
SHEET NO.

M-1.1

SHEET 5 OF 9



1 TYPICAL GOOSENECK DETAIL
SCALE: N.T.S.



2 ACOUSTIC LINING DETAIL
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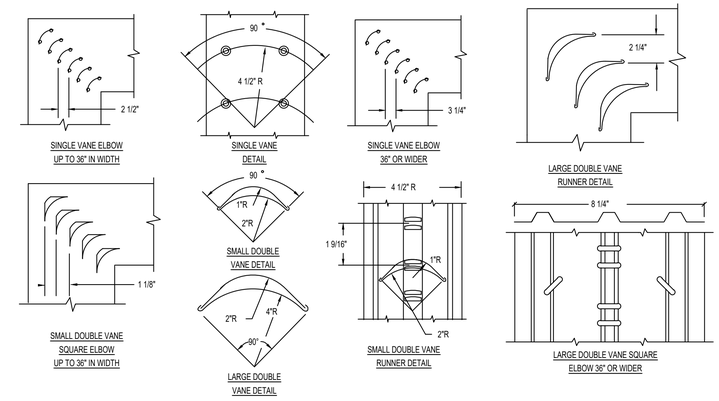
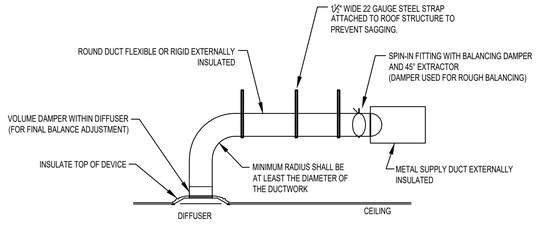


3 LOW VELOCITY DUCTWORK ELBOW
SCALE: N.T.S.



4 DIFFUSER CONNECTION DETAILS
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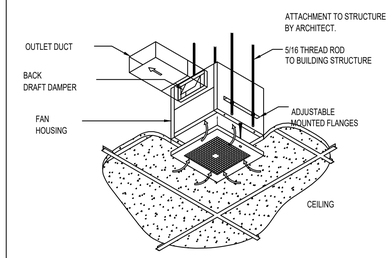

5 CEILING MOUNTED FAN DETAIL
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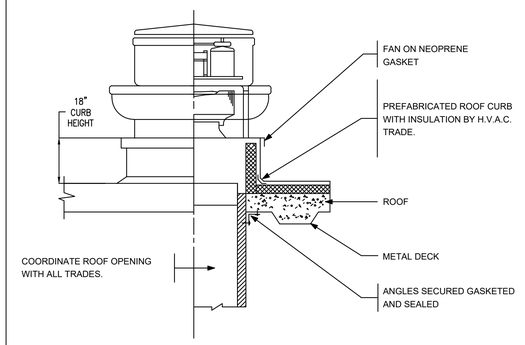
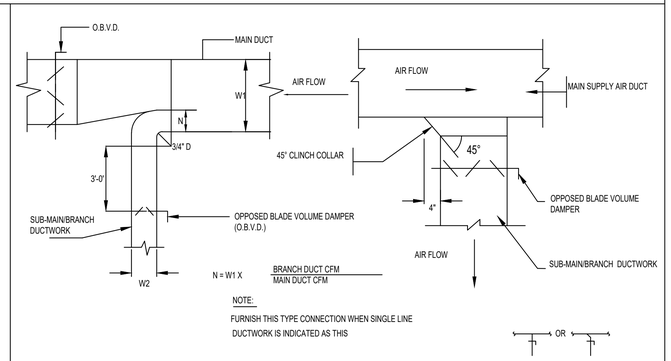
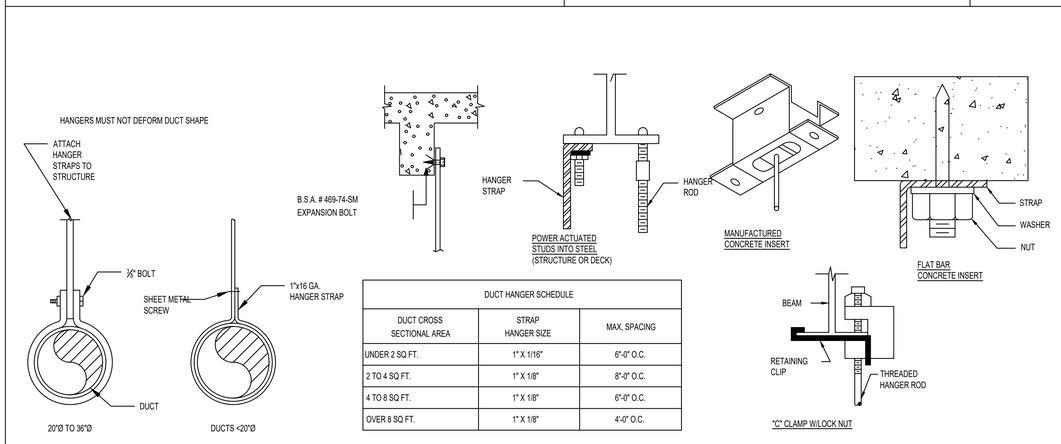


7 UP BLAST EXHAUST FAN DETAIL
SCALE: N.T.S.

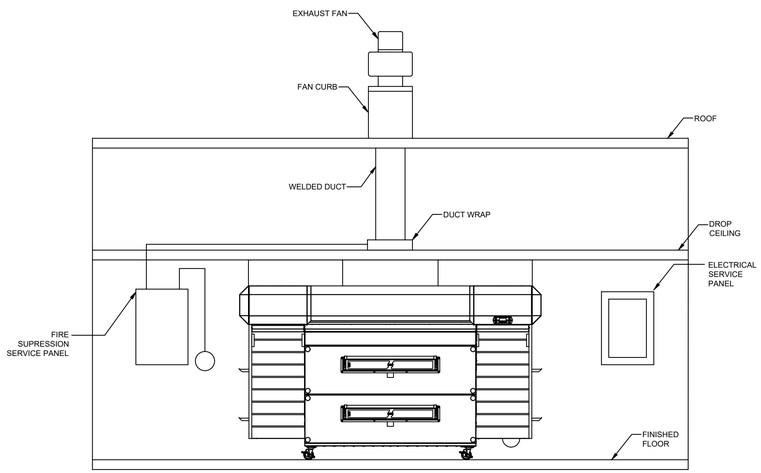


8 SUPPLY DUCT MAIN BRANCH TAP-OFF DETAILS
SCALE: N.T.S.



DUCT HANGER SCHEDULE		
DUCT CROSS SECTIONAL AREA	STRAP HANGER SIZE	MAX. SPACING
UNDER 2 SQ FT.	1" X 1/16"	6'-0" O.C.
2 TO 4 SQ FT.	1" X 1/8"	8'-0" O.C.
4 TO 8 SQ FT.	1" X 1/8"	6'-0" O.C.
OVER 8 SQ FT.	1" X 1/8"	4'-0" O.C.

9 TYPICAL DUCT HANGING DETAIL
SCALE: N.T.S.



10 OVEN/HOOD DETAILS
SCALE: N.T.S.

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D

COLORADO LICENSED
MICHAEL D TOMAS
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME:
6087
MARCO'S PIZZA
INTERIOR UP-FIT
MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

MECHANICAL DETAILS

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

M-2.0

SHEET 6 OF 9

ROOF TOP UNIT SCHEDULE

UNIT ID	MANUFACTURER	MODEL	AREA SERVED	NOMINAL TONS	SUPPLY FAN DATA			HEATING DATA		COOLING DATA				ELECTRICAL DATA				EER	SEER	THERMAL EFFICIENCY	OPERATING WEIGHT (LBS)
					TOTAL CFM	OUTSIDE AIR CFM	E.S.P. (IN. W.G.)	INPUT MBH	OUTPUT MBH	TOTAL MBH	SENSIBLE MBH	AMBIENT DB (°F)	ENTERING DB / WB(°F)	VOLTS / Hz	PHASE	MCA(A)	MOCP(A)				
RTU-4(E)	CARRIER (V.I.F.)	48HJE005 (V.I.F)	SEE PLAN	4 (V.I.F)	1600 (V.I.F)	400	S.A.E.	115 (V.I.F.)	93 (V.I.F.)	S.A.E.	S.A.E.	S.A.E.	S.A.E.	208-230/60 (V.I.F)	3 (V.I.F)	29.4 (V.I.F.)	35 (V.I.F.)	S.A.E.	S.A.E.	S.A.E.	S.A.E.
RTU-5(E)	CARRIER (V.I.F.)	48HJE005 (V.I.F)	SEE PLAN	4 (V.I.F)	1600 (V.I.F)	400	S.A.E.	115 (V.I.F.)	93 (V.I.F.)	S.A.E.	S.A.E.	S.A.E.	S.A.E.	208-230/60 (V.I.F)	3 (V.I.F)	29.4 (V.I.F.)	35 (V.I.F.)	S.A.E.	S.A.E.	S.A.E.	S.A.E.

NOTES FOR EXISTING RTU :-

1. EXISTING RTUs WITH ALL ACCESSORIES TO REMAIN SAME AND TO BE REUSED.
2. S.A.E. : SAME AS EXISTING , V.I.F.: VERIFY IN FIELD
3. CONTRACTOR TO FIELD VERIFY IF ALL RTUs ARE WORKING AT THEIR 100% RATED CAPACITY. INFORM TO DESIGN ENGINEER IF ANY DISCREPANCIES ARE FOUND IN PERFORMANCE PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND CONFIGURATION OF UNIT ON SITE.
5. IF REQUIRED, PROVIDE NEW THERMOSTAT AND TEMPERATURE SENSOR COMPATIBLE WITH EXISTING RTU. CO-ORDINATE FINAL LOCATION OF T-SENSOR WITH ARCHITECT/OWNER.
6. CONTRACTOR TO BALANCE OUTSIDE AIR & RETURN AIR DAMPER ON EXISTING RTU TO MATCH VALUES MENTIONED IN ABOVE TABLES.
7. REPLACE FILTERS, IF REQUIRED.
8. CONTRACTOR SHALL VERIFY EXACT ELECTRICAL CONNECTIONS, WIRE SIZES, BREAKER, DISCONNECT ETC. PRIOR TO ORDERING AND BID.

FAN SCHEDULE

UNIT ID	MANUFACTURER	MODEL	CFM	E.S.P. (IN. W.G.)	ELECTRICAL DATA			WEIGHT (LBS)	ACCESSORIES	NOTES
					VOLTS (V)	PHASE	FLA (A)			
EF-1 (N)	GREENHECK	SP-B110ES	70	0.75	115	1	0.27	10	BD,DP,FSC,VI	3
EF-2 (N)	CAPTIVEAIRE	DU50HFA	700	0.8	115	1	6.3	130	RC, FSC,GDC,WP	1,2

ACCESSORIES:

BD-BACKDRAFT DAMPER, DP-DISCONNECT PLUG, GDC-GREASE DRAIN CUP, RC-FACTORY FURNISHED 18" ROOF CURB, FSC-FACTORY MOUNTED AND WIRED VARIABLE SPEED CONTROL, VI-VIBRATION ISOLATION, WP-NEMA 3R DISCONNECT SWITCH.

NOTES:

1. FAN SHALL BE CONTROLLED BY HOOD CONTROLS. INTERLOCK RTU-4(E) & RTU-5(E) TO OPERATE IN OCCUPIED MODE WHILE KITCHEN EXHAUST FAN IS ENERGIZED.
2. INSTALL FAN AS PER MANUFACTURE RECOMMENDATION.
3. INTERLOCK FAN OPERATION WITH ROOM LIGHT.

AIR TERMINAL SCHEDULE

			BASIS OF DESIGN: PRICE	
TAG	TYPE	DIMENSION(IN)	MODEL NO.	MAX NC dBA
CDS-1	SUPPLY	24X24	SPD	20
CDS-2	SUPPLY	24X24	PDN	20
CDR-1	RETURN	24X24	PDDR	20

NOTES FOR DIFFUSERS

1. ALL GRILLES : CONTRACTOR SHALL COORDINATE WITH LATEST ARCHITECTURAL REFLECTED CEILING PLANS PLANS TO ENSURE PROPER AIR DEVICE BORDER SELECTION.
2. COORDINATE COLOR/FINISH WITH ARCHITECT.

FOR ROUND DIFFUSER NECK SIZE	FOR SQUARE DIFFUSER NECK SIZE
6" DIA: 0-100 CFM	6"X6" : 0 - 115 CFM
8" DIA: 101-175 CFM	8"X8" : 116 - 220 CFM
10" DIA: 176-275 CFM	10"X10" : 221 - 350 CFM
12" DIA: 276-395 CFM	12"X12" : 351 - 520 CFM
14" DIA: 396-535 CFM	14"X14" : 521 - 730 CFM
15" DIA:536-750 CFM	16"X16" : 731 - 840 CFM
	18"X18" : 840 - 1035 CFM
	20"X20" : 1036 - 1285 CFM
	22"X22" : 1286 - 1570 CFM

AIR BALANCE

UNIT	AREA SERVED	SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	RETURN AIR (CFM)	EXHAUST AIR(CFM)
RTU-4(E)	SEE PLAN	1600	400	1200	0
RTU-5(E)	SEE PLAN	1600	400	1200	0
EF-1(N)	SEE PLAN	0	0	0	70
EF-2(N)	SEE PLAN	0	0	0	700
TOTAL:		3200	800	2400	770
BUILDING PRESSURE:			30	**POSITIVE**	

NOTES:

1. CONTRACTOR TO ADJUST MOTORIZED DAMPER ON OUTSIDE AIR TAP TO PROVIDE OUTSIDE AIR AS MENTIONED IN ABOVE TABLE.

VENTILATION CALCULATION

ROOM NAME	AREA (SQ.FT.)	NUMBER OF PEOPLE/1000sq.ft AS PER IMC 2021	NUMBER OF PEOPLE AS PER IMC 2021	NUMBER OF CHAIR	FINAL PEOPLE NO.	MIN OUTSIDE AIR AS PER IMC 2021		REQ. OA (CFM)	PROVIDED OA (CFM)	EXHAUST AIRFLOW RATE (CFM/SQ.FT)	TOTAL EXHAUST (CFM)	PROVIDED EXHAUST (CFM)
						CFM/PEOPLE	CFM/SQ.FT					
WAITING AREA	123	15	2	3	3	7.5	0.12	37	800	-	-	-
SERVICE AREA	82	15	1	0	1	7.5	0.12	17		-	-	-
KITCHEN	995	20	20	0	20	7.5	0.12	269		0.7	697	700
OFFICE	57	5	0	1	1	5	0.06	8		-	-	-
RESTROOM	62	0	0	0	0	0	0	0		70	190	70
TOTAL	**1319**	-	**23**	**4**	**25**	-	**TOTAL**	**332**	**800**	**TOTAL**	-	**770**

GP|N

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MICHAEL D'TOMAS
0060432
PROFESSIONAL ENGINEER

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NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA® INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

MECHANICAL SCHEDULE

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SHEET NO.

M-2.1

EDGE-EEH-23

EDGE CLOSE CAPTURE LOW CFM EXTRACTION HOOD

Introducing the EDGE EEH-23 hood, exclusively crafted for the EDGE conveyor oven model line. The EEH-23 hood is meticulously engineered to efficiently capture smoke and grease-laden vapors. Consequently, the EEH-23 hood boasts the lowest extraction CFM among all the hoods available for the EDGE oven model line.

DRAMATICALLY LOWER CFM RATES

The innovative EDGE close capture hood requires fewer CFMs to effectively capture, contain, and extract grease-laden vapors, surpassing rival conveyor oven manufacturers' hood systems by up to 40% in efficiency.

LOWER MUA REQUIREMENTS & COSTS

The annual cost of heating or cooling one CFM of Make Up Air (MUA) is estimated to range from $1 - $3. Our market-leading CFM reductions can save you thousands of dollars annually compared to traditional hood models.

COOLER KITCHEN ENVIRONMENT

By optimizing the capture process, we have significantly reduced the heat and thermal impact on the surrounding environment, leading to improved HVAC efficiency and reduced energy consumption. Not only will this result in a more comfortable working environment for your staff, but it will also contribute to a cleaner and healthier kitchen.

AUTOMATED FAN SPEED ADJUSTMENT

Why waste money on excessive exhaust when you can have an extraction hood that adjusts to your needs? Our innovative hood system features an optional automatic fan speed adjustment, ensuring that the CFM rate is optimized based on the number of ovens in use. Not only that, but it also dynamically adjusts the make-up air CFM rate accordingly.

HOOD OPTIONS

PRE-PLUMBED FIRE SUPPRESSION

Our integrated hood fire suppression system is available for every model. It comes pre-installed at the factory with the necessary nozzles and fusible links included.

HOOD VALANCE

The EDGE close capture hoods can be ordered with an easy-to-install hood-to-ceiling valance. Crafted from stainless steel, this sleek valance conceals ducting, hanging rods, and wiring, creating a seamless look between the hood and the ceiling.

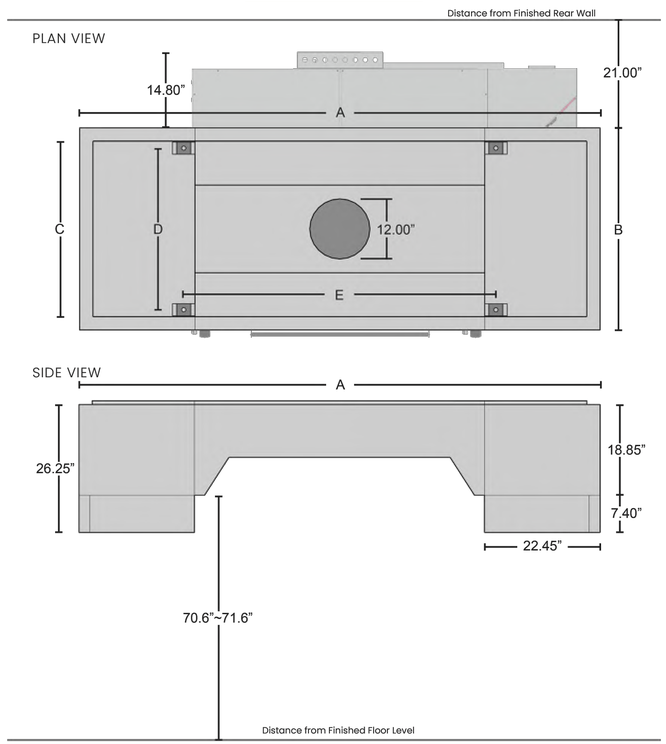
MULTI-SPEED CONTROL SYSTEM - EEC-23-A

Our innovative hood system features an optional automatic fan speed adjustment, ensuring that the CFM rate for both exhaust and make-up air or HVAC is optimized based on the number of ovens in use.

EXTENDED LEGS & BRACES

Suggested for use with double stacked ovens placed beneath an EDGE close-capture hood, the extended legs and braces elevate the oven's height to that of a triple oven, providing a future-proof option if you decide to incorporate a third deck.

HOOD DIMENSIONS



*All units are inches, unless otherwise noted

HOOD DIMENSIONS

Hood Model	Hood Length	Hood Depth	Hood Capture Width	Mounting Distance (Front to Back)	Mounting Distance (Left to Right)
	A	B	C	D	E
EDGE-EEH-23-1830	75.57"	26.33"	22.00"	20.92"	24.75"
EDGE-EEH-23-2440	85.32"	32.33"	28.00"	26.00"	34.50"
EDGE-EEH-23-3240	85.32"	40.33"	36.00"	34.00"	34.50"
EDGE-EEH-23-2460	103.82"	32.33"	28.00"	26.00"	53.00"
EDGE-EEH-23-3260	103.82"	40.33"	36.00"	34.00"	53.00"
EDGE-EEH-23-3860	103.82"	46.33"	42.00"	40.00"	53.00"
EDGE-EEH-23-4460	103.82"	52.33"	48.00"	46.00"	53.00"
EDGE-EEH-23-3270	113.83"	40.33"	36.00"	34.00"	63.00"
EDGE-EEH-23-3870	113.83"	46.33"	42.00"	40.00"	63.00"

HOOD EXTRACTION SPECIFICATIONS

Hood Model	Capture (Linear ft)	Minimum FPM (Linear ft)			Minimum CFM (Cubic ft)		
		Single	Double	Triple	Single	Double	Triple
EDGE-EEH-23-1830	3.67	50	100	120	184	367	440
EDGE-EEH-23-2440	4.67	50	100	120	234	467	560
EDGE-EEH-23-3240	6.00	50	100	120	300	600	720
EDGE-EEH-23-2460	4.67	50	100	120	234	467	560
EDGE-EEH-23-3260	6.00	50	100	120	300	600	720
EDGE-EEH-23-3860	7.00	50	100	120	350	700	840
EDGE-EEH-23-4460	8.00	50	100	120	400	800	960
EDGE-EEH-23-3270	6.00	50	100	120	300	600	720
EDGE-EEH-23-3870	7.00	50	100	120	350	700	840

*Please refer to the EDGE-EEH I&O manual for detailed and complete information.

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6087 INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

HOOD DETAILS
(1 OF 2)

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

M-3.0

EDGE OVENS

For use with the following EDGE Ovens:

EDGE-1830	EDGE-2440	EDGE-3240
EDGE-2460	EDGE-2460S	EDGE-3260
EDGE-3260S	EDGE-3860	EDGE-3860S
EDGE-4460	EDGE-4460S	EDGE-3270
EDGE-3870	EDGE-4470	

www.edgeovens.com

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+1.888.480.EDGE
support@edgeovens.com

Intertek Intertek

Conforms to:

UL 710:2012 Ed.6+R:16Feb2021
ULC S646:2010 Ed.3
NSF/ANSI 2:2021

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COLORADO LICENSED
MICHAEL D'TOMASO
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PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME:

6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

HOOD DETAILS
(2 OF 2)

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

M-3.1

SHEET 9 OF 9

SWITCHES AND CONTROLS

$\$_a$	20A SPST SWITCH U.O.N. "a" DENOTES SWITCH'S TAG
$\$^D_a$	DIMMER SWITCH U.O.N. "a" DENOTES SWITCH'S TAG
$\$_{OS}$	WALL OCCUPANCY SENSOR SWITCH
[F]	PULL STATION
[S]	SWITCH BANK
$\$^T$	TIME SWITCH

WIRING SYSTEMS

----------	EXISTING
_____	NEW

ANNOTATION

+24"	INDICATES MOUNTING HEIGHT CENTER LINE TO FINISHED FLOOR.
(#)	KEYED NOTE REFERENCE
1 / E-1.0	DETAIL REFERENCE: DETAIL NUMBER INDICATED ON TOP; DRAWING NUMBER INDICATED ON BOTTOM

POWER DISTRIBUTION

■	DISTRIBUTION PANELBOARD, SURFACE OR FLUSH MOUNTED.

ELECTRICAL DRAWING LIST

POWER AND TELECOMMUNICATION

(J)	JUNCTION BOX
	DUPLEX RECEPTACLE, +18" AFF OR AS NOTED.
	SPECIAL RECEPTACLE
	QUAD RECEPTACLE
▽	TYPICAL DATA/COMM OUTLET DOUBLE GANG OUTLET BOX WITH SINGLE GANG MUD RING. ROUTE 3/4 INCH CONDUIT TO ABOVE CEILING SPACE. PROVIDE PULL STRING. COMMUNICATIONS CONTRACTOR TO PROVIDE FACE PLATE, WIRING, AND FINAL CONNECTIONS.

MOTORS AND CONTROLS

(M)	MOTOR AS NOTED WITH LIQUID TIGHT FLEXIBLE CONNECTION WITH JUNCTION BOX AND MOTOR SWITCH.
A	30A NON FUSED DISCONNECT SWITCH, POLES AS NOTED.
B	60A NON FUSED DISCONNECT SWITCH, POLES AS NOTED.
C	100A NON FUSED DISCONNECT SWITCH, POLES AS NOTED.
D	200A NON FUSED DISCONNECT SWITCH, POLES AS NOTED.
$\$_M$	MANUAL MOTOR SWITCH

APPLICABLE CODES

A. 2021 INTERNATIONAL BUILDING CODE

B. 2021 INTERNATIONAL MECHANICAL CODE

C. 2021 INTERNATIONAL FIRE CODE

D. 2021 INTERNATIONAL ENERGY CONSERVATION CODE.

ELECTRICAL ABBREVIATIONS

A	AMPERES
A/C, AC	AIR CONDITIONING UNIT
AF	AMPERE FRAME/AMP FUSE
AFF	ABOVE FINISHED FLOOR
AS	AMP SWITCH
AIC	AMPS INTERRUPTING CAPACITY
AUTO	AUTOMATIC
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
C/B,CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
COMM	COMMUNICATION
CT	CURRENT TRANSFORMER
CU	COPPER
°C	DEGREE CELSIUS
°F	DEGREE FAHRENHEIT
DIA	DIAMETER
DISC	DISCONNECT
DN	DOWN
DWG	DRAWING
JB	JUNCTION BOX
KCMIL	ONE THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
LP	LIGHTING PANEL
LTG	LIGHTING
MAX	MAXIMUM
MC	MOTOR CONTROLLER
MCB	MAIN CIRCUIT BREAKER
MER	MECHANICAL EQUIPMENT ROOM
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
N	NEUTRAL
NE	NEW DEVICE TO REPLACE EXISTING
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
P	POLES
PB	PULLBOX
PC	PERSONAL COMPUTER
Ø	PHASE
PNL	PANEL
W	WATT
W	WIRE
WH	WALL HEATER
E	EXISTING
TC	TIME CLOCK
VIF	VERIFY IN FIELD
TS	TIME SWITCH
EA	EACH
EC	EMPTY CONDUIT/ ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
ER	EXISTING TO BE RELOCATED
ETR	EXISTING TO REMAIN
EWF	ELECTRIFIED WORKSTATION FURNITURE
EWH	ELECTRIC WATER HEATER
FA	FIRE ALARM
FBO	FURNISHED BY OTHERS, INSTALLED & WIRED BY EC
FDR	FEEDER
FIBO	FURNISHED & INSTALLED BY OTHERS, WIRED BY EC
FIXT	FIXTURE
FL	FLOOR
FLUOR	FLUORESCENT
G	GROUND
GFI	GROUND FAULT INTERRUPTER
GP	GENERAL PURPOSE
HC	HUNG CEILING
HP	HORSEPOWER
HWH	HOW WATER HEATER
HZ	HERTZ
IC	INTERRUPTING CAPACITY
PP	POWER PANEL
PVC	POLYVINYL CHLORIDE
PWR	POWER
R	REMOVE
RE	RELOCATED EXISTING
REC	RECEPTACLE
RR	REMOVE & RELOCATE
SECT	SECTION
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SPEC	SPECIFICATION
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
SYS	SYSTEMS
TELE	TELEPHONE
TEMP	TEMPERATURE
TXF	TOILET EXHAUST FAN
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT/VOLTAGE
VA	VOLT AMPERE
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHER PROOF
XFMR	TRANSFORMER
IG	ISOLATED GROUND
TR	TAMPER RESISTANCE

GENERAL NOTES

(APPLY TO ALL "E" DRAWINGS)

1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CURRENT VERSION OF THE NATINOL ELECTRICAL CODE 2023, LOCAL JURISDICTION REQUIREMENTS, AND ALL GOVERNING LOCAL CODES, LAWS, AND REGULATIONS.
2. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS THAT MAY AFFECT THE WORK. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR FAILURE TO DO SO.
3. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, TEST REPORTS, AND CERTIFICATIONS FOR TEMPORARY AND FINAL CERTIFICATE OF OCCUPANCY.
4. FIRE STOP ALL PENETRATIONS OF FIRE RATED CONSTRUCTION IN A CODE APPROVED MANNER IN ORDER TO MAINTAIN FIRE RATING. ALL PENETRATIONS SHALL BE SLEEVED AND SEALED WATERTIGHT.
5. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10 FT APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
6. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10 FT LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH FISH WIRE.
7. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
8. CONTRACTOR SHALL PROVIDE A WARRANTY ON ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
9. ALL UNUSED MATERIALS AND DEBRIS SHALL BE LEGALLY REMOVED AND DISPOSED OF AWAY FROM THE PREMISES ON A DAILY BASIS.
10. CONTRACTOR SHALL PATCH, PAINT, AND RESTORE EXISTING SURFACES DAMAGED DURING THE COURSE OF THIS CONSTRUCTION TO PRE-EXISTING CONDITIONS OR BETTER.
11. MINIMUM SIZE OF CONDUIT SHALL BE ¾", AND TYPE SHALL BE ELECTRICAL METALLIC TUBING (EMT), UNLESS OTHERWISE NOTED. PROVIDE NYLON DRAG LINE AND CONDUIT CAP FOR ALL EMPTY CONDUITS.
12. CONNECT CONDUIT TO MOTOR CONDUIT TERMINAL BOXES WITH FLEXIBLE CONDUIT (MINIMUM 18 IN. LENGTH AND 50% SLACK). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.
13. PULL AND JUNCTION BOXES WHERE INDICATED ON THE DRAWINGS, SHALL BE CONSIDERED SHOWN AT THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL LOCATE THEM AS FIELD CONDITIONS DICTATE. ADDITIONAL PULL AND JUNCTION BOXES NOT SHOWN ON DRAWINGS SHALL BE PROVDED WHERE REQUIRED BY APPLICABLE CODE PROVISIONS OR WHERE CALLED FOR BY FIELD CONDITIONS. PULL AND JUNCTION BOXES SHALL BE SURFACE TYPE IN UNFINISHED AREAS AND INSTALLED CANCEALED IN FINISHED AREAS, AND ALL COVERS TO PULL & JUNCTION BOXES SHALL BE READILY ACCESSIBLE.
14. SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
15. FOR EXACT LOCATION AND MOUNTING HEIGHT OF LIGHTING FIXTURES AND SWITCH/RECEPTACLE OUTLETS, REFER TO ARCHITECTURAL REFLECTED CEILING AND POWER PLANS.
16. ALL ELECTRICAL ACCESSORIES AND EQUIPMENT INSTALLED OUTSIDE OR EXPOSED TO WEATHER SHALL HAVE NEMA 3R ENCLOSURES AND SHALL BE TIGHTLY GASKETED FOR A COMPLETE RAINTIGHT INSTALLATION. ALL BUILDING EXTERIOR MOUNTED RECEPTACLES SHALL BE GFCI RATED AND MOUNTED IN WEATHERPROOF ENCLOSURE.
17. ALL ACCESS PANEL LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
18. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION AND INSTALLATION OF NEW WORK WITH THE GENERAL CONTRACTOR AND OTHER ASSOCIATED TRADES IN A TIMELY MANNER. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL, DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
19. ALL CONDUITS AND EQUIPMENT TO BE CONCEALED IN FINISHED SPACES UNLESS OTHERWISE NOTED. CONDUITS SHALL BE ENCASED IN THE CONCRETE FLOOR SLAB.
20. ALL EQUIPMENT AND MATERIALS INSTALLED IN PLENUM CEILINGS SHALL BE APPROVED FOR THAT APPLICATION.
21. OUTLET BOXES AND JUNCTION BOXES ON OPPOSITE SIDES OF FIRE-RATED WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES, UNLESS FIRE-RATED BOXES OR PUTTY PADS ARE UTILIZED.
22. COORDINATE ALL FLOOR PENETRATIONS WITH THE STRUCTURAL AND ARCHITECTURAL DRAWINGS. CONFIRM PENETRATION LOCATIONS WITH THE ENGINEER AND OWNER BEFORE INSTALLATION.
23. COORDINATE THE MOUNTING HEIGHT AND LOCATION OF RACEWAYS, COMMUNICATIONS OUTLETS, AND RECEPTACLES WITH THE ARCHITECTURAL CASEWORK DRAWINGS AND DETAILS. COORDINATE LOCATIONS OF LIGHT FIXTURES, SWITCHES, AND RELATED DEVICES WITH THE ARCHITECTURAL DRAWINGS AND DETAILS.
24. REFER TO ARCHITECTURAL PLANS FOR FINAL LOACTIONS OF ALL LUMINARIES AND SWITCHES, AND FOR ALL FINISHED CEILING HEIGHTS.
25. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL ELECTRICAL DEVICES, AND FOR FINAL CEILING AND WALL HEIGHTS AND LAYOUTS.
26. LIGHTING FIXTURES PROVIDED WITH EMERGENCY BATTERY PACKS AND INDICATED WITH SWITCH CONTROL SHALL BE WIRED WITH BATTERY CHARGING/SENSING CIRCUIT WIRED AHEAD OF SWITCH CONTROL.
27. NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT NUMBERS IN PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD.

GP|N

COLORADO LICENSED
MICHAEL D TOMAS
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PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

ELECTRICAL SYMBOL LIST, ABBREVIATION AND GENERAL NOTES

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

E-0.1

ELECTRICAL SPECIFICATION

1. GENERAL:

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.

B. DRAWING ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATION WITH EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES, IS REQUIRED, MAINTAIN HEADROOM AND SPACE CONDITIONS.

C. BIDDERS, BEFORE SUBMITTING PROPOSALS, SHALL VISIT AND CAREFULLY EXAMINE THE AREA AFFECTED BY THIS WORK TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT, OR MATERIALS, REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.

D. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTANANCE AND REPAIR, MINOR DEVIATIONS FROM DRAWING MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

E. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES AND CHARGES IN MAKING UP THE WORK PROPOSAL.

F. CONNECTIONS TO EXISTING WORK: INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES. AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.

G. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.

H. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

I. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL, UNLESS OTHERWISE NOTED.

J. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF CONDUIT AND EQUIPMENT, PROVIDE EQUIPMENT CURBS AS REQUIRED.

K. ALL EXISTING MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF SPECIFIC EQUIPMENT ND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. REMOVED EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.

L. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK DURING OVERTIME HOURS AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.

M. UNLESS OTHERWISE SPECIFICALLY NOTED OR SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.

N. ALL MATERIAL AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.

O. INSURANCE: PROVIDE IN ACCORDANCE WITH OWNER/BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.

P. THE FINAL ACCEPTANCE SHALL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATED OF INSPECTION AND APPROVAL.

2. 2. GENERAL PROVISIONS FOR ELECTRICAL WORK:

A. DEFINITIONS:

1) "PROVIDE": TO FURNISH, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.

2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.

3) "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE. AND DELIVER COMPLETE WITH RELATED ACCESSORIES.

4) "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.

5) "WIRING": RACEWAY. FITTINGS, WIRE, BOXES, AND RELATED ITEMS.

6) "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES

7) "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.

8) "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

B. TEMPORARY LIGHT AND POWER: PROVIDE TEMPORARY LIGHT AND POWER SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCTION AREAS FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING OWNER. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.

C. QUALITY ASSURANCE

1) QUALITY OF MATERIALS: ALL EQUIPMENT SHALL BE NEW SPECIFICATION GRADE, FREE FROM DEFECTS AND LISTED BY APPROVED TESTING AGENCY AND BEARING THEIR LABEL MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURER, EXCEPT AS NOTED.

2) GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED AS DEFINED IN PARAGRAPH 2.C.

3) CURRENT CHARACTERISTICS:

a. DISTRIBUTION: 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.

4) HEIGHTS OF OUTLETS:

a. FROM FINISHED FLOOR TO CENTERLINE OF OUTLETS FOR:

- RECEPTACLES AND TELEPHONES: 1 FT-6 IN.
- WALL SWITCHES: 4 FT-0 IN.
- WALL FIXTURES: 7 FT-0 IN.
- MOTOR CONTROLLERS: 5 FT-0 IN.
- CLOCKS: 7 FT 6 IN

b. EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN VIOLATION OF CODE, OR AS NOTED OR DIRECTED.

D. PRODUCT DELIVERY, STORAGE AND HANDLING

1) MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.

2) ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS SHALL BE PERMITTED, CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

E. MATERIALS

1) NAMEPLATES: PROVIDE BLACK LAMICOID SHEET WITH 3/4 IN. WHITE LETTERING, FASTENED WITH EPOXY CEMENT FOR EACH DISCONNECT SWITCH, CIRCUIT BREAKER, PANEL CABINET, TRANSFORMER, ENCLOSURE, MOTOR CONTROLLER AND THE LIKE. NAMEPLATES SHALL DESCRIBE THE NAME AND NUMBER OF EACH COMPONENT.

2) CABLE TAGS: TAG EACH CONDUCTOR PASSING THROUGH SPLICE OR PULLBOX WITH A WHITE LINEN TAG, INDICATING POINT OF ORIGIN AND TERMINATION OF THE CIRCUIT.

3) INSERTS AND SUPPORTS:

a. INSERTS: STEEL, SLOTTED TYPE, FACTORY PAINTED.

- SINGLE ROD: SIMILAR TO GRINNELL FIG. 281.
- MULTI-ROD: SIMILAR TO FEE AND MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS.
- CLIP FORM NAILS FLUSH WITH INSERTS.
- MAXIMUM LOADING 75 PERCENT OF RATING.

b. SUPPORTS FROM BUILDING CONSTRUCTION: INSERTS, BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), CANTILEVER BRACKETS OR OTHER MEANS. SUBMIT FOR REVIEW.

c. GROUPED LINES AND SERVICES: TRAPEZE HANGERS OF BOLTED ANGLES OR CHANNELS.

d. WHERE BUILDING CONSTRUCTION IS INADEQUATE: PROVIDE ADDITIONAL FRAMING. SUBMIT FOR REVIEW.

F. PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER INORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COLORS SHALL BE AS SELECTED BY ARCHITECT OR ENGINEER. UTILIZE GALVANIZED IRON PRIMER ON PANEL AND PULL BOXES, AFTER FABRICATION. UTILIZE HOT DIPPED GALVANIZED OR DIPPED IN ZINC BASED PRIMER FOR: OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS, INSERTS AND SUPPORTS. ZINC BASED PRIMER WITH FINISH TO MATCH BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK SOILED OR DAMAGED; CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.

G. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHT FIXTURES SHALL BE VERIFIED WITH ARCHITECT.

H. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.

3. SCOPE OF WORK:

A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMING WITH THE COLORADO ELECTRICAL CODE 2023 WITH LOCAL ADOPTIONS, AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

B. ALL DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLIED OR SPECIFIED HEREIN.

C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER, DATE IS EARLIER, THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDED THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION, WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.

E. CONTRACTOR SHALL PERFORM ALL CONTROLLED INSPECTIONS IN ACCORDANCE WITH THE BUILDING CODE. SECURE ALL REQUIRED PERMITS AND APPROVALS AND TRANSMIT SAME TO OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES.

F. AREAS WITH NO ELECTRICAL WORK SHALL REMAIN AS IS. CONTRACTOR SHALL MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS TO ALL AREAS NOT COVERED BY THIS RENOVATION AND SHALL PROVIDE 48 HOUR NOTICE TO LANDLORD OF ANY PLANNED POWER INTERRUPTIONS OR SIGNAL SYSTEM OUTAGES.

4. SHOP DRAWINGS

A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT, CONTRACTOR SHALL PROVIDE COMPLETE SETS OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT,INDICATING CAPACITY, DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

B. INDICATE ON EACH SHOP DRAWINGS SUBMITTED:

1) PROJECT NAME AND LOCATION

2) NAME OF ARCHITECT AND ENGINEER

3) ITEM IDENTIFICATION

4) APPROVAL STAMP OF PRIME CONTRACTOR

C. SUBMISSIONS:

1) SUBMISSIONS 11 IN. X 17 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.

2) SUBMISSIONS LARGER THAN 11 IN. X 17 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPIA TO THE ENGINEER.

D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:

1) SAFETY/DISCONNECT SWITCHES

2) FUSES

3) CIRCUIT BREAKERS

4) PANELBOARDS/LOADCENTER (INCLUDING DIMENSIONS, SCHEDULES, AND CATALOG CUTS).

5) RACEWAYS

6) WIRE AND CABLE

7) WALL SWITCHES

8) INSERTION RECEPTACLES

9) MOMENTARY CONTACT SWITCHES

10) TIME SWITCHES

11) LIGHTING FIXTURES.

12) TRANSFORMER.

E. ASSIST AND PROVIDE ALL NECESSARY INFORMATION, DIAGRAMS, SKETCHES, ETC. TO THE HVAC CONTRACTOR, FOR THE PREPARATION OF COORDINATED SHOP DRAWINGS INDICATING ROUTING OF FEEDERS, CONTROL CONDUITS, RECESSED FIXTURES AND ADJACENT NEARBY PIPING AND DUCTWORK WHERE APPLICABLE, CERTIFIED BY ALL TRADES THAT COORDINATION HAS BEEN ESTABLISHED. SUBMIT FOUR(4) BOOKBOUND OPERATING AND SERVICE MANUALS WHICH SHALL INCLUDE COPIES OF ALL SHOP DRAWING. PROVIDE SHOP DRAWINGS FOR PANELS, FIXTURES, WIRING DEVICES, CONDUIT, CABLE, DISCONNECT SWITCH, RELAYS, CONTRACTORS, AND OTHER SYSTEMS AS DIRECTED BY THE ENGINEER.

5. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS

A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER A BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS. CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.

D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.

6. LOW-VOLTAGE DISTRIBUTION EQUIPMENT:

A. PROVIDE COMPLETE EQUIPMENT INCLUDING: SWITCHES, FUSES, CIRCUIT BREAKERS, PANELS AND TRANSFORMERS.

B. ALL EQUIPMENT SHALL CONFORM TO NEMA, ANSI AND IEEE STANDARDS.

C. DISCONNECT SWITCHES SHALL BE FUSED OR NONFUSED AS NOTED. VOLTAGE SHALL BE AS REQUIRED. SWITCHES SHALL BE HEAVY DUTY, EXCEPT AS NOTED, AND HORSEPOWER RATED FOR MOTOR LOADS. TOGGLE TYPE SWITCHES SHALL BE NONFUSED, LOAD BREAK, HAVING MAXIMUM RATINGS OF 20 AMP AT 600 VOLTS AND 30 AMP AT 240 VOLTS. TWO-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 6808F. THREE-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 7810F. KNIFE-BLADE TYPE SWITCHES SHALL BE LOAD BREAK, QUICK-MAKE- QUICK-BREAK, UL CLASS R UP TO 600 AMP. MAXIMUM RATING EXCEPT AS NOTED SHALL BE 800 AMP. ARC QUENCHERS SHALL BE PROVIDED. SWITCHES SHALL BE SIMILAR TO GENERAL ELECTRIC QMR. ALL SWITCH ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED.

7. FUSES:

A. CIRCUITS 0 TO 600 AMPERES SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMAN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

B. MOTOR CIRCUITS - ALL INDIVIDUAL MOTOR CIRCUITS WITH FULLLOAD AMPERE RATINGS (FLA) OF 480 AMPERES OR LESS SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMANN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP) SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

C. ALL FUSES SHALL BE PROVIDED BY SAME MANUFACTURER.

D. PROVIDE 1 SPACE MATCHING FUSE FOR EACH SET OF 3.

E. CIRCUIT BREAKERS: MOLDED CASE BREAKERS SHALL BE THERMAL-MAGNETIC, QUICK-MAKE-QUICK-BREAK, BOLT-ON TYPE, MANUALLY OPERATED WITH INSULATED TRIP-FREE HANDLE. MULTI-POLE TYPE BREAKERS SHALL CONTAIN INTERNAL TRIP BAR. TERMINALS SHALL BE SUITABLE FOR COPPER OR ALUMINUM CABLE. FURNISH AUXILIARY DEVICES WHERE REQUIRED FOR SHUNT-TRIPPING, OPEN AND CLOSE MOTOR OPERATOR AND ALARM INDICATION. ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED. FRAMES, IC AND INTERCHANGEABLE TRIPS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

1) 120 VOLTS, 100-AMP FRAME: 10,000 AMPS, 1 POLE.

2) 120/240 VOLTS, 225-AMP FRAME: 22,000 AMPS MINIMUM.

8. DISTRIBUTION PANELBOARDS, CIRCUIT BREAKER TYPE:

A. THREE PHASE, 4 OR 5 WIRE, COPPER BUS BARS, WITH 2, 3, OR 4 WIRE BRANCHES, AS NOTED. CAPACITY OF PANEL AND CIRCUITS, AS NOTED BELOW. PANELBOARD TO HAVE GROUND BUS SAME SIZE AS PHASE BUSES.

B. CABINETS: CODE GAUGE GALVANIZED SHEET STEEL PRIMED AND PAINTED WITH TRIM AND DOOR, TYPE AS NOTED, LAP AND RIVET CORNERS OR FORM AS APPROVED.

C. TRIM: ONE PIECE FULL FINISH PRIMED AND PAINTED SHEET STEEL. TRIM SHALL BE MOUNTED WITH A CONTINUOUS PIANO HINGE CONFIGURED IN SUCH A MANNER THAT IT SHALL BE POSSIBLE TO GAIN FULL ACCESS TO CIRCUIT BREAKERS AND WIRING GUTTERS WITHOUT REMOVING THE TRIM. PROVIDE A MULTI-PIN CYLINDER LOCK (YALE, CORBIN OR EQUAL) TO LATCH THE TRIM. KEYS SHALL BE MILLED.

D. HARDWARE: MULTI-PIN, CYLINDER LOCKS WITH MILLED KEYS. ALL PANELS SHALL BE KEYED ALIKE. DOOR OVER 48″ HIGH SHALL BE EQUIPPED WITH A CHROME PLATED VAULT HANDLE, BUILT-IN LOCK AND 3-POINT CATCH FASTENING DOOR AT TOP, BOTTOM AND CENTER.

E. HINGES: CONCEALED, CONTINUOUS PIANO HINGE AS DESCRIBED ABOVE.

F. DIRECTORY HOLDER: MEAL FRAME WITH NONBREAKABLE TRANSPARENT COVER AND DIRECTORY CARD. ENTRIES TO BE TYPEWRITTEN BY ELECTRICAL CONTRACTOR. PROVIDE AN ENGRAVED LAMINATED NAMEPLATE ADJACENT TO EACH BRANCH BREAKER. MOUNT WITH SELF TAPPING MACHINE SCREWS.

G. FURNISH MULTI-CABLE LUGS WHERE REQUIRED. DOUBLE LUGGING NOT PERMITTED. SECURE LUGS TO BUS BY STUD BOLTS.

H. PANELBOARD CONSTRUCTION FOR BOLTED TYPE BREAKERS. MINIMUM SHORT CIRCUIT RATING 25,000 AMPERES, RMS SYMMETRICAL FOR ALL 120/208V APPLICATIONS. INDIVIDUAL CIRCUIT BREAKERS SHALL HAVE MINIMUM 100A FRAME, TRIPS SIZED AS SHOW ON THE PLANS.

I. MINIMUM GUTTER SPACES: PANELS WITH 225 AMPERE MAINS, 5-¾″ MINIMUM, 400 AMPERES AND OVER, MINIMUM GUTTERS 8″. FOR PANELS WITH THROUGH FEEDERS, INCREASE GUTTER WIDTH BY 2″ MINIMUM AND PROVIDE A SHEET STEEL BARRIER BETWEEN THE PANEL GUTTER AND THE THROUGH FEEDER PORTION OF THE BACK BOX. BRANCH CIRCUIT BREAKERS SHALL BE MECHANICALLY INTERLOCKED WHEN SHOWN ON DRAWINGS.

J. DISTRIBUTION AND SUB-DISTRIBUTION PANELBOARDS SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

K. PANELBOARD SHALL HAVE MAIN CIRCUIT BREAKER OR MAIN LUGS AS INDICATED ON THE DRAWINGS. QUANTITY, POLES AND TRIP RATINGS OF BRANCH CIRCUIT BREAKERS TO BE AS INDICATED ON DRAWINGS.

L. PANELBOARD SHALL HAVE ENGRAVED WHITE CORE, BLACK LAMACOID NAMEPLATE SCREWED ONTO PANE TRIM WITH DESIGNATION LISTED (PANELBOARD NAME, VOLTAGE, RATING OR MAINS IN AMPS).

9. DISTRIBUTION PANELBOARDS, SWITCH AND FUSE:

A. THREE PHASE, 3 OR 4 WIRE WITH COPPER BUS BARS. ALL THROUGH BUS SHALL BE INSULATED.

B. NEMA CLASS 1 CONSTRUCTION TO ACCOMMODATE FUSIBLE, INDIVIDUALLY ENCLOSED SWITCHES, FRONT REMOVABLE, SWITCH AND DOOR INTERLOCKS. COVERS TO BE PAD-LOCKABLE.

C. PANELBOARD SHALL BE CONSTRUCTED OF CODE-GAUGE STEEL, GRAY FINISH OVER RUST INHIBITOR, FOR SURFACE MOUNTING. BOX AND PANEL FRAME SHALL BE FLANGED AND REINFORCED FOR RIGID SUPPORT OF INTERIOR AND ACCURATE ALIGNMENT OF INTERIOR WITH FRONT. TRIMS TO BE FASTENED TO BACK BOX WITH SCREWS.

D. ALL BRANCH SWITCHES SHALL HAVE INDIVIDUAL ENGRAVED LAMICOID NAMEPLATES (BLACK WITH WHITE CORE).

E. DISTRIBUTION PANELBOARD CONSTRUCTION MINIMUM SHORT CIRCUIT RATING 25,000 AMPERES, REMS SYMMETRICAL FOR ALL 120/208V APPLICATIONS. APPLICATIONS.

F. DISCONNECTS

1) DISCONNECT SWITCHES SHALL CONFORM TO NEMA AND UL STANDARDS, AND SHALL BE HORSEPOWER RATED.

2) SWITCHING MECHANISM SHALL BE QUICK-MAKE, QUICK-BREAK, SINGLE THROW WITH EXTERNAL OPERATING HANDLE MECHANICALLY INTERLOCKED WITH ENCLOSURE COVER TO PROVIDE ACCESS TO INTERIOR WHEN DISCONNECT IS IN OFF POSITION ONLY. PROVIDE MEANS TO LOCK OPERATING HANDLE IN THE OPEN AND CLOSED POSITION. DESIGNATE ON THE ENCLOSURE THE OPEN AND CLOSED POSITION OF THE OPERATING HANDLE.

3) SWITCHES SHALL BE OF THE DOUBLE STATIONARY CONTACT TYPE.

4) SWITCHES SHALL BE EQUIPPED WITH REJECTION TYPE FUSE HOLDERS, FUSIBLE AS SHOWN ON THE DRAWINGS; PROVIDE COMPLETE WITH FUSES AS SCHEDULED.

GP|N

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COLORADO LICENSED
MICHAEL D TOMAS
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

ELECTRICAL SPECIFICATIONS (1 OF 2)

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

E-0.2

ELECTRICAL SPECIFICATION (CONT.)

D. INSTALLATION

1) DISTRIBUTION PANELBOARD SHALL BE MOUNTED TO STRUCTURAL STEEL CHANNEL (KINDORF) WHICH SHALL BE BOLTED TO THE WALL USING EXPANSION ANCHORS FOR LARGE PANELS.

H. IDENTIFICATION

1) PROVIDE NAMEPLATE AT EACH SWITCH IDENTIFYING THE LOAD SERVED.

2) NAMEPLATES SHALL BE MOUNTED ON THE FRONT COVER SECURED WITH SELF-TAPPING SCREWS OR NUTS AND BOLTS. NAMEPLATES SHALL BE LAMINATED PHENOLIC, BLACK WITH A MINIMUM OF ¼" HIGH WHITE LETTERING.

I. DISTRIBUTION AND SUB-DISTRIBUTION PANELBOARDS SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

J. POWER PANELBOARDS SHALL BE SIMILAR TO GENERAL ELECTRIC TYPE "QMR", AS MANUFACTURED BY ATLAS SWITCH COMPANY, ELECTRIC SWITCHBOARD COMPANY OR APPROVED EQUAL.

K. PANELBOARD SHALL HAVE MAIN CIRCUIT BREAKER OR MAIN LUGS AS INDICATED ON THE DRAWINGS. QUANTITY, POLES AND TRIP RATINGS OF BRANCH CIRCUIT BREAKERS TO BE AS INDICATED ON DRAWINGS.

L. PANELBOARD SHALL HAVE ENGRAVED WHITE CORE, BLACK LAMACOID NAMEPLATE SCREWED ONTO PANE TRIM WITH DESIGNATION LISTED (PANELBOARD NAME, VOLTAGE, RATING OR MAINS IN AMPS).

M. MATERIALS

1) RACEWAYS:

a. RIGID STEEL CONDUIT: FULL-WEIGHT PIPE, GALVANIZED, THREADED.

b. ELECTROMETALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADLESS.

c. FLEXIBLE STEEL CONDUIT: CONTINUOUS SINGLE STRIP, GALVANIZED.

d. WIREWAYS: WIRE SHALL BE AS NOTED, MINIMUM NO. 16 GAUGE STEEL WITH GROUND CONTINUITY. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.

e. SURFACE METAL RACEWAY: SIZE AS NOTED. BASE 0.04 IN., COVER 0.25 IN. MATERIAL SHALL BE STEEL. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.

2) FITTINGS AND ACCESSORIES:

a. RIGID STEEL: NONSPLIT, THREADED, STEEL OR MALLEABLE IRON. ZINC DIE CAST NOT PERMITTED.

b. ELECTROMETALLIC TUBING: COMPRESSION TYPE. GALVANIZED RIGID STEEL ELBOWS, 2 IN. OR LARGER.

c. FLEXIBLE METALLIC CONDUIT: ANGLE WEDGE TYPE WITH INSULATED THROAT.

d. BUSHINGS: METALLIC INSULATED TYPE.

3) BOXES:

a. OUTLET BOXES: EXCEPT AS OTHERWISE REQUIRED BY CONSTRUCTION, DEVICES OR WIRING, BOXES SHALL BE STAMPED STEEL, 4 IN. SQUARE OR OCTAGON FOR FIXTURES. BOXES ABOVE CEILING SHALL BE 1-1/2 IN. DEEP. BOXES IN CEILING OR SLAB SHALL BE 3 IN. DEEP. BOXES IN WALL FOR FIXTURES SHALL BE 2-3/4 IN. DEEP. BOXES IN WALL FOR RECEPTACLES AND SWITCHES SHALL BE 1-1/2 IN. DEEP. FURNISH WITH RAISED COVERS AND FIXTURE STUDS WHERE REQUIRED. WITHOUT FIXTURE OR DEVICE: FURNISH BLANK COVER. OFFSET BACK-TO-BACK OUTLETS WITH MINIMUM 6 IN. SEPARATION.

b. JUNCTION AND PULL BOXES: GALVANIZED SHEET STEEL WITH SCREW-ON COVERS, EXCEPT AS NOTED. FURNISH WITH INSULATED SUPPORTS FOR CABLES. LOCATIONS SHALL BE AS NOTED OR REQUIRED AND ACCESSIBLE. PROVIDE BARRIERS IN NEW AND RENOVATED BOXES BETWEEN 120/208 VOLT AND 265/460 VOLT WIRING AND BETWEEN EMERGENCY AND NORMAL WIRING. FLOOR BOXES SHALL BE SUITABLE FOR CONDUIT AND DEVICES NOTED. RAISED OUTLETS SHALL BE HUBBELL #B2414 SERIES WITH ABOVE FLOOR FITTING. TELEPHONE: BUSHED HOLE. POWER: DUPLEX RECEPTACLE OR OTHER AS NOTED. INCREASE SIZE TO SUIT AS NECESSARY. FLUSH OUTLETS SHALL BE HUBBELL #B2414 SERIES WITH FLUSH FLOOR FITTING FOR TELEPHONE AND FLUSH DUAL FLAP COVER WITH DUPLEX RECEPTACLE FOR POWER AS NOTED. INCREASE SIZE TO SUIT AS NECESSARY.

N. PROVIDE RACEWAYS ONLY AS HEREIN SPECIFIED, EXCEPT AS NOTED. RACEWAYS SHALL BE RUN CONCEALED, EXCEPT AS NOTED.

PROVIDE RACEWAY SUPPORT UTILIZING CEILING TRAPEZE, STRAP HANGERS, OR WALL BRACKETS. PROVIDE U-BOLTS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND CONNECTED TO ACCEPTABLE SUPPORTS. PROVIDE RISER CLAMPS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND RESTING ON SLAB. FOR THROUGH-THE-FLOOR SYSTEMS, UTILIZE AN ASSEMBLY SIMILAR TO HUBBELL FIRE RATED POKE-THROUGH-FLOOR BOX SYSTEM. FOR ABOVE FLOOR FITTINGS TELEPHONE SHALL BE BUSHED HOLE AND POWER SHALL BE DUPLEX RECEPTACLE OR OTHER AS NOTED. PROVIDE SEPARATION BARRIER BETWEEN POWER AND TELEPHONE COMPARTMENTS. PROVIDE JUNCTION BOX ON UNDERSIDE OF FLOOR. PACK FITTING TO RESTORE FIRE RATING OF FLOOR.

SECURE ALL RACEWAYS TO SUPPORTS WITH PIPE STRAPS OR U-BOLTS. SPACING OF SUPPORTS SHALL BE A MINIMUM OF 10 FT ON CENTER FOR METALLIC RACEWAY AND AS REQUIRED FOR NONMETALLIC RACEWAY. SPACING SHALL BE 5 FT ON CENTER FOR WIREWAYS AND PER CODE AND AS NOTED FOR OTHERS. MOUNT SUPPORTS TO STRUCTURE MASONRY WITH TOGGLE BOLTS ON HOLLOW MASONRY, EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK, MACHINE SCREWS ON METAL, BEAM CLAMPS ON FRAMEWORK. WOOD SCREWS ON WOOD, AND PAN THROUGH STRAPS IN METAL DECK. NAILS, RAWL PLUGS OR WOOD PLUGS SHALL NOT BE PERMITTED. WHERE REQUIRED BY STRUCTURE, FURNISH THROUGH BOLTS AND FISHPLATES.

EXPOSED RACEWAYS SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. PROVIDE CLEARANCE WITH WATER, STEAM OR OTHER PIPING (MINIMUM 3 IN. SEPARATION FROM STEAM AND HOT WATER PIPES, EXCEPT 1 IN. FROM PIPE COVER AT CROSSINGS AND 18 IN. FOR PARALLEL RUNS). FOR HUNG CEILING OUTLETS, RUN IN HUNG CEILING AND CONNECT TO CEILING SUPPORT CHANNELS. IN MASONRY AND POURED CONCRETE, RUN VERTICALLY ONLY.

EMPTY RACEWAYS OVER 10 FT LONG: PROVIDE FISH OR PULL WIRE, GALVANIZED OR NYLON ROPE.

RIGID STEEL CONDUIT SHALL BE PERMITTED FOR FEEDERS AND BRANCH CIRCUITS. PAINT MALE THREADS OF FIELD-THREADED CONDUIT WITH GRAPHITE-BASE PIPE COMPOUND AND BUTT CONDUIT ENDS. TOUCH UP MARRED SURFACES AND FIELD-CUT THREADS, CRC-COLD GALVANIZED. EMT SHALL BE PERMITTED FOR BRANCH CIRCUITS ONLY, IN DRY LOCATIONS, DRY WALLS, HUNG CEILINGS, HOLLOW BLOCK WALLS AND FURRED SPACES. EMT SHALL NOT BE PERMITTED IN RAISED FLOORS. FLEXIBLE STEEL CONDUIT SHALL BE UTILIZED FOR SHORT CONNECTIONS WHERE RIGID CONDUIT IS IMPRACTICAL. FROM OUTLET BOX TO RECESSED LIGHTING FIXTURE: PROVIDE MINIMUM 4 FT AND MAXIMUM 6 FT LENGTHS. FOR FINAL CONNECTION TO MOTOR TERMINAL BOX, TRANSFORMER AND OTHER VIBRATING EQUIPMENT: PROVIDE WITH POLYVINYL SHEATHING AND GROUND CONDUCTOR. MINIMUM LENGTH: 18 IN. WITH SLACK. CONNECT GROUND CONDUCTOR TO ENCLOSURE OR RACEWAY AT EACH END. FOR EXPANSION JOINT CROSSINGS, CROSS AT RIGHT ANGLES AND ANCHOR ENDS.

CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.

ALL COUPLINGS SHALL BE COMPRESSION TYPE. NO SET SCREW FITTINGS.

EXPANSION FITTINGS SHALL BE INSTALLED AT RIGHT ANGLES WITH CLIP JOINT CENTERED IN EXPANSION JOINT. PROVIDE A LENGTH OF RUN IN ACCORDANCE MANUFACTURER'S RECOMMENDATIONS. PRESET FITTINGS SHALL ALLOW FOR TEMPERATURE VARIATION.

RACEWAYS PASSING THROUGH FIRE-RATED CONSTRUCTION: SEAL OPENING WITH FIRE SEALANT.

O. PROVIDE CABLE SUPPORTS IN ACCORDANCE WITH NATIONAL ELECTRIC CODE ARTICLE 300.19. CABLE SUPPORTS SHALL UTILIZE A ONE-PIECE PLUG WITH POZI-GRIP WEDGING PLUG AS MANUFACTURED BY OZ-GEDNEY. TYPE SF SHALL BE USED FOR ARMORED CABLE.

INSTALL CABLE SUPPORTS AT THE TOP OF A VERTICAL RISE AND PROVIDE INTERMEDIATE ADDITIONAL SUPPORTS AS REQUIRED TO LIMIT SUPPORTED CONDUCTOR LENGTHS TO NOT GREATER THAN THOSE SPECIFIED IN TABLE 300.19(A).

P. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. OUTLET BOXES SHALL BE SET SQUARE AND TRUE WITH BUILDING FINISH. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRON OR GROUT IN WITH MASONRY. VERIFY OUTLET LOCATIONS IN FINISHED SPACES WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISHES. PROVIDE BARRIER BETWEEN SWITCHES CONNECTED TO DIFFERENT PHASES FOR VOLTAGES EXCEEDING 150 VOLTS TO GROUND.

Q. PANEL, JUNCTION AND PULL BOXES SHALL BE LOCATED CLEAR OF OTHER TRADES. CONCEAL JUNCTION AND PULL BOXES IN FINISHED WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. BOXES SHALL BE ACCESSIBLE. SUPPORT BOXES FROM BUILDING STRUCTURE, INDEPENDENT OF CONDUIT. PROVIDE FLOOR-TO-CEILING CHANNELS FOR MOUNTING ON DRYWALL AND LIGHTWEIGHT CONSTRUCTION. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILINGS SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURE. SECURE TO BLACK IRON SUPPORT. MOTOR TERMINAL BOXES: COORDINATE WITH MOTOR BRANCH CIRCUIT CONDUIT AND WIRING; ADD BOX VOLUME WHERE REQUIRED.

R. FIRE SEALANTS: PROVIDE FOR RACEWAYS AND WIRE PASSING THROUGH FLOOR SLOTS, SLEEVES OR OPENINGS IN FIRE-PARTITIONS ROOMS.

S. PERFORM CONTINUITY TESTS OF RESISTANCE OF FEEDER CONDUITS FROM SERVICE TO POINT OF FINAL DISTRIBUTION USING 1 CONDUCTOR RETURN. MAXIMUM RESISTANCE SHALL BE 25 OHMS.

10. WIRE AND CABLE:

A. PROVIDE WIRE AND CABLE COMPLETE WITH ACCESSORIES. SIZE REFERENCE SHALL BE AWG EXCEPT AS NOTED.

B. CONDUCTORS SHALL BE COPPER, ASTM STANDARD SOLID (NO. 10 AND SMALLER) OR STRANDED (NO. 8 AND LARGER). GENERAL USE CABLING SHALL BE NO. 12 MINIMUM. AT 120 VOLTS AND OVER 100 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM. AT 265 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM.

C. CONTROL AND ALARM CABLING, EXCEPT AS NOTED, SHALL BE NO. 14 MINIMUM. AT 120 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 12 MINIMUM. OTHER VOLTAGES AND PHASES: ADJUST CABLE SIZING AS REQUIRED TO MAINTAIN VOLTAGE DROP. INCREASE RACEWAY SIZES FOR LARGER WIRE AS REQUIRED.

D. INSULATION SHALL BE RUBBER AND THERMOPLASTIC MEETING ASTM AND IPCEA STANDARDS. TYPE THW OR THWN SHALL BE UTILIZED FOR FEEDERS AND BRANCH CIRCUITS EXCEPT AS NOTED. TYPE SFF-2 SHALL BE UTILIZED FOR BRANCH CIRCUITS LOCATED IN WIRING CHANNELS OF CONTINUOUS FLUORESCENT FIXTURES AND IN AMBIENT TEMPERATURES OVER 90 DEG C.FOR UNGROUNDED ISOLATED BRANCH CIRCUITS PROVIDE CROSS-LINKED POLYETHYLENE INSULATION (TYPE XHHW).

E. ARMORED CABLE (BX) SHALL BE UTILIZED FOR BRANCH CIRCUITS IN DRY HOLLOW LOCATIONS, HUNG CEILINGS, AND BLOCK WALLS. WHEN USED IN LIEU OF WIRING IN CONDUIT, STATE IN PROPOSAL THAT PRICE IS BASED UPON THE USE OF HOSPITAL GRADE 'BX'.

F. COLOR CODING SHALL BE AS FOLLOWS:

120/208 VOLT SYSTEM:	277/480 VOLT SYSTEM:
BLACK FOR A PHASE	BROWN FOR A PHASE
RED FOR B PHASE	ORANGE FOR C PHASE
BLUE FOR C PHASE	YELLOW FOR C PHASE

1) NEUTRAL WIRE SHALL UTILIZE WHITE OUTER COVERING THROUGHOUT. EQUIPMENT GROUND WIRE SHALL UTILIZE GREEN OUTER COVERING THROUGHOUT.

G. WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION TO OVERLAP CONDUCTORS WITH 6 IN. OF COLOR TAPING IN ACCESSIBLE LOCATIONS.

H. TERMINATIONS, SPLICES AND TAPS UNDER 600 VOLTS: COPPER CONDUCTORS NO. 10 AND SMALLER SHALL UTILIZE COMPRESSION-TYPE OF TWIST-ON SPRING-LOADED CONNECTORS AND CLEAR NYLON-INSULATED COVERING. COPPER CONDUCTORS NO. 8 AND LARGER SHALL UTILIZE MECHANICAL BOLTED PRESSURE OR HYDRAULIC COMPRESSION TYPE USING MANUFACTURER'S RECOMMENDED TOOLING. CABLE LUGS AND CONNECTORS SHALL UTILIZE COMPRESSION TYPE OF SAME METAL AS CONDUCTOR. PROVIDE TO MATCH CABLE, WITH MARKING INDICATING SIZE AND TYPE. COPPER LUG CONNECTIONS TO BUS BARS: USE ANTISEIZE COMPOUND ON TANG.

I. NOT MORE THAN 3 LIGHTING OR CONVENIENCE OUTLET CIRCUITS SHALL BE INSTALLED IN ONE CONDUIT UNLESS OTHERWISE INDICATED. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F. PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF 120/208 AND 265/460 VOLT SYSTEMS, EXCEPT 460 VOLT MOTOR BRANCH CIRCUIT WIRING AND RELATED 120 VOLT CONTROL WIRING. THERMOPLASTIC WIRES SHALL NOT BE INSTALLED IN COMPUTER AREA RAISED FLOORS.

J. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS.

K. PERFORM CONTINUITY AND INSULATION TESTS. MEGGER TEST 100 PERCENT OF FEEDERS, 10 PERCENT OF BRANCH CIRCUITS AND ALL MOTOR BRANCH CIRCUITS OVER 25 HP.

PERFORM TESTS PRIOR TO CONNECTING EQUIPMENT AND IN PRESENCE OF AUTHORIZED REPRESENTATIVES. SUBMIT WRITTEN REPORT OF RESULTS. CORRECT OR REPLACE CABLE TESTING BELOW MANUFACTURER'S STANDARDS.

11. WIRING DEVICES:

A. WIRING DEVICES SHALL BE SPECIFICATION GRADE UNLESS OTHERWISE SPECIFIED. ALL DEVICES SHALL BE FLUSH MOUNTED, UNLESS OTHERWISE NOTED. PROVIDE COMPLETE MATERIAL AND ACCESSORIES AS NOTED.

B. LOCAL WALL SWITCHES SHALL BE ROCKER TYPE, QUIET OPERATING, RATED 20 AMP, 120/277 VOLT, AC. SIMILAR TO LEVITON DECORA SERIES A5621 (SINGLE POLE), A5623 (3-WAY) AND A5624 (4-WAY).

C. STRAIGHT BLADE RECEPTACLES SHALL BE RESIDENTIAL GRADE DUPLEX CONVENIENCE 125 VOLTS, 2 POLE, 3 WIRE, U GROUND SLOT, DECORA SERIES BY LEVITON. GROUNDED, EXCEPT AS NOTED.

1) SINGLE GANG, RECESSED, DUPLEX RECEPTACLE: TAMPER RESISTANT, 2-POLE, 3-WIRE GROUNDING, 15A, 125V, NEMA 5-20R; LEVITON 689 SERIES (COLOR AS SPECIFIED BY ARCHITECT).

2) USB CHARGER/ DUPLEX TAMPER-RESISTANT RECEPTACLE: TAMPER RESISTANT,

D. DEVICE PLATES: SEE ARCHITECT FOR TYPE. FOR RECEPTACLES WITH OTHER THAN 120 VOLT, INSCRIBED VOLTAGE AVAILABLE.

E. COLORS: COORDINATE COLORS WITH ARCHITECT.

F. MOUNTING ORIENTATION OF RECEPTACLES (HORIZONTAL OR VERTICAL): COORDINATE WITH ARCHITECT.

12. LIGHTING FIXTURES:

A. FIXTURES TO BE AS SPECIFIED BY ARCHITECT AND SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED AND EQUIPPED WITH ALL NECESSARY SOCKETS, BALLASTS, SUPPORTING HARDWARE AND ACCESSORIES. REFER TO DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS.

B. FIXTURE CATALOG NUMBERS USED TO ILLUSTRATE EQUIPMENT TYPE DO NOT NECESSARILY DENOTE REQUIRED MOUNTING EQUIPMENT OR ACCESSORIES. PROVIDE ACCESSORIES TO SUIT.

C. BALLAST: CLASS P, HIGH POWER FACTOR, LOWEST AVAILABLE NEMA RATED NOISE LEVEL, ET1 AND CBM APPROVED. ENERGY SAVING TYPE, TRIGGER START FOR 24-INCH LAMPS AND RAPID START FOR 48-INCH. TWO LAMP BALLASTS; NO THREE LAMP BALLASTS. BALLASTS SHALL BE ADVANCE MAGNETEK, UNIVERSAL OR EQUAL.

D. LED DRIVERS SHALL BE ELECTRONIC TYPE, LABELED AS COMPLIANT WITH RADIO FREQUENCY INTERFERENCE (RFI) REQUIREMENTS OF FCC TITLE 47, PART 15 AND COMPLY WITH NEMA SSL 1 "ELECTRONIC DRIVERS SHALL HAVE A SOUND RATING OF "A", HAVE A MINIMUM EFFICIENCY OF 85% AND BE RATED FOR A THD OF LESS THAN 20% AT ALL INPUT VOLTAGES.

E. DIMMABLE LED DRIVERS SHALL BE CAPABLE OF DIMMING WITHOUT LED STROBING OR FLICKER ACROSS THEIR FULL DIMMING RANGE. PROVIDE TYPE OF LED DRIVER AS PER LIGHTING FIXTURE SCHEDULE, DIMMABLE LED DRIVERS SHALL BE 0-10V WHERE NOT INDICATED.

F. CONTINUOUS ROW, TWO LAMP STRIP FIXTURES SHALL BE STAGGERED TYPE.

G. EXIT SIGNS SHALL BE PRECISION DIE-CAST ALUMINUM HOUSING WITH LASER-FORMED ACRYLIC LEGEND. EXIT SIGNS SHALL COMPLY WITH UL 924 AND BE LOCAL AHJ APPROVED. AC POWERED WITH PREMIUM LONG-LIFE NICKEL CADMIUM BATTERY WITH STANDARD UL LISTED 3-HOUR RUN TIME OR AS REQUIRED. PROVIDE WITH INTEGRAL AUTOMATIC CHARGER IN A SELF CONTAINED POWER PACK. LED INDICATOR WITH PUSH TO TEST SWITCH.

13. TELEPHONE CONDUIT SYSTEM:

A. PROVIDE COMPLETE SYSTEM OF: RACEWAYS AND ACCESSORIES, OUTLET BOXES, SLEEVES AND FISHWIRES.

B. EQUIPMENT SHALL CONFORM TO REQUIREMENTS OF TELEPHONE COMPANY.

C. OUTLETS SHALL BE:

1) WALL: 4 IN. SQUARE WITH BUSHED COVER PLATE.

D. PROVIDE FISHWIRES, IN RACEWAYS OVER 10 FT LONG.

E. CONDUIT SHALL BE 3/4 IN. MINIMUM. FURNISH EMPTY CONDUIT FROM OUTLET BOX TO BUSHED END THRU WALL 6" BELOW THE PLASTER CEILING.

F. FACE RACEWAYS IN ROOMS SHALL HUBBELL HBL500, HBL750 OR HBL2000 SERIES OR AS ACCEPTABLE.

14. PANELBOARDS:

A. PANELBOARDS SHALL BE OF THE DEAD FRONT TYPE MANUFACTURED IN CODE GAUGE AND SIZE BOXES FOR MOUNTING AS INDICATED ON PLANS COMPLETE WITH TRIM, DOORS AND LOCKS. ALL LOCKS SHALL BE KEYED ALIKE.

B. CIRCUIT BREAKERS SHALL BE OF THE BOLT-ON THERMAL MAGNETIC MOLDED CASE TYPE, AND SHALL HAVE THE TRIP RATINGS AND NUMBER OF POLES SHOWN IN SCHEDULES ON THE CONTRACT DRAWINGS. FOR BLANK (SPACE) COMPARTMENTS, PROVIDE FULL RATED BUS. MINIMUM GUTTER SPACES SHALL BE 5-3/4". SIDES, TOP AND BOTTOM. INCREASE FOR THROUGH FEEDERS. PROVIDE 25% COPPER GROUND BUS AND 100% COPPER NEUTRAL BUS AND INCREASE NEUTRAL BUS INDICATED.

C. LOCKING TABS SHALL BE PROVIDED ON ALL CIRCUIT BREAKERS SERVING EMERGENCY LIGHTING, FIRE ALARM SYSTEM, SECURITY SYSTEMS AND OTHER EMERGENCY OR CRITICAL EQUIPMENT AND AS NOTED ON THE CONTRACT DRAWINGS. A TOTAL OF 5 SPARE LOCKING TABS SHALL BE FURNISHED TO THE OWNER.

D. BUSES SHALL BE HARD DRAWN COPPER OF 98 PERCENT CONDUCTIVITY AND SHALL HAVE CROSS SECTIONAL AREAS LARGE ENOUGH TO LIMIT THE TEMPERATURE RISE, WHEN CARRYING FULL LOAD, TO 35 DEGREES C. ABOVE AN AMBIENT INSIDE THE ENCLOSURE OF 55 DEGREES C. AS DEFINED IN IEEE STANDARD RULES. MAIN BUS CAPACITY SHALL BE AS SHOWN ON THE CONTRACT DRAWINGS.

E. ENCLOSURES SHALL BE SURFACE OR FLUSH AS INDICATED. TRIMS SHALL BE SECURED TO PANEL WITH MACHINE SCREWS. COVERS SHALL BE HINGED DOOR-IN-DOOR CONSTRUCTION WITH CYLINDER LOCKS AND CATCHES. LOCKS MUST BE COMPATIBLE WITH BUILDING STANDARD KEY SYSTEM AND WHEN NONE EXISTS, THEY SHALL BE SIMILAR TO A YALE NO. 911 KEY.

F. DISTRIBUTION AND SUB-DISTRIBUTION PANELBOARD SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

G. ALL STANDARD PANELBOARDS SHALL BE A MINIMUM OF 20" WIDE AND 5 3/4" DEEP.

H. FURNISH ALL PANELBOARDS WITH FEED-THRU LUGS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

I. ALL NEW PANELBOARDS SHALL BE PROVIDED WITH AN ENGRAVED WHITE CORE LAMACOID NAMEPLATE, WITH 3/4 IN. WHITE LETTERING ON A BLACK BACKGROUND, WITH DESIGNATION LISTED (PANELBOARD NAME), FASTENED WITH EPOXY CEMENT OR OVAL HEAD CHROME PLATED MACHINE SCREWS.

J. THE CIRCUIT DIRECTORY SHALL BE TYPEWRITTEN AND PROVIDED INSIDE EACH PANEL DOOR TO INDICATE EQUIPMENT AND/OR AREA SERVED. DIRECTORY HOLDER SHALL BE METAL FRAME WITH CLEAR PLASTIC, TRANSPARENT COVER. THE TYPEWRITTEN LIST INDICATING CIRCUIT NUMBERS, OUTLETS SUPPLIED AND THEIR LOCATIONS SHALL BE PROVIDED.

K. TIE-BARS SHALL NOT BE USED TO CREATE MULTI-POLE CIRCUITS. MAXIMUM 42 CIRCUITS ALLOWED.

L. ONLY ONE WIRE SHALL BE INSTALLED UNDER EACH CIRCUIT BREAKER LUG.

M. SHORT CIRCUIT RATING OF PANELBOARDS SHALL NOT BE LESS THAN AS INDICATED ON THE CONTRACT DRAWINGS OR SPECIFIED HEREIN. WHERE NOT INDICATED OR SPECIFIED THE MINIMUM SHORT CIRCUIT RATING SHALL BE EQUAL TO THE INTERRUPTING CAPACITY OF THE LOWEST RATED CIRCUIT BREAKER IN THE PANELBOARD, BUT IN NO CASE LESS THAN 10,000 AMPERES R.M.S. SYMMETRICAL FOR 208Y/120 VOLT SYSTEM AND 14,000 AMPERES R.M.S. SYMMETRICAL FOR 480Y/277 VOLT SYSTEM. SERIES RATED PANELBOARDS SHALL BE USED TO ACHIEVE REQUIRED SHORT CIRCUIT RATINGS.

N. FOR ALL EXISTING PANELBOARDS, CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKERS TO REPLACE EXISTING AS REQUIRED AS INDICATED ON DRAWINGS.

15. INTERCOM CONDUIT SYSTEM:

A. PROVIDE COMPLETE SYSTEM OF: RACEWAYS AND ACCESSORIES, OUTLET BOXES, SLEEVES AND FISHWIRES.

B. EQUIPMENT SHALL CONFORM TO REQUIREMENTS OF INTERCOM MANUFACTURER.

C. OUTLETS SHALL BE:

1)WALL: 4 IN. SQUARE WITH SINGLE GANG COVER PLATE.

D. PROVIDE FISH WIRES, IN RACEWAYS OVER 10 FT LONG.

E. CONDUIT SHALL BE 3/4 IN. MINIMUM. FURNISH EMPTY CONDUIT FROM EACH APARTMENT TO MAIN INTERCOM CONTROLLER AT ENTRANCE.

GP|N

COLORADO LICENSED
MICHAEL D TOMAS
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. - UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

ELECTRICAL SPECIFICATIONS (2 OF 2)

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

E-0.3

SHEET 3 OF 9

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	VOLTAGE	LIGHT SOURCE	CCT	FIXTURE WATTS	MANUFACTURER / MODEL NUMBER
INTERIOR						
LT5A-#FT	LINE VOLTAGE TRACK WITH LED HEADS AND (1) 1A SINGLE CIRCUIT END FEED CURRENT LIMITING DEVICE. ONE CURRENT LIMITING DEVICE FOR ALL TRACK SECTION	120V	LED	3,000K	6 VA/ HEAD	TRACK: CONTECH LIGHTING CATALOG #LT-LENGTH-B CURRENT LIMITER: CONTECH LIGHTING CATALOG #LA-23-RN-B-REG1-B TRACK HEAD: LF ILLUMINATION LIGHTING CATALOG #TXA01-A-J-06C-9230-M-D1-1-BB
LT7	2X4 LED FIXTURE (4950 LUMEN)	120V	LED	3,500K	41 VA	CREE LIGHTING CATALOG #C-TR-C-FP24-50L-35K-WH OR LOW COST EQUAL
LT8	6" RECESSED LED DOWNLIGHT	120V	LED	3,000K	12 VA	HOUSING: ELITE LIGHTING CATALOG #B6IC-AT-W-WH FIXTURE: TCP LIGHTING CATALOG #LED14DR5630K95
EMERGENCY						
EM1	EMERGENCY DUAL-HEAD FIXTURE WITH BATTERY BACK UP	120V	LED	-	3 VA	MAXILUM LIGHTING /ELM-LED-803-FINISH
ER	2-LAMP WATERPROOF REMOTE HEAD POWERED BY "EX" SIGN BELOW	6V	LED	-	2 VA	MAXILUM LIGHTING /ELM-LED-882-0T
EX	THERMOPLASTIC LED EXIT SIGN COMBO WITH HEADS, AND HIGH OUTPUT BATTERY	120V	LED	-	4 VA	MAXILUM LIGHTING /ELM-LED-882-FINISH

GENERAL NOTES:

1. BATTERY PACKS FOR ALL EXIT, NIGHT LIGHT AND EMERGENCY LIGHT FIXTURES SHALL BE CAPABLE OF PROVIDING EMERGENCY POWER TO THE FIXTURES FOR A MINIMUM OF 90 MINUTES.
2. E.C. SHALL COORDINATE EXACT MAKE/MODEL, COLOR, FINISH & CCT OF LIGHTING FIXTURES WITH ARCHITECT/OWNER IN FIELD.
3. FIXTURE MODEL NUMBER MAY NOT REFLECT ALL MOUNTING HARDWARE. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY MOUNTING EQUIPMENT, LENSES, STEMS, SAFETY CHAINS, END PLATES, AND ALL OTHER HARDWARE NECESSARY FOR A COMPLETE FIXTURE INSTALLATION. SEE MOUNTING DETAILS WHEN APPLICABLE.
4. LINE VOLTAGE DRIVERS MAY BE SUBSTITUTED FOR "UNIVERSAL" OR "MULTI-VOLTAGE" DRIVERS.
5. ALL FIXTURES SHALL BE UL OR ETL LISTED.
6. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED ACCESSORY PARTS FOR THE TRACK LIGHTING SYSTEM TO MAKE A COMPLETE WORKING TRACK SYSTEM THIS INCLUDES BUT NOT LIMITED TO TRACK, 120V ADAPTERS, END PIECES, CORNER PIECES, PENDANT MOUNTED ADAPTERS, HANGERS, ETC.

LIGHTING PLAN KEYED NOTES: (#)

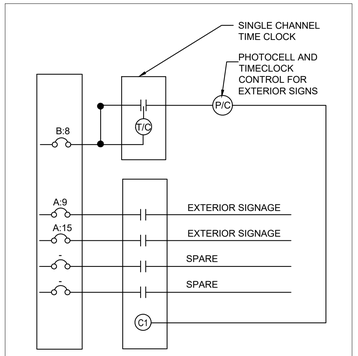
1. WIRE ALL EMERGENCY, NIGHT LIGHT AND EXIT LIGHT TO THE NEAREST CIRCUIT AHEAD OF ALL CONTROLS & SWITCHING FOR CONTINUOUS OPERATION.
2. E.C. SHALL CO-ORDINATE LOCATION & MAKE/MODEL OF TIME CLOCK & LIGHTING CONTRACTORS WITH ARCHITECT/OWNER IN FIELD. SEE DETAIL-5 THIS SHEET FOR ADDITIONAL INFORMATION.
3. PROVIDED LIGHTING CONTROL SWITCH BANK, SEE SWITCH BANK DETAIL BELOW. ELECTRICAL CONTRACTOR TO VERIFY SWITCH BANK WILL FIT WITHIN SPECIFIED AREA AND STACK MULTIPLE SWITCH BANKS AT THIS LOCATION IF A SINGLE SWITCH BANK WILL NOT FIT WITHIN THE SPECIFIED REGION.
4. E.C. TO COORDINATE EXACT MAKE/MODEL OF WALL MOUNTED OCCUPANCY SENSOR WITH ARCHITECT/OWNER IN COORDINATION WITH EQUIPMENT MANUFACTURER IN FIELD. BASE BID ACCORDINGLY.
5. PROVIDE DIGITAL IN-WALL TIMER SWITCH, PROGRAMMABLE 7 DAY CONTROL. LITHIUM BATTERY BACKUP FOR TIMEKEEPING. MANUAL OVERRIDE CONTROL FOR MAXIMUM 2 HOURS. EQUAL TO INTERMATIC ST01 SERIES. ADJUST TO ON/OFF SCHEDULE DIRECTED BY AUTHORIZED REPRESENTATIVE FOR TENANT.
6. SWITCH FOR CONTROL OF "STORE FRONT SIGN" OUTLET. E.C. TO COORDINATE EXACT LOCATION MAKE/MODEL OF SWITCH WITH ARCHITECT/OWNER IN COORDINATION WITH DEVICE MANUFACTURER IN FIELD. BASE BID ACCORDINGLY.
7. DENOTES LIGHTING FOR WALK-IN COOLER TO BE PURCHASED BY MANUFACTURER. ELECTRICAL CONTRACTOR TO PROVIDE FINAL CONNECTIONS TO LIGHTING IN WALK-IN COOLER. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER PRIOR TO ANY ROUGH-IN WORK.
8. DENOTES CAMERA TO BE PURCHASED BY SECURITY CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR. COORDINATE EXACT MOUNTING LOCATION AND REQUIREMENTS WITH SECURITY CONTRACTOR/TENANT PRIOR TO ANY ROUGH-IN WORK. BASE BID ACCORDINGLY.
9. E.C. SHALL VERIFY OPERABLE CONDITION OF EXISTING LIGHT FIXTURE, IT'S CONTROL AND CIRCUIT INCLUDING WIRE/CONDUIT/BREAKER IN FIELD, REPLACE WITH NEW IF FOUND INOPERABLE. PROVIDE NEW CIRCUIT AND CONTROL AS SHOWN ON PLAN IF EXISTING CIRCUIT NOT FOUND AND PROVIDE WALL MOUNTED OCCUPANCY SENSOR IF EXISTING CONTROL IS NOT APPROPRIATE AS PER CODE. BASE BID ACCORDINGLY.
10. EXTERIOR SIGNS CONTROLLED VIA PHOTOCELL. E.C. SHALL COORDINATE EXACT MAKE/MODEL OF PHOTOCELL WITH EQUIPMENT MANUFACTURER. E.C. SHALL ADJUST PHOTOCELL QUANTITIES AS RECOMMENDED BY MANUFACTURER. BASE BID ACCORDINGLY.
11. LIGHT FIXTURE NEAR ELECTRICAL PANEL SHALL NOT BE CONTROLLED BY ANY AUTOMATIC MEANS AND SHALL BE COMPILED AS PER NEC 110.26(D).
12. INTERLOCK EF-1(N) WITH RESTROOM LIGHT. E.C. SHALL COORDINATE WITH MECHANICAL DRAWING FOR THE EXACT REQUIREMENT.

LIGHTING PLAN GENERAL NOTES:

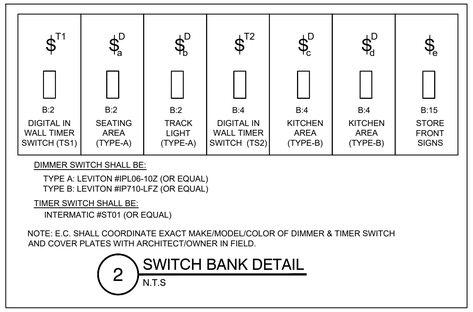
1. CONTRACTOR IS ADVISED THAT ADJUSTMENTS TO EMERGENCY AND EXIT LIGHT FIXTURE LOCATIONS/QUANTITIES MAY BE REQUIRED BY AHJ UPON FINAL INSPECTION.
2. ALL EXTERIOR LIGHTS/ SIGNS SHALL BE CONTROLLED VIA PHOTOCELL/TIME-CLOCK. E.C. SHALL PROVIDE ALL THE LIGHTING CONTROL COMPLYING WITH COLORADO ENERGY CONSERVATION CODE 2021 AND LOCAL AHJ REQUIREMENTS.
3. REFER TO DWG. E-0.1 FOR ELECTRICAL GENERAL NOTES, SYMBOL LIST, ABBREVIATIONS AND E-0.2 AND E-0.3 FOR ADDITIONAL SPECIFICATIONS.
4. FINAL CONDUIT/CABLE ROUTING SHALL BE DETERMINED IN-FIELD, AND PRIOR TO THE COMMENCEMENT OF WORK, COORDINATED WITH OTHER TRADE CONTRACTORS AND THE TENANT.
5. LAY-IN TYPE FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE INDEPENDENT FROM THE CEILING SYSTEM AND BE CLIPPED TO THE GRID WITH EARTHQUAKE/HURRICANE CLIPS.
6. ALL SWITCHES QUANTITIES, LOCATION AND MOUNTING DETAILS SHALL BE COORDINATED WITH ARCHITECT/OWNER IN THE FIELD.

$_{OS}$ WALL MOUNTED DUAL TECNOLOGY OCCUPANCY SENSOR HUBBELL CONTROL SOLUTIONS CATALOG #LHMTS1-G-WH OR EQUAL

4 LIGHTING CONTROL LEGEND
NTS



5 TIME CLOCK DETAIL
NTS

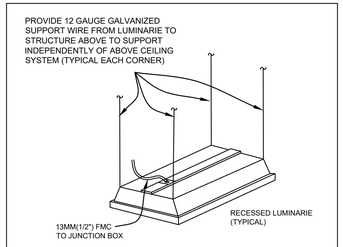


DIMMER SWITCH SHALL BE:
TYPE A: LEVITON #IPL06-10Z (OR EQUAL)
TYPE B: LEVITON #IP710-LFZ (OR EQUAL)

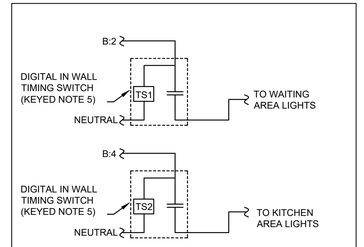
TIMER SWITCH SHALL BE:
INTERMATIC #ST01 (OR EQUAL)

NOTE: E.C. SHALL COORDINATE EXACT MAKE/MODEL/COLOR OF DIMMER & TIMER SWITCH AND COVER PLATES WITH ARCHITECT/OWNER IN FIELD.

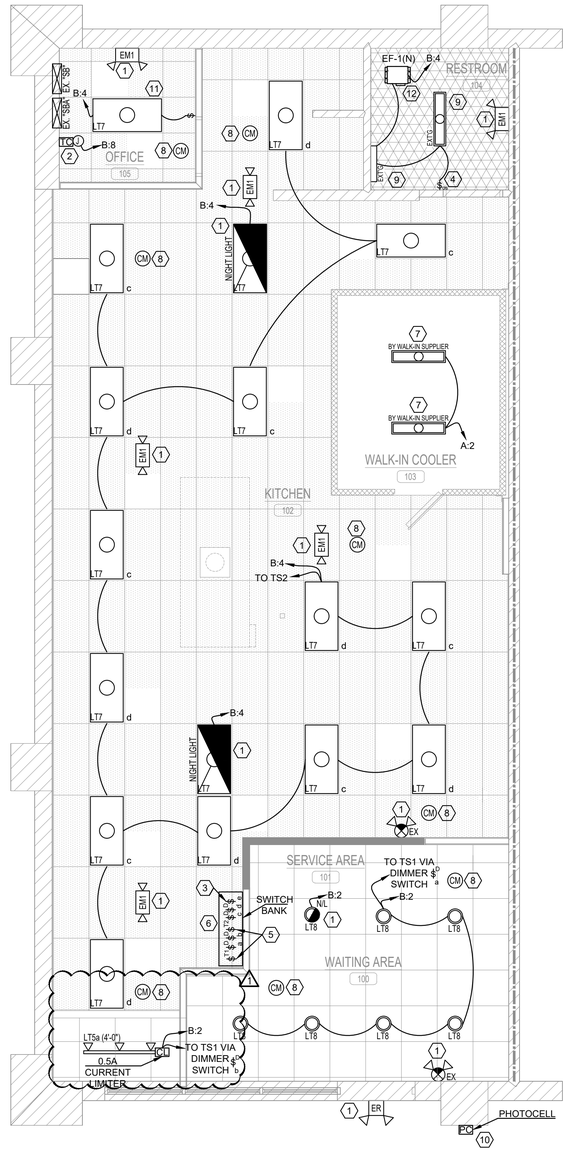
2 SWITCH BANK DETAIL
N.T.S



3 LIGHTING MOUNTING DETAIL
N.T.S



5 TIMER SWITCH CONTROL DETAIL
N.T.S



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

GP|N

COLORADO LICENSED
MICHAEL D TOMAS
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	04-28-2025	CLIENT REQUESTED CHANGES	NYE

PROJECT NAME:
6087
MARCO'S PIZZA
INTERIOR UP-FIT
MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. -- UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

LIGHTING FLOOR PLAN

PROJECT NUMBER 25-025

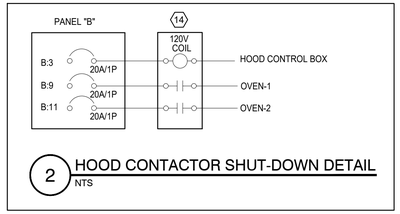
DATE 04-16-2025

SHEET NO.

E-1.0

ITEM	DESCRIPTION	PANEL-CKT#	CB/#POLES	VOLTAGE/PH	WIRE-CONDUIT	ELECTRICAL CONNECTION	NOTES
	KITCHEN EQUIPMENT WIRING SCHEDULE						
1	REFRIGERATOR, PIZZA PREP	B:5	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R EATON TR780W RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 44" AFF TO CENTER OF BOX.
2	SCALE PORTION DIGITAL	B:18	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 44" AFF TO CENTER OF BOX.
3.2	REFRIGERATOR, SANDWICH/SALAD PREP.	B:7	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R EATON TR780W RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 50" AFF TO CENTER OF BOX.
4	DISPLAY CASE, REFRIGERATED	B:29	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 82-1/4" AFF TO CENTER OF BOX.
6	DOUGH ROLLER	B:31	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 44" AFF TO CENTER OF BOX.
7.4	OVEN, CONVEYOR	B:11	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	SEE KEYED NOTE 11 AND DETAIL-4 ON SHEET E-3.0	SEE KEYED NOTE 11 AND DETAIL BELOW
7.4	OVEN, CONVEYOR	B:13	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	SEE KEYED NOTE 11 AND DETAIL-4 ON SHEET E-3.0	
8.4	HOOD SYSTEM - TYPE 1	B:3	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	-	SEE KEYED NOTE 11 AND DETAIL BELOW
14	SAFE	B:20	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 24" AFF TO CENTER OF BOX.
15.1	WARMER, FOOD OVERHEAD	B:12	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	SEE KEYED NOTE 10 AND DETAIL-5 ON SHEET E-3.0	SEE KEYED NOTE 10 AND DETAIL BELOW
15.2	WARMER, FOOD OVERHEAD	B:14	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	SEE KEYED NOTE 10 AND DETAIL-5 ON SHEET E-3.0	SEE KEYED NOTE 10 AND DETAIL BELOW
15b.1	WARMER, FOOD OVERHEAD	B:16	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	SEE KEYED NOTE 10 AND DETAIL-5 ON SHEET E-3.0	SEE KEYED NOTE 10 AND DETAIL BELOW
15b.2	WARMER, FOOD OVERHEAD	A:16	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	SEE KEYED NOTE 10 AND DETAIL-5 ON SHEET E-3.0	SEE KEYED NOTE 10 AND DETAIL BELOW
18.1	MIXER, PIZZA	A:27,29,31	20A/3P	208V/3PH	(3)#12,#12G-3/4"C	PROVIDE NEMA L15-20R RECEPTACLE, PLUG, AND CORD.	MOUNT RECEPTACLE 36" AFF TO CENTER OF BOX.
20	FREEZER	B:33	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 48" AFF TO CENTER OF BOX.
28.1	DISPLAY CASE, REFRIGERATED	B:35	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 48" AFF TO CENTER OF BOX.
29	MENU BOARD SYSTEM	A:13	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 99" AFF TO CENTER OF BOX.
33.1	TANKLESS WATER HEATER (WH-1)	A:26	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE JUNCTION BOX TO MATCH PROVIDED CORD WITH PLUG	SEE KEYED NOTE 6
33.1	TANKLESS WATER HEATER (WH-2)	A:28	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE JUNCTION BOX TO MATCH PROVIDED CORD WITH PLUG	SEE KEYED NOTE 6
41.1	RECEIPT PRINTER	B:26	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 24" AFF TO CENTER OF BOX.
41.2	RECEIPT PRINTER	B:26	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 48" AFF TO CENTER OF BOX.
41.3	RECEIPT PRINTER	B:26	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	CEILING MOUNTED.
41.4	RECEIPT PRINTER	B:18	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 50" AFF TO CENTER OF BOX.
42	REPORT PRINTER	B:20	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 24" AFF TO CENTER OF BOX.
43.1	PHONE	B:20	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 24" AFF TO CENTER OF BOX.
43.2	PHONE	B:22	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 24" AFF TO CENTER OF BOX.
43.3	PHONE	B:24	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 48" AFF TO CENTER OF BOX.
43.4	PHONE	B:24	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 48" AFF TO CENTER OF BOX.
44.1	TV - WALL MOUNTED	A:11	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 96" AFF TO CENTER OF BOX.
44.2	TV - WALL MOUNTED	A:11	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 96" AFF TO CENTER OF BOX.
54.1	POS / COMPUTER	B:20	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 24" AFF TO CENTER OF BOX.
54.2	POS / COMPUTER	B:22	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 24" AFF TO CENTER OF BOX.
54.3	POS / COMPUTER	B:22	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 24" AFF TO CENTER OF BOX.
54.4	POS / COMPUTER	B:24	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 48" AFF TO CENTER OF BOX.
54.5	POS / COMPUTER	B:24	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 48" AFF TO CENTER OF BOX.
54.1a	BUMP SCREEN	B:18	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 96" AFF TO CENTER OF BOX.
54.1b	BUMP SCREEN	B:18	20A/1P	120V/1PH	(2)#12,#12G-3/4"C	PROVIDE NEMA 5-15R RECEPTACLE TO MATCH PROVIDED CORD WITH PLUG	MOUNT RECEPTACLE 96" AFF TO CENTER OF BOX.

NOTE: COORDINATE ALL MOUNTING HEIGHTS WITH OWNER PRIOR TO INSTALL.



2 HOOD CONTACTOR SHUT-DOWN DETAIL
NTS

PIZZA OVEN / EXHAUST HOOD NOTES:

A. ELECTRICAL CONTRACTOR TO COORDINATE WITH HOOD & OVEN INSTALLATION CONTRACTOR & INSTALLATION SHOP DRAWINGS FOR ALL ELECTRICAL REQUIREMENTS.

B. 208/120V POWER CIRCUITS ARE INDICATED FOR OVEN & HOOD ON THESE DRAWINGS. REFER TO INSTALLATION SHOP DRAWINGS FOR REQUIRED LOW VOLTAGE CIRCUITS.

C. ELECTRICAL CONTRACTOR TO WIRE ALL OVEN/HOOD COMPONENTS & INTERCONNECTION WIRING TO MAKE A COMPLETE WORKING & CODE COMPLIANT OVER & HOOD.

D. OVENS SHALL DE-ENERGIZE IN THE EVENT THE ANSUL FIRE SYSTEM IS ACTIVATED & HORN/STROBE ALARM TO BE INITIATED. EXHAUST FAN TO REMAIN ENERGIZED.

POWER FLOOR PLAN KEYED NOTES: (#)

1. E.C. TO INSTALL SHOW WINDOW RECEPTACLES/FRONT SIGN AS PER NEC 210.62. COORDINATE EXACT LOCATION OF OUTLET IN FIELD WITH ARCHITECT/OWNER BEFORE COMMENCEMENT OF ANY WORK.
2. ALL RECEPTACLES IN THIS AREA SHALL BE TAMPER RESISTANCE AS PER NEC 406.12.
3. PROVIDE JUNCTION BOX WITH LOCAL TOGGLE SWITCH DISCONNECT LOCATED ABOVE ACCESSIBLE CEILING AND ASSOCIATED 120V, 1Ø, 20 AMP CIRCUIT(S) FOR SIGNAGE. FIELD VERIFY EXACT ROUGH-IN LOCATION. CIRCUIT THRU TIME CLOCK CONTROLLED CONTACTOR FOR AUTOMATIC ON/OFF CONTROL OF LIGHTING.
4. DENOTES HOOD CONTROLLER. COORDINATE WITH OWNER AND EQUIPMENT PROVIDER FOR LOCATION & REQUIREMENT PRIOR TO INSTALLING. MAKE POWER PROVISION ACCORDINGLY. BASE BID ACCORDINGLY
5. E.C SHALL FIELD VERIFY THAT THE PANELS ARE UNOBSTRUCTED AND THE AREA WHERE THE PANELS ARE PLACED SHALL NOT BE USED AS A STORAGE SPACE AND WORKING SPACE FOR ELECTRICAL PANEL SHALL BE AS PER NATIONAL ELECTRICAL CODE 2023 SECTION 110.26(A).
6. ELECTRICAL POWER PROVISION FOR MECHANICAL/PLUMBING EQUIPMENT. E.C. SHALL COORDINATE EXACT POWER AND ELECTRICAL OUTLET/DISCONNECT REQUIREMENT FOR MECHANICAL/PLUMBING EQUIPMENT WITH EQUIPMENT MANUFACTURER IN COORDINATION WITH ARCHITECT/OWNER IN THE FIELD PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY.
7. E.C. SHALL COORDINATE EXACT LOCATION/MOUNTING DETAILS OF ELECTRICAL/DATA OUTLET FOR MENUBOARD IN FIELD WITH ARCHITECT/OWNER. BASE BID ACCORDINGLY.
8. VERIFY WALK-IN COOLER ELECTRICAL REQUIREMENT IN THE FIELD. ADJUST ELECTRICAL CONNECTIONS PER MANUFACTURER'S DOCUMENTATION AS REQUIRED.
9. DENOTES MANUAL ACTUATION DEVICE FOR HOOD FIRE SUPPRESSION SYSTEM. SEE DETAIL-6 ON SHEET E-3.0 FOR DETAIL.
10. DENOTES NEW 5-15 RECEPTACLE WIRED FROM ABOVE TO PROVIDE POWER TO OVERHEAD FOOD WARMERS. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER PRIOR TO INSTALLING. PROVIDE 8' SLACK OF CABLE. SEE POWER DROP DETAIL-5 ON SHEET E-3.0.
11. DENOTES POWER DROP CORD TO PIZZA OVEN RECEPTACLE CONNECTED TO JUNCTION BOX AT CEILING. DO NOT ROUTE THROUGH SUSPENDED CEILING TILE. ADD DROP CORDS FOR THIRD OVEN IF NECESSARY. ELECTRICAL CONTRACTOR SHALL INSTALL JUNCTION BOX BELOW SUSPENDED CEILING AND MAKE HARD WIRE CONNECTION TO CORD DROP TO PIZZA OVEN RECEPTACLE. PROVIDE STRAIN RELIEF FOR CONNECTION AT JUNCTION BOX. FIELD VERIFY EXACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS PRIOR TO ROUGH-IN. SEE CORD DROP DETAIL-4 ON SHEET E-3.0.
12. DENOTES 5'-0" PLUGMOLD WITH RECEPTACLES MOUNTED 6" O.C. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECT/GENERAL CONTRACTOR PRIOR TO INSTALLING. ELECTRICAL CONTRACTOR TO PROVIDE WIREMOLD FINISH-20GBA506 (OR EQUAL).
13. ELECTRICAL CONTRACTOR TO ADD A NOTE TO SWITCH BANK NEAR THE LIGHTING SWITCHES AND LABEL ALL SWITCH FACEPLATES TO INDICATE THEIR FUNCTION, INCLUDING LABELING ONE AS "STORE FRONT SIGNS".
14. E.C. SHALL COORDINATE EXACT LOCATION OF HOOD CONTACTOR SHUT-DOWN IN AND INTERCONNECTION WITH HOOD CONTROL PANEL & SUPPRESSION SYSTEM FIELD WITH ARCHITECT/OWNER EQUIPMENT MANUFACTURER, PROVIDE ALL THE NECESSARY ACCESSORIES NEEDED FOR THE PROPER OPERATION OF HOOD/FIRE SUPPRESSION.

POWER FLOOR PLAN GENERAL NOTES:

A. COORDINATE EXACT LOCATION OF HVAC EQUIPMENTS ON ABOVE CEILING WITH MECHANICAL CONTRACTOR.

B. E.C. SHALL COORDINATE DISCONNECT REQUIREMENT FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER FOR FINAL SELECTION PRIOR TO ROUGH-IN. E.C. COORDINATE LOCATION OF DISCONNECT SWITCH WITH MANUFACTURER AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.

C. REFER TO DWG. E-0.1 FOR ELECTRICAL GENERAL NOTES, SYMBOL LIST, ABBREVIATIONS AND E-0.2 AND E-0.3 FOR ADDITIONAL SPECIFICATIONS.

D. FINAL CONDUIT/CABLE ROUTING SHALL BE DETERMINED IN-FIELD, AND PRIOR TO THE COMMENCEMENT OF WORK, COORDINATED WITH OTHER TRADE CONTRACTORS AND THE TENANT.

E. CONTRACTOR SHALL COORDINATE EXACT RECEPTACLE TYPE FOR EQUIPMENT WITH EQUIPMENT VENDOR/MANUFACTURER.

F. ALL WIRING TO BE #12AWG WITH #12AWG GND IN 3/4" CONDUIT UNLESS OTHERWISE NOTED OR REQUIRED.

G. ALL 125-VOLT THROUGH 250-VOLT RECEPTALCES SUPPLIED BY SINGLE-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 50 AMPERES OR LESS, AND ALL RECEPTACLES SUPPLIED BY THREE-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 100 AMPERES OR LESS LOCATED IN KITCHEN, DRIVE-THRU, AND FOOD PREP AREAS SHALL BE GFCI PROTECTION PER NEC 210.8B.

H. VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.

I. DETAIL REFERENCES ON PLANS ARE TO AID THE CONTRACTOR IN IDENTIFYING THE APPLICABLE DETAIL. NOT ALL DETAILS, OR INSTANCES OF DETAILS, ARE REFERENCES ON PLANS. CONTRACTOR IS RESPONSIBLE TO REVIEW AND COMPLY WITH ALL APPLICABLE DETAILS WHETHER OR NOT REFERENCED ON PLANS.

J. ALL 120V, 1P 15 & 20 AMP RECEPTACLES IN THE KITCHEN AREA SHALL BE GFCI TYPE AND MOUNTED IN A READILY ACCESSIBLE LOCATION. READILY ACCESSIBLE IS DEFINED AS NOT HAVING TO MOVE ANY EQUIPMENT IN ORDER TO RESET OR TEST THE GFCI RECEPTACLE.

K. VERIFY ALL PLUG CONFIGURATIONS AND MOUNTING HEIGHTS OF ALL KITCHEN EQUIPMENT OUTLET BOXES WITH FOOD SERVICE EQUIPMENT CONTRACTOR BEFORE INSTALLATION OF CONDUIT AND WIRING.

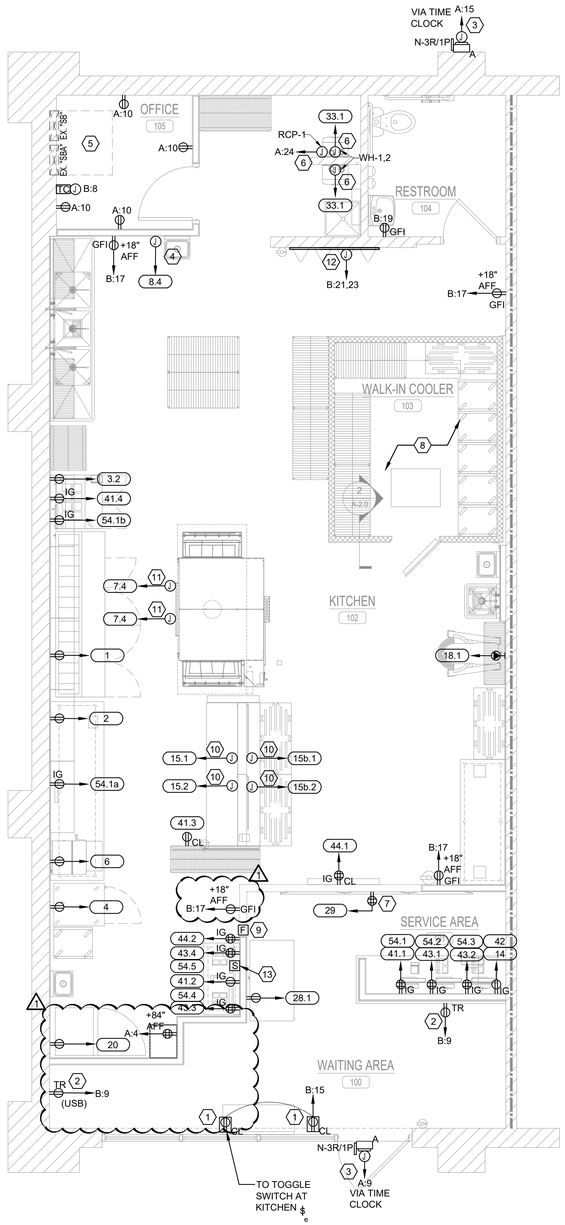
L. ELECTRICAL CONTRACTOR TO VERIFY ELECTRICAL REQUIREMENTS OF WALK-IN COOLER BEFORE PURCHASING BREAKER, CONDUIT, AND WIRING.

M. ELECTRICAL CONTRACTOR SHALL NOT PENETRATE ROOF OF WALK-IN COOLER.

N. WHERE PORTIONS OF A RACEWAY ARE SUBJECT TO DIFFERENT TEMPERATURES, AND WHERE CONDENSATION IS KNOWN TO BE A PROBLEM, AS IN COOLER APPLICATIONS OR WHERE PASSING FROM WARM TO COLD AREAS, ELECTRICAL CONTRACTOR TO FILL THE RACEWAY WITH AN APPROVED MATERIAL TO PREVENT CIRCULATION OF WARM AIR TO A COLDER SECTION OF THE RACEWAY.

O. ELECTRICAL CONTRACTOR TO COORDINATE WITH OWNER REGARDING EXTERIOR SIGNAGE VOLTAGE/AMPACITY REQUIREMENTS BEFORE PURCHASING AND INSTALLING CONDUIT, WIRE AND CIRCUIT BREAKERS. COORDINATE CONTROL OF SIGNAGE WITH OWNER/TENANT.

P. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL DISCONNECT SWITCHES, RECEPTACLES, CONCEALED WIRING, ETC. TO KITCHEN EQUIPMENT AS REQUIRED. THE ELECTRICAL CONTRACTOR SHALL ALSO PROVIDE ALL CORDS, FITTINGS, BOXES, CORD GRIPS, PLUGS, CABLES, ETC. ON EQUIPMENT REQUIRING SUCH ITEMS.



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

GP|N

C
D

COLORADO LICENSED
MICHAEL D TOMAS
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	04-28-2025	CLIENT REQUESTED CHANGES	NYE

PROJECT NAME:

MARCO'S PIZZA 6087 INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

POWER FLOOR PLAN

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

E-2.0

LOW VOLTAGE SYSTEM PLAN GENERAL NOTES:

A. VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.

B. TELEPHONE AND DATA WIRING TERMINATIONS ARE TO BE PROVIDED AND INSTALLED BY LOW VOLTAGE CONTRACTOR.

C. ALL DATA CABLING SHALL BE PLENUM RATED CAT6.

D. SUPPORT ALL CABLES WHETHER THEY ARE BUNDLED OR INDIVIDUAL.

E. THERE SHALL BE NO CABLING LYING ON THE CEILING, CEILING GRID, CONDUIT, WATER PIPES, OR DUCT WORK. NO CABLES TIED TO OR SUPPORTED FROM CEILING GRID SUPPORTS ELECTRICAL CONDUIT, WATER PIPES, OR DUCT WORK.

F. ALL DATA LINES TO USE CAT6 RJ-45 CONNECTORS COMPATIBLE WITH 568B WIRING AND MUST BE LABELED ON BOTH ENDS. USE SINGLE 48 PORT PATCH PANEL, OR (2) 24 PORT PATCH PANELS. COORDINATE LABELING WITH MARCOS VENDOR.

G. ALL CABLES SHOULD BE TERMINATED AT THE PATCH PANEL ON THE NETWORK CABINET/RACK AND WHEREVER EACH EQUIPMENT IS LOCATED THROUGHOUT THE STORE.

H. PATCH CABLES TO BE NEATLY INSTALLED IN NETWORK CABINET USING LENGTH APPROPRIATE CABLES AND WIRE MINDERS WHEN NEEDED.

SYSTEMS PLAN KEYED NOTES: (#)

1. PROVIDE 2" CONDUIT STUBBED UP INTO TENANT SPACE OVERHEAD. E.C. SHALL COORDINATE FOR EXACT REQUIREMENT OF LOW SYSTEM WITH LV VENDOR. E.C. TO INTERCEPT CONDUIT AND ROUTE NEW CONDUIT TO SERVER CABINET. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION STUBBED UP WITH THE ARCHITECT / LANDLORD PRIOR TO PURCHASING AND INSTALLING.
2. DENOTES NAVEPOINT 12U WALL MOUNT SERVER CABINET NETWORK RACK ENCLOSURE WITH AT LEAST ONE COOLING FAN, LOCKING GLASS DOOR AND ONE 48 PORT PATCH PANEL. TRENDNET #TC-P48C6 OR COMPARABLE UL RATED PATCH PANEL. MOUNT ENCLOSURE TO 2'X2' PLYWOOD. COAT ALL SIX SIDES WITH FIRE RETARDANT PAINT.
3. DENOTES CEILING MOUNTED DATA OUTLET. COORDINATE FINAL LOCATION OF OUTLET AFTER CUT TABLE IS IN PLACE.
4. PROVIDE TELEPHONE GROUNDING BUS IN KITCHEN. GROUND BAR TO BE 1/4"X4"X1/8" 98% CONDUCTIVE COPPER INSTALLED ON 600 VOLT PORCELAIN INSULATOR MOUNTED AT 84" AFF. CONNECT TO BUILDING GROUNDING SYSTEM.

CABLE SPECIFICATIONS

A. 6 CABLE RUNS PER POS STATION (POS, EMV, PHONE, PRINTER, 2 EXTRA FOR REDUNDANCY) 4 STATIONS MIN 24 CABLES.

B. CABLES FOR CAMERA SYSTEM - 4 CABLES.

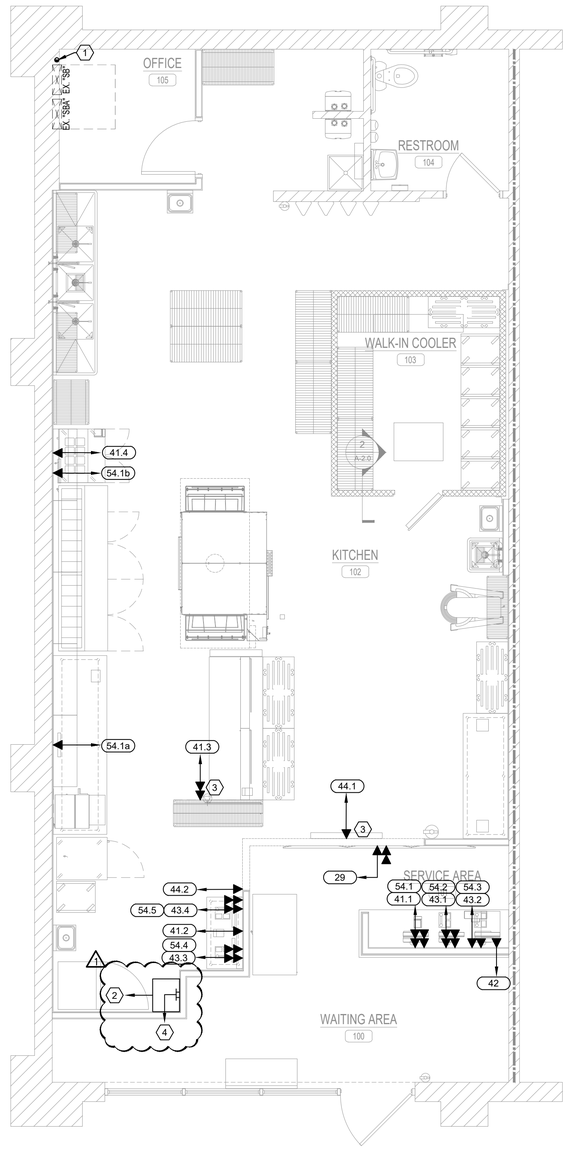
C. CABLES FOR BUMPS/KITCHEN MONITORS - MIN 3 CABLES (2 EXTRA CABLES CAN BE ADDED FOR REDUNDANCY).

D. CABLES FOR MENU BOARDS - MIN 3 CABLES (1 EXTRA CABLE CAN BE ADDED FOR REDUNDANCY).

E. CABLES FOR KITCHEN PRINTERS (SALAD, CUT, DRIVER STATION) - MIN 3 CABLES (1 EXTRA CABLE CAN BE ADDED FOR REDUNDANCY).

F. (OPTIONAL) ALARM SYSTEM AND OTHER MEDIA (4).

	DATA WIRING SCHEDULE	
ITEM	DESCRIPTION	MOUNTING HEIGHT
29	MENU BOARD AND ILLUMINATED LOGO	+99" AFF
41.1	RECEIPT PRINTER	+24" AFF
41.2	RECEIPT PRINTER	+48" AFF
41.3	RECEIPT PRINTER	CEILING MOUNTED.
41.4	RECEIPT PRINTER	+50" AFF
42	REPORT PRINTER	+24" AFF
43.1	PHONE	+24" AFF
43.2	PHONE	+24" AFF
43.3	PHONE	+48" AFF
43.4	PHONE	+48" AFF
44.1	TV - WALL MOUNTED	+96" AFF
44.2	TV - WALL MOUNTED	+96" AFF
54.1	POS / COMPUTER	+24" AFF
54.2	POS / COMPUTER	+24" AFF
54.3	POS / COMPUTER	+24" AFF
54.4	POS / COMPUTER	+48" AFF
54.5	POS / COMPUTER	+48" AFF
54.1a	BUMP SCREEN	+96" AFF
54.1b	BUMP SCREEN	+96" AFF



1 LOW VOLTAGE SYSTEM PLAN
1/4" = 1'-0"

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

GP|N

C
D

COLORADO LICENSED
MICHAEL D TOMAS
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	04-28-2025	CLIENT REQUESTED CHANGES	NYE

PROJECT NAME: 6087
MARCO'S PIZZA INTERIOR UP-FIT
MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

LOW VOLTAGE SYSTEM PLAN

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

E-2.1

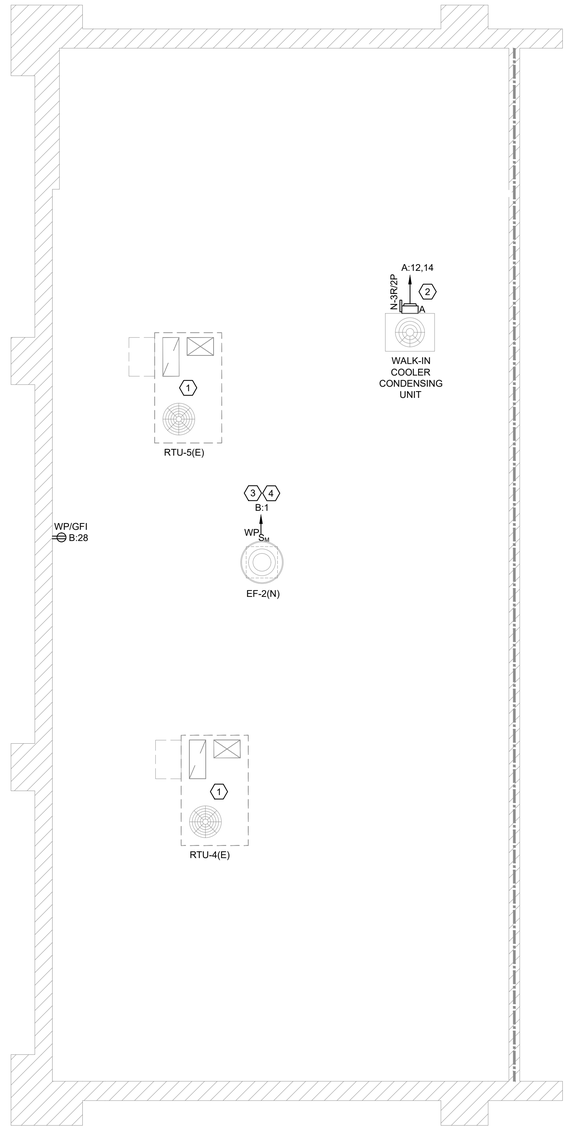
SHEET 6 OF 9

ROOF POWER PLAN GENERAL NOTES:

1. ELECTRICAL CONTRACTOR TO VERIFY ELECTRICAL REQUIREMENTS OF WALK-IN COOLER BEFORE PURCHASING BREAKER, CONDUIT, AND WIRING.
2. ELECTRICAL CONTRACTOR SHALL NOT PENETRATE ROOF OF WALK-IN COOLER/FREEZER.
3. WHERE PORTIONS OF A RACEWAY ARE SUBJECT TO DIFFERENT TEMPERATURES, AND WHERE CONDENSATION IS KNOWN TO BE A PROBLEM, AS IN COOLER AND FREEZER APPLICATIONS OR WHERE PASSING FROM WARM TO COLD AREAS, ELECTRICAL CONTRACTOR TO FILL THE RACEWAY WITH AN APPROVED MATERIAL TO PREVENT CIRCULATION OF WARM AIR TO A COLDER SECTION OF THE RACEWAY.
4. "FWE" ADJACENT TO DEVICE DENOTES FURNISHED WITH EQUIPMENT.
5. ELECTRICAL CONTRACTOR TO VERIFY EXACT ELECTRICAL REQUIREMENTS WITH NAMEPLATE DATA ON PRIOR TO PURCHASING & INSTALLING WIRING AND CONDUIT.

ROOF POWER PLAN KEYED NOTES: (#)

1. EXISTING DISCONNECTING MEANS & CIRCUIT FOR EXISTING RTU SHALL REMAIN AS IS. E.C. SHALL VERIFY OPERABLE CONDITION OF EXISTING DISCONNECTING MEANS AND CIRCUIT INCLUDING WIRE/CONDUIT/BREAKER IN FIELD REPLACE WITH NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
2. PROVIDE 20A/2P CIRCUIT FOR WALK-IN COOLER CONDENSER. E.C. SHALL COORDINATE WITH EQUIPMENT MANUFACTURER FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS IN FIELD.
3. EF-2(N) SHALL BE CONTROLLED BY HOOD CONTROLS ALSO SHALL BE INTERLOCKED WITH RTU-4(E) AND RTU-5(E). COORDINATE EXACT LOCATION AND CONTROLS WITH MECHANICAL CONTRACTOR AS PER THE MECHANICAL DRAWINGS.
4. EXHAUST FANS FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR. E.C. SHALL COORDINATE WITH MECHANICAL CONTRACTOR FOR SWITCHING & CONTROLS AND PROVIDE ALL NECESSARY WIRING REQUIRED.



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

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

GP|N

COLORADO LICENSED
MICHAEL D'TOMASO
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME:
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INTERIOR UP-FIT
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SHEET TITLE:

ROOF POWER PLAN

PROJECT NUMBER 25-025

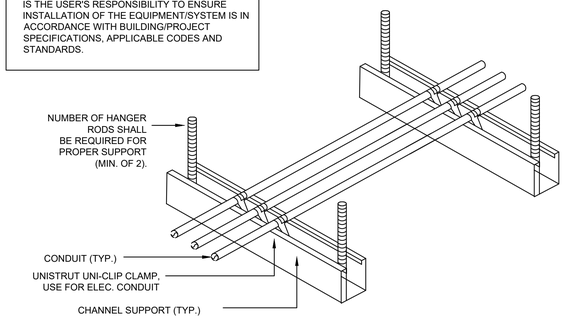
DATE 04-16-2025

SHEET NO.

E-2.2

SHEET 7 OF 9

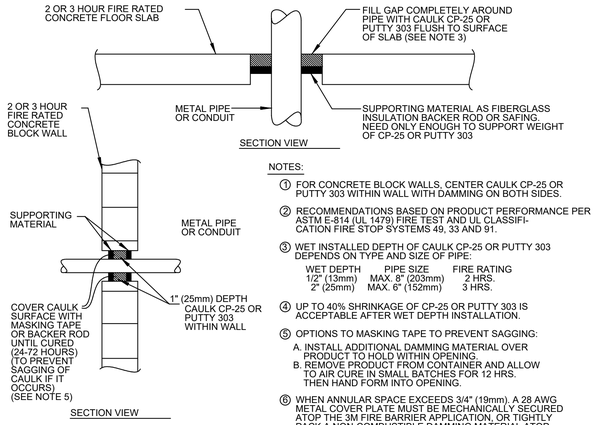
NOTE:
THIS INFORMATION MAY NOT CONTAIN ALL DETAILS REQUIRED FOR CONSTRUCTION. APPROPRIATE MODIFICATION MAY BE REQUIRED TO ENSURE SUITABILITY OF THESE DRAWINGS FOR THE SPECIFIC APPLICATION. IT IS THE USER'S RESPONSIBILITY TO ENSURE INSTALLATION OF THE EQUIPMENT/SYSTEM IS IN ACCORDANCE WITH BUILDING/PROJECT SPECIFICATIONS, APPLICABLE CODES AND STANDARDS.



NOTES:

1. ALL CONDUIT MAY BE COMBINED ON SAME SUPPORT CHANNEL WHERE PRACTICAL.
2. SUPPORT CHANNEL LENGTH SHALL NOT BE DETERMINED UNTIL ALL PIPING, CONDUIT, ETC. TO BE SUPPORTED IS COORDINATED.
3. SUPPORT CHANNEL SPACING SHALL BE NO MORE THAN 10'-0".
4. UNISTRUT AND CONDUIT INSTALLATION MAY BE REVERSED.

1 CONDUIT SUPPORT DETAIL
NTS



NOTES:

① FOR CONCRETE BLOCK WALLS, CENTER CAULK CP-25 OR PUTTY 303 WITHIN WALL WITH DAMMING ON BOTH SIDES.

② RECOMMENDATIONS BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) FIRE TEST AND UL CLASSIFICATION FIRE STOP SYSTEMS 49, 33 AND 91.

③ WET INSTALLED DEPTH OF CAULK CP-25 OR PUTTY 303 DEPENDS ON TYPE AND SIZE OF PIPE:

WET DEPTH	PIPE SIZE	FIRE RATING
1/2" (13mm)	MAX. 8" (203mm)	2 HRS.
2" (25mm)	MAX. 6" (152mm)	3 HRS.

④ UP TO 40% SHRINKAGE OF CP-25 OR PUTTY 303 IS ACCEPTABLE AFTER WET DEPTH INSTALLATION.

⑤ OPTIONS TO MASKING TAPE TO PREVENT SAGGING:
A. INSTALL ADDITIONAL DAMMING MATERIAL OVER PRODUCT TO HOLD WITHIN OPENING.
B. REMOVE PRODUCT FROM CONTAINER AND ALLOW TO AIR CURE IN SMALL BATCHES FOR 12 HRS. THEN HAND FORM INTO OPENING.

⑥ WHEN ANNULAR SPACE EXCEEDS 3/4" (19mm), A 28 AWG METAL COVER PLATE MUST BE MECHANICALLY SECURED ATOP THE 3M FIRE BARRIER APPLICATION, OR TIGHTLY PACK A NON-COMBUSTIBLE DAMMING MATERIAL ATOP INSTALLED CAULK OR PUTTY.

2 FIRE STOP DETAIL
NTS

MANUAL MODE OPERATION:

1. PUSHBUTTON PRESS IS REQUIRED TO TURN LOAD ON.

2. LOAD TURNS OFF WHEN SENSOR TIMES OUT OR BY PRESSING PUSH BUTTON.

3. IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, LOAD WILL NOT TURN ON.

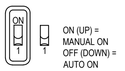
AUTOMATIC MODE OPERATION:

1. WHEN SENSOR ACTIVATES LOAD TURNS ON.

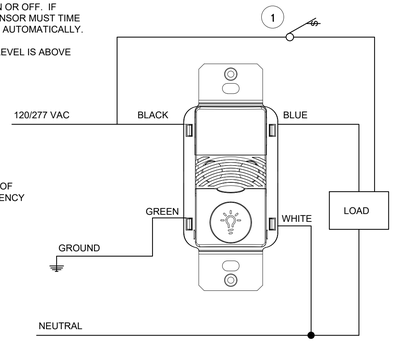
2. PUSHBUTTON CAN BE USED TO TURN LOAD ON OR OFF. IF PUSHBUTTON IS USED TO TURN LOAD OFF, SENSOR MUST TIME OUT FIRST, BEFORE LOAD CAN TURN BACK ON AUTOMATICALLY.

3. IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, LOAD WILL NOT TURN ON.

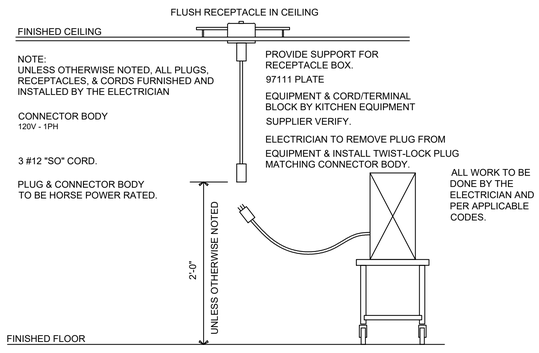
① PROVIDE SENSING CONDUCTOR TAPPED AHEAD OF ANY SWITCHES WHERE SWITCH SERVES EMERGENCY FIXTURES.



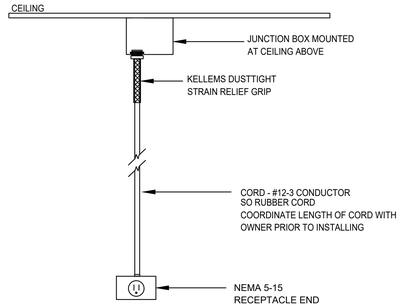
ON (UP) = MANUAL ON
OFF (DOWN) = AUTO ON



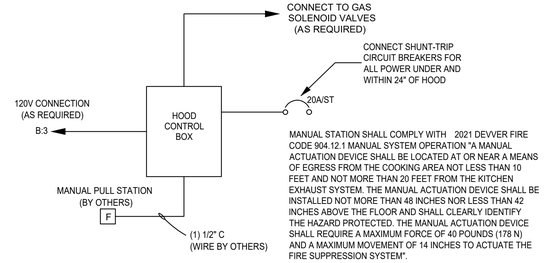
3 WALL SWITCH SENSOR
NTS



4 CORD DROP DETAIL
NTS



5 POWER DROP DETAIL
NTS



MANUAL STATION SHALL COMPLY WITH 2021 DEVVER FIRE CODE 904.12.1 MANUAL SYSTEM OPERATION "A MANUAL ACTUATION DEVICE SHALL BE LOCATED AT OR NEAR A MEANS OF EGRESS FROM THE COOKING AREA NOT LESS THAN 10 FEET AND NOT MORE THAN 20 FEET FROM THE KITCHEN EXHAUST SYSTEM. THE MANUAL ACTUATION DEVICE SHALL BE INSTALLED NOT MORE THAN 48 INCHES NOR LESS THAN 42 INCHES ABOVE THE FLOOR AND SHALL CLEARLY IDENTIFY THE HAZARD PROTECTED. THE MANUAL ACTUATION DEVICE SHALL REQUIRE A MAXIMUM FORCE OF 40 POUNDS (178 N) AND A MAXIMUM MOVEMENT OF 14 INCHES TO ACTUATE THE FIRE SUPPRESSION SYSTEM".

6 HOOD FIRE SUPPRESSION SYSTEM DETAIL
NTS

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COLORADO LICENSED
MICHAEL D TOMAS
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME:
6087
MARCO'S PIZZA
INTERIOR UP-FIT
MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

ELECTRICAL DETAILS

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

E-3.0

PANEL: "SB" DESIGNATED BY "A" (EXISTING) — MOUNTING: RECESSED

120/208 VOLTS, 3 PHASE, 4 WIRE — LOCATION: OFFICE

MAIN CB: 400 — MLO: NA — BUS: EXISTING — FED FROM: EXISTING UTILITY SERVICE

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	SPARE				0.20			2#12,#12G,3/4"C	0.20	L	WALK-IN COOLER LIGHT	20	2
3	20	SPARE					0.36		2#12,#12G,3/4"C	0.36	R	DATA RACK	20	4
5	2P-40	SPARE						0.00				SPARE	20	6
7						0.00						SPARE	20	8
9	20	BUILDING SINAGE	L	1.20	2#12,#12G,3/4"C		1.74		2#12,#12G,3/4"C	0.54	R	OFFICE RECEPTACLE	20	10
11	20	RECEPTACLE - TV WALL MOUNTED (44.1), (44.2)	R	0.72	2#12,#12G,3/4"C			1.29	2#12,#12G,3/4"C	0.57	H	COOLER CONDENSOR (16.1)	2P-20	12
13	20	MENUBOARD (29)	R	0.54	2#12,#12G,3/4"C	1.11				0.57	H			14
15	20	BUILDING SINAGE	L	1.20	2#12,#12G,3/4"C		2.25		2#12,#12G,3/4"C	1.05	E	WARMER OVERHEAD (15b.2)	20*	16
17	2P-50	SPARE						0.00				SPARE	20	18
19						0.00						SPARE	2P-50	20
21	20	SPARE					0.00							22
23	20	SPARE						0.33	2#12,#12G,3/4"C	0.33	M	RCP-1	20	24
25	20	SPARE				0.48			2#12,#12G,3/4"C	0.48	O	WH-1 (33.1)	20	26
27	3P-20*	MIXER (18.1)	E	1.44	3#12,#12G,3/4"C		1.92		2#12,#12G,3/4"C	0.48	O	WH-2 (33.1)	20	28
29			E	1.44				1.44				SPARE	20	30
31			E	1.44		1.44						SPARE	20	32
33	20	SPARE					0.00					SPARE	2P-50	34
35	20	SPARE						0.00						36
37	20	SPARE				0.00						SPARE	20	38
39	20	SPARE					0.00					SPARE	20	40
41	20	SPARE						0.00				SPARE	20	42
TOTAL CONNECTED LOAD (KVA)						3.23	6.27	3.06						

PANEL: "SBA" DESIGNATED BY "B" (EXISTING) — MOUNTING: RECESSED

120/208 VOLTS, 3 PHASE, 4 WIRE — LOCATION: OFFICE

MAIN CB: NA — MLO: 400A — BUS: EXISTING — SUB FED FROM: EXISTING ELECTRICAL PANEL A

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	EF-2 (N)	M	0.72	2#12,#12G,3/4"C	0.83			2#12,#12G,3/4"C	0.10	L	LIGHTING - WAITING AREA	20	2
3	20	HOOD CONTROL BOX (8.4)	O	1.44	2#12, #12G, 3/4"C		2.15		2#12,#12G,3/4"C	0.71	L	LIGHTING - KITCHEN, OFFICE AND RESTROOM + EF-1(N)	20	4
5	20*	RECEPTACLE REFRIGERATOR PIZZA PREP (1)	E	0.67	2#12,#12G,3/4"C			0.67				SPARE	20	6
7	20*	RECEPTACLE-REFRIGERATOR (3.2)	E	0.28	2#12,#12G,3/4"C	0.58			2#12,#12G,3/4"C	0.30	O	TIMECLOCK	20	8
9	20	RECEPTACLE-WAITING AREA	R	0.36	2#12,#12G,3/4"C		0.36					SPARE	20	10
11	20	OVEN,CONVEYOR (7.4)	E	1.02	2#12,#12G,3/4"C			1.82	2#12,#12G,3/4"C	0.80	E	WARMER OVERHEAD (15.1)	20	12
13	20	OVEN,CONVEYOR (7.4)	E	1.02	2#12,#12G,3/4"C	1.82			2#12,#12G,3/4"C	0.80	E	WARMER OVERHEAD (15.2)	20	14
15	20	STORE FRONT SIGN	R	1.20	2#12,#12G,3/4"C		2.25		2#12,#12G,3/4"C	1.05	E	WARMER OVERHEAD (15b.1)	20	16
17	20	RECEPTACLE- KITCHEN AREA	R	0.72	2#12,#12G,3/4"C			1.22	2#12,#12G,3/4"C	0.50	R	RECEPTACLE-BUMP SCREENS (54.1a ,54.1b), SCALE (2), RECEPT PRINTER (41.4)	20	18
19	20	RECEPTACLE RESTROOM	R	0.18	2#12,#12G,3/4"C	0.68			2#12,#12G,3/4"C	0.50	R	RECEPTACLE- REPORT PRINTER 42, SAFE 14 , POS (54.1), PHONE (43.1)	20	20
21	2P-20*	WIREMOLD (CAR TOOPER)	R	0.50	2#12,#12G,3/4"C		1.00		2#12,#12G,3/4"C	0.50	R	RECEPTACLE- POS (54.2), PHONE (43.2), POS (54.3)	20	22
23			R	0.50				1.00	2#12,#12G,3/4"C	0.50	R	RECEPTACLE- POS (54.4), PHONE (43.3), POS (54.5), PHONE (43.4)	20	24
25	2P-50	SPARE				0.50			2#12,#12G,3/4"C	0.50	R	RECEPTACLE-RECEIPT PRINTER (41.3), RECEIPT PRINTER (41.2),RECEIPT PRINTER (41.1)	20	26
27							0.54		2#12,#12G,3/4"C	0.54	R	HVAC MAINTENANCE RECEPTACLE	20	28
29	20	RECEPTACLE- DISPLAY CASE (4)	E	0.93	2#12,#12G,3/4"C			0.93				SPARE	20	30
31	20	RECEPTACLE DOUGH ROLLER (6)	E	0.82	2#12,#12G,3/4"C	0.82						SPARE	3P-100	32
33	20	RECEPTACLE-FREEZER (20)	E	0.28	2#12,#12G,3/4"C		0.28							34
35	20	RECEPTACLE-DISPLAY CASE REFRIGERATOR (28.1)	E	0.60	2#12,#12G,3/4"C			0.60						36
37	3P-35	EXISTING RTU	H	3.53	EXISITING	7.06			EXISITING	3.53	H	EXISTING RTU	3P-35	38
39			H	3.53			7.06			3.53	H			40
41			H	3.53				7.06		3.53	H			42
TOTAL CONNECTED LOAD (KVA)						12.29	13.64	13.30						

PANEL SCHEDULE GENERAL NOTES:

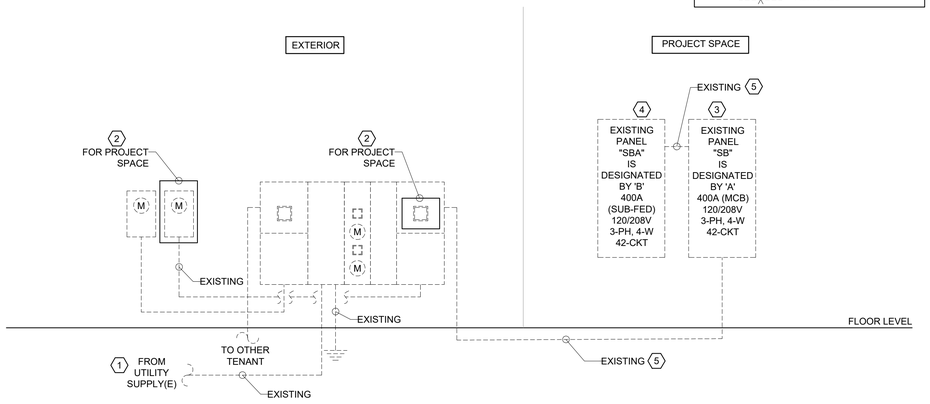
1. E.C. SHALL COORDINATE EXACT POWER AND ELECTRICAL OUTLET/DISCONNECT REQUIREMENT FOR MECHANICAL/PLUMBING EQUIPMENT WITH EQUIPMENT MANUFACTURER IN COORDINATION WITH ARCHITECT/OWNER IN THE FIELD PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY.
2. E.C. SHALL COORDINATE WITH ALL EQUIPMENT MANUFACTURER/SUPPLIER/ARCHITECT/ OWNER FOR THE EXACT ELECTRICAL REQUIREMENTS AND ACCORDINGLY PROVIDE THE BREAKER, CABLE AND CONDUIT ACCORDINGLY. BASE BID ACCORDINGLY.
3. CONTRACTOR SHALL COORDINATE WITH ARCHITECT/OWNER/LV CONSULTANT FOR POWER AND ELECTRICAL REQUIREMENTS FOR THE LOW VOLTAGE AND SECURITY SYSTEM IN FIELD AND ACCORDINGLY PROVIDE THE ELECTRICAL CONNECTIONS/CIRCUITS FROM SPARE CIRCUITS FOR LOW VOLTAGE SYSTEM PER REQUIREMENTS. BASE BID ACCORDINGLY.
4. E.C SHOULD PROVIDE NEW GFCI BREAKER IN THE PLACE OF EXISTING BREAKERS IN PANELS AS SHOWN.

ELECTRICAL PANEL SCHEDULE ABBREVIATIONS:

(E)	EXISTING
(N)	NEW
MLO	MAIN LUG ONLY
L	LIGHTING
R	RECEPTACLE
H	HVAC
M	MOTOR
E	EQUIPMENT
O	OTHER
*	NEW GFCI BREAKER

1 ELECTRICAL PANEL SCHEDULE
NTS

ELECTRICAL RISER SYMBOL
- NEW
- EXISTING ITEM/FEEDER TO REMAIN
- EXISTING ITEM/FEEDER TO BE DISCONNECTED & REMOVED



RISER DIAGRAM KEYED NOTES: (#)

1. EXISTING ELECTRICAL SERVICE FROM THE UTILITY COMPANY SHALL REMAIN AS IS. E.C. SHALL COORDINATE WITH LANDLORD/UTILITY COMPANY FOR EXACT POWER DISTRIBUTION. INFORM THE ENGINEER ON RECORD FOR ANY DISCREPANCIES PRIOR TO COMMENCING ANY WORK.
2. EXISTING ELECTRICAL METER, CT CABINET & FUSED DISCONNECT/BREAKER OF 400A, 120/208V, 3-PH, 4-W FOR THE PROJECT SPACE SHALL REMAIN AS IS. E.C. SHALL VERIFY EXACT LOCATION & OPERABLE CONDITION OF EXISTING METER, CT CABINET & FUSED DISCONNECT/BREAKER IN FIELD WITH UTILITY / LANDLORD, REPLACE WITH NEW IF FOUND INOPERABLE. INFORM THE ENGINEER ON RECORD FOR ANY DISCREPANCIES PRIOR TO COMMENCING ANY WORK.
3. EXISTING 400A (MCB), 120/208V, 3-PH, 4-W ELECTRICAL PANEL "SB" IS DESIGNATED BY 'A' SHALL REMAIN. THE ELECTRICAL CONTRACTOR (E.C.) IS REQUIRED TO FIELD VERIFY THE EXACT SIZE, LOCATION AND OPERABLE CONDITION OF THE PANEL. IF THE PANEL IS FOUND TO BE INOPERABLE, IT MUST BE REPLACED WITH NEW. INFORM ENGINEER ON RECORD IN CASE OF ANY DISCREPANCY FOUND WITH SITE CONDITION. BASE BID ACCORDINGLY.
4. EXISTING 400A (MLO), 120/208V, 3-PH, 4-W ELECTRICAL PANEL "SBA" IS DESIGNATED BY 'B' SHALL REMAIN. THE ELECTRICAL CONTRACTOR (E.C.) IS REQUIRED TO FIELD VERIFY THE EXACT SIZE, LOCATION AND OPERABLE CONDITION OF THE PANEL. IF THE PANEL IS FOUND TO BE INOPERABLE, IT MUST BE REPLACED WITH NEW. INFORM ENGINEER ON RECORD IN CASE OF ANY DISCREPANCY FOUND WITH SITE CONDITION. BASE BID ACCORDINGLY.
5. EXISTING ELECTRICAL FEEDER SHALL REMAIN. E.C. TO VERIFY OPERABLE CONDITION OF INCOMING FEEDER IN FIELD AND PROVIDE NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

RISER DIAGRAM GENERAL NOTES:

1. ABOVE RISER DIAGRAM IS FOR REFERENCE PURPOSE ONLY. E.C TO VERIFY EXACT POWER DISTRIBUTION & OPERABLE CONDITION OF EXISTING DEVICES/EQUIPMENTS IN FIELD AND INFORM ENGINEER FOR ANY DISCREPANCY. VERIFY SCOPE OF WORK WITH OWNER/LANDLORD PRIOR TO BID.
2. E.C. SHALL VERIFY THE INCOMING SERVICE AMPERAGE, VOLTAGE, NUMBER OF PHASES, WIRE SIZE AND DISTRIBUTION IN FIELD.
3. E.C. TO COORDINATE FAULT CURRENT (ISC) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO COMMENCING ANY WORK.

2 ELECTRICAL RISER DIAGRAM
NTS

GP|N

COLORADO LICENSED
MICHAEL D TOMAS
0060432
PROFESSIONAL ENGINEER

04-30-2025

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: 6087

MARCO'S PIZZA

INTERIOR UP-FIT

MAYFAIR COMMONS SHOPPING CENTER
6160 EAST COLFAX AVE. – UNIT 1
DENVER, COLORADO 80220

SHEET TITLE:

ELECTRICAL RISER DIAGRAM AND PANEL SCHEDULES

PROJECT NUMBER 25-025

DATE 04-16-2025

SHEET NO.

E-4.0