# 30hop SOWP

## 1020 NW Pryor Road,

Lees Summit, MO 64081

Issue For Permit
05.02.2024

**Note:**
**- The entire structure shall be equipped throughout with an approved supervised automatic sprinkler system served by a fire pump. This system shall comply with IBC-2018-903.3.1.1 w/ Lee's Summit Amendments, IFC-2018 w/ Lee's Summit Amendments and with one of the following National Fire Prevention Association Standards: NFPA 13-2019 or a more recent edition of the foregoing standards.**
**- The building shall be equipped with an approved fire alarm system. This system shall comply with IBC-2018-907 w/ Lee's Summit Amendments, IFC-2018 w/ Lee's Summit Amendments, and one of the following National Fire Prevention Association Standards: NFPA 72-2019 or a more recent edition of the foregoing standards.**

Project Location

Location Map

30hop
DEVELOPER

Pappageorge Haymes Partners
ARCHITECT

Pearson Kent McKinley Raaf Engineering, LLC.
MECHANICAL, PLUMBING, ELECTRICAL ENGINEER

C&T Design and Equipment Co., Inc.
KITCHEN EQUIPMENT

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640 N Lasalle
Suite 400
Chicago Illinois 60654

312 337 3344

Architecture
Urban Planning

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STATE OF MISSOURI
JEFF RENTERGHEM
NUMBER
A-2024000851
ARCHITECT

I hereby certify that these plans were prepared under my direction and to the best of my knowledge and belief conform to the City of Lee's Summit Building Codes and Ordinances.

Name: Jeff Renterghem
License No.: A-2024000851
Exp: 12/31/2024

**NOT FOR CONSTRUCTION**

**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

orientation

project number 232882

scale As Noted

date 5/1/24

sheet title Title Sheet

sheet number
A001

640 N Lasalle
Suite 400
Chicago Illinois 60654
312 337 3344
Architecture
Urban Planning

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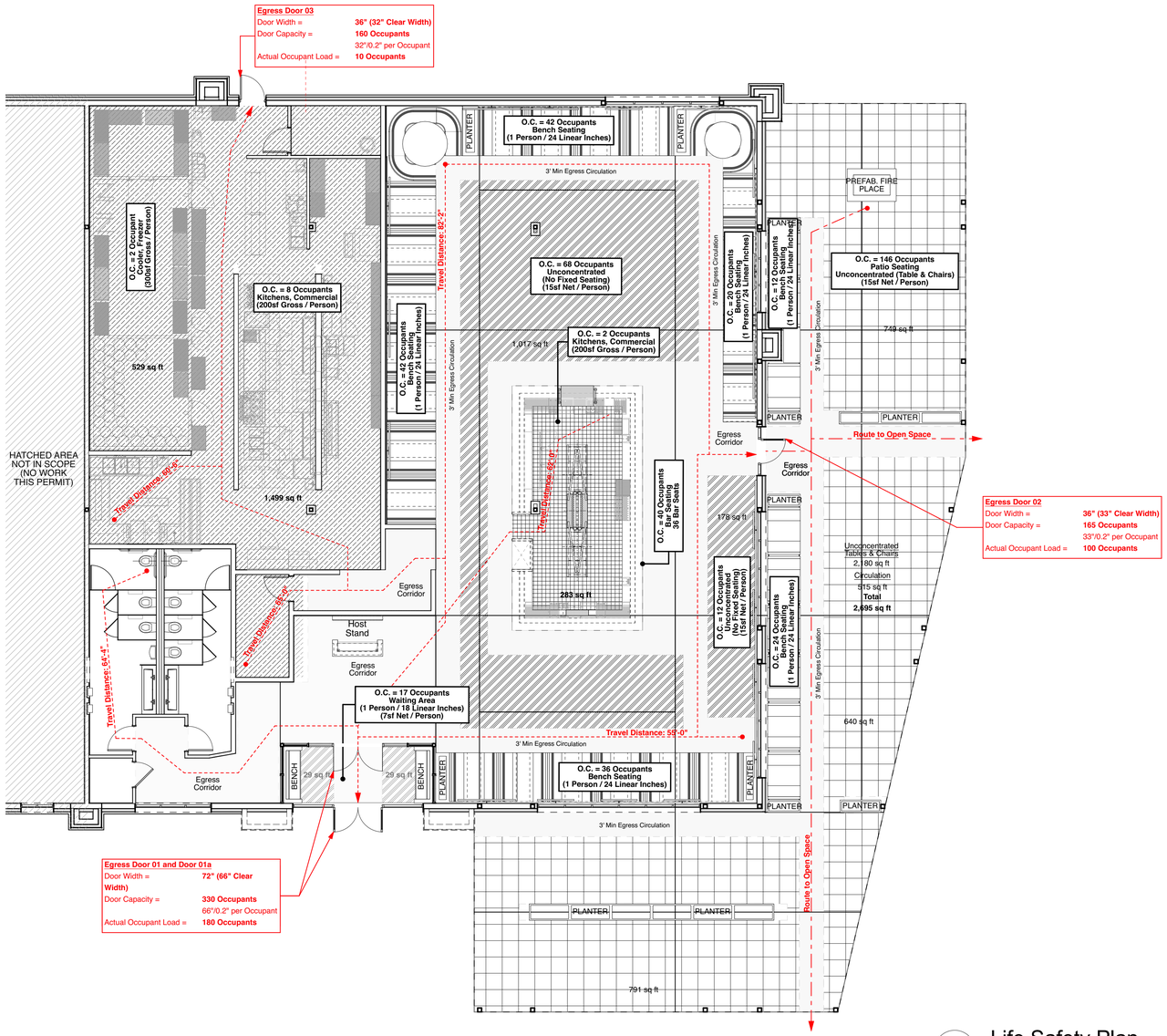


1 Life Safety Plan

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

## Occupancy Calculations

| Description | | | Counts | | | | Remarks |
|---|---|---|---|---|---|---|---|
| Location | Area | Function | Occupant Load | | Calculated Subtotal | RoundedUp Subtotal | |
| INTERIOR RESTAURANT | | | | | | | |
| Dining Room | 1,017 sf | Assembly w/o Fixed Seats Unconcentrated (Tables & Chairs) | 15 sf / occupant | Net | 67.80 | 68 | |
| Dining Room | 178 sf | Assembly w/o Fixed Seats Unconcentrated (Tables & Chairs) | 15 sf / occupant | Net | 11.87 | 12 | |
| Dinning Room Fixed Seating | N/A | Booth/Bench Seating | 1 occupant / 24 linear inches | | 20.00 | 20 | (5) 4' Deep Booths, 96"/24" = 4 persons per booth |
| | N/A | Booth/Bench Seating | 1 occupant / 24 linear inches | | 102.00 | 102 | (17) 6' Deep Booths, 144"/24" = 6 persons per booth |
| | N/A | Booth/Bench Seating | 1 occupant / 24 linear inches | | 18.00 | 18 | (2) Corner Booths, 432"/24" = 18 persons total |
| Host Stand | N/A | Assembly w/ Fixed Seats | 1 occupant / seat | | 1.00 | 1 | |
| Kitchen and Prep | 1,499 sf | Kitchens, Commercial | 200 sf / occupant | Gross | 7.50 | 8 | |
| Cooler, Freezer, Keg | 529 sf | Storage Areas / Mech Equipment | 300 sf / occupant | Gross | 1.76 | 2 | |
| Bar Service Areas | 283 sf | Kitchens, Commercial | 200 sf / occupant | Gross | 1.42 | 2 | |
| Bar Seating | N/A | Fixed Seating | 1 occupant / seat | | 40.00 | 40 | Barstools + H.C. Accessible Counter |
| Waiting Area | 58 sf | Assembly w/o Fixed Seats | 7 sf / occupant | | 8.29 | 9 | |
| | N/A | Fixed Seating | 1 occupant / 18" linear inches | | 8.00 | 8 | Fixed Seating w/o Dividing Arms, 144"/18" = 8 persons |
| *SUBTOTAL RESTAURANT* | | | | | | **290** | ***Total Interior Occupants*** |
| EXTERIOR PATIO | | | | | | | |
| Open Seating | 2,180 sf | Assembly w/o Fixed Seats Unconcentrated (Tables & Chairs) | 15 sf / occupant | Net | 145.33 | 146 | |
| Covered Patio Fixed Seating | N/A | Booth/Bench Seating | 1 occupant / 24 linear inches | | 36.00 | 36 | (9) 4' Deep Booths, 96"/24" = 4 persons per booth |
| *SUBTOTAL RESTAURANT* | | | | | | **182** | ***Total Exterior Occupants*** |
| ***SUBTOTAL EXTERIOR POPULATION*** | | | | | | | |
| **TOTAL PROJECT POPULATION** | | | | | **472** | **TOTAL OCCUPANT LOAD** | |

## Plumbing Fixture Calculations

| Classification | Occupancy | | Requirement | | | | Required | | | | Provided | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Fixture | Male | Female | Total | Male | Female | Calculated Subtotal | Rounded Up Subtotal | Male | Female | Total |
| A-2 | | | | | | | | | | | | | |
| Assembly (Restaurants) | Total for Indoor and Outdoor Assembly | 472 Occupants | Water Closets | 1 per 75 | 1 per 75 | - | 3.15 | 3.15 | 6.29 | 7 | 4 | 4 | **8** |
| | | | Lavs | - | - | 1 per 200 | - | - | 2.36 | 3 | 2 | 2 | **4** |
| | | | Service Sink | | | 1 required | - | - | 1.00 | 1 | | | **8** |

## Occupant Exit Load

| | |
|---|---|
| **Assembly** | |
| Total Occupant Exit Load | **290 Occupants** |
| Exit Width Factor | x **0.2** |
| Required Exit Width | **58" Exit Width** |
| Provided Exit Width | **131" Exit Width** |

Total of (4) 36" Wide Egress Doors provided for a Toal Exiting Width of 324" provides sufficient Occupant Exit Load for Assembly. See Life Safety Plans for Exit Widths and Capacity at Each Exit

| CODE SUMMARY | |
|---|---|
| **PROJECT DESCRIPTION** | |
| Tenant build-out of an existing space for use as a Bar and Restaurant. Accommodation for exterior seating is also in the scope of this work. Core and shell build-out by others and is not covered in this permit submission. | |
| **APPLICABLE CODES** | |
| 2018 International Building Code | |
| 2018 International Plumbing Code | |
| 2018 International Mechanical Code | |
| 2018 International Fuel Gas Code | |
| 2018 International Fire Code | |
| 2017 National Electric Code Code | |
| ICC/ANSI A117.1-2009, Accessible and Usable Buildings and Facilities | |
| **GENERAL PROJECT DATA** | |
| Square Footage: Gross Interior 6,992 sf | |
| Occupancy: A-2 | |
| Stories: 1 | |
| Type IIB Construction (Existing) | |
| **REQUIREMENTS BASED ON CONSTRUCTION TYPE** | |
| (Based on IBC Chapter 6) | |
| **IIB** | |
| Primary Structural Frame 0HR | |
| Bearing Wall Exterior 0HR | |
| Bearing Wall Interior 0HR | |
| Nonbearing Walls/Partitions (Interior) 0HR | |
| Floor Construction, Secondary Members 0HR | |
| Roof Construction, Secondary Members 0HR | |
| Separation Wall 2HR | |
| **FIRE PROTECTION SYSTEMS** | |
| (Based on IBC Chapter 9) | |
| 903.2.1.2 - Group A-2: An automatic sprinkler system shall be provided throughout stories containing group A-2 occupancy | |
| 907.2.1 - Group A: A manual fire alarm system that activates the occupant notification system shall be installed in Group A occupancies where the occupant load due to the assembly occupancy is 300 or more. | |
| **MEANS OF EGRESS / LIFE SAFETY** | |
| (Based on IBC Chapter 10) | |
| OCCUPANT LOAD - 480 Occupants (See table included on this sheet.) | |
| EGRESS WIDTH FACTOR = 0.15" PER OCCUPANT | |
| MINIMUM NUMBER OF EXITS PER STORY | |
| 1-500 Occupant Load - minimum 2 Exits | |
| 501-1,000 Occupants - minimum 3 Exits | |
| MAXIMUM TRAVEL DISTANCE | |
| A-2: 250' (with sprinklers) | |
| MINIMUM CORRIDOR WIDTH = 44" | |
| MAXIMUM DEAD END CORRIDOR | |
| A-2: 20' | |
| DOOR SWING AND FORCE TO OPEN | |
| Shall Swing in Direction of Egress Travel when total Occupant Load is more than 50 Occupants. For means of Egress Doors: 15 LBF to release latch, 30 LBF to set the door in motion and 15 LBF to open the door to the minimum required width | |
| **MINIMUM NUMBER OF PLUMBING FIXTURES** | |
| (Based on IPC 2018) | |
| See "Plumbing Fixture Calculations" Table on this sheet. | |

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**NOT FOR CONSTRUCTION**

30hop
american grill • craft beer • rooftop patio

**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
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orientation

project number 232882

scale As Noted

date 5/1/24

sheet title Code Sheet

sheet number

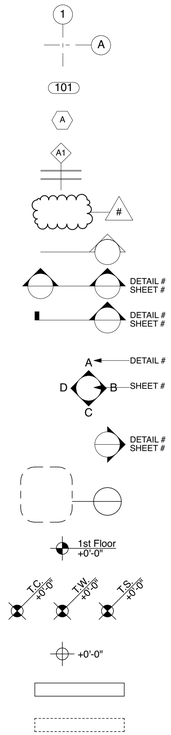
A002

# ABBREVIATIONS

| | |
|---|---|
| A/C. | AIR CONDITIONING |
| ACC | ACCESSORY |
| ACOUS. | ACOUSTICAL |
| ADD'L | ADDITIONAL |
| ADJ. | ADJACENT |
| A.F.F. | ABOVE FINISHED FLOOR |
| AL. | ALUMINUM |
| ALT. | ALTERNATE |
| A.P. | ACCESS PANEL |
| APPROX. | APPROXIMATELY |
| APP'D | APPROVED |
| A.R.F. | ABOVE RAISED FLOOR |
| ARCH | ARCHITECT or ARCHITECTURAL |
| A.T. | ACOUSTIC TILE |
| BD. | BOARD |
| BLDG. | BUILDING |
| BLK. | BLOCK |
| BLKG. | BLOCKING |
| BM. | BEAM |
| B.O. or B/ | BOTTOM OF |
| B.P. | BOOSTER PUMP |
| BRG. | BEARING |
| BSMT. | BASEMENT |
| BTWN. | BETWEEN |
| C.A. | CLEAR ANODIZED |
| CABT. | CABINET |
| CB | CATCH BASIN |
| CEM. | CEMENT |
| CER. | CERAMIC |
| C.I. | CAST IRON |
| C.J. | CONTROL JOINT |
| C.L. | CENTER LINE |
| CLG. | CEILING |
| CLOS. | CLOSET |
| CLR. | CLEAR |
| C.M.U. | CONCRETE MASONRY UNIT |
| CO | CARBON MONOXIDE DETECTOR |
| COL. | COLUMN |
| COMM. | COMMERCIAL |
| CONC. | CONCRETE |
| CONN. | CONNECTION |
| CONSTR. | CONSTRUCTION |
| CONT. | CONTINUOUS |
| CONTR. | CONTRACTOR |
| COORD. | COORDINATION or COORDINATE(D) |
| COR. | CORRIDOR |
| CPT. | CARPET |
| C.T. | CERAMIC TILE |
| CTR. | CENTER |
| C.W. | COLD WATER |
| C.Y. | CUBIC YARD |
| D | DRYER |
| DBL. | DOUBLE |
| DEPT. | DEPARTMENT |
| DET. | DETAIL |
| DF | DRINKING FOUNTAIN |
| DIA. | DIAMETER |
| DIAG. | DIAGONAL |
| DIM. | DIMENSION |
| DIST. | DISTANCE |
| DL | DEAD LOAD |
| DN | DOWN |
| DP | DAMPPROOFING |
| DR | DOOR |
| DS | DOWNSPOUT |
| DW | DISHWASHER |
| DWG. | DRAWING |
| DWR. | DRAWER |
| DU | DWELLING UNIT |
| E | EAST |
| EA. | EACH |
| E.I.F.S. | EXTERIOR INSULATION FINISH SYSTEM |
| EFF UNIT | EFFICIENY UNIT |
| E.J. | EXPANSION JOINT |
| ELECT. | ELECTRICAL |
| ELEV. | ELEVATOR |
| EL. | ELEVATION |
| EM. | EMERGENCY |
| E.P. | EPOXY PAINT |
| EQ. | EQUAL |
| EQUIP. | EQUIPMENT |
| EST | ESTIMATE |
| EWC | ELECTRIC WATER COOLER |
| EXIST. | EXISTING |
| EXP. | EXPOSED |
| EXT. | EXTERIOR |
| FAR | FLOOR AREA RATIO |
| F.D. | FLOOR DRAIN |
| F.E.C. | FIRE EXTINGUISHER CABINET |
| F.H.C. | FIRE HOSE CABINET |
| FIN. | FINISH |
| FLR. | FLOOR |
| FLUOR | FLUORESCENT |
| FP | FIRE PROTECTION |
| FR | FRAME |
| FT | FOOT or FEET |
| FTG. | FOOTING |
| FURN. | FURNACE |
| FURRG | FURRING |
| GA. | GAUGE |
| GALV. | GALVANIZED |
| G.B. | GYPSUM BOARD |
| GC | GENERAL CONTRACTOR |
| GFI | GROUND FAULT INTERRUPTER |
| GFRC | GLASS FIBER REINFORCED CONCRETE |
| GL. | GLASS |
| GPM | GALLONS PER MINUTE |
| GYP. | GYPSUM |
| GYP. BD. | GYPSUM BOARD |
| H.C. | HANDICAP(PED) |
| HDWD. | HARDWOOD |
| HDWR. | HARDWARE |
| HT. | HEIGHT |
| HM | HOLLOW METAL |
| HOR | HORIZONTAL |
| HP | HORSEPOWER |
| HR. | HOUR |
| HVAC | HEATING/VENTILATION/AIR CONDITIONING |
| H.W.H | HOT WATER HEATER |
| I.L.O. | IN LIEU OF |
| ID | INSIDE DIAMETER |
| IN | INCH |
| INCL. | INCLUDE(ING) |
| INSUL. or INS. | INSULATION |
| INT. | INTERIOR |
| INV. | INVERT(ED) |
| JST. | JOIST |
| JT. | JOINT |
| KIT | KITCHEN |
| K.D. | KNOCKED DOWN |
| K.O. | KNOCKED OUT |
| LAB | LABORATORY |
| LAM. | LAMINATED |
| LAV. | LAVATORY |
| L.C. | LIGHTWEIGHT CONCRETE |
| LED | LIGHT EMITTING DIODE |
| L.F. | LINEAR FEET |
| L.H. | LEFT HAND |
| LL | LIVE LOAD |
| LT. | LIGHT |
| LVT | LUXURY VINYL TILE |
| M. | MASTER |
| MAINT. | MAINTENANCE |
| MAS. | MASONRY |
| MAT. | MATERIAL |
| MAX. | MAXIMUM |
| MDF | MEDIUM DENSITY FIBERBOARD |
| MECH. | MECHANICAL |
| MFR. | MANUFACTURER |
| MH | MANHOLE |
| MIN. | MINIMUM |
| MIR. | MIRROR |
| MISC. | MISCELLANEOUS |
| M.O. | MASONRY OPENING |
| MTD. | MOUNTED |
| MULL. | MULLION |
| MWK. | MILLWORK |
| MTL. | METAL |

| | |
|---|---|
| N | NORTH |
| N/A | NOT APPLICABLE |
| NFHB | NON-FREEZE HOSE BIBB |
| N.I.C. | NOT IN CONTRACT |
| NO. or # | NUMBER |
| NOM. | NOMINAL |
| N.T.S. | NOT TO SCALE |
| O.A. | OVERALL |
| O.C. | ON CENTER |
| O.D. | OVERFLOW DRAIN |
| OPN'G | OPENING |
| OPP. | OPPOSITE |
| PART. BD. | PARTICLE BOARD |
| PCF | POUNDS PER CUBIC FOOT |
| PED. | PEDESTAL |
| PERF. | PERFORATE or PERFORATED |
| PKG. | PARKING |
| PL. | PLATE |
| PLAS. | PLASTER |
| PLAM | PLASTIC LAMINATE |
| PLYWD. | PLYWOOD |
| PNL. | PANEL |
| PR. | PAIR |
| PREFAB | PREFABRICATED |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| PT. | POINT |
| PVMT. | PAVEMENT |
| Q.T. | QUARRY TILE |
| R | RISER(S) |
| R.A. | RETURN AIR |
| RAD. | RADIUS |
| RD | ROOF DRAIN |
| RE. | RANGE (ELECTRIC) |
| REC | RECOMMENDATION(S) |
| REF or F | REFRIGERATOR |
| REG. | REGISTER |
| REINF'D | REINFORCED |
| REINF'G | REINFORCING |
| REQ. or REQ'D | REQUIRE, REQUIRED |
| RES. | RESIDENTIAL |
| RET. | RETURN |
| REV. | REVISED |
| RG | RANGE (GAS) |
| R.H. | RIGHT HAND |
| RM. | ROOM |
| R.O. | ROUGH OPENING |
| ROW | RIGHT OF WAY |
| RS | ROUGHT SAWN |
| S | SOUTH |
| S4S | SURFACE FOUR SIDES |
| SAN. | SANITARY |
| S.B. | SAND BLAST |
| S.C. | SOLID CORE |
| SCHED | SCHEDULE |
| SD | SMOKE DETECTOR |
| SECT. | SECTION |
| SEP | SEPARATION |
| S.F. or SQ.FT. | SQUARE FOOT or FEET |
| SHT. | SHEET |
| SHGC | SOLAR HEAT GAIN COEFFICIENT |
| SIM. | SIMILAR |
| S.M. | SHEET METAL |
| SPEC | SPECIFICATIONS |
| SPKR. | SPEAKER |
| SPRK. | SPRINKLER |
| SQ. | SQUARE |
| S.S. | STAINLESS STEEL |
| STD. | STANDARD |
| STL. | STEEL |
| STOR. | STORAGE |
| STRUCT. | STRUCTURAL |
| SUSP | SUSPENDED |
| SW | SWITCH |
| S.Y. | SQUARE YARD |
| SYM | SYMMETRICAL |
| THK | THICK |
| TEMP'D | TEMPERED |
| TRANS. | TRANSPARENT |
| T | TREAD(S) |
| T.O. or T/ | TOP OF |
| TAN. | TANGENT |
| TELE | TELEPHONE |
| TELEP | TELEPHONE POLE |
| TEMP. | TEMPORARY |
| TER. | TERRAZZO |
| T&G | TONGUE AND GROOVE |
| THK | THICK |
| TV | TELEVISION |
| TYP. | TYPICAL |
| U.L. | UNDERWRITERS LABORATORIES |
| UNF. | UNFINISHED |
| U.N.O. | UNLESS NOTED OTHERWISE |
| V. | VOLT |
| VAR. | VARIES, VARIABLE |
| VB | VAPOR BARRIER |
| VCT | VINYL COMPOSITE TILE |
| VERT. | VERTICAL |
| VEST. | VESTIBULE |
| V.I.F. | VERIFY IN FIELD |
| V.T. | VINYL TILE |
| VTR | VENT THROUGH ROOF |
| W | WEST |
| WA | WASHER |
| W/ | WITH |
| WC | WATER CLOSET |
| WD. | WOOD |
| W/D | WASHER DRYER |
| WDW. | WINDOW |
| WH | WATER HEATER |
| W.I.C. | WALK IN CLOSET |
| W/O | WITHOUT |
| WP | WHIRLPOOL TUB |
| WT. | WEIGHT |
| W.W.F. | WELDED WIRE FABRIC |
| H | HEIGHT |
| W | WIDTH |
| D | DEPTH |
| L | LENGTH |
| ASK | ARCHITECTURAL SKETCH |
| ATSK | ARCHITECTURAL TENANT SKETCH |
| CSK | CIVIL SKETCH |
| ESK | ELECTRICAL SKETCH |
| FPSK | FIRE PROTECTION SKETCH |
| LSK | LANDSCAPE SKETCH |
| MSK | MECHANICAL SKETCH |
| PSK | PLUMBING SKETCH |
| SSK | STRUCTURAL SKETCH |

# SYMBOLS




COLUMN CENTERLINE

DOOR TAG

WINDOW TAG

WALL TAG

REVISION BUBBLE

MATCH LINE

BUILDING SECTION

WALL SECTION

INTERIOR ELEVATION

EXTERIOR ELEVATION

DETAIL

STORY/ELEVATION MARKER

T/ CURB, T/ WALL, T/ SLAB
PLAN ELEVATION MARKER

CEILING/SOFFIT
ELEVATION MARKER

NEW CONSTRUCTION

EXISTING CONSTRUCTION
TO BE DEMOLISHED

EXISTING CONSTRUCTION
TO REMAIN

CENTER LINE

HIDDEN LINE

PROPERTY LINE

BREAK LINE

1HR FIRE RATING

2HR FIRE RATING

3HR FIRE RATING

4HR FIRE RATING

HIDDEN LINE

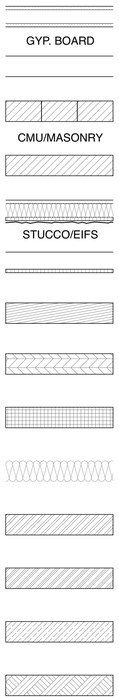
MAX. DIAG. DIMENSION

MAX. SEPARATION DISTANCE

EXIT ACCESS PATH

COMMON EGRESS PATH

# MATERIALS




DETAILED SCALE

SIMPLE SCALE

DETAILED SCALE

SIMPLE SCALE

DETAILED SCALE

SIMPLE SCALE

WOOD/FINISH

PLYWOOD

RIGID INSULATION

BATT INSULATION

STEEL

ALUMINUM

BRONZE/BRASS

EARTH

GRANULAR FILL

SAND

CONCRETE

CMU

BRICK

GYPSUM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Architecture
Urban Planning

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HAYMES


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STATE OF MISSOURI
JEFF
RENTENGHEM
NUMBER
A-2024000851
ARCHITECT

I hereby certify that these plans were prepared under my direction and to the best of my knowledge and belief conform to the City of Lee's Summit Building Codes and Ordinances.

Name: Jeff Rentenghem
License No.: A-2024000851
Exp: 12/31/2024

**NOT FOR CONSTRUCTION**

30hop
american grill • craft beer • rooftop patio

**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

| | |
|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/1/24 |
| sheet title | Symbols and Abbreviations |
| sheet number | A003 |

# DIVISION 01: GENERAL REQUIREMENTS

**GENERAL CONDITIONS NOTES**

1. Verify all existing conditions, materials, dimensions and utilities in field prior to execution of the work.
2. Perform all cutting and patching and repair work as required to complete the project. Restore all surfaces to original conditions after installation of other work. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio. Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
3. All work and materials shall be in conformance with applicable building codes and local amendments.
4. General Contractor shall obtain and pay for all building permits required for completion of the project, arrange for all necessary inspections and make all required submittals.
5. Design/Build: Portions of the work indicate that work will be performed on a "Design Build" basis. In such cases, the Contractor shall be solely responsible for the complete design, engineering, and installation of such systems or equipment and shall warranty to the Owner that such work shall adequately meet the needs and requirements of the Owner and of the project as planned and its intended uses as well as comply completely with all applicable codes, ordinances and governing regulations. In no way shall a Design/Build arrangement limit the responsibility of the Contractor to complete his obligations to meet such needs and requirements. Design/Build shall include but not be limited to the following:
   - Fire Protection and Fire Sprinkler Systems
   - Fire Alarm Systems
   - Structural Metal Stud Framing (where required)
   - Booth Partition Steel Connections
6. Coordinate all work with other trades and with the Owner.
7. Submit shop drawings for approval for all shop fabricated construction.
8. Protect property and Owner operations from damage and/or deleterious activities. Repair any damage which may occur at once.
9. Report any discrepancies to the Architect in writing at once.
10. Provide all temporary lighting, power and heat as required to properly perform the work. Maintain temporary systems throughout the duration of the work or until permanent systems are completed.
11. All workers shall be insured in accordance with the project specifications.
12. Maintain the site in a clean and orderly manner. Remove all debris, excess materials, dirt, and similar items and properly dispose of off site.
13. Allowable unit stress and loading in accordance with local codes and existing building limitations.
14. Provide adequate shoring and bracing for work in progress.
15. New work shall be installed plumb, level and true, aligned as indicated with maximum elevations of 1/8" in a ten foot run. Shim existing surfaces to level floor finished and to plumb wall finishes.
16. Provide temporary signage and maintain same throughout duration of project including but not limited to the following:
    - Standpipes, siamese connections, and fire extinguishers.
    - Address, Building Permit copy and Emergency phone numbers at project entrance.

# DIVISION 02: EXISTING CONDITIONS

DEMOLITION NOTES

1. Remove existing construction and perform demolition work where indicated on the drawings and required by job conditions and as necessary to prepare the site for the new work as further described in the project drawings.
2. Remove demolished items from the site and dispose of them in a legal manner.
3. Maintain exit and access ways in a clean, unobstructed, and properly illuminated manner at all times.
4. Protect existing construction, spaces and work, where indicated on the drawings to remain, free from dust and damage. Provide temporary endosures to insure that no water leakage or damage occurs to the interior areas or structure. Maintain site in a closed and secured manner to prevent theft, vandalism, and unauthorized entry.
5. Demolition work shall include, but not be limited to the following:
   - Abandoned wiring, piping, conduits, fixtures, panels and devices.
   - Partitions and finishes as noted on plans and as needed to complete the work.
   - Clips, brackets, supports, hangers, etc. which are not a part of an assembly or structure to remain.
   - All signage, temporary enclosures, barricades, and clean-up work as needed to protect the building and its occupants.
6. Items to remain shall include:
   - Active utilities, services and systems serving areas not a part of this contract.
   - Doors, partitions, and finishes as indicated on plans.
   - All existing windows and exterior storefront.
   - Existing plaster finishes, as noted.
   - Existing sprinkler system fixtures, if utilized as part of new sprinkler system.
7. Cease operations and immediately notify the owner if the safety of existing construction appears to be endangered at any time. Take precautions to support such endangered construction and do not resume operations until authorized by the Architect.
8. The contractor shall be fully responsible for the adequacy and installation of all temporary shoring systems used during the removal of all structural elements, except, as otherwise agreed by the building dept. and the architect.
9. The drawings do not necessarily indicate the full extent of the work required to be performed. Inspect the existing construction carefully to determine the full extent of work to be performed and the problems involved. No extra compensation will be allowed because of failure to estimate the full extent of the work or for any contingencies in connection therewith.
10. All work shall be performed by skilled and properly equipped personnel. Demolition and removal of items scaffold high or higher shall be lowered by controlled methods, not by throwing or dropping, perform cutting and stripping so that the work to remain is undamaged and in such manner that the new work can be properly connected with it.
11. Demolish existing construction only to the extent necessary for the proper installation of new construction and junction with existing work cut back finished surfaces to straight, plumb and level as required.
12. Sawing shall be performed by experienced craftsmen customarily engaged in and properly equipped for the performance of the type of work required by job conditions. Provide wet vacuum equipment as required for control of waste cooling water.
13. Remove existing construction for installation of piping, conduit and tubing as required by mechanical and electrical trades.
14. Drilling and installing sleeves for passage of piping conduit and tubing shall be done by the trade installing the piping, conduit or tubing.
15. Repair, restore, replace or make good damage to existing construction which occurs as a result of demolition operations at no additional cost to the owner.
16. Do not allow materials and debris generated by demolition activities to accumulate, remove daily and dispose of in a legal matter. No on-site sale or burning of demolished materials will be permitted.
17. Leave all spaces broom clean with all ledges and corners properly cleaned.
18. Glass: Provide protection as may be required to prevent glass breakage at no additional cost, replace in kind all broken glass. Glazing broken during demolition and/or construction activities shall be replaced at no cost to the Owner.
19. Existing Work to Remain: Provide such forms of protection as may be necessary to prevent damage to existing work and equipment to remain.
20. Doors and Hardware: Remove carefully to avoid damage, insofar as possible, leave hardware attached to the door where this is not practical place items of hardware in a cloth bag attached to the door.
21. Partitions: Remove partition finish, studs, plates and sills. Where only a partial run is removed, cut back finish material to the center line of the next adjacent support to remain. Leave remaining material with a clean terminal line with no loose material adhering.
22. Mechanical, Electrical, Plumbing: Carefully review plans and determine lines to be removed and those to be kept active or to be reactivated. Protect lines to remain. Provide for minimum service interruption of lines to remain.
23. Remove fixtures and equipment as indicated, when indicated for reuse, clean, store as directed and protect. Identify point of reuse.
24. Remove existing floor finishes and prepare sub-surface to receive new floor as indicated (see finish schedule). Work shall be acceptable to the point that the finish will accept specified finish with no noticeable alteration having been made. Provide concrete topping and/or leveling where required.
25. All existing to remain items to be inspected & verified to be in good working condition. Clean completely for future use. Notify owner immediately if repair or replacement is required.
26. Verify existing space dimensions after demolition and verify location of all utilities to/through the space in field. Notify architect immediately with any discrepancies with plan.

# DIVISION 05: METALS

STRUCTURAL STEEL NOTES

1. Structural steel shall be detailed, fabricated and erected in accordance with the AISC 'Specification for the Design, Fabrications and Erection of Structural Steel for Buildings' and the AISC 'Code of Standard Practice' with the exception of the following sections:
   - 1.2 (Definition of Architect/Engineer Only), 1.5, 3.1.4, 4.2, 7.6 (last line only) & 7.11.5.
2. Steel shall conform to the following ASTM Specifications:
   - Structural Shapes: A36
   - Steel Pipe: A53
   - Structural tubing: A 500 Grade B
3. Typical beam connections shall be standard AISC framed beam connections unless otherwise shown. All field connection shall be bolted with 3/4" diameter steel bolts conforming to ASTM Specification A 307, except where shown to be welded.
4. Provide government anchors for beams bearing on masonry where anchor bolts or other anchorages are not specified.

METAL AND STUD FRAMING NOTES

1. Comply with the recommendations of the Gypsum Construction Handbook, latest edition, for framing work unless more stringent requirements are specified in the Contract Documents.
2. Provide wood blocking at all door and window openings.
3. Provide double 20 gauge metal studs at all door jambs.
4. Rigidly attach all framing to building structure. Provide top track slip joints or expansion joints where noted.
5. Do not frame over expansion joints in building structure.
6. Do not anchor studs to top runner at gypsum board partitions. Maintain a 1/2" gap between runner and top of stud. Related drywall finish shall not be anchored to top track.
7. Layout wall prior to erection of framing. Report discrepancies or deviations to Architect in writing at once.
8. All dimensions are to face of drywall UNO. Millwork, tile finishes and similar items are not included in the dimension.
9. Where finishes are applied to only one face of framing, provide horizontal backer brace at mid-height to all studs.

# DIVISION 06: WOOD AND PLASTICS

**WOOD NOTES**

1. Minimum lumber stress grade shall be as follows:
   - Douglas-Fir Larch No. 2 or Southern Pine No. 2 Medium Grain (fb single=1,200 and fb repetitive =1,400).
   - Maximum allowable moisture content shall be 19%.

BLOCKING NOTES

1. Drywall contractor shall provide all labor and materials for blocking and backing as indicated in the drawings. Blocking and backing shall be treated for fire resistance as required by code. Anchor all blocking and backing rigidly to building structure or partition framing.
2. Provide blocking and backing for items including, but not limited to the following:
   A. Toilet accessories, wall mounted bathroom accessories, and accommodations for grab-bars: Install blocking as required or recommended by accessory manufacturer. At accessible spaces, solid wood blocking and backing shall be installed at all bathroom accessories, wall hung sinks and cabinets, and shelving as required for compliance with governing Accessibility regulations. Solid blocking shall meet the loading requirements outlined in the governing Accessibility regulations.
   B. Cabinets, counters, millwork, coat hooks, wall-mounted televisions, and wall-hung art work: Provide blocking and backing as noted in drawings or per manufacturer's recommendations for application. If not specified, provide 2x4 horizontal blocking between studs at top and bottom of wall-mounted cabinets, counters, and millwork. If not noted or manufacturer does not provide recommendations, provide 3/4" plywood blocking for shelving, coat hooks, wall-mounted televisions, and wall hung art work.
   C. Plumbing fixtures, electrical equipment, security cameras and devices, and light fixtures. Provide blocking as required by drawings and per manufacturer's recommendations. Coordinate with other trades for size and location.

**PLASTIC LAMINATE COUNTERTOP NOTES**

1. Countertops shall be fabricated from particle board slabs 1" thick minimum.
2. Provide back painting or laminate backing on non-exposed face of countertops and backsplashes.
3. Scribe countertops to wall for 0" to 1/4" maximum joint width. Seal resulting joint with silicone sealant, color to match countertop. Provide scribe edge on back of backsplash.
4. Countertops shall be formed with eased edge post formed plastic laminate finish and integral 4" high backsplash at backside of counter.
5. Laminate on counter surface shall be without seams.
6. Provide cutouts for sinks, lavatories, and appliances. Seal edges or finish with plastic laminate material.
7. All plastic laminate work shall be anchored rigidly in place with concealed anchors.
8. Field measure for all countertops prior to fabrication and submit shop drawings for review.

# DIVISION 07: THERMAL AND MOISTURE PROTECTION

**INSULATION NOTES**

1. Install insulation materials in accordance with manufacturer's recommendations. Fill cavities completely and tape joints between boards.
2. Fill gaps between jambs and framing with non-formaldehyde foam filler.
3. Insulate ducts and plumbing pipes subject to sweating. Refer to Mechanical drawings and notes for additional information
4. Provide thermal gaskets or seal air-tight all openings and penetrations through building envelope or between conditioned and unconditioned spaces including:
   - Electrical devices in exterior walls
   - Pipe penetrations
   - Recessed lighting (see electrical notes for additional information).

# DIVISION 08: DOORS AND WINDOWS

**DOOR NOTES**

1. All hollow metal door frames shall be 16 gauge shop primed, and welded UNO. Provide silencers at all frames. Reinforce frames for heavy weight doors as required.
2. Provide blocking and jamb reinforcing as recommended by door frame manufacturer. Refer to framing details for additional requirements.
3. Provide door and frame hardware preparations in accordance with approved hardware submittals.
4. Hollow metal doors shall be shop primed with minimum 18-gauge face sheet metal, 1-3/4" thick UNO.

**EXISTING ALUMINUM STOREFRONT, WINDOW, AND ENTRANCE DOOR NOTES**

1. Verify existing materials, conditions, and sizes in the field.
2. Replace all broken glass. New glass shall match existing UNO.
3. Provide "FireLite" rated glass at all windows in fire-rated doors to match door rating.
4. Replace all defective or missing window hardware weather-stripping, and flashing. All operable units shall have locks.
5. Caulk, grout, and/or reglaze defective or missing sealants for weather-tight window assembly.
6. All glass, existing and new, shall be clean at time of substantial completion. Remove all tape, labels, paint, dirt and similar items.

HARDWARE NOTES

1. Provide thresholds for all exterior doors, neoprene weather-stripping, typical at heads, jambs, and sills.
2. Provide hardware compatible with door thickness, weight, and material.
3. All exterior doors and doors at tenant demising walls shall have pinned security hinges.
4. All doors shall have locks.
5. All doors shall have 1-1/2 pair hinges for sizes up to 3' x 7'. Larger sizes shall have two pair hinges. All exit doors shall have ball bearing hinges.
6. All double doors shall have top and bottom flush bolts with dust-proof strikes at inactive leaf.
7. Latch bolts shall have 5/8" throw at all latchsets and locksets.
8. Submit hardware component schedule for Architect's review.
9. All doors shall operate in the direction of exit travel without the use of keys.
10. Provide wall bumpers for all doors, where there is no wall adjacent to door to install wall bumper, provide floor bumper.
11. Provide door closers at all interior and exterior doors. Closers shall comply with the Handicap Accessibility Code for closing force.

# DIVISION 09: FINISHES

**FINISH NOTES**

1. All finishes shall be Class 1, 0-25 Flame Spread Rating.
2. Clean and prepare prime surfaces in compliance with the finish materials manufacturer's instructions.
3. Provide a minimum of one (1) prime coat and two (2) finish coats for all painted surfaces, unless noted otherwise. Provide additional coats as may be required to completely cover and conceal substrates. For dark colors and deep clear colors, review final colors and cover with Architect and Owner, apply additional coats as needed until complete cover is achieved and approved by Architect and Owner. All ferrous metal surfaces shall be painted.
4. Do not paint over labels, factory finished metal trim, door hardware, electrical fixtures, equipment, sprinkler heads, or millwork assemblies UNO.
5. Provide a minimum of one gallon of attic stock paint for each color and finish in clearly labeled containers.
6. Paint all hollow metal doors semi-gloss alkyd enamel per Architect's color selection.
7. Existing ceiling and beams to remain exposed. Clean, prepare and paint per Architect's color selection.
8. Paint all exposed ductwork, conduits, and piping semi-gloss alkyd enamel UNO.
9. Provide touch-up painting to match existing paint colors and textures where infill or patch and repair work is required at existing construction.
10. All drywall surfaces shall be painted except where ceramic tile or a wall covering fabric is specified.
11. Provide corner and J-beads at all terminations and corners of gypsum board.
12. All closet/utility shelving shall be medium-density fiberboard with fiberface Grade 1. Provide oil base paint finish.
13. All dimensions to face of drywall UNO.
14. General Contractor shall coordinate final floor finish selections stair construction with existing stair constructions and flooring finishes existing to remain to obtain proper heights and transitions.
15. Review layout of stone, tile, and ceramic tile with Architect prior to installation. All grout lines shall align vertically and horizontally and at all intersections and corners.
16. Cementitious tile backer board shall be used for substrate sheathing at all vertical wall and horizontal ledges to be covered with ceramic tile, unless noted otherwise on the drawings. Provide back up wall framing and continuous edge support as recommended by the board manufacturer..
17. Provide blocking at all bathroom accessories, electrical locations, plumbing, etc., and as required for proper installation and support.
18. Provide thresholds and transitions as required or as noted at all floor material transitions.

DRYWALL NOTES

1. Provide all labor and materials necessary to complete the work in accordance with all applicable codes and governing ordinances.
2. All drywall shall be minimum 5/8" thick UNO.
3. Metal stud framing shall be minimum 25 gauge galvanized or painted sheet metal space maximum 24" O.C. UNO.
4. Comply with the recommendations of the Gypsum Construction Handbook published by the USG Corporation, latest edition, for methods and installation of metal framing and gypsum drywall systems.
5. Provide metal corner reinforcement trim at all outside corner conditions. Trim shall be USG-DUR-A-BEAD or equal.
6. Provide continuous bead of sound sealant at top and bottom of all sound related insulated partitions and at partition penetrations, including electrical openings.
7. Coordinate with other trades for installation of wood blocking.
8. Provide gypsum board edge trim, USG-801-A at exposed edges of all non-full height gypsum drywall partitions except where top of wall has drywall finish.
9. Finish drywall joints and conceal all fasteners using USG 'PERF-A-TAPE' system or equal. Apply finishing compound, sand, and repeat as needed to completely conceal all joints and fasteners.
10. Provide additional supports, brackets, ties, and framing as recommended or required for proper installation and rigid assembly.
11. Clean all surfaces and leave ready for paint. Remove all excess materials and debris from site.
12. Provide water resistant gypsum board at commercial kitchen, bathrooms, and other wet locations.
13. Drywall support systems and framing shall be of sufficient capacity and rigidity to support the assembly with a maximum deflection of L/240 where 'L' represents the length of the span. Deflection limit includes live loads and dead loads simultaneously imposed.

VINYL BASE TRIM AND FLOOR TILE NOTES

1. Verify existing conditions in field. Provide all necessary surface preparation as needed for installation of new work.
2. Where new floor finished are to be installed, provide new base trim.
3. Base trim shall be as follows UNO (see finish schedule and elevations for locations):
   - Tile areas: 4" cove vinyl base 1/8" gauge.
   - Concrete floors: 4" cove vinyl base 1/8" gauge.
4. Allow for individual color selection of base trim for each floor finish type. Base trim shall be as manufactured by VPI, Armstrong, or Roppe from standard colors. All vinyl base trim shall be roll vinyl base, do not use strip vinyl base in any location. Provide seams per manufacturer's recommendations. Seams should be minimized to the greatest extent possible and located in inconspicuous locations
5. Provide pre-formed or molded base trim and tile accessories.
6. Fill gaps between trim and irregular wall surface with manufacturer's recommended filler.
7. Install base trim and tile work with tightly butted joints and seams, mitered to fit with adjoining surfaces. Comply with manufacturer's recommendations for surface preparation and installation.
8. Clean tile surfaces and provide initial sealer polish finish at time of substantial completion.
9. Provide a minimum of 40 sf of tile and 20 lf base trim of each type to tenant for attic stock.

# DIVISION 10: SPECIALTIES

FIRE PROTECTION SPECIALTIES NOTES

1. Refer to Division 21: Fire Suppression Notes, Mechanical, Electrical, and Fire Protection drawings.

# DIVISION 11: EQUIPMENT

KITCHEN AND BAR EQUIPMENT NOTES

1. Coordinate all kitchen and bar appliance installation requirements and clearances with rough carpentry and millwork, VIF. Notify architect of discrepancies or conflicts immediately.
2. Refer to kitchen consultant drawings for specifications and details.

# DIVISION 12: FURNISHINGS

FURNISHING NOTES

1. Coordinate placement of electrical and communications receptacles and distribution with approved furnishings plan.

# DIVISION 21: FIRE SUPRESSION

FIRE PROTECTION NOTES

1. The fire protection work shall be executed on a Design Build basis as indicated in the Design Build section on this page and the notes on the Cover Sheet.
2. All work, materials, and methods shall be in strict accordance with rules and regulations of applicable local codes and regulations.
3. Verify all existing conditions, dimensions, and materials in the field.
4. Provide all permits, arrange for all inspections and pay all fees associated with the fire protection work.
5. Work shall comply with applicable code requirements, Owner's requirements, and approved architectural drawings. Refer to General Conditions for additional requirements.

# DIVISION 22: PLUMBING

**PLUMBING NOTES**

1. See Plumbing Drawings for additional requirements. Provide all labor and materials for a complete plumbing system in accordance with all applicable codes. Inspect existing conditions and materials prior to submittal of bid.
2. Provide sleeves for piping through existing and new construction, and seal following pipework installation with U.L. approved fire rated sealant.
3. Arrange piping to permit equipment and fixture removal. Provide shut-off valves at all equipment and fixtures and as indicated on the Plumbing Drawings.
4. Pressure test all piping systems prior to concealment. Fix all leaks at once. Test duration shall be a minimum of one hour.
5. Where work involves the re-use of existing waste piping systems, contractor shall inspect and rod out all piping to provide a clean and freely operating drainage system in compliance with code requirements.
6. Provide equipment submittals to Architect for review. Submittals are required for all equipment, fixtures, faucets, and accessories. Adequately support all piping and fixtures. Provide expansion loops as required.
7. Provide water hammer prevention systems for water piping at each riser and at each fixture.
8. All water distribution shall be copper or galvanized steel pipe.
9. All waste and vent piping shall be provided as indicated on the Plumbing Drawings.
10. Provide code approved grease trap for kitchen and/or galley sinks.
11. Contractor shall protect all fixtures and faucets from damage throughout the duration of the project. Fixtures, faucets, and equipment shall be clean and free from damage and operational flaws at the time of project completion.
12. Provide all cutting and patching as required. Cutting of structural members such as floor joists, beams, trusses, etc. is not permitted without specific written approval from the Architect and/or Engineer.
13. Provide open site drain at all air conditioning coils for condensation.
14. Provide and install all gas piping, fittings and valves.

# DIVISION 23: HVAC

**ENVIRONMENTAL DESIGN STANDARDS**

1. Refer to Mechanical Drawing for Environmental Design Standards.

HVAC NOTES

1. See Mechanical Drawings for additional requirements. Work shall comply with code requirements, Owner's program, and Environmental Design Standards indicated. Refer to General Conditions for other requirements.
2. The contractor shall inspect the job site for existing conditions and for coordination with all other trades and drawings. Claims for additional compensation due to existing conditions or coordination with other trade will not be given consideration.
3. Provide all cutting, patching, shoring and bracing as required.
4. Provide 1" sound lining 15 feet downstream of all air handling equipment. Insulate ducts as needed to prevent condensation.
5. Ductwork and piping shall be concealed, except as noted, run in straight parallel and/or perpendicular to the building construction and installed as high as possible.
6. Provide factory fabricated turning vanes in all square turn elbows.
7. Provide flexible connections at inlet and discharge of all fan powered equipment and as indicated on drawings.
8. Equipment noise level shall not exceed 55 DB at the lot lines.
9. All outside air intakes shall be installed a minimum of 15' from all exhaust outlets and/or contaminants.
10. Flexible ductwork shall be UL 181 type as approved by code and shall have a maximum length of 5'-0". Flexible ductwork shall not be run in locations where it may be exposed.
11. All expansion valves, devices, and connections shall be removed from the airstream of all mechanical equipment as per code requirements.
12. The contractor shall provide all labor, material, equipment and services required to furnish and install, test, and adjust all heating, ventilating, air conditioning systems, complete in all detail and ready for satisfactory operation.
13. The mechanical contractor shall furnish and install a safety relief valve designed to relieve and/or prevent the build-up of excessive refrigerant pressure within the direct expansion system. The pressure relief device shall be set at 400 PSI and shall be installed on the high temperature side at the discharge of the compressor and upstream of the compressor shut-off (stop) valve.
14. The mechanical contractor shall furnish and install a refrigerant relief discharge pipe. The discharge pipe outlet shall be installed a minimum of 12'-0" above the ground a minimum of 10' from any window and shall discharge through a turned down elbow.
15. All dampers shall be locking type.
16. Provide flashing and sealants for weather-tight penetrations thru exterior walls, foundations, or roof.
17. Flues for gas water heater equipment shall be U.L. rated 'B-vent' complete with supports, fire stops, and elbows. Maintain minimum 1" air space between flue and combustible materials.
18. Provide housekeeping pads and equipment supports as needed.
19. All filters shall be clean at time of project completion.

# DIVISION 26: ELECTRICAL

**ELECTRICAL NOTES**

1. See Electrical Drawings for additional requirements.
2. Verify all existing conditions, dimensions and materials in the field. Report all discrepancies to Architect.
3. All conductors shall be copper. Minimum conductor size shall be #12 AWG. All conductors #10 and larger shall have THWN or THW rated insulation. All others shall have THWN.
4. All work and materials shall conform with the Ankeny Codes and other governing regulations.
5. Electrical contractor shall provide all permits and inspections and pay for all fees associated with this work.
6. All conduit shall be thin wall galvanized steel or intermediate wall galvanized steel conduit. Where conduit runs must be exposed, install against walls or ceilings. Install parallel to major building lines. Exposed conduit shall only be permitted in mechanical rooms UNO. All other conduit shall be concealed from view.
7. Ground all equipment and associated electrical work in accordance with code requirements.
8. Provide all lamps for fixtures. Provide all fuses and drivers.
9. Label circuit breakers and disconnect switches to identify equipment and devices controllers. Directories at panel shall be typed.
10. Balance circuit loads at panels as indicated on the Electrical Drawings.
11. Where penetrations for electrical devices occur on opposite sides of the same full height wall. Do NOT locate within the same stud space as a sound prevention measure.
12. Separate lighting circuits from receptacle circuits. Maximum permitted loads on circuits shall be as permitted by code and indicated in the Electrical Drawings.
13. 'Dedicated Circuit' shall be limited to outlets serving like pieces of equipment. 'Separate Circuit' shall serve a single outlet or piece of equipment.
14. All device trim plates shall be metal plates painted semi-gloss to match adjacent wall surface. Receptacle and switch to be as noted.
15. Unless noted otherwise in the Kitchen Drawings, Electrical Drawings, or Appliance Manufacturer's requirements. Provide a dedicated 20A circuit for countertop receptacles for kitchen counter appliances. Receptacles shall be rated for 20A each.
16. Locate electrical meter and panel as indicated on plans. Provide service entrance equipment, cable and conduit as required.
18. Provide conduit and cable for telephones and/or cable TV wiring system.
19. Provide all motorized entrance door equipment, connections and modular jacks with trim plates. Ground system in accordance with code requirements and those of the utility company.

# DIVISION 32: EARTHWORK

SITEWORK & PAVING NOTES

1. Permits for all work will be provided by the Contractor.
2. The proposed improvements shall be constructed according to the ordinances and requirements of The District at Prairie Trail design guidelines.
3. Construction along existing roadways shall be coordinated with the City of Omaha to insure that the convenience and safety of the general public and of residences along the roadway shall be provided for in an adequate and satisfactory manner. At no time shall the existing roadways be closed to traffic unless approved by the City of Omaha.
4. The Contractor(s) shall be responsible for the installation and maintenance of adequate signs, barricade and warning devices to inform and protect the public. The cost of furnishing and maintaining signs, barricades and warning devices shall be incidental to the contract and no additional compensation will be allowed.
5. Provide all cutting, patching, shoring, and dewatering necessary to complete the work.
6. Earthwork:
   - Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations. Should uncharted utilities be encountered during excavation, consult utility Owner immediately for directions. Existing utilities are to remain in effect during construction.
   - Uniformly grade areas within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated and between such points and existing grades.
   - Determine extent of cut or fill required prior to submitting bid. Provide suitable fill and/or dispose of excess excavated material, waste, trash, and debris off site.

# DIVISION 32: EXTERIOR IMPROVEMENTS

LANDSCAPING NOTES

1. Comply with the regulations and requirements of The District at Prairie Trail and the City of Ankeny design guidelines for all materials, plants and methods or installation.
2. Plant species shall be USDA for Zones 4 or 5 and have been raised at a nursery in a similar climatic zone. All plants shall be high grade quality nursery grown. 'Park Grade' plants are not acceptable. Comply with 'American Standard for Nursery Stock' ANSI Z60-1986.
3. Provide on-going maintenance of plant materials until final acceptance by the Owner. Owner shall provide maintenance of plants for a minimum of two years following initial planting. Maintenance shall include watering, fertilizing, weeding, plant replacement, and trimming.


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STATE OF MISSOURI
JEFF RENTERGHEM
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ARCHITECT

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30hop
owner

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|---|---|---|
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orientation

project number 232882

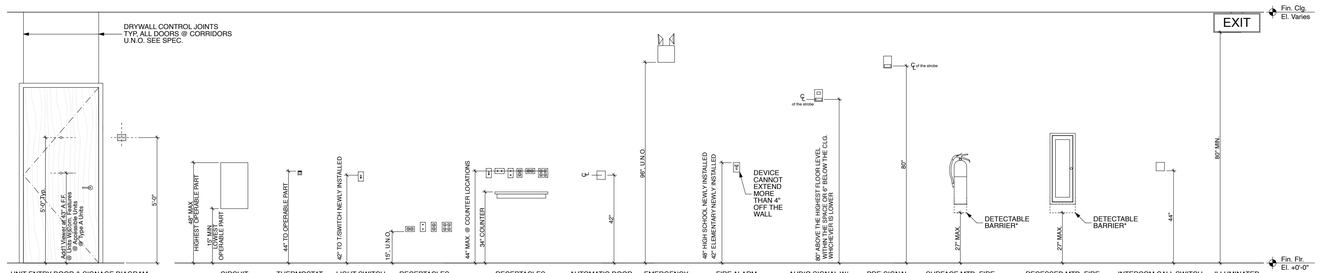
scale As Noted

date 5/1/24

sheet title General Notes

sheet number

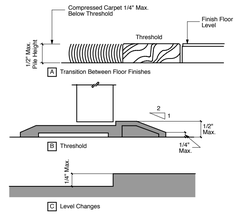
A004




*Note for all doors along accessible route: Doorjgate surfaces within 10 inches of the floor, measured vertically, shall be smooth surfaces on the push side extending the full width of the doorjgate. No obstruction, hardware or protrusion permitted into the area within 10 inches of the floor. Joints in such surfaces shall be within 1/16 inch of the same plane as the other. Cavities created by added kick plates shall be capped*

**Detectable cane barrier to be provided below the extinguisher/cabinet where projection from wall exceeds 4"*

## 19 Typical Fixture Elevations




## 16 Threshold/Transition Details
**Public Spaces & Type A Units**

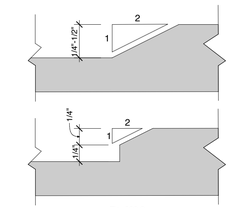
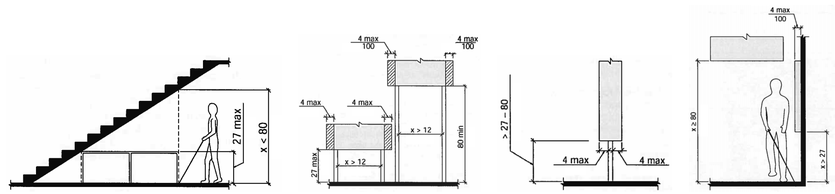



Fig. 303.3

## 15 Beveled Changes in Level
**Public Spaces & Type A Units**, ICC/ANSI A117.1-2009




**Reduced Vertical Clearance**
Fig. 307.4
*Note: All detection rails to be primed and painted steel*

**Post-Mounted Protruding Objects**
Fig. 307.3

**Limits of Protruding Objects**
Fig. 307.2

## 12 Protruding Objects
**Public Spaces & Type A Units**, ICC/ANSI A117.1-2009

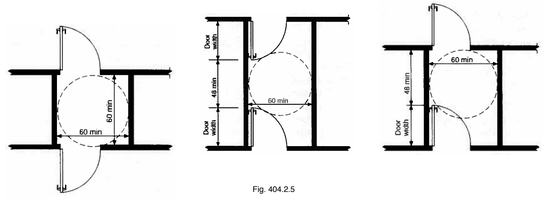
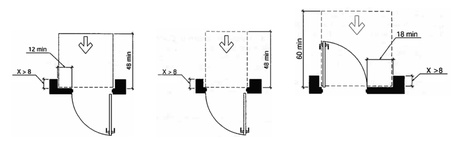



Fig. 404.2.5

## 8 Two Doors in a Series
**Public Spaces & Type A Units**, ICC/ANSI A117.1-2009

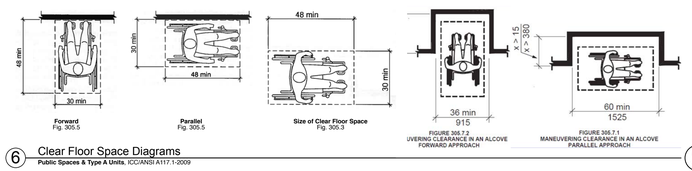



**Push Side Door Provided with Both Closer & Latch**
Fig. 404.2.3.5c

**Push Side**
Fig. 404.2.3.5b

**Pull Side**
Fig. 404.2.3.5a

## 7 Maneuvering Clearances at Recessed Doors
**Public Spaces, Type A Units, & Type B Unit Entries** ICC/ANSI A117.1-2009
*Note: Door maneuvering clearances to be provided at both corridor and unit sides of each unit entry door, regardless of unit type.*




**Forward**
Fig. 305.5

**Parallel**
Fig. 305.5

**Size of Clear Floor Space**
Fig. 305.3

FIGURE 305.7.2
LIVERING CLEARANCE IN AN ALCOVE FORWARD APPROACH

FIGURE 305.7.1
MANEUVERING CLEARANCE IN AN ALCOVE PARALLEL APPROACH

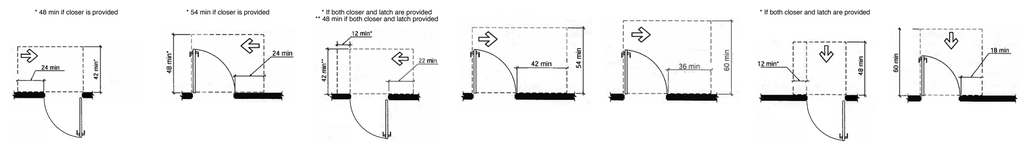
## 6 Clear Floor Space Diagrams
**Public Spaces & Type A Units**, ICC/ANSI A117.1-2009

**Stop or Latch Approach**
Fig. 404.2.3.3c

**Pocket or Hinge Approach**
Fig. 404.2.3.3b

**Front Approach**
Fig. 404.2.3.3a

## 5 Maneuvering Clearance at Sliding and Folding Doors
**Public Spaces & Type A Units**, ICC/ANSI A117.1-2009




**Latch Approach Push Side**
Fig. 404.2.3.2g

**Latch Approach Pull Side**
Fig. 404.2.3.2f

**Hinge Approach Push Side**
Fig. 404.2.3.2e

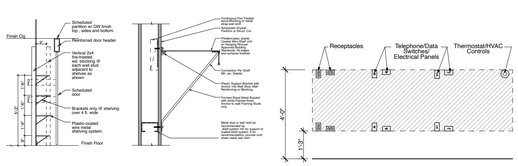
**Hinge Approach Pull Side**
Fig. 404.2.3.2d

**Hinge Approach Pull Side**
Fig. 404.2.3.2c

**Front Approach Push Side**
Fig. 404.2.3.2b

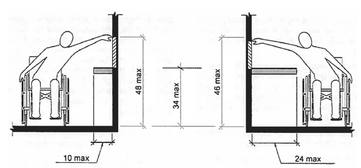
**Front Approach Pull Side**
Fig. 404.2.3.2a

## 4 Maneuvering Clearances at Manual Swinging Doors
**Public Spaces, Type A Units, & Type B Unit Entries** ICC/ANSI A117.1-2009
***Note from ANSI A117.1 2009 Section 404.2.7.2***
*Door spring hinges shall be adjusted so that from an open position of 70 degrees, the door shall move to the closed position in 1.5 seconds minimum.*
*Note: Door maneuvering clearances to be provided at both corridor and unit sides of each unit entry door, regardless of unit type.*

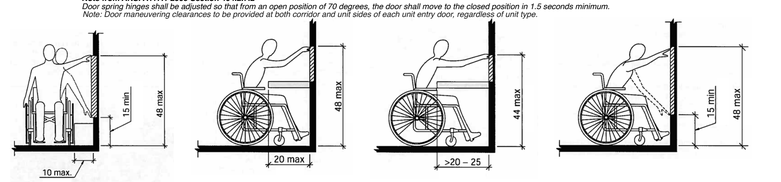



## 3a Open Storage Closet Sections and Details

## 3 Mounting Heights
**Public Spaces, Type A Units, & Type B Unites**, ICC/ANSI A117.1-2009




**Obstructed High Side Reach**
Fig. 308.3.2



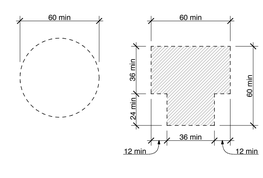

**Unobstructed Side Reach**
Fig. 308.3.1

**Unobstructed High Forward Reach**
Fig. 308.2.2a

**Unobstructed High Forward Reach**
Fig. 308.2.2b

**Unobstructed Forward Reach**
Fig. 308.2.1

## 2 Reach Ranges
**Public Spaces, Type A Units, & Type B Units**, ICC/ANSI A117.1-2009




**Circular**
Fig. 304.3

**T-Shaped**
Fig. 304.3

## 1 Turning Spaces
**Public Spaces & Type A Units**, ICC/ANSI A117.1-2009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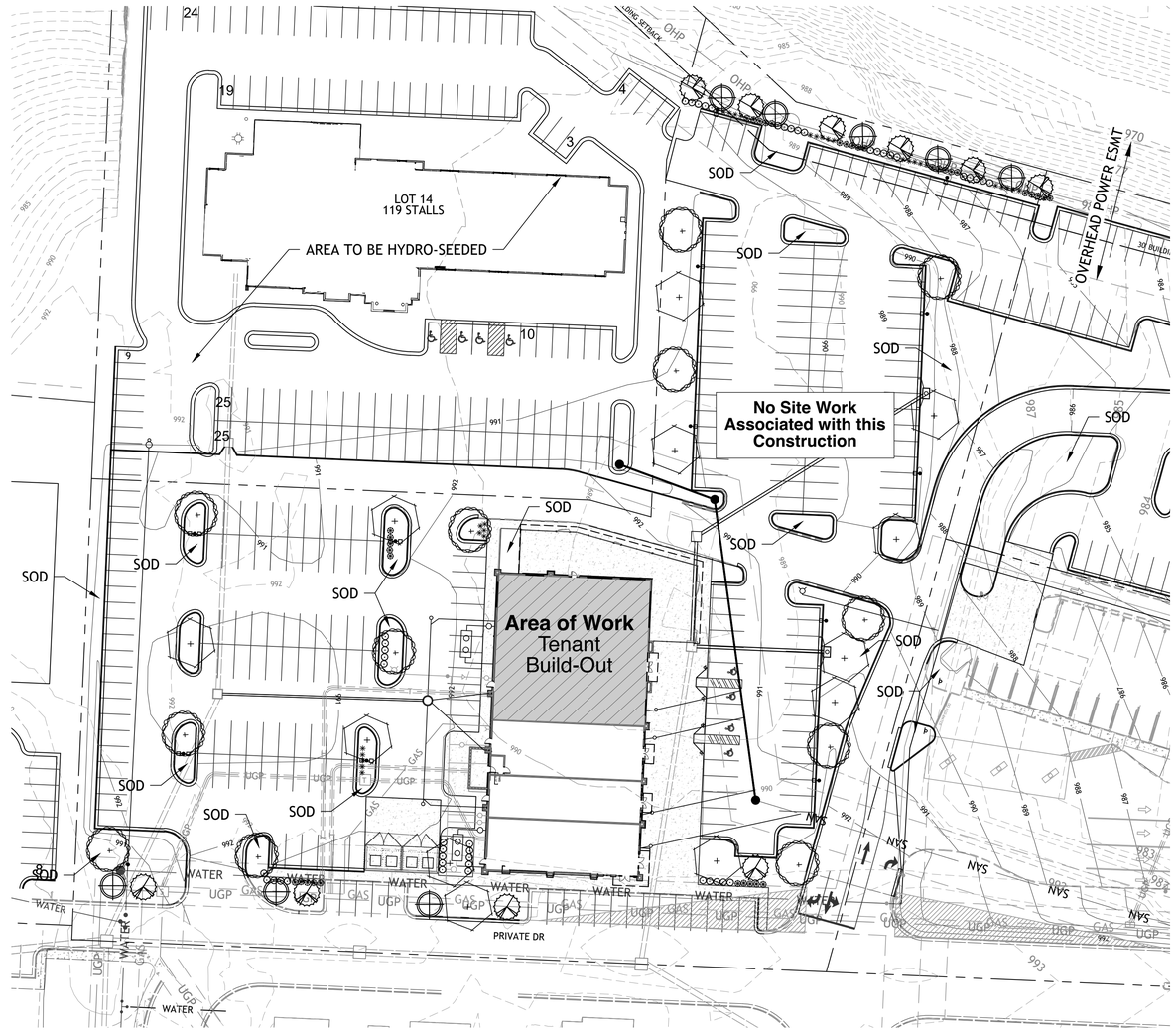
30hop
owner

| date | description |
|---|---|
| 05.02.24 | Issue For Permit |

| | |
|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/1/24 |
| sheet title | Accessibility Notes and Diagrams |
| sheet number | A005 |




1 Site Plan - SOWP Lot 13

NOT TO SCALE

0 1/2" 1" 2"

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|---|---|---|
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orientation

project number 232882

scale As Noted

date 5/1/24

sheet title Site Plan

sheet number

A101

**Seating Summary:**

| Total | | |
|---|---|---|
| Location | Tables | Seats |
| Indoor Seating | 78 | 244 |
| Outdoor Seating | 34 | 172 |
| Total | **112** | **416** |

| Indoor Seating | | | | | |
|---|---|---|---|---|---|
| Type | Description | # of Type | Seats | Seat / Description | Seats / Type |
| Bar-Top | Bar-Top | 38 | 1 | 38 | 38 |
| 2-Top | Two-Top (Low) | 3 | 2 | 6 | 6 |
| 4-Top | Four-Top (Low) | 6 | 4 | 24 | 56 |
| | Four-Top (High) | 0 | | 0 | |
| | Four-Top (High) | 3 | | 12 | |
| | Four-Top (Low Booths) | 5 | | 20 | |
| 6-Top | Six-Top (High Booths) | 6 | 6 | 36 | 126 |
| | Six-Top (High) | 4 | | 24 | |
| | Six-Top (Low) | 0 | | 0 | |
| | Six-Top (Low Booths) | 11 | | 66 | |
| 8-Top | Eight-Top (Low Booths) | 1 | 8 | 8 | 8 |
| 10-Top | Ten-Top (Low Booths) | 1 | 10 | 10 | 10 |
| **Total** | | **# of Tables** | | **Total Seats** | |
| | | **78** | | **244** | |

| Outdoor Seating | | | | | |
|---|---|---|---|---|---|
| Type | Description | # of Type | Seats | Seat / Description | Seats / Type |
| 2-Top | Two-Top (Low) | 3 | 2 | 6 | 6 |
| 4-Top | Four-Top (Low) | 8 | 4 | 32 | 68 |
| | Four-Top (Low Booths) | 9 | | 36 | |
| 6-Top | Six-Top (Low) | 11 | 6 | 66 | 66 |
| 8-Top | Eight-Top (Low) | 1 | 8 | 8 | 8 |
| 12-Top | Twelve-Top (Low) | 2 | 12 | 24 | 24 |
| **Total** | | **# of Tables** | | **Total Seats** | |
| | | **34** | | **172** | |

1 Seating Floor Plan

SCALE: 3/16" = 1'-0"

0 4' 8' 12'

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orientation

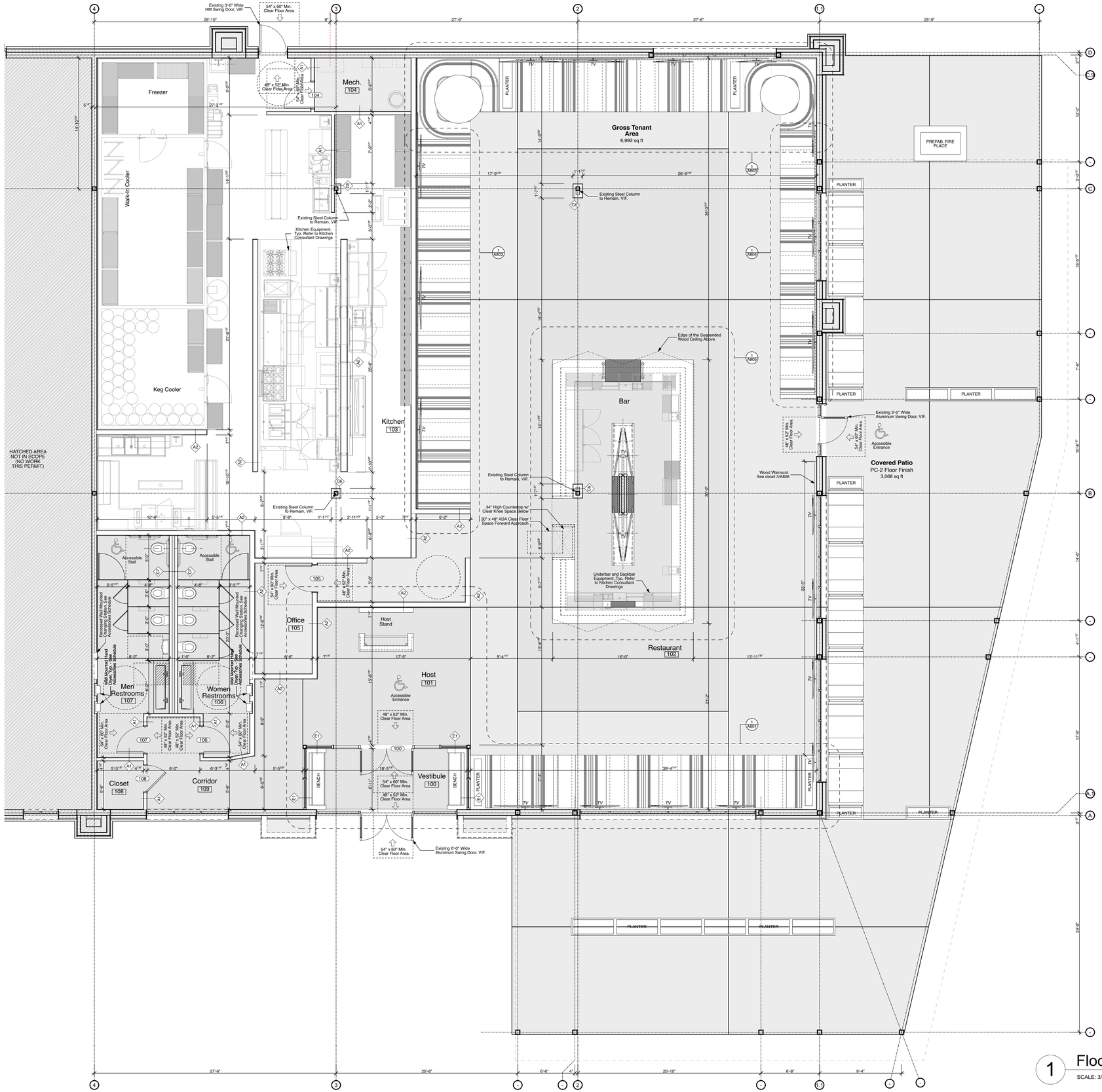
project number 232882

scale As Noted

date 5/1/24

sheet title Seating Floor Plan

sheet number A201




1 Floor Plan

SCALE: 3/16" = 1'-0"

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orientation

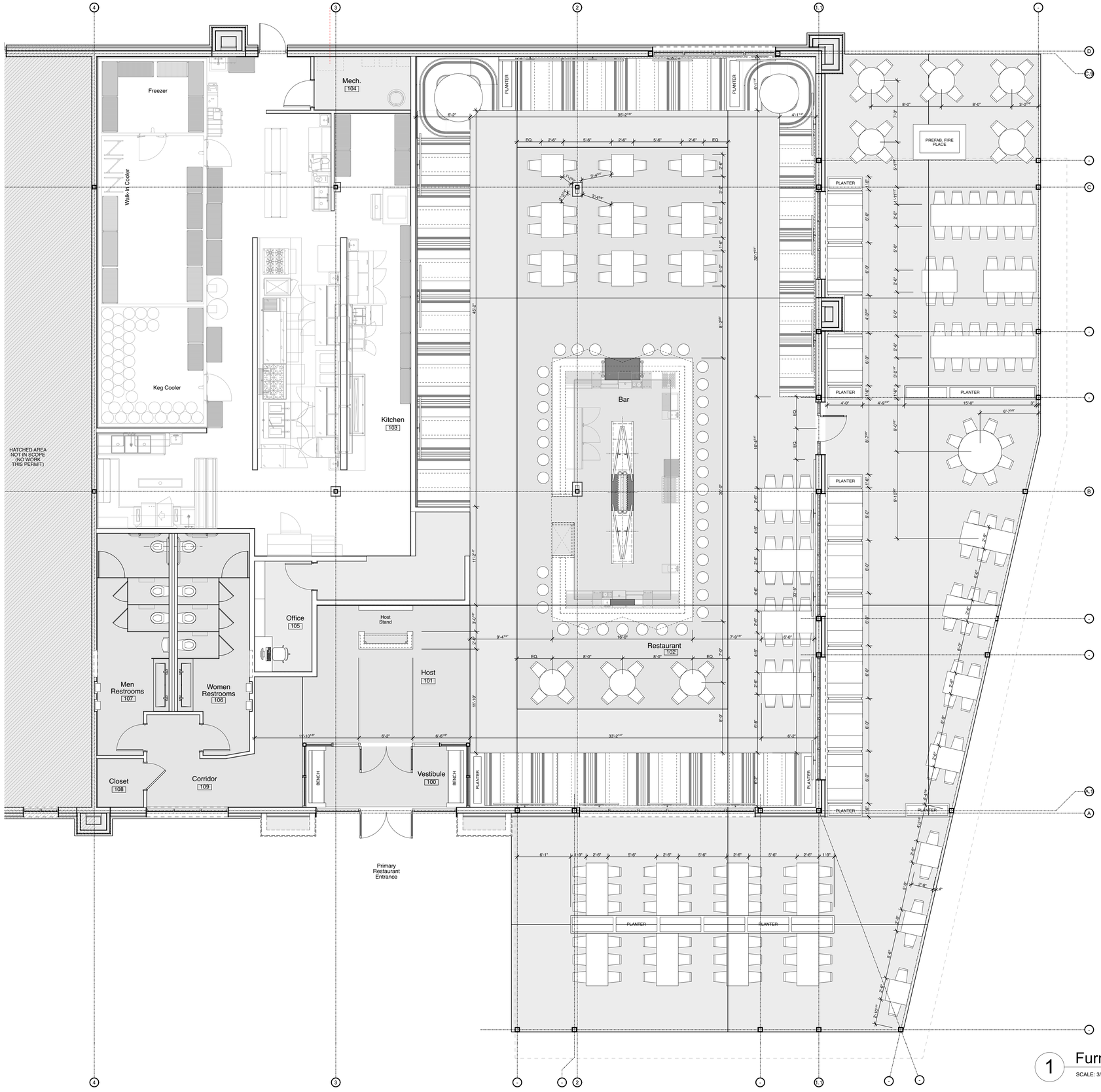
project number 232882

scale As Noted

date 5/1/24

sheet title Floor Plan

sheet number A202




1 Furniture Floor Plan

SCALE: 3/16" = 1'-0"

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|---|---|---|
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orientation

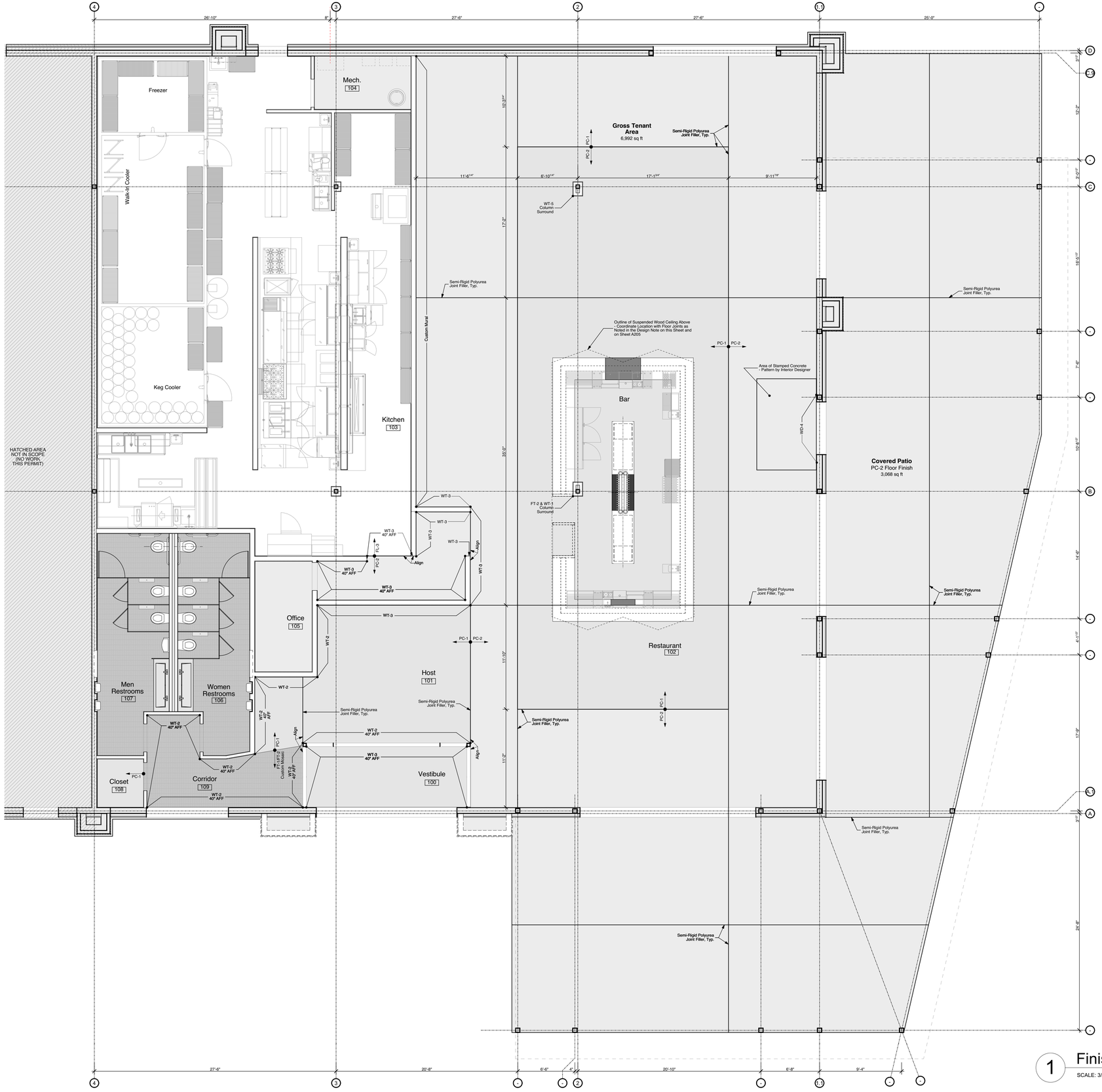
project number 232882

scale As Noted

date 5/1/24

sheet title Furniture Floor Plan

sheet number A203




1 Finish Floor Plan

SCALE: 3/16" = 1'-0"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owner

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|---|---|---|
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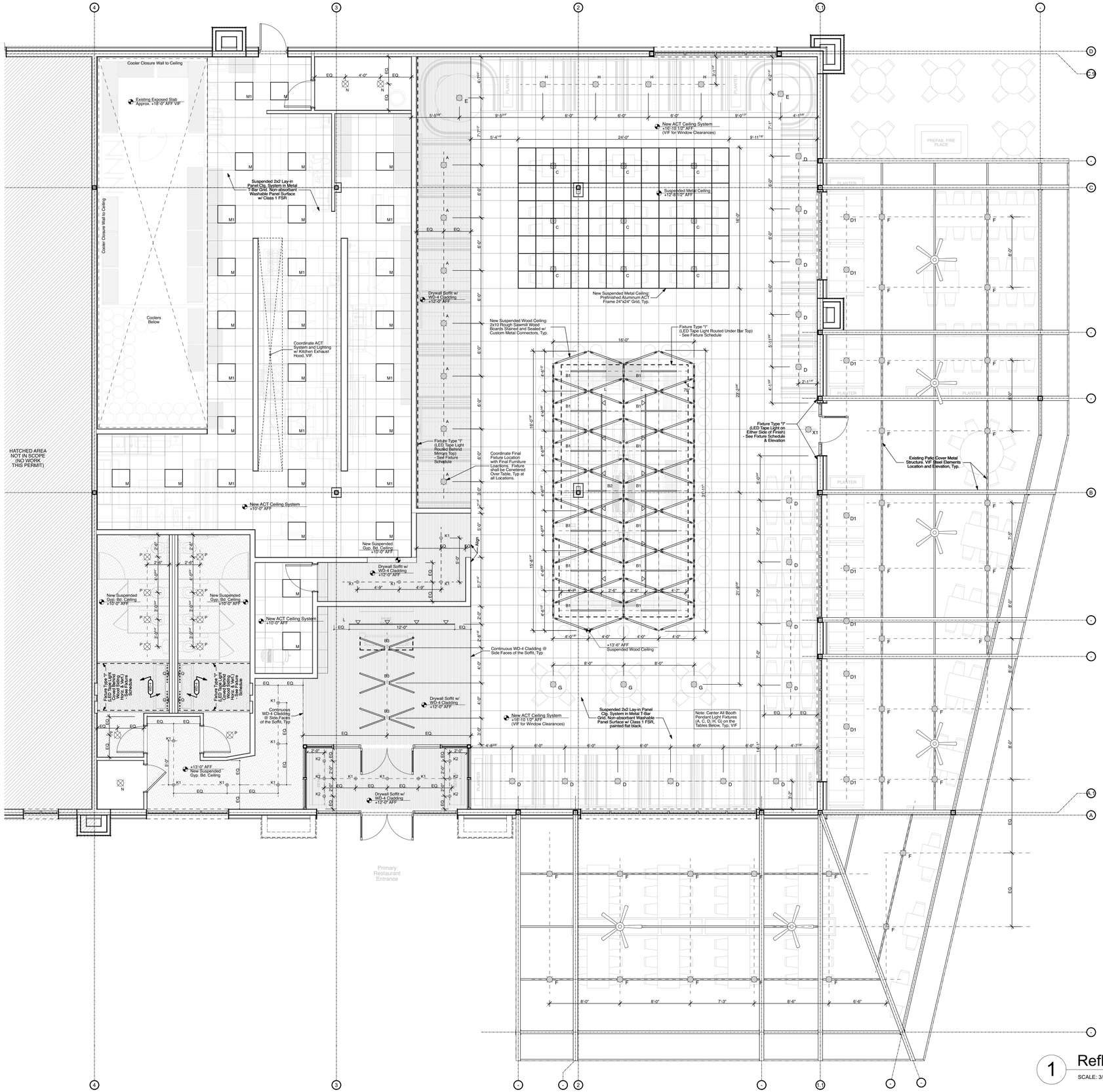
project number 232882

scale As Noted

date 5/2/2024

sheet title Floor & Wall Finish Floor Plan

sheet number A204




1 Reflected Ceiling Plan

SCALE: 3/16" = 1'-0"

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orientation

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|---|---|
| project number | 232882 |
| scale | As Noted |
| date | 5/1/24 |
| sheet title | Reflected Ceiling Plan |
| sheet number | A205 |

## Room Finish Schedule

| Room No | Room Name | Floor | | | | | Walls | | | | | | | | | | | Base | | | Ceiling | | | | | | Ceiling Height | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PC-1 | PC-2 | FL-1 | FL-3 | FT-1/FT-2 | WT-1 | WT-2 | WT-3 | WT-4 | WP-1 | FRP-1 | PT-1 | PT-2 | PT-3 | PT-4 | WD-4 | B-1 | B-2 | B-3 | CLG-1 | CLG-2 | CLG-3 | CLG-4 | CLG-5 | CLG-6 | | |
| 100 | Vestibule | | X | | | | | | | | | | | X | | | | X | | | | | | | | X | 12'-0" | |
| 101 | Host | | X | | | | | | X | | | | | X | | | X | X | | X | | | | | | X | 12'-0" | |
| 102 | Restaurant & Bar | X | X | X | | | | X | | | | | | X | | X | X | X | X | X | | | X | X | X | X | 16'-10 1/2" VIF; 13'-6"; 12'-0" | |
| 103 | Kitchen | | | | X | | | | | | | X | | | | X | | X | | | | | | | X | | 10'-0" | Provide Protect-All system with a minimum height of 8-0" to match FL-3 floor finish at the dishwasher area. |
| 104 | Mech | | X | | | | | | | | | | X | | | | | X | | | X | | | | | | VIF | |
| 105 | Office | X | | | | | | | | | | | X | | | | | X | | | X | | | | | | 10'-0" | |
| 106 | Women's Restroom | | | | | X | | | | X | X | | | X | | | X | | X | | | X | | | | X | 10'-0" | Custom Mosaic by Interior Designer |
| 107 | Men's Restroom | | | | | X | | | | X | X | | | X | | | X | | X | | | X | | | | X | 10'-0" | Custom Mosaic by Interior Designer |
| 108 | Closet | | X | | | | | | | | | | X | | | | | X | | | X | | | | | | VIF | |

5 Room Finish Schedule

SCALE: 1:0.67

## FIRE STOP SCHEDULE

REFER TO UL SYSTEM DETAILS FOR MORE INFORMATION

| PENETRATED ASSEMBLY | SINGLE PIPE | MULTIPLE PIPES | INSULATED PIPES | MULTIPLE INSULATED PIPES | METAL DUCTWORK | METAL GREASE DUCT | ELECTRICAL BUS DUCT | CABLES |
|---|---|---|---|---|---|---|---|---|
| CONCRETE FLOOR SLAB | C-AJ-1175 2HR | C-AJ-1175 2, 3, 4HR | C-AJ-5001 1, 2, 3HR | C-AJ-5001 3HR | C-AJ-7018 2HR | C-AJ-7018 2HR | C-AJ-6002 3HR | C-AJ-3021 2HR C-AJ-3020 |
| CMU WALL NON-BEARING | C-AJ-1175 2HR | C-AJ-1175 2, 3, 4HR | C-AJ-5001 1, 2, 3HR | C-AJ-5001 3HR | C-AJ-7018 2HR | C-AJ-7018 2HR | C-AJ-6002 3HR | C-AJ-3015 2HR |
| D.W. WALL NON-BEARING | W-L-7011 1, 2HR | W-L-8009 1, 2HR | W-L-5065 2HR | W-L-8010 1, 2HR | W-L-7012 1, 2HR | | W-L-6002 2HR | W-L-3076 2HR W-L-3032 2HR W-J-3019 2HR |

NOTES:

1. Refer to Underwriter's Fire Resistance Directory for Additional Assembly Requirements. Contractor shall provide Alternate Systems as Required to Suit Assembly & Penetrating Item.
2. Contractor may Submit Alternate Designs which Satisfy Project Requirements for Approval by the Architect.
3. System Shall Provide Firestop Rating Equal to or Greater than Partition or Floor Structure Fire Rating as Indicated on Plans or in Schedules.
4. Provide Accessory Sleeves, Braces, Forms, Supports and Frames as Needed to Complete the Firestop System per U.L. Design Specifications.
5. Seals at Floors shall be Watertight when provided in Parking Areas or at Exterior Conditions. Provide Supplementary Sealants or Gaskets as Required.

## FIRE RESISTANCE SCHEDULE - MINIMUM PARTITION RATINGS

| REQUIRED HOURLY SEPARATION REQUIREMENTS BETWEEN VARIOUS BUILDING USES | DWELLING | CORRIDOR | ELECTRICAL RM. | SWITCHGEAR / GENERATOR | STORAGE RM. (under 100sf) | STORAGE RM. (over 100sf) | STAIRS (Public) | ELEVATORS | TRASH CHUTE | SHAFTS (over 9sf) | PARKING / LOADING | RETAIL | BUSINESS | COLUMNS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DWELLING | 1-HR | | | | | | | | | | | | | |
| CORRIDOR | 1-HR | 0 | | | | | | | | | | | | |
| ELECTRICAL RM. | 2-HR | 2-HR | 2-HR | | | | | | | | | | | |
| SWITCHGEAR / GENERATOR | 3-HR | 3-HR | 3-HR | 3-HR | | | | | | | | | | |
| STORAGE RM. (under 100sf) | 1-HR | 1-HR | 2-HR | 3-HR | 1-HR | | | | | | | | | |
| STORAGE RM. (over 100sf) | 2-HR | 2-HR | 2-HR | 3-HR | 2-HR | 2-HR | | | | | | | | |
| STAIRS (Public) | 2-HR | 2-HR | 2-HR | 3-HR | 2-HR | 2-HR | 2-HR | | | | | | | |
| ELEVATORS | 2-HR | 2-HR | 2-HR | 3-HR | 2-HR | 2-HR | 2-HR | 0-HR | | | | | | |
| TRASH CHUTE | 2-HR | 2-HR | 2-HR | 3-HR | 2-HR | 2-HR | 2-HR | 2-HR | 0 | | | | | |
| SHAFTS (over 9sf) | 2-HR | 2-HR | 2-HR | 3-HR | 2-HR | 2HR | 2-HR | 2-HR | 2-HR | 0 | | | | |
| PARKING / LOADING | 3-HR | 3-HR | 3-HR | 3-HR | 3-HR | 3HR | 3-HR | 3-HR | 3-HR | 3-HR | 0 | | | |
| RETAIL | 1 HR | 1-HR | 2-HR | 3-HR | 1-HR | 2HR | 2-HR | 2-HR | 2-HR | 2-HR | 3-HR | 0 | | |
| BUSINESS | 1 HR | 1-HR | 2-HR | 3-HR | 1-HR | 2HR | 2-HR | 2-HR | 2-HR | 2-HR | 3-HR | 1-HR | 0 | |
| COLUMNS (ROOF COLUMNS 2-HRS) | 3-HR | 3-HR | 3-HR | 3-HR | 3-HR | 3-HR | 3-HR | 3-HR | 3-HR | 3-HR | 3-HR | 3-HR | 3-HR | |

See plans and details for additional requirements.
Above ratings reflect minimum requirements to satisfy Code required fire ratings.
Plan indicated wall types or construction details may provide ratings higher than the above indicated minimums.

**Notes:**

1 HR Rated Fire Separation Required at Demising Partitions Between Units

2 HR Rated Fire Separation Required at Corridor and Stair Walls

4 Fire Stop Schedule

## Door Schedule

| Door # | Type | Location | Door Size W | Door Size H | Door Size THK | Material | Glazing | Finish | Frame Type | Frame Finish | Fire Rating | HDW | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | A | Vestibule | 3'-0" | 7'-0" | 2" | Aluminum Storefront | IGU, Tempere | Match Adjacent | Aluminum Storefront | Match Adjacent | NR | C-2 | |
| 104 | B | Mechanical | 3'-0" | 7'-0" | 1 3/4" | HM | - | Ptd. | HM | Ptd. | NR | C-4 | |
| 105 | B | Office | 3'-0" | 7'-0" | 1 3/4" | HM | - | Ptd. | HM | Ptd. | NR | C-3 | |
| 106 | B | Women's Toilet Room | 3'-0" | 7'-0" | 1 3/4" | HM | - | Ptd. | HM | Ptd. | NR | C-1 | |
| 107 | B | Men's Toilet Room | 3'-0" | 7'-0" | 1 3/4" | HM | - | Ptd. | HM | Ptd. | NR | C-1 | |
| 108 | B | Closet | 3'-0" | 7'-0" | 1 3/4" | HM | - | Ptd. | HM | Ptd. | NR | C-4 | |

**Note:** All doors to open in the direction of egress travel unless noted otherwise, typical. Exterior Doors and Hardware by Others - Refer to Base Building Drawings.
* Coordinate with overhead door for door height and glazing divisions.

### Hardware Set C-1

| Door Type | Component | Remarks |
|---|---|---|
| Restroom (Multi-user) | Lockset | ADA Lever Style Handles |
| | Closer | ADA Compliant |
| | Hinges | |
| | Foot Pull | Hands Free Open from Interior |
| | Wall Stop | |
| | | |

### Hardware Set C-2

| Door Type | Component | Remarks |
|---|---|---|
| Vestibule Storefront | Lockset | Coordinate Locking Requirements with Owner |
| | | Color Match Lockset to Door |
| | Door Pull | Pull Side of Door / ADA Compliant |
| | Push Bar | Full Width of Door |
| | | Push Side of Door / ADA Compliant |
| | Closer | ADA Compliant |
| | Hinges | Continuous Geared Hinges - Color Match Door/Storefront. |
| | Door Sweep | |
| | Weatherstripping | |
| | Kickplate | 10" (H) - Inside Only - Color Match Door / Storefront |

### Hardware Set C-3

| Door Type | Component | Remarks |
|---|---|---|
| Office | Lockset | ADA Lever Style Handles |
| | | Keyed both sides |
| | Closer | ADA Compliant |
| | Hinges | |
| | Wall Stop | |
| | | |

### Hardware Set C-4

| Door Type | Component | Remarks |
|---|---|---|
| Closet | Lockset | ADA Lever Style Handles |
| | | Keyed outside |
| | Closer | ADA Compliant |
| | Hinges | |
| | Wall Stop | |
| | Kickplate | 10" (H) - Inside Only |

3 Door & Hardware Schedules

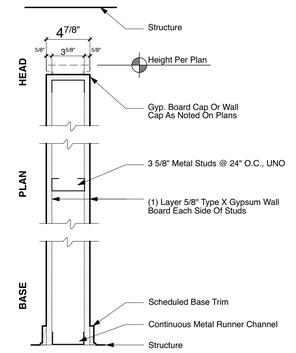
SCALE: 1:1.25

## Material Finish Schedule (Basis-of-Design)

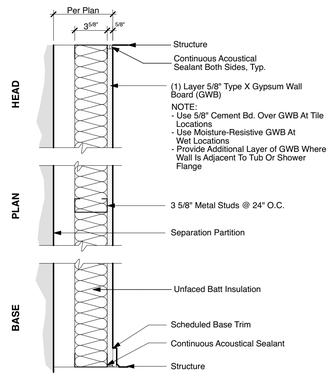
| | Description | Location | Manufacturer | Product | Color / Finish | Notes |
|---|---|---|---|---|---|---|
| **WALL FINISHES** | | | | | | |
| WT-1 | Accent Tile (Bar Face) | Bar Face | Tile Bar | Tile Bar - Metal 0.75" Pennyround | Stainless Steel | Provide Samples/Mock-up for Owner review and approval See Int. Elevations for Tile Pattern |
| WT-2 | Accent Tile (Planters/Entry) | Planters/Entry | Virginia Tile | WOW USA Sweet Bars - 4.6" x 4.6" | Olive Gloss - WOWSBOL55G | Provide Samples/Mock-up for Owner review and approval See Int. Elevations for Tile Pattern |
| WT-3 | Wall Tile Panel | Host Wall Behind Sign | Virginia Tile | 1 x 3 (M) X 5.6MM Tile | Laminam - Oxide Bianco | Vertical pattern; Align Joints |
| WT-4 | Wall Tile (Restrooms) | Restrooms | Daltile | Colorwheel Linear - 2" x 8" | Matte Arctic White - 0790 | |
| WT-5 | Wall Tile Panel | Bar Column | Virginia Tile | 1 x 3 (M) X 5.6MM Tile | Laminam - Oxide Nero | Vertical pattern; Align Joints |
| WP-1 | Vinyl Wall Covering | Bathroom Walls | Dreamscapes | Custom Wallpaper / Graphic | Custom Graphic | Provide Level 5 Drywall Finish for Smooth Wall Covering Installation |
| WP-2 | Vinyl Wall Covering | Booths | Korographics Artist Canvas | Custom Wallpaper / Graphic | Custom Graphic | Provide Level 5 Drywall Finish for Smooth Wall Covering Installation |
| FRP-1 | Fiber Reinforced Plastic | Kitchen Walls | Crane Composites | GlasBord Smooth Wall Panel | White I 85 - Kitchen Black I 1201 - Bar | Review final FRP colors and locations with Owner prior for approval |
| PT-1 | Latex-Based Paint | Field Paint Color | Sherwin Williams | ProMar 200 Zero VOC | Iron Ore SW7069; Eg-Shel | Provide mock-ups in field for Owner review and approval |
| PT-2 | Latex-Based Paint | Accent Paint Color | Sherwin Williams | ProMar 200 Zero VOC | Color Match: Coordinate with Interior Designer | Provide mock-ups in field for Owner review and approval |
| PT-3 | Acrylic-Based Paint | HM Doors/Frames | Sherwin Williams | Pro-Industrial DTM Acrylic | Iron Ore SW 7069; Semi-Gloss | Provide mock-ups in field for Owner review and approval |
| PT-4 | Acrylic-Based Paint | Exposed Steel (Columns, Channels, Etc.); HVAC | Sherwin Williams | Pro-Industrial DTM Acrylic | Tricorn Black SW6258; Semi-Gloss | Provide mock-ups in field for Owner review and approval |
| **FLOOR FINISHES** | | | | | | |
| FT-1 | Floor Tile (Mosaic) | Floor Mosaic | Daltile | Keystones - Pennyround Solid Colors | Matte Arctic White - D617 | |
| FT-2 | Floor Tile (Floor Mosaic / Bar Face) | Floor Mosaic / Bar Face | Daltile | Keystones - Pennyround Solid Colors | Matte Black - D311 | |
| PC-1 | Polished, Stained, and Sealed Concrete | Concrete Field Color | Ameripolish | - | White / Gray | Color to be reviewed and approved by Owner |
| PC-2 | Polished, Stained, and Sealed Concrete | Concrete Accent Color | Ameripolish | - | Gray / Black | Color to be reviewed and approved by Owner |
| FL-1 | Vinyl Sheet Flooring | Raised Booth Flooring | Tarkett | iQ Optima | TBD | |
| FL-3 | Welded Vinyl Flooring | Kitchen | Protect-All Flooring | - | Light Gray | Provide Protect-All cove base system with a minimum height of 6" and manufacturer's recommend cove base cap |
| **CEILING** | | | | | | |
| CLG-1 | Spray-Applied Cellulose Acoustical Finish System | All Exposed Ceiling Surfaces | Soprema | Sonaspray FC | Black | Applied to underside of existing exposed composite floor/ ceiling slab and all other exposed ceiling surfaces. |
| CLG-2 | Suspended Gypsum Board Ceiling | Restroom, Corridor, Soffits | - | - | - | Painted Finish |
| CLG-3 | Suspended Painted Light Metal Open Frame | Central Dining Room | USG | GridWare Open Cell Decorative Suspension System | TBD | Ceiling cloud at central Dining Area, USG Gridware Open Cell Decorative System. |
| CLG-4 | Suspended Custom Fabricated Wood Ceiling | Bar Area | - | - | See Details | Custom ceiling clouds; 2x10 rough sawmill wood bolted to metal connectors. |
| CLG-5 | Suspended 2x2 Lay-in Panel Ceiling System in Metal T-Bar Grid | Kitchen, All Dinning Room & Bar | USG | Sheetrock Lay-In Ceiling Panel ClimaPlus | White | Non-Absorbant washable panel surface w/ Class 1 Flame Spread Rating Provide manufacturer's recommended tee grid, color to match ceiling tile |
| CLG-6 | Reclaimed Wood - Slats Over Gyp Board Ceiling | Partially @ Dinning Room | TerraMai | Lost Coast Redwood Mini Slat Modular Panel | Factory Pre-finished | Provide samples for Owner review and approval. |
| **BASE TRIM** | | | | | | |
| B-1 | 4" Vinyl Cove Base | - | Armstrong | - | R48MG - Metal Gray | Typical at Painted Walls. |
| B-2 | 4" Vinyl Cove Base | - | Armstrong | - | R41EB - Ebony | Typical at Bar Millwork |
| B-3 | Stainless Steel Base Trim | Typical at All Booths, Banquettes & Millwork Knee Walls, and WD-4 Siding | - | | Stainless Steel | Continuous at All Booths and Millwork Knee Walls |
| **MILLWORK** | | | | | | |
| WD-1 | Millwork Grade Veneer Plywood | See Interior Elevations / Details | - | Plain Sliced White Oak | Stained (Minwax Wood Finish Water-Based Semi-Transparent Color Stain, Olde Maple MW1182) | Provide at all exposed surfaces not indicated for other finish. All exposed edges and faces to be finished and stained. Provide samples for Owner review and approval. |
| WD-2 | Solid Hardwood Trim | See Interior Elevations / Details | - | Plain Sliced White Oak | Stained (Minwax Wood Finish Water-Based Semi-Transparent Color Stain, Olde Maple MW1182) | All exposed edges and faces to be finished and stained. Provide samples for Owner review and approval. |
| WD-3 | Solid Hardwood | See Interior Elevations / Details | Stacked Wood | Plain Sliced White Oak | Factory Pre-finished | Provide samples for Owner review and approval. |
| WD-4 | Reclaimed Wood - Slats | See Interior Elevations / Details | TerraMai | Lost Coast Redwood Mini Slat Modular Panel | Factory Pre-finished | Provide samples for Owner review and approval. |
| LM-1 | Laminate Particle Board | Bar Cabinets | Formica | Laminate Particle Board | 909-SP Black | Provide mock-ups in field for Owner review and approval. Laminate all exposed edges to match panels. |
| LM-2 | Laminate Particle Board | Back Bar Countertop | Formica | Laminate Particle Board | M2178 Brushed Stainless Steel | Provide mock-ups in field for Owner review and approval. Laminate all exposed edges to match panels. |

**Note:** GC to confirm final finishes and finish locations with Owner and Interior Designer.

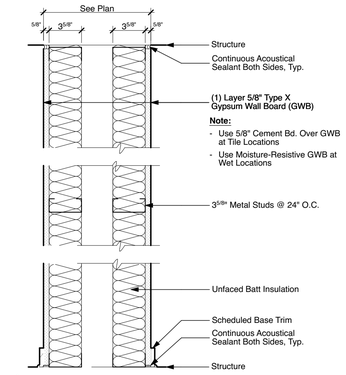
2 Material Finish Schedule



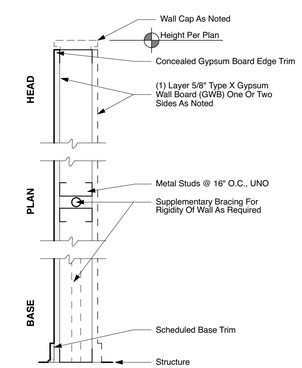

D1 **Partial Height Partition**
Non-Load Bearing
Non Rated




C6 **Furred Partition**
Non-Bearing
Not Rated




C7 **Furred Plumbing Partition**
Non-Bearing
Not Rated

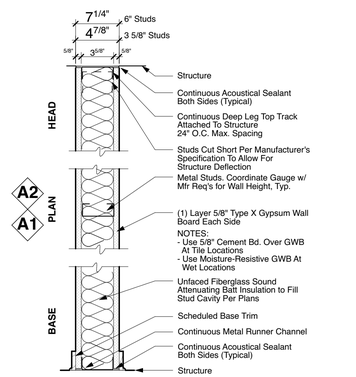



E1 **Knee Wall - 1 Sided**
3 5/8" Metal Studs With (1) Layer GWB On (1) Side Only - Not Rated

E2 **Knee Wall - 2 Sided**
3 5/8" Metal Studs With (1) Layer GWB Each Side - Not Rated

E3 **Knee Wall - 1 Sided - 6" Studs**
6" Metal Studs With (1) Layer GWB On (1) Side Only - Not Rated

E4 **Knee Wall - 2 Sided - 6" Studs**
6" Metal Studs With (1) Layer GWB Each Side - Not Rated




A1 **Interior Partition**
3 5/8" Metal Studs @ 24" O.C. With 5/8" GWB Each Side
Non-Load Bearing
Rating: UL #U419 - 1 Hour

A2 **Interior Partition**
Same As A1 With 6" Metal Studs @ 24" O.C.
Non-Load Bearing
Rating: UL #U419 - 1 Hour

Note: Provide 3/4" Plywood and Add'l Treated Wood Blocking at Back Bar as Req'd for Installation of Wall Mounted Tap Towers, Shelves, TVs, Etc.

1 Wall Types Schedule

SCALE: 1 1/2"= 1'-0" 0 6" 12" 18"


640 N Lasalle
Suite 400
Chicago Illinois 60654
312 337 3344
Architecture
Urban Planning

**Pappageorge Haymes Partners**
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STATE OF MISSOURI
JEFF RENTERGHEM
NUMBER A-2024000851
ARCHITECT

I hereby certify that these plans were prepared under my direction and to the best of my knowledge and belief conform to the City of Lee's Summit Building Codes and Ordinances.

Name: Jeff Renterghem
License No.: A-2024000851
Exp: 12/31/2024

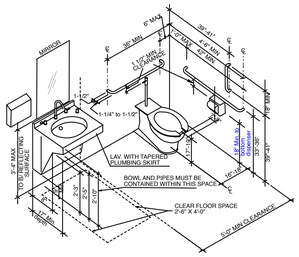
**NOT FOR CONSTRUCTION**

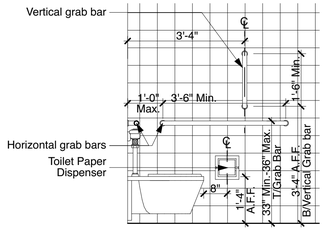
30hop
american grill • craft beer • rooftop patio

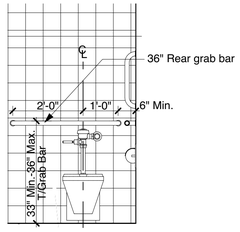
**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

| | |
|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/1/24 |
| sheet title | Wall Types & Schedules |
| sheet number | A301 |



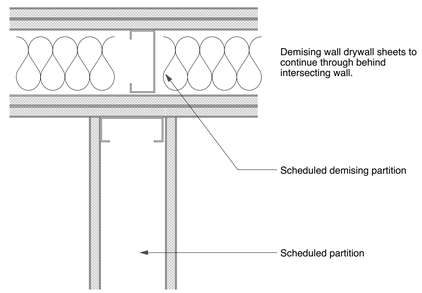




## 3 Typ. ADA Grab Bars and Mounting Heights

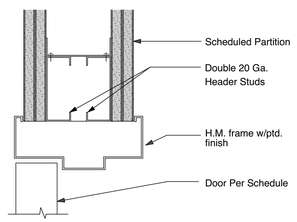
NOT TO SCALE

0 1/2" 1" 2"



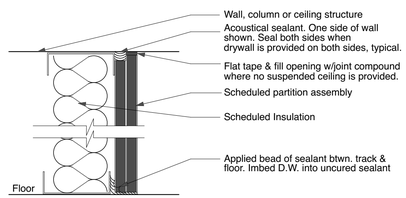

## Corner Demising Detail - Typ.

**NOT TO SCALE**



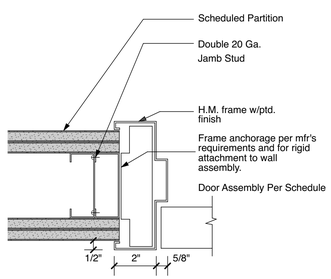

## Typical H.M. Door Head Detail

**NOT TO SCALE** **For 'B' Label Assemblies or Better**



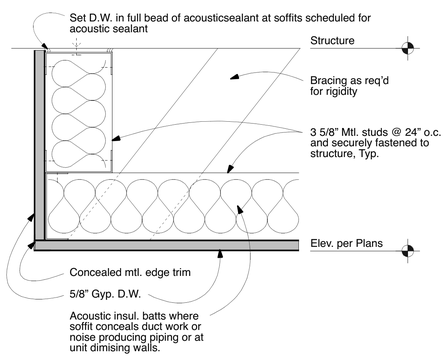

## Acoustical Sealant Detail - Typ.

**NOT TO SCALE** **Typical installation @ Perimeter Demising Partitions**



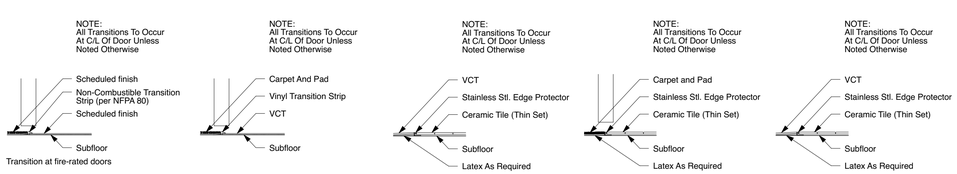

## H. M. Entry Door Jamb Detail - Typ.

**NOT TO SCALE**




## Non-Rated Soffit Framing Detail - Typ

**NOT TO SCALE**




## 4 Misc. Interior Details

SCALE: 1' = 1'-0"

0 1/2" 1" 2"

## Plumbing Fixture Schedule

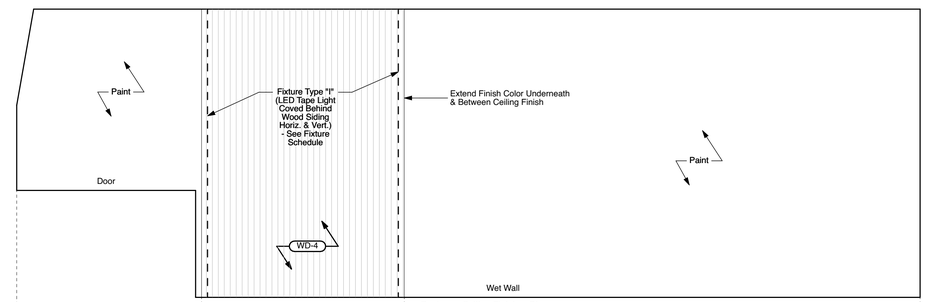
**Plumbing Fixtures**

| Fixture | | | Style | | | | Remarks |
|---|---|---|---|---|---|---|---|
| Tag | Type | Description | Manufacturer | Model Name / No. | Color/Finish | Size | |
| SK-1 | Toilet Room Sinks (Women's, Men's) | 2-Station Wall-Mounted. 72" Floating Concrete Ramp Sink w/ADA Shroud | Trueform Concrete | FLO-72V-ADA | TBD | 72" X 22" X 5" | ADA compliant. |
| LAV-1 | Bathroom Faucet | Hard Wired Sensor Operated Faucet | Sloan | EBF-85 | Polished Chrome | | ADA compliant. |
| WC-1 | Toilet | Flushometer - Floor Mounted | Kohler | K-96057 Highcliff | White | Rim Height: 17" | Must be ADA compliant. |
| UR-1 | Urinal | Flushometer - Wall Hanging | Kohler | 4991-ET 'Bardon' | White | Rim Height: 17" | Must be ADA compliant. |
| FV-1 | Flush Valves - Toilet | Top Spud | Sloan | 111-1.6 SFSM | Polished Chrome | - | 1.6 gpf. BatteryOperated with True Mechanical and Manual Override. Do Not Place Grab Bars in Front of Sensor. |
| FV-2 | Flush Valves - Urinal | Exposed Urinal Flush Valve | Sloan | Royal 186-0.5 SFSM | Polished Chrome | - | 0.5 gpf. BatteryOperated with True Mechanical and Manual Override. |

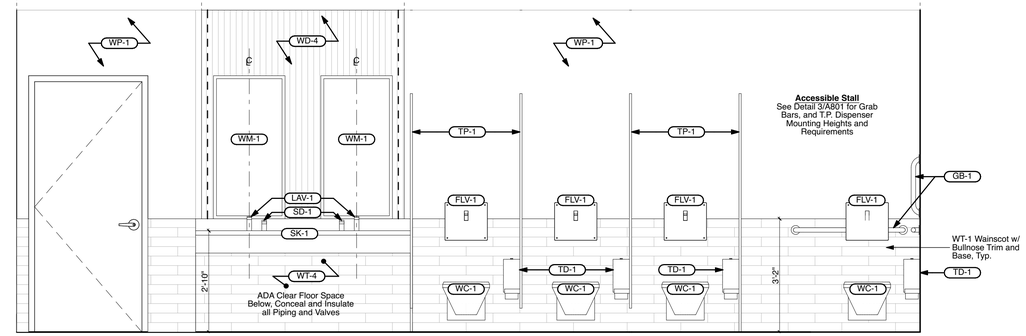
**Accessories**

| Fixture | | | Style | | | | Remarks |
|---|---|---|---|---|---|---|---|
| Tag | Type | Description | Manufacturer | Model Name / No. | Color/Finish | Size | |
| SD-1 | Soap Dispenser | Deck Mounted Battery Powered Soap Dispenser, No-Touch, Automatic | Sloan | ESD-800 | Chrome | | ADA Compliant |
| HD - 1 | Hand Dryer | Surface Mounted Electric Hand Dryer, No-Touch, Automatic | Dyson | Airblade V | SS | 15.51"H x 9.21"W x 4"D | Mount per ADA requirements 2 in ea. Women's and Men's Toilet Rooms |
| TD-1 | Toilet Tissue Dispenser | | | | | | Mount per ADA requirements |
| GB-1 | Grab Bar | 1-1/2" Dia. ADA Compliant Grab Bars | American Specialties, Inc. | - | SS | Varies, See Plan | Mount per ADA requirements Provide Blocking per ADA requirements |
| WM-1 | Wall Mirror | Surface Mounted Lighted Mirror | Electric Mirror | Eminence LED Lighted Mirror | TBD | 24"W x 36"H | Coordinate height of B/Mirror with ADA requirements See Light Fixture Schedule for Additional Requirements Provide Power to Mirror as Required by Manufacturer |
| TP-1 | Toilet Partition System | Floor-Mounted, Overhead Braced Toilet Partition | ASI-Accurate Partitions | Integrated Privacy - Stainless Steel | SS | - | |
| CS-1 | Baby Changing Station | Horizontal Recess Mounted | Koala Kare | KB110-SSRE | SS | 37"W x 23"H x 4 1/4"D | Must be ADA compliant. Mounted in Family Restroom. |

**Note:** All fixtures and Accessories must meet all National and Local Codes and ADA requirements. Provide Solid Blocking at all Wall Mounted Fixtures and Accessories for Secure Anchoring, verify Location w/ Manufacturer's Specifications. Clear Silicone Caulk Fixtures to Surfaces. Plumbing Fixtures for Base Building by others. Plumbing Fixtures for Kitchen by Kitchen Designer - contractor to coordinate with Kitchen Designer's approved Plans. Brewery Plumbing fixtures by others - contractor to coordinate w/ owner approved Brewery Plans.



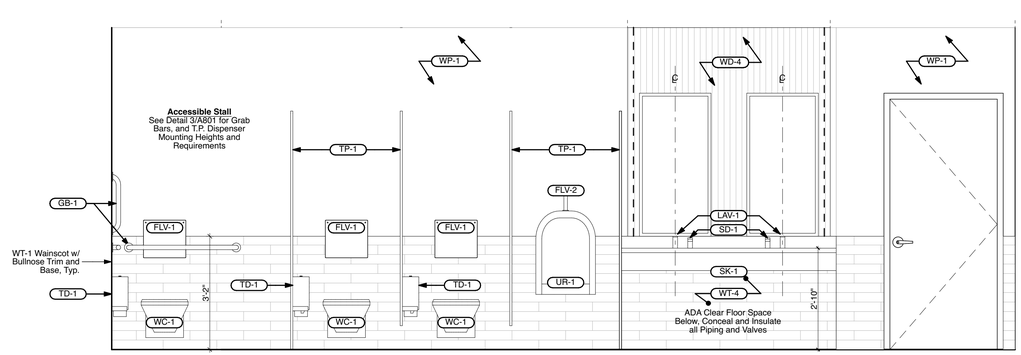

**Restroom Ceiling Finishes Diagram**




## 2 Women Restroom Elevation

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

0 1' 2' 4'




## 1 Men Restroom Elevation

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

0 1' 2' 4'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NUMBER A-2024000851
ARCHITECT

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Name: Jeff Renterghem
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Exp: 12/31/2024

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owner

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|---|---|---|
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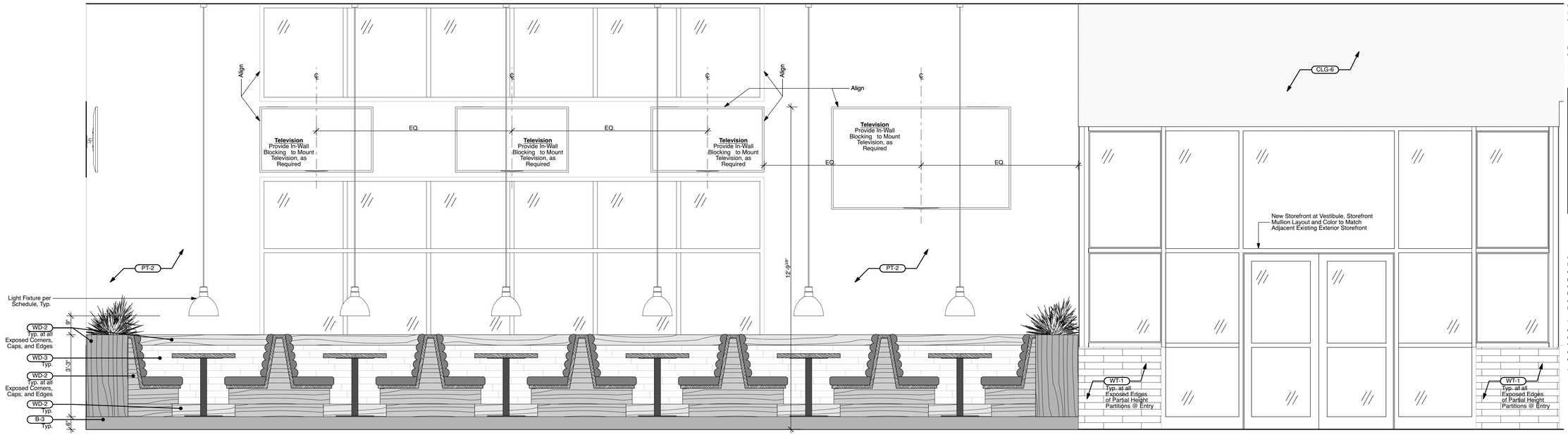
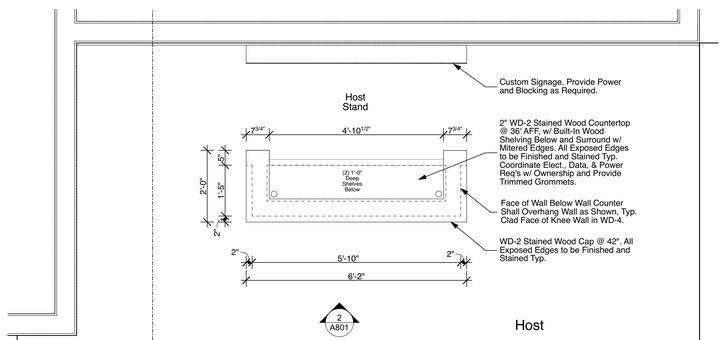
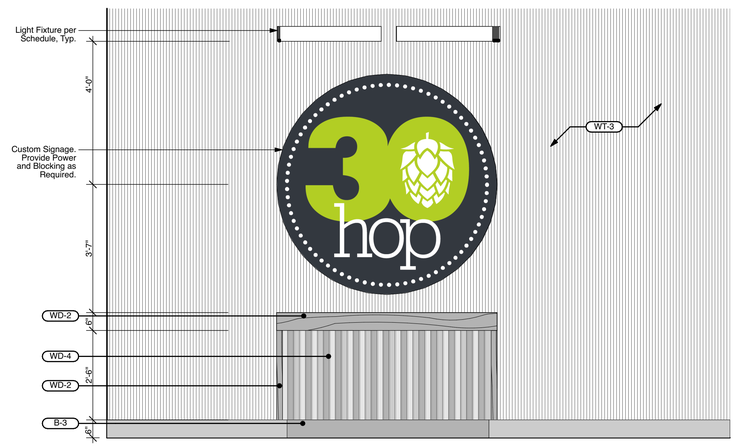
|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/1/24 |
| sheet title | Interior Elevations |
| sheet number | A701 |




4 Raised Booths @ East

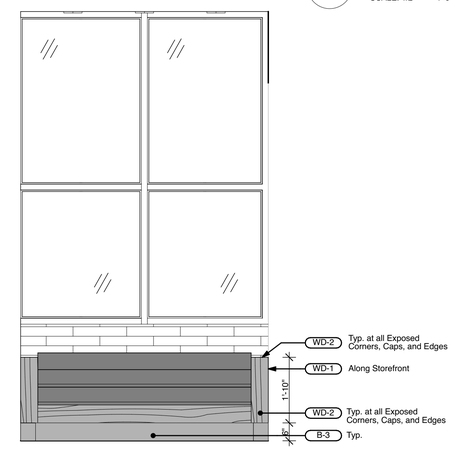
SCALE: 1/2" = 1'-0"



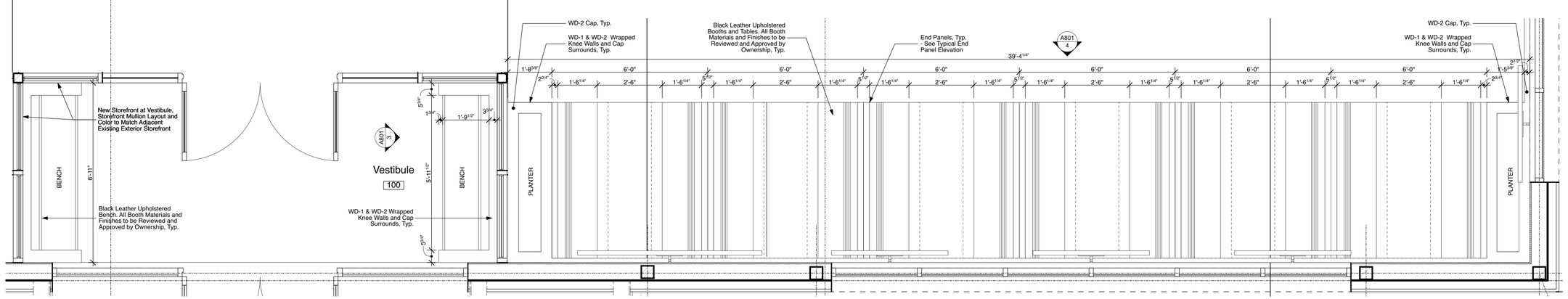

2 Host Stand @ Entry

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




3 Entry Vestibule

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




1 Floor Plan Details

SCALE: 1/2" = 1'-0"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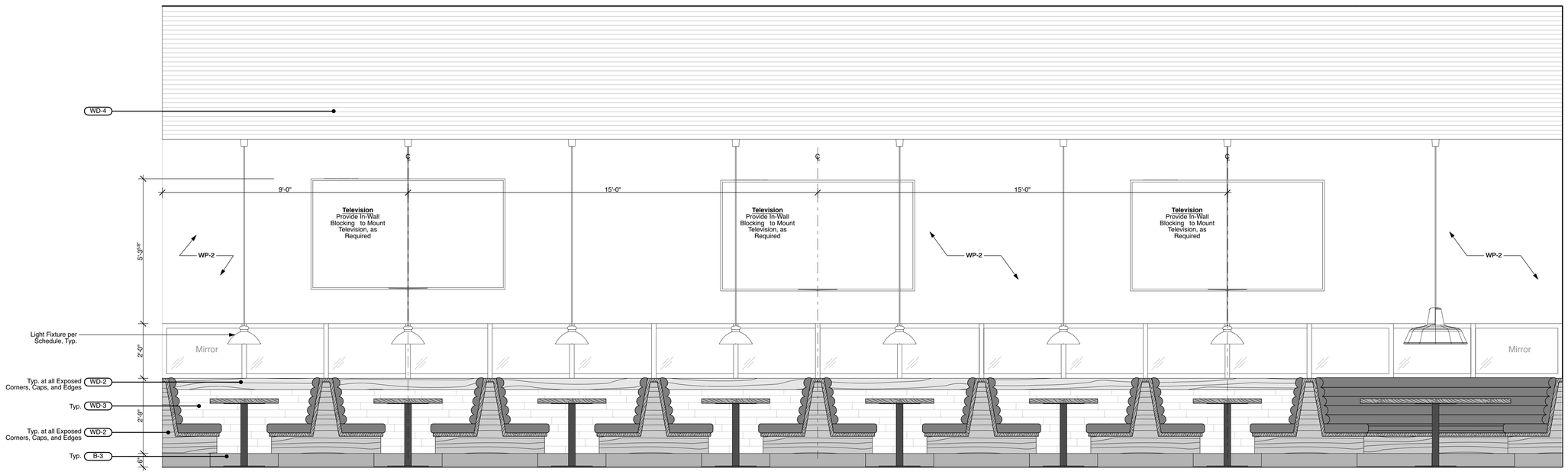
project number 232882

scale As Noted

date 5/1/24

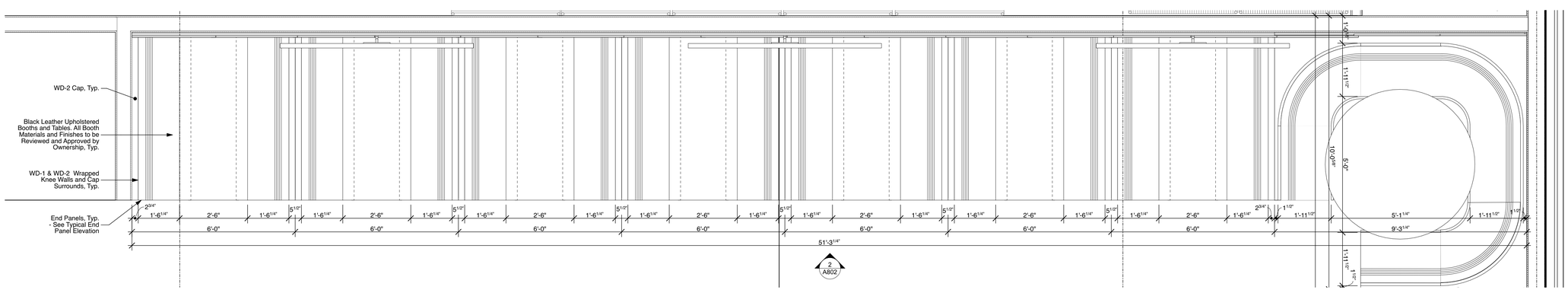
sheet title Millwork Plan Details & Elevations

sheet number A801




## 2 Low Booths @ South

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




## 1 Floor Plan Details

SCALE: 1/2" = 1'-0"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| orientation | |
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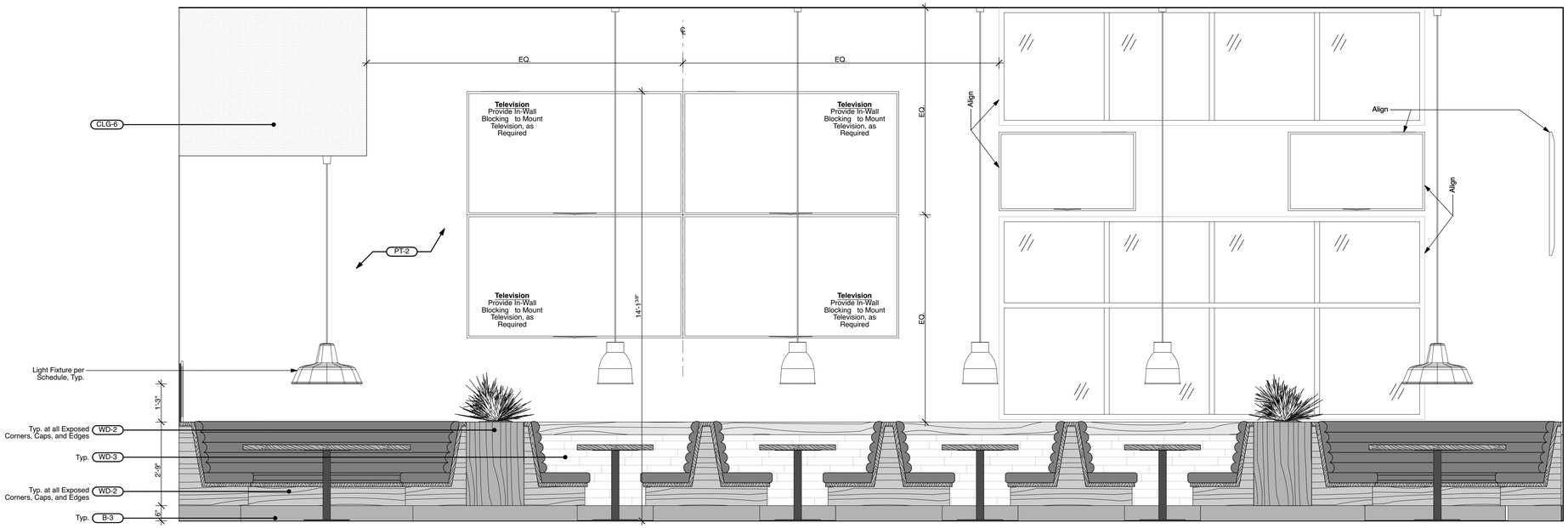
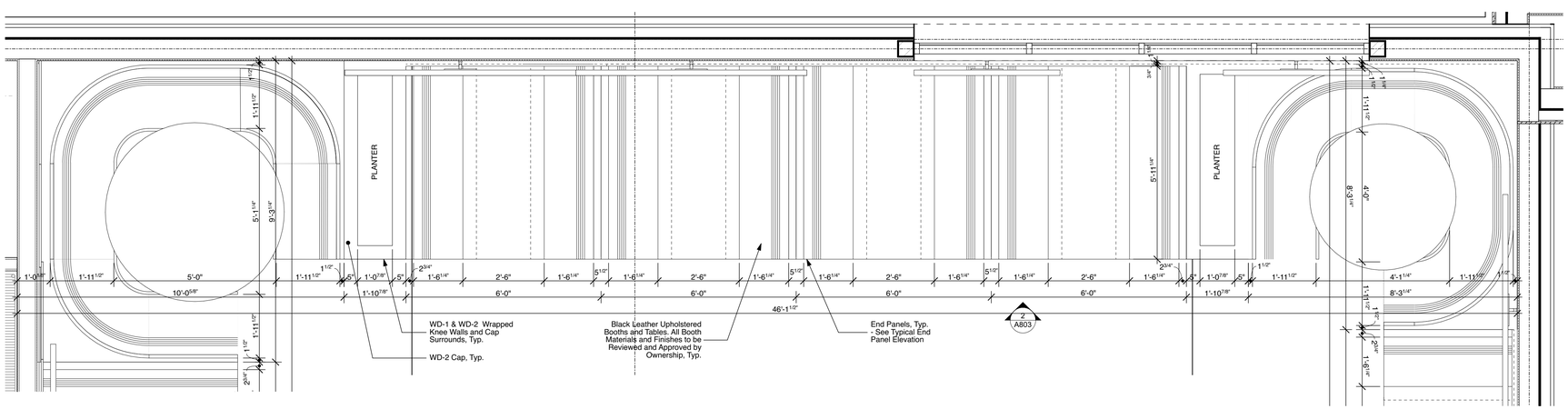
| scale | As Noted |
| date | 5/1/24 |
| sheet title | Millwork Plan Details & Elevations |
| sheet number | A802 |




## 2 Low Booths @ West

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




## 1 Floor Plan Details

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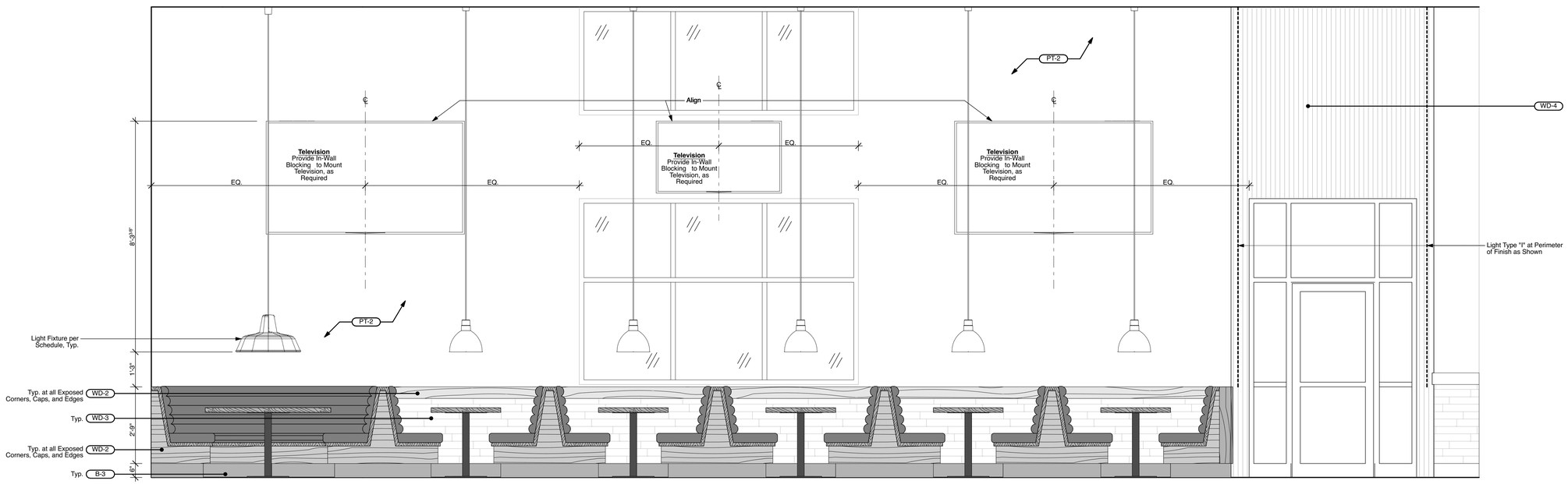
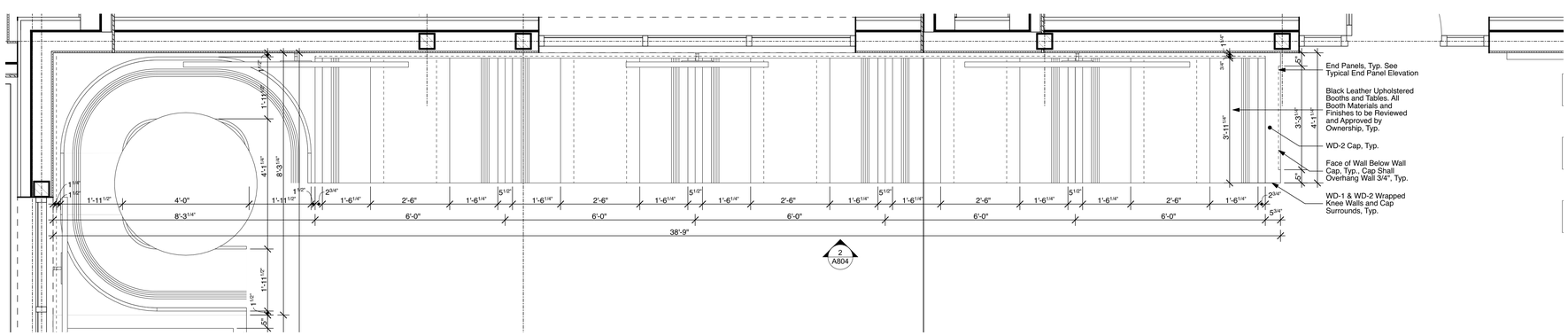



## 2 Low Booths @ North

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




## 1 Floor Plan Details

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

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owner

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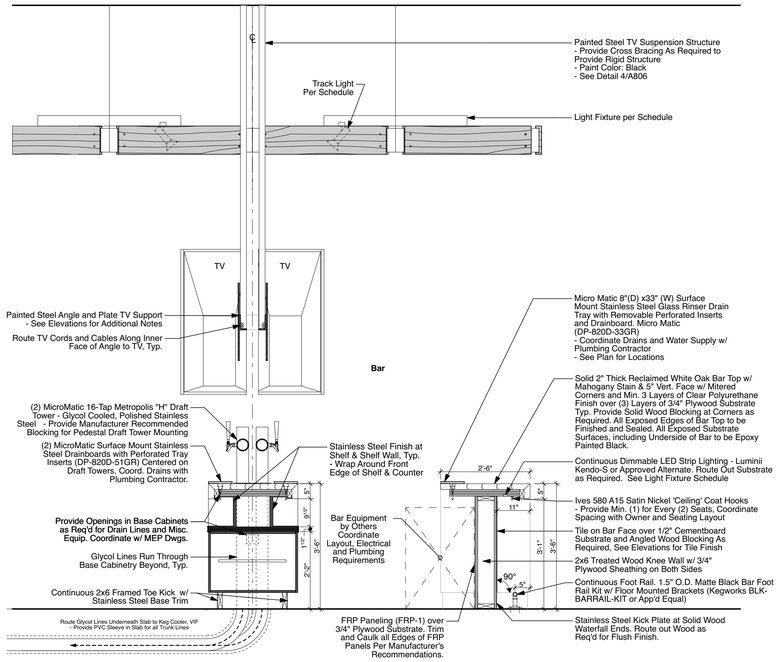
project number 232882

scale As Noted

date 5/1/24

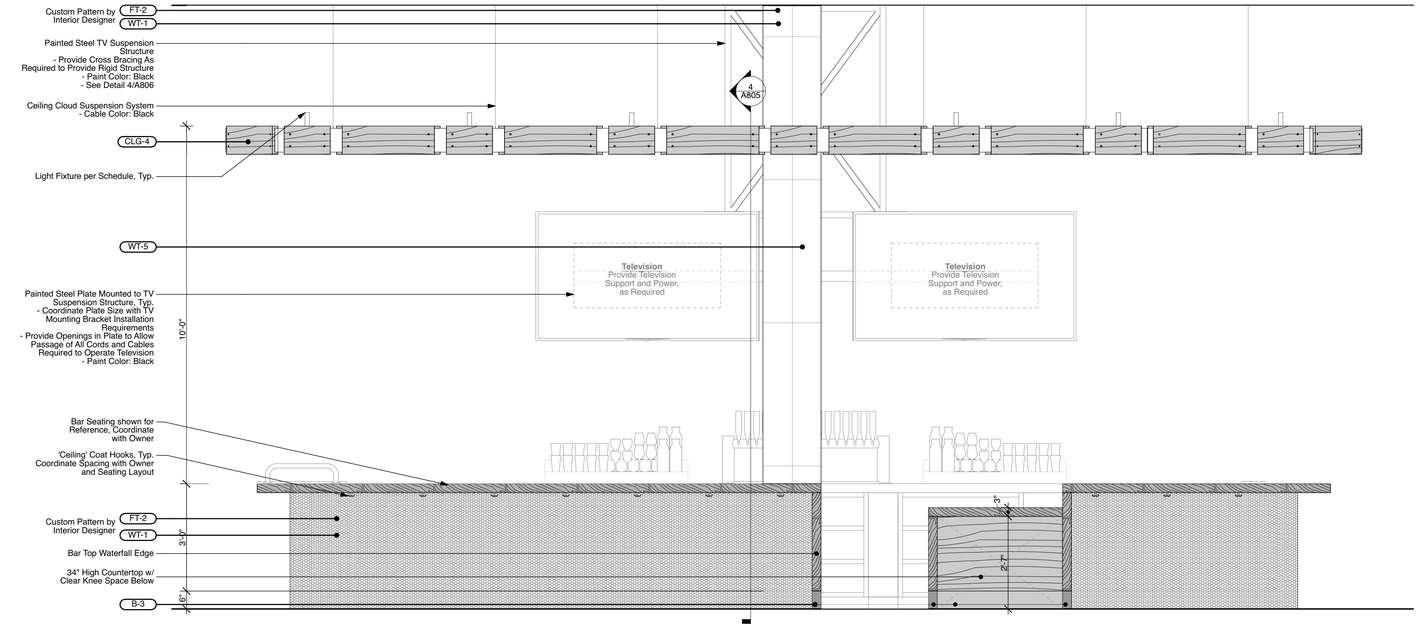
sheet title Millwork Plan Details & Elevations

sheet number A804



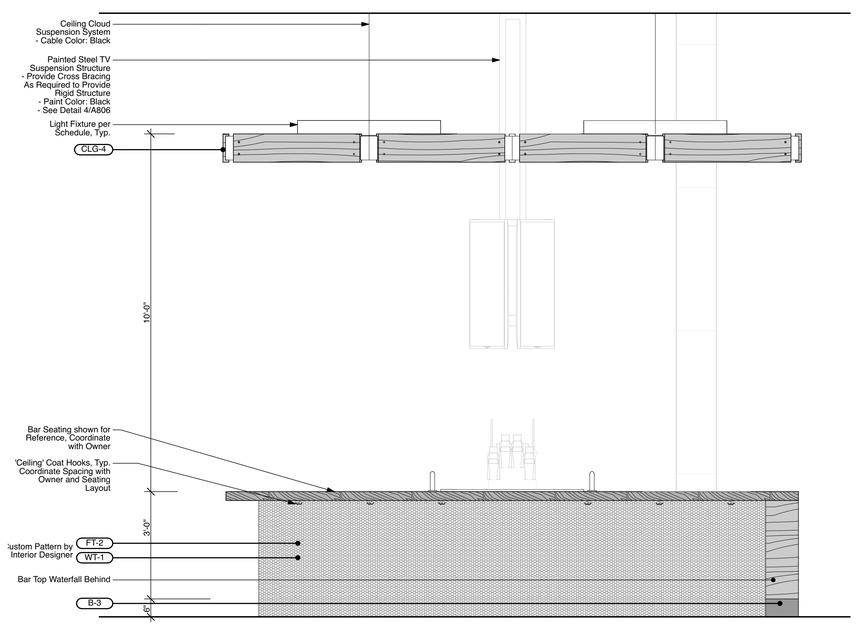

## 4 Bar Section Details

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



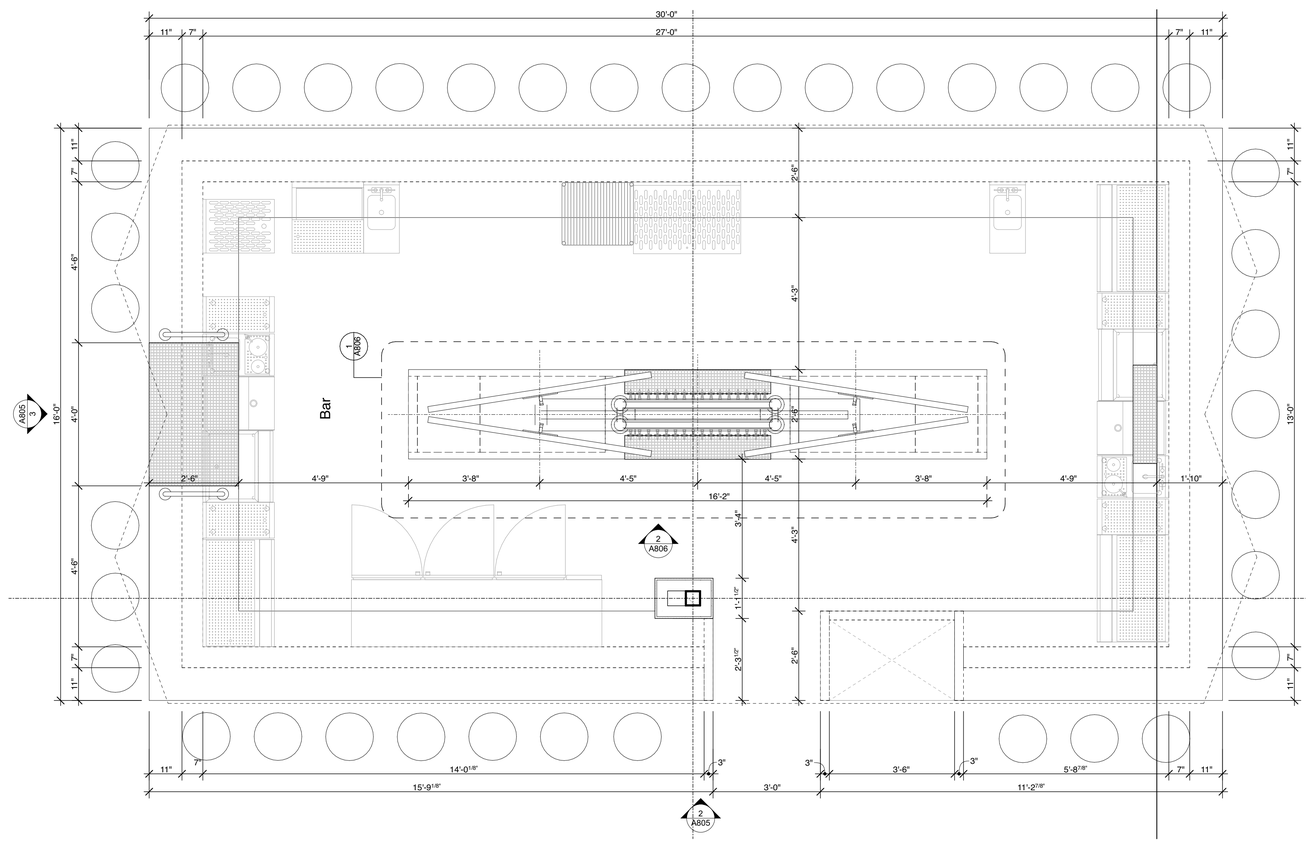

## 2 Bar Seating - Front Elev.

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




## 3 Bar Seating - Side

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




## 1 Floor Plan Details

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

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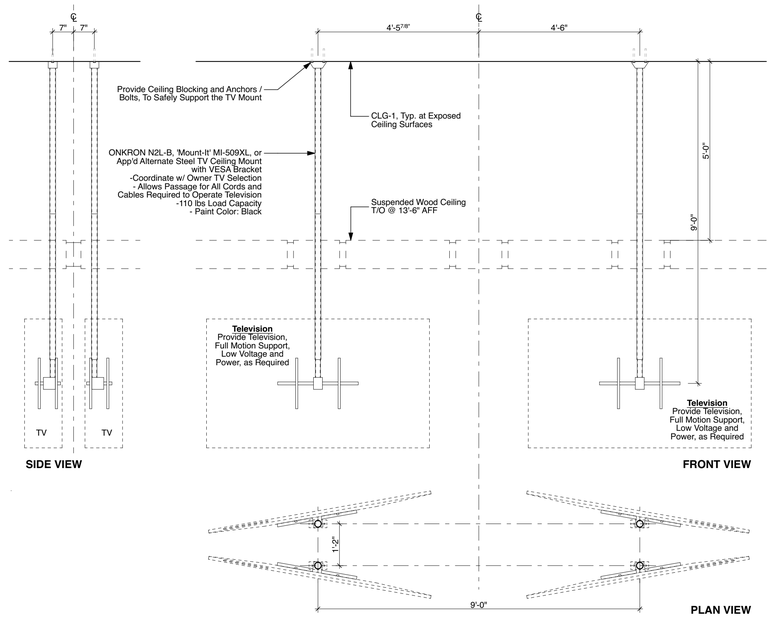
project number 232882

scale As Noted

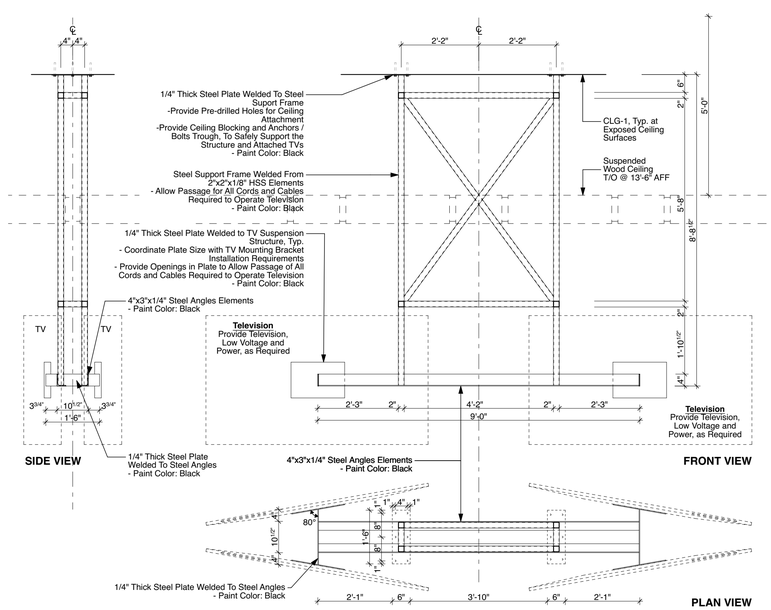
date 5/1/24

sheet title Millwork Plan Details & Elevations

sheet number A805



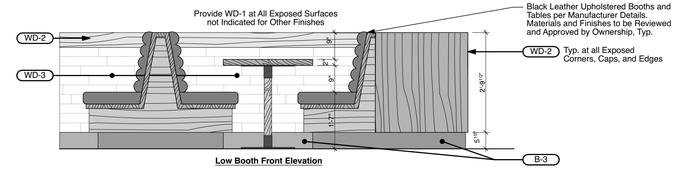

**OPTION 2**



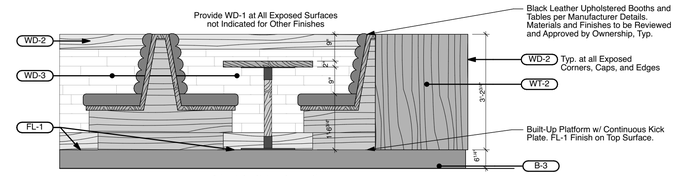

**OPTION 1**

## 4 Bar TV Mount

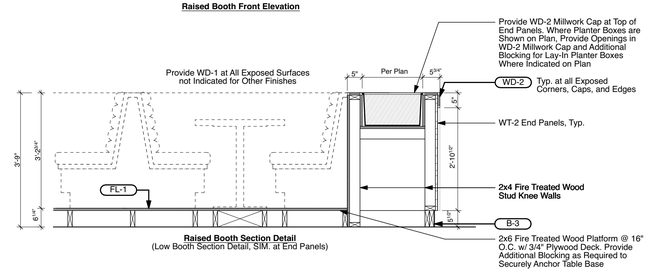
SCALE: 1/2" = 1'-0"



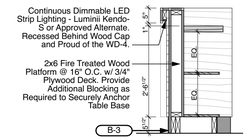

**Low Booth Front Elevation**



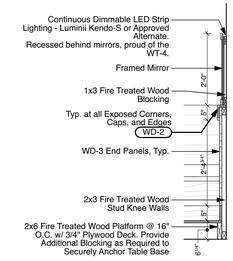

**Raised Booth Front Elevation**




**Raised Booth Section Detail**
(Low Booth Section Detail, SIM. at End Panels)



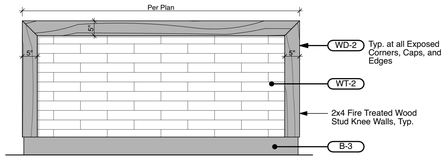

**Host Stand Section Detail**




**Raised Booth Section Detail @ Wall**



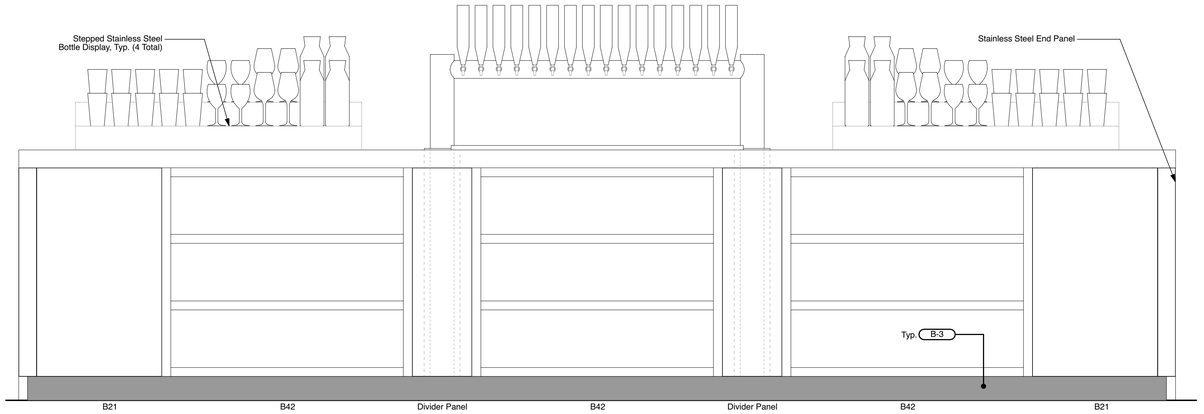

**Wood Wainscot Section Detail @ Wall**




**Typ. End Panel Elevation**

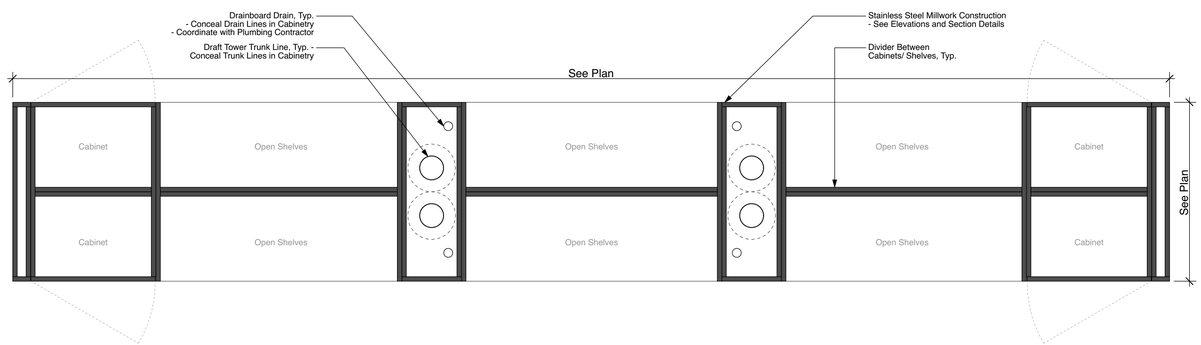
## 3 Millwork Details

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




## 2 Back Bar Detail Elevation

SCALE: 1" = 1'-0"




## 1 Back Bar Detail Plan

SCALE: 1" = 1'-0"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30hop
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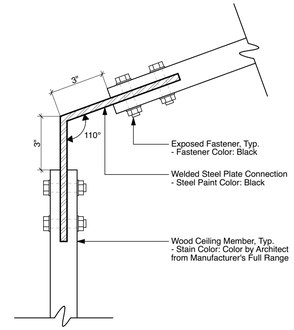
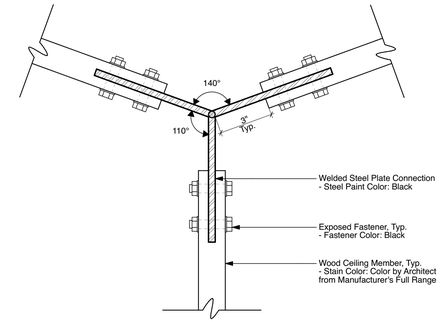
**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

| | |
|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/1/24 |
| sheet title | Millwork Details |
| sheet number | A806 |




**Connection E**

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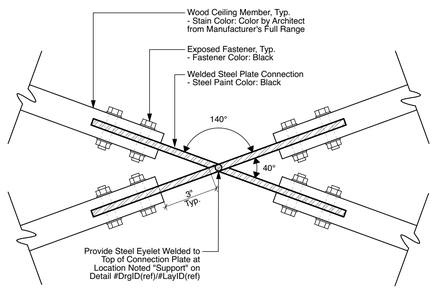


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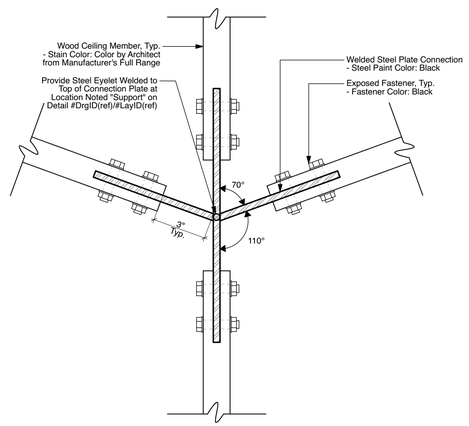


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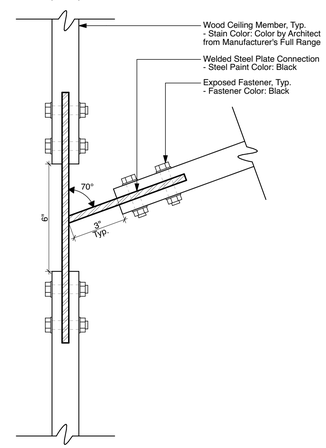


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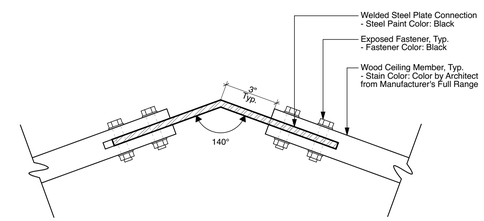
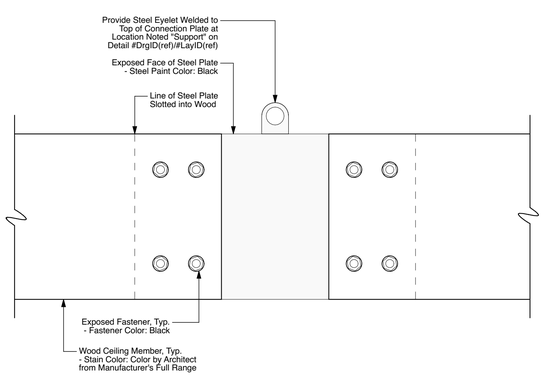



**Connection D**

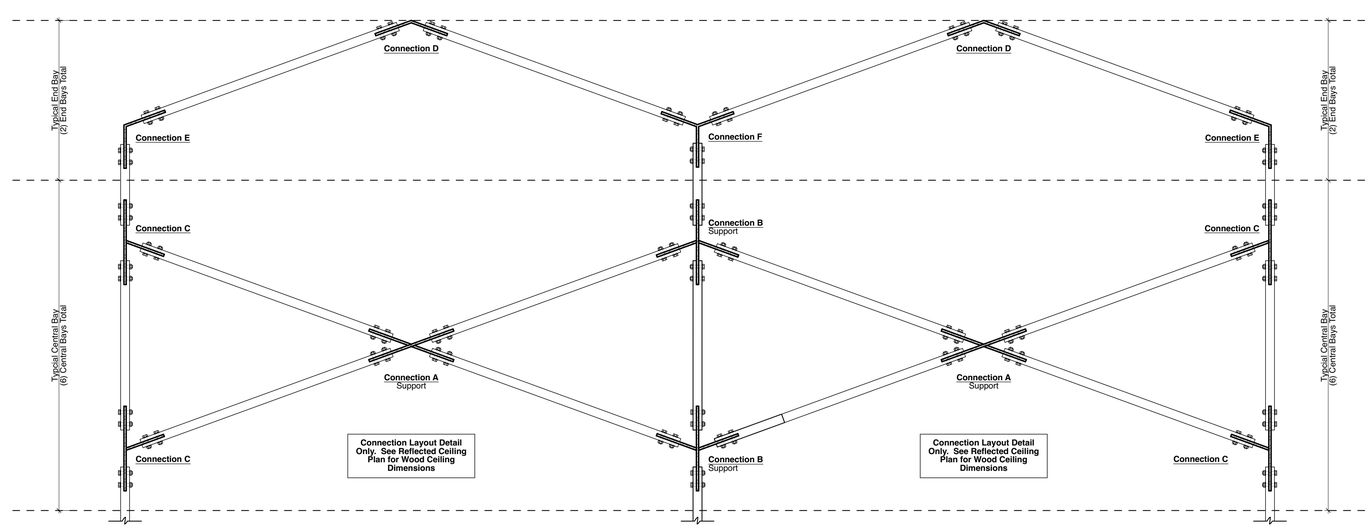
## 2 Wood Ceiling Connection Details

SCALE: 3" = 1'-0"




## 3 Wood Ceiling Connection Details

SCALE: 3" = 1'-0"




## 1 Wood Ceiling Connection Detail Layout

SCALE: 1" = 1'-0"

640 N Lasalle
Suite 400
Chicago Illinois 60654
312 337 3344
Architecture
Urban Planning

**Pappageorge Haymes Partners**
www.pappageorgehaymes.com

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STATE OF MISSOURI
JEFF
RENTERGHEM
NUMBER
A-2024000851
ARCHITECT

I hereby certify that these plans were prepared under my direction and to the best of my knowledge and belief conform to the City of Lee's Summit Building Codes and Ordinances.

Name: Jeff Renterghem
License No.: A-2024000851
Exp: 12/31/2024

**NOT FOR CONSTRUCTION**

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| | date | description |
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| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/1/24 |
| sheet title | RCP Details |
| sheet number | A807 |

640 N Lasalle 312 337 3344 Architecture
Suite 400 Urban Planning
Chicago Illinois 60654

Pappageorge Haymes Partners
www.pappageorgehaymes.com

## MECHANICAL AND PLUMBING SYMBOL LEGEND

SOME SYMBOLS AND ABBREVIATIONS ON THIS LEGEND MAY NOT BE USED

### SHEET METAL

- HIGH EFFICIENCY ROUND DUCT TAKEOFF (WITH & WITHOUT MANUAL DAMPER)
- SPIN–IN ROUND DUCT TAKEOFF (WITH & WITHOUT MANUAL DAMPER)
- CONICAL BELLMOUTH ROUND TAKEOFF
- ROUND DUCT RUNOUT WITH FLEX DUCT
- DUCTWORK ELBOW (WITH & WITHOUT TURNING VANES)
- (XD) FD:FIRE DAMPER FS:FIRE/SMOKE DAMPER SD:SMOKE DAMPER BD:BACKDRAFT DAMPER (GRAVITY)
- (MD) AUTOMATIC MOTORIZED DAMPER
- 8"Ø (A) 225 SUPPLY DIFFUSER AND DIFFUSER CALLOUT (NECK SIZE, TYPE AND CFM)
- LINEAR/SLOT DIFFUSER
- RETURN GRILLE OR EXHAUST REGISTER
- SUPPLY AIR FLOW INDICATOR
- RETURN AND EXHAUST AIR FLOW INDICATOR
- THERMOSTAT
- TEMPERATURE SENSOR
- (H) HUMIDISTAT
- CONTROL WIRING

### MEDICAL GAS

| Symbol | Description |
|---|---|
| —MV— | MEDICAL VACUUM PIPING |
| —O— | OXYGEN PIPING |
| —NO— | NITROUS OXIDE PIPING |
| —SA— | MEDICAL COMPRESSED AIR PIPING |
| —N— | NITROGEN PIPING |
| —CO— | CARBON DIOXIDE PIPING |
| —V V— | VACUUM VENT PIPING |
| —WAGD— | WASTE ANESTHETIC GAS DISPOSAL PIPING |
| —GV— | MEDICAL GAS VENT PIPING |
| X | MEDICAL GAS OUTLET W/ DESIGNATION (RE: BELOW) |
| O | OXYGEN |
| N | NITROGEN |
| NO | NITROUS OXIDE |
| WAGD | WASTE ANESTHETIC GAS DISPOSAL |
| CO | CARBON DIOXIDE |
| MV | MEDICAL VACUUM |
| SA | SURGICAL AIR |
| S | MEDICAL SLIDE |

### GENERAL SYMBOLS

- INDICATES CONNECT TO EXISTING
- INDICATES ELEVATION

### MECHANICAL PIPING

| Symbol | Description |
|---|---|
| —RL— | REFRIGERANT LIQUID |
| —RS— | REFRIGERANT SUCTION |
| —D— | DRAIN (CONDENSATE) |
| —CA— | COMPRESSED AIR |
| —CWS— | CHILLED WATER SUPPLY |
| —CWR— | CHILLED WATER RETURN |
| —C/HWS— | CHILLED/HOT WATER SUPPLY |
| —C/HWR— | CHILLED/HOT WATER RETURN |
| —HWS— | HOT WATER SUPPLY |
| —HWR— | HOT WATER RETURN |
| —CTWS— | COOLING TOWER SUPPLY |
| —CTWR— | COOLING TOWER RETURN |
| —STM— | STEAM (ANY #'S DENOTE PRESSURE) |
| —CR— | CONDENSATE RETURN (#'S DENOTE PRESSURE) |
| —RV— | REFRIGERANT VENT |
| —RD— | RUPTURE DISK |

### PLUMBING PIPING

| Symbol | Description |
|---|---|
| — · — | DOMESTIC COLD WATER |
| — ·· — | DOMESTIC HOT WATER |
| — ··· — | RECIRCULATING DOMESTIC HOT WATER |
| —SAN— | WASTE ABOVE GRADE OR FLOOR |
| – –SAN– – | WASTE BELOW GRADE OR FLOOR |
| —ST— | STORM ABOVE GRADE OR FLOOR |
| – –ST– – | STORM BELOW GRADE OR FLOOR |
| —ST/O— | STORM OVERFLOW ABOVE GRADE OR FLOOR |
| – –ST/O– – | STORM OVERFLOW BELOW GRADE OR FLOOR |
| —V— | PLUMBING VENT |
| —W— | WATER SERVICE |
| —G— | GAS (NATURAL) |
| —PD— | FROM SUMP PUMP DISCHARGE |
| —CA— | COMPRESSED AIR |
| —LP— | PROPANE |
| —SCW— | SOFT DOMESTIC COLD WATER |
| —SHW— | SOFT DOMESTIC HOT WATER |
| —SRW— | SOFT RECIRCULATING HOT WATER |
| —ACID— | ACID WASTE |
| ---VACID--- | ACID WASTE VENT |
| —NP— | NON–POTABLE |
| —DI— | DEIONIZED WATER |
| —RO— | REVERSE OSMOSIS WATER |

### FIRE SPRINKLER

| Symbol | Description |
|---|---|
| —F— | FIRE PROTECTION PIPING |
| | SPRINKLER HEAD |
| | SIDEWALL SPRINKLER HEAD |
| | FIRE PROTECTION SIAMESE CONNECTION |
| | POST INDICATOR VALVE |

### PIPING SYMBOLS

- SHUTOFF VALVE
- SHUTOFF VALVE IN RISER
- BALANCING VALVE
- PLUG VALVE
- AUTO FLOW CONTROL VALVE
- PIPING ELBOW UP
- PIPING ELBOW DOWN
- PIPING TEE
- PIPING ELBOW
- PIPING TEE UP
- PIPING TEE DOWN
- INCREASER / REDUCER
- UNION
- CAP
- PIPE FLEX
- STRAINER
- CHECK VALVE
- INLINE STRAINER
- TEST PLUG
- GUIDE
- ANCHOR
- TRIPLE DUTY VALVE
- AUTOMATIC 2–WAY CONTROL VALVE
- AUTOMATIC 3–WAY CONTROL VALVE
- (S) SOLENOID VALVE

### PIPING SPECIALTIES

- (P) (T) PRESS/ TEMP GAUGE WITH COCK
- THERMOMETER.
- HI LOW PRESSURE REDUCING VALVE
- RELIEF VALVE
- WATER HAMMER ARRESTER

### PLUMBING FIXTURES/EQUIPMENT

| Symbol | Description |
|---|---|
| HB | HOSE BIBB |
| WH | WALL HYDRANT |
| | CLEAN OUT |
| RPZ | REDUCED PRESSURE BACKFLOW PREVENTER |
| DCBP | DOUBLE CHECK BACKFLOW PREVENTER |
| WC–1 S–1 | PLUMBING FIXTURE AND CALLOUT |
| FD–1 | FD: FLOOR DRAIN, AD: AREA DRAIN, FS: FLOOR SINK |
| RD–1 | RD: ROOF DRAIN ORD: OVERFLOW ROOF DRAIN |

## ELECTRICAL SYMBOL LEGEND

SOME SYMBOLS AND ABBREVIATIONS ON THIS LEGEND MAY NOT BE USED

### CIRCUITING

- HOME RUN (2#12 1#12G UNO)
- INDICATES 2 PHASE, 1 N, & 1 GRD CONDUCTOR
- HOME RUN: INDICATES SHARED CIRCUIT
- HOME RUN: INDICATES #10 CONDUCTORS ENTIRELY

### UTILITIES

| Symbol | Description |
|---|---|
| ---- UGE ---- | UNDERGROUND ELECTRICAL |
| —— OHE —— | OVERHEAD ELECTRICAL |
| —— TELE —— | TELECOMMUNICATIONS CONDUIT |
| ---- UGT ---- | UNDERGROUND TELECOMMUNICATIONS CONDUIT |

### LIGHTING

| Symbol | Description |
|---|---|
| | FLUORESCENT LIGHT FIXTURE |
| | FLUORESCENT STRIP FIXTURE |
| | SURFACE/RECESSED LIGHT FIXTURE |
| | WALL–MOUNTED LIGHT FIXTURE |
| | POLE–MOUNTED LIGHT FIXTURE |
| | EXIT LIGHT |
| | BATTERY–OPERATED EMERGENCY LIGHT (WALL MTD) |
| | BATTERY–OPERATED EMERGENCY LIGHT (CEILING MTD) |
| | WALL–MOUNTED COMBINATION EXIT LIGHT/ BATTERY–OPERATED EMERGENCY LIGHT |
| $ | LIGHT SWITCH – SINGLE POLE |
| $3 | LIGHT SWITCH – 3–WAY |
| $4 | LIGHT SWITCH – 4–WAY |
| $K | LIGHT SWITCH – KEY |
| $D | LIGHT SWITCH – DIMMER |
| $PL | LIGHT SWITCH – PILOT LIGHT |
| $2P | LIGHT SWITCH – 2 POLE |
| $3D | LIGHT SWITCH – 3–WAY DIMMER |
| $M | WALL–MOUNTED MOTION SWITCH |
| M | CEILING–MOUNTED MOTION SWITCH |
| SB | SWITCHBANK – REFER TO DETAILS |
| FD1 | DIMMER BOARD |
| RCS–1 | REMOTE CONTROL SWITCH AS SCHEDULED |
| TC | TIMECLOCK – REFER TO PLANS / DETAILS |

### EQUIPMENT

- DISCONNECT SWITCH. RE: PLANS FOR INFORMATION.
- MAGNETIC MOTOR STARTER
- COMBINATION DISCONNECT SWITCH / MOTOR STARTER
- TOGGLE–TYPE DISCONNECT. FURNISH WITH THERMAL MOTOR PROTECTION WHERE SERVING FANS/PUMPS.
- SURFACE PANELBOARD
- RECESSED PANELBOARD
- DISTRIBUTION PANELBOARD
- SWITCHBOARD. FEEDER/MAIN CIRCUIT BREAKER SECTION AND DISTRIBUTION SECTION.

### GENERAL SYMBOLS

- INDICATES CONNECT TO EXISTING
- INDICATES ELEVATION

### POWER DEVICES

| Symbol | Description |
|---|---|
| | DUPLEX RECEPTACLE. |
| | LINE THRU DEVICE INDICATES ABOVE COUNTER |
| GFI | SPECIAL DUPLEX RECEPTACLE (GFCI, ISOLATED GROUND, ETC.) |
| | QUADPLEX RECEPTACLE |
| 5–50R | SIMPLEX RECEPTACLE W/NEMA CONFIG AS NOTED |
| 5–50R | MULTI–POLE RECEPTACLE W/NEMA CONFIG AS NOTED |
| | CEILING MOUNTED RECEPTACLE |
| | RECEPTACLE/DEVICE MOUNTED IN "TOMBSTONE" |
| | POKE–THRU WITH POWER |
| | POKE–THRU WITH TELECOMMUNICATIONS |
| | POKE–THRU W/POWER AND TELECOM |
| 1G | SINGLE GANG FLOOR BOX (2, 3, 4 GANG SIMILAR) |
| | DIVIDED POWER POLE |
| C | CLOCK RECEPTACLE |
| | PLUG MOLD / WIRE MOLD AS SPECIFIED |
| J | JUNCTION BOX |
| E T | THERMOSTAT – ELECTRIC |
| | PUSH BUTTON |
| | MOTOR |

### TELEPHONE/DATA

| Symbol | Description |
|---|---|
| | TELEPHONE OUTLET (SINGLE–GANG BOX WITH (1) 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING) |
| | LINE THRU DEVICE INDICATES ABOVE COUNTER |
| | DATA OUTLET (DOUBLE–GANG BOX WITH (2) 3/4" CONDUITS TO ABOVE ACCESSIBLE CEILING) |
| | TELEPHONE/DATA OUTLET (DOUBLE–GANG BOX WITH (2) 3/4" CONDUITS TO ABOVE ACCESSIBLE CLG.) |
| 1V | PHONE OUTLET WITH NUMBER OF PHONE JACKS AS INDICATED – SEE DETAILS FOR ADD'L INFO. |
| 1D | DATA OUTLET WITH NUMBER OF PHONE JACKS AS INDICATED – SEE DETAILS FOR ADD'L INFO. |
| 1D/1V | PHONE/DATA OUTLET WITH NUMBER OF PHONE/DATA JACKS AS INDICATED – SEE DETAILS FOR ADD'L INFO. |
| W | WALL–MOUNTED WIRELESS INTERNET TRANSMITTER |
| W | CEILING–MOUNTED WIRELESS INTERNET TRANSMITTER |

### AUDIO/VISUAL

| Symbol | Description |
|---|---|
| TV | TELEVISION OUTLET (SINGLE GANG BOX WITH (1) 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING) |
| TR | REVERSE TELEVISION OUTLET – CABLE TO HEAD END |
| TDC | TEACHER'S DESK CONNECTIONS – RE: DETAILS |
| S | WALL SPEAKER |
| S | CEILING SPEAKER |
| S | WALL SPEAKER – HORN TYPE |
| S | CEILING SPEAKER – HORN TYPE |
| S SUB | CEILING SPEAKER – SUBWOOFER |
| S SS | CEILING SPEAKER – SOUND SYSTEM |
| V | VOLUME CONTROL |
| I | INTERCOM CALL STATION |
| | INTERCOM HANDSET |
| | SOUND SYSTEM AUDIO JACK |
| RM | REMOTE MICROPHONE CONTROL |
| PAS | PUBLIC ADDRESS SYSTEM AMPLIFIER |
| IMS | INTERCOM MASTER STATION |

### FIRE ALARM

| Symbol | Description |
|---|---|
| F | MANUAL PULL STATION |
| D | CEILING SMOKE DETECTOR |
| D | DUCT SMOKE DETECTOR |
| H | HEAT DETECTOR |
| WF | WATERFLOW SWITCH |
| TS | TAMPER SWITCH |
| 75 | VISIBLE NOTIFICATION DEVICE WITH CANDELA RATING. 75cd RATING UNLESS OTHERWISE NOTED ON PLANS. |
| 30 | AUDIBLE/VISIBLE NOTIFICATION DEVICE WITH CANDELA RATING. 75cd UNLESS OTHERWISE NOTED ON PLANS. |
| | HORN |
| 75 | CEILING–MOUNTED STROBE LIGHT WITH CANDELA RATING. MINIMUM OF 75cd RATING. |
| 30 | CEILING–MOUNTED COMBINATION HORN/STROBE WITH CANDELA RATING. MIN. OF 75cd RATING. |
| | CEILING–MOUNTED HORN |
| | CEILING–MOUNTED SPEAKER |
| R | RELAY |
| FACP | FIRE ALARM CONTROL PANEL |
| FAAP | FIRE ALARM ANNUNCIATOR PANEL |
| FARA | REMOTE ANNUNCIATOR PANEL |
| FAEC | FIRE ALARM EXTENDER CABINET |
| DH | DOOR HOLDER |
| D 120V | SINGLE / MULTI–STATION 120V SMOKE ALARM |
| ZAM | ZONE ADDRESSABLE MODULE |
| IAM | INDIVIDUAL ADDRESSABLE MODULE |
| HFSS | KITCHEN HOOD FIRE SUPPRESSION SYSTEM PANEL |
| H | KITCHEN HOOD REMOTE PULL STATION |
| ARA | AREA OF RESCUE ASSISTANCE STATION |
| ARAM | AREA OF RESCUE ASSISTANCE MASTER STATION |

### SECURITY

| Symbol | Description |
|---|---|
| | FIXED CAMERA |
| PTZ | PAN/TILT/ZOOM CAMERA |
| PROX | PROXIMITY TYPE CARD READER |
| CARD | SWIPE CARD READER |
| BG | BREAK GLASS DETECTOR |
| ES | ELECTRIC STRIKE |
| MD | SECURITY MOTION DETECTOR |
| KP | KEYPAD / MAG LOCK |
| B | BUTTON / MAG LOCK |

## 15000 - MECHANICAL SPECIFICATIONS

SECTION 15000 – MECHANICAL REQUIREMENTS

1. GENERAL REQUIREMENTS

A. ALL WORK SHALL BE IN ACCORDANCE W/ LATEST EDITION OF INTERNATIONAL BUILDING, MECHANICAL & PLUMBING CODES, CODES AS ADOPTED BY CITY, COUNTY, STATE & ALL OTHER APPLICABLE CODES.

B. FURNISH & INSTALL ALL LABOR & MATERIALS REQUIRED FOR COMPLETE, FUNCTIONING, MECHANICAL & PLUMBING SYSTEMS W/ ALL ASSOCIATED EQUIPMENT & APPARATUS AS SHOWN ON PLANS. "PROVIDE" MEANS TO FURNISH & INSTALL.

C. OBTAIN & PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THIS WORK & SHALL MAKE ARRANGEMENTS FOR MODIFICATIONS TO WATER, GAS & SEWER CONNECTIONS TO BUILDING AS REQUIRED.

D. VISIT SITE & OBSERVE CONDITIONS UNDER WHICH WORK WILL BE DONE. ANY DISCREPANCIES SHALL BE CALLED TO ARCHITECT'S ATTENTION. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN CONTRACT FOR ANY ERROR OR NEGLIGENCE ON CONTRACTOR'S PART.

E. FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO CONDITION THAT ALL SYSTEMS, EQUIPMENT, APPARATUS & APPLIANCES OPERATE SATISFACTORILY AS DESIGNED & INTENDED. WORK SHALL INCLUDE REQUIRED ADJUSTMENT OF SYSTEMS & CONTROL EQUIPMENT INSTALLED UNDER THESE SPECIFICATIONS.

F. WARRANT TO OWNER QUALITY OF MATERIAL, EQUIPMENT, WORKMANSHIP & OPERATION OF EQUIPMENT PROVIDED UNDER THESE SPECIFICATIONS FOR ONE YEAR FROM & AFTER COMPLETION OF BUILDING & ACCEPTANCE OF MECHANICAL SYSTEMS BY OWNER.

G. ALL MATERIALS INSTALLED IN PLENUMS SHALL BE NONCOMBUSTIBLE OR HAVE FLAME/SMOKE INDEX OF NO MORE THAN 25/50 IN ACCORDANCE W/ ASTM E 84.

H. ROOF PENETRATIONS – MADE BY AUTHORIZED ROOFING CONTRACTOR WHEN REQUIRED.

SECTION 15100 – PLUMBING

1. PIPING

A. WATER PIPING – ALL WATER PIPING SHALL BE 95–5 TIN–ANTIMONY JOINED TYPE L COPPER. INSULATE W/ FIBERGLASS W/ ASJ & PVC COVERS. THINCKNESS IN ACCORDANCE W/ ASHRAE 90.1.

B. WASTE & VENT PIPING – CI BELL & SPIGOT OR HUBLESS CI W/ NEOPRENE GASKET FITTINGS W/ STAINLESS STEEL BANDS. SCHED 40 PVC W/ SOLVENT WELDS MAY BE USED WHERE ALLOWED BY LOCAL CODE. PVC NOT ALLOWED IN PLENUMS.

C. GAS PIPING – PROVIDE SCHED 40 CONT. WELD CARBON STEEL W/ CORRESPONDING FITTINGS. PROVIDE THREADED FITTINGS. PROVIDE IRON BODY–BRASS PLUG GAS STOPS. PAINT ALL EXPOSED GAS PIPING ON THE EXTERIOR OF THE BUILDING INCLUDING ON THE ROOF.

2. VALVES

A. BALL VALVES – 2" & UNDER – BRONZE FULL PORT W/ TEFLOW SEATS, BRONZE BALL & INSULATED HANDLE.

B. BALANCING VALVES – ARMSTRONG MODEL CBV I OR CBV II, 125 PSI–WP AT 250 DEGREES F., METER CONNECTIONS W/ BUILT–IN CHECK VALVES SCREWED OR FLANGED ENDS. PROVIDE POLYURETHANE INSULATION COVER.

C. CHECK VALVES – 2" 7 SMALLER SCREWED OR SOLDER BRONZE CHECK VALVE, 200 PSI–WOG/125 PSI–WSP, TEFLON OR BRONZE DISC & SEAT RING. 2–1/2" & LARGER FLANGED, ASTM 126 IRON BODY, BRONZE TRIMMED, 200 PSI–WOG/125 PSI–WSP.

D. BUTTERFLY VALVES – 3" & LARGER LEVER ASTM A126 CI DRILLED & TAPPED FULL LUG BODY, 200 PSI–WOG, EXTENDED NECK, BRONZE DISC, STAINLESS STEEL STEM, FIELD–REPLACEABLE EPDM SLEEVE & STEM SEALS.

E. EQUIVALENT VALVE MANUFACTURERS: MILWAUKEE, STOCKHAM, POWELL, RED–WHITE, CRANE, APPOLO, MUELLER, MUESSCO, WATTS, HAYS, ROCKWELL–NORDSTROM.

FIXTURES – SEE SCHEDULES

A. FIXTURES: AMERICAN STANDARD, KOHLER, CRANE, ZURN, TOTO
B. STAINLESS STEEL FIXTURES: ELKAY, JUST, MOEN COMMERCIAL
C. FITTINGS & SUPPORTS: JOSAM, SMITH, WADE, ZURN, OR JONESPEC.
D. SEATS: CHURCH, OLSONITE, BEMIS OR BENEKE.
E. DRINKING FOUNTAINS: HALSEY TAYLOR, ELKAY, OASIS, OR HAWS.
F. TRIM BY DELTA, ELJER, KOHLER, AMERICAN STANDARD, CRANE, SLOAN.
G. FLUSHVALVES: SLOAN, ZURN, TOTO
H. DRAINS BY WADE, ZURN, WOODFORD, SMITH, JOSAM.

EQUIPMENT – SEE SCHEDULES

A. WATER HEATER – STATE, RHEEM, NATIONAL, A.O. SMITH. PORCELAINIZED GLASSLINED TANK. COLD WATER INLET DROP TUBE. MAGNESIUM ANODE RODS. U.L. SEAL, 160 PSI, FACTORY TEMPERATURE & PRESSURE RELIEF VALVE. N.S.F. CONSTRUCTION. 3 YR WARRANTY.

B. RECIRCULATION PUMPS – HORIZONTAL, OIL–LUBRICATED, ALL BRONZE. NON–OVERLOADING MOTOR.

EXECUTION

A. PROVIDE UNIONS OR FLANGED JOINTS IN EACH PIPE LINE PRECEDING CONNECTIONS TO EQUIPMENT TO ALLOW REMOVAL FOR REPAIR OR REPLACEMENT. PROVIDE ALL SCREWED & CONTROL VALVES W/ UNIONS ADJACENT TO EACH CONNECTION. PROVIDE SCREWED END VALVES W/ UNION ADJACENT TO VALVE UNLESS VALVE CAN BE OTHERWISE EASILY REMOVED FROM LINE.

B. AFTER PIPING IS IN PLACE TEST LINES TO ENSURE NO LEAKS.

C. ALL PIPING & EQUIPMENT SHALL BE SUPPORTED PROPERLY FROM STRUCTURE.

D. ESCUTCHEONS – PROVIDE NICKEL–BRASS OR CHROME PLATED ON ALL EXPOSED PIPES WHEN PASSING THRU WALL OR CEILING OF FINISHED ROOMS.

E. VERIFY FLOOR MATERIALS USED FROM ARCHITECTURAL PLANS & PROVIDE PROPER CLEANOUT TOPS, WHERE THEY OCCUR IN CARPET, QUARRY TILE, VINYL TILE OR CERAMIC TILE.

F. PROVIDE WATER HAMMER ARRESTORS FOR ALL PLUMBING BANKS W/ FIXTURES UTILIZING FLUSH VALVES IN ANY CAPACITY. LOCATE ARRESTER BETWEEN LAST TWO FIXTURES SERVED ON BRANCH LINE.

SECTION 15300 – HVAC

GENERAL

A. PROVIDE COMPLETE HVAC SYSTEM AS SHOWN ON DRAWINGS INCLUDING ALL NECESSARY EQUIPMENT, DUCTWORK, DIFFUSERS, GRILLES, & FILTERS. PROVIDE OPERATING & MAINTENANCE INSTRUCTIONS ON ALL EQUIPMENT.

B. ALL HVAC WORK SHALL BE DONE IN STRICT ACCORDANCE W/ ALL REQUIREMENTS OF LOCAL BUILDING CODE, ASHRAE, NEC, NFPA, & ALL OTHER APPLICABLE CODES HAVING JURISDICTION.

DUCTWORK

A. HVAC DUCTWORK SHALL BE GALV SHEET METAL OF GAUGES & JOINT TYPES SPECIFIED IN SMACNA MANUAL. PROVIDE TURNING VANES IN ELBOWS.

B. EXPOSED SPIRAL DUCT SHALL BE DOUBLE WALL SPIRAL INTERIOR INSULATED WITH PERFORATED LINER WITH 1" INSULATION R VALUE OF 4 MINIMUM.

C. VOLUME DAMPERS SHALL BE MANUAL LOCKING BLADE TYPE.

D. DISHWASHER EXHAUST DUCT SHALL BE NEW COMMERCIAL QUALITY, BRIGHT TYPE 302 STAINLESS STEEL. CONSTRUCTION SHALL BE WELDED. DUCTWORK SHALL SLOPE TO DRAIN.

E. GREASE DUCT SHALL BE NEW COMMERCIAL QUALITY BLACK STEEL FOR GREASE DUCTS. CONSTRUCTION SHALL BE WELDED, STEEL MINIMUM OF 16 GAUGE.

F. ALL DUCTWORK MUST BE SUPPORTED PROPERLY FROM STRUCTURE.

G. WRAP ALL SUPPLY & OUTSIDE AIR HVAC DUCTWORK W/ CERTAINTEED 1–1/2" THICK INSULATION W/ VAPOR BARRIER IN CONCEALED LOCATIONS. ALSO LINE FIRST 10' OF SUPPLY DUCTWORK FOR SOUND ATTENUATION ( IN ADDITION TO WRAP) LINE ALL RETURN AIR DUCTS & TRANSFER BOOTS W/ ½" LINER. DO NO WRAP EXPOSED SPIRAL DUCTS.

H. EXTERNAL FIRE INSULATION FOR GREASE DUCTS – 2 HR. FIRE RESISTANCE RATING SHALL BE PABCO SUPER FIRETIMP–L. INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS. EQUIVALENT BY 3M DUCTWRAP, PROVIDE (2) 1 ½" LAYERS.

SPECIALTIES

A. FLEXIBLE DUCTS – THERMAFLEX OR EQUAL SOUND RATED TYPE G–KM INSULATED. (DUCT W/O PUBLISHED ACOUSTICAL ATTENUATION RATINGS NOT ACCEPTABLE) TAKE OFF FITTING SHALL BE HI–EFF STYLE W/ LOCKING DAMPER. MAXIMUM LENGTH OF FLEXIBLE DUCTWORK SHALL BE 7'–0".

B. DIFFUSERS & GRILLES – SEE SCHEDULE. EQUIVALENT BY PRICE, TUTTLE & BAILEY, TITUS, MATEL–AIRE, KREUGER, NAILOR. COORDINATE COLOR, MOUNTING W/ DUCT, CEILINGS, ARCHITECT.

C. LOUVERS – GREENHECK TYPE FSK–400 FABRICATED GALVANIZED STEEL LOUVER W/ TRIM FLANGE. EQUIVALENT BY RUSKIN, LOUVERS & DAMPERS, GREENHECK, AMERICAN WARMING 7 VENTILATING, INDUSTRIAL LOUVERS, ACME. COORDINATE FINISH W/ ARCHITECT.

PIPING

A. REFRIGERANT PIPING – COPPER TUBE TYPE ACR, HARD TEMPER NITROGENIZED REFRIGERANT TUBE, ASTM B–88. TYPE L OR K. BRAZED JOINTS. INSULATE W/ ARMAFLEX IN THICKNESS PER ASHRAE 90.1. PROVIDE EXTERIOR RATED OR COATED ARMAFLEX OUTDOORS.

EQUIPMENT

A. EXHAUST FANS – EQUIVALENT BY COOK, PENN, ACME, GREENHECK, JENNAIRE, TWIN CITY. PROVIDE W/ SPEED CONTROLS FOR ALL FANS LESS THAN 1/3HP TO BE FURNISHED TO E/C FOR MOUNTING AT FAN. PROVIDE W/ 14" MIN. CURB. PROVIDE GREASE TRIM & VENTILATED CURB EXTENSIONS FOR GREASE FANS.

B. HOOD FIRE–EXTINGUISHING EQUIPMENT – PROVIDE STAND ALONE, AUTOMATIC EXTINGUISHING SYSTEM FOR EXHAUST HOODS & DUCT SYSTEM MEETING REQUIREMENTS OF NFPA 96 & 17. INCLUDE ALL TANKS, PIPING, HEADS, ALARMS, INDICATORS, VALVES & CHARGE TO PROPERLY PROTECT EXHAUST SYSTEM. SYSTEM SHALL COMPLETELY SHUT–DOWN POWER & GAS TO ALL APPLIANCES LOCATED BENEATH HOOD IN EVENT OF ALARM CONDITIONS. GAS SHUT DOWN SHALL BE BY MECHANICAL GAS VALVE. COORDINATE ALL WIRING W/ EQUIPMENT & REQUIREMENTS LOCAL JURISDICTION.

C. MAKE–UP AHU – SEE SCHEDULE. HEAVY GAUGE GALV STEEL CONSTRUCTION. 1" METAL MESH FILTERS, BELT DRIVEN DWDI, FC FAN. FAN & MOTOR ASSEMBLY MTD ON VIBRATION ISOLATORS. SHAFT SHALL BE MTD IN HD, SEALED BALL BEARINGS. ADJUSTABLE SHEAVES. 150% HP DRIVES AGA DIRECT GAS FIRED & C.G.A. APPROVED. CONTROLS SHALL INCLUDE MAIN GAS PRESSURE REGULATOR, MODULATING GAS VALVE, ELECTRIC SPARK IGNITION PILOT RE–LIGHT SYSTEM, SAFETY PILOT, HIGH LIMIT & 24V CONTROL TRANS. EQUIVALENTS BY CAPTIVEAIR, GREENHECK, ENGINEERED AIR, REZNOR, HASTINGS, STERLING.

EXECUTION

F. COORDINATE W/ E/C TO PROVIDE ALL WIRING BETWEEN EQUIPMENT, DAMPERS, THERMOSTATS & ALL OTHER REQUIRED CONTROLS & DEVICES. PROVIDE ANY REQUIRED INTERFACES TO FIRE ALARM OR SIMILAR SYSTEMS.

G. PROVIDE GROUND–MOUNTED UNITS ON 4", REINFORCED CONCRETE BASE, 4" LARGER THAN UNIT ON EACH SIDE.

H. ROOF–MOUNTED UNITS ON EQUIPMENT SUPPORTS OR CURBS. ANCHOR UNITS TO SUPPORTS

I. PROVIDE FACTORY–AUTHORIZED SERVICE START UP ON EQUIPMENT. TRAIN OWNER'S MAINTENANCE PERSONNEL ON STARTUP, SHUTDOWN, TROUBLESHOOTING, SERVICING, PREVENTIVE MAINTENANCE.

SECTION 15900 – SYSTEM TESTING & BALANCING

A. CONTRACTOR SHALL PROCURE SERVICES OF INDEPENDENT TAB CONTRACTOR WHICH SPECIALIZES IN TAB OF HVAC SYSTEMS, TO BALANCE, ADJUST, & TEST AIR MOVING EQUIPMENT & DISTRIBUTION & EXHAUST SYSTEMS & ALL WATER FLOW CIRCUITS. WORK SHALL BE DONE UNDER ENGINEER EMPLOYED TAB. ALL INSTRUMENTS USED SHALL BE ACCURATELY CALIBRATED & MAINTAINED IN GOOD WORKING ORDER. IF REQUESTED TESTS SHALL BE CONDUCTED IN PRESENCE OF A/E RESPONSIBLE FOR PROJECT &/OR REPRESENTATIVE. TAB CONTRACTOR SHALL BE CERTIFIED BY NEBB OR AABC & ALL WORK SHALL BE PERFORMED IN ACCORDANCE W/ ORGANIZATIONS PUBLISHED PROCEDURE MANUALS.

B. TESTING & BALANCING (TAB) OF BUILDING HVAC SYSTEMS WILL BE COMPLETED NEAR END OF CONSTRUCTION. M/C HAS RESPONSIBILITY TO COOPERATE W/, MAKE ADJUSTMENTS FOR & PROVIDE EQUIPMENT NECESSARY FOR TAB CONTRACTOR TO COMPLETE JOB.

C. PRIOR TO REQUESTING TAB CONTRACTOR TO PERFORM WORK, INSTALLING CONTRACTOR SHALL MAKE ALL NECESSARY INSPECTIONS & ADJUSTMENTS TO ENSURE THAT SYSTEMS ARE COMPLETELY INSTALLED & OPERATING ACCORDING TO MANUFACTURER'S RECOMMENDATIONS & CONTRACT DOCUMENTS.

D. CHECKS SHALL BE PERFORMED ON EACH SYSTEM INSTALLED UNDER THIS CONTRACT. REPORT SHEET SHALL BE PREPARED FOR EACH SYSTEM INDICATING CHECKS MADE, CORRECTIVE ACTION TAKEN WHERE REQUIRED, DATE & NAME OF INSPECTOR. SUBMIT (1) COPY TO TAB CONTRACTOR & (1) INDICATING CHECKS MADE, CORRECTIVE ACTION TAKEN WHERE REQUIRED, DATE & NAME OF INSPECTOR. SUBMIT (1) COPY TO TAB CONTRACTOR & (1) TO A/E. TAB CONTRACTOR WILL NOT BEGIN UNTIL CHECKLIST HAS BEEN RECEIVED & REVIEWED.

E. TAB CONTRACTOR SHALL AT MINIMUM: VERIFY & INSPECT THAT SYSTEMS ARE CLEAN, FAN ROTATION, BEARINGS, CLEARANCES, ALIGNMENT, VIBRATION ISOLATORS, FILTERS, DAMPER OPERATION & POSITION, EQUIPMENT IS INSTALLED, TRANSFER OPENINGS IN WALLS, AIR LEAKS, COIL FINS/DAMAGE.

F. BALANCING CONTRACTOR SHALL PREPARE CERTIFIED REPORT OF ALL TESTS PERFORMED. REPORT SHALL BE WRITTEN ON STANDARD FORMS PREPARED BY NEBB OR AABC OR FACSIMILES THEREOF. BALANCING CONTRACTOR SHALL SUBMIT 3 COPIES OF THIS REPORT TO M/C WHO SHALL SUBMIT THEM TO A/E FOR REVIEW & DISTRIBUTION.

G. AIR HANDLING UNIT AS INSTALLED SHOWING OUTDOOR, RETURN & SUPPLY AIR CONNECTIONS, COIL & DAMPERS ARRANGEMENTS, PSYCHOMETRIC CHART ON EACH AHU, W/ COOLING COIL, SHOWING OUTDOOR RETURN, MIXED AIR TEMPS AT MINIMUM OUTDOOR AIR CONDITION, COIL LEAVING AIR CONDITION AT FULL COOLING COIL FLOW. TAB REPORT SHALL INCLUDE ALL NEBB OR AABC FORMS COMPLETED AS REQUIRED BY CERTIFICATION.

H. TAB CONTRACTOR SHALL CYCLE EACH AHU THROUGH CONTROL SEQUENCE OF OPERATION TO VERIFY PROPER OPERATION. ANY INCONSISTENCY W/ CONTRACT DOCUMENTS SHALL BE REPORTED TO A/E & TEMP CONTROL CONTRACTOR. TEMP CONTROL CONTRACTOR SHALL TAKE ACTION TO CORRECT ANY CONTROL INCONSISTENCY AS REPORTED BY TAB CONTRACTOR.

I. DURING INSTALLATION OF HVAC SYSTEMS TAB CONTRACTOR SHALL PERIODIC INSPECTION VISITS TO PROJECT SITE. PROPER PLACEMENT & INSTALLATION OF CONTROL & BALANCING DEVICES SHALL BE VERIFIED BY THESE INSPECTIONS. M/C SHALL MAKE ALL CORRECTIONS IN CONTROL & BALANCING DEVICE LOCATIONS AS REQUESTED BY TAB CONTRACTOR. FOLLOWING EACH VISIT TAB CONTRACTOR SHALL REPORT TO A/E ALL ITEMS NOTED, ACTION TAKEN & PROGRESS OF INSTALLATION.

## 16000 - ELECTRICAL SPECIFICATIONS

SECTION 16000 – ELECTRICAL REQUIREMENTS

GENERAL REQUIREMENTS

A. ALL WORK SHALL BE IN ACCORDANCE W/ LATEST EDITION OF INTERNATIONAL BUILDING CODE, NATIONAL ELECTRICAL CODE, NFPA, CODES AS ADOPTED BY CITY, COUNTY, STATE & ALL OTHER APPLICABLE CODES.

B. ALL MATERIALS & EQUIPMENT SHALL BE NEW & SHALL BEAR U.L. LABEL WHERE APPLICABLE. PROVIDE WATERPROOF EQUIPMENT ENCLOSURES WHERE REQUIRED.

C. OBTAIN & PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THIS WORK & SHALL MAKE ARRANGEMENTS FOR MODIFICATIONS TO ELECTRICAL CONNECTIONS TO BUILDING AS REQUIRED.

D. CONTRACTOR SHALL PROVIDE ALL LABOR & MATERIALS REQUIRED TO HAVE COMPLETE FUNCTIONING ELECTRICAL LIGHTING & POWER SYSTEMS TOGETHER W/ ALL ASSOCIATED EQUIPMENT & APPARATUS AS SHOWN ON PLANS.

E. WHERE AN ELECTRICAL DEVICE IS REQUIRED BY CODE BUT NOT SHOWN, IT SHALL BE PROVIDED AS THOUGH FULLY SHOWN & SPECIFIED.

F. CONTRACTOR SHALL VISIT SITE & OBSERVE CONDITIONS UNDER WHICH WORK WILL BE DONE. ANY DISCREPANCIES SHALL BE CALLED TO ARCHITECT'S ATTENTION. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION FOR ANY ERROR OR NEGLIGENCE ON CONTRACTOR'S PART.

G. FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO CONDITION THAT ALL SYSTEMS, EQUIPMENT, APPARATUS & APPLIANCES OPERATE SATISFACTORILY AS DESIGNED & INTENDED. WORK SHALL INCLUDE REQUIRED ADJUSTMENT OF SYSTEMS & CONTROL EQUIPMENT INSTALLED UNDER THESE SPECIFICATIONS.

H. WARRANT TO OWNER QUALITY OF MATERIALS, EQUIPMENT, WORKMANSHIP & OPERATION OF EQUIPMENT PROVIDED UNDER THESE SPECIFICATIONS FOR ONE YEAR FROM & AFTER COMPLETION OF BUILDING & ACCEPTANCE OF MECHANICAL SYSTEMS BY OWNER.

I. ALL MATERIALS INSTALLED IN PLENUMS SHALL BE NONCOMBUSTIBLE OR HAVE FLAME/SMOKE INDEX OF NO MORE THAN 25/50 IN ACCORDANCE W/ ASTM E 84.

SECTION 16100 – CONDUIT & CONDUCTORS

A. FOLLOW CIRCUITING SHOWN ON PLANS. USE NO CONDUIT SMALLER THAN 1/2" & NO CONDUCTORS SMALLER THAN #12 GA. UNLESS NOTED OTHERWISE.

B. WIRE SHALL BE IN NON–FLEXIBLE METALLIC CONDUIT (EMT, IMC OR RMC) FOR ALL CIRCUITS AND FEEDERS GREATER THAN 30A, LIGHT SWITCH RISERS, KITCHEN CIRCUITS & HOME RUNS.

C. MC CABLE ACCEPTABLE FOR BRANCH CONVENIENCE CIRCUITS AND LIGHTING CIRCUITS. DO NOT DAISY CHAIN LIGHT FIXTURES. PROVIDE MC LUMINARY CABLE WITH BUILT–IN TWISTED JACKETED PAIR FOR LIGHTING CIRCUITS FOR LIGHTING CONTROLS.

D. CONDUIT INSTALLED BELOW GRADE SHALL BE SCHEDULE 80 PVC HEAVY WALL PLASTIC CONDUIT MEETING NEMA STANDARDS & UL LISTED FOR UNDERGROUND & EXPOSED USE. PROVIDE GRS RADIUS BENDS & RISERS AS CONDUITS RISE ABOVE GRADE OR ABOVE FLOOR SLAB.

E. PROVIDE INTERLOCKING SPACERS FOR MULT RUNS OF UG CONDUITS IN SAME TRENCH.

F. LIGHTING & RECEPTACLE CIRCUIT CONDUCTORS SHALL BE COPPER THWN/THHN 600 VOLT, 75 DEG C, COLOR CODED AS DESCRIBED UNDER APPLICABLE CODES. NO ROMEX, PLASTIC FLEX TUBING ETC PERMITTED. LIGHT FIXTURE WIRE INSULATION SHALL HAVE TEMP RATING NOT LESS THAN THE MANUFACTURER'S RECOMMENDED INDIVIDUAL FIXTURE RATING.

G. CIRCUITS W/ NO. 8 OR LARGER CONDUCTORS, MOTOR CIRCUITS, POWER & FEEDER CIRCUITS & BUILDING SERVICE FEEDERS SHALL BE COPPER THWN/THHN 600 VOLT, 75 DEG C.

H. ALL CONDUIT, JUNCTION BOXES, ETC. ABOVE CEILINGS SHALL BE SUPPORTED FROM STRUCTURE. PIPE SLEEVES, HANGERS & SUPPORTS SHALL BE FURNISHED & SET & CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER & PERMANENT LOCATIONS.

SECTION 16200 – GROUNDING

A. SUPPLEMENT GROUNDED NEUTRAL OF SECONDARY DISTRIBUTION SYSTEM W/ EQUIPMENT GROUNDING SYSTEM, INSTALLED SO THAT METALLIC STRUCTURES, ENCLOSURES, RACEWAYS, JUNCTION BOXES, OUTLET BOXES, CABINETS, MACHINE FRAMES, PORTABLE EQUIPMENT & OTHER CONDUCTIVE ITEMS OPERATE CONTINUOUSLY AT GROUND POTENTIAL & PROVIDE LOW IMPEDANCE PATH FOR GROUND FAULT CURRENTS.

B. SYSTEM SHALL COMPLY W/ NATIONAL ELECTRICAL CODE, DRAWINGS & AS SPECIFIED.

C. PROVIDE EQUIPMENT GROUND BUS IN BASE OF LOW VOLTAGE, SWITCHGEAR BRAZED OR OTHERWISE ADEQUATELY CONNECTED BY AN APPROVED METHOD TO GROUND RODS.

D. PROVIDE IN CONDUIT GREEN INSULATED COPPER GROUND CONDUCTOR TO MAIN METALLIC WATER SERVICE ENTRANCE & CONNECT BY MEANS OF ADEQUATE GROUND CLAMPS.

E. EQUIPMENT GROUNDING CONDUCTORS FOR BRANCH CIRCUIT HOME RUNS SHOWN ON DRAWINGS SHALL INDICATE AN INDIVIDUAL & SEPARATE GROUND CONDUCTOR FOR THAT BRANCH CIRCUIT WHICH SHALL BE TERMINATED AT BRANCH CIRCUIT PANELBOARD, SWITCHBOARD, OR OTHER DISTRIBUTION EQUIPMENT.

F. PROVIDE LOW VOLTAGE DISTRIBUTION SYSTEM W/ SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR EACH SINGLE OR THREE–PHASE FEEDER. SINGLE PHASE 120 VOLT BRANCH CIRCUITS FOR LIGHTING & POWER SHALL CONSIST OF PHASE & NEUTRAL CONDUCTORS & GREEN GROUND CONDUCTOR INSTALLED IN COMMON CONDUIT WHICH SHALL SERVE AS GROUNDING CONDUCTOR.

G. GROUNDING CONDUCTORS SHALL BE AS SHOWN ON PLANS OR IF NOT SPECIFICALLY SHOWN SHALL BE NO SMALLER THAN THAT REQUIRED BY NEC.

SECTION 16300 – ELECTRICAL EQUIPMENT

A. JUNCTION BOXES & OUTLET BOXES SHALL BE GALVANIZED KNOCKOUT TYPE. LIGHTING FIXTURE BOXES IN CEILINGS SHALL NOT BE LESS THAN 4" OCTAGONAL KNOCKOUT TYPE. OUTLETS SHALL BE INSTALLED IN LOCATIONS SHOWN ON DRAWINGS EXCEPT OUTLETS MAY BE MOVED 4 FEET IN EITHER DIRECTION IF SO DIRECTED, WITHOUT ADDITIONAL COST. BOXES SHALL BE FLUSH MOUNTED ON WALLS FOR CONCEALED WORK. GANGABLE BOXES SHALL BE USED IN ALL GYPBOARD SURFACES.

PANELBOARDS

A. BRANCH CIRCUIT 208/240V PANELS SHALL BE CAPACITY SHOWN W/ TIN PLATED COPPER BUSSING & BRACED FOR MINIMUM OF 22,000A AIC OR AS OTHERWISE NOTED OR REQUIRED (SERIES RATED ACCEPTABLE). BOLT ON CIRCUIT BREAKERS. 480V PANELS SAME EXCEPT 25,000A AIC MIN. MINIMUM 20" WIDE W/ GALV STEEL ENCLOSURE W/ HINGED DOOR & KEYED LOCK. COORD TRIM WITH MOUNTING LOCATION. PANELS TO BE RECESSED WHENEVER POSSIBLE.

B. DISTRIBUTION PANELS SHALL BE CAPACITY SHOWN & SHALL BE SQUARE D I–LINE W/ TIN PLATED COPPER BUSSING. 65KAIC MIN OR AS OTHERWISE NOTED/REQ'D. BOLT ON CIRCUIT BREAKERS (SERIES RATED ACCEPTABLE). GALV STEEL ENCLOSURE.

C. EQUIVALENT BY SQUARE D, SIEMENS, CUTLER HAMMER, OR GE.

SECTION 16350 – ELECTRICAL IDENTIFICATION

A. MANUFACTURED LABELS FOR EACH PANELBOARD & TRANSFORMER. TYPEWRITTEN PANEL SCHEDULES MOUNTED IN PANELS

B. PRINTED TAPE STYLE LABEL FOR EACH RECEPTACLE INDICATING PANEL & CIRCUIT #.

C. MANUFACTURED LABELS FOR ALL DISCONNECT SWITCHES INDICATING EQUIPMENT SERVED.

D. BRANCH CIRCUITS – IDENTIFY EACH CIRCUIT W/ WIRE MARKERS WHEN ENCLOSURE LABEL AND WIRE COLORS DO NOT PROVIDE ENOUGH INFORMATION TO IDENTIFY EACH CIRCUIT WITHOUT TRACING. FEEDERS & BRANCH CIRCUIT HOME RUNS W/ WIRE MARKER W/ PANEL & CKT #. BOX COVERS ABOVE LAY–IN CEILINGS NEATLY MARKED W/ INDELIBLE MARKER.

E. FIRE ALARM – NAMEPLATE ON EACH FIRE ALARM TERMINAL CABINET. LABEL ALL WIRING.

SECTION 16400 – WIRING DEVICES

A. CONVENIENCE OUTLETS – SPEC GRADE 20 AMP DUPLEX W/ GROUND & SS WALL PLATES. OTHER OUTLETS SHALL BE VERIFIED W/ EQUIPMENT SUPPLIERS FOR PROPER NEMA CONFIGURATIONS. PROVIDE GFIC RATED DEVICES WHERE INDICATED AND AS REQ'D PER CODE.

B. PROVIDE GFCI RATED DEVICES WHERE INDICATED AND ANYWHERE REQUIRED PER THE NEC.

C. PROVIDE AFCI PROTECTION ON ALL CIRCUITS REQUIRED PER THE NEC.

D. PROVIDE TAMPER RESISTANT RECEPTACLES ON ALL RECEPTACLES IN PUBLIC AREAS, AREAS ACCESSIBLE TO CHILDREN, AND WHERE OTHERWISE REQUIRED TO BE TAMPER RESISTANT PER THE NEC.

E. LIGHT SWITCHES – SPEC GRADE 20 AMP TOGGLE SWITCHES W/ SS WALL PLATES.

F. WALL MOTION SWITCHES – SPEC GRADE, PIR, OVERRIDE.

G. CEILING MOTION SWITCHES – SPEC GRADE, DUAL TECHNOLOGY, MODEL AS REQ'D BY ROOM CONFIGURATION, ALL NECESSARY POWER PACKS AND RELAYS.

H. WALL MOTION SWITCHES (BATHROOM) – DUAL RELAY, SPEC GRADE, PIR, 2ND RELAY FOR OPERATION OF EXHAUST FAN DELAY.

I. COLOR OF DEVICES AS DIRECTED BY ARCHITECT.

J. EQUIVALENT DEVICES BY LEVITON, BRYANT, HUBBELL, WATTSTOPPER, LITHONIA, SENSOR SWITCH.

EXECUTION

A. ALL OUTLETS, SHALL BE MOUNTED W/ BOTTOM AT 18" AFF & SWITCHES W/ BOTTOM AT 44" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE ON PLANS. REFER TO ARCH FOR OTHER REQUIRED ELEVATIONS AND CABINETRY COORDINATION.

SECTION 16500 – LED LUMINAIRES

LUMINAIRES

A. PROVIDE LIGHTING FIXTURES W/ ALL ACCESSORIES REQ'D FOR HANGING. COORD MOUNTING OF LIGHTING FIXTURES W/ ARCHITECT & G/C. ADDITIONAL FIXTURE SUPPORTS SHALL BE PROVIDED BY E/C. SUPPORTS SHALL COMPLY W/ LATEST EDITION OF NEC. PROVIDE LIGHTING FIXTURE SECURING CLIPS AS REQUIRED. CONSULT ARCH PLANS FOR CEILING TYPES & PROVIDE SURFACE & RECESSED LIGHTING FIXTURES W/ APPROPRIATE MOUNTING COMPONENTS & ACCESSORIES.

B. REFER TO LIGHTING FIXTURE SCHEDULE PLANS FOR FIXTURE TYPES.

C. EQUIVALENT LUMINAIRES BY CREE, COOPER, HUBBELL, INFINITY, LITHONIA, WILLIAMS, COLUMBIA, EXITRONICS, LITEALARM, EXIDE, MULE, DUALLITE

SECTION 16600 – FIRE ALARM SYSTEM

A. EXTEND EXISTING FIRE ALARM SYSTEM

PRODUCTS

A. MICROPROCESSOR BASED FIRE ALARM CONTROL PANEL W/ INDICATION & NOTIFICATION CIRCUITS REQUIRED BASED ON DEVICES & DESCRIPTION HEREIN. COMPLETE CONTROL PANEL W/ POWER SUPPLY, BATTERIES, PROCESSOR, DIALER, ETC. IN SINGLE CABINET. CABINET TO HAVE HINGED LOCKABLE DOOR. SURFACE OR SEMI–RECESSED MOUNTING. MANUFACTURED BY SIEMENS, SIMPLEX, NOTIFIER, OR APPROVED EQUAL.

B. PHOTOELECTRIC DUCT SMOKE DETECTORS W/ SAMPLING TUBE. PROVIDE REMOTE TEST SWITCH & INDICATOR FOR EACH. LOCATION APPROVED BY ARCHITECT. ACTIVATION OF DUCT SMOKE DETECTORS SHALL SHUT DOWN RESPECTIVE AIR HANDLING UNIT.

C. PHOTOELECTRIC CEILING MOUNTED SMOKE DETECTORS.

D. SINGLE ACTION PULL STATIONS.

E. REMOTE ANNUNCIATOR FOR RECESSED MOUNTING. COORDINATE LOCATION WITH FIRE DEPARTMENT.

F. PROVIDE ALL REQUIRED FAN AND OTHER SHUTDOWN RELAYS FOR DOORS, DAMPERS, ETC. COORDINATE W/ OTHER TRADES.

G. NOTIFICATION APPLIANCES – STROBES & COMBINATION HORN/STROBES. 15/75 CANDELA RATING UNLESS OTHERWISE NOTED OR REQUIRED. WEATHERPROOF WHERE EXTERIOR MOUNTED.

H. HEAT DETECTORS – RATE OF RISE OR FIXED AS REQUIRED BY APPLICATION.

I. COORDINATE TO PROVIDE POWER & SHUTDOWN OR OPERATION OF FIRE/SMOKE DAMPERS, DOOR HOLD OPENS, POWER TO DOOR LOCKS &ACCESS CONTROL & OTHER SIMILAR SYSTEMS.

J. MODULES FOR MONITORING STATUS OF SPRINKLER SYSTEM TAMPER & FLOW SWITCHES.

EXECUTION

A. INSTALLED & TESTED PER NFPA 72 & APPLICABLE SECTIONS OF NFPA 70. PROVIDE COMPLETE FIRE ALARM SYSTEM AS DESCRIBED HEREIN & SHOWN TO BE WIRED, CONNECTED, & IN FIRST CLASS CONDITION. INCLUDE SUFFICIENT CONTROL UNIT(S), ANNUNCIATOR(S), MANUAL STATIONS, AUTOMATIC FIRE DETECTORS, SMOKE DETECTORS, AUDIBLE & VISIBLE NOTIFICATION APPLIANCES, WIRING, TERMINATIONS, ELECTRICAL BOXES, & ALL NECESSARY MATERIAL FOR COMPLETE OPERATING SYSTEM.

B. SYSTEM SHALL BE UL LISTED.

C. SYSTEM WIRING: WIRE & CABLE SHALL BE LISTED FOR ITS INTENDED USE BY AN APPROVAL AGENCY ACCEPTABLE TO AHJ & SHALL BE INSTALLED IN ACCORDANCE W/ APPROPRIATE ARTICLES FROM CURRENT APPROVED EDITION OF NEC.

SECTION 16700 – LOW VOLTAGE CABLING

A. PROVIDE BROADBAND RG COAXIAL CABLE FOR CABLE TELEVISION OUTLETS.

B. PROVIDE ALL NECESSARY CABLING, EQUIPMENT, BOXES, SPLITTERS, CONNECTORS, COVERS, ETC. FOR COMPLETE & OPERATIONAL SYSTEM.

EXECUTION

A. CABLING SHALL BE INSTALLED CONCEALED IN NEW & EXISTING CONSTRUCTION.

B. CABLING SHALL BE UL LISTED FOR INTENDED USE & INSTALLED IN ACCORDANCE W/ APPROPRIATE ARTICLES FROM LATEST NEC.

## ABBREVIATIONS

| Abbr. | Meaning |
|---|---|
| A/E | ARCHITECT / ENGINEER |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| AG | ABOVE GRADE |
| AHJ | AUTHORITY HAVING JURISDICTION |
| AHU | AIR HANDLING UNIT |
| ARCH | ARCHITECT |
| BFP | BACKFLOW PREVENTER |
| BG | BELOW GRADE |
| BLDG | BUILDING |
| BMS | BUILDING MANAGEMENT SYSTEM |
| C | CONDUIT |
| CD | CANDELA |
| CD | COLD DECK |
| CLG | COOLING |
| CM | COORDINATE MOUNTING HEIGHT |
| CO | CLEAN OUT |
| CTE | CONNECT TO EXISTING |
| DCVA | DOUBLE CHECK VALVE ASSEMBLY |
| DCW | DOMESTIC COLD WATER |
| DDC | DIRECT DIGITAL CONTROLS |
| DF | DRINKING FOUNTAIN |
| DHW | DOMESTIC HOT WATER |
| DHWR | DOMESTIC HOT WATER RETURN |
| DIA | DIAMETER |
| DN | DOWN |
| E/C | ELECTRICAL CONTRACTOR |
| EA | EXHAUST AIR |
| EDF | ELECTRIC DRINKING FOUNTAIN |
| ELEV | ELEVATION |
| EM | EMERGENCY FIXTURE/DEVICE |
| EWT | ENTERING WATER TEMPERATURE |
| EX | EXISTING ITEM |
| FFA | FROM FLOOR ABOVE |
| FFB | FROM FLOOR BELOW |
| FFCO | FINISHED FLOOR CLEAN OUT |
| FGCO | FLUSH GRADE CLEAN OUT |
| FL | FLOW LINE |
| FLR | FLOOR |
| FP | FIRE PROTECTION |
| FPM | FEET PER MINUTE |
| FWCO | FLUSH WALL CLEAN OUT |
| G | GROUND / GANG |
| G/C | GENERAL CONTRACTOR |
| GFCI | GROUND FAULT CIRCUIT INTERUPTER |
| GPM | GALLONS PER MINUTE |
| HD | HOT DECK |
| HTG | HEATING |
| IG | ISOLATED GROUND |
| JB | JUNCTION BOX |
| LED | LIGHT EMITTING DIODE |
| LWT | LEAVING WATER TEMPERATURE |
| M/C | MECHANICAL CONTRACTOR |
| MA | MIXED AIR |
| MAU | MAKE UP AIR UNIT |
| MCB | MAIN CIRCUIT BREAKER |
| MECH | MECHANICAL |
| MH | MANHOLE |
| MLO | MAIN LUGS ONLY |
| NFA | NET FREE AREA |
| NL | NIGHT LIGHT |
| OA | OUTSIDE AIR |
| ORD | OVERFLOW ROOF DRAIN |
| P/C | PLUMBING CONTRACTOR |
| PSI | POUNDS PER SQUARE INCH |
| PVC | POLYVINYLCHLORIDE |
| RA | RETURN AIR |
| RE/REF | REFER / REFERENCE |
| RF | RELIEF FAN |
| RL | RELOCATED ITEM |
| RPZ | REDUCED PRESSURE ZONE |
| RR | RESTROOM |
| SA | SUPPLY AIR |
| SPD | SURGE PROTECTIVE DEVICE |
| ST | SHUNT TRIP |
| TA | TRANSFER AIR |
| TFA | TO FLOOR ABOVE |
| TFB | TO FLOOR BELOW |
| TP | TAMPERPROOF |
| TYP | TYPICAL |
| UNO | UNLESS NOTED OTHERWISE |
| VRF | VARIABLE REFRIGERANT FLOW |
| VTR | VENT THROUGH ROOF |
| WCO | WALL CLEANOUT |
| WG | WIRE GUARD |
| WP | WEATHERPROOF |

## FIRE SEALING NOTES

1. COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT THROUGH–PENETRATION FIRESTOP SYSTEMS ARE INSTALLED ACCORDING TO SPECIFIED AND APPLICABLE UL REQUIREMENTS.
2. COORDINATE SIZING OF SLEEVES, OPENINGS, CORE–DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE THROUGH–PENETRATION FIRESTOP SYSTEMS.
3. DO NOT COVER UP THROUGH–PENETRATION FIRESTOP SYSTEM INSTALLATIONS UNTIL EXAMINED BY NSPECTOR, IF REQUIRED BY AUTHORITIES HAVING JURISDICTION.
4. COMPATIBILITY: PROVIDE THROUGH–PENETRATION FIRESTOP SYSTEMS THAT ARE COMPATIBLE WITH ONE ANOTHER; WITH THE SUBSTRATES FORMING OPENINGS; AND WITH THE ITEMS, IF ANY, PENETRATING THROUGH–PENETRATION FIRESTOP SYSTEMS, UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY THROUGH–PENETRATION FIRESTOP SYSTEM MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.
5. PROVIDE COMPONENTS FOR EACH THROUGH–PENETRATION FIRESTOP SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS. USE ONLY COMPONENTS SPECIFIED BY THROUGH–PENETRATION FIRESTOP SYSTEM MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOP SYSTEMS INDICATED.
6. PROVIDE SLEEVES THROUGH ALL FIRE_RATED WALLS AND FILL VOIDS SURROUNDING SLEEVES AND INTERIOR TO SLEEVES AROUND PIPING WITH FIRE STOP PUTTY WITH U.L. LISTED 3 HOUR RATING INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
7. FIRE SEAL ALL PIPING, CONDUIT, CABLE, ETC PENETRATIONS ROUTED THROUGH FIRE RATED WALLS.
8. PROVIDE FIRE RATED ENCLOSURES OR WRAPS ON LIGHT FIXTURES AND OTHER ITEMS PENETRATING FIRE RATED CEILINGS, FLOOR/CEILING/ CEILING/ROOF ASSEMBLIES TO MAINTAIN UL LISTING FOR CONSTRUCTION.

## GENERAL ELECTRICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ.
2. COORDINATE LOCATIONS OF RECEPTACLES, SWITCHES, ETC. WITH ARCHITECTURAL CASEWORK AND ELEVATIONS.
3. REFER TO MOUNTING HEIGHTS DETAIL FOR MOUNTING HEIGHTS OF ALL DEVICES NOT INDICATED OTHERWISE.
4. PROVIDE ALL EMPTY CONDUITS WITH PULL STRINGS AND BUSHED ENDS.
5. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES FROM VIEW WHERE REASONABLY POSSIBLE.

## GEN. MECHANICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE INTERNATIONAL MECHANICAL CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ.
2. ANY POWER FOR CONTROL SYSTEMS TO BE PROVIDED BY E/C IS INDICATED ON ELECTRICAL PLANS. ANY ADDITIONAL LINE VOLTAGE OR LOW VOLTAGE POWER REQUIRED BY THE M/C OR SUBCONTRACTORS TO HAVE A FULLY FUNCTIONING SYSTEM SHALL BE PROVIDED BY THE M/C CONTRACTOR OR SUBS.
3. ALL EQUIPMENT SHALL BE ADEQUATELY AND PROPERLY SUPPORTED AND FASTENED FROM STRUCTURE.
4. ALL EQUIPMENT AND ACCESSORIES INSTALLED IN CONCEALED SPACES REQUIRING ACCESS SHALL BE PROVIDED WITH ACCESS DOORS MEETING ANY FIRE REQUIREMENTS OF THE WALL/CEILING THEY ARE INSTALLED.
5. EACH AIR HANDLING UNIT OVER 2000CFM SHALL BE PROVIDED WITH A SMOKE DETECTOR TO SHUT DOWN THE UNIT PER IMC 606 AS REQUIRED BY AHJ. COORDINATE WITH OTHER TRADES.
6. START UP AND ADJUST ALL EQUIPMENT AND VERIFY ALL MECHANICAL SYSTEMS IN OPERATE IN ACCORDANCE WITH THEIR INTENDED PURPOSES. SUBMIT BALANCE AND START UP REPORTS TO THE A/E. REFER TO SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS.

## GENERAL PLUMBING NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE INTERNATIONAL PLUMBING CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ.
2. NO PIPING SHALL BE INSTALLED WHERE IT WILL SUBJECT TO FREEZING TEMPERATURES. PIPING IN EXTERIOR WALLS SHALL BE INSTALLED ON THE WARM SIDE OF BUILDING INSULATION, INSULATED AND THE CHASE SHALL BE VENTILATED WITH GRILLES ALLOWING INDOOR AMBIENT CONDITIONS TO CIRCULATE THROUGH THE CHASE.
3. PROVIDE CLEANOUTS IN THE FOLLOWING LOCATIONS:
3.1. IN ALL HORIZONTAL DRAINS (WITHIN THE BUILDING) NOT MORE THAN 100 FEET APART.
3.2. IN BUILDING SEWERS LOCATED NO MORE THAN 100 FEET APART MEASURED FROM THE UPSTREAM ENTRANCE OF THE CLEANOUT.
3.3. EACH CHANGE OF DIRECTION OF THE BUILDING DRAIN OR HORIZONTAL WASTE OR SOIL LINES GREATER THAN 45 DEGREES.WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE PIPING.
3.4. AT THE BASE OF EACH WASTE OR SOIL STACK.
3.5. NEAR THE JUNCTION OF THE BUILDING DRAIN AND BUILDING SEWER.

## COORDINATION NOTES

1. COORDINATE REQUIREMENTS FOR INSTALLATION OF SYSTEMS AND EQUIPMENT WITH ALL OTHER TRADES.
2. THE CONTRACTOR SHALL COORDINATE THE ROUTING AND PATH OF ALL SYSTEMS, CONDUITS, PIPES, DUCTS, ETC WITH THE POSITION AND LAYOUT OF THE STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY OFFSETS, TURNS, RISES AND DROPS FOR SYSTEMS AND COMPONENTS AS NEEDED TO INSTALL THE MEP SYSTEMS TO CLEAR STRUCTURE, CEILINGS, ETC AND OTHER SYSTEMS IN POTENTIAL CONFLICT WITH ROUTING.
3. COORDINATE WORK WITH OTHER TRADES TO INSTALL SYSTEMS ABOVE CEILING HEIGHTS INDICATED ON ARCHITECTURAL PLANS.
4. CHECK SPACE REQUIREMENTS WITH OTHER TRADES AND STRUCTURE/CONSTRUCTION TO INSURE THAT ALL MATERIALS AND EQUIPMENT CAN BE INSTALLED IN THE SPACE ALLOTTED INCLUDING FINISHED SUSPENDED CEILINGS AND OTHER SPACES, CHASES, ETC WITHIN THE BUILDING. MAKE MODIFICATIONS THERETO AS REQUIRED AND APPROVED.
5. TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE TIME FOR INSTALLATION.
6. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES, COORDINATE WITH THOSE TRADES TO INSURE THAT ALL SUBCONTRACTORS HAVE THE INFORMATION NECESSARY SO THAT THEY MAY PROPERLY INSTALL ALL CONNECTIONS AND EQUIPMENT. IDENTIFY ALL ITEMS OF WORK THAT REQUIRE ACCESS SO THAT THE CEILING TRADE WILL KNOW WHERE TO INSTALL ACCESS DOORS AND PANELS.
7. COORDINATE, PROJECT AND SCHEDULE WORK WITH OTHER TRADES IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE.
8. DRAWINGS SHOW THE GENERAL RUNS OF CONDUITS, PIPING AND DUCTWORK AND APPROXIMATE LOCATION OF OUTLETS. ANY SIGNIFICANT CHANGES IN LOCATION OF ITEMS NECESSARY IN ORDER TO MEET FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER AND RECEIVE HIS APPROVAL BEFORE SUCH ALTERATIONS ARE MADE. ALL SUCH MODIFICATIONS SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF SURFACES, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
10. ADJUST LOCATION OF PIPING, DUCTWORK, ETC. TO PREVENT INTERFERENCES, BOTH ANTICIPATED AND ENCOUNTERED. DETERMINE THE EXACT ROUTE AND LOCATION OF EACH ITEM PRIOR TO FABRICATION. MAKE OFFSETS, TRANSITIONS AND CHANGES IN DIRECTION IN SYSTEMS AS REQUIRED TO MAINTAIN ADEQUATE CLEARANCES AND HEADROOM.
11. WHEREVER THE WORK IS OF SUFFICIENT COMPLEXITY, PREPARE ADDITIONAL COORDINATION DRAWINGS AND ORGANIZE ON–SITE MEETINGS WITH ALL RELATED SUBCONTRACOTRS TO COORDINATE THE WORK BETWEEN TRADES . DRAWINGS SHALL CLEARLY SHOW THE WORK AND ITS RELATION TO THE WORK OF OTHER TRADES, AND BE SUBMITTED FOR REVIEW PRIOR TO COMMENCING SHOP FABRICATION OR ERECTION IN THE FIELD.
12. COORDINATE WITH LOCAL UTILITY PROVIDERS FOR THEIR REQUIREMENTS FOR SERVICE CONNECTIONS AND PROVIDE ALL NECESSARY PAYMENTS, MATERIALS, LABOR AND TESTING TO ACCOMPLISH THE WORK.

## GENERAL NOTES

1. SOME ROOM NAMES MAY NOT BE SHOWN FOR PURPOSE OF CLARIFYING PLAN. REFER TO ARCHITECTURAL PLANS FOR REFERENCE TO ROOM NAMES NOT SHOWN.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND KEEP AT THE JOB SITE, AN UP TO DATE SET OF "RECORD DRAWINGS" SHOWING ALL CHANGES FROM THE ORIGINAL PLANS. THE CONTRACTOR SHALL DELIVER THE "RECORD DRAWINGS" TO THE ENGINEER AT THE CONCLUSION OF THE PROJECT ELECTRONICALLY.
3. THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS (NEW AND EXISTING), DIMENSIONS, AND CLEARANCES PRIOR TO THE COMMENCEMENT OF WORK AND SHALL INCLUDE ALL COSTS, EQUIPMENT, MATERIAL, ACCESSORIES, ETC. REQUIRED FOR A FULLY COMPLETE, FUNCTIONAL AND CODE COMPLIANT INSTALLATION.
4. FINAL LOCATIONS OF ALL DEVICES, LIGHT FIXTURES, EQUIPMENT ETC SHALL BE INDICATED ON THE ARCHITECTURAL DRAWINGS. ALL DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM ARCHITECTURAL PLANS. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM MEP DRAWINGS.
5. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, APPROVALS, LICENSES, ETC. AS NEEDED FOR THE COMPLETE INSTALLATION AND PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA NEEDED FOR THIS.

## GEN. RENOVATION NOTES

1. DISCONNECT AND REMOVE ANY EQUIPMENT, PIPING OR DUCTWORK THAT WAS INSTALLED AS PART OF THE BUILDING SHELL THAT IS NOT NEEDED OR CONFLICTS WITH THIS BUILD OUT.
2. EXISTING UNDERGROUND PIPING LOCATIONS ARE ESTIMATED BASED UPON ANTICIPATED ROUTINGS. FIELD VERIFY EXACT LOCATIONS DURING CONSTRUCTION AND PROVIDE ALL NECESSARY MODIFICATIONS.
3. SAWCUT GRADE FLOOR SLABS TO INSTALL NEW PIPING, MECHANICAL SYSTEMS, ELECTRICAL FLOOR BOXES AND ALL ASSOCIATED CONDUIT, ETC. PATCH FLOOR TO MAKE LIKE NEW AFTER INSTALLATION. TAKE CARE TO LOCATE EXISTING CONDUIT, ETC AND AVOID CUTTING EXISTING CONDUITS BY NOT OVERCUTTING SLAB DEPTH.
4. SAWCUT AND CORE DRILL OPENINGS AS REQUIRED FOR ABOVE GRADE SLAB PENETRATIONS. XRAY SLABS TO ASCERTAIN STEEL AND EXISTING CONDUIT PENETRATIONS PRIOR TO CUTTING. VERIFY OPENINGS WITH STRUCTURAL ENGINEER PRIOR TO CUTTING.
5. HOMERUN CIRCUITS TO 20 AMP, SINGLE POLE BREAKERS IN PANELBOARDS INDICATED. UTILIIZE SPARE BREAKERS MADE AVAILABLE BY DEMOLITION, IF NO SPARE BREAKER IS AVAILABLE, PROVIDE NEW BREAKER.
6. EXISTING CIRCUITING MAY BE RE–USED WHERE POSSIBLE.
7. CONCEAL NEW CIRCUITING IN WALLS WHERE POSSIBLE. FOR NEW DEVICES INSTALLED ON EXISTING SOLID WALLS, CONCEAL CIRCUITING IN WIREMOLD. COORDINATE FINISH AND GENERAL ROUTING OF WIREMOLD WITH ARCHITECT TO BE AS CONCEALLED AND/OR ROUTED IN A NEAT AND ORGANIZED CONSISTENT MANNER.

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PROFESSIONAL ENGINEER
5/02/24

Bryan Leinwetter - Engineer
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owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

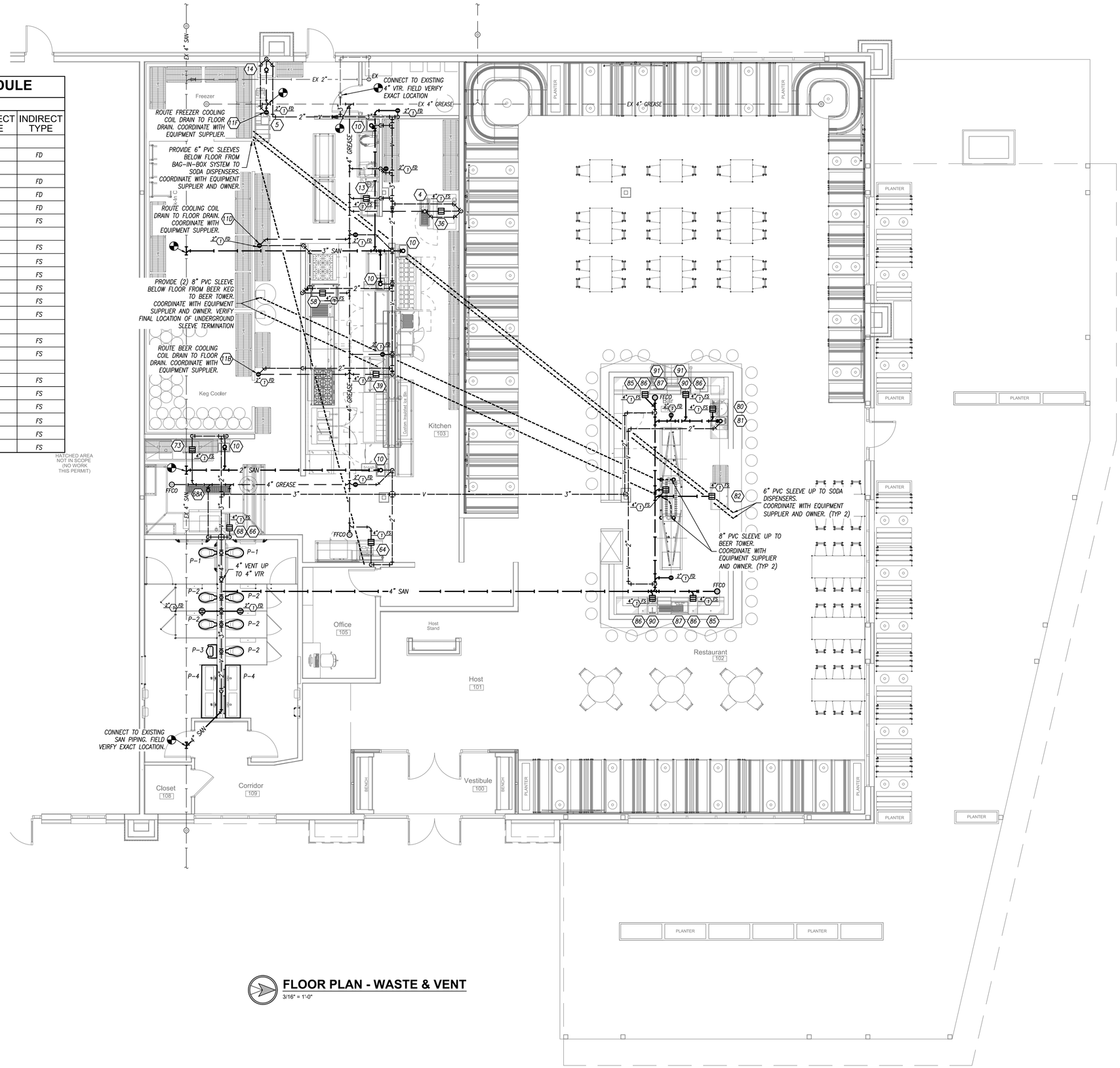
| | |
|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/02/2024 |
| sheet title | MEP Cover Sheet |
| sheet number | ME101 |

# KITCHEN EQUIPMENT-ELECTRICAL SCHEDULE

| ITEM NO | QTY | EQUIPMENT DISCRIPTION | WASTE | | | |
|---|---|---|---|---|---|---|
| | | | DIRECT SIZE | DIRECT HGT AFF | INDIRECT SIZE | INDIRECT TYPE |
| 4 | 1 | FLOOR TROUGH | 4" | – | | |
| 5 | 1 | BAG–IN–BOX SYSTEM | | | 1" | FD |
| 10 | 5 | HAND SINK | 1–1/2" | 16" | | |
| 11B | 1 | BEER COOLER COIL | | | 1" | FD |
| 11D | 1 | COOLER COIL | | | 1" | FD |
| 11F | 1 | FREEZER COIL | | | 1" | FD |
| 13 | 1 | 2 COMPARTMENT SINK | | | 2" | FS |
| 14 | 1 | MOP SINK | 3–1/2" | – | | |
| 36 | 1 | ICE MAKER W/ BIN | | | 2" | FS |
| 39 | 1 | HOT FOOD SERVING COUNTER | | | 2" | FS |
| 58 | 1 | COMBI OVEN | | | 2" | FS |
| 64 | 1 | SODA DISPENSER | | | 2" | FS |
| 66 | 1 | SOILED DISHTABLE | | | 2" | FS |
| 68 | 1 | DISHWASHER | | | 2" | FS |
| 68A | 1 | FLOOR TROUGH | 4" | – | | |
| 73 | 1 | 3 COMPARTMENT SINK | | | 2" | FS |
| 80 | 1 | UNDERCOUNTER DISHWASHER | | | 2" | FS |
| 81 | 1 | HAND/DUMP SINK | 1–1/2" | 16" | | |
| 82 | 1 | DRAINBOARD | | | 2" | FS |
| 85 | 2 | DRAINBOARD | | | 2" | FS |
| 86 | 4 | DRAIN BOARD | | | 2" | FS |
| 87 | 2 | ICE BIN | | | 2" | FS |
| 90 | 2 | UNDERBAR SINK | | | 2" | FS |
| 91 | 2 | DRAIN PAN | | | 2" | FS |

REMARKS:
1. EQUIPMENT ON SCHEDULE FURNISHED BY OTHERS.
2. EQUIPMENT SUBJECT TO CHANGE, FIELD VERIFY EQUIPMENT W/ OWNER AND ARCHITECT.
3. FIELD VERIFY PLUMBING REQUIREMENTS FOR ALL EQUIPMENT.
4. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
5. COORDINATE EXACT LOCATION OF EQUIPMENT WITH OWNER.

HATCHED AREA NOT IN SCOPE (NO WORK THIS PERMIT)




## FLOOR PLAN - WASTE & VENT

3/16" = 1'-0"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30hop american grill • craft beer • rooftop patio

**30hop SOWP**
1020 NW Pryor Road,
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30hop
owner

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| | 05.02.24 | Issue For Permit |

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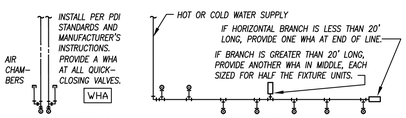
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/02/2024 |
| sheet title | Plumbing Plan |
| sheet number | M101 |

# KITCHEN EQUIPMENT-ELECTRICAL SCHEDULE

| ITEM NO | QTY | EQUIPMENT DISCRIPTION | WATER DCW SIZE | WATER DHW SIZE | WATER HEIGHT AFF | GAS SIZE | GAS MBH | GAS HEIGHT AFF |
|---|---|---|---|---|---|---|---|---|
| 5 | 1 | BAG-IN-BOX SYSTEM | 1/2" | | 60" | | | |
| 6 | 1 | HOTPLATE | | | | 3/4" | 120 | 12" |
| 10 | 5 | HAND SINK | 1/2" | 1/2" | 20" | | | |
| 13 | 1 | 2 COMPARTMENT SINK | 1/2" | 1/2" | 20" | | | |
| 14 | 1 | MOP SINK | 1/2" | 1/2" | 20" | | | |
| 25 | 1 | CHARBROILER | | | | 3/4" | 45 | 12" |
| 28 | 1 | GRIDDLE | | | | 3/4" | 168 | 12" |
| 30 | 1 | HOTPLATE | | | | 3/4" | 240 | 12" |
| 32 | 1 | CHEESE MELTER | | | | 3/4" | 30 | 60" |
| 34 | 3 | FRYER | | | | 3/4" | 140 | 12" |
| 36 | 1 | ICE MAKER W/ BIN | 3/8" | | 60" | | | |
| 58 | 1 | COMBI OVEN | 3/4" | | 48" | 3/4" | 98 | 12" |
| 64 | 1 | SODA DISPENSER | 1/2" | | 60" | | | |
| 66 | 1 | SOILED DISHTABLE | 1/2" | 1/2" | 20" | | | |
| 68 | 1 | DISHWASHER | | 3/4" | 20" | | | |
| 73 | 1 | 3 COMPARTMENT SINK | 1/2" | 1/2" | 20" | | | |
| 80 | 1 | UNDERCOUNTER DISHWASHER | 1/2" | 1/2" | 20" | | | |
| 81 | 1 | HAND/DUMP SINK | 3/8" | 3/8" | 20" | | | |
| 90 | 2 | UNDERBAR SINK | 3/8" | 3/8" | 20" | | | |

REMARKS:
1. EQUIPMENT ON SCHEDULE FURNISHED BY OTHERS.
2. EQUIPMENT SUBJECT TO CHANGE, FIELD VERIFY EQUIPMENT W/ OWNER AND ARCHITECT.
3. FIELD VERIFY PLUMBING REQUIREMENTS FOR ALL EQUIPMENT.
4. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
5. COORDINATE EXACT LOCATION OF EQUIPMENT WITH OWNER.

HATCHED AREA NOT IN SCOPE (NO WORK THIS PERMIT)



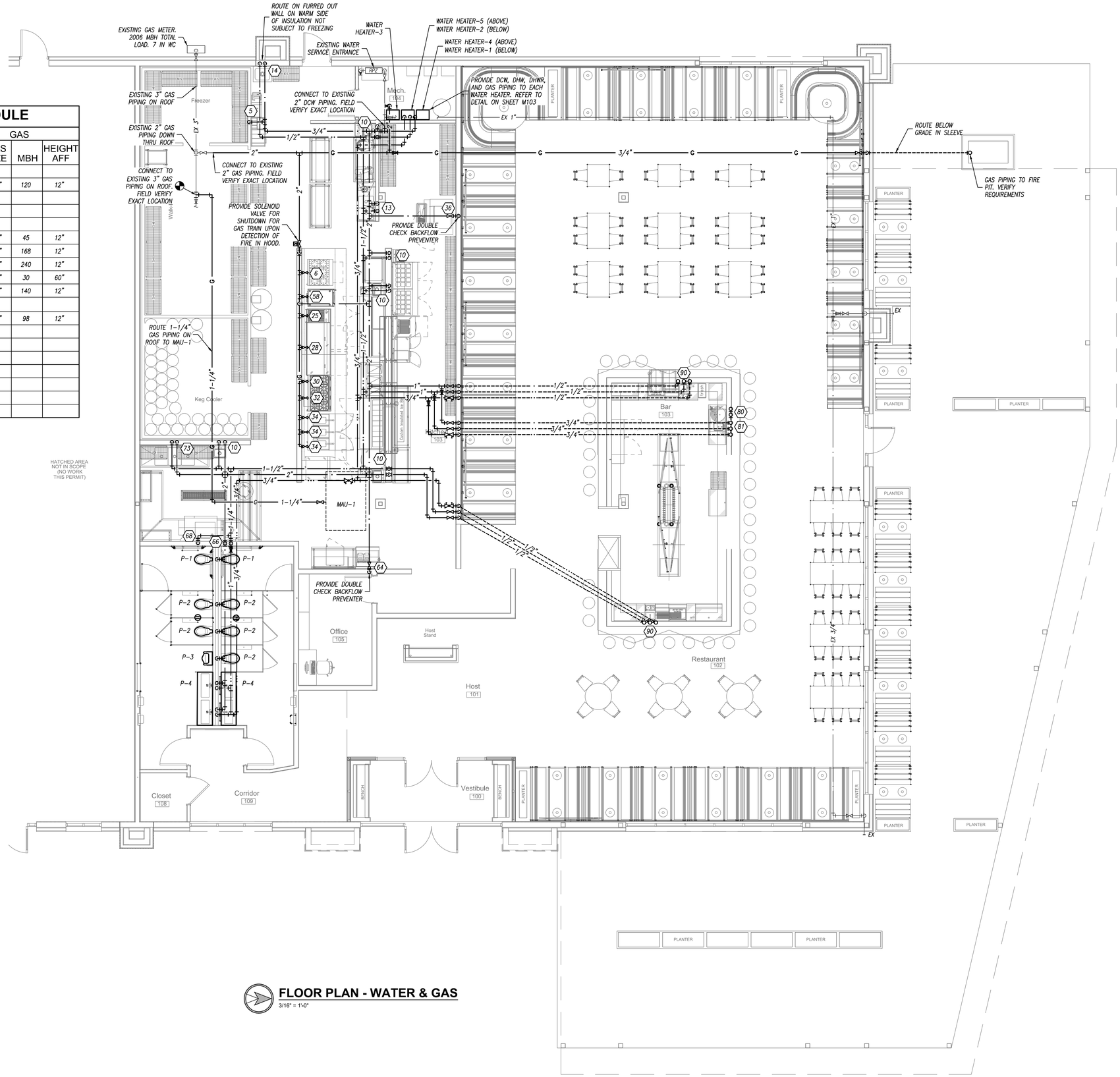

| PDI SIZE | PIPE SIZE | FIXTURE UNIT LOAD |
|---|---|---|
| A | 1/2" | 1-11 |
| B | 3/4" | 12-32 |
| C | 1" | 33-60 |
| D | 1-1/4" | 61-113 |
| E | 1-1/2" | 114-154 |
| F | 2" | 154-330 |

| FIXTURE UNIT TABULATION | | |
|---|---|---|
| FIXTURE | COLD | HOT |
| VALVE WATER CLOSET | 10 | -- |
| TANK WATER CLOSET | 5 | -- |
| URINAL | 5 | -- |
| LAVATORY/SINK | 1.5 | 1.5 |
| JANITOR'S SINK | 3 | 3 |
| SHOWER/BATHTUB | 2 | 2 |

FOR BATTERIES OF FIXTURES, PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE # 1010 AND ANSI # A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER THE TABLES SHOWN ABOVE. PROVIDE ACCESSIBILITY TO "WHA" WHERE REQUIRED BY LOCAL CODE.

## WATER HAMMER ARRESTERS

NOT TO SCALE




## FLOOR PLAN - WATER & GAS

3/16" = 1'-0"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30hop american grill • craft beer • rooftop patio

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orientation
project number 232882
scale As Noted
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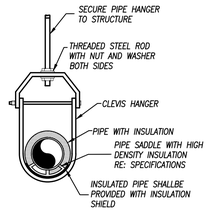
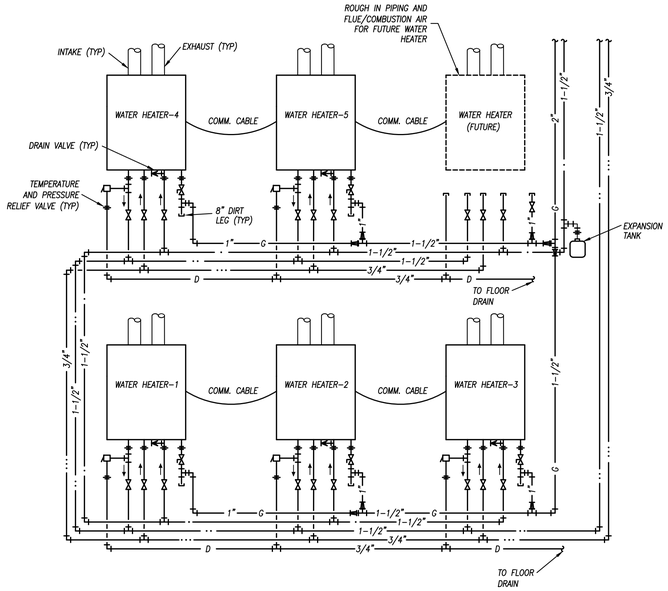
sheet title Plumbing Plan
sheet number M102




## PIPE HANGER DETAIL

NOT TO SCALE




NOTES:
1. INSTALL GAS WATER HEATERS PER MANUFACTURER'S RECOMMENDATIONS AND ALL LOCAL CODES. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND CODE REQUIRED CLEARANCES.
2. PROVIDE COLD WATER AND HOT WATER MANIFOLD TO ALLOW EQUAL FLOW THROUGH EACH WATER HEATER. ALL COLD WATER AND HOT WATER PIPING ASSOCIATED WITH MANIFOLD SHALL BE SYMMETRIC. INSTALL PIPING PER MANUFACTURER'S RECOMMENDATIONS.

## TANKLESS GAS WATER HEATER DETAIL

NO SCALE

## PLUMBING FIXTURE SCHEDULE

| PLAN MARK | FIXTURE MODEL | FIXTURE DESCRIPTION | FITTINGS MODEL | FITTINGS DESCRIPTION | PIPE SIZES WASTE | VENT | DCW | DHW |
|---|---|---|---|---|---|---|---|---|
| P-1 | KOHLER K-96057<br>CHURCH 9500C | ADA COMPLIANT WATER CLOSET: FLUSH VALVE, WHITE ELONGATED BOWL, FLOOR MOUNTED, 1.6 GALLON SIPHON JET FLUSHING ACTION<br>SEAT: WHITE, SOLID PLASTIC, OPEN FRONT, ELONGATED | SLOAN ROYAL 111 SFSM-1.6 | BATTERY POWERED, SENSOR ACTIVATED, FLUSH METER CHROME PLATED WITH SENSOR UNIT AND BATTERIES WITH VACUUM BREAKER FLUSH CONNECTION, AND SPUD COUPLING FOR 1 1/2" TOP SPUD. PROVIDE WITH WALL AND SPUD FLANGES. 1.6 GALLON FLUSH WITH OVERRIDE COVER. | 4" | 2" | 1-1/4" | -- |
| P-2 | KOHLER K-96053<br>CHURCH 9500C | WATER CLOSET: FLUSH VALVE, WHITE ELONGATED BOWL, FLOOR MOUNTED, 1.6 GALLON SIPHON JET FLUSHING ACTION<br>SEAT: WHITE, SOLID PLASTIC, OPEN FRONT, ELONGATED | SLOAN ROYAL 111 SFSM-1.6 | BATTERY POWERED, SENSOR ACTIVATED, FLUSH METER CHROME PLATED WITH SENSOR UNIT AND BATTERIES WITH VACUUM BREAKER FLUSH CONNECTION, AND SPUD COUPLING FOR 1 1/2" TOP SPUD. PROVIDE WITH WALL AND SPUD FLANGES. 1.6 GALLON FLUSH WITH OVERRIDE COVER. | 4" | 2" | 1-1/4" | -- |
| P-3 | KOHLER 4991-ET | ADA COMPLIANT URINAL: WHITE WALL HUNG URINAL 0.5 GALLON SIPHON JET FLUSHING ACTION. MOUNT FIXTURE RIM AT 17" ABOVE FLOOR WITH FLOOR MOUNTED, HEAVY DUTY TUBULAR STEEL SUPPORT CARRIER | SLOAN ROYAL 186 SFSM-0.5 | BATTERY POWERED, SENSOR ACTIVATED, FLUSH METER CHROME PLATED WITH SENSOR UNIT AND BATTERIES WITH VACUUM BREAKER FLUSH CONNECTION, AND SPUD COUPLING FOR 3/4" TOP SPUD. PROVIDE WITH WALL AND SPUD FLANGES. 0.5 GALLON FLUSH. | 2" | 2" | 1" | -- |
| P-4 | TRUEFORM CONCRETE FLO-72VA-ADA | ADA COMPLIANT DUAL STATION LAVATORY: WALL HUNG LAVATORY 70"x21". PROVIDE FLEXIBLE METAL WATER RISERS, DECK MOUNTED SOAP DISPENSERS. MOUNT TOP OF RIM AT 34" ABOVE FLOOR. COORDINATE COLOR WITH ARCHITECT. | (2) SLOAN EBF-85 | SENSOR OPERATED ELECTRONICS FAUCET: CHROME FINISH 1/2" CONNECTIONS, VANDAL RESISTANT, 0.5 GPM., NO POP UP HOLE CHROME PLATED BRASS GRID DRAIN, TAILPIECE, AND P-TRAP INSULATE THE TAILPIECE, P-TRAP, AND WATER RISERS PROVIDE WITH THERMOSTATIC MIXING VALVE AND BATTERIES | 2" | 2" | 1/2" | 1/2" |

## WATER HEATER SCHEDULE

| PLAN MARK | MANUFACTURER | MODEL NUMBER | GALLONS | CAPACITY | ELECTRICAL | NOTES |
|---|---|---|---|---|---|---|
| WATER HEATER-1 | NAVIEN | NPE-240A2 | TANKLESS | 13,300 BTUH MIN - 199,000 BTUH MAX | 120V, 200W | 1,2,3 |
| WATER HEATER-2 | NAVIEN | NPE-240A2 | TANKLESS | 13,300 BTUH MIN - 199,000 BTUH MAX | 120V, 200W | 1,2,3 |
| WATER HEATER-3 | NAVIEN | NPE-240A2 | TANKLESS | 13,300 BTUH MIN - 199,000 BTUH MAX | 120V, 200W | 1,2,3 |
| WATER HEATER-4 | NAVIEN | NPE-240A2 | TANKLESS | 13,300 BTUH MIN - 199,000 BTUH MAX | 120V, 200W | 1,2,3 |
| WATER HEATER-5 | NAVIEN | NPE-240A2 | TANKLESS | 13,300 BTUH MIN - 199,000 BTUH MAX | 120V, 200W | 1,2,3 |

NOTES LEGEND
1 - PROVIDE INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS, INCLUDING INTAKE AND EXHAUST VENTING.
2 - PROVIDE INTERNAL CIRCULATION PUMP, 0.5 GALLON BUFFER TANK, TEMPERATURE/PRESSURE RELIEF VALVE.
3 - PROVIDE READY-LINK COMMUNICATION CABLE AND CONDENSATE NEUTRALIZER KIT.

## EXPANSION TANK SCHEDULE

| PLAN MARK | MANUFACTURER | MODEL NUMBER | TOTAL VOLUME |
|---|---|---|---|
| DOMESTIC HOT WATER | AMTROL | ST-12 | 4.4 |

## FLOOR DRAIN SCHEDULE

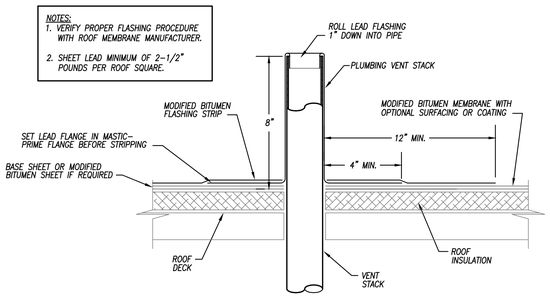
| PLAN MARK | MANUFACTURER | MODEL NUMBER | SERVICE | TOP/GRATE SIZE | WASTE SIZE | REMARKS |
|---|---|---|---|---|---|---|
| FD-1 | SIOUX CHIEF | 842-PB | FLOOR DRAIN | 5-1/2"Ø | 2" | 1,3 |
| FS-1 | SIOUX CHIEF | 861 | FLOOR SINK | 12"x12" | 4" | 2 |

REMARKS:
1. PROVIDE WITH NICKEL BRONZE STRAINER.
2. PROVIDE WITH STAINLESS STEEL SCREEN AND PVC HALF OPEN STRAINER
3. PROVIDE WITH TRAP SEAL

## FIRE SPRINKLER NOTES:

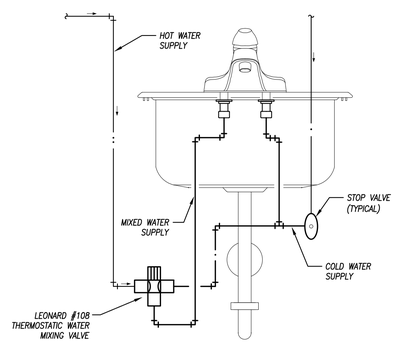
1. EXISTING SPACE HAS A FIRE SPRINKLER SYSTEM. AN APPROVED FIRE SPRINKLER CONTRACTOR TO VERIFY EXACT SPACING AND LAYOUT. RELOCATE EXISTING SPRINKLER HEADS AND EXTEND SPRINKLER PIPING AS REQUIRED FOR COMPLETE COVERAGE. CONTRACTOR TO FIELD VERIFY EXACT REQUIREMENTS.
2. THE FIRE SPRINKLER SYSTEM MUST BE INSTALLED AND COMPLY WITH NFPA, LATEST EDITION, THE LIFE SAFETY CODE, AND THE INTERNATIONAL FIRE CODE.
3. SUBMIT PLANS AND SUBMITTALS TO THE FIRE MARSHAL. THE SYSTEM SHALL BE INSPECTED FOR COMPLIANCE BY THE FIRE INSPECTOR.

NOTES:
1. VERIFY PROPER FLASHING PROCEDURE WITH ROOF MEMBRANE MANUFACTURER.
2. SHEET LEAD MINIMUM OF 2-1/2" POUNDS PER ROOF SQUARE.




## VENT STACK

NOT TO SCALE



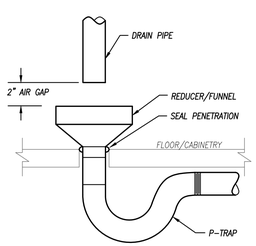

## MIXING VALVE SCHEMATIC

NOT TO SCALE

## PIPING MATERIAL & INSULATION SCHEDULE

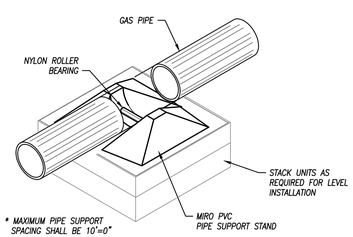
| PIPING SYSTEM | SIZE | TYPE/SCHED | MATERIAL | ACCEPTABLE FITTINGS | FIELD TEST PRESSURE/TIME | ALLOWABLE IN PLENUMS | INSULATION TYPE | INSULATION THICKNESS |
|---|---|---|---|---|---|---|---|---|
| DOMESTIC COLD WATER | 1/2"-2-1/2" | L | COPPER | SOLDER, PRO-PRESS | 130 PSI - 1/2HR | YES | FIBERGLASS W/ ASJ | 1/2" |
| DOMESTIC HOT WATER & HW RETURN | 1/2"-2-1/2" | L | COPPER | SOLDER, PRO-PRESS | 130 PSI - 1/2HR | YES | FIBERGLASS W/ ASJ | 1" |
| DOM. HOT & COLD BELOW GRADE | 1/2"-1-1/4" | K | COPPER | CONTINUOUS TUBING, BRAZED | 130 PSI - 1/2HR | YES | ELASTOMERIC | 3/4" (HOT ONLY) |
| DOMESTIC COLD WATER | 3"-6" | L | COPPER | BRAZED, PRO-PRESS | 130 PSI - 1/2HR | YES | FIBERGLASS W/ ASJ | 1/2" |
| DOMESTIC HOT WATER | 3"-6" | L | COPPER | BRAZED, PRO-PRESS | 130 PSI - 1/2HR | YES | FIBERGLASS W/ ASJ | 1-1/2" |
| | | | | | | | | |
| NATURAL GAS - ABOVE GRADE | 2-1/2 & Up | SCH. 40 | STEEL- SEEMED | WELDED | 75 PSI - 1HR | YES | ---- | ---- |
| NATURAL GAS - ABOVE GRADE | 1/2"-2" | SCH. 40 | STEEL- SEEMLESS | THREADED IRON | 75 PSI - 1HR | YES | ---- | ---- |
| NATURAL GAS BELOW GRADE | ALL | SDR-11 | POLYETHYLENE | FUSION JOINTS | 100 PSI - 1HR | NO | ---- | ---- |
| | | | | | | | | |
| SOIL & WASTE ABOVE GRADE | 1-1/2"-6" | NO HUB / SERVICE WT. | CAST IRON | NO HUB | 10 FT - 1/2HR | YES | ---- | ---- |
| SOIL & WASTE ABOVE GRADE | 2"-8" | SCH. 40 | PVC | SOLVENT JOINED | 10 FT - 1/2HR | NO | ---- | ---- |
| SOIL & WASTE BELOW GRADE | 2"-8" | SCH. 40 | PVC | SOLVENT JOINED | 10 FT - 1/2HR | NO | ---- | ---- |
| DRINKING FOUNT. DRAIN | ALL | ---- | ---- | ---- | ---- | YES | ELASTOMERIC | 1/2" |
| | | | | | | | | |
| CONDENSATE DRAIN ON ROOF | 3/4"-2" | SCH. 40 | PVC | SOLVENT JOINED | 10 FT - 1/2HR | NO | ---- | ---- |
| CONDENSATE DRAIN INTERIOR | 1/2"-2" | L | COPPER | SOLDER, PRO-PRESS | 10 FT - 1/2HR | YES | FIBERGLASS W/ ASJ | 1/2" (PLENUM ONLY) |
| | | | | | | | | |
| FIRE SERVICE BELOW GRADE | 4"-8" | AWWA C151 | DUCTILE IRON | AWWA C111. MECH JOINTS | 130 PSI - 1/2HR | YES | ---- | ---- |
| DOM. WATER SERVICE BELOW GRADE | 4"-8" | AWWA C151 | DUCTILE IRON | AWWA C111. MECH JOINTS | 130 PSI - 1/2HR | YES | ---- | ---- |
| DOM. WATER SERVICE BELOW GRADE | 1"-3" | K | COPPER | CONTINUOUS TUBING, BRAZED | 130 PSI - 1/2HR | YES | ---- | ---- |
| DOM. WATER SERVICE BELOW GRADE | 1"-3" | DR 9 | HDPE | CONTINUOUS TUBING, FUSED | 130 PSI - 1/2HR | NO | ---- | ---- |

NOTES
1. ALL PIPING AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
2. ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 - 2007 REQUIREMENTS AT A MINIMUM.
3. REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION.



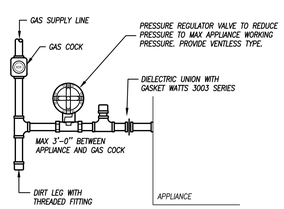

## AIR GAP DETAIL

NOT TO SCALE




## ROOF SUPPORT FOR GAS LINE

NOT TO SCALE




## TYPICAL GAS CONNECTION

NOT TO SCALE


640 N Lasalle Suite 400 Chicago Illinois 60654
312 337 3344 Architecture Urban Planning

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PROFESSIONAL ENGINEER
5/02/24
Bryan Leinwetter - Engineer
MO# PE-2020020297


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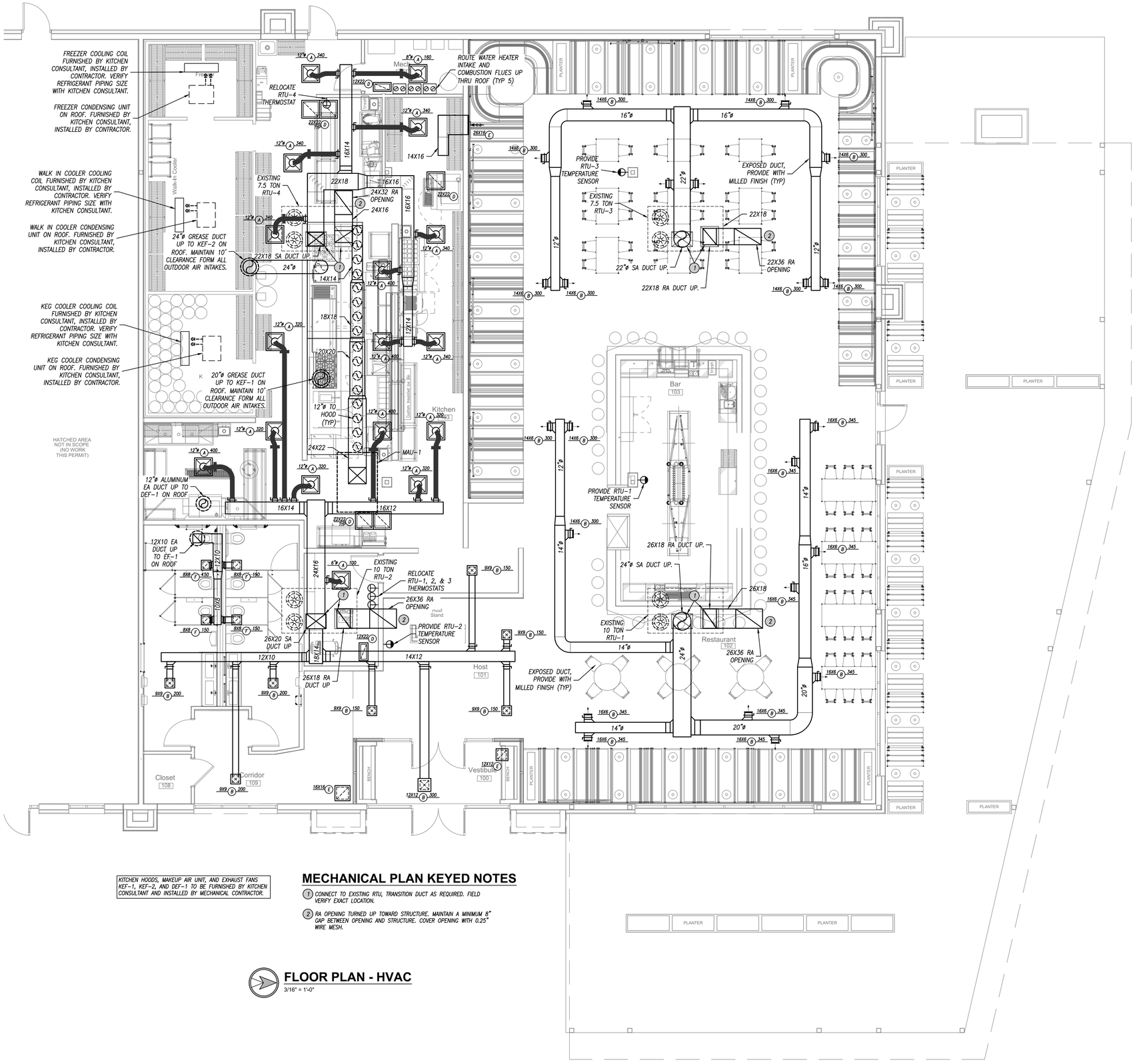
30hop American grill • craft beer • rooftop patio

**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

orientation
project number 232882
scale As Noted
date 5/02/2024
sheet title Plumbing Details
sheet number M103




KITCHEN HOODS, MAKEUP AIR UNIT, AND EXHAUST FANS KEF-1, KEF-2, AND DEF-1 TO BE FURNISHED BY KITCHEN CONSULTANT AND INSTALLED BY MECHANICAL CONTRACTOR.

## MECHANICAL PLAN KEYED NOTES

1. CONNECT TO EXISTING RTU, TRANSITION DUCT AS REQUIRED. FIELD VERIFY EXACT LOCATION.
2. RA OPENING TURNED UP TOWARD STRUCTURE. MAINTAIN A MINIMUM 8" GAP BETWEEN OPENING AND STRUCTURE. COVER OPENING WITH 0.25" WIRE MESH.

## FLOOR PLAN - HVAC

3/16" = 1'-0"

640 N Lasalle 312 337 3344 Architecture
Suite 400 Urban Planning
Chicago Illinois 60654

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owner

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| | |
|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/02/2024 |
| sheet title | HVAC Plan |
| sheet number | M201 |

# DUCTWORK INSULATION SCHEDULE

| DUCT | | | | INSULATION | | | |
|---|---|---|---|---|---|---|---|
| PURPOSE | DUTY | LOCATION | STYLE | MATERIAL | APPLICATION | THICKNESS | NOTES |
| SUPPLY | LOW PRESSURE/VELOCITY | CONCEALED | RECTANGULAR | FIBERGLASS | LINED | 1/2" | --- |
| | | CONCEALED | ROUND | MINERAL FIBER | WRAPPED | 1-1/2" | --- |
| | | EXPOSED | RECTANGULAR | FIBERGLASS | LINED | 1/2" | --- |
| | | EXPOSED | ROUND | FIBERGLASS | LINED | 1/2" | --- |
| RETURN | LOW PRESSURE/VELOCITY | CONCEALED | RECTANGULAR | FIBERGLASS | LINED | 1/2" | --- |
| | | CONCEALED | ROUND | MINERAL FIBER | WRAPPED | 1-1/2" | --- |
| | | EXPOSED | RECTANGULAR | FIBERGLASS | LINED | 1/2" | --- |
| | | EXPOSED | ROUND | FIBERGLASS | LINED | 1/2" | --- |
| | | RETURN/TRANSFER BOOTS | RECTANGULAR | FIBERGLASS | LINED | 1/2" | --- |
| EXHAUST | LOW PRESSURE/VELOCITY | CONCEALED | RECTANGULAR | FIBERGLASS | LINED | 1/2" | --- |
| | | CONCEALED | ROUND | FIBERGLASS | LINED | 1/2" | 1 |
| | | EXPOSED | RECTANGULAR | FIBERGLASS | LINED | 1/2" | --- |
| | | EXPOSED | ROUND | FIBERGLASS | LINED | 1/2" | 1 |
| | GREASE HOOD EXHAUST | ALL | ALL | 2 HOUR UL LISTED FIRE RATED WRAP SYSTEM | | | --- |
| | DISHWASHER EXHAUST | ALL | ALL | NONE | | | --- |

NOTES:

1. PROVIDE LINER ONLY WITHIN 10' OF FAN FOR ACCOUSTICS.

GENERAL REMARKS (APPLICABLE TO ALL TYPES):

1) ALL DUCTWORK, INSULATION AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
2) ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 – 2010 REQUIREMENTS AT A MINIMUM.
3) REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION FOR INSULATION PRODUCTS AND SYSTEMS.

# EXHAUST FAN SCHEDULE

| PLAN MARK | MANUFACTURER | MODEL NUMBER | MOUNTING | SERVICE | CFM | STATIC PRESSURE | ELECTRICAL | DRIVE | DISCONNECT | DAMPER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-1 | GREENHECK | GB-100 | ROOF | EXHAUST | 600 | 3/4" | 1/4 HP, 120V, 1 PH. | BELT | YES | MOTORIZED | 1,2 |

NOTES LEGEND

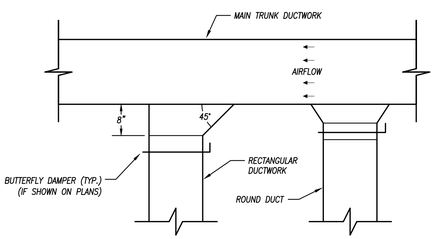
1. PROVIDE TIMECLOCK TO RUN FAN CONTINUOUSLY WHEN BUILDING IS OCCUPIED
2. PROVIDE ROOF CURB AND BIRD SCREEN

# GRILLE, REGISTER & DIFFUSER SCHEDULE

| PLAN MARK | MANUFACTURER | MODEL NUMBER | SERVICE | MOUNT TYPE | VOLUME DAMPER | MATERIAL | MATERIAL COLOR | NOTES |
|---|---|---|---|---|---|---|---|---|
| A | PRICE | PFD | SUPPLY | GRID | NO | STEEL | WHITE | 2 |
| B | PRICE | SMD-1 | SUPPLY | FLANGE | YES | STEEL | WHITE | |
| C | PRICE | SDGE | SUPPLY | ROUND DUCT | YES | STEEL | GALVANIZED | |
| D | PRICE | PDR | RETURN | GRID | NO | STEEL | WHITE | 1 |
| E | PRICE | 535 | RETURN | FLANGE | NO | STEEL | WHITE | |
| F | PRICE | 535 | EXHAUST | FLANGE | YES | STEEL | WHITE | |

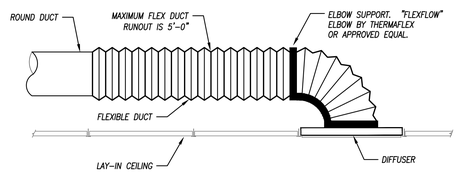
NOTES LEGEND

1. PROVIDE WITHOUT SCREW HOLES WHERE USED IN A GRID CEILING
2. PAN TO FIT A 2'X2' GRID.




## DUCTWORK TAKEOFF

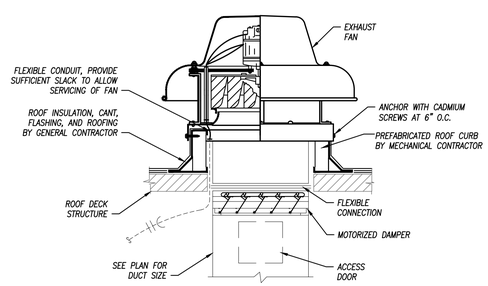
NOT TO SCALE




NOTES:
1. NOTE: INSTALL FLEXIBLE DUCTWORK SUPPORTS AT ALL ROUND NECK OUTLETS/INLETS UNLESS OTHERWISE NOTED ON DRAWINGS.
2. FLEXIBLE DUCTWORK IS NOT TO BE USED IN UNACCESSIBLE LOCATIONS. (ABOVE GYP. BOARD CEILINGS, ETC.)

## FLEXIBLE DUCT CONNECTION TO DIFFUSER

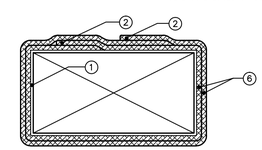
NOT TO SCALE




## EXHAUST FAN DETAIL

NOT TO SCALE

NOTES:
1. BANDING MATERIAL, 3/4" WIDE, MINIMUM 0.015" THICK, CARBON STEEL FOR CONSTRUCTION REQUIREMENTS OF ZERO CLEARANCE TO COMBUSTIBLES OR 1 HR. RATINGS. STAINLESS STEEL BANDING IS USED FOR 2 HR. REQUIREMENTS.
2. 3M FIREMATER DUCT WRAP, 1-1/2" THICK, 24" OR 48" WIDE, 300" STANDARD LENGTH (2 LAYERS) 8 LBS PER CUBIC FT TO BE UTILIZED.
3. HOLD INTERIOR WRAP OF INSULATION USING 1" WIDE FILAMENT TAPE (NO. 898) MANUFACTURED BY 3M COMPANY.
4. SEAL CUTE EDGES OF BLANKET WITH ALUMINUM FOIL TAPE.

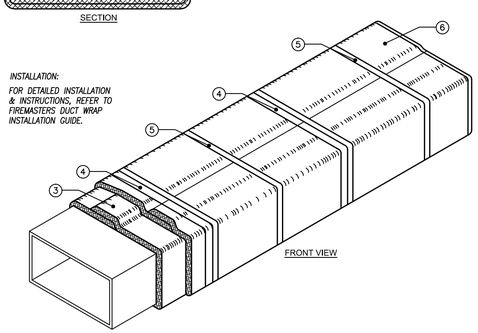



SECTION

| LEGEND | |
|---|---|
| 1 | DUCT |
| 2 | 3" MINIMUM PERIMETER OVERLAP |
| 3 | 3" PERIMETER OVERLAP |
| 4 | 3" LONGITUDINAL OVERLAP |
| 5 | FILAMENT TAPE & BANDING |
| 6 | 2 LAYERS FIREMASTERS DUCTWRAP |
| | |

INSTALLATION:

FOR DETAILED INSTALLATION & INSTRUCTIONS, REFER TO FIREMASTERS DUCT WRAP INSTALLATION GUIDE.




FRONT VIEW

## GREASE DUCT FIRE RATING DIAGRAM

NOT TO SCALE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NUMBER PE-2020020297
PROFESSIONAL ENGINEER
5/02/24
Bryan Leinwetter - Engineer
MO# PE-2020020297


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PEARSON KENT MCKINLEY RAAF ENGINEERS LLC
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24-107

30hop American grill • craft beer • rooftop patio

**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

orientation

project number 232882

scale As Noted

date 5/02/2024

sheet title HVAC Details

sheet number M202

FOR QUESTIONS, CALL THE
Iowa Office
REGION 71
PHONE: (515) 318 - 5908
EMAIL: reg71@captiveaire.com

## PATENT NUMBERS

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

## HOOD INFORMATION – JOB#6744776

| HOOD NO | TAG | MODEL | MANUFACTURER | LENGTH | MAX COOKING TEMP | TYPE | APPLIANCE DUTY | DESIGN CFM/FT | TOTAL EXH CFM | EXHAUST PLENUM RISER(S) WIDTH | LENG | HEIGHT | DIA | CFM | VEL | SP | TOTAL SUPPLY CFM | HOOD CONSTRUCTION | HOOD CONFIG END TO END | ROW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Main - L | 6030 ND-2-PSP-F | CAPTIVEAIRE | 12' 0" | 450 DEG | I | MEDIUM | 200 | 2400 | | | 4" | 16" | 2400 | 1719 | -0.797" | 2000 | 430 SS WHERE EXPOSED | LEFT | ALONE |
| 2 | Main - R | 6030 ND-2-PSP-F | CAPTIVEAIRE | 12' 0" | 600 DEG | I | HEAVY | 275 | 3300 | | | 4" | 18" | 3300 | 1867 | -1.151" | 2000 | 430 SS WHERE EXPOSED | RIGHT | ALONE |

## HOOD INFORMATION

| HOOD NO | TAG | FILTER(S) TYPE | QTY | HEIGHT | LENGTH | EFFICIENCY @ 7 MICRONS | LIGHT(S) QTY | TYPE | WIRE GUARD | UTILITY CABINET(S) LOCATION | SIZE | FIRE SYSTEM TYPE | SIZE | ELECTRICAL MODEL # | SWITCHES QUANTITY | FIRE SYSTEM PIPING | HOOD HANGING WEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Main - L | CAPTRATE SOLO FILTER | 9 | 20" | 16" | 85% SEE FILTER SPEC | 3 | RECESSED ROUND | NO | LEFT | 12"x60"x30" | TANK FS | 4.0/4.0/4.0/4.0 | | | YES | 1252 LBS |
| 2 | Main - R | CAPTRATE SOLO FILTER | 9 | 20" | 16" | 85% SEE FILTER SPEC | 3 | RECESSED ROUND | NO | RIGHT | 12"x60"x30" | | | DCV-2111_MA4 | 1 LIGHT 1 FAN | YES | 940 LBS |

## HOOD OPTIONS

| HOOD NO | TAG | OPTION |
|---|---|---|
| 1 | Main - L | FIELD WRAPPER 18.00" HIGH FRONT, LEFT. |
| | | BACKSPLASH 128.00" HIGH X 348.00" LONG 430 SS VERTICAL. |
| | | LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. |
| | | STRUCTURAL FRONT PANEL. |
| 2 | Main - R | FIELD WRAPPER 18.00" HIGH FRONT, RIGHT. |
| | | STRUCTURAL FRONT PANEL. |
| | | RISER SENSOR INSTALL 6IN PLEN. |
| | | RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS. |

## PERFORATED SUPPLY PLENUM(S)

| HOOD NO | TAG | PDS | LENGTH | WIDTH | HEIGHT | TYPE | RISER(S) WIDTH | LENG | DIA | CFM | SP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Main - L | Front | 156" | 14" | 12" | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| 2 | Main - R | Front | 156" | 14" | 12" | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |
| | | | | | | MUA | | | 12" | 249 | 0.079" |

## CLEARANCE TO COMBUSTIBLES

| HOODS # | SURFACE | *CLEARANCE |
|---|---|---|
| 1 | TOP | 18" |
| | FRONT | 0" |
| | BACK | 18" |
| | LEFT | 0" |
| | RIGHT | 18" |
| 2 | TOP | 18" |
| | FRONT | 0" |
| | BACK | 18" |
| | LEFT | 18" |
| | RIGHT | 0" |

- *0" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD.
- HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.

## SPECIFICATION: CAPTRATE• GREASE-STOP• SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

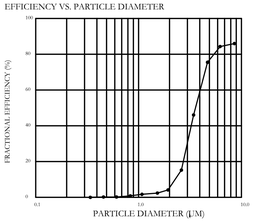
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

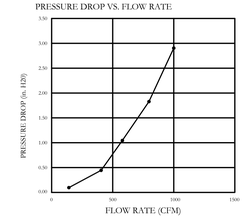
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

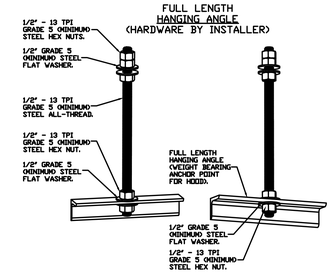
EFFICIENCY VS. PARTICLE DIAMETER




PRESSURE DROP VS. FLOW RATE



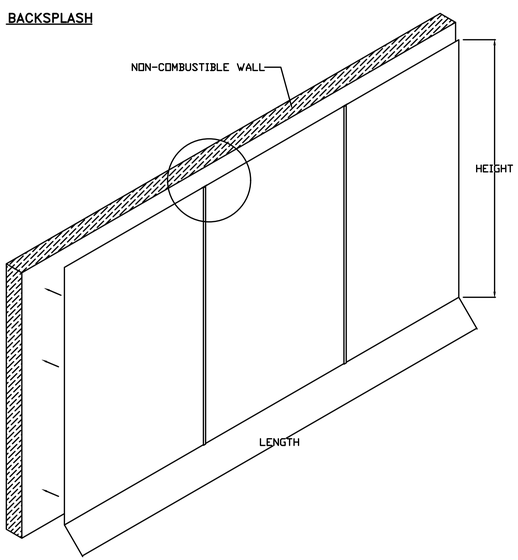

CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.

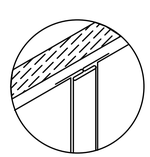



### ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR FULL LENGTH HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

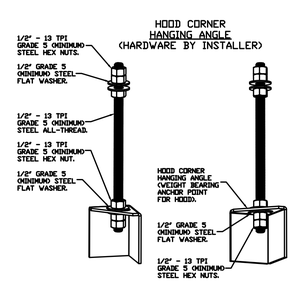
## BACKSPLASH



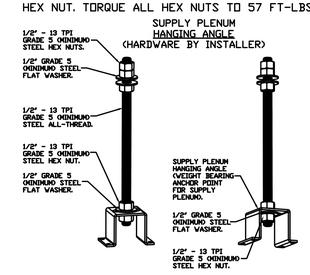
BACKSPLASH PANELS SLIDE INTO DIVIDER BAR

- BACKSPLASH IS NOT INSULATED AND IS UNSUITABLE FOR INSTALL AGAINST COMBUSTIBLE WALLS




### ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.




### ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.


640 N Lasalle Suite 400 Chicago Illinois 60654
312 337 3344 Architecture
Urban Planning

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STATE OF MISSOURI
BRYAN LEINWETTER
NUMBER PE-2020020297
PROFESSIONAL ENGINEER
5/02/24
Bryan Leinwetter - Engineer
MO# PE-2020020297


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PEARSON KENT MCKINLEY RAAF ENGINEERS LLC
2949 SW WANAMAKER DR., TOPEKA, KANSAS 66614
785.273.2447 WWW.PKMRENG.COM
24-107


30hop american grill • craft beer • rooftop patio

**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
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| | 05.02.24 | Issue For Permit |

REVISIONS

| DESCRIPTION | DATE: |
|---|---|
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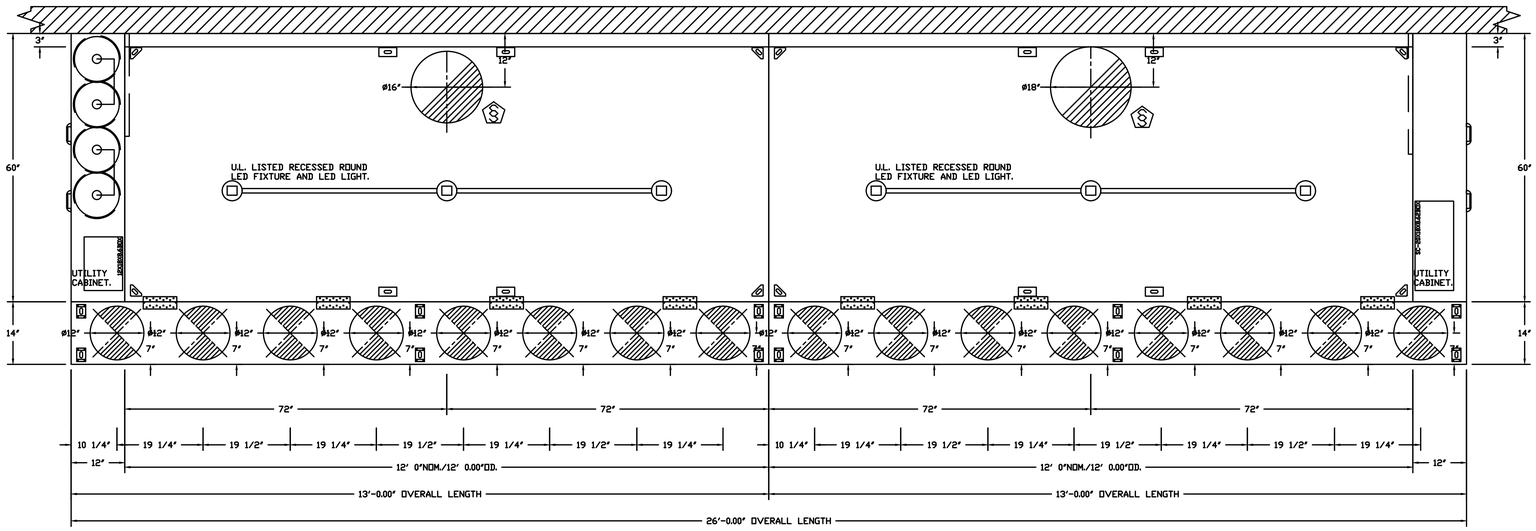
30 Hop - Lee's Summit, MO_R1
Ankeny, IA, 64002

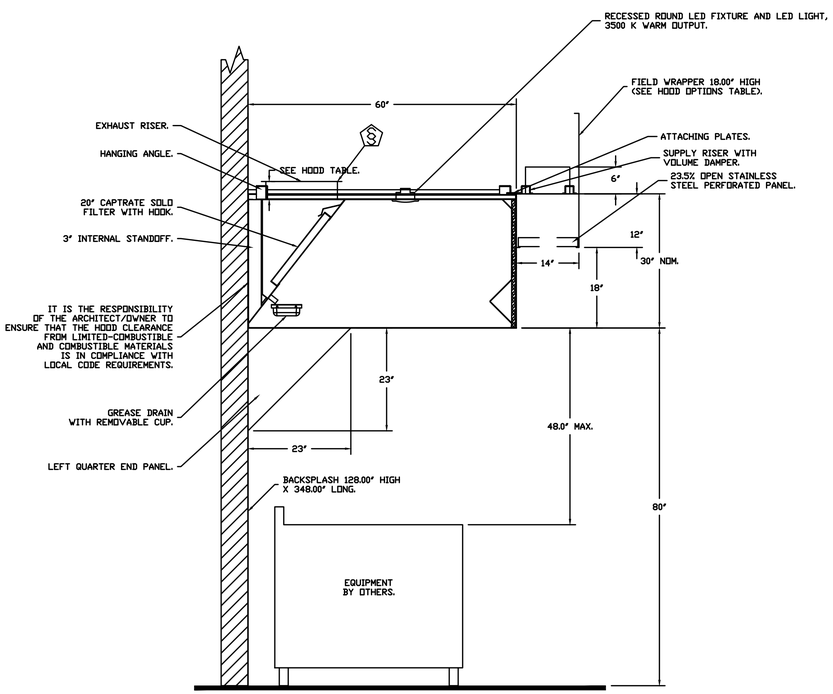
**DATE:** 4/17/2024
**DWG.#:** 6744776
**DRAWN BY:** jsievers
**SCALE:** 3/4" = 1'-0"
**MASTER DRAWING**
**SHEET NO.** 1

orientation
project number 232882
scale As Noted
date 5/02/2024
sheet title HVAC Details
sheet number M203

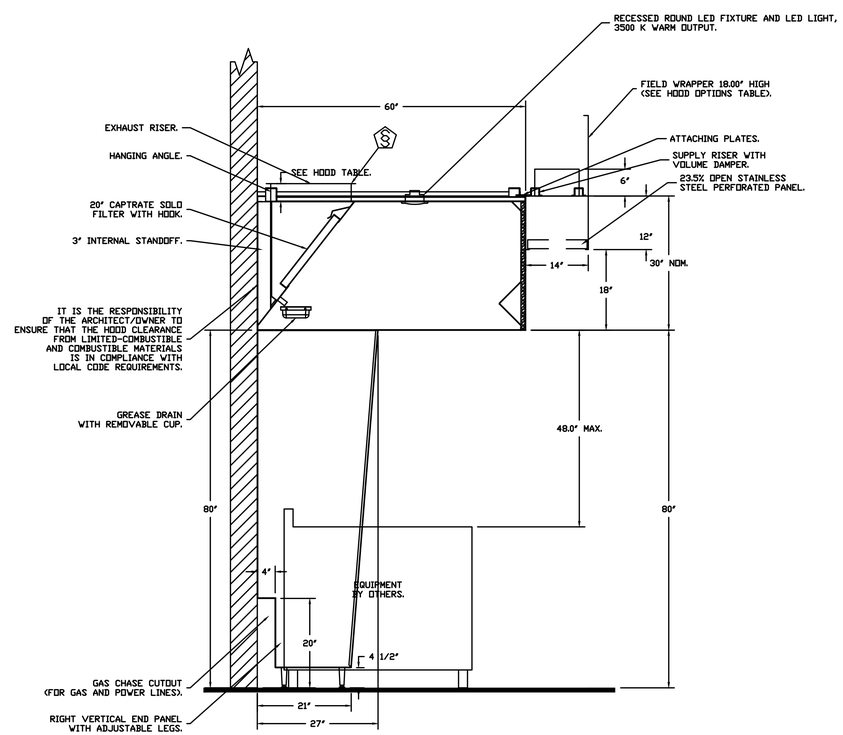



PLAN VIEW – HOOD #1 (Main – L)
12' 0.00" LONG 6030ND-2-PSP-F
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.

PLAN VIEW – HOOD #2 (Main – R)
12' 0.00" LONG 6030ND-2-PSP-F
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.




*SECTION VIEW – MODEL 6030ND-2-PSP-F*
*HOOD – #1 (Main – L)*




*SECTION VIEW – MODEL 6030ND-2-PSP-F*
*HOOD – #2 (Main – R)*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STATE OF MISSOURI
BRYAN LEINWETTER
NUMBER PE-2020020297
PROFESSIONAL ENGINEER
5/02/24
Bryan Leinwetter - Engineer
MO# PE-2020020297


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| | date | description |
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| | 05.02.24 | Issue For Permit |

**REVISIONS**

| DESCRIPTION | DATE: |
|---|---|
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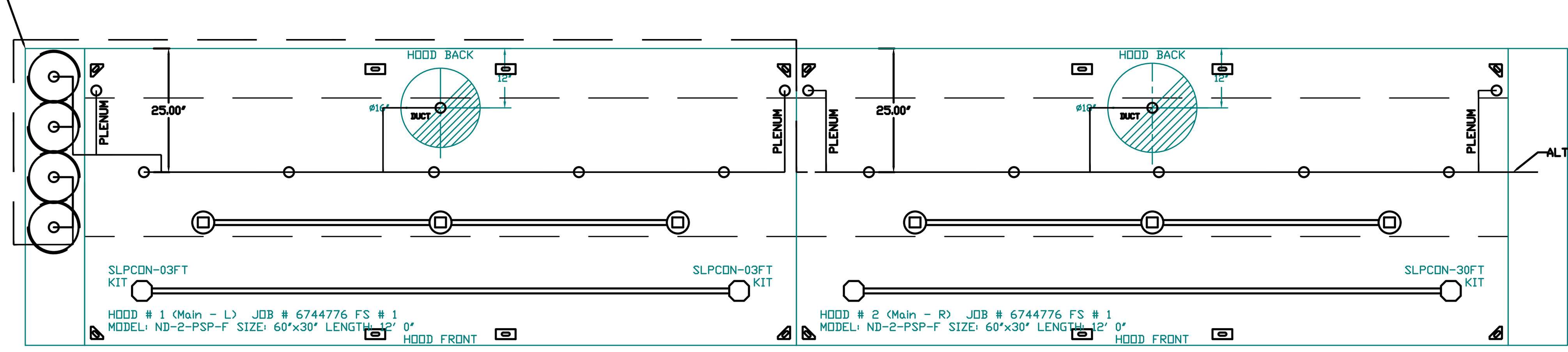
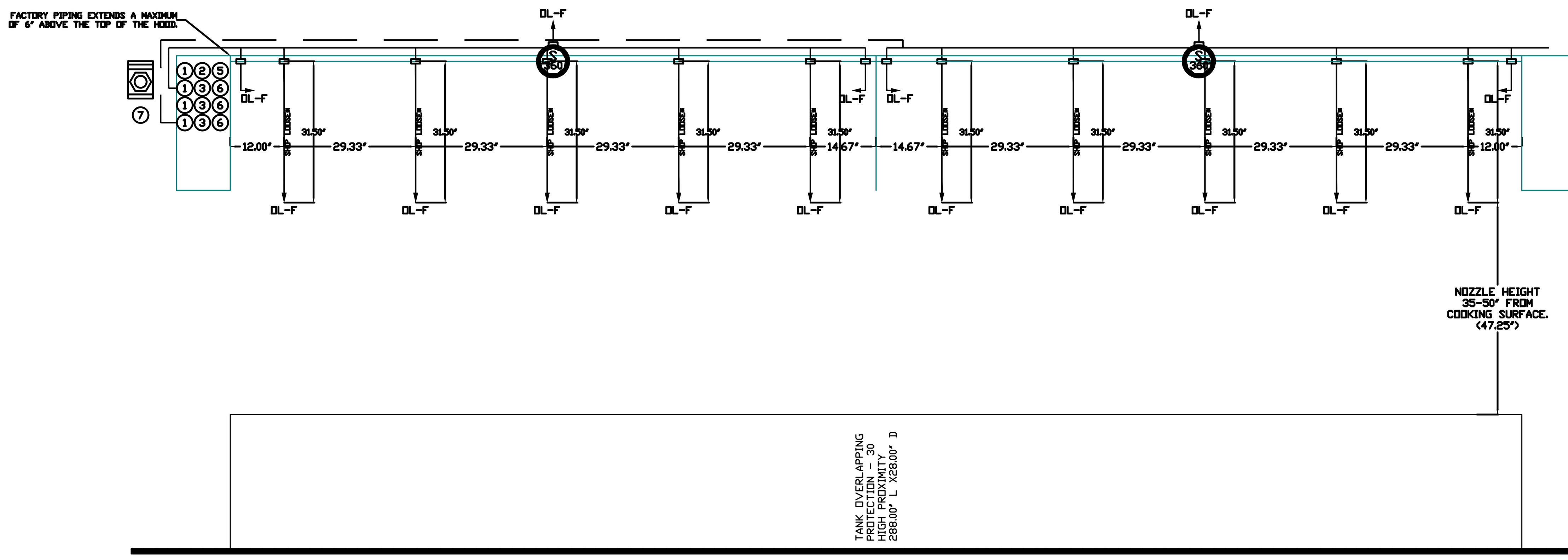
30 Hop - Lee's Summit, MO_R1
Ankeny, IA, 64002

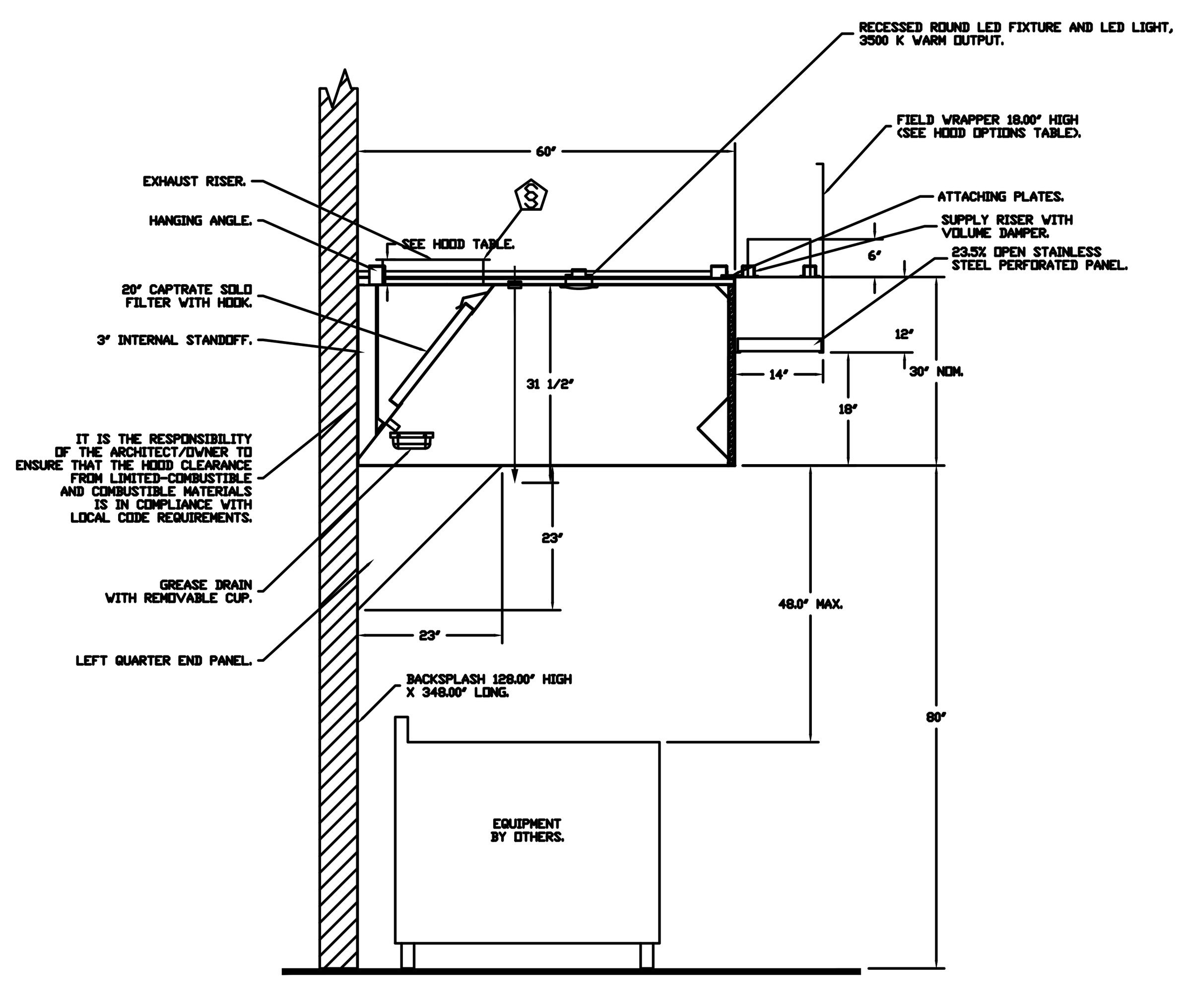
**DATE:** 4/17/2024
**DWG.#:** 6744776
**DRAWN BY:** jslevers
**SCALE:** 3/4" = 1'-0"
**MASTER DRAWING**

**SHEET NO.** 2

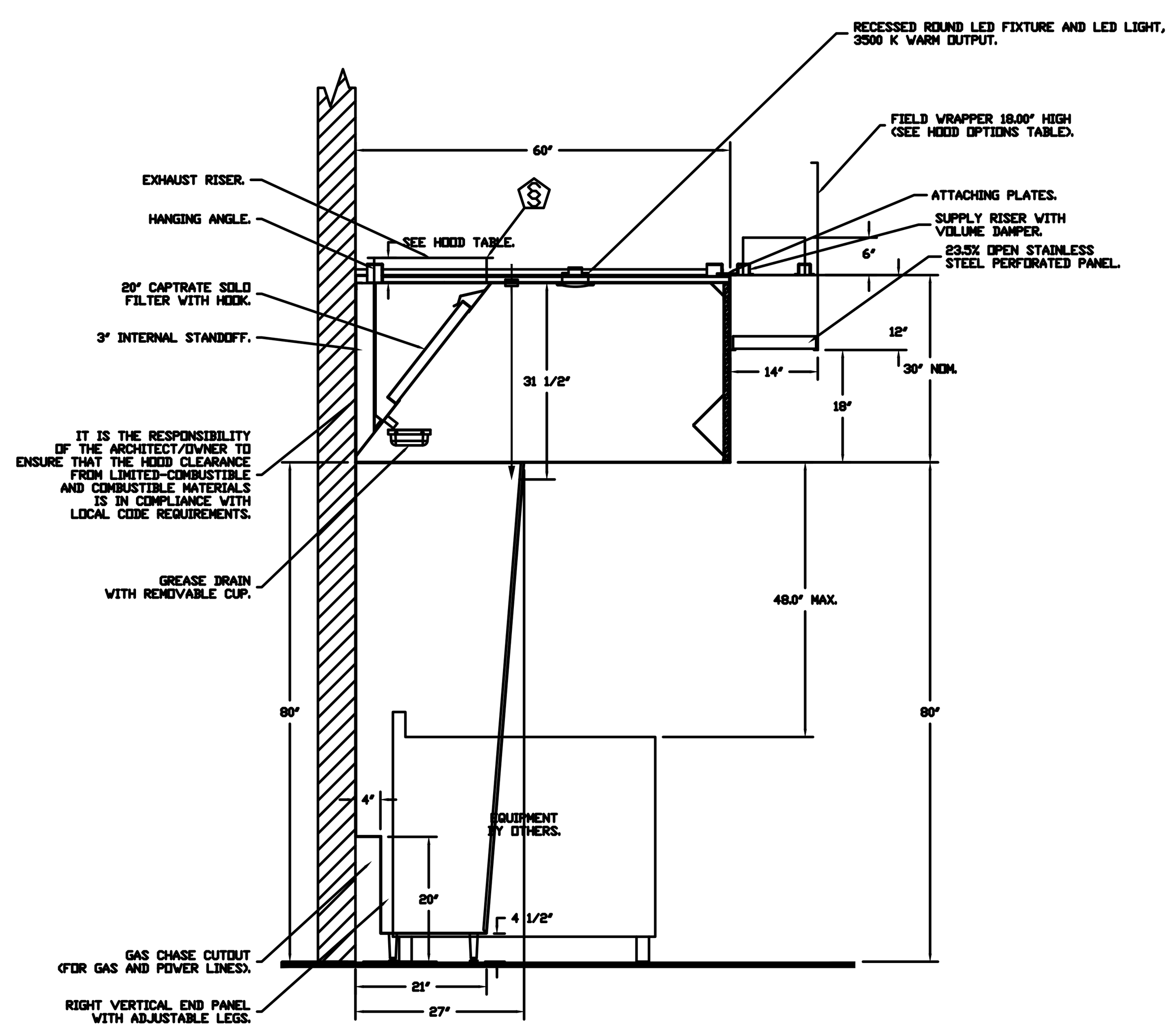
| | |
|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/02/2024 |
| sheet title | HVAC Details |
| sheet number | M204 |




***SECTION VIEW - MODEL 6030ND-2-PSP-F***
***HOOD - #1***




***SECTION VIEW - MODEL 6030ND-2-PSP-F***
***HOOD - #2***

NOTES
- FIELD PIPE DROPS AS SHOWN
  PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- OL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 6744776.
JOB NAME: 30 HOP - LEE'S SUMMIT, MO_R1.

SYSTEM SIZE: TANK-SP-4 DESIGN FP: 74. MAXIMUM FP: 80.
HOOD # 1 12' 0.00" LONG x 60" WIDE x 30" HIGH.
RISER # 1 SIZE: 16" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.
HOOD # 2 12' 0.00" LONG x 60" WIDE x 30" HIGH.
RISER # 1 SIZE: 18" DIA.
HOOD # 2 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

***LEGEND - FIRE CABINET TANK SYSTEM***

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.

INCLUDES: FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE, TWO SITE VISITS ONLY (ONE VISIT TO SET PULL STATION & SYSTEM HOOKUP AND ONE VISIT FOR ONE TEST; ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGES), ONE MECHANICAL OR ELECTRICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2", PERMIT, AND SYSTEM TEST.
EXCLUDES: UNION LABOR & PREVAILING WAGE (LABOR & WAGES WILL BE ADDED IF APPLICABLE), GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CABINET, SHUNT TRIP, HANDHELD EXTINGUISHER(S), ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

***FIRE SYSTEM INFORMATION - JOB#6744776***

| FIRE SYSTEM NO | TAG | TYPE | SIZE | MAX FP | DESIGN FP | INSTALLATION: SYSTEM | INSTALLATION: LOCATION ON HOOD |
|---|---|---|---|---|---|---|---|
| 1 | | TANK FS | 4.0/4.0/4.0/4.0 | 80 | 74 | FIRE CABINET LEFT | LEFT, HOOD 1 |

***GAS VALVE(S)***

| FIRE SYSTEM NO | TAG | TYPE | SIZE | SUPPLIED BY |
|---|---|---|---|---|
| 1 | | SC ELECTRICAL | 2.000 | CAPTIVEAIRE SYSTEMS |

***FIRE SYSTEM PARTS LIST KEY***

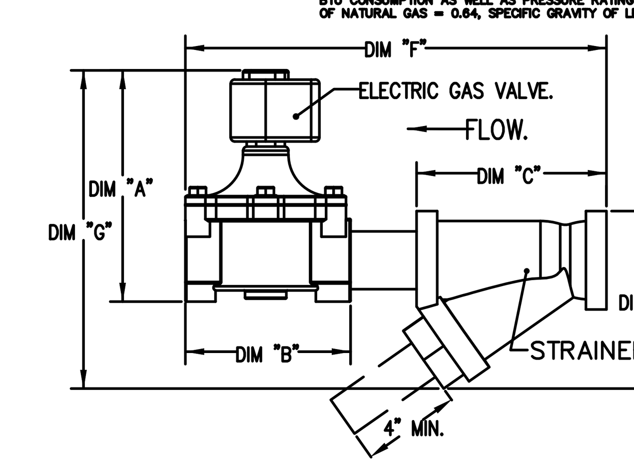
| FIRE SYSTEM NO | TAG | KEY NUMBER - PART DESCRIPTION | QTY BY FACTORY | QTY BY DIST |
|---|---|---|---|---|
| 1 | | 0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET. | 1 | 0 |
| | | 0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET. | 1 | 0 |
| | | 0 - 0 - 12-F28021-32144-OT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F. | 2 | 0 |
| | | 0 - 0 - 32-00002 QUIK SEAL - 1/2" (UL). | 2 | 0 |
| | | 0 - 0 - 361091 3/8" BRASS PLUG. | 3 | 0 |
| | | 0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS. | 4 | 0 |
| | | 0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING. | 2 | 0 |
| | | 0 - 0 - 79425 3/8" NPT FEMALE TO 1/2" MALE PROPRESS ADAPTER. | 3 | 0 |
| | | 0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2"NPT FEMALE CONNECTION, VIEGA. | 2 | 0 |
| | | 0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2"NPT FEMALE CONNECTION, VIEGA. | 4 | 0 |
| | | 0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION. | 3 | 0 |
| | | 0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5" BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION. | 3 | 0 |
| | | 0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION. | 4 | 0 |
| | | 0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION. | 1 | 0 |
| | | 0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION. | 16 | 0 |
| | | 0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD. | 12 | 0 |
| | | 0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD. | 15 | 0 |
| | | 0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION. | 8 | 0 |
| | | 0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR. | 1 | 0 |
| | | 0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT. | 2 | 0 |
| | | 0 - 0 - BI145 3/8" BLACK IRON 90 ELL. | 6 | 0 |
| | | 0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION. | 4 | 0 |
| | | 0 - 0 - SLPCON-03FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN A 2' GAP. KIT CONTAINS 5 FEET OF BLACK MG WIRE, 5 FEET OF TAN MG WIRE, 3 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS. | 2 | 0 |
| | | 0 - 0 - SLPCON-30FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UPTO 29' GAP. KIT CONTAINS 32 FEET OF BLACK MG WIRE, 32 FEET OF TAN MG WIRE, 30 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS. | 1 | 0 |
| | | 0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION. | 12 | 0 |
| | | 0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION. | 4 | 0 |
| | | 0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION. | 4 | 0 |
| | | 16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA. | 16 | 0 |
| | | 16 - 16 - OL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE). | 16 | 0 |
| | | 26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL). | 16 | 0 |
| | | 34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR. | 1 | 0 |

GAS VALVES AND STRAINERS

| | GAS VALVE SIZING: TYPE | SIZE | VOLTAGE | MIN. INLET PRESSURE | MAX. INLET PRESSURE | FLOW AT 1 IN.W.C. DROP NATURAL GAS | FLOW AT 1 IN.W.C. DROP PROPANE | GAS VALVE DIMENSIONS: DIM "A" | DIM "B" | DIM "C" | DIM "D" | DIM "F" | DIM "G" | INSTALLATION: MOUNTING ORIENTATION | PART NUMBERS: GAS VALVE PART NUMBER | STRAINER PART NUMBER | GAS VALVE/STRAINER KIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GAS VALVE FOR FS#1 | ELECTRICAL | 2" | 24 VDC | 0 PSI (0 IN.W.C.) | 5 PSI (138 IN.W.C.) | 2,940,500 BTU/HR | 1,908,048 BTU/HR | 7-5/8" | 6-3/8" | 7-1/4" | 7-13-16" | 15-5/8" | 13-15/16" | HORIZONTAL | 8214280-24VDC | 4417K68 | (SC)EGVC2-24 |

ALL GAS VALVES/STRAINERS
PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

CALCULATIONS
TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) X NEW PRESSURE DROP$^{0.5}$
TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)$^{0.5}$.




REVISIONS

| | DESCRIPTION | DATE: |
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30 Hop - Lee's Summit, MO_R1
Ankeny, IA, 64002

**DATE:** 4/17/2024

**DWG.#:** 6744776

**DRAWN BY:** jsievers

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

**MASTER DRAWING**

**SHEET NO.** 3

640 N Lasalle 312 337 3344 Architecture
Suite 400 Urban Planning
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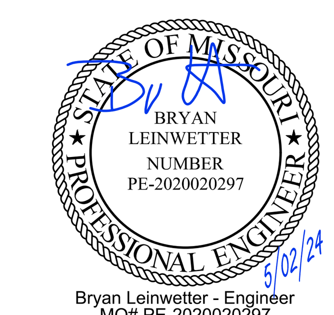


Bryan Leinwetter - Engineer
MO# PE-2020020297

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30hop american grill • craft beer • rooftop patio

**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

orientation

project number 232882

scale As Noted

date 5/02/2024

sheet title HVAC Details

sheet number M205

## DOAS/RTU FAN SCHEDULE - JOB#6744776

| FAN UNIT ND | TAG | QTY | DOAS/RTU MODEL # | MANUFACTURER | BLOWER | RETURN AIR CFM | MAX OUTSIDE AIR CFM | TOTAL CFM | VEIGHT (LBS) | ESP | HP | PHASE | VOLT | MCA | MOCP | ELECTRICAL INFORMATION | | | | | | COOLING INFORMATION | | | | | | | | | | REHEAT INFORMATION | | | | | GAS HEAT INFORMATION | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | OUTSIDE AIR | | MIXED AIR | | LEAVING AIR | | | CAPACITY | | IEER | ISMRE | DISCHARGE | | CAPACITY | | MOISTURE REMOVAL RATE | GAS TYPE | INPUT BTU# | OUTPUT BTU# | TEMP RISE | REQUIRED INPUT GAS PRESSURE | | |
| | | | | | | | | | | | | | | | | DB | WB | DB | WB | DB | WB | DP | TOTAL | SENS. | | | DB | WB | DESIRED | MAX | | | | | | | | |
| 4 | MAU-1 | 1 | CAS-HVAC2-1.300-18-10T | CAPTIVEAIRE | 18WF-2-RTU | 0 | 4000 | 4000 | 2080 | 0.000 | 5.00 | 3 | 208 | 68.2A | 80A | 94.0°F | 76.0°F | 94.0°F | 76.0°F | 71.9°F | 66.0°F | 63.2°F | 144.0 MBH | 89.9 MBH | 18.6 | 4.3 | -1.0°F | -1.0°F | 17.3 MBH | 0 MBH | 49.1 LBS/HR | NATURAL | 300000 | 243000 | 52°F | 7 IN. W.C. - 14 IN. W.C. | | 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15 |

NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY. 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 26GA EXTERIOR W/ 14GA BASE
11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FULLY MODULATING HOT GAS REHEAT
14. HAIL GUARD FOR CONDENSING COIL
15. FACTORY INSTALLED COMPRESSOR SOUND BLANKET

## FAN OPTIONS

| FAN UNIT ND | TAG | QTY | DESCRIPTION |
|---|---|---|---|
| 1 | KEF-1 | 1 | GREASE BOX |
| | | 1 | FAN BASE CERAMIC SEAL - DU/DR180HFA - SHIP LOOSE - FOR GREASE DUCTS |
| | | 1 | HINGE KIT - SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS |
| | | 1 | 2 YEAR PARTS WARRANTY |
| 2 | KEF-2 | 1 | GREASE BOX |
| | | 1 | FAN BASE CERAMIC SEAL - DU/DR240HFA - SHIP LOOSE - FOR GREASE DUCTS |
| | | 1 | HINGE KIT (HD)- SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS |
| | | 1 | 2 YEAR PARTS WARRANTY |
| 3 | DEF-1 | 1 | 1 15-920 DAMPER |
| | | 1 | ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCOD, CCW ROTATION |
| | | 1 | FULL CRATING FOR EXHAUST FANS |
| | | 1 | SCR-11 BIRD SCREEN |
| | | 1 | 2 YEAR PARTS WARRANTY |
| 4 | MAU-1 | 1 | INLET PRESSURE GAUGE, 0-35" |
| | | 1 | MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE |
| | | 1 | RTU TOTAL CFM MONITORING |
| | | 1 | INTAKE FIRESTAT SET TO 135°F |
| | | 1 | FREEZESTAT |
| | | 1 | DISCHARGE FIRESTAT SET TO 240°F |
| | | 1 | SHIP LOOSE GAS STRAINER 3/4" |
| | | 1 | CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED |
| | | 1 | RTU2 DOWN DISCHARGE |
| | | 1 | 2" MERV 13 FILTERS FOR RTU2 (QTY. 4) |
| | | 1 | 2" MERV 8 FILTERS FOR RTU2 (QTY. 4) |
| | | 1 | OCCUPIED SCHEDULING |
| | | 1 | RTU2 HAIL GUARD |
| | | 1 | 10 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS |
| | | 1 | MOISTURE ELIMINATOR FOR SIZE 2, 10 TON RTU. NO REHEAT |
| | | 1 | RTU2 CURB DUCT HANGER |
| | | 1 | 120V FIRE INPUT |
| | | 1 | COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK - ALARM SUPPLIED BY OTHERS |
| | | 1 | CONTROL PANEL ENCLOSURE HEATER 100W - RECOMMENDED FOR WINTER DESIGN TEMPERATURES LESS THAN 0°F |
| | | 1 | RTU HEATED FURNACE CONDENSATE DRAIN KIT. REQUIRED FOR WINTER DESIGN TEMP OF 0 DEGREES F AND LOWER |
| | | 1 | LOW PRESSURE GAS SWITCH |
| | | 1 | CLOGGED FILTER SWITCH - NOTIFICATION ON HMI |
| | | 1 | RTU2 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX |
| | | 1 | RTU 2 FIXED 100% RETURN AIR INTAKE CONTROL |
| | | 1 | RTUV2H065 COMPRESSOR SOUND BLANKET 230/460/575V - FACTORY INSTALLED |
| | | 1 | UNIT MOUNTED VFD CONFIGURED FOR DCV |
| | | 1 | SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE |
| | | 1 | 5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS) |

## FAN ACCESSORIES

| FAN UNIT ND | TAG | EXHAUST | | | SUPPLY | | | |
|---|---|---|---|---|---|---|---|---|
| | | GREASE CUP | GRAVITY DAMPER | WALL MOUNT | SIDE DISCHARGE | GRAVITY DAMPER | MOTORIZED DAMPER | WALL MOUNT |
| 1 | KEF-1 | YES | | | | | | |
| 2 | KEF-2 | YES | | | | | | |
| 3 | DEF-1 | | YES | | | | | |

## CURB ASSEMBLIES

| ND | ON FAN | TAG | WEIGHT | ITEM | SIZE |
|---|---|---|---|---|---|
| 1 | # 1 | KEF-1 | 48 LBS | CURB | 26.500"W X 26.500"L X 24.000"H INSULATED. |
| 2 | # 2 | KEF-2 | 43 LBS | CURB | 21.500"W X 21.500"L X 24.000"H INSULATED. |
| 3 | # 3 | DEF-1 | 18 LBS | CURB | 19.500"W X 19.500"L X 14.000"H. |
| 4 | # 4 | MAU-1 | 111 LBS | CURB | 49.500"W X 75.000"L X 20.000"H INSULATED. |

CONTROLS DESIGN SERVICE

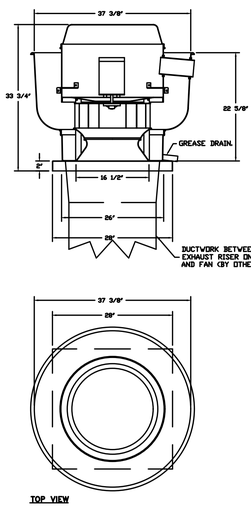
BIANNUAL ANALYSIS OF EQUIPMENT PERFORMANCE REQUIRED BY THE MANUFACTURER TO OPTIMIZE SYSTEM POST INSTALL. DETAILED PERFORMANCE REPORT TO BE PRESENTED TO OWNERSHIP ON QUARTERLY BASIS FOR THE FIRST YEAR.

| HMI SCHEDULE | | | | |
|---|---|---|---|---|
| UNIT NUMBER | HMI # | HMI LOCATION | TEMP AVERAGING | MODBUS ADDRESS |
| FAN #4 | HMI #1 - UNIT HMI # 1 | MOUNTED IN UNIT | NOT AVERAGED | 55 |
| FAN #4 | HMI #2 - SPACE HMI # 1 | OFFICE | NOT AVERAGED | 56 |

## EXHAUST FAN INFORMATION - JOB#6744776

| FAN UNIT ND | TAG | QTY | FAN UNIT MODEL # | MANUFACTURER | CFM | ESP | RPM | MOTOR ENCL | HP | BHP | PHASE | VOLT | FLA | DISCHARGE VELOCITY | VEIGHT (LBS) | SONES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | KEF-1 | 1 | DU180HFA | CAPTIVEAIRE | 2400 | 1.200 | 1134 | ODP,PREMIUM | 2.000 | 0.9980 | 3 | 208 | 8.3 | 554 FPM | 189 | 13.1 |
| 2 | KEF-2 | 1 | DU240HFA | CAPTIVEAIRE | 3300 | 1.200 | 789 | ODP,PREMIUM | 3.000 | 1.3360 | 3 | 208 | 10.2 | 750 FPM | 314 | 12.6 |
| 3 | DEF-1 | 1 | DU33HFA | CAPTIVEAIRE | 600 | 0.500 | 1307 | TEAO-ECM | 0.333 | 0.1470 | 1 | 115 | 4.3 | 297 FPM | 103 | 11.9 |

FAN #1 DU180HFA - EXHAUST FAN (KEF-1)

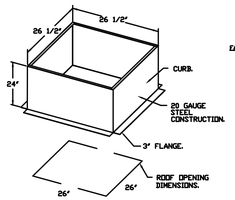



FEATURES:
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL VIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SVITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH VOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS
- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR180HFA
- SHIP LOOSE - FOR GREASE DUCTS.
- HINGE KIT - SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS.
- 2 YEAR PARTS WARRANTY.

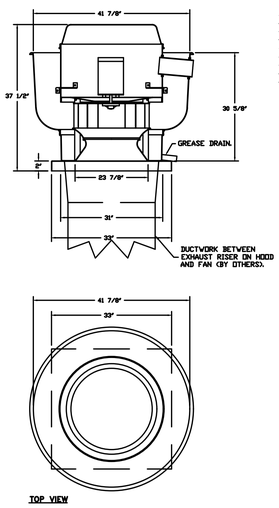






TOP VIEW

FAN #2 DU240HFA - EXHAUST FAN (KEF-2)

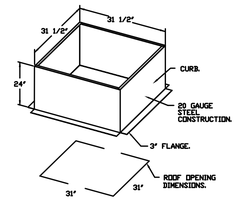



FEATURES:
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL VIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SVITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH VOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS
- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR240HFA - SHIP LOOSE - FOR GREASE DUCTS.
- HINGE KIT (HD)- SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS.
- 2 YEAR PARTS WARRANTY.

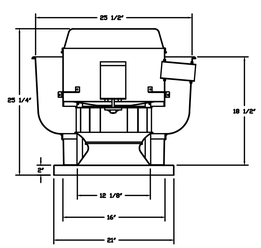






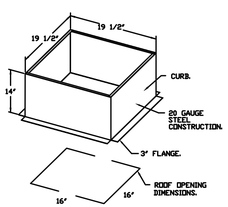
TOP VIEW

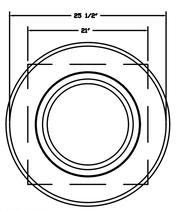
FAN #3 DU33HFA - EXHAUST FAN (DEF-1)




FEATURES:
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- VARIABLE SPEED CONTROL.
- INTERNAL VIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- NEMA 3R SAFETY DISCONNECT SVITCH.

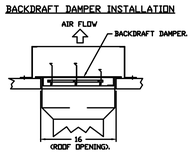
OPTIONS
- 1 15-920 DAMPER.
- ECM VIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCOD, CCV ROTATION.
- FULL CRATING FOR EXHAUST FANS.
- SCR-11 BIRD SCREEN.
- 2 YEAR PARTS VARRANTY.




TOP VIEW

BACKDRAFT DAMPER INSTALLATION





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BRYAN LEINWETTER
NUMBER PE-2020020297
PROFESSIONAL ENGINEER
5/02/24
Bryan Leinwetter - Engineer
MO# PE-2020020297


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1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
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REVISIONS

| DESCRIPTION | DATE: |
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30 Hop - Lee's Summit, MO_R1
Ankeny, IA, 64002

**DATE:** 4/17/2024

**DWG.#:** 6744776

**DRAWN BY:** jsievers

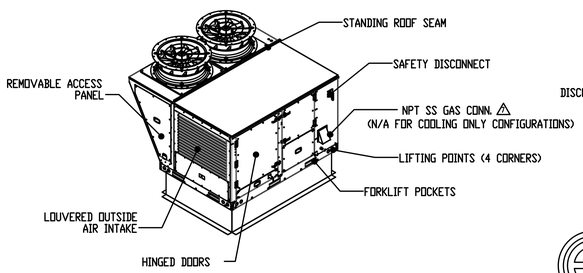
**SCALE:** 1/2" = 1'-0"

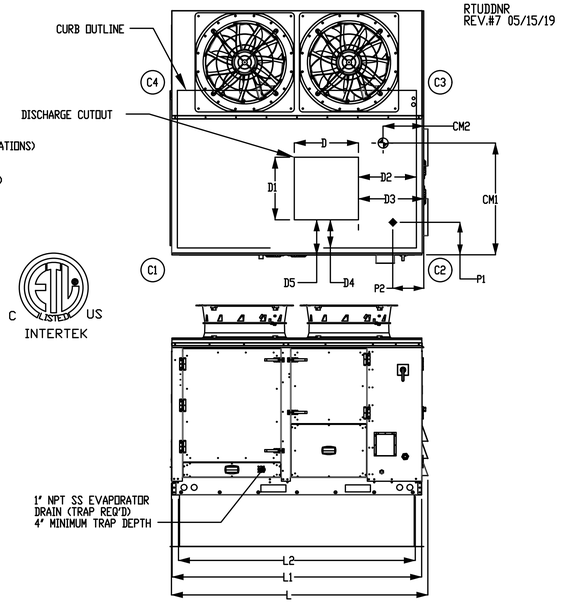
**MASTER DRAWING**

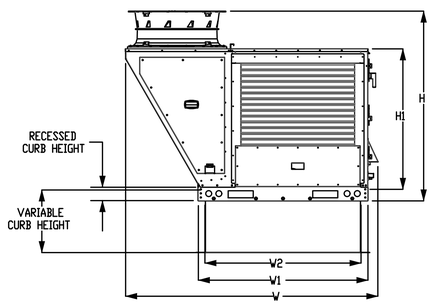
**SHEET NO.** 4

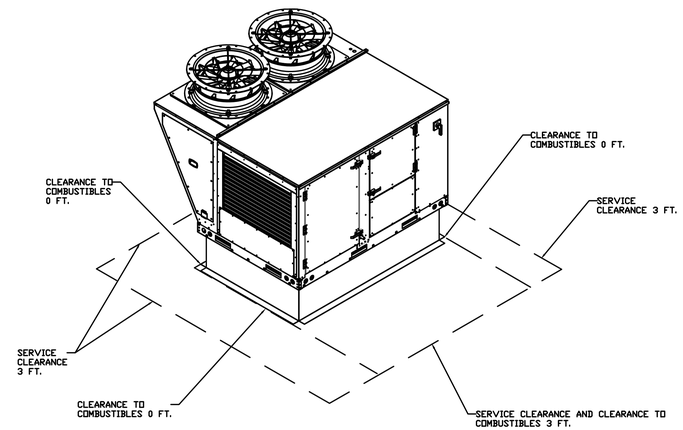
orientation
project number 232882
scale As Noted
date 5/02/2024
sheet title HVAC Details
sheet number M206

ROOFTOP UNIT DOWN DISCHARGE NO RETURN




| RTU INFORMATION* | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UNIT SIZE | AVAILABLE NOMINAL TONNAGE | INTAKE FILTERS | SUPPLY FILTERS △4 | FURNACE CAPACITY (MBH) △5 | ELECTRIC CAPACITY (KW) △5 | APPROXIMATE WEIGHT (LBS) △6 | CENTER OF MASS | | CORNER WEIGHTS (LBS) | | | | ENTERING POWER | |
| | | | | | | | CM1 | CM2 | C1 | C2 | C3 | C4 | P1 | P2 |
| 2 | 8, 10 | 25 X 20 X 2 (2) | 16 X 20 (8) | 50 - 200 | 15 - 60 | 1650 | 32 | 36 | 441 | 537 | 369 | 303 | 5 1/4 | 7 1/4 |

| RTU DIMENSIONS* | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UNIT SIZE | UNIT LENGTH (L) | OUTSIDE BASE LENGTH (L1) | INSIDE BASE LENGTH (L2) | UNIT HEIGHT (H) | MOUNTED HEIGHT (H1) | UNIT WIDTH (W) | BASE WIDTH (W1) | INSIDE BASE WIDTH (W2) | RECESSED CURB HEIGHT | DISCHARGE DIMENSIONS | | | | | | CURB SIZE |
| | | | | | | | | | | D | D1 | D2 | D3 | D4 | D5 | |
| 2 | 81 3/4 | 79 3/4 | 75 3/4 | 60 | 45 | 80 3/4 | 54 | 49 3/4 | 3 1/2 | 20 1/2 | 20 | 19 3/4 | 22 | 9 | 12 | 75 x 49 1/2 |

*ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED

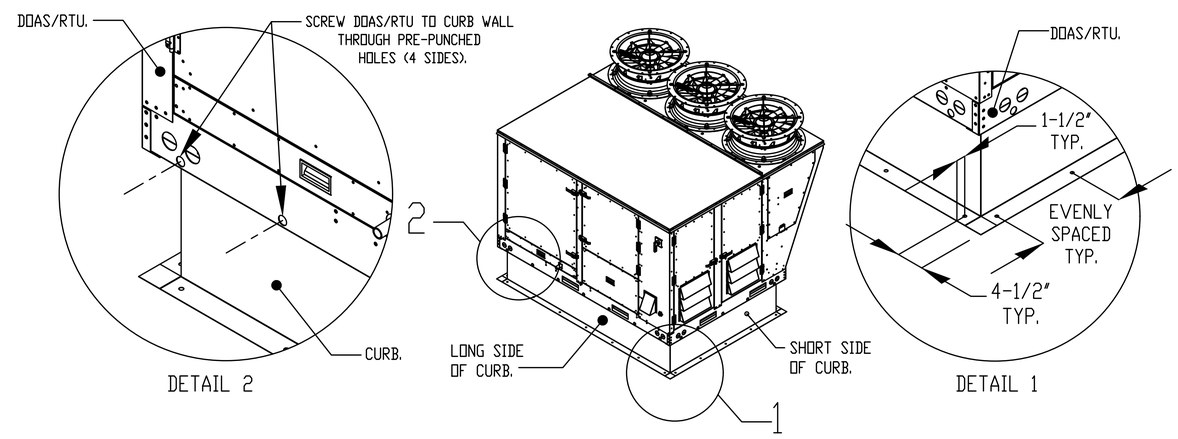
NOTES:

1. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS
2. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN
3. FLOOR MOUNT ISOLATORS LOCATED 1" FROM END OF BASE IN EITHER DIRECTION. ACCOUNT FOR AN ADDITION 5" FOR ISOLATOR HEIGHT
4. QUANTITIES SUBJECT TO CHANGE DEPENDING ON FILTER TYPES
5. ONLY APPLICABLE FOR INDIRECT HEAT OR ELECTRIC HEAT CONFIGURATIONS
6. SUBTRACT 100 LBS. FOR COOLING ONLY CONFIGURATIONS
7. 3/4" NPT SS GAS CONN. FOR 50-200 MBH FURNACES
   1" NPT SS GAS CONN. FOR 300-500 MBH FURNACES

# TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

1. SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW. USING 3/8" X 2" ZINC PLATED STEEL LAG BOLTS, AND ZINC PLATED WASHERS, SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (5) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.

2. SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.





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30 Hop - Lee's Summit, MO_R1
Ankeny, IA, 64002

DATE: 4/17/2024
DWG.#: 6744776
DRAWN BY: jsievers
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 5

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5/10/24
Bryan Leinwetter - Engineer
MO# PE-2020020297

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**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

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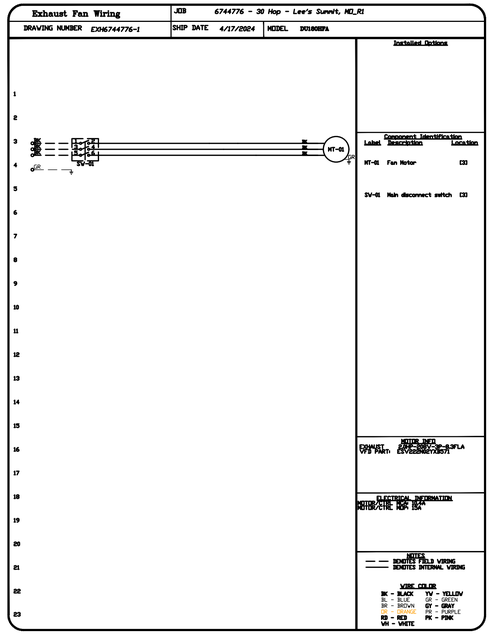
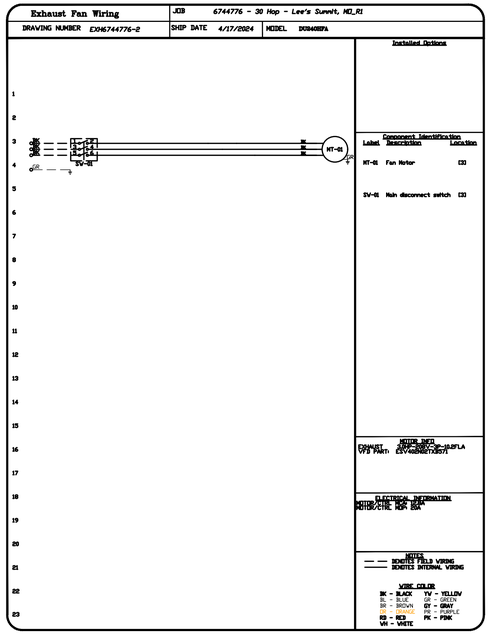
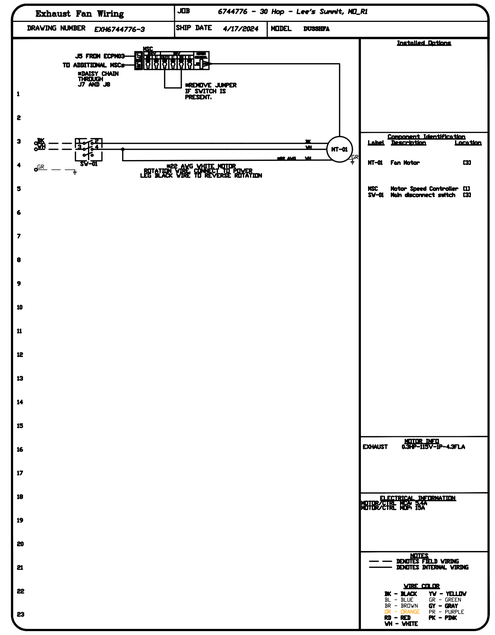
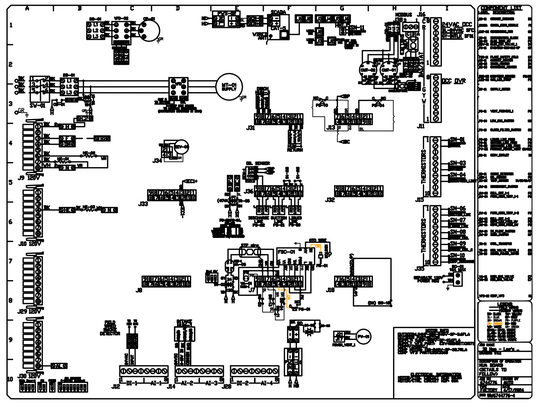
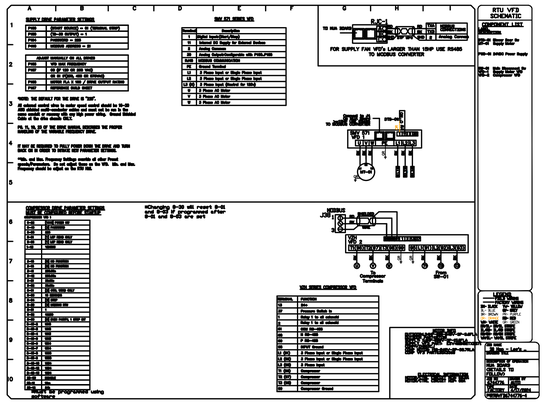
|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/02/2024 |
| sheet title | HVAC Details |
| sheet number | M207 |

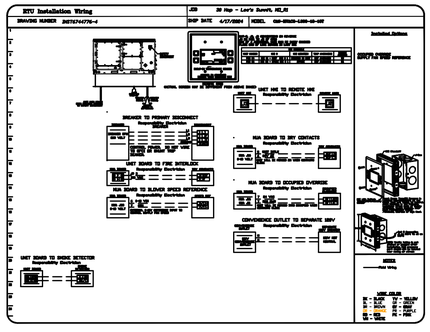


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Ankeny, IA, 64002

**DATE:** 4/17/2024

**DWG.#:** 6744776

**DRAWN BY:** jsievers

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

**MASTER DRAWING**

**SHEET NO.** 6

orientation

project number 232882

scale As Noted

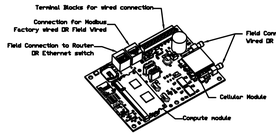
date 5/02/2024

sheet title HVAC Details

sheet number M208

## ELECTRICAL PACKAGE – JOB#6744776

| NO | TAG | PACKAGE # | LOCATION | SWITCHES LOCATION | SWITCHES QUANTITY | OPTION | FANS CONTROLLED FAN TAG | TYPE | Φ | HP | VOLT | FLA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | DCV-2111_MA4 | UTILITY CABINET RIGHT | UTILITY CABINET RIGHT | 1 LIGHT | SMART CONTROLS DCV | KEF-1 | EXHAUST | 3 | 2.000 | 208 | 8.3 |
| | | | | HOOD # 2 | 1 FAN | | KEF-2 | EXHAUST | 3 | 3.000 | 208 | 10.2 |
| | | | | | | | MAU-1 | SUPPLY | 3 | 5.000 | 208 | 15.0 |
| 2 | | SC-11001000_DISH-HMI | WALL MOUNT IN SS BOX | SHIP LOOSE W/ PREVIRE | 1 FAN | SMART CONTROLS BASIC | DEF-1 | EXHAUST | 1 | 0.333 | 115 | 4.3 |




### CASlink Monitor and Control

- Hood control panel to support communications to cloud-based Building Management System.
- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
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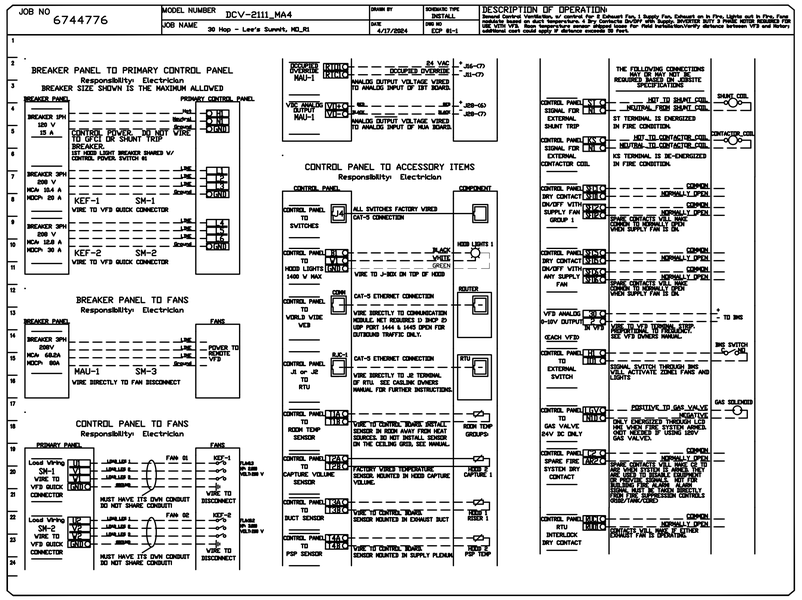
### MONITORING AND CONTROL POINTS LIST

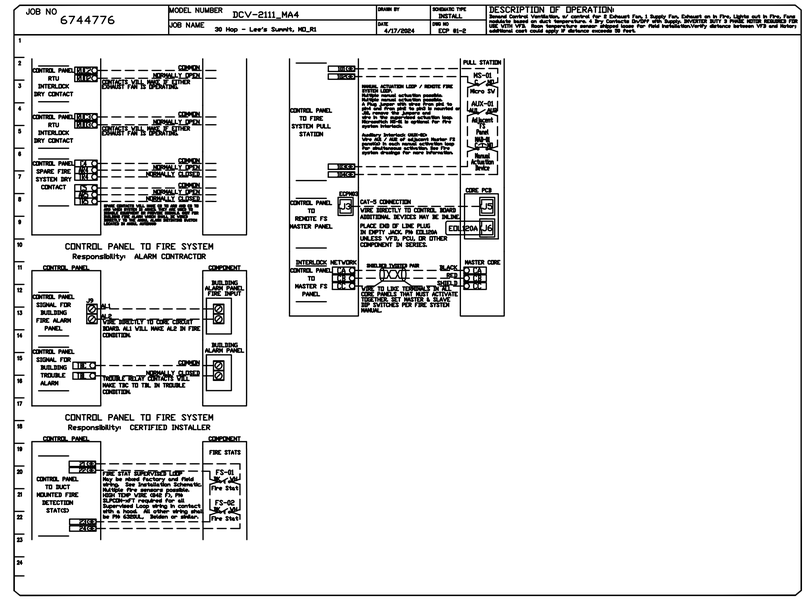
| DCV Packages | Function |
|---|---|
| Room Temperature | MONITOR |
| Duct Temperature(s) | MONITOR |
| MUA Discharge Temperature | MONITOR |
| Kitchen RTU Discharge Temperature | MONITOR |
| Fan Speed | MONITOR |
| Fan Amperage | MONITOR |
| Fan Power | MONITOR |
| VFD Faults | MONITOR |
| Controller Faults | MONITOR |
| Fan Faults | MONITOR |
| Fan Status | MONITOR |
| PCU Faults | MONITOR |
| PCU Filter Clog Percentages | MONITOR |
| Fire Condition | MONITOR |
| CORE Fire System | MONITOR |
| Building Pressure | MONITOR |
| Prep Time Button | MONITOR & CONTROL |
| Fans Button | MONITOR & CONTROL |
| Lights Button | MONITOR & CONTROL |
| Wash Button | MONITOR & CONTROL |

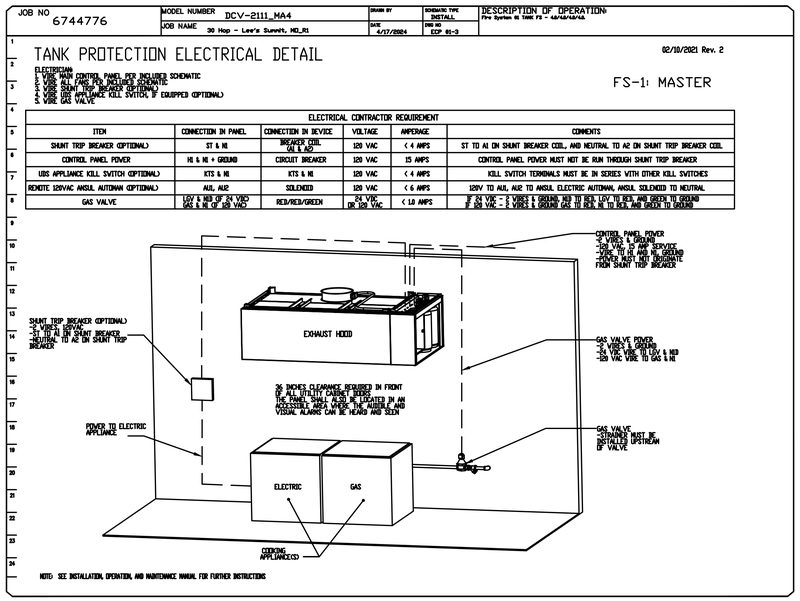
| SC Packages | Function |
|---|---|
| Room Temperature(s) | MONITOR |
| Duct Temperature(s) | MONITOR |
| MUA Discharge Temperature | MONITOR |
| Kitchen RTU Discharge Temperature | MONITOR |
| Controller Faults | MONITOR |
| Fan Faults | MONITOR |
| Fan Status | MONITOR |
| PCU Faults | MONITOR |
| PCU Filter Clog Percentages | MONITOR |
| Fire Condition | MONITOR |
| CORE Fire System | MONITOR |
| Building Pressure | MONITOR |
| Fans Button(s) | MONITOR & CONTROL |
| Lights Button(s) | MONITOR & CONTROL |
| Wash Button | MONITOR & CONTROL |

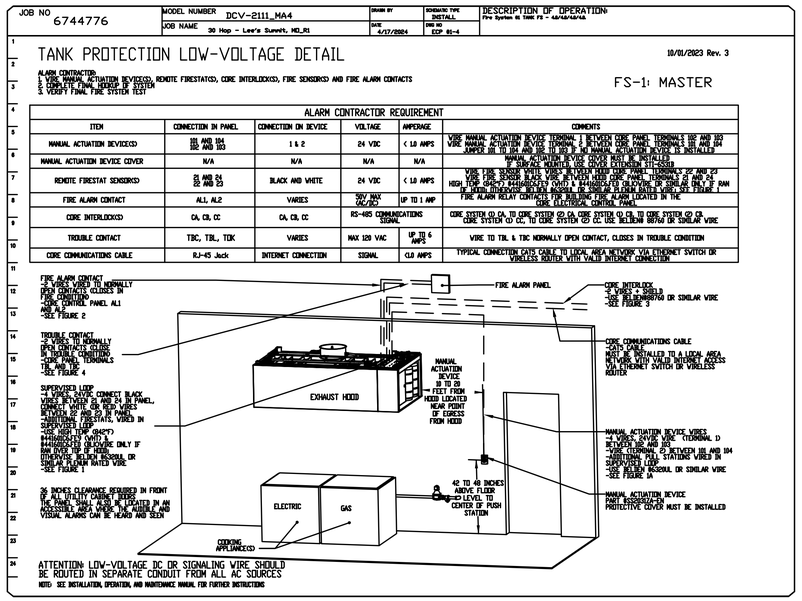
CONTROLS DESIGN SERVICE

BIANNUAL ANALYSIS OF EQUIPMENT PERFORMANCE REQUIRED BY THE MANUFACTURER TO OPTIMIZE SYSTEM POST INSTALL. DETAILED PERFORMANCE REPORT TO BE PRESENTED TO OWNERSHIP ON QUARTERLY BASIS FOR THE FIRST YEAR.





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Ankeny, IA, 64002

**DATE:** 4/17/2024

**DWG.#:** 6744776

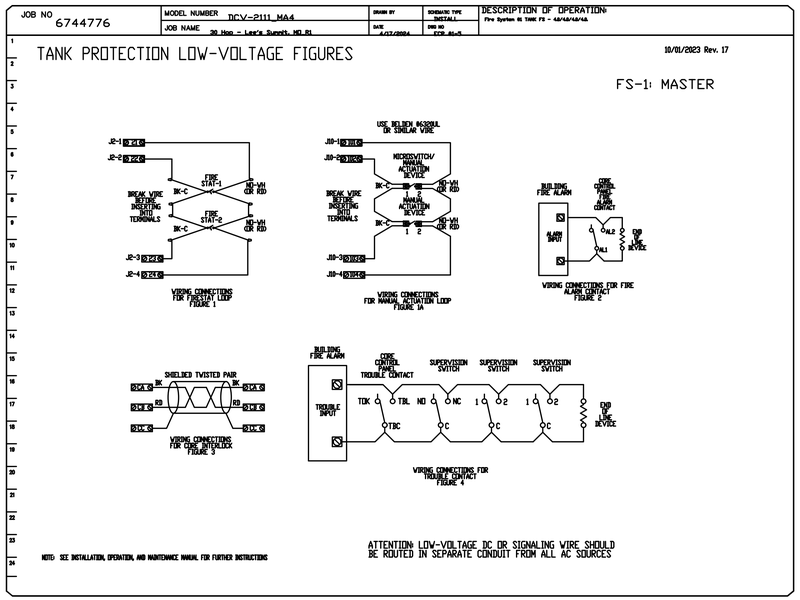
**DRAWN BY:** jsievers

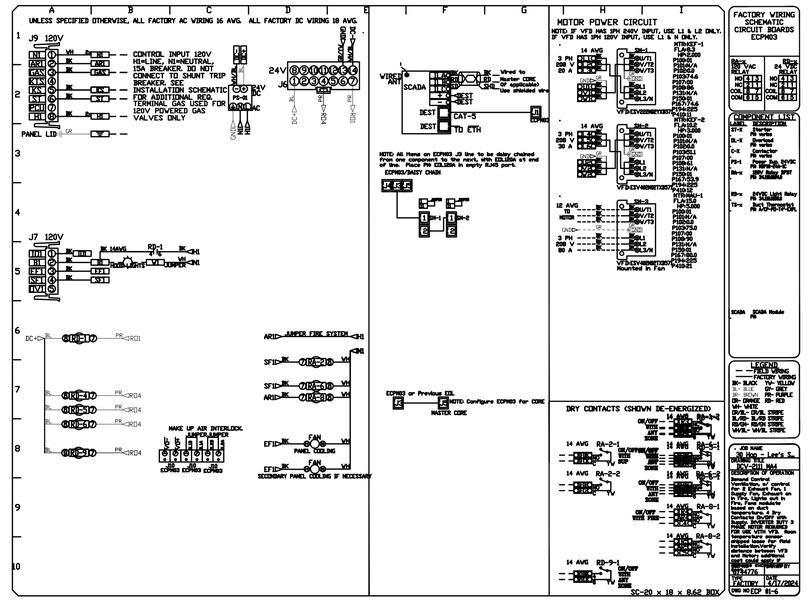
**SCALE:** 3/4" = 1'-0"

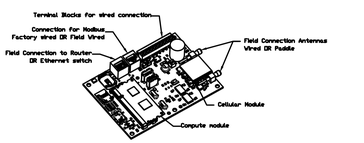
**MASTER DRAWING**

**SHEET NO.** 8

orientation
project number 232882
scale As Noted
date 5/02/2024
sheet title HVAC Details
sheet number M209

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## MONITORING AND CONTROL POINTS LIST

| | |
|---|---|
| DCV Packages | Function |
| Room Temperature | MONITOR |
| Duct Temperature(s) | MONITOR |
| MUA Discharge Temperature | MONITOR |
| Kitchen RTU Discharge Temperature | MONITOR |
| Fan Speed | MONITOR |
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| PCU Filter Clog Percentages | MONITOR |
| Fire Condition | MONITOR |
| CORE Fire System | MONITOR |
| Building Pressure | MONITOR |
| Prep Time Button | MONITOR & CONTROL |
| Fans Button | MONITOR & CONTROL |
| Lights Button | MONITOR & CONTROL |
| Wash Button | MONITOR & CONTROL |

| | |
|---|---|
| DC Packages | Function |
| Room Temperature(s) | MONITOR |
| Duct Temperature(s) | MONITOR |
| MUA Discharge Temperature | MONITOR |
| Kitchen RTU Discharge Temperature | MONITOR |
| Controller Faults | MONITOR |
| Fan Faults | MONITOR |
| Fan Status | MONITOR |
| PCU Faults | MONITOR |
| PCU Filter Clog Percentages | MONITOR |
| Fire Condition | MONITOR |
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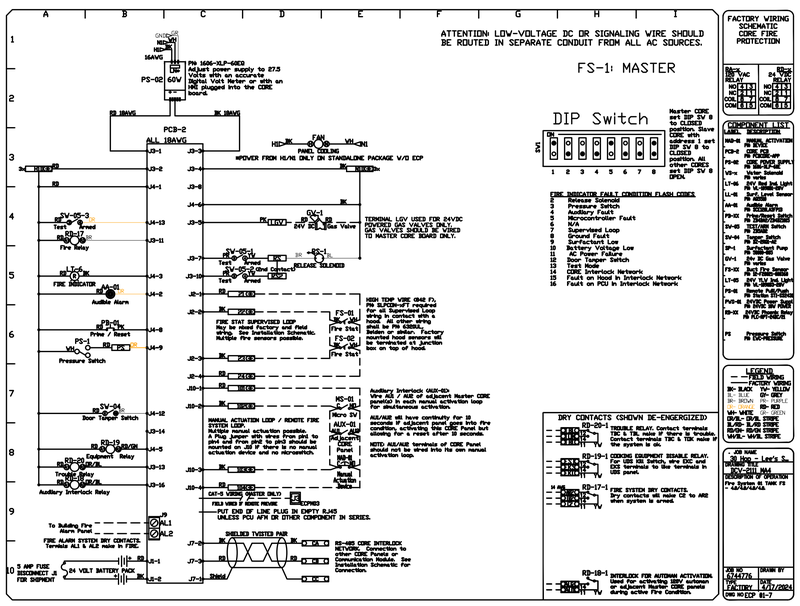


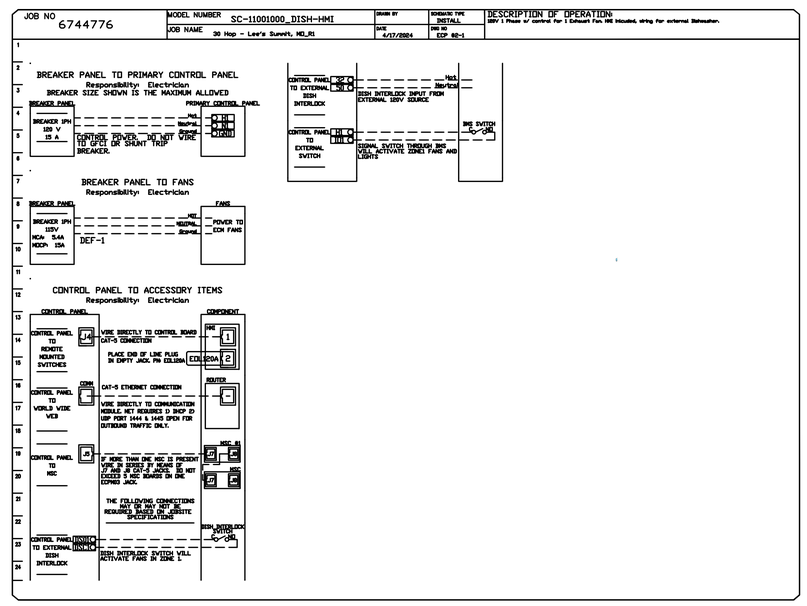


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| orientation | |
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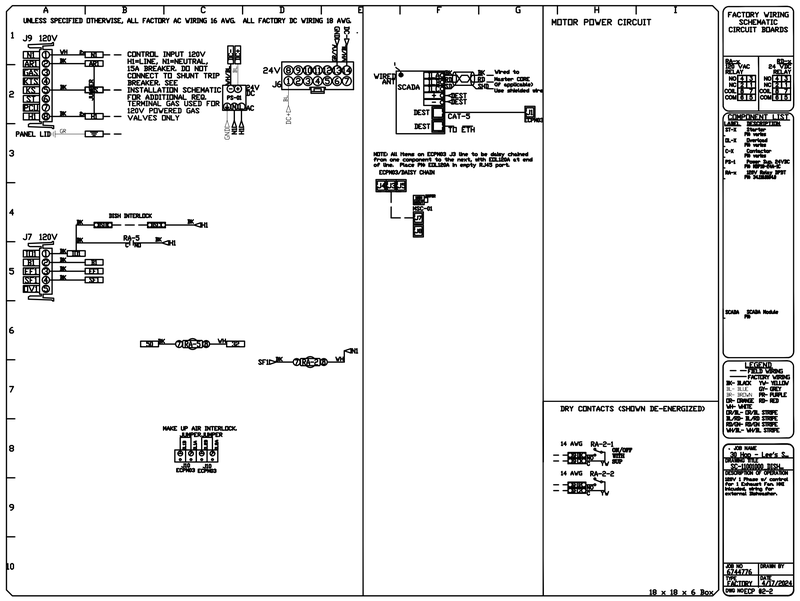
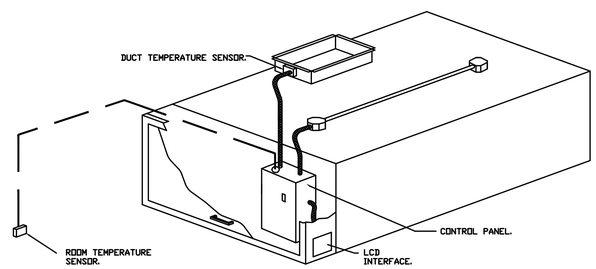
| date | 5/02/2024 |
| sheet title | HVAC Details |
| sheet number | M210 |




## DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
  A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
  B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
  C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
  G. AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDS.




*TYPICAL HOOD CONTROL PANEL INSTALLATION*

## SEQUENCE OF OPERATIONS:

THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:

- AUTOMATIC: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR VFD DRIVEN MOTORS) MODULATE WITH TEMPERATURE. IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS 'DYNAMIC', THESE WILL MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS 'STATIC', FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- MANUAL: THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
- SCHEDULE: A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA OFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
- OTHER: THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
- FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

**REVISIONS**

| DESCRIPTION | DATE: |
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30 Hop - Lee's Summit, MO_R1
Ankeny, IA, 64002

**DATE:** 4/17/2024

**DWG.#:** 6744776

**DRAWN BY:** jsievers

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

**MASTER DRAWING**

**SHEET NO.** 10


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STATE OF MISSOURI
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Bryan Leinwetter - Engineer
MO# PE-2020020297


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30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

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| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/02/2024 |
| sheet title | HVAC Details |
| sheet number | M211 |

## *DUCTWORK #1 PARTS – JOB#6744776 DOUBLE WALL MAIN*

| TAG | PART # | CFM | GPM | ZONE | COVEREDBY | SP | WEIGHT | VELOCITY | QTY | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| H1-E1 | DW20DWRISER-2R-S | 2400 | | | | -0.7965 | 8.36 | 0.00 | 1 | DOUBLE WALL RISER COVER - USED ON 16' INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS. |
| H2-E1 | DW22DWRISER-2R-S | 3300 | | | | -1.1505 | 10.73 | 0.00 | 1 | DOUBLE WALL RISER COVER - USED ON 18' INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 22' STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS. |
| P1 | DW1647DWLT-2R-S | 2400 | | | | -0.0182 | 70.12 | 1718.87 | 1 | DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL. |
| P2 | DW1635DWLT-2R-S | 2400 | | | | -0.0136 | 52.26 | 1718.87 | 1 | DOUBLE WALL DUCT - 16' INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL. |
| P3 | DW1647DWAJD-2R-S | 2400 | | | | -0.0132 | 103.34 | 1718.87 | 1 | DOUBLE WALL ADJUSTABLE DUCT - 16' INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS. |
| P4 ASSEMBLED W/P5 | DW1635DWLTTP-2R-S | 2400 | | | | -0.013 | 53.98 | 1718.87 | 1 | DOUBLE WALL DUCT - 16' INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATE. |
| P5 ASSEMBLED W/P4 □=B | DW3116TP | 2400 | | | | | 13.00 | 1718.87 | 1 | DUCT TO CURB TRANSITION, 31-1/2' CURB TO 16' DUCT, 16 GA ALUMINIZED. MISC. NON-STANDARD TRANSITION PLATE. |
| SYSTEM AT P5 | | | | | | -0.8545 | 0.00 | | | |
| P6 | DW1847DWLT-2R-S | 3300 | | | | -0.0142 | 77.59 | 1867.42 | 1 | DOUBLE WALL DUCT - 18' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 22' STAINLESS STEEL OUTER SHELL. |
| P7 | DW1835DWLT-2R-S | 3300 | | | | -0.0106 | 57.50 | 1867.42 | 1 | DOUBLE WALL DUCT - 18' INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 22' STAINLESS STEEL OUTER SHELL. |
| P8 | DW1847DWAJD-2R-S | 3300 | | | | -0.0103 | 107.98 | 1867.42 | 1 | DOUBLE WALL ADJUSTABLE DUCT - 18' INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 22' STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS. |
| P9 ASSEMBLED W/P10 | DW1835DWLTTP-2R-S | 3300 | | | | -0.011 | 58.74 | 1867.42 | 1 | DOUBLE WALL DUCT - 18' INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 22' STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATES |
| P10 ASSEMBLED W/P9 □=B | DW3118TP | 3300 | | | | | 13.00 | 1867.42 | 1 | DUCT TO CURB TRANSITION, 31-1/2' CURB TO 18' DUCT, 16 GA ALUMINIZED. MISC. NON-STANDARD TRANSITION PLATE. |
| SYSTEM AT P10 | | | | | | -1.1965 | 0.00 | | | |
| RC1 | DW20DWRISER-2R-S | | | | | | 8.36 | | 1 | DOUBLE WALL RISER COVER - USED ON 16' INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS. |
| RC2 | DW22DWRISER-2R-S | | | | | | 10.73 | | 1 | DOUBLE WALL RISER COVER - USED ON 18' INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 22' STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS. |
| | 3M-2000PLUS | | | | | | 0.80 | | 2 | DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS. |
| | DW16DWCLASY-2R-S | | | | | | 7.96 | | 1 | DUCT - 16' DUCT - 20' DOUBLE 'V' CLAMP - 2R INSULATION & SINGLE 'V' CLAMP INCLUDED - REDUCED CLEARANCE. |
| | DW18DWCLASY-2R-S | | | | | | 8.70 | | 1 | DUCT - 18' DUCT - 22' DOUBLE 'V' CLAMP - 2R INSULATION & SINGLE 'V' CLAMP INCLUDED - REDUCED CLEARANCE. |
| TOTAL WEIGHT | | | | | | | 663.95 | | | |

DOUBLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16' PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16' PER LINEAR FOOT.

| HORIZONTAL | |
|---|---|
| DUCT DIAMETER | SUPPORT SPACING (FT) |
| 5' | 7' |
| 6' | 7' |
| 7' | 7' |
| 8' | 7' |
| 10' | 7' |
| 12' | 7' |
| 14' | 7' |
| 16' | 7' |
| 18' | 5' |
| 20' | 5' |
| 22' | 5' |
| 24' | 5' |
| 26' | 5' |
| 28' | 5' |
| 30' | 5' |
| 32' | 5' |
| 34' | 5' |
| 36' | 5' |

| VERTICAL | | | |
|---|---|---|---|
| TYPE | WALL SUPPORT (FT) | CURB SUPPORT (FT) | FLOOR SUPPORT (FT) |
| 2R & 2R HT (5'-16') | 20' | 24' | 24' |
| 2R (18') | 18' | 24' | 24' |
| 3R & 3Z (5'-24') | 10' | 24' | 24' |
| 3Z (26' -36') | 10' | 20' | 20' |

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

**REVISIONS**

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30 Hop - Lee's Summit, MO_R1
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**DATE:** 4/17/2024

**DWG.#:** 6744776

**DRAWN BY:** jsievers

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

**MASTER DRAWING**

**SHEET NO.** 11


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BRYAN LEINWETTER
NUMBER PE-2020020297
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5/02/24
Bryan Leinwetter - Engineer
MO# PE-2020020297


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owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

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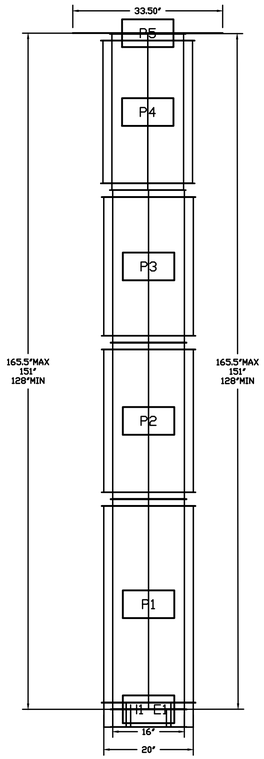
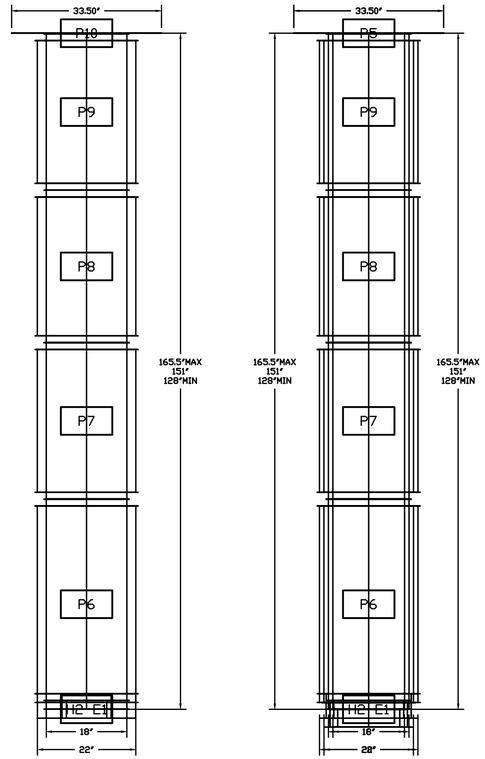
|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/02/2024 |
| sheet title | HVAC Details |
| sheet number | M212 |

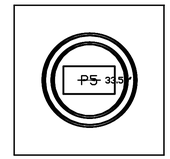
DUCTWORK #1 FRONT VIEW
MAIN



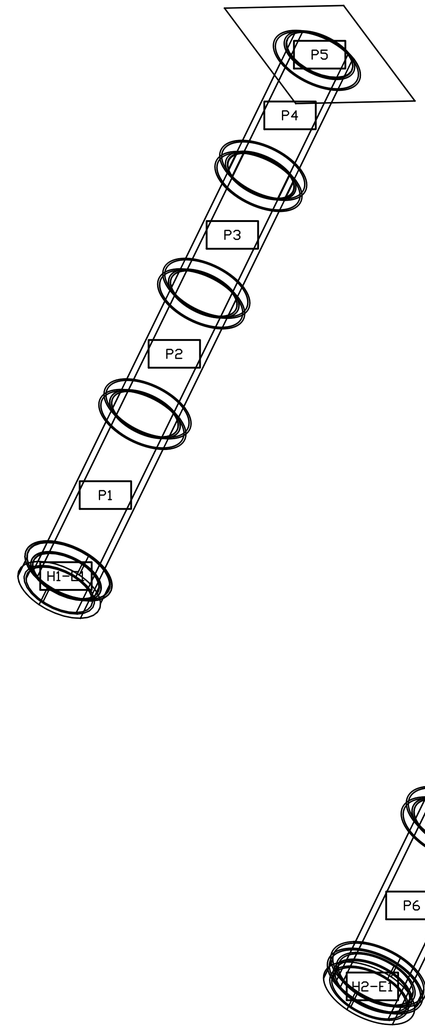

DUCTWORK #1 SIDE VIEW
MAIN

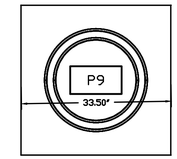


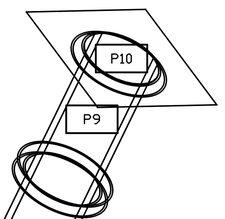

DUCTWORK #1 TOP VIEW
MAIN




DUCTWORK #1 SE VIEW
MAIN

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**DATE:** 4/17/2024

**DWG.#:** 6744776

**DRAWN BY:** jsievers

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

**MASTER DRAWING**

**SHEET NO.** 12


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Lees Summit,MO 64081
30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

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|---|---|
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/02/2024 |
| sheet title | HVAC Details |
| sheet number | M213 |

## *DUCTWORK #2 PARTS – JOB#6744776 DISH*

| TAG | PART # | CFM | GPM | ZONE | COVEREDBY | SP | WEIGHT | VELOCITY | QTY | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| P1 | DW1045ASY | 300 | | | | -0.0053 | 4.62 | 550.04 | 1 | SINGLE WALL DUCT 45 DEGREE ELBOW, 10" DUCT, ASSEMBLY. |
| P2 | DW1011LT | 300 | | | | -0.0006 | 3.90 | 550.04 | 1 | SINGLE WALL DUCT 10" DIAMETER, 11" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL. |
| P3 | DW1018AJDKIT | 300 | | | | -0.0004 | 7.95 | 550.04 | 1 | SINGLE WALL DUCT ADJUSTABLE, 10" DIAMETER, 17.5" LONG, FLANGE AT ONE END WITH A 10" ADJUSTABLE COLLAR - STAINLESS STEEL. |
| P4 | DW10YTEASY | 600 | | | | -0.069 | 10.46 | 1100.08 | 1 | SINGLE WALL DUCT Y TEE, 10" DUCT, ASSEMBLY. |
| P5 | DW1011LT | 300 | | | | -0.0006 | 3.90 | 550.04 | 1 | SINGLE WALL DUCT 10" DIAMETER, 11" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL. |
| P6 | DW1018AJDKIT | 300 | | | | -0.0004 | 7.95 | 550.04 | 1 | SINGLE WALL DUCT ADJUSTABLE, 10" DIAMETER, 17.5" LONG, FLANGE AT ONE END WITH A 10" ADJUSTABLE COLLAR - STAINLESS STEEL. |
| P7 | DW1045ASY | 300 | | | | -0.0053 | 4.62 | 550.04 | 1 | SINGLE WALL DUCT 45 DEGREE ELBOW, 10" DUCT, ASSEMBLY. |
| P8 | DW10SUBRASY | | | | | | 2.54 | | 1 | DUCT SUPPORT BRACKET KIT, 10" DUCT, USED FOR HANGING DUCT. 12 GA STEEL, CLEAR ZINC COATING. - 2 RINGS, 4 BRACKETS, & HARDWARE BAG 2. |
| P9 | DW1047LT | 600 | | | | -0.0117 | 15.72 | 1100.08 | 1 | SINGLE WALL DUCT 10" DIAMETER, 47" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL. |
| P10 | DW1035LT | 600 | | | | -0.0087 | 11.78 | 1100.08 | 1 | SINGLE WALL DUCT 10" DIAMETER, 35" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL. |
| P11 | DW1048AJDKIT | 600 | | | | -0.0066 | 18.63 | 1100.08 | 1 | SINGLE WALL DUCT ADJUSTABLE, 10" DIAMETER, 47.5" LONG, FLANGE AT ONE END WITH A 10" ADJUSTABLE COLLAR - STAINLESS STEEL. |
| P12 | DW10VESU18 | | | | | | 19.56 | | 1 | DUCT VERTICAL SUPPORT KIT, 10" DUCT, 18" CLEARANCE TO COMBUSTIBLES. PARTS ARE ZINC COATED. HARDWARE KIT #3 USED ON DWXXVESU & DWXXVESU18. |
| P13 ASSEMBLED W/P14 | DW1035LT | 600 | | | | -0.009 | 11.78 | 1100.08 | 1 | SINGLE WALL DUCT 10" DIAMETER, 35" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL. |
| P14 ASSEMBLED W/P13 D=T | DW1910TP | 600 | | | | | 6.62 | 1100.08 | 1 | DUCT TO CURB TRANSITION, 19-1/2" CURB TO 10" DUCT, 16 GA ALUMINIZED STEEL. MISC. NON-STANDARD TRANSITION PLATE. |
| SYSTEM AT P14 | | | | | | -0.1113 | 0.00 | | | |
| | 3M-2000PLUS | | | | | | 0.80 | | 2 | DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS. |
| | DW10CLASY | | | | | | 0.82 | | 12 | DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 10" DUCT, ASSEMBLY. |
| TOTAL WEIGHT | | | | | | | 141.47 | | | |

SINGLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

| DUCT DIAMETER | HORIZONTAL SUPPORT (FT) | VERTICAL WALL SUPPORT (FT) | VERTICAL CURB SUPPORT (FT) |
|---|---|---|---|
| 5" | 10' | 10' | 24' |
| 6" | 10' | 10' | 24' |
| 7" | 10' | 10' | 24' |
| 8" | 10' | 10' | 24' |
| 10" | 10' | 10' | 24' |
| 12" | 10' | 10' | 24' |
| 14" | 10' | 10' | 24' |
| 16" | 10' | 10' | 24' |
| 18" | 10' | 10' | 24' |
| 20" | 10' | 10' | 24' |
| 22" | 10' | 10' | 24' |
| 24" | 10' | 10' | 24' |
| 26" | 10' | 10' | 24' |
| 28" | 10' | 10' | 24' |
| 30" | 10' | 10' | 24' |
| 32" | 10' | 10' | 24' |
| 34" | 10' | 10' | 24' |
| 36" | 10' | 10' | 24' |

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.


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30 Hop - Lee's Summit, MO_R1
Ankeny, IA, 64002

**DATE:** 4/17/2024

**DWG.#:** 6744776

**DRAWN BY:** jsievers

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

**MASTER DRAWING**

**SHEET NO.** 13

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Bryan Leinwetter - Engineer
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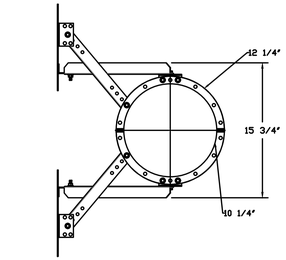
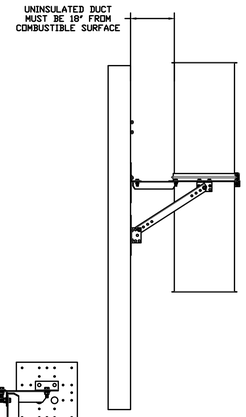
| 1 | 05.02.24 | Issue For Permit |

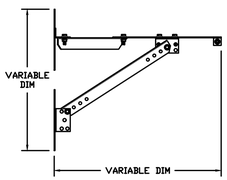
orientation
project number 232882
scale As Noted
date 5/02/2024
sheet title HVAC Details
sheet number M214

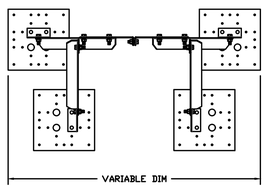
# SUPPORT SYSTEM DETAILS #2

## DW10VESU18 - VERTICAL WALL SUPPORT

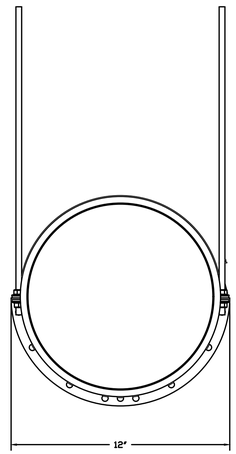


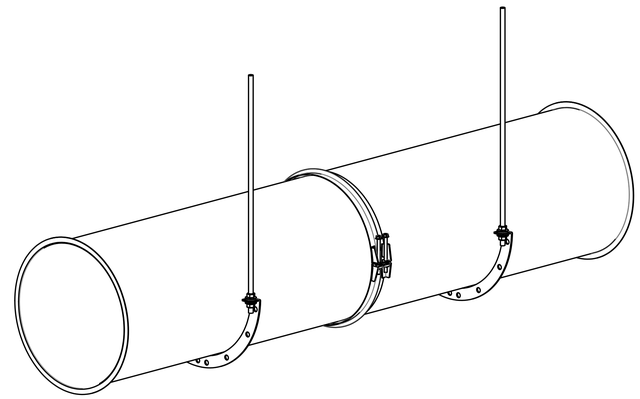




## DW10SUBRASY - HORIZONTAL SUPPORT



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Ankeny, IA, 64002

**DATE:** 4/17/2024

**DWG.#:** 6744776

**DRAWN BY:** jslevers

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

**MASTER DRAWING**

**SHEET NO.** 14


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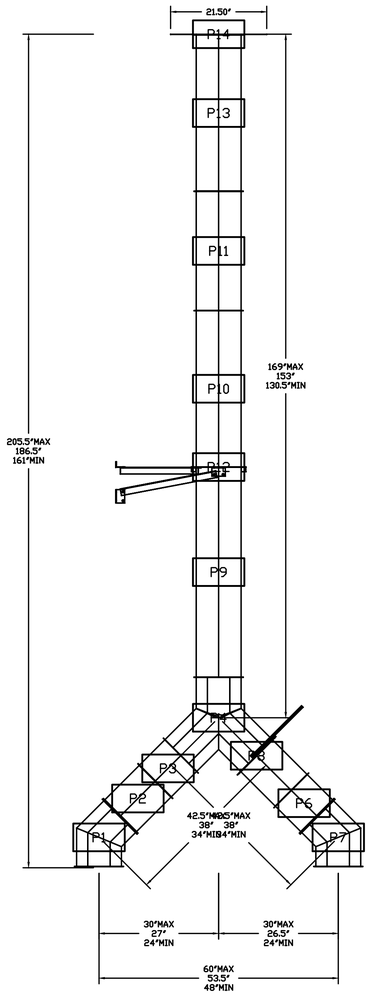
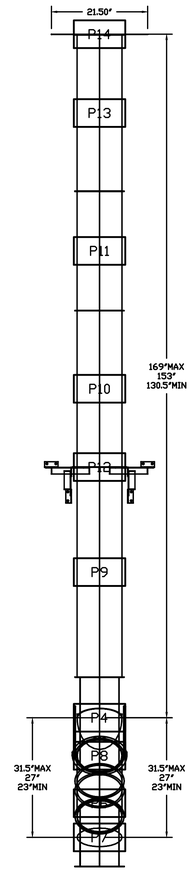
orientation
project number 232882
scale As Noted
date 5/02/2024
sheet title HVAC Details
sheet number M215

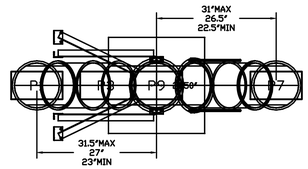
DUCTWORK #2 FRONT VIEW
DISH



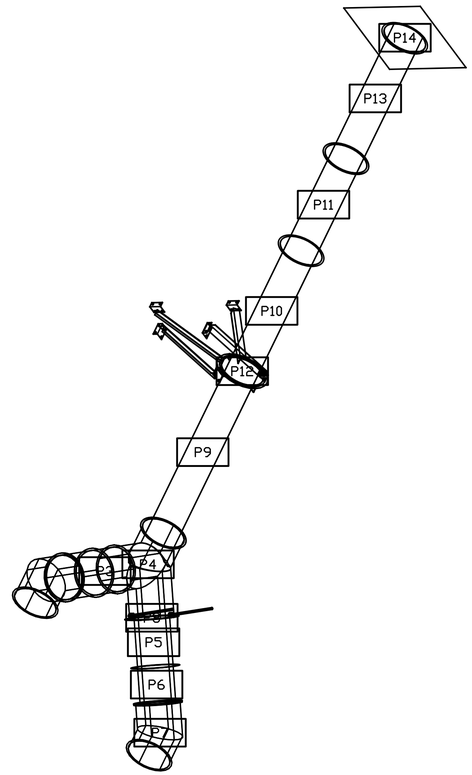

DUCTWORK #2 SIDE VIEW
DISH




DUCTWORK #2 TOP VIEW
DISH




DUCTWORK #2 SE VIEW
DISH

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Ankeny, IA, 64002

**DATE:** 4/17/2024
**DWG.#:** 6744776
**DRAWN BY:** jslevers
**SCALE:** 3/4" = 1'-0"
**MASTER DRAWING**
**SHEET NO.** 15

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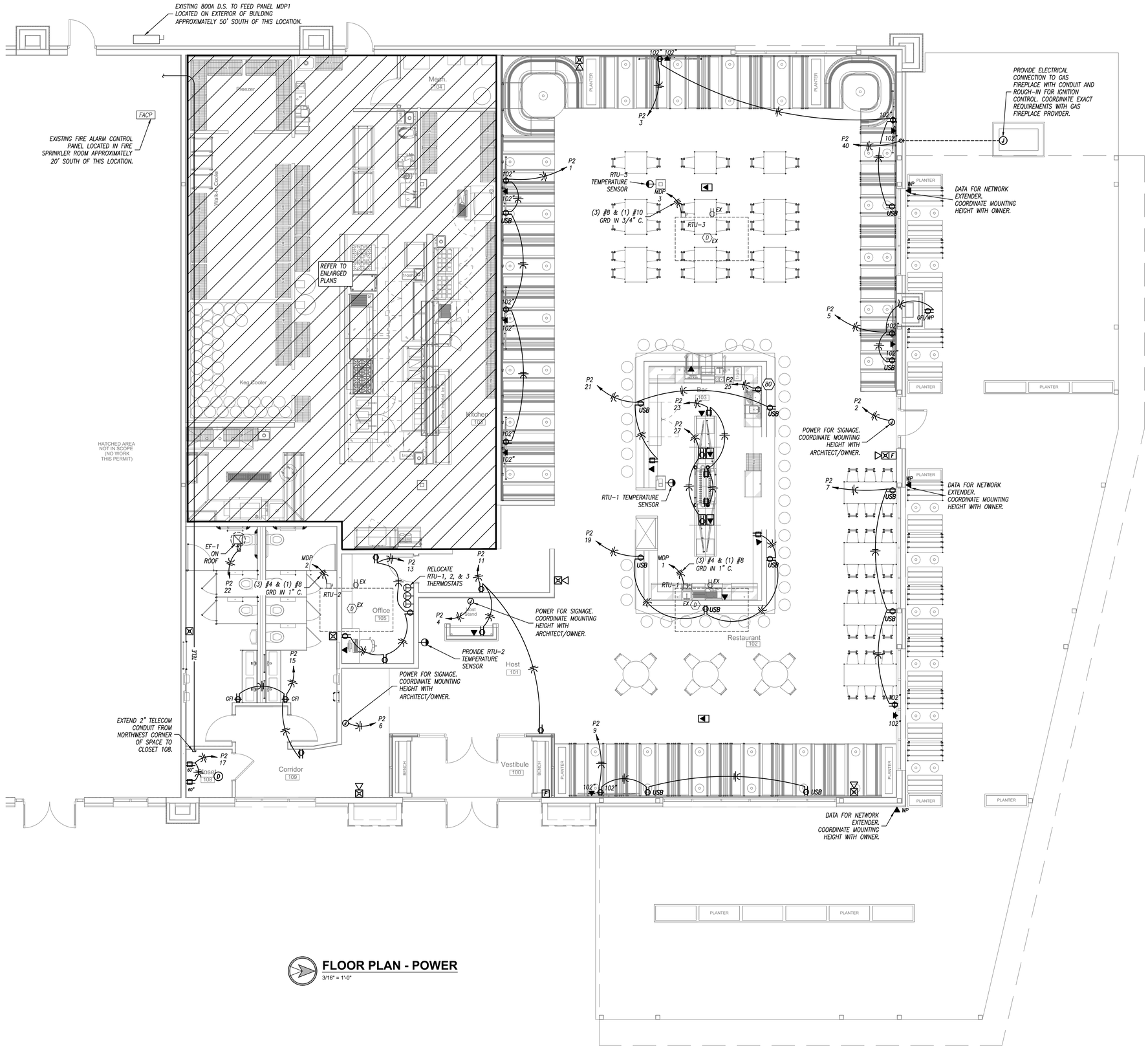
| orientation | |
| project number | 232882 |
| scale | As Noted |
| date | 5/02/2024 |
| sheet title | HVAC Details |
| sheet number | M216 |




## FLOOR PLAN - POWER

3/16" = 1'-0"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project number 232882

scale As Noted

date 5/02/2024

sheet title Power Plan

sheet number E101

# KITCHEN EQUIPMENT-ELECTRICAL SCHEDULE

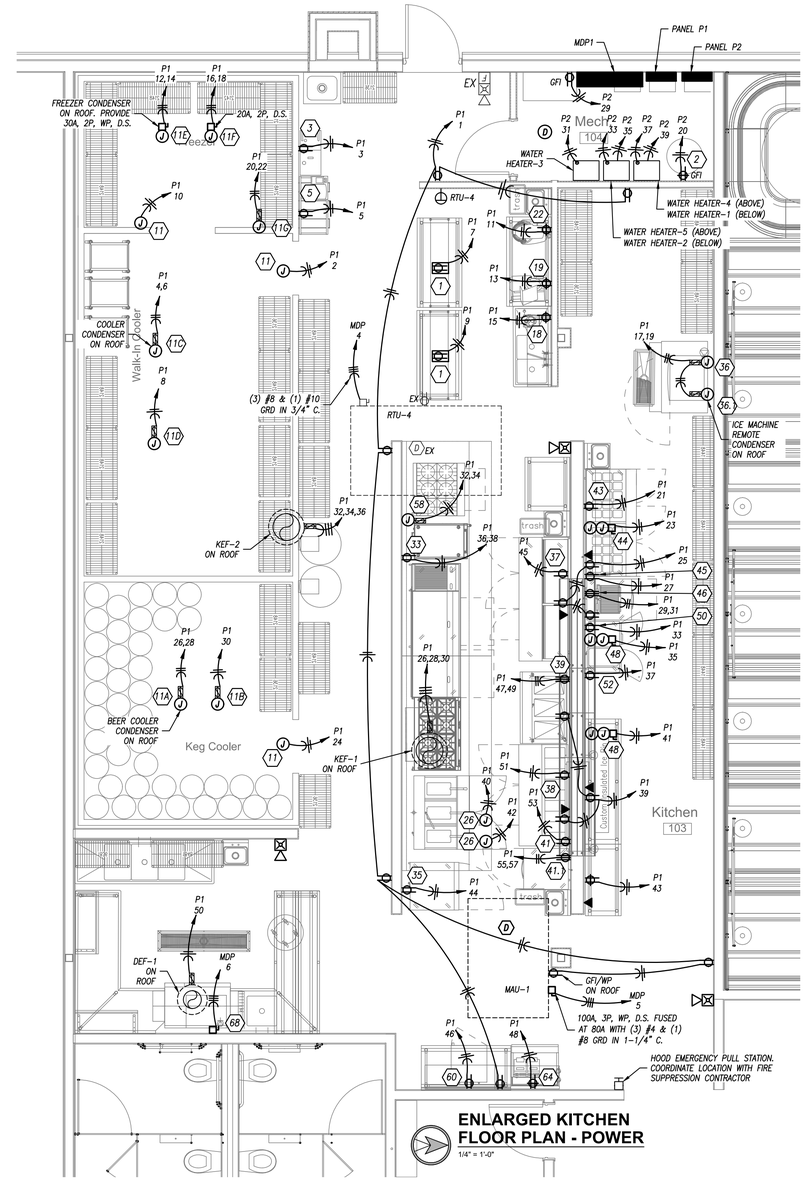
| ITEM NO | QTY | EQUIPMENT DISCRIPTION | AMPS | VOLTAGE/ PHASE | WIRE SIZE | HEIGHT (AFF) | NOTES |
|---|---|---|---|---|---|---|---|
| 1 | 2 | S/S WORK TABLE | 15.0 | 120V/1ø | (3) #12, 1/2"C. | | |
| 2 | 1 | BULK CO2 TANK | 15.0 | 120V/1ø | (3) #12, 1/2"C. | 48" | |
| 3 | 1 | PORTABLE OIL FILTER | 15.0 | 120V/1ø | (3) #12, 1/2"C. | 20" | |
| 5 | 1 | BAG-IN-BOX SYSTEM | 15.0 | 120V/1ø | (3) #12, 1/2"C. | 60" | |
| 11 | 3 | COOLER/FREEZER LIGHTS AND ACCESSORIES | 10.0 | 120V/1ø | (3) #12, 1/2"C. | | 2 |
| 11A | 1 | BEER COOLER CONDENSER | 16.1 | 208V/1ø | (3) #10, 3/4"C. | | |
| 11B | 1 | BEER COOLER COIL | 15.0 | 120V/1ø | (3) #12, 1/2"C. | | |
| 11C | 1 | COOLER CONDENSER | 19.6 | 208V/1ø | (3) #10, 3/4"C. | | |
| 11D | 1 | COOLER COIL | 15.0 | 120V/1ø | (3) #12, 1/2"C. | | |
| 11E | 1 | FREEZER CONDENSER | 20.6 | 208V/1ø | (3) #10, 3/4"C. | | |
| 11F | 1 | FREEZER COIL | 15.0 | 208V/1ø | (3) #12, 3/4"C. | | |
| 11G | 1 | DRAIN LINE HEATER | 15.0 | 240V/1ø | (3) #12, 1/2"C. | | |
| 18 | 1 | FOOD PROCESSOR | 12.0 | 120V/1ø | (3) #12, 1/2"C. | 48" | |
| 19 | 1 | FOOD SLICER | 4.8 | 120V/1ø | (3) #12, 1/2"C. | 48" | |
| 22 | 1 | PLANTARY MIXER | 15.0 | 120V/1ø | (3) #12, 1/2"C. | 48" | |
| 26 | 2 | EXHAUST HOOD SYSTEM | 15.0 | 120V/1ø | (3) #12, 1/2"C. | | |
| 33 | 1 | REFRIGERATED EQUIPMENT STAND | 6.0 | 120V/1ø | (3) #12, 1/2"C. | 20" | |
| 35 | 1 | UNDERCOUNTER FREEZER | 2.6 | 120V/1ø | (3) #12, 1/2"C. | 20" | |
| 36 | 1 | ICE MAKER | 11.0 | 208V/1ø | (3) #12, 1/2"C. | 60" | |
| 36.1 | 1 | REMOTE CONDENSER | 1.0 | 208V/1ø | (3) #12, 1/2"C. | | |
| 37 | 1 | PREP REFRIGERATOR | 5.8 | 120V/1ø | (3) #12, 1/2"C. | 20" | |
| 38 | 1 | PREP REFRIGERATOR | 6.0 | 120V/1ø | (3) #12, 1/2"C. | 20" | |
| 39 | 1 | HOT FOOD SERVING COUNTER | 18.8 | 208V/1ø | (3) #10, 3/4"C. | 20" | |
| 41 | 1 | REFRIGERATED WORKTOP | 2.5 | 120V/1ø | (3) #12, 1/2"C. | 20" | |
| 41.1 | 1 | INDUCTION RANGE | 15.0 | 208V/1ø | (3) #12, 1/2"C. | 48" | |
| 43 | 1 | MEGA TOP PREP REFRIGERATOR | 5.8 | 120V/1ø | (3) #12, 1/2"C. | 20" | |
| 44 | 1 | HEAT LAMP | 18.3 | 120V/1ø | (3) #10, 1/2"C. | 56" | 1 |
| 45 | 1 | REFRIGERATED WORKTOP | 2.5 | 120V/1ø | (3) #12, 1/2"C. | 20" | |
| 46 | 1 | PANINI GRILL | 13.3 | 240V/1ø | (3) #12, 1/2"C. | 48" | |
| 48 | 2 | HEAT LAMP | 23.3 | 120V/1ø | (3) #12, 1/2"C. | 56" | 1 |
| 50 | 1 | REFRIGERATED WORKTOP | 2.0 | 120V/1ø | (3) #12, 1/2"C. | 20" | |
| 52 | 1 | FOOD PAN WARMER | 8.3 | 120V/1ø | (3) #12, 1/2"C. | 48" | |
| 58 | 1 | COMBI GAS OVEN | 12.0 | 120V/1ø | (3) #12, 1/2"C. | 48" | |
| 60 | 1 | UNDERCOUNTER REFRIGERATOR | 2.5 | 120V/1ø | (3) #12, 1/2"C. | 20" | |
| 64 | 1 | SOAD DISPENSER | 2.4 | 120V/1ø | (3) #12, 1/2"C. | 60" | |
| 68 | 1 | DISHWASHER | 111.3 | 208V/3ø | (3) #1/0 & (1) #6 GRD, 2"C. | 20" | |
| 80 | 1 | UNDERCOUNTER DISWASHER | 15.0 | 120V/1ø | (3) #12, 1/2"C. | 20" | |

NOTES:

1. PROVIDE (2) JUNCTION BOXES, ONE FOR HEAT LAMP AND ONE FOR REMOTE CONTROL ENCLOSURE. PROVIDE DISCONNECT SWITCH ABOVE ACCESSIBLE CEILING, UPSTREAM OF REMOTE CONTROL AND HEAT LAMP. SEE KITCHEN EQUIPMENT DRAWINGS FOR EXACT MOUNTING HEIGHT AND MANUFACTURE'S INSTRUCTIONS FOR EXACT WIRING REQUIREMENTS.
2. PROVIDE CONNECTION TO ALL ACCESSORIES (HEAT TAPE, PRESSURE RELIEF PORT, LIGHT/THERMOMETER SWITCH, VAPOR LIGHT, ETC) PER MANUFACTURER'S INSTRUCTIONS.

REMARKS:

1. EQUIPMENT ON SCHEDULE FURNISHED BY OTHERS.
2. EQUIPMENT SUBJECT TO CHANGE, FIELD VERIFY EQUIPMENT W/ OWNER AND ARCHITECT.
3. FIELD VERIFY ELECTRICAL REQUIREMENTS FOR ALL EQUIPMENT.
4. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
5. COORDINATE EXACT LOCATION OF EQUIPMENT WITH OWNER.




## ENLARGED KITCHEN FLOOR PLAN - POWER

1/4" = 1'-0"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orientation

project number 232882

scale As Noted

date 5/02/2024

sheet title Power Plan

sheet number E102

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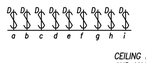
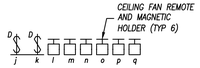
| project number | 232882 |
| scale | As Noted |
| date | 5/02/2024 |
| sheet title | Lighting Plan |
| sheet number | E201 |

DINING & BAR SWITCHBANK




EXTERIOR SWITCHBANK

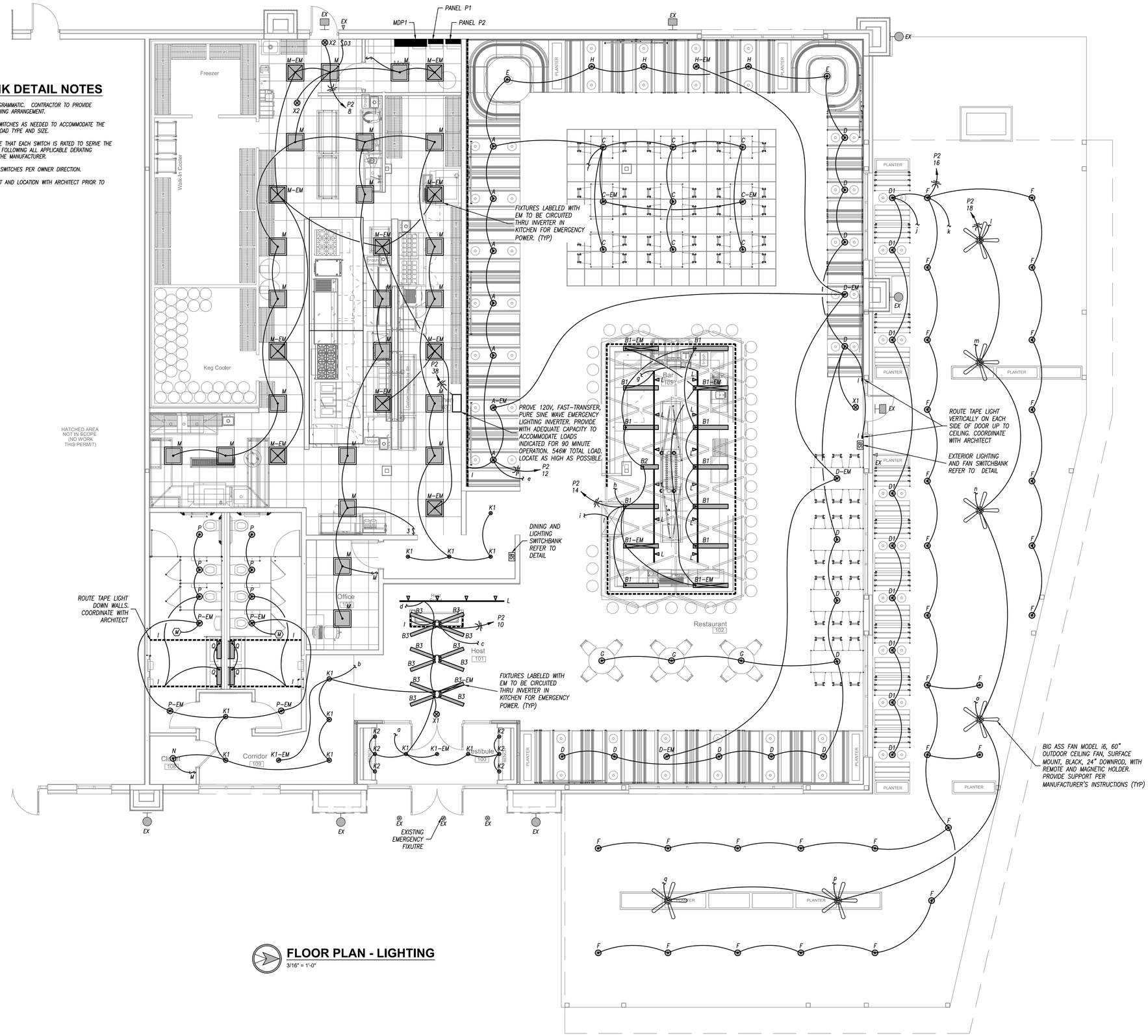



## SWITCHBANK DETAIL

NOT TO SCALE

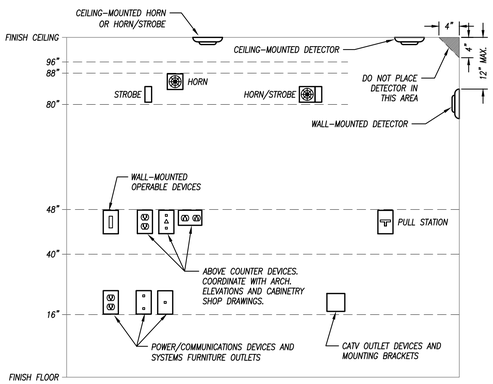
## SWITCHBANK DETAIL NOTES

1. SWITCHBANK SHOWN IS DIAGRAMMATIC. CONTRACTOR TO PROVIDE SWITCHES TO MATCH SWITCHING ARRANGEMENT.
2. CONTRACTOR TO SUPPLY SWITCHES AS NEEDED TO ACCOMMODATE THE CORRESPONDING LIGHTING LOAD TYPE AND SIZE.
3. CONTRACTOR SHALL ENSURE THAT EACH SWITCH IS RATED TO SERVE THE CONNECTED LIGHTING LOAD, FOLLOWING ALL APPLICABLE DERATING FACTORS AS OUTLINED BY THE MANUFACTURER.
4. CONTRACTOR SHALL LABEL SWITCHES PER OWNER DIRECTION.
5. VERIFY EXACT ARRANGEMENT AND LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.




## FLOOR PLAN - LIGHTING

3/16" = 1'-0"




GENERAL NOTES:
1. MOUNTING HEIGHTS SHOWN IN THIS DETAIL ARE TYPICAL UNLESS OTHERWISE NOTED ON THE PLANS.
2. SEE ARCHITECTURAL ELEVATIONS FOR SPECIAL CONDITIONS. NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS.
3. ALL INSTALLATIONS SHALL COMPLY WITH ADA.

VISUAL FIRE ALARM NOTIFICATION DEVICES (STROBE)
LOCATE DEVICE SO THE BOTTOM OF THE DEVICE IS BETWEEN 80" AND 96" A.F.F. (NFPA) OR 6" BELOW CEILING, WHICHEVER IS LOWER (ADA 2010).

AUDIBLE FIRE ALARM NOTIFICATION DEVICES (HORN)
LOCATE DEVICE SO THAT THE TOP OF UNIT IS NOT MORE THAN 90" A.F.F. AND NOT LESS THAN 6" BELOW CEILING (NFPA)

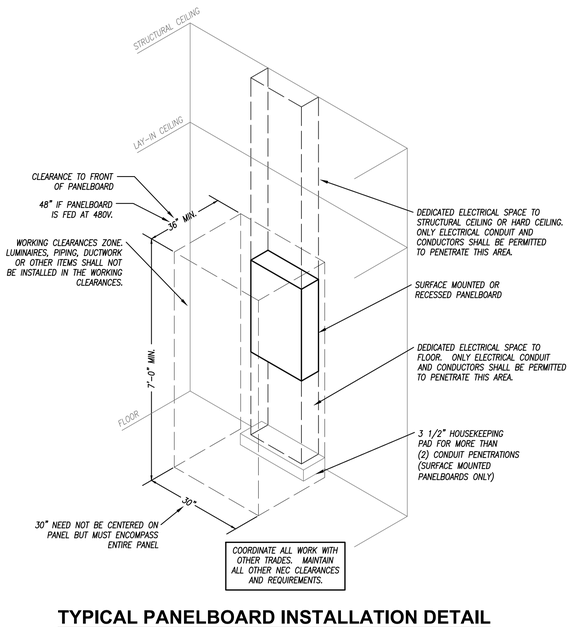
FIRE ALARM ACTIVATION DEVICES (PULL STATION)
LOCATE FRONT-APPROACH DEVICES SO THAT THE HIGHEST OPERABLE PORTION OF THE DEVICE IS NOT MORE THAN 48" A.F.F (ADA 2010) AND NOT LESS THAN 42" A.F.F. (NFPA).

POWER/COMMUNICATION DEVICES:
OUTLETS SHALL BE LOCATED AT 16" A.F.F. TO THE BOTTOM OF THE BOX. ABOVE COUNTER DEVICES SHALL BE LOCATED AT 2" ABOVE THE BACKSPLASH OF THE COUNTER TO THE BOTTOM OF THE DEVICES. VERIFY WITH ARCHITECTURAL DETAILS.

WALL-MOUNTED OPERABLE DEVICES:
OPERABLE DEVICES SHALL BE LOCATED AT 48" A.F.F. TO THE TOP OF THE OPERABLE PORTION OF THE DEVICE.

WALL-MOUNTED OPERABLE DEVICES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
LIGHT SWITCHES, DIMMERS, CONTROLS, ETC.
PUSH BUTTONS
NURSE/PATIENT CALL DEVICES (INLUDING THOSE FOR STAFF USE)
OTHER CONTROL OR "CALL" DEVICES

## MOUNTING HEIGHTS FOR WALL-MOUNTED DEVICES
NOT TO SCALE



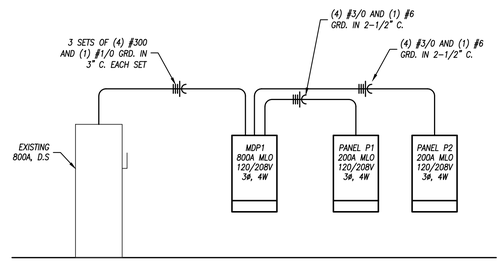

## TYPICAL PANELBOARD INSTALLATION DETAIL
NOT TO SCALE

## LIGHT FIXTURE SCHEDULE

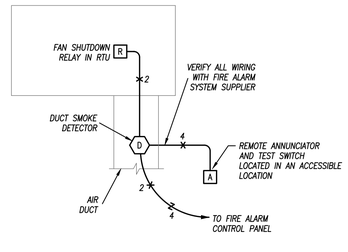
| PLAN MARK | MANUFACTURER | MODEL | SIZE | MOUNTING | FINISH | MIN LUMEN/MAX WATTS | CRI/CCT | NOTES |
|---|---|---|---|---|---|---|---|---|
| A | JUSTICE DESIGN | CER-6300-BIS-MBLK-INC | – | PENDANT | BLACK | 8 WATTS | – | 2 |
| B1 | AXIS | ED2-500-90-27-UB-4-BLK/BLK-120-DP-45D | 4' | SUSPENDED | BLACK | 2,000 LUMENS/14 WATTS | 90/2700K | 1 |
| B2 | AXIS | ED2-500-90-27-UB-2-BLK/BLK-120-DP-45D | 2' | SUSPENDED | BLACK | 1,000 LUMENS/7 WATTS | 90/2700K | 1 |
| B3 | AXIS | SCD-300-90-27-FL-3-BLK-120-DP | 3' | SUSPENDED | BLACK | 1,500 LUMENS/10 WATTS | 90/2700K | 1 |
| C | DMF | XCP-R-9-C-4-S-D-12-WF-0-00-00-27-BK-0 | 3" | PENDANT | BLACK | 1,250 LUMENS/15 WATTS | 90/2700K | 1 |
| D | BASELITE | D614-46-BLC | – | SUSPENDED | YELLOW | 8 WATTS | – | 1,2 |
| D1 | BASELITE | D614-46-STEM | – | PENDANT | YELLOW | 8 WATTS | – | 1,2,3,4 |
| E | BASELITE | MW529-41-CBLC | – | SUSPENDED | BLACK | 8 WATTS | – | 1,2 |
| F | BASELITE | P-HP1-41-STEM-FR3-CG1 | – | PENDANT | BLACK | 8 WATTS | – | 1,2,3,4 |
| G | BASELITE | WBC20-41-CABLE AND CORD MOUNT | – | SUSPENDED | BLACK | 8 WATTS | – | 1,2 |
| H | BASELITE | PEO-90-BLC | – | SUSPENDED | GREEN | 8 WATTS | – | 1,2 |
| I | DIODE | DI-24V-BLBSC2-27-SL-AL OMNI DRIVE X (ODX) | – | SURFACE | – | 3 WATTS PER FT | 90/2700K | 1 |
| J | NOT USED | | | | | | | |
| K1 | DMF | M4NCRS/DRD2M-12-927-FL-A/M4TRS-BK | 4" | RECESSED | BLACK | 1,250 LUMENS, 14 WATTS | 90/2700K | 1 |
| K2 | DMF | M4NCRS/DRD4M-10-927-FL-A/M4TRS-BK | 4" | RECESSED | BLACK | 1,000 LUMENS, 12 WATTS | 90/2700K | 1 |
| L | JUNO | T381-G2-27K-90-PDIM-FL-BL-HCLBL200 | – | TRACK | BLACK | 1,000 LUMENS, 11 WATTS | 90/2700K | 1,5 |
| M | LITHONIA | 2GTL-2-40L-FW-LP840 | 2X2 | RECESSED | WHITE | 4,000 LUMENS, 35 WATTS | 80/4000K | 1 |
| N | JUNO | IC1JB-JSF-13IN-18LM-30K-90-120FRPC-WH | 13" | SURFACE | WHITE | 1,800 LUMENS, 20 WATTS | 90/3000K | 1 |
| P | BASELITE | SFM1-41-WJB41/2-FR3-CG1 | – | SURFACE | BLACK | 8 WATTS | – | 1,2 |
| Q | ELECTRIC MIRROR | EMINENCE 24WX36H EMN3-24X36-01L-OS-RC6.0-TD2-WG3-30K | – | SURFACE WALL | – | 81 WATTS | 90/3000K | 1 |
| X1 | LITHONIA | EDG-1-GMR / ELA-US12 | – | PENDANT | – | – | – | 1,6 |
| X2 | LITHONIA | EDG-1-GMR | – | SURFACE | – | – | – | 1,6 |

NOTES LEGEND

1. PROVIDE DIMMABLE LED DRIVER UNIVERSAL VOLTAGE
2. PROVIDE WITH PHILIPS 8W, A19 WARM GLOW LED DIMMABLE BULB.
3. PROVIDE WET LOCATION RATED FIXTURE.
4. PROVIDE COLD LOCATION RATED BALLAST.
5. PROVIDE 1 CIRCUIT SURFACE TRACK – REFER TO PLANS FOR TRACK LENGTH AND CONFIGURATION. PROVIDE ALL NECESSARY POWER FEEDS AND ACCESSORIES FOR COMPLETE INSTALLATION. TRACK AND COMPONENT FINISHES TO MATCH FIXTURE. PROVIDE EACH TRACK RUN WITH 3 AMP CURRENT LIMITER.
6. PROVIDE EMERGENCY BATTERY MINIMUM OF 1000 LUMENS FOR 90 MINUTES




## ELECTRICAL RISER DIAGRAM
NO SCALE

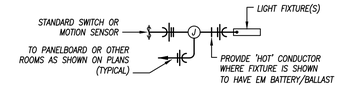



## DUCT SMOKE DETECTOR DIAGRAM
NOT TO SCALE

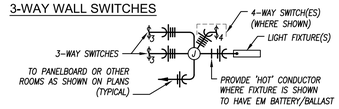
## TYPICAL WIRING OF CONTROLS AND LIGHT FIXTURES

THE WIRING AND/OR TIC MARKS SHOWN BELOW ARE NOT SHOWN ON PLANS FOR CLARITY. PROVIDE WIRING FROM JUNCTION BOX(ES) TO SWITCHES/CONTROLLERS AND LIGHTS AS SHOWN BELOW FOR EACH ROOM/AREA.

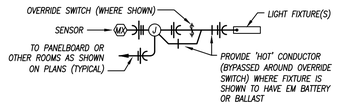
### LINE VOLTAGE STANDARD WALL SWITCHES



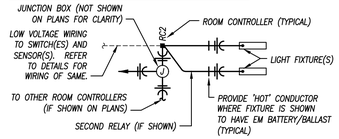

### 3-WAY WALL SWITCHES




### LINE VOLTAGE CEILING SENSORS




### ROOM CONTROLLERS / POWER PACKS




## ROOM CONTROLLER SCHEDULE

| MARK | MANUFACTURER | MODEL | RELAYS NO. | RELAYS TYPE | VOLTAGE |
|---|---|---|---|---|---|
| RCD1 | WATTSTOPPER | LMRC-211 | 1 | DIMMING (0-10V) | 120 V |
| RCD2 | WATTSTOPPER | LMRC-212 | 2 | DIMMING (0-10V) | 120 V |
| RC1 | WATTSTOPPER | LMRC-101 | 1 | ON/OFF | 120 V |
| RC2 | WATTSTOPPER | LMRC-102 | 2 | ON/OFF | 120 V |

## LIGHTING CONTROL DEVICE SCHEDULE

| MARK | MANUFAC. | MODEL | DESCRIPTION | VOLTAGE |
|---|---|---|---|---|
| CEILING SENSORS | | | | |
| M1 | WATTSTOPPER | LMDC-100 | DUAL-TECHNOLOGY CEILING SENSOR. 24V OPERATION WITH CAT5 CONNECTION. | 24 V |
| M2 | WATTSTOPPER | DT-355 | DUAL-TECHNOLOGY CEILING SENSOR. LINE VOLTAGE. | 120 V |
| SWITCHES | | | | |
| L# | WATTSTOPPER | LMSW-100 SERIES | DIGITAL DECORA PUSHBUTTON SWITCH WITH LED PILOT LIGHT. CAT5 CONNECTION TO CONTROLLER. # REFERS TO QUANTITY OF BUTTONS ON FACE. | 24 V |
| LD1 | WATTSTOPPER | LMDM-101 | DIGITAL DECORA DIMMING SWITCH WITH LED PILOT AND INDICATING LIGHTS. CAT5 CONNECTION TO CONTROLLER. | 24 V |
| WALL SENSORS | | | | |
| M | WATTSTOPPER | DSW-100 | DUAL-TECHNOLOGY WALL SENSOR. LINE VOLTAGE. | 120 V |

## GENERAL LIGHTING NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
2. LIGHT FIXTURES INDICATED AS EMERGENCY FIXTURES ARE TO FUNCTION AS NIGHT LIGHTS UNLESS SPECIFICALLY SHOWN SWITCHED.
3. ALL CIRCUITING SHOWN ON THIS PLAN IS DIAGRAMMATIC.
   3.1. ALL FIXTURES SHALL BE FED FROM JUNCTION BOXES WITH LIGHT FIXTURE WHIPS (<6'). DAISY-CHAINING OF FIXTURES IS NOT ALLOWED.
   3.2. SWITCH BOX LOCATIONS SHALL BE WIRED SO THAT A NEUTRAL WIRE IS AVAILABLE AT THE SWITCH BOX LOCATION, EITHER IN THE BOX OR AVAILABLE TO BE ADDED VIA RACEWAY OR AN ACCESSIBLE WALL CAVITY.
   3.3. WALL SWITCHES FOR SEPARATE LOAD TYPES (EM/NORMAL, 120/277V, ETC.) SHALL NOT BE IN A SINGLE BOX.
   3.4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.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STATE OF MISSOURI
BRYAN LEINWETTER
NUMBER PE-2020020297
PROFESSIONAL ENGINEER
5/02/24
Bryan Leinwetter - Engineer
MO# PE-2020020297


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| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

orientation

project number 232882

scale As Noted

date 5/02/2024

sheet title Electrical Details

sheet number E301

# DISTRIBUTION PANELBOARD SCHEDULE

PANEL DESIGNATION: **MDP1**
MAIN BUS AMPS: 800 VOLTAGE: 208/120 MOUNTING: SURFACE
MAIN BREAKER AMPS: 800 PHASE/WIRE: 3Ø, 4W LOCATION: MECH 104
SCCR RATING (AIC): 35,000

| CIRCUIT NO. | CIRCUIT DESIGNATION | KVA | CIRCUIT BREAKER POLE | CIRCUIT BREAKER FRAME | CIRCUIT BREAKER TRIP | FEEDER SETS | FEEDER # OF WIRES | FEEDER SIZE | FEEDER GROUND | FEEDER CONDUIT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RTU-1 | 18.5 | 3 | 100 | 70 | 1 | 3 | #4 | #8 | 1" |
| 2 | RTU-2 | 18.5 | 3 | 100 | 70 | 1 | 3 | #4 | #8 | 1" |
| 3 | RTU-3 | 12.6 | 3 | 100 | 50 | 1 | 3 | #6 | #10 | 3/4" |
| 4 | RTU-4 | 12.6 | 3 | 100 | 50 | 1 | 3 | #6 | #10 | 3/4" |
| 5 | MAU-1 | 22.1 | 3 | 100 | 80 | 1 | 3 | #3 | #8 | 1-1/4" |
| 6 | DISHWASHER-GFI | 40.1 | 3 | 200 | 150 | 1 | 3 | #1 | #6 | 2" |
| 7 | PANELBOARD P1 | 74.6 | 3 | 200 | 200 | 1 | 4 | #3/0 | #6 | 2" |
| 8 | PANELBOARD P2 | 30.4 | 3 | 200 | 200 | 1 | 4 | #3/0 | #6 | 2" |
| 9 | SPACE | 0.0 | 3 | - | - | - | - | - | - | - |
| 10 | SPACE | 0.0 | 3 | - | - | - | - | - | - | - |

**PANELBOARD SIZING LOAD**

| LOAD DESCRIPTION | CONNECTED LOAD | DEMAND FACTOR | CODE MIN. (VA) |
|---|---|---|---|
| LIGHTS | 4,520 | 1.25 | 5,650 |
| RECEPTACLES | 13,140 | 10KVA + 50% REST | 11,570 |
| MOTORS | 7,910 | 1.25 x LARGEST + SUM OF REST | 8,833 |
| AIR CONDITIONING | 84,367 | 1.00 | 84,367 |
| SPACE HEATING | 0 | 0.00 | 0 |
| HEAT PUMP | 0 | 1.00 | 0 |
| CONTINUOUS | 0 | 1.25 | 0 |
| NON-CONTINUOUS | 83,200 | 1.00 | 83,200 |
| MISC. LOADS 1 | 0 | 1.00 | 0 |
| TOTAL CONNECTED LOAD (VA): | 229,367 | SIZING LOAD (VA): | 217,169 |
| TOTAL CONNECTED LOAD (AMPS): | 636.7 | SIZING LOAD (AMPS): | 602.8 |

REMARKS:
1. EATON POW-R-LINE 4X PANELBOARD OR EQUAL.
2. SINGLE SECTION, 44" WIDE PANELBOARD.
3. FURNISH PANELBOARD WITH EXTERNAL SPD.

# SINGLE-SECTION PANELBOARD SCHEDULE

PANEL DESIGNATION: **P1**
MAIN LUG AMPS: 225 SCCR RATING (AIC): 35,000
MOUNTING: SURFACE MAIN BREAKER: M.L.O.
LOCATION: MECH 104 VOLTAGE: 208/120
PHASE/WIRE: 3Ø, 4W

| DESCRIPTION | PHASE A | PHASE B | PHASE C | C/B TRIP | C/B POLE | CIRCUIT # | | C/B POLE | C/B TRIP | PHASE A | PHASE B | PHASE C | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REC-KITCHEN -GFI | 1080 | | | 20 | 1 | 1 | 2 | 1 | 20 | 1200 | | | WALK-IN COOLER-GFI |
| PORTABLE OIL FILTER-GFI | | 1800 | | 20 | 1 | 3 | 4 | 2 | 25 | | 2360 | | COOLER CONDENSER |
| BAG-IN-BOX SYSTEM-GFI | | | 1800 | 20 | 1 | 5 | 6 | - | - | | | 2360 | - |
| S/S WORK TABLE-GFI | 1800 | | | 20 | 1 | 7 | 8 | 1 | 20 | 1800 | | | COOLER COIL |
| S/S WORK TABLE-GFI | | 1800 | | 20 | 1 | 9 | 10 | 1 | 20 | | 1200 | | FREEZER-GFI |
| PLANTARY MIXER-GFI | | | 1800 | 20 | 1 | 11 | 12 | 2 | 25 | | | 2480 | FREEZER CONDENSER |
| FOOD SLICER-GFI | 580 | | | 20 | 1 | 13 | 14 | - | - | 2480 | | | |
| FOOD PROCESSOR-GFI | | 1440 | | 20 | 1 | 15 | 16 | 2 | 20 | | 1800 | | FREEZER COIL |
| ICE MAKER-GFI | | | 1450 | 20 | 2 | 17 | 18 | - | - | | | 1800 | - |
| - | 1450 | | | - | - | 19 | 20 | 2 | 20 | 1800 | | | DRAIN LINE HEATER-GFI |
| MEGA TOP PREP REF-GFI | | 700 | | 20 | 1 | 21 | 22 | - | - | | 1800 | | - |
| HEAT LAMP-GFI | | | 2200 | 25 | 1 | 23 | 24 | 1 | 20 | | | 1200 | BEER COOLER-GFI |
| REC-KITCHEN -GFI | 540 | | | 20 | 1 | 25 | 26 | 2 | 20 | 1940 | | | BEER COOLER CONDENSER |
| REFRIGERATED WORKTOP-GFI | | 300 | | 20 | 1 | 27 | 28 | - | - | | 1940 | | - |
| PANINI GRILL-GFI | | | 1600 | 20 | 2 | 29 | 30 | 1 | 20 | | | 1800 | BEER COOLER COIL |
| - | 1600 | | | - | - | 31 | 32 | 1 | 20 | 1440 | | | COMBI GAS OVEN-GFI |
| REFRIGERATED WORKTOP-GFI | | 240 | | 20 | 1 | 33 | 34 | 1 | - | | - | | SHUNT TRIP |
| HEAT LAMP-GFI | | | 2800 | 30 | 1 | 35 | 36 | 1 | 20 | | | 720 | REFRIGERATED EQUIP STAND-GFI |
| FOOD WARMER-GFI | 1000 | | | 20 | 1 | 37 | 38 | 1 | - | - | | | SHUNT TRIP |
| REC-KITCHEN -GFI | | 540 | | 20 | 1 | 39 | 40 | 1 | 20 | | 1800 | | EXHAUST HOOD |
| HEAT LAMP-GFI | | | 2800 | 25 | 1 | 41 | 42 | 1 | 20 | | | 1800 | EXHAUST HOOD |
| REC-KITCHEN -GFI | 360 | | | 20 | 1 | 43 | 44 | 1 | 20 | 720 | | | UNDERCOUNTER FREEZER-GFI |
| PREP REFRIGERATOR-GFI | | 700 | | 20 | 1 | 45 | 46 | 1 | 20 | | 300 | | UNDERCOUNTER FRIDGE-GFI |
| HOOT FOOD SERVING-GFI | | | 2260 | 25 | 2 | 47 | 48 | 1 | 20 | | | 290 | SODA DISPENSER-GFI |
| - | 2260 | | | - | - | 49 | 50 | 1 | - | - | | | SPACE |
| PREP REFRIGERATOR-GFI | | 720 | | 20 | 1 | 51 | 52 | 1 | - | | - | | SPACE |
| REFRIGERATED WORKTOP-GFI | | | 300 | 20 | 1 | 53 | 54 | 1 | - | | | - | SPACE |
| INDUCTION RANGE-GFI | 1800 | | | 20 | 2 | 55 | 56 | 1 | - | - | | | SPACE |
| - | | 1800 | | - | - | 57 | 58 | 1 | - | | - | | SPACE |
| SPARE-GFI | | | - | - | 1 | 59 | 60 | 1 | - | | | - | SPACE |
| TOTALS | 12470 | 10040 | 17010 | | | | | | | 11380 | 11200 | 12450 | TOTALS |

**PANELBOARD SIZING LOAD**

| LOAD DESCRIPTION | CONNECTED | DEMAND | CODE MIN. (VA) |
|---|---|---|---|
| LIGHTS | 0 | 1.25 | 0 |
| RECEPTACLES | 2,520 | 10KVA + 50% REST | 2,520 |
| MOTORS | 0 | 1.25 x LARGEST + SUM OF REST | 0 |
| AIR CONDITIONING | 0 | 1.00 | 0 |
| SPACE HEATING | 0 | 0.00 | 0 |
| HEAT PUMP | 0 | 1.00 | 0 |
| CONTINUOUS | 0 | 1.25 | 0 |
| NON-CONTINUOUS | 35,800 | 1.00 | 35,800 |
| MISC. LOADS 1 | 0 | 1.00 | 0 |
| | | SIZING LOAD: | 61,870 |
| | | SIZING LOAD (AMPS): | 172 |

**CONNECTED PHASE LOADS**

| PHASE | VA | AMPS |
|---|---|---|
| A | 23,850 | 198.6 |
| B | 21,240 | 176.9 |
| C | 29,460 | 245.3 |
| TOTALS | 74,550 | 206.9 |

REMARKS:
1. EATON POW-R-LINE 2X OR EQUAL.

# SINGLE-SECTION PANELBOARD SCHEDULE

PANEL DESIGNATION: **P2**
MAIN LUG AMPS: 225 SCCR RATING (AIC): 35,000
MOUNTING: SURFACE MAIN BREAKER: M.L.O.
LOCATION: MECH 104 VOLTAGE: 208/120
PHASE/WIRE: 3Ø, 4W

| DESCRIPTION | PHASE A | PHASE B | PHASE C | C/B TRIP | C/B POLE | CIRCUIT # | | C/B POLE | C/B TRIP | PHASE A | PHASE B | PHASE C | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REC-RESTAURANT | 720 | | | 20 | 1 | 1 | 2 | 1 | 20 | 1000 | | | LIGHT UP SIGN |
| REC-RESTAURANT | | 540 | | 20 | 1 | 3 | 4 | 1 | 20 | | 1000 | | LIGHT UP SIGN |
| REC-RESTAURANT | | | 540 | 20 | 1 | 5 | 6 | 1 | 20 | | | 1000 | LIGHT UP SIGN |
| REC-RESTAURANT | 540 | | | 20 | 1 | 7 | 8 | 1 | 20 | 1150 | | | LIGHTING-KITCHEN/OFFICE |
| REC-RESTAURANT | | 540 | | 20 | 1 | 9 | 10 | 1 | 20 | | 750 | | LIGHTING-HOST/RR |
| REC-HOST | | | 540 | 20 | 1 | 11 | 12 | 1 | 20 | | | 540 | LIGHTING-RESTAURANT |
| REC-OFFICE | 720 | | | 20 | 1 | 13 | 14 | 1 | 20 | 1160 | | | LIGHTING-BAR |
| REC-RESTROOMS | | 540 | | 20 | 1 | 15 | 16 | 1 | 20 | | 320 | | LIGHTING-PATIO |
| REC-CLOSET | | | 720 | 20 | 1 | 17 | 18 | 1 | 20 | | | 1500 | PATIO CEILING FANS |
| REC-BAR - GFI | 900 | | | 20 | 1 | 19 | 20 | 1 | 20 | 1800 | | | BULK CO2 TANK |
| REC-BAR - GFI | | 720 | | 20 | 1 | 21 | 22 | 1 | 15 | | 700 | | EF-1 |
| REC-BAR - GFI | | | 1080 | 20 | 1 | 23 | 24 | 1 | 15 | | | 520 | DEF-1 |
| UNDERCOUNTER DISHWASHER-GFI | 1800 | | | 20 | 1 | 25 | 26 | 3 | 20 | 1000 | | | KEF-1 |
| REC-BAR TVS | | 360 | | 20 | 1 | 27 | 28 | - | - | | 1000 | | - |
| REC-MECH | | | 360 | 20 | 1 | 29 | 30 | - | - | | | 1000 | - |
| WATER HEATER-1 | 200 | | | 20 | 1 | 31 | 32 | 3 | 20 | 1230 | | | KEF-2 |
| WATER HEATER-2 | | 200 | | 20 | 1 | 33 | 34 | - | - | | 1230 | | - |
| WATER HEATER-3 | | | 200 | 20 | 1 | 35 | 36 | - | - | | | 1230 | - |
| WATER HEATER-4 | 200 | | | 20 | 1 | 37 | 38 | 1 | 20 | 600 | | | LIGHTING INVERTER |
| WATER HEATER-5 | | 200 | | 20 | 1 | 39 | 40 | 1 | 20 | | 500 | | FIRE PIT |
| SPARE | | | - | 20 | 1 | 41 | 42 | 1 | 20 | | | - | SPARE |
| SPARE | - | | | 20 | 1 | 43 | 44 | 1 | 20 | - | | | SPARE |
| SPARE | | - | | 20 | 1 | 45 | 46 | 1 | 20 | | - | | SPARE |
| SPARE | | | - | 20 | 1 | 47 | 48 | 1 | 20 | | | - | SPARE |
| SPARE | - | | | 20 | 1 | 49 | 50 | 1 | - | - | | | SPACE |
| SPARE | | - | | 20 | 1 | 51 | 52 | 1 | - | | - | | SPACE |
| SPARE | | | - | 20 | 1 | 53 | 54 | 1 | - | | | - | SPACE |
| SPACE | - | | | - | 1 | 55 | 56 | 1 | - | - | | | SPACE |
| SPACE | | - | | - | 1 | 57 | 58 | 1 | - | | - | | SPACE |
| SPACE | | | - | - | 1 | 59 | 60 | 1 | - | | | - | SPACE |
| TOTALS | 5080 | 3100 | 3440 | | | | | | | 7940 | 5500 | 5790 | TOTALS |

**PANELBOARD SIZING LOAD**

| LOAD DESCRIPTION | CONNECTED | DEMAND | CODE MIN. (VA) |
|---|---|---|---|
| LIGHTS | 4,520 | 1.25 | 5,650 |
| RECEPTACLES | 10,620 | 10KVA + 50% REST | 10,310 |
| MOTORS | 7,910 | 1.25 x LARGEST + SUM OF REST | 8,833 |
| AIR CONDITIONING | 0 | 1.00 | 0 |
| SPACE HEATING | 0 | 0.00 | 0 |
| HEAT PUMP | 0 | 1.00 | 0 |
| CONTINUOUS | 0 | 1.25 | 0 |
| NON-CONTINUOUS | 7,800 | 1.00 | 7,800 |
| MISC. LOADS 1 | 0 | 1.00 | 0 |
| | | SIZING LOAD: | 32,593 |
| | | SIZING LOAD (AMPS): | 90 |

**CONNECTED PHASE LOADS**

| PHASE | VA | AMPS |
|---|---|---|
| A | 13,020 | 108.4 |
| B | 8,600 | 71.6 |
| C | 9,230 | 76.9 |
| TOTALS | 30,850 | 85.6 |

REMARKS:
1. EATON POW-R-LINE 2X OR EQUAL.


640 N Lasalle 312 337 3344 Architecture
Suite 400 Urban Planning
Chicago Illinois 60654

Pappageorge Haymes Partners
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PAPPAGEORGE HAYMES


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STATE OF MISSOURI
BRYAN LEINWETTER
NUMBER PE-2020020297
PROFESSIONAL ENGINEER
5/02/24
Bryan Leinwetter - Engineer
MO# PE-2020020297


pkmr ENGINEERS
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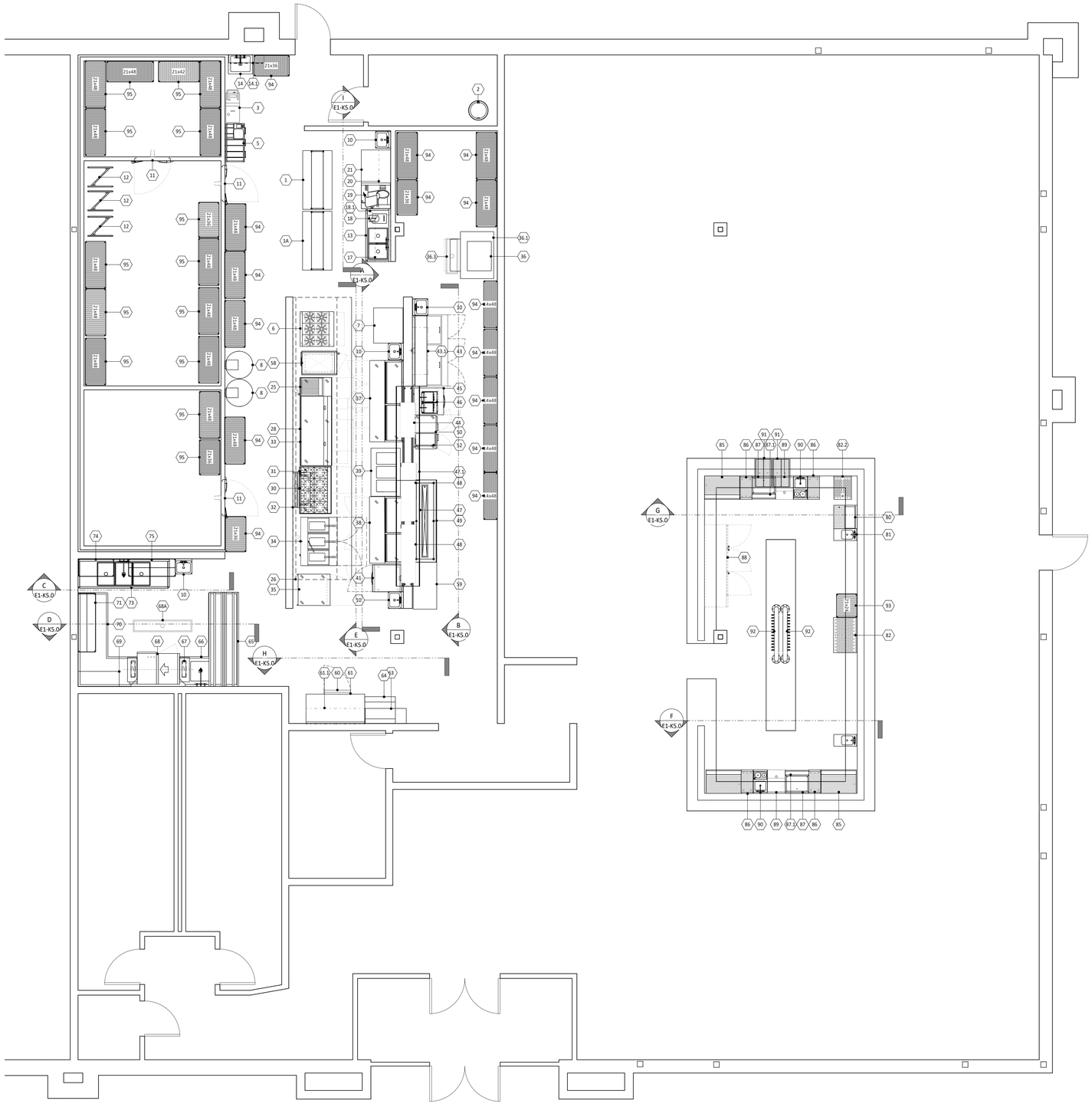
24-107

30hop
american grill • craft beer • rooftop patio

**30hop SOWP**
1020 NW Pryor Road,
Lees Summit,MO 64081
30hop
owner

| | date | description |
|---|---|---|
| | 05.02.24 | Issue For Permit |

orientation
project number 232882
scale As Noted
date 5/02/2024
sheet title Panelboard Schedules
sheet number E302



EQUIPMENT LAYOUT PLAN
SCALE: 1/4" = 1'-0"

## EQUIPMENT LIST

| ITEM NO. | QTY. | ITEM DESCRIPTION | ITEM REMARKS |
|---|---|---|---|
| 1 | 1 | S/S WORK TABLE | |
| 1A | 1 | S/S WORK TABLE | |
| 2 | 1 | BULK CO2 TANK | BY OTHERS |
| 3 | 1 | PORTABLE OIL FILTER | BY OTHERS |
| 5 | 1 | BAG-IN-BOX SYSTEM | BY OTHERS |
| 6 | 1 | 36" HD RANGE, GAS | |
| 7 | 1 | S/S WORK TABLE | |
| 8 | 2 | RTI OIL SYSTEM | BY OTHERS |
| 10 | 5 | HAND SINK | |
| 11 | 1 | WALK-IN COMBO | |
| 12 | 3 | NESTING PAN RACK | |
| 13 | 1 | TWO (2) COMPARTMENT SINK | |
| 14 | 1 | MOP SINK | |
| 14.1 | 1 | UTILITY SHELF | |
| 17 | 1 | S/S WALL SHELVING | |
| 18 | 1 | FOOD PROCESSOR | |
| 18.1 | 1 | IMMERSION HAND MIXER | |
| 19 | 1 | MEAT SLICER | |
| 20 | 1 | S/S WALL SHELVING | |
| 21 | 1 | S/S WORK TABLE | |
| 25 | 1 | CHARBOILER, GAS | |
| 26 | 1 | EXHAUST HOOD SYSTEM | |
| 26.1 | 1 | EXHAUST FAN | |
| 26.2 | 1 | EXHAUST FAN | |
| 26.3 | 1 | DOAS UNIT | |
| 28 | 1 | GRIDDLE, GAS | |
| 30 | 1 | HOTPLATE, GAS | |
| 31 | 1 | REFRIGERATED EQUIPMENT STAND | |
| 32 | 1 | CHEESEMELTER, GAS | |
| 33 | 1 | REFRIGERATED EQUIPMENT STAND | |
| 34 | 1 | BATTERY FRYER, GAS | |
| 35 | 1 | REACH-IN UNDERCOUNTER FREEZER | |
| 36 | 1 | ICE MAKER | |
| 36.1 | 1 | ICE BIN | |
| 36.2 | 1 | REMOTE CONDENSER | |
| 36.3 | 1 | FLOOR TROUGH | BY OTHERS |
| 37 | 1 | REFRIGERATED PREP TABLE | |
| 38 | 1 | REFRIGERATED PREP TABLE | |
| 39 | 1 | HOT FOOD SERVING COUNTER | |
| 41 | 1 | REFRIGERATED WORK TOP | |
| 43 | 1 | MEGA TOP PREP REFRIGERATOR | |
| 43.1 | 1 | S/S WALL SHELVING | |
| 44 | 1 | HEAT LAMP | |
| 45 | 1 | REFRIGERATED WORK TOP | |
| 46 | 1 | PANINI GRILL | |
| 47 | 1 | PASS-THRU SHELF | |
| 47.1 | 1 | PASS-THRU SHELF | |
| 48 | 2 | HEAT LAMP | |
| 49 | 1 | S/S WORK TABLE | |
| 50 | 1 | REFRIGERATED WORK TOP | |
| 52 | 1 | FOOD PAN WARMER | |
| 58 | 1 | MULTI-COOK OVEN | BY OTHERS |
| 59 | 1 | S/S WORK TABLE | |
| 60 | 1 | UNDERCOUNTER REFRIGERATOR | |
| 61 | 1 | S/S WORK TABLE | |
| 61.1 | 1 | S/S WALL SHELVING | |
| 63 | 1 | DISHTABLE SORTING SHELF | |
| 64 | 1 | ICE/BEVERAGE DISPENSER | BY OTHERS |
| 65 | 1 | DISHTABLE SORTING SHELF | |
| 66 | 1 | SOILED DISHTABLE, "L" SHAPE | |
| 67 | 1 | DISHWASHER VENT DUCT RISER | |
| 67.1 | 1 | CONDENSATE EXAUST FAN | |
| 68 | 1 | WAREWASHER, RACK CONVEYOR | BY OTHERS |
| 68A | 1 | FLOOR TROUGH | BY OTHERS |
| 69 | 1 | DISHTABLE SORTING SHELF | |
| 70 | 1 | CLEAN DISHTABLE, "L" SHAPE | |
| 71 | 1 | WIRE SHELVING UNIT | |
| 73 | 1 | THREE (3) COMPARTMENT SINK | |
| 74 | 1 | WIRE SHELVING UNIT | |
| 75 | 1 | WIRE SHELVING UNIT | |
| 80 | 1 | UNDERCOUNTER GLASSWASHER | BY OTHERS |
| 81 | 1 | WET WASTE SINK | |
| 82 | 1 | DRAINBOARD | |
| 82.2 | 1 | DRAINBOARD | |
| 85 | 2 | DRAINBOARD | |
| 86 | 4 | DRAINBOARD | |
| 87 | 2 | ICE BIN | BY OTHERS |
| 87.1 | 2 | SPEED RAIL | |
| 88 | 1 | REFRIGERATED BACK BAR CABINET | |
| 89 | 2 | BOTTLE STORAGE UNIT | |
| 90 | 2 | UNDERBAR SINK UNIT | |
| 91 | 2 | DRIP TROUGH | BY OTHERS |
| 92 | 2 | BEER PIPE TOWER | BY OTHERS |
| 93 | 1 LOT | WIRE SHELVING UNIT | |
| 94 | 1 LOT | WIRE SHELVING UNIT | |
| 95 | 1 LOT | WIRE SHELVING UNIT | |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2750 Tobey Drive
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DESIGN & SALES TO ALL TYPES OF FOOD SERVICE OPERATIONS

PROJECT MANAGER: JACK GRABEEL
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# 30 HOP
## LEE'S SUMMIT, MO

ISSUE DATE:

| Rev. | Date | Description |
|---|---|---|
| | | |

PROJECT No: 2024-064
DRAWN BY: Author
SHEET SCALE: 1/4" = 1'-0"

SHEET TITLE:
KITCHEN EQUIPMENT PLAN

SHEET NUMBER:
E1-K1.0

4/26/2024 4:08:28 PM

## ELECTRICAL NOTES

1. ELECTRICAL SYSTEM IS DESIGNED FOR 240 VOLTS, 3-PHASE, 4 WIRE AT 60 HERTZ.
2. OUTLETS AND ROUGH-INS SHOWN PERTAIN TO AND ARE FOR FOOD-SERVICE FIXTURES AND EQUIPMENT ONLY. SEE ARCHITECTURAL AND/OR ENGINEERING PLANS FOR ANY ADDITIONAL ROUGH-IN REQUIREMENTS.
3. THIS ELECTRICAL PLAN IS INTENDED TO SHOW ROUGH-IN LOCATIONS AND LOAD REQUIREMENTS. ALL DIMENSIONS ARE SHOWN FROM FINISHED SURFACES TO THE CENTERLINE OF THE ROUGH-IN LOCATION UNLESS OTHERWISE NOTED.
4. UNLESS OTHERWISE NOTED, ALL ELECTRICAL WORK FOR FABRICATED FOODSERVICE EQUIPMENT SHALL BE COMPLETELY WIRED BY KITCHEN EQUIPMENT DIVISION TO A JUNCTION BOX OR PULL BOX MOUNTED ON THE EQUIPMENT IN AN ACCESSIBLE LOCATION. FINAL CONNECTIONS TO PANEL BOARDS TO BE THE RESPONSIBILITY OF THE E.C.
5. FINAL CONNECTIONS TO ALL EQUIPMENT AND ALL REQUIRED MATERIALS TO BE THE RESPONSIBILITY OF THE E.C.
6. E.C. TO FURNISH AND INSTALL THE FOLLOWING:
   A. ALL JUNCTION BOXES, ELECTRICAL OUTLETS, COVER PLATES, ETC., NOT BUILT INTO FIXTURES OR EQUIPMENT. ALL OUTLETS, JUNCTION BOXES, COVER PLATES, ETC., IN DISHROOMS, OR AS INDICATED ON SCHEDULES, MUST BE VAPOR-PROOF.
   B. SHUNT TRIP CIRCUIT BREAKERS/CONTACTORS OR DISCONNECTS FOR FIRE CONTROL SYSTEM SHUT-OFF OF FOODSERVICE EQUIPMENT BELOW HOODS/VENTILATORS AS REQUIRED BY N.F.P.A.-96 AND LOCAL CODES.
   C. DISCONNECTS OR OTHER DEVICES AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES.
7. WHEN APPLICABLE, E.C. TO INSTALL F.S.E.C.-PROVIDED ELECTRICAL COMPONENTS, PROVIDE ALL CONDUIT AND WIRING, AND INTERCONNECT BETWEEN THE FOLLOWING:
   A. REMOTE REFRIGERATION EQUIPMENT TO EVAPORATOR COILS.
   B. CONTROL PANELS TO WATER-TYPE VENTILATORS AND EXHAUST OR SUPPLY FANS PER MANUFACTURER'S SPECIFICATIONS.
   C. KITCHEN EXHAUST HOODS/VENTILATORS TO FIRE CONTROL SYSTEM AND SHUT-OFFS.
8. ALL ELECTRICAL AMPERAGE NOTED ON ROUGH-IN SCHEDULE INDICATES FULL LOAD AMP DRAW -- NOT RECOMMENDED CIRCUIT BREAKER SIZE. E.C. IS RESPONSIBLE FOR PROPER BREAKER SIZING WITH THIS INFORMATION.
9. PEDESTAL RECEPTACLES ARE NOT TO EXCEED 4-1/2" AFF.
10. E.C. TO FURNISH AND INSTALL GROUND FAULT RECEPTACLE OR FURNISH GROUND FAULT CIRCUIT BREAKER FOR ANY RECEPTACLE WITHIN FIVE FEET (5'-0") OF SINK.

## ABBREVIATIONS

| ABBREV. | DESCRIPTION |
|---|---|
| ADD'L | ADDITIONAL |
| AFC | ABOVE FINISHED CEILING |
| AFF | ABOVE FINISHED FLOOR |
| AMP | AMPERAGE |
| BFC | BELOW FINISHED CEILING |
| BTC | BRANCH TO CONNECTION |
| BTU | BRITISH THERMAL UNIT |
| CFM | CUBIC FEET PER MINUTE |
| CW | COLD WATER |
| CWR | CHILLED WATER RETURN |
| CWS | CHILLED WATER SUPPLY |
| DFA | DROP SERVICE FROM ABOVE |
| E.C. | ELECTRICAL CONTRACTOR |
| °F | DEGREES FAHRENHEIT |
| FD | FLOOR DRAIN |
| FFD | FUNNEL FLOOR DRAIN |
| FLA | FULL LOAD AMPS |
| FLUSH | MOUNT ITEM FLUSH WITH SURFACE |
| FS | FLOOR SINK |
| F.S.E.C. | FOODSERVICE EQUIPMENT CONTRACTOR |
| FT | FLOOR TROUGH |
| GA. | GAUGE |
| G.C. | GENERAL CONTRACTOR |
| GFI | GROUND FAULT INTERRUPTER |
| GHT | GARDEN HOSE THREAD |
| GPM | GALLONS PER MINUTE |
| HD | HUB DRAIN |
| HGT. | HEIGHT |
| HP | HORSEPOWER |
| HR | HOUR |
| H.V.A.C. | HEATING, VENTILATION AND AIR CONDITIONING |
| HW | HOT WATER |
| in. | INCH |
| kW | KILOWATT |
| MBTU | 1,000 BTU |
| M.C. | MECHANICAL CONTRACTOR |
| MTD | MOUNTED |
| N.I.F.S.E.C. | NOT IN FOODSERVICE EQUIPMENT CONTRACT |
| NPT | NATIONAL PIPE THREAD |
| P.C. | PLUMBING CONTRACTOR |
| PED | PEDESTAL-MOUNTED |
| PH | PHASE |
| R.C. | ROOFING CONTRACTOR |
| RECP. | RECEPTACLE |
| REQ'MTS | REQUIREMENTS |
| S.C. | STRUCTURAL CONTRACTOR |
| S/S | STAINLESS STEEL |
| STUB-UP | STUB SERVICE UP FROM FINISHED FLOOR |

**NOTE**:
EXISTING AND/OR EQUIPMENT PROVIDED BY OTHERS MAY REQUIRE ADDITIONAL ROUGH-INS NOT SHOWN IN THESE PLANS. CONFIRM UTILITY REQUIREMENTS WITH PROVIDER.

**NOTE**:
ELECTRICAL SERVICE SHOWN IS FOR FOODSERVICE EQUIPMENT ONLY. ELECTRICAL SERVICE REQUIRED FOR ROOM LIGHTING, CONVENIENCE OUTLETS, DATA PORTS, TELEPHONE LINES, ETC., TO BE ADDITIONAL. CONFIRM WITH ARCHITECT.

**NOTE**:
P.C. TO SET AND LEVEL ALL SINKS AND TABLE, FASTEN TO THE WALL WITH SUPPLIED Z-CLIPS AND CAULK TOP EDGES

**NOTE**:
E.C. TO INSTALL HEAT LAMPS TO THE BOTTOM OF TOP SHELF AS SHOWN IN KITCHEN EQUIPMENT PLANS, AND MOUNT CONTROLS AS SHOWN ON ELEVATION PLAN.

## ELECTRICAL SCHEDULE

| ITEM NO. | QTY. | ITEM DESCRIPTION | ITEM REMARKS | ELECT. NO. | AMPS | WATTS | HP | VOLTS | PHASE | CONN TYPE | PLUG TYPE | ELECT. HGT. (AFF) | ELECTRICAL REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | S/S WORK TABLE | | E1 | 20.0 | | | 120V | 1 | CORD & PLUG | NEMA 6-20P | | E.C. TO DROP SPECIAL PURPOSE RECEPTACLE DOWN FROM ABOVE. |
| 1A | 1 | S/S WORK TABLE | | E1A | 20.0 | | | 120V | 10 | CORD & PLUG | NEMA 6-20P | | E.C. TO DROP SPECIAL PURPOSE RECEPTACLE DOWN FROM ABOVE. |
| 2 | 1 | BULK CO2 TANK | BY OTHERS | E2 | 15.0 | | | 120V | 1 | CORD & PLUG | NEMA 5-15P | 48" | E.C. TO PROVIDE DUPLEX RECEPTACLE. CONFIRM UTILITIES W/PROVIDER |
| 3 | 1 | PORTABLE OIL FILTER | BY OTHERS | E3 | 9.0 | | | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. CONFIRM UTILITIES W/PROVIDER |
| 5 | 1 | BAG-IN-BOX SYSTEM | BY OTHERS | E5 | 15.0 | | | 120V | 1 | CORD & PLUG | NEMA 5-15P | 60" | E.C. TO PROVIDE DUPLEX RECEPTACLE. CONFIRM UTILITIES W/PROVIDER |
| 6 | 1 | 36" HD RANGE, GAS | | E6 | 3.4 | | | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 8 | 2 | RTI OIL SYSTEM | BY OTHERS | E8 | | | | | | | | | CONFIRM UTILITIES W/PROVIDER |
| 11 | 1 | WALK-IN COMBO | | E11 | 10.0 | | | 120V | 1 | DIRECT | | | LIGHTS, HEATERS, AND CONTROLS. E.C. TO CONNECT TO FINAL LOCATION. E.C. TO REFERENCE APPROVED SHOP DRAWINGS FOR ADDITONAL INFORMATION. |
| 18 | 1 | FOOD PROCESSOR | | E18 | 12.0 | | 1 1/2 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 48" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 18.1 | 1 | IMMERSION HAND MIXER | | E18.1 | 10.0 | | 1 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 48" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 19 | 1 | MEAT SLICER | | E19 | 1.4 | | 1/2 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 48" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 26 | 1 | EXHAUST HOOD SYSTEM | | E26 | 15.0 | | | 120V | 1 | DIRECT | | | LIGHTING AND CONTROLS. E.C. TO CONNECT TO FINAL LOCATION. E.C. TO REFERENCE APPROVED SHOP DRAWINGS FOR ADDITIONAL INFORMATION. |
| 26.1 | 1 | EXHAUST FAN | | E26.1 | 8.3 | | 2 | 208V | 3 | DIRECT | | | REMOTE FAN LOCATION. E.C. TO REFERENCE APPROVED SHOP DRAWINGS FOR ADDITIONAL INFORMATION. |
| 26.2 | 1 | EXHAUST FAN | | E26.2 | 10.2 | | 3 | 208V | 3 | DIRECT | | | REMOTE FAN LOCATION. E.C. TO REFERENCE APPROVED SHOP DRAWINGS FOR ADDITIONAL INFORMATION. |
| 26.3 | 1 | DOAS UNIT | | E26.3 | 80.0 | | 5 | 208V | 3 | DIRECT | | | REMOTE DOAS LOCATION. E.C. TO REFERENCE APPROVED SHOP DRAWINGS FOR ADDITIONAL INFORMATION. |
| 31 | 1 | REFRIGERATED EQUIPMENT STAND | | E31 | 6.0 | | 1/4 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 33 | 1 | REFRIGERATED EQUIPMENT STAND | | E33 | 6.0 | | 1/4 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 34 | 1 | BATTERY FRYER, GAS | | E34 | 12.0 | | | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 35 | 1 | REACH-IN UNDERCOUNTER FREEZER | | E35 | 1.8 | | 1/5 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 36 | 1 | ICE MAKER | | E36 | 11.0 | | | 208/240V | 1 | DIRECT | | 60" | E.C. TO CONNECT TO FINAL LOCATION. |
| 36.2 | 1 | REMOTE CONDENSER | | E36.2 | 1.0 | | | 208/240V | 1 | DIRECT | | | REMOTE CONDENSER LOCATION. E.C. TO CONNECT TO FINAL LOCATION. |
| 37 | 1 | REFRIGERATED PREP TABLE | | E37 | 5.8 | | 1/4 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 38 | 1 | REFRIGERATED PREP TABLE | | E38 | 6.0 | | 1/3 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 39 | 1 | HOT FOOD SERVING COUNTER | | E39 | 12.5 | 2,600 | | 208V | 1 | CORD & PLUG | NEMA 6-20P | 20" | E.C. TO PROVIDE SPECIAL PURPOSE RECEPTACLE. |
| 41 | 1 | REFRIGERATED WORK TOP | | E41 | 2.3 | | 1/7 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 43 | 1 | MEGA TOP PREP REFRIGERATOR | | E43 | 2.8 | | 1/5 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 44 | 1 | HEAT LAMP | | E44 | 13.3 | 1,600 | | 120V | 1 | DIRECT | | 56" | E.C. TO PROVIDE ELECTRICAL SERVICE FOR CONTROL BOX AND CONNECT TO FINAL LOCATION. E.C. TO REFERENCE ELEVATION DRAWINGS FOR ADDITIONAL INFORMATION. |
| 45 | 1 | REFRIGERATED WORK TOP | | E45 | 2.5 | | 1/5 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 46 | 1 | PANINI GRILL | | E46 | 15.0 | 3,200 | | 240V | 1 | CORD & PLUG | NEMA 6-15P | 42" | E.C. TO PROVIDE SPECIAL PURPOSE RECEPTACLE. |
| 48 | 2 | HEAT LAMP | | E48 | 23.3 | 2,800 | | 120V | 1 | DIRECT | | 56" | E.C. TO PROVIDE ELECTRICAL SERVICE FOR CONTROL BOX AND CONNECT TO FINAL LOCATION. E.C. TO REFERENCE ELEVATION DRAWINGS FOR ADDITIONAL INFORMATION. |
| 50 | 1 | REFRIGERATED WORK TOP | | E50 | 2.0 | | 1/6 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 52 | 1 | FOOD PAN WARMER | | E52 | 8.3 | 1,000 | | 120V | 1 | CORD & PLUG | NEMA 5-15P | 42" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 58 | 1 | MULTI-COOK OVEN | BY OTHERS | E58 | 25.0 | 10,300 | | 208/240V | 3 | CORD & PLUG | NEMA 15-30P | 48" | E.C. TO PROVIDE SPECIAL PURPOSE RECEPTACLE. CONFIRM UTILITIES W/PROVIDER. |
| 60 | 1 | UNDERCOUNTER REFRIGERATOR | | E60 | 2.3 | | | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |
| 64 | 1 | ICE/BEVERAGE DISPENSER | BY OTHERS | E64 | 2.4 | | | 120V | 1 | CORD & PLUG | NEMA 5-15P | 60" | E.C. TO PROVIDE DUPLEX RECEPTACLE. CONFIRM UTILITES W/PROVIDER. |
| 67.1 | 1 | CONDENSATE EXAUST FAN | | E67.1 | 4.3 | | 1/3 | 120V | 1 | DIRECT | | | REMOTE FAN LOCATION. E.C. TO REFERENCE APPROVED SHOP DRAWINGS FOR ADDITIONAL INFORMATION. |
| 68 | 1 | WAREWASHER, RACK CONVEYOR | BY OTHERS | E68 | 111.3 | 45,300 | 3.9 | 208V | 3 | DIRECT | | 20" | E.C. TO CONNECT TO FINAL LOCATION. E.C. TO PROVIDE ELECTRICAL SERVICE FOR BOOSTER HEATER. CONFIRM UTILITIES W/PROVIDER. |
| 80 | 1 | UNDERCOUNTER GLASSWASHER | BY OTHERS | E80 | 3.5 | | | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. CONFIRM UTILITIES W/PROVIDER |
| 88 | 1 | REFRIGERATED BACK BAR CABINET | | E88 | 7.0 | | 1/4 | 120V | 1 | CORD & PLUG | NEMA 5-15P | 20" | E.C. TO PROVIDE DUPLEX RECEPTACLE. |

## PLUMBING SCHEDULE

| | | | | | SUPPLY | | | WASTE | | | | GAS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM NO. | QTY. | ITEM DESCRIPTION | ITEM REMARKS | PLUMB. NO. | CW SIZE | HW SIZE | PLUMB. HGT. (AFF) | DIRECT WASTE SIZE | DIRECT WASTE HGT. (AFF) | INDIRECT WASTE SIZE | INDIRECT CONN TYPE | MECH. NO. | GAS SIZE | BTU/HR | GAS HGT. (AFF) | PLUMBING REMARKS |
| 5 | 1 | BAG-IN-BOX SYSTEM | BY OTHERS | P5 | 1/2" | | 60" | | | 1" | FD | | | | | P.C. TO CONNECT C.W. SUPPLY AND CONNECT TO FINAL LOCATION. P.C. TO EXTEND DRAIN LINES TO FLOOR DRAIN. |
| 6 | 1 | 36" HD RANGE, GAS | | | | | | | | | | G6 | 3/4" | 198,000 | 12" | P.C. TO CONNECT UNIT W/PROVIDED QUICK DISCONNECT HOSE. |
| 10 | 5 | HAND SINK | | P10 | 1/2" | 1/2" | 20" | 1 1/2" | 16" | | | | | | | P.C. TO CONNECT C.W. AND H.W. SUPPLY LINES AND CONNECT TO FINAL LOCATION. P.C. TO CONNECT DIRECT DRAIN. |
| 13 | 1 | TWO (2) COMPARTMENT SINK | | P13 | 1/2" | 1/2" | 20" | | | 2" | FS | | | | | P.C. TO CONNECT C.W. AND H.W. SUPPLY LINES AND CONNECT TO FINAL LOCATION. P.C. TO MANIFOLD TWO (2) DRAIN LINES AND EXTEND TO FLOOR SINK. |
| 14 | 1 | MOP SINK | | P14 | 1/2" | 1/2" | 36" | 3 1/2" | 0" | | | | | | | P.C. TO CONNECT C.W. AND H.W. SUPPLY LINES AND CONNECT TO FINAL LOCATION. P.C. TO CONNECT DIRECT DRAIN. |
| 25 | 1 | CHARBOILER, GAS | | | | | | | | | | G25 | 3/4" | 45,000 | 12" | P.C. TO CONNECT UNIT W/PROVIDED QUICK DISCONNECT HOSE. |
| 26.3 | 1 | DOAS UNIT | | | | | | | | | | G26.3 | 3/4" | 300,000 | | REMOTE DOAS LOCATION. P.C. TO REFERENCE APPROVED SHOP DRAWINGS FOR ADDITIONAL INFORMATION. |
| 28 | 1 | GRIDDLE, GAS | | | | | | | | | | G28 | 3/4" | 162,000 | 12" | P.C. TO CONNECT UNIT W/PROVIDED QUICK DISCONNECT HOSE. |
| 30 | 1 | HOTPLATE, GAS | | | | | | | | | | G30 | 3/4" | 240,000 | 12" | P.C. TO CONNECT UNIT W/PROVIDED QUICK DISCONNECT HOSE. |
| 32 | 1 | CHEESEMELTER, GAS | | | | | | | | | | G32 | 3/4" | | | P.C. TO CONNECT TO UNIT VIA UNION. |
| 34 | 1 | BATTERY FRYER, GAS | | | | | | | | | | G34 | 1" | 255,000 | 12" | P.C. TO CONNECT UNIT W/PROVIDED QUICK DISCONNECT HOSE. |
| 36 | 1 | ICE MAKER | | P36 | 3/8" | | 60" | | | 1" | FD | | | | | P.C. TO CONNECT C.W. SUPPLY LINE AND RUN TO AND THRU WATER FILTER SYSTEM ADD CONNECT TO FINAL LOCATION. P.C. TO EXTEND DRAIN LINES TO FLOOR DRAIN. |
| 36.3 | 1 | FLOOR TROUGH | BY OTHERS | P36.3 | | | | 4" | 0" | | | | | | | P.C. TO CONFIRM UTILITIES W/PROVIDER |
| 39 | 1 | HOT FOOD SERVING COUNTER | | | | | | | | 1" | FD | | | | | P.C. TO EXTEND DRAIN LINES TO FLOOR DRAIN. |
| 49 | 1 | S/S WORK TABLE | | | | | | | | 1" | FD | | | | | P.C. TO EXTEND DRAIN LINES TO FLOOR DRAIN. |
| 64 | 1 | ICE/BEVERAGE DISPENSER | BY OTHERS | P64 | 1/2" | | 48" | | | 1" | FD | | | | | P.C. TO CONNECT C.W. SUPPLY LINE AND RUN TO AND THRU WATER FILTER SYSTEM AND CONNECT TO FINAL LOCATION. P.C. TO EXTEND DRAIN LINES TO FLOOR DRAIN. CONFIRM UTILITIES W/PROVIDER. |
| 66 | 1 | SOILED DISHTABLE, "L" SHAPE | | P66 | 1/2" | 1/2" | 20" | | | 2" | FS | | | | | P.C. TO CONNECT C.W. AND H.W. SUPPLY LINES AND CONNECT TO FINAL LOCATION. P.C. TO EXTEND DRAIN LINES TO FLOOR SINK. |
| 68 | 1 | WAREWASHER, RACK CONVEYOR | BY OTHERS | P68 | | 3/4" | 20" | | | 2" | FS | | | | | P.C. TO CONNECT H.W. SUPPLY LINE AND RUN TO AND THRU WATER BOOSTER HEATER AND CONNECT TO FINAL LOCATION. P.C. TO EXTEND DRAIN LINE TO FLOOR SINK. CONFIRM UTILITIES W/PROVIDER. |
| 68A | 1 | FLOOR TROUGH | BY OTHERS | P68A | | | | 4" | 0" | | | | | | | P.C. TO CONFIRM UTILITIES W/PROVIDER |
| 73 | 1 | THREE (3) COMPARTMENT SINK | | P73 | 1/2" | 1/2" | 20" | | | 2" | FS | | | | | P.C. TO CONNECT C.W. AND H.W. SUPPLY LINES AND CONNECT TO FAUCET. P.C. TO MANIFOLD THREE (3) DRAIN LINES AND EXTEND TO FLOOR SINK. |
| 80 | 1 | UNDERCOUNTER GLASSWASHER | BY OTHERS | P80 | 1/2" | 1/2" | 10" | | | 2" | FS | | | | | P.C. TO CONNECT C.W. AND H.W. SUPPLY LINES AND CONNECT TO FINAL LOCATION. P.C. TO EXTEND DRAIN LINES TO FLOOR SINK. CONFIRM UTILITIES W/PROVIDER. |
| 81 | 1 | WET WASTE SINK | | P81 | 1/2" | 1/2" | 10" | 1 1/2" | 6" | | | | | | | P.C. TO CONNECT C.W. AND H.W. SUPPLY LINES AND CONNECT TO FINAL LOCATION. P.C. TO CONNECT DIRECT DRAIN. |
| 82 | 1 | DRAINBOARD | | | | | | | | 2" | FS | | | | | P.C. TO EXTEND DRAIN LINES TO FLOOR SINK. |
| 82.2 | 1 | DRAINBOARD | | | | | | | | 2" | FS | | | | | P.C. TO EXTEND DRAIN LINES TO FLOOR SINK. |
| 85 | 2 | DRAINBOARD | | | | | | | | 2" | FS | | | | | P.C. TO EXTEND DRAIN LINES TO FLOOR SINK. |
| 86 | 4 | DRAINBOARD | | | | | | | | 2" | FS | | | | | P.C. TO EXTEND DRAIN LINES TO FLOOR SINK. |
| 87 | 2 | ICE BIN | BY OTHERS | | | | | | | 2" | FS | | | | | P.C. TO EXTEND DRAIN LINES TO FLOOR SINK. CONFIRM UTILITIES W/PROVIDER |
| 90 | 2 | UNDERBAR SINK UNIT | | P90 | 1" | 3/8" | 10" | | | 2" | FS | | | | | P.C. TO CONNECT C.W. AND H.W. SUPPLY LINES AND BRANCH TO CONNECT TO FINAL LOCATIONS. P.C. TO EXTEND DRAIN LINES TO FLOOR SINK. |
| 91 | 2 | DRIP TROUGH | BY OTHERS | | | | | | | 2" | FS | | | | | P.C. TO EXTEND DRAIN LINES TO FLOOR SINK. CONFIRM UTILITIES W/PROVIDER |

## PLUMBING NOTES

1. ROUGH-INS SHOWN PERTAIN TO AND ARE FOR FOODSERVICE FIXTURES AND EQUIPMENT ONLY. SEE ARCHITECTURAL AND/OR ENGINEERING PLANS FOR ADDITIONAL PLUMBING REQUIREMENTS.
2. THIS PLUMBING PLAN IS INTENDED TO SHOW ROUGH-IN LOCATIONS, HEIGHTS AND LOAD REQUIREMENTS. ALL DIMENSIONS SHOWN ARE FROM FINISHED SURFACES TO THE CENTERLINE OF THE ROUGH-IN LOCATION, UNLESS OTHERWISE NOTED.
3. FINAL CONNECTIONS TO ALL EQUIPMENT TO BE PERFORMED BY P.C., INCLUDING ALL REQUIRED MATERIALS SUCH AS STOPS, VALVES, FILTERS, TRAPS, CHECK VALVES, PIPING, TUBING, PRESSURE REGULATING VALVES, ET AL.
4. P.C. TO FURNISH AND INSTALL THE FOLLOWING:
   A. ALL WATER, WASTE, GAS, AND STEAM SERVICE TO POINT OF ROUGH-IN AS SHOWN ON PLAN. ROUGH-IN OUTLETS TO STUB 4 in. OUT OF WALLS AT HEIGHT INDICATED FROM FINISHED FLOOR TO CENTERLINE OF OUTLET. FLOOR ROUGH-INS TO STUB UP 4 in. ABOVE FINISHED FLOOR OR CURB. ALL FLOOR OPENINGS ARE TO BE SEALED WATER-TIGHT.
   B. PRESSURE REDUCING AND/OR REGULATION VALVES FOR DISH-WASHERS, BOOSTER HEATERS, AND AS OTHERWISE NOTED IN KITCHEN AREA.
   C. ALL FLOOR SINKS, COMPLETE WITH TOP GRATES INDICATED AND REMOVABLE SEDIMENT BUCKETS, SET FLUSH WITH FINISHED FLOOR (UNLESS OTHERWISE NOTED).
   D. ALL WASTE LINES (DIRECT OR INDIRECT) EXCEPT AS NOTED. MINIMUM DIAMETER OF LINE SHALL BE AS INDICATED ON PLAN REGARDLESS OF CONNECTION SIZE, AND SHALL BE PITCHED DOWNWARD. MAINTAIN DRAINS AS HIGH AS POSSIBLE ABOVE FLOOR. ALL WASTE LINES SHALL HAVE ADEQUATE CLEAN-OUT PROVISIONS.
   E. INDIRECT WASTE LINES FOR WALK-IN COOLERS/FREEZERS TO BE PITCHED AT 4 in./12 ft. (MINIMUM) AND WITH A "P"-TRAP AT THE END OF THE RUN ABOVE THE FLOOR DRAIN.
   F. HEATER TAPE RATED AT 36 WATTS PER LINEAL FOOT OF DRAIN LINE AS WELL AS INSULATION OF ALL DRAIN LINES INSIDE FREEZER COMPARTMENTS.
   G. ALL REQUIRED GREASE TRAPS BELOW OR FLUSH WITH FLOOR.
   H. WHEN GAS COOKING EQUIPMENT IS USED, INSTALL FIRE CONTROL GAS SHUT-OFF VALVE(S) AS SUPPLIED BY FIRE SUPPRESSION SYSTEM CONTRACTOR.
   I. VACUUM BREAKERS AS REQUIRED AS WELL AS INSTALLATION OF THOSE PROVIDED BY K.E.C. FOR USE WITH DISPOSERS.
   J. INSULATION ON ALL STEAM, HOT WATER, AND CONDENSATE LINES IN THE KITCHEN AREA. ALL SUCH LINES ARE TO BE COLOR-CODED ACCORDING TO LOCAL CODES.
5. ALL VENT PIPES TO BE CONCEALED IN WALLS OR COLUMN CHASES. USE LOOP VENTS FOR ISLAND FIXTURES.
6. ALL EXPOSED PIPING AND FITTINGS IN THE KITCHEN AREA TO BE CHROME-PLATED OR STAINLESS STEEL.
7. ALL LINES ROUTED THROUGH EQUIPMENT SHALL NOT INTERFERE WITH INTENDED USE OR SERVICING OF EQUIPMENT.
8. AREA FLOOR DRAINS HAVE NOT BEEN SHOWN OR NOTED. QUANTITIES AND LOCATIONS TO BE COORDINATED WITH G.C.


A SYMBOL OF QUALITY AND CUSTOMER SATISFACTION — SINCE 1971

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DESIGN & SALES TO ALL TYPES OF FOOD SERVICE OPERATIONS

PROJECT MANAGER: JACK GRABEEL
EMAIL ADDRESS: JGRABEEL@c-tdesign.com



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# 30 HOP
**LEE'S SUMMIT, MO**

ISSUE DATE:

| Rev. | Date | Description |
|---|---|---|

PROJECT No: 2024-064
DRAWN BY: Author
SHEET SCALE: 12" = 1'-0"
SHEET TITLE: UTILITY SCHEDULE
SHEET NUMBER: E1-K1.1

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# ELECTRICAL NOTES

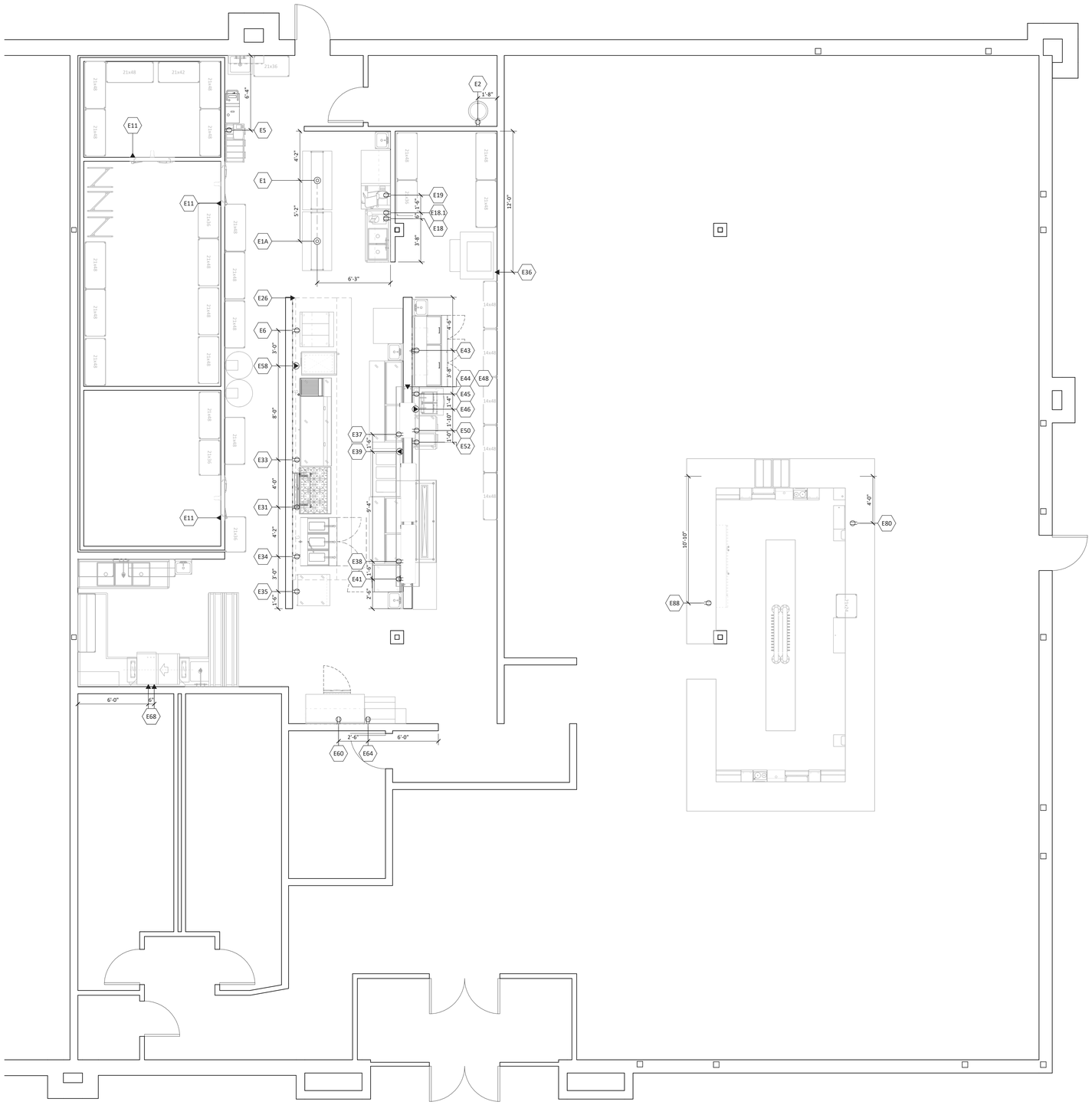
1. ELECTRICAL SYSTEM IS DESIGNED FOR 240 VOLTS, 3-PHASE, 4 WIRE AT 60 HERTZ.
2. OUTLETS AND ROUGH-INS SHOWN PERTAIN TO AND ARE FOR FOOD-SERVICE FIXTURES AND EQUIPMENT ONLY. SEE ARCHITECTURAL AND/OR ENGINEERING PLANS FOR ANY ADDITIONAL ROUGH-IN REQUIREMENTS.
3. THIS ELECTRICAL PLAN IS INTENDED TO SHOW ROUGH-IN LOCATIONS AND LOAD REQUIREMENTS. ALL DIMENSIONS ARE SHOWN FROM FINISHED SURFACES TO THE CENTERLINE OF THE ROUGH-IN LOCATION UNLESS OTHERWISE NOTED.
4. UNLESS OTHERWISE NOTED, ALL ELECTRICAL WORK FOR FABRICATED FOODSERVICE EQUIPMENT SHALL BE COMPLETELY WIRED BY KITCHEN EQUIPMENT DIVISION TO A JUNCTION BOX OR PULL BOX MOUNTED ON THE EQUIPMENT IN AN ACCESSIBLE LOCATION. FINAL CONNECTIONS TO PANEL BOARDS TO BE THE RESPONSIBILITY OF THE E.C.
5. FINAL CONNECTIONS TO ALL EQUIPMENT AND ALL REQUIRED MATERIALS TO BE THE RESPONSIBILITY OF THE E.C.
6. E.C. TO FURNISH AND INSTALL THE FOLLOWING:
   - A. ALL JUNCTION BOXES, ELECTRICAL OUTLETS, COVER PLATES, ETC., NOT BUILT INTO FIXTURES OR EQUIPMENT. ALL OUTLETS, JUNCTION BOXES, COVER PLATES, ETC., IN DISHROOMS, OR AS INDICATED ON SCHEDULES, MUST BE VAPOR-PROOF.
   - B. SHUNT TRIP CIRCUIT BREAKERS/CONTACTORS OR DISCONNECTS FOR FIRE CONTROL SYSTEM SHUT-OFF OF FOODSERVICE EQUIPMENT BELOW HOODS/VENTILATORS AS REQUIRED BY N.F.P.A.-96 AND LOCAL CODES.
   - C. DISCONNECTS OR OTHER DEVICES AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES.
7. WHEN APPLICABLE, E.C. TO INSTALL F.S.E.C.-PROVIDED ELECTRICAL COMPONENTS, PROVIDE ALL CONDUIT AND WIRING, AND INTERCONNECT BETWEEN THE FOLLOWING:
   - A. REMOTE REFRIGERATION EQUIPMENT TO EVAPORATOR COILS.
   - B. CONTROL PANELS TO WATER-TYPE VENTILATORS AND EXHAUST OR SUPPLY FANS PER MANUFACTURER'S SPECIFICATIONS.
   - C. KITCHEN EXHAUST HOODS/VENTILATORS TO FIRE CONTROL SYSTEM AND SHUT-OFFS.
8. ALL ELECTRICAL AMPERAGE NOTED ON ROUGH-IN SCHEDULE INDICATES FULL LOAD AMP DRAW -- NOT RECOMMENDED CIRCUIT BREAKER SIZE. E.C. IS RESPONSIBLE FOR PROPER BREAKER SIZING WITH THIS INFORMATION.
9. PEDESTAL RECEPTACLES ARE NOT TO EXCEED 4-1/2" AFF.
10. E.C. TO FURNISH AND INSTALL GROUND FAULT RECEPTACLE OR FURNISH GROUND FAULT CIRCUIT BREAKER FOR ANY RECEPTACLE WITHIN FIVE FEET (5'-0") OF SINK.

# ABBREVIATIONS

| ABBREV. | DESCRIPTION |
|---|---|
| ADD'L | ADDITIONAL |
| AFC | ABOVE FINISHED CEILING |
| AFF | ABOVE FINISHED FLOOR |
| AMP | AMPERAGE |
| BFC | BELOW FINISHED CEILING |
| BTC | BRANCH TO CONNECTION |
| BTU | BRITISH THERMAL UNIT |
| CFM | CUBIC FEET PER MINUTE |
| CW | COLD WATER |
| CWR | CHILLED WATER RETURN |
| CWS | CHILLED WATER SUPPLY |
| DFA | DROP SERVICE FROM ABOVE |
| E.C. | ELECTRICAL CONTRACTOR |
| °F | DEGREES FAHRENHEIT |
| FD | FLOOR DRAIN |
| FFD | FUNNEL FLOOR DRAIN |
| FLA | FULL LOAD AMPS |
| FLUSH | MOUNT ITEM FLUSH WITH SURFACE |
| FS | FLOOR SINK |
| F.S.E.C. | FOODSERVICE EQUIPMENT CONTRACTOR |
| FT | FLOOR TROUGH |
| GA. | GAUGE |
| G.C. | GENERAL CONTRACTOR |
| GFI | GROUND FAULT INTERRUPTER |
| GHT | GARDEN HOSE THREAD |
| GPM | GALLONS PER MINUTE |
| HD | HUB DRAIN |
| HGT. | HEIGHT |
| HP | HORSEPOWER |
| HR | HOUR |
| H.V.A.C. | HEATING, VENTILATION AND AIR CONDITIONING |
| HW | HOT WATER |
| in. | INCH |
| kW | KILOWATT |
| MBTU | 1,000 BTU |
| M.C. | MECHANICAL CONTRACTOR |
| MTD | MOUNTED |
| N.I.F.S.E.C. | NOT IN FOODSERVICE EQUIPMENT CONTRACT |
| NPT | NATIONAL PIPE THREAD |
| P.C. | PLUMBING CONTRACTOR |
| PED | PEDESTAL-MOUNTED |
| PH | PHASE |
| R.C. | ROOFING CONTRACTOR |
| RECP. | RECEPTACLE |
| REQ'MTS | REQUIREMENTS |
| S.C. | STRUCTURAL CONTRACTOR |
| S/S | STAINLESS STEEL |
| STUB-UP | STUB SERVICE UP FROM FINISHED FLOOR |

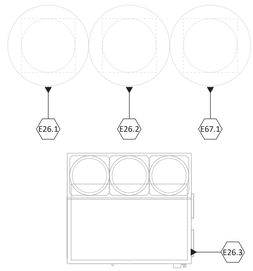
# ELECTRICAL SYMBOLS

| SYMBOL | DESCRIPTION | |
|---|---|---|
| ▲ | POWER SUPPLY | (DIRECT) |
| J | JUNCTION BOX | (DIRECT) |
| | SIMPLEX RECEPTACLE | |
| | DUPLEX RECEPTACLE | |
| | QUADRAPLEX RECEPTACLE | |
| | SPECIAL PURPOSE RECEPTACLE | |
| | FLOOR RECEPTACLE | (FLUSH or PEDESTAL) |
| | CEILING RECEPTACLE | (FLUSH or DROP-CORD) |
| △ | EMPTY CONDUIT | |
| h | DISCONNECT SWITCH | |
| F | FIRE PULL STATION | |
| | TELEPHONE or DATA LINE | |




ELECTRICAL ROUGH-IN PLAN
SCALE: 1/4" = 1'-0"

REMOTE MAKE-UP AIR AND EXHAUST FAN LOCATIONS. CONFIRM LOCATION W/ ARCHITECT.




EXHAUST/MAKE-UP AIR -- ELECTRICAL
SCALE: 1/4" = 1'-0"

REMOTE CONDENSERS LOCATION. CONFIRM LOCATION W/ ARCHITECT.

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

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# 30 HOP
## LEE'S SUMMIT, MO

ISSUE DATE:

| Rev. | Date | Description |
|---|---|---|
| | | |

PROJECT No: 2024-064
DRAWN BY: Author
SHEET SCALE: As indicated
SHEET TITLE: ELECTRICAL ROUGH-IN PLAN
SHEET NUMBER: E1-K2.0

# PLUMBING NOTES

1. ROUGH-INS SHOWN PERTAIN TO AND ARE FOR FOODSERVICE FIXTURES AND EQUIPMENT ONLY. SEE ARCHITECTURAL AND/OR ENGINEERING PLANS FOR ADDITIONAL PLUMBING REQUIREMENTS.
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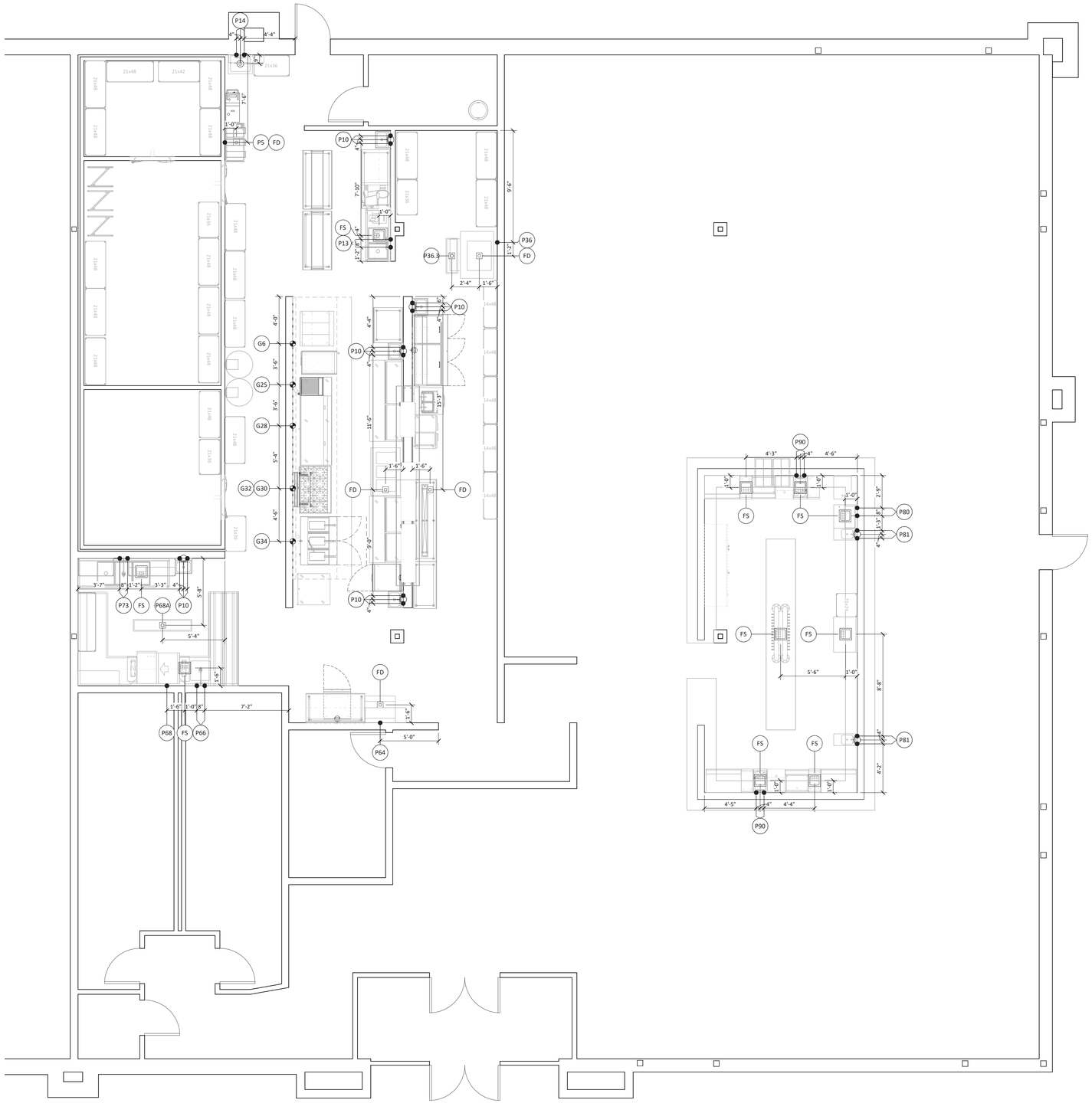
   - B. PRESSURE REDUCING AND/OR REGULATION VALVES FOR DISH-WASHERS, BOOSTER HEATERS, AND AS OTHERWISE NOTED IN KITCHEN AREA.
   - C. ALL FLOOR SINKS, COMPLETE WITH TOP GRATES INDICATED AND REMOVABLE SEDIMENT BUCKETS, SET FLUSH WITH FINISHED FLOOR (UNLESS OTHERWISE NOTED).
   - D. ALL WASTE LINES (DIRECT OR INDIRECT) EXCEPT AS NOTED. MINIMUM DIAMETER OF LINE SHALL BE AS INDICATED ON PLAN REGARDLESS OF CONNECTION SIZE, AND SHALL BE PITCHED DOWNWARD. MAINTAIN DRAINS AS HIGH AS POSSIBLE ABOVE FLOOR. ALL WASTE LINES SHALL HAVE ADEQUATE CLEAN-OUT PROVISIONS.
   - E. INDIRECT WASTE LINES FOR WALK-IN COOLERS/FREEZERS TO BE PITCHED AT 4 in./12 ft. (MINIMUM) AND WITH A "P"-TRAP AT THE END OF THE RUN ABOVE THE FLOOR DRAIN.
   - F. HEATER TAPE RATED AT 36 WATTS PER LINEAL FOOT OF DRAIN LINE AS WELL AS INSULATION OF ALL DRAIN LINES INSIDE FREEZER COMPARTMENTS.
   - G. ALL REQUIRED GREASE TRAPS BELOW OR FLUSH WITH FLOOR.
   - H. WHEN GAS COOKING EQUIPMENT IS USED, INSTALL FIRE CONTROL GAS SHUT-OFF VALVE(S) AS SUPPLIED BY FIRE SUPPRESSION SYSTEM CONTRACTOR.
   - I. VACUUM BREAKERS AS REQUIRED AS WELL AS INSTALLATION OF THOSE PROVIDED BY K.E.C. FOR USE WITH DISPOSERS.
   - J. INSULATION ON ALL STEAM, HOT WATER, AND CONDENSATE LINES IN THE KITCHEN AREA. ALL SUCH LINES ARE TO BE COLOR-CODED ACCORDING TO LOCAL CODES.
5. ALL VENT PIPES TO BE CONCEALED IN WALLS OR COLUMN CHASES. USE LOOP VENTS FOR ISLAND FIXTURES.
6. ALL EXPOSED PIPING AND FITTINGS IN THE KITCHEN AREA TO BE CHROME-PLATED OR STAINLESS STEEL.
7. ALL LINES ROUTED THROUGH EQUIPMENT SHALL NOT INTERFERE WITH INTENDED USE OR SERVICING OF EQUIPMENT.
8. AREA FLOOR DRAINS HAVE NOT BEEN SHOWN OR NOTED. QUANTITIES AND LOCATIONS TO BE COORDINATED WITH G.C.

# ABBREVIATIONS

| ABBREV. | DESCRIPTION |
|---|---|
| ADD'L | ADDITIONAL |
| AFC | ABOVE FINISHED CEILING |
| AFF | ABOVE FINISHED FLOOR |
| AMP | AMPERAGE |
| BFC | BELOW FINISHED CEILING |
| BTC | BRANCH TO CONNECTION |
| BTU | BRITISH THERMAL UNIT |
| CFM | CUBIC FEET PER MINUTE |
| CW | COLD WATER |
| CWR | CHILLED WATER RETURN |
| CWS | CHILLED WATER SUPPLY |
| DFA | DROP SERVICE FROM ABOVE |
| E.C. | ELECTRICAL CONTRACTOR |
| °F | DEGREES FAHRENHEIT |
| FD | FLOOR DRAIN |
| FFD | FUNNEL FLOOR DRAIN |
| FLA | FULL LOAD AMPS |
| FLUSH | MOUNT ITEM FLUSH WITH SURFACE |
| FS | FLOOR SINK |
| F.S.E.C. | FOODSERVICE EQUIPMENT CONTRACTOR |
| FT | FLOOR TROUGH |
| GA. | GAUGE |
| G.C. | GENERAL CONTRACTOR |
| GFI | GROUND FAULT INTERRUPTER |
| GHT | GARDEN HOSE THREAD |
| GPM | GALLONS PER MINUTE |
| HD | HUB DRAIN |
| HGT. | HEIGHT |
| HP | HORSEPOWER |
| HR | HOUR |
| H.V.A.C. | HEATING, VENTILATION AND AIR CONDITIONING |
| HW | HOT WATER |
| in. | INCH |
| kW | KILOWATT |
| MBTU | 1,000 BTU |
| M.C. | MECHANICAL CONTRACTOR |
| MTD | MOUNTED |
| N.I.F.S.E.C. | NOT IN FOODSERVICE EQUIPMENT CONTRACT |
| NPT | NATIONAL PIPE THREAD |
| P.C. | PLUMBING CONTRACTOR |
| PED | PEDESTAL-MOUNTED |
| PH | PHASE |
| R.C. | ROOFING CONTRACTOR |
| RECP. | RECEPTACLE |
| REQ'MTS | REQUIREMENTS |
| S.C. | STRUCTURAL CONTRACTOR |
| S/S | STAINLESS STEEL |
| STUB-UP | STUB SERVICE UP FROM FINISHED FLOOR |

# PLUMBING SYMBOLS

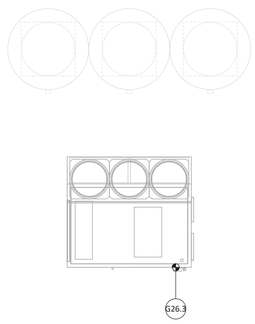
| SYMBOL | DESCRIPTION |
|---|---|
| | WATER SERVICE (HOT or COLD) |
| | WATER SERVICE (FILTERED) |
| | GAS SERVICE |
| | CHILLED WATER (SUPPLY or RETURN) |
| | DIRECT WASTE |
| | STEAM SERVICE (SUPPLY or RETURN) |
| | 8" x 8" FLOOR SINK (SHOWN w/ HALF GRATE) |
| | 12" x 12" FLOOR SINK (SHOWN w/ HALF GRATE) |
| | FLOOR DRAIN |
| | FUNNEL FLOOR DRAIN |
| | HUB DRAIN |
| | BEVERAGE CHASE (SODA or BEER) |




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




REMOTE MAKE-UP AIR AND EXHAUST FAN LOCATIONS. CONFIRM LOCATION W/ ARCHITECT.




EXHAUST/MAKE-UP AIR -- PLUMBING
SCALE: 1/4" = 1'-0"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PROJECT MANAGER: JACK GRABEEL
EMAIL ADDRESS: JGRABEEL@c-tdesign.com



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ISSUE DATE:

| Rev. | Date | Description |
|---|---|---|

PROJECT No: 2024-064
DRAWN BY: Author
SHEET SCALE: As indicated
SHEET TITLE: PLUMBING ROUGH-IN PLAN
SHEET NUMBER: E1-K3.0

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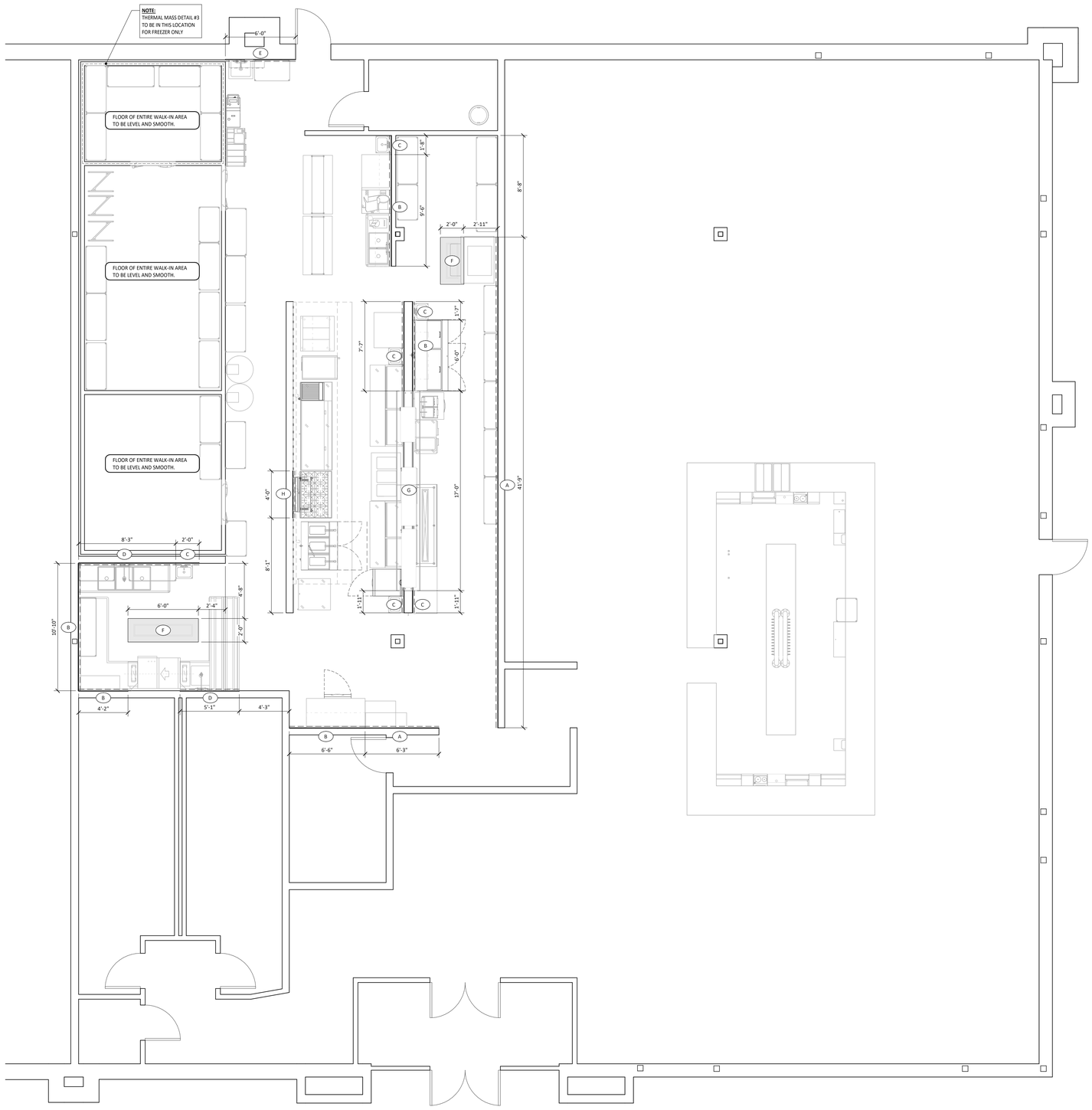
**NOTES**:

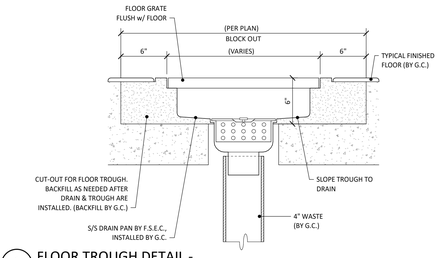
1. WALL BACKING TO BE USED AT ALL LOCATIONS DESIGNATED UNLESS WALL IS COMPOSED OF MASORY BLOCK.
2. WALL BACKING DIMENSIONS ARE FROM FINISHED WALLS UNLESS OTHERWISE NOTED.
3. EXTEND BACKING TO THE NEAREST STUDS.
4. G.C. TO CONFIRM WITH OWNER FOR ANY ADDITIONAL WALL-MOUNTED ITEMS NOT SHOWN.

## SPECIAL CONDITIONS NOTES

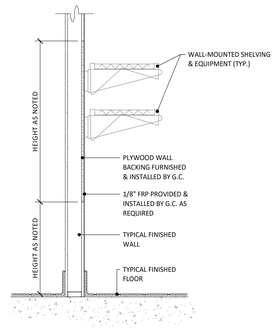
| NOTE ID | DESCRIPTION |
|---|---|
| A | (2 LOCATIONS) G.C. TO PROVIDE ADEQUATE WALL BACKING FROM 36" AFF TO 84" AFF FOR WALL MOUNTED WATER FILTER. |
| B | (5 LOCATIONS) G.C. TO PROVIDE ADEQUATE WALL BACKING FROM 42" AFF TO 84" AFF FOR WALL MOUNTED SHELF. |
| C | (5 LOCATIONS) G.C. TO PROVIDE ADEQUATE WALL BACKING FROM 24" AFF TO 72" AFF FOR WALL MOUNTED HAND SINK. |
| D | (2 LOCATIONS) G.C. TO PROVIDE ADEQUATE WALL BACKING FROM 42" AFF TO 84" AFF FOR PRE-RINSE FAUCET WALL BRACKET. |
| E | G.C. TO PROVIDE ADEQUATE WALL BACKING FROM 12" AFF TO 60" AFF FOR MOP SINK FAUCET WALL BRACKET. |
| F | (2 LOCATIONS) G.C. TO BOX OUT AREA PRIOR TO POURING OF FLOOR FOR INSTALLATION OF FLOOR TROUGH BY F.S.E.C. |
| G | G.C. TO PROVIDE FINISHED OPENING IN WALL FOR PASS-THRU WINDOW. G.C. VERIFY DIMENSIONS OF OPENINGS WITH OWNER. |
| H | G.C. TO PROVIDE ADEQUATE WALL BACKING FROM 36" AFF TO 78" AFF FOR WALL MOUNTED EQUIPMENT. |



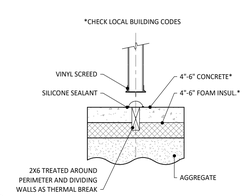

SPECIAL CONDITIONS LAYOUT PLAN
SCALE: 1/4" = 1'-0"




1 FLOOR TROUGH DETAIL -
SCALE: NOT TO SCALE




2 TYPICAL WALL BACKING DETAIL -
SCALE: NOT TO SCALE




3 INSULATED CONCRETE DETAIL -
SCALE: NOT TO SCALE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# 30 HOP
## LEE'S SUMMIT, MO

ISSUE DATE:

| Rev. | Date | Description |
|---|---|---|
| | | |

PROJECT No: 2024-064
DRAWN BY: Author
SHEET SCALE: As indicated
SHEET TITLE: SPECIAL CONDITIONS PLAN
SHEET NUMBER: E1-K4.0

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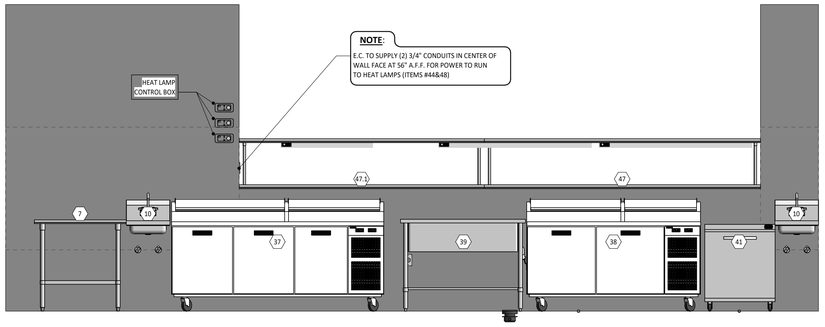
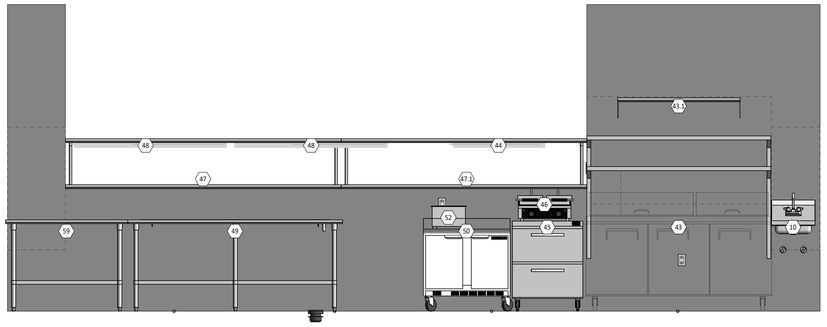
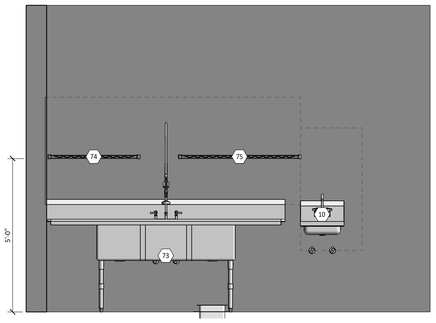


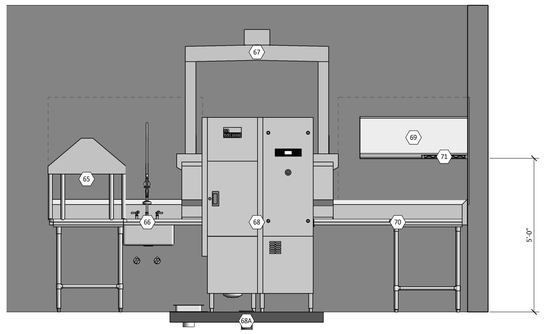

A PASS-THRU -- COOK SIDE
SCALE: 1/2" = 1'-0"



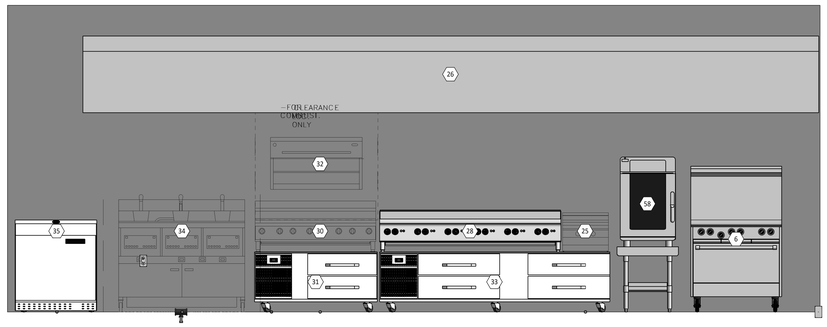

B PASS-THRU -- SERVICE SIDE
SCALE: 1/2" = 1'-0"



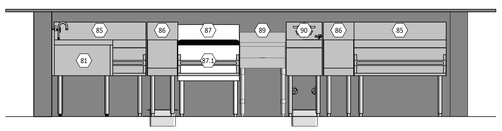

C THREE-COMPARTMENT SINK
SCALE: 1/2" = 1'-0"



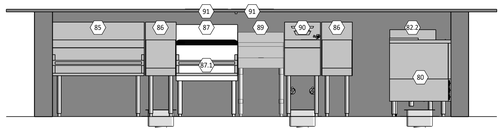

D DISHMACHINE WALL
SCALE: 1/2" = 1'-0"



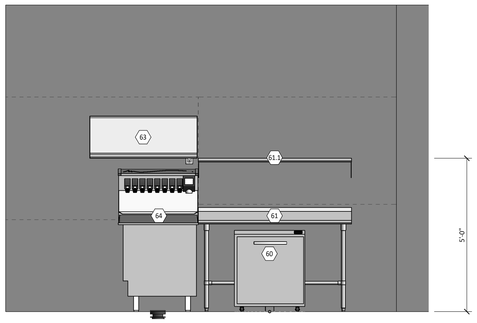

E COOKLINE
SCALE: 1/2" = 1'-0"



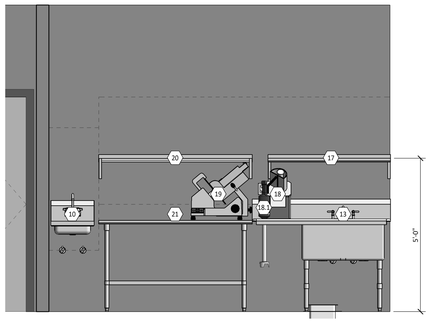

F BACK BAR
SCALE: 1/2" = 1'-0"




G FRONT BAR
SCALE: 1/2" = 1'-0"




H SODA MACHINE WALL
SCALE: 1/2" = 1'-0"




I UTILITIY SINK WALL
SCALE: 1/2" = 1'-0"

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A SYMBOL OF QUALITY AND CUSTOMER SATISFACTION
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# 30 HOP
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ISSUE DATE: 04/26/24

| Rev. | Date | Description |
|---|---|---|
| | | |

PROJECT No: 2024-064
DRAWN BY: Author
SHEET SCALE: As indicated
SHEET TITLE: ELEVATIONS
SHEET NUMBER: E1-K5.0