8601 WEST DODGE ROAD STE. 101

OMAHA, NE.

BHD: Bulkhead EF: Exhaust Fan AB: Anchor Bolt CNTR: Counter EIFS: Exterior Insulation and Finish System FUT: Future BLDG: Building ABV: Above C.O.: Cased Opening F.V.: Field Verify

AC: Acoustical BLK: Block COL: Column ACOUST: Acoustical BLKG: Blocking CON: Construction ACT: Acoustical Tile BLT-IN: Built-In CONC: Concrete COND: Condenser, Conduit BM: Beam AD: Access Door, Area Drain BN: Bullnose CONN: Connection ADA: Americans with Disabilities Act CONST: Construction BOT: Bottom ADD: Addendum: Addition BP: Base Plate CONT: Continuous, Contro ADDL: Additional

BPL: Bearing Plate CONTR: Contractor ADJ: Adjustable, Adjacent BR: Bedroom CORR: Corridor AFF: Above Finished Floor BRDG: Bridge, Bridging CPT: Carpet AIA: American Institute of Architects BRG: Bearing CT: Ceramic Tile ALT: Alternate BRZ: Bronze ALUM: Aluminun

> BUR: Built-up Roof CAB: Cabinet CARP: Carpet CAT: Catalog CER: Ceramic CFL: Counterflashina CG: Corner Guard

BSMT: Basement

CHAM: Chamfer

AMT: Amount

ANCH: Anchor

ANOD: Anodized

ARCH: Architect

ASSY: Assemblu

AUTO: Automatic

AVG: Average

BALL: Ballast

BDRM: Bedroor

BETM: Between

NOT USED

SYMBOL

ROOM NAME

(#)

PULL SIDE

24" preferred

18" minimum/

TAG DESCRIPTION

DOOR NUMBER

COLUMN GRID

ROOM NAME AND

NUMBER

WINDOW FRAME TYPE

TOWEL DISPENSER

SIZE MAY VARY

UNDERSINK PIPE

INSULATION (TYP.)

SCHEDULE FOR ADDITIONAL INFORMATION.

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

 $_{-}$ ONLY WHERE OCCURS

CIVIL ENGINEER

BD: Board

BEL: Below

AT: Acoustical Tile

ASSOC: Association

ASPH: Asphalt

APPROX: Approximate

ATM: Automatic Teller Machine

B & B: Balled and Burlapped

CHAN: Channel CIP: Cast-in-Place CJ: Control Joint CL: Centerline, Clearance CLG: Ceiling CLOS: Closet

CLR: Clear CLR OPG: Clear Opening CMU: Concrete Masonry Unit CNTR: Counter

SYMBOL

lacktriangle

PUSH SIDE

and a latch

12" if door

₋has a closer

EJ: Expansion Joint EL: Elevation, Elevator ELEC: Electrical ELEV: Elevator, Elevation

EPDM: Ethylene Propylene Diene Monomer EQ: Equal EQUIP: Équipment EW: Each Way EMC: Electric Mater Cooler EXIST: Existing

EXP: Expansión, Exposed EXT: Exterior FABR: Fabricate F: File DEPT: Department FD: Floor drain FDN: Foundation DF: Drinking Fountain FE: Fire Extinguisher FEC: Fire Extinquisher Cabinet FF: Finished Floor FFE: Finished Floor Elevation DISP: Disposal, Dispenser

FGR: Fiberalass reinforced FIN: Finish, finished FIXT: Fixture FL: Floor FLASH: Flashina FLR: Floor

FURN: Furnish Furniture

PHONE: 402-491-4144

SYMBOL

VIEW

BABY CHANGING

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

CABINET

(IF USED)

FAMILY

RESTROOM

IN: Inch FLUOR: Fluorescent INFO: Information FR: Frame INSUL: Insulation FT: Foot, Feet INT: Interior FTG: Footing

TAG DESCRIPTION

PLUS / MINUS

DEGREES

SECTION MARKER

PULL SIDE

ELECTRIC HAND

DRYER

(IF USED)

AREA OF

REFUGE

PATHWAY

24" minimum

ABBREVIATIONS JAN: Janitor JST: Joist JT: Joint GA: Gauge GALV: Galvanized KIT: Kitchen GC: General Contractor L: Angle, Length GEN: General, Generator LAB: Laboratory

GL: Glass LAM: Laminate, Laminated GND: Ground LAV: Lavatory GRAN: Granular, Granite LB: Pound (weight, GYP: Gypsum LIBR: Library GYP BD: Gypsum Board LIN: Linear LT: Light LTG: Līghting HB: Hose Bib

MACH: Machine MAINT: Maintenance MAS: Masonr MAT: Materia MATL: Material MAX: Maximum MECH: Mechanica MED: Medium HVAC: Heating, Ventilating & Air Conditioning MET: Metal MEZZ: Mezzanine

MFR: Manufacture, Manufacturer MIN: Minimum MISC: Miscellaneous MLDG: Molding MO: Masonry Openina MTD: Mountéd

MULL: Mullion

NIC: Not In Contract NOM: Nominal NTS: Not To Scale OC: On Center OFF: Office OHD: Overhead Door OPNG: Openina OPP: Opposité ORD: Overflow Roof Drain P. LAM: Plastic Laminate PE: Porcelain Enamel, Professional Enginee PED: Pedestal, Pedestrian PERF: Perforated PERIM: Perimeter

PERP: Perpendicular PKG: Parking PL: Plate, Plan, Plastic Laminate, Plastic PLAS: Plaster, Plastic PLAS LAM: Plastic Laminate PLYWD: Plywood PLUMB: Plumbing PNL: Panel PNT: Paint

POL: Polish, Polished PR: Pair PRE: Prefinished PREFAB: Prefabricated PT: Paint PVC: Polyvinyl Chloride PVMT: Pavement PWR: Power

QTY: Quantity R & S: Rod and Shelf RA: Return Air, Registered Architect RAD: Radius RCP: Reinforced Concrete Pipe RD: Roof Drain REBAR: Reinforcing Bar REC: Receiver RECEPT: Receptacle REFL: Reflected REFR: Refrigerate, Refrigerator REINF: Reinforcement, or Reinforce REQD: Required REV: Reverse RM: Room

RO: Rough Opening ROW: Right of Wal RT: Rubber Tile SAN: Sanitary SC: Solid Core SCHED: Schedule SECT: Section SECY: Secretary SERV: Service SF: Square Foot SHT: Sheet SHEATH: Sheathing SHWR: Shower

SIM: Similar

SPK: Speaker

SHEET

SQ: Savare

UT: Utility VAR: Varies VB: Vapor Barrier, Vinul Base VCT: Vinyl Composition Tile VERT: Vértical SPEC: Specification, Specifications VEST: Vestibule

M1.1 FLOOR PLAN - HVAC

E1.1 ELECTRICAL PLANS

M2.1 FLOOR PLAN - PIPING

M3.1 MECHANICAL DETAILS

M4.1 MECHANICAL SCHEDULES

M5.1 MECHANICAL SPECIFICATIONS

E2.1 ELECTRICAL SPECIFICATIONS

Project Information

Energy Code:

Climate Zone:

Project Type:

Construction Site:

Building Area

Lounge/Leisure]

Envelope Assemblies

1-Dining: Bar Lounge/Leisure: Nonresidential

Roof 1: Attic Roof with Steel Joists, [Bldg. Use 1 - Dining: Bar

Exterior Wall 2: Steel-Framed, 16" o.c., [Bldg. Use 1 - Dining: Bar

Exterior Wall 1: Steel-Framed, 16" o.c., [Bldg. Use 1 - Dining: Bar

elope PASSES: Design 0.0% better than code

Project Title: Proposed Mexican Restaurant (storage space only)

Door 1: Insulated Metal, Swinging, [Bldg. Use 1 - Dining: Bar

Envelope Compliance Statement

Stanley J. How III - Principal

requirements listed in the Inspection Checklist.

8601 Dodge Street

Omaha, NE 68114

Project Title:

Location:

M6.1 MECHANICAL SUPPLEMENTAL DRAWINGS

M6.2 MECHANICAL SUPPLEMENTAL DRAWINGS

INDEX

MECHANICAL

ELECTRICAL

SS: Stainless Steel

STRUCT: Structural

T: Tread, Thermostat

T\$B: Top and Bottom

T&G: Tonque & Groove

SUSP: Suspended, Suspend

STD: Standard

STOR: Storage

STL: Steel

SM: Switch

SYS: System

TB: Towel Bar

TEL: Telephone

TEMP: Tempered

TERR: Terrazzo

TLT: Toilet

TYP: Typical

UR: Urinal

M0.1 FLOOR PLAN - MECHANICAL DEMO

TV: Television

THRESH: Threshold

UNEXC: Unexcavated

UNO: Unless Noted Otherwise

UNFIN: Unfinished

VMC: Vinyl Wall Covering M: Midth W/: With W/O: Without MB: Wood Base MC: Watercloset MD: Wood MDM: Window WH: Water Heater MSCT: Wainscot MT: Weight WMF: Welded Wire Fabric

USG: United States Gupsum Company

COMcheck Software Version 4.1.5.5

Omaha, Nebraska

Owner/Agent:

Nate Dodge

8701 West Dodge Road

Omaha, NE 68114

NP Dodge

Suite 300

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans,

specifications, and other calculations submitted with this permit application. The proposed envelope systems have been

designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory

402-397-4900

1 Envelope Compliance Certificate

Proposed Mexican Restaurant (storage space only)

Designer/Contractor:

Stanley How III

402-964-9000

Gross Area Cavity Cont.

R-Value

19.0

sih@asdhow.com

R-Value

12.0

Stanley J. How Architects

Proposed Budget U-

0.064

U-Factor

0.047

July 3, 2024

Report date: 07/03/24

14685 California Street Omaha, NE 68154

PROJECT	CONTACTS	
		_

SYMBOL LEGEND

MINIMUM MANEUVERING CLEARANCES AT DOORS

DBL: Double

DET: Detail

DIAG: Diagonal

DIA: Diameter

DIM: Dimension

DS: Downspout

DWG: Drawing

DWR: Drawer

DWGS: Drawings

EB: Expansion Bolt

DTL: Detail

DR: Door, Dining Room

EA: Each, Expansion Anchor

DN: Down

DEG: Degree

DEMO: Demolition

ARCHITECT STAN HOW III RYAN PELSTER STANLEY J. HOW ARCHITECTS, INC. 14685 CALIFORNIA STREET OMAHA, NEBRASKA 68154 OMAHA, NEBRASKA 68164 PHONE: 402-964-9000 PHONE: 402-343-3960 EMAIL: rpelster@performancese.com EMAIL: sjh@asdhow.com

TAG DESCRIPTION

ELEVATION

SPOT ELEVATION AND

DESCRIPTION

SPOT ELEVATION

WALL TYPE

PULL SIDE

54" min.

39"-41"

42" @ X

36" @ Y

STRUCTURAL ENGINEER MECHANICAL ENGINEER NICK LIMPACH PERFORMANCE ENGINEERING MORRISSEY ENGINEERING 4940 NORTH 118TH STREET 11811 FORT STREET, SUITE 104 OMAHA, NEBRASKA 68164

TAG DESCRIPTION

CENTER LINE

DIAMETER

PLATE

ANGLE

FIRE EXTINGUISHER

PUSH SIDE

24" minimum

ELECTRICAL ENGINEER GEORGE MORRISSEY MORRISSEY ENGINEERING 4940 NORTH 118TH STREET OMAHA, NEBRASKA 68164 PHONE: 402-491-4144 EMAIL: nlimpach@morrisseyengineering.com

SYMBOL

DETAIL

J-BOX: Junction Box

HC: Handicapped

HD: High Density

HDWD: Hardwood

HDWE: Hardware

HORIZ: Horizontal

HDR: Héader

HGT: Height

HR: Hour

HT: Height

HVY: Heavy

EMAIL: gmorrissey@morrisseyengineering.co

ABBREVIATIONS .DETAILS. COMCHECK AND CODE INFORMATION A1.2 EXISTING BUILDING REFERENCE SITE PLAN ARCHITECTURAL A2.0 DEMOLITION FLOOR PLAN AND NOTES

TAG DESCRIPTION

DETAIL MARKER

PUSH SIDE

22" minimum .

****-----

ACCESSIBLE SIGNAGE

BREAKROOM

DISPERSAL

••••••

AREA

A2.1 FLOOR PLAN, SCHEDULES, NOTES AND DETAILS A2.2 EGRESS FLOOR PLAN AND NOTES A3.1 DOOR AND FRAME ELEVATIONS, ELEVATIONS, SECTIONS AND DETAILS A3.2 ELEVATIONS

A4.1 SECTIONS AND DETAILS A4.2 SECTIONS AND DETAILS

A1.1 PROJECT COVER SHEET, SHEET INDEX, SYMBOLS,

A5.1 REFLECTED CEILING PLAN, NOTES AND ROOF PLAN PROJECT MANUAL

PM-1 GENERAL SPECIFICATIONS PM-2 GENERAL SPECIFICATIONS

KITCHEN RANGES, GRILLS, AND DEEF

FAT FRYERS SHALL BE PROTECTED

ACCORDING TO NFPA NO. 96.

2018 INTERNATIONAL EXISTING BUILDING CODE

CLASSIFICATION TYPE: CHANGE OF OCCUPANCY

PROPOSED MEXICAN RESTAURANT TENANT

8601 WEST DODGE ROAD SUITE 101

PROJECT NAME:

PM-3 GENERAL SPECIFICATIONS

PLAN REVIEW FORM

OMAHA, NE. 68114

OMAHA, NE. 68114

3. LIVE LOADS

N.P. DODGE COMPANY

8701 WEST DODGE ROAD

NATE DODGE

2012 LIFE SAFETY CODE

SYSTEMS AND WATER FLOW SWITCHES SHALL RE ELECTRONICALLY SUPERVISED **APPROVED AUDIBLE ALARMS SHALL BE PROVIDED ON THE EXTERIOR OF THE** BUILDING. AS PER SECT. 903.4 AND 903.4.2 OF THE I.F.C. . ONE SET OF APPROVED PLANS SHALL BE KEPT ON THE JOBSITE AND SHALL BE AVAILABLE TO INSPECTORS AT ALL TIMES.

ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER

THIS PERMIT DOES NOT GRANT APPROVAL TO VIOLATE ANY ORDINANCE OF THIS JURISDICTION, STATE, OR FED LAW. 3. A PERMIT MAY BE REVOKED WHENEVER THE PERMIT IS ISSUED IN ERROR OR DUE TO INCORRECT INFORMATION 4. THIS PERMIT SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING CONSTRUCTION TO BE IN COMPLIANCE

WITH ALL APPLICABLE CODES

00009 - COMM (Le Nguyen)

ertificate of Occupancy.

Change of use shall require new

APPROVED 9/16/2024, 11:29:15 AM BLD-24-10892

5. THIS PERMIT IS VALID FOR 30 MONTHS IF AN INITIAL

INSPECTION OCCURS WITHIN 6 MONTHS OF ISSUANCE.

402-397-4900 ARCHITECT: REGISTERED DESIGN PROFESSIONAL

STANLEY J. HOW ARCHITECTS, INC 14685 CALIFORNIA STREET OMAHA, NE 68154 REGISTERED DESIGN PROFESSIONAL STANLEY J. HOW III EMAIL: sih@asdhow.com 402-964-9000

RESTAURANT AREA: 2,197 S.F.

ROOF: (INCLUDING DRIFTS)

EXTERIOR NON-BEARING WALLS:

I. CONSTRUCTION TYPE, USE, HEIGHT AND AREA TYPE OF BUILDING CONSTRUCTION: II-B (EXISTING) NUMBER OF STORIES: 3 (EXISTING)

TOTAL BUILDING AREA: 72,716 SQUARE FEET (EXISTING) AREA PER FLOOR: IST: 22,042 (EXISTING) 2ND: 25,337 (EXISTING) 3RD: 25,337 (EXISTING) SPRINKLER SYSTEM: NFPA 13 (EXISTING) PROPOSED TENANT (LOWER LEVEL): MEXICAN RESTAURANT, BAR AND PATIO, OCCUPANCY TYPE: A-2

COOLER/FREEZER/PANTRY: 437.5 S.F. TOTAL: 2,634.5 S.F. PATIO: 599 S.F. CONSTRUCTION TYPE: II-B SPRINKLER SYSTEM: NFPA 13 OCCUPANCY SEPARATION: I HOUR RATED CONSTRUCTION BETWEEN 'A' AND 'B' OR 'M'

IBC MIN: 100 LBS/SQ. FT. DESIGNED: 100 LBS/SQ. FT. (EXISTING) FLOORS: CORRIDORS: IBC MIN: 100 LBS/SQ. FT. DESIGNED: 100 LBS/SQ. FT. (EXISTING) IBC MIN: 115 MPH / EXP. 'B' DESIGNED: 115 MPH / EXP. 'B' (EXISTING) WIND LOAD:

4. FIRE PROTECTION REQUIRED BASED ON TYPE OF CONSTRUCTION (IBC TABLES 601 \$ 602) EXTERIOR BEARING WALLS: REQUIRED: 0 HR. PROVIDED: 0 HR INTERIOR BEARING WALLS: REQUIRED: 0 HR. PROVIDED: 0 HR

PROVIDED: 0 HR STRUCTURAL FRAME REQUIRED: REQUIRED: 0 HR. FIRE WALLS: (IBC SECTION 705) REQUIRED: 3 HR. PROVIDED: N/A SHAFT ENCLOSURES: REQUIRED: I HR. PROVIDED: I HR. FLOORS: REQUIRED: 0 HR. PROVIDED: 0 HR ROOFS: REQUIRED: 0 HR. PROVIDED: 0 HR ROOFING MATERIAL CLASS: REQUIRED: B PROVIDED: B OPENINGS IN EXTERIOR WALLS: REQUIRED: 0 HR. PROVIDED: N/A PARAPETS: (IBC SECTION 704.II) REQUIRED: NO PROVIDED: NO DRAFT STOPS: (IBC SECTION 717) REQUIRED: NO PROVIDED: NO 5. EXIT REQUIREMENTS (IBC CHAPTER 10)

REQUIRED: 0 HR.

NUMBER OF EXITS TOTAL TENANT SPACE. REQUIRED: 2 EXIT WIDTH TO EXTERIOR REQUIRED: 33" (36" MIN.) MAXIMUM DISTANCE TO AN EXIT: CORRIDOR WIDTH: CORRIDOR PROTECTION REQUIRED: REQUIRED: YES

ALLOWED: 250' MOST RESTRICTIVE PROVIDED: +/- 150' PROVIDED: N/A/ PROVIDED: N/A

20

S

Data filename: C:\Users\kad\Documents\COMcheck\NP Dodge 8601 Mexican Restaurant (storage area).cck Page 1 of 10 I, STANLEY J. HOW III, AM THE COORDINATING PROFESSIONAL ON THE 8601 DODGE STREET SUITE 101 PROPOSED MEXICAN RESTAURANT PROJECT. 7/24/24

UNISEX **ACCESSIBLE** WOMEN ACCESSIBLE SHOWER • • • • • • <u>ACCESSIBLE SIGNAGE TYPICAL NOTES:</u> (NOT ALL SIGNS SHOWN ARE USED)

4. PROVIDE SIGNAGE AS REQUIRED BY CODE, CONTRACTOR SHALL VERIFY.

WIW (S)

MOUNT ON WALL ADJACENT TO LATCH SIDE OF DOOR, 60" MAX. TO 48" MIN. FROM FLOOR TO TACTILE CHARACTERS OF SIGN AND APPROXIMATELY 4" AWAY FROM THE DOOR FRAME. MOUNT WITH SILASTIC ADHESIVE, SUITABLE FOR ADHESION TO PAINT OR VINYL. MOUNTING HEIGHTS SHALL BE VERIFIED TO MEET ALL LOCAL, STATE OR FEDERAL CODES THAT APPLY (VERIFY).

AT WOMEN'S

RESTROOM ONLY

2. PICTOGRAM SHALL BE 1/32" RAISED, SOLID COLOR EQUAL TO ASI, DARK GREY SC-904 IN A 6" HIGH PICTOGRAM AREA. BACKGROUND COLOR EQUAL TO ASI LIGHT BEIGE #SC-806. 3. VERBIAGE SHALL BE SANS SERIF LETTERING STYLE, 1/32" RAISED, 3/4" HIGH, UPPERCASE LETTERS, SOLID COLOR EQUAL TO ASI, DARK GREY SC-904 WITH GRADE 2 BRAILLE TACTILE CHARACTERS.

5. SIGNS SHALL BE EQUAL TO ASI, INTAC SERIES O.125 ACRYLIC FACEPLATE 7" × 9" (OR 7" × 4" AS SHOWN) WITH RADIUS CORNERS.

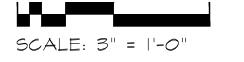
MISCELLANEOUS ACCESSORY MOUNTING LOCATIONS

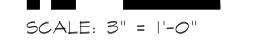
ACCESSORIES SHOWN ABOVE ARE FOR REFERENCE ONLY AND MAY NOT BE THE ACTUAL ACCESSORY TYPE. SEE RESTROOM ACCESSORY

ALL RESTROOM ACCESSORIES AND FIXTURES SHALL BE MOUNTED AT HEIGHTS AND LOCATIONS AS SPECIFIED BY LOCAL, STATE OR

FEDERAL CODES THAT APPLY, CONTRACTOR SHALL VERIFY WITH GOVERNING JURISDICTION BEFORE INSTALLATION.

ICAL ACCESSIBLE SIGNAGE AI. / SCALE: 3" = 1'-0"





UNISEX

SHOWER

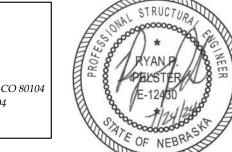
PROVIDED: 2 PROVIDED: 72"

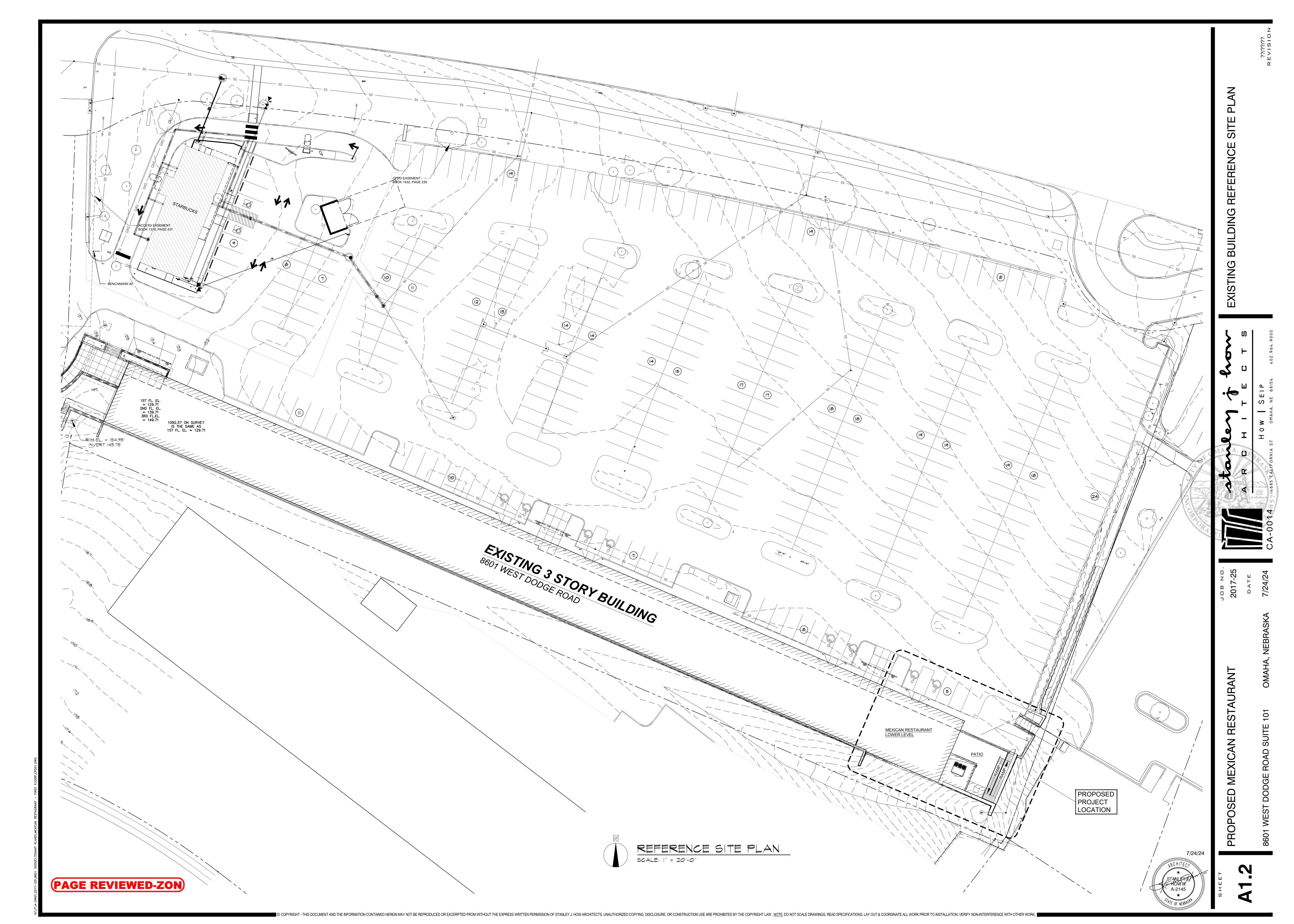
PROVIDED: 0 HR

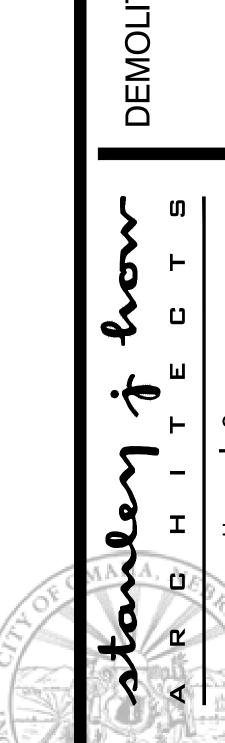
REQUIRED: 3 FT. 8 IN. 6. ENERGY COMPLIANCE: SEE MECHANICAL / ELECTRICAL DRAWINGS FOR APPLICABLE COM-CHECK FORMS

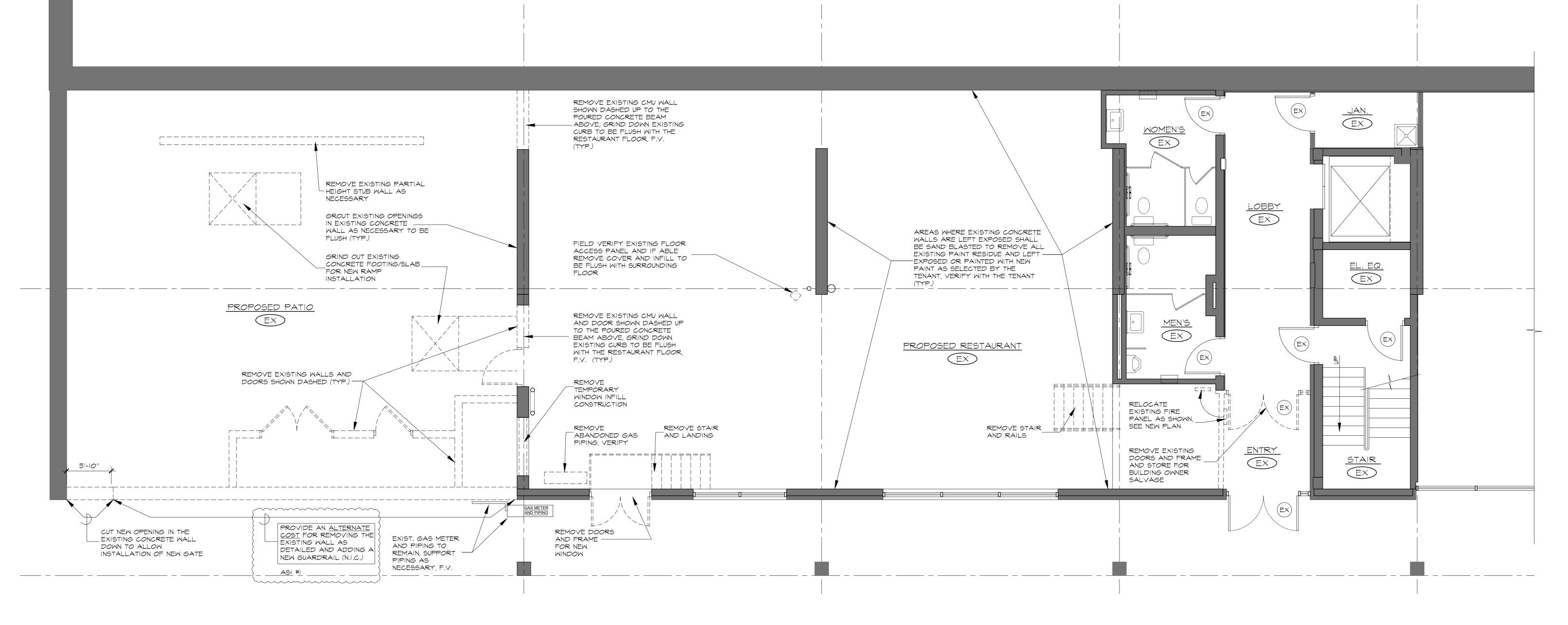
IBC MIN: 25 LBS/SQ. FT. DESIGNED: 25 LBS/SQ. FT. (EXISTING)

PERFORMANCE Engineering 1811 Fort Street, Suite 104 - Omaha, NE 68164 399 Perry Street, Suite 204A - Castle Rock, CO 80104 (402) 343-3960 Fax: (402) 343-3961 (303) 721-3322 Fax: (303) 721-9504 PE #: 240647









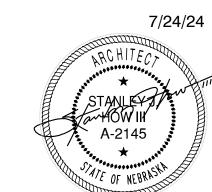
DEMOLITION FLOOR PLAN GENERAL NOTES:

- 1. GENERAL AND SUB CONTRACTORS SHALL FIELD VERIFY EXISTING CONDITION OF SITE, ALL STRUCTURES, EQUIPMENT AND DEVICES.
- 2. ALL EXISTING FINISHES SHALL BE REMOVED AND SURFACES PREPARED TO RECEIVE NEW FINISHES AS SCHEDULED, U.N.O.
- ALL DOORS, FRAMES, WINDOWS, MILLWORK, FIXTURES, ETC... SHOWN DASHED SHALL BE REMOVED, U.N.O.
- 4. WALLS SHOWN ARE EXISTING WALLS TO REMAIN.
- WALLS SHOWN _____ ARE EXISTING WALLS TO BE REMOVED. ALL DEMOLISHED MATERIALS SHALL BE REMOVED COMPLETELY FROM SITE.
- ALL SURFACES TO RECEIVE NEW FINISHES SHALL BE PREPARED AS NECESSARY TO ENSURE THE PROPER
- APPLICATION OF THE NEW FINISHES. 7. ANY DAMAGED OR MODIFIED WALLS, FLOORS OR CEILINGS SHALL BE PATCHED AND REPAIRED AS
- NECESSARY TO MATCH ADJACENT SURFACES.
- 8. ALL AREAS WHERE THE CONCRETE FLOOR IS MISSING SHALL BE INFILLED WITH GRANULAR FILL AND NEW 5" CONCRETE SLAB ON STEGO VAPOR BARRIER. FLOOR SHALL BE FLUSH WITH ADJACENT FLOORS.
- 9. ALL ITEMS SHOWN DASHED SHALL BE REMOVED AS NOTED.



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EXISTING SHAFT THROUGH TO DECKING, GUARD AND HAND RAILS, PROVIDE AN -ROOF ABOVE, F.V. ALTERNATE PRICE FOR PRE-FAB MODULAR ALUMINUM RAMP, LANDINGS AND RAILINGS AS MANUF. BY EZ-ACCESS, MODEL: "PATHWAY 36" OR TANKLESS WATER HEATERS 00001 - MPE (Frank Reida) EQUAL, ANCHOR TO EXISTING CONC. SLAB - ABOVE, SEE MECHANICAL, F.V. Type I Hood Stamp EXPANSION JOINT WITH COMPRESSIBLE FILLER AND SEALANT (TYP.) NEW & EXISTING ELECTRICAL PANELS 16'-3³/4" 7'-35/8" 25'-0" 5'-O" |'-4³/₈'' 36/12 <u>36/12</u> SEE WALL 18'-0" LANDING ELEV. = 127'-0" F.V. (TYP.) T ABOVE EXIST. WOMEN 36"x36" ALIGN T.775" 5'-6" PANTRY SEATING (08) LAYOUT BY TENANT EXIST. ---FIRE EXTING. (TYP.) ELEV. EQUIP. PIPING, F.V. EXIST. FLOOR ACCESS 54" HIGH WALL, DOOR, VERIFY, INFILL -SEE SUPPORT-DETAIL 6/A3.I EXIST. PIPING, F.V., NOTCH BAR TOP AND OFFSET SUPPORT 36" HIGH POS TOP, VERIFY CARPET CLOSURE/ -COUNTERTOP, 36"x36" 09 RELOCATED FIRE EXTING. FIRE PANEL CABINET UPPER 35" HC LIFT LANDING -:WALLS: LANDING STL. HANDRAIL, PAINT EXIST. STAIR 30"Ø SEE WINDOW_ TYPES (TYP.) WINDOW IN EXISTING ACTUAL BAR EQUIPMENT OPENING, MATCH 24"x36" WALKOFF AND LAYOUT SHALL BE CONFIRMED BY THE HOSTESS CARPET AS VERIFY EXISTING SUPPORT STATION BY TENANT GRADE FOB READER TO MATCH BUILDINGS DETAIL 6/A3.I EXISTING TENANT NOTE: WALL REMOVAL EXIST. GAS METER $^{\parallel}$ UPPER BAR $_{-}$ 36" HIGH COUNTERTOP, MASTER SYSTEM, VERIFY WITH OWNER AND PIPING TO CURB BELOW AND GATE IS IN THIS DISPLAY SHELVES VERIFY AND TENANT, COORDINATE REQUIRED NOTE: WALL REMOVAL CONTRACT REMAIN, SUPPORT BY TENANT AND FENCE IS N.I.C. \longrightarrow DOOR HARDWARE PIPING AS NECESSARY, F.V. NEW ALUM AND GLASS PLUMBING REQUIREMENT CALCULATION STOREFRONT TO MATCH EXISTING EXISTING NOTE: THE RESTROOM REMODEL WAS PREVIOUSLY COMPLETED UNDER PERMIT RETAINING WALL AND GUARDRAIL, #BLD-23-11329 RESTAURANT USE SCALE: 1/4" = 1'-0" TOTAL INDOOR SEATING: 1 OCC. / 15 S.F. = 53 PEOPLE (47 ACTUAL SEATS) SCALE: 1/4" = 1'-0' TOTAL OUTDOOR SEATING: 1 OCC. / 15 S.F. = 36 PEOPLE (22 ACTUAL SEATS)

FLOOR PLAN GENERAL NOTES

WOOD FRAMED RAMP AND LANDINGS WITH TREX

53 x .25 = 14 THEREFORE 35 - 14 = 21 ADDED TO OCC. COUNT

OCCUPANTS = 34 MEN, 34 WOMEN

34 WOMEN (REQ'D) = 2 WC, 1 LAV

DRINKING FOUNTAIN (REQ'D) = 1 DF,

CONVERSATION ON 9/7/2023.

MOP SINK (REQ'D)

CONC. CEILING TEE STRUCT.

BATT INSUL.

WHERE

OCCURS

5/8" GYP.

MET. STUDS

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

@ 16" O.C.

BATT INSUL.

MET. STUDS @ —

WHERE

OCCURS

16" O.C.

NOTE: WALL FINISHES SHALL BE SELECTED BY THE TENANT.

FIXTURE REQUIREMENT PER TABLE 49-722(3)

5/8" GYF

6" MET. _

STUDS @ 16"

BD.

TOTAL RESTAURANT CAPACITY: 74 PEOPLE (69 ACTUAL SEATS)

34 MEN (REQ'D) = $1 \underline{WC}$, $0 \underline{UR}$, $1 \underline{LAV}$ (PROVIDED) = $1 \underline{WC}$, $1 \underline{UR}$, $1 \underline{LAV}$

NOTE: FIXTURE COUNT CONFIRMED AS ACCEPTABLE WITH FRANK REIDA AND MARTIN

*= DF NOT REQUIRED IS WATER IS PROVIDED FOR FREE PER NOTE 1

GOMEZ WITH THE CITY OF OMAHA PLUMBING DEPARTMENT PER PHONE

(PROVIDED) = 2 WC, 1 LAV

(PROVIDED) = 1 HIGH/LOW DF*

(PROVIDED) - 1

7/8" MET.

FURRING —

@ 16" O.C.

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

GENERAL AND SUB CONTRACTORS SHALL FIELD VERIFY EXISTING CONDITION OF SITE, ALL STRUCTURES AND DEVICES. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND INSPECTIONS

GENERAL CONTRACTOR SHALL PROVIDE APPROPRIATE WOOD BLOCKING AT ALL WALL MOUNTED ITEMS.

DOORS WITH AN 'EX' TAG ARE EXISTING DOORS TO REMAIN, CONTRACTOR SHALL FIELD VERIFY EACH DOOR, FRAME AND TRIM TO DETERMINE THAT THEY ARE IN GOOD CONDITION AND IF NOT SHALL BE REPLACED WITH NEW. DOOR HARDWARE SHALL BE REPLACED AS NOTED.

WALLS SHOWN ARE EXISTING WALLS TO REMAIN.

WALLS SHOWN ARE NEW METAL STUD / FURRING FRAMING WITH 5/8" GYP BD, ALL WALLS BETWEEN KITCHEN/WASHING AND THE SEATING/BAR AREA SHALL HAVE SOUND BATT INSULATION.

ALL SURFACES TO RECEIVE NEW FINISHES SHALL BE PREPARED AS NECESSARY TO ENSURE THE PROPER APPLICATION OF THE NEW FINISH.

ALL FINISHES SHALL BE SELECTED BY THE TENANT AND INSTALLED BY THE CONTRACTOR, VERIFY

ALL KITCHEN, BAR, COOLER/FREEZER AND OTHER EQUIPMENT SHALL BE SELECTED AND APPROVED BY THE TENANT CONTRACTOR SHALL VERIFY WITH SPACE PROVIDED AND ENSURE THAT ALL UTILITY CONNECTIONS ARE PROVIDED FOR IT TO OPERATE AS INTENDED.

10. ANY DAMAGED OR MODIFIED WALLS, FLOORS OR CEILINGS SHALL BE PATCHED AND REPAIRED AS NECESSARY TO MATCH ADJACENT SURFACES.

11. ALL GYP BD IN THE KITCHEN AND BAR AREAS SHALL BE GREEN BOARD OR EQUAL WATER RESISTANT BOARD AS DETAILED. 12. 'FD' INDICATES FLOOR DRAIN, 'FE' INDICATES FIRE EXTINGUISHER, 'FEC' INDICATES FIRE EXTINGUISHER CABINET AND 'FS' INDICATES FLOOR SINK, 'AD' INDICATES AREA DRAIN.

ООМ	DOOM NAME	FLOOD	DACE	WA	LLS	(CEILING	3	RMRK		DEMARKS	
NO	ROOM NAME	FLOOR	BASE	CONST	FIN	MATL	FIN	HGT	NO		REMARKS	
01	ENTRY	WALKOFF CARPET	VINT L	GYP BD	EXPOSED / PAINT	GYP BD	PAINT	EXIST./ GYP BD	1, 2, 5		REP ALL EXISTING SURFACES AS NECESSARY TO BE UNIFORM	
<i>0</i> 2	STAIR	WALKOFF CARPET	A IN I F	EXIST./	EXPOSED / PAINT	GYP BD	PAINT	EXPOSED	1, 2, 5	Al	ND SMOOTH READY TO ACCEPT NEW FINISHES.	
03	SEATING	EPOXY	VINYL	EX.CONC/ GYP BD	EXPOSED / PAINT	GYP BD	PAINT	EXPOSED	1, 5		ALKOFF CARPET SHALL MATCH EXISTING LOBBY ENTRY	
04	BAR	EPOXY	VINYL	EX.CONC/ GYP BD	EXPOSED / PAINT	GYP BD	PAINT	EXPOSED	1, 3, 5	C)	ARPET, VERIFY WITH BUILDING OWNER.	
<i>0</i> 5	DISH WASHING	EPOXY	EPOXY	GYP BD	FRP	ACOUST	ACT-I	9'-0"	1, 4	3. Al	LL PAINT SHALL BE EPOXY PAINT.	
06	KITCHEN	EPOXY	EPOXY	GYP BD	FRP	ACOUST	ACT-I	9'-0"	I, 4		EILING GRID SHALL BE ALUMINUM AND ACOUSTIC TILES SHALL	
07	OFFICE	EPOXY	VINYL	EX.CONC/ GYP BD	PAINT	ACOUST	ACT-2	8'-0"	ĺ	B	E CLEANABLE.	
08	PANTRY	EPOXY	VINYL	EX./G.B./ COOLER	PAINT	GYP BD	PAINT	EXPOSED	1		LL INTERIOR EXPOSED CONCRETE WALL SHALL BE SAND	
											BLASTED TO REMOVE EXISTING PAINT AND LEFT AS BARE CONCRETE OR NEW PAINT AS SELECTED BY TENANT, VERIF	

GENERAL NOTES: ALL EPOXY AND VINYL BASES SHALL BE COVED EXCEPT AT CARPETED AREAS.

ACT-1: ARMSTRONG 24"x24" KITCHEN ZONE OR EQUAL.

ACT-2: ARMSTRONG 24"x24" OPTIMA OR EQUAL. VERIFY CEILINGS WITH TENANT.

. ALL GYP BD IN THE KITCHEN AND BAR AREAS SHALL BE GREEN BOARD OR EQ. WATER RESISTANT BOARD AS DETAILED

		DOC)R	1A	۷D		RA	M	-	SC	H	EDI	JLE
DOOR	DOOR				FRAME	<u>-</u> -	FI	RAME	DETA	IL	HDW	RMRK.	DEMARKS
NO	SIZE	MAT.	TYPE	MAT.	TYPE	DEPTH	HEAD	JAMB	JAMB	SILL	SET	NO.	REMARKS
01	3'-0" × 7'-0" × 3/4"	WOOD/GL	6	HOL MET	А	5 3/4"	3/A3.I	3/A3.I			ı	1, 2, 4	I. DOOR TYPE SHALL MATCH EXISTING
04	3'-0" × 7'-0"	ALUM/GL	4	ALUM	C	4 1/2"					2	1, 2	BUILDING DOOR TYPES.
<i>0</i> 5	ELIASON BI-SWING 3'-0"x7'-0"	ALUM/GL	3	HOL MET	В	5 3/4"	3/A3.I	3/A3.I					2. HARDWARE SHALL MATCH BUILDING STANDARD MANUFACTURER AND
07	3'-0" × 7'-0" × 3/4"	SC WOOD		HOL MET	А	5 3/4"	3/A3.I	3/A3.I			3		FINISH AND CONFORM TO TENANTS
08	3'-0" × 7'-0" × 3/4"	HOL MET	2	HOL MET	А	5 3/4"	3/A3.I	3/A3.I			4	I, 2	LOCKING REQUIREMENTS, VERIFY.
09	3'-8" x 7'-0" GATE	STEEL	5								5	3	3. GATE SHALL BE LOCKABLE FROM
													THE EXTERIOR AND HAVE A PANIC BAR EXITING DEVICE. SYSTEM SHAL.
													BE POWDER COATED GALVANIZED STEEL. PROVIDE ALTERNATE COST
													TO REMOVE ENTIRE NORTH WALL AN
													INSTALL GUARDRAIL SYSTEM.
													4. DOOR AND FRAME SHALL BE ONE
													HOUR RATED WITH FIRELITE RATED GLAZING.

DOOR AND FRAME SCHEDULE GENERAL NOTES:

I. ALL NEW DOOR HARDWARE (HINGES, LOCKSETS, PASSAGE SETS, CLOSERS, PUSH / PULLS, ETC...) SHALL BE MEDIUM COMMERCIAL GRADE HARDWARE AS SELECTED BY THE TENANT. KEYING SHALL BE PER THE TENANTS INSTRUCTIONS.

HARDWARE SHALL BE EQUAL TO THE FOLLOWING: HAGER, MCKINNEY, STANLEY OR EQUAL HINGES: LOCKSETS,

LATCHSETS, DEADBOLTS, CYLINDERS AND COVERS: SCHLAGE, BEST, YALE, WEISER OR EQUAL WALL STOPS: IVES, QUALITY OR EQUAL CLOSERS: LCN, NORTON OR EQUAL OVERHEAD STOPS: GLYNN-JOHNSON OR EQUAL

EXIT DEVICES: YON DUPRIN OR EQUAL SEALS AND THRESHOLDS: PEMKO, REESE OR EQUAL 2. FINISH SHALL BE SELECTED BY THE TENANT. CONTRACTOR SHALL VERIFY PASSAGE SET / LOCKSET LOCATIONS WITH THE TENANT. KEYING OF ALL

LOCKS SHALL BE COORDINATED WITH THE TENANT.

SCHEDULE OF HARDWARE:

SET NO. 1: DOOR OI | |/2 PAIR BUTTS AB800 4 |/2 X 4 |/2 X NRP I PUSH

MATCH BUILDING STANDARD MATCH BUILDING STANDARD

I ELECTRIC STRIKE 9600 630 I POWER SUPPLY PS902 YON DUPRIN I CLOSER 4110-CUSH I OVERHEAD STOP 90 SERIES GLYNN-JOHNSON

**COORDINATE INSTALLATION AND HARDWARE WITH BUILDINGS STANDARD SECURITY SYSTEMS AND TENANTS SECURITY REQUIREMENTS. ADJUST HARDWARE SHOWN TO COMPLY WITH SECURITY REQUIREMENTS AND TO FUNCTION AS INTENDED

SYSTEM MANUF. AS SELECTED

<u>SET NO. 2:</u> DOOR 04	
CYLINDER 2 PAIR BUTTS AB800 5" x 4" NRP CLOSER 4 0 CUSH 2 OFFSET PUSH / PULL CPN THRESHOLD SET WEATHER STRIPPING	BY OTHERS HAGER LCN KAWNEER KAWNEER KAWNEER
NOTE: VERIFY WITH BUILDING STANDARD DOOR AND	FRAME HARDWARE.

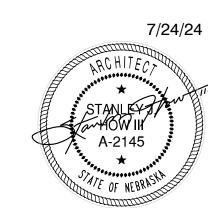
<u>SET NO. 3:</u> DOOR OT 1/2 PAIR BUTTS AB700 4 1/2 x 4 1/2 HAGER CLASSROOM SET SAT x STOPD SCHLAGE I WALL STOP 401 IVES <u>SET NO. 4:</u> DOOR 08 I I/2 PAIR BUTTS AB700 4 $I/2 \times 4$ I/2 NRP HAGER I STOREROOM LOCK SET SAT x S80PD SCHLAGE I DEAD BOLT, SINGLE CYLINDER SCHLAGE

CLOSER 4110 CUSH THERMALLY BROKEN WITH SEAL THRESHOLD S501A REESE I WEATHER STRIPPING REESE I SILL SWEEP 362A REESE I DRIP CAP REESE

NOTE: VERIFY WITH BUILDING STANDARD DOOR AND FRAME HARDWARE.

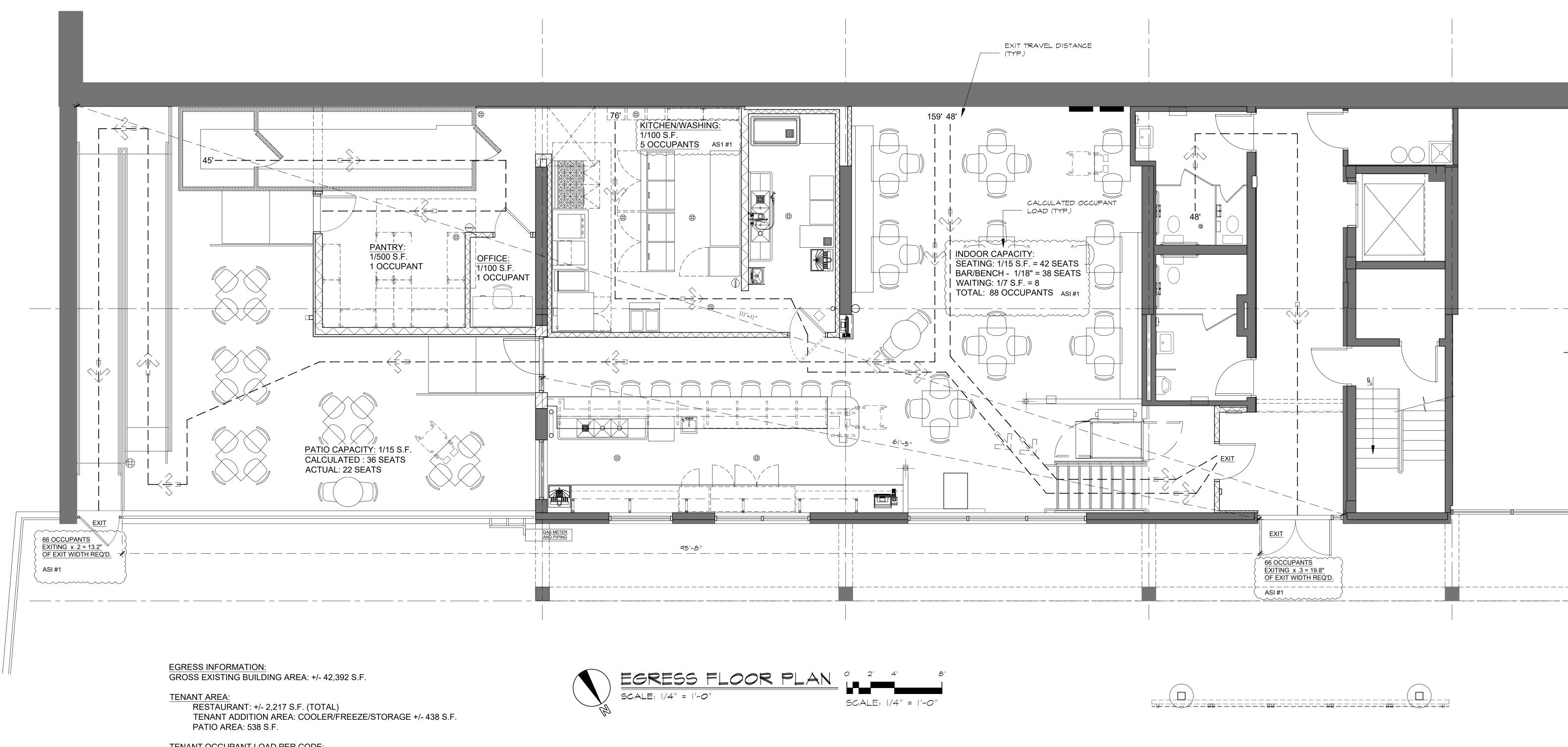
<u>SET NO. 5:</u> GATE 09 PAIR SELF CLOSING HINGES SYSTEM MANUF. AS SELECTED I CYLINDER LOCK SYSTEM MANUF. AS SELECTED

NOTE: VERIFY SYSTEM AS SELECTED AND APPROVED BY THE BUILDING OWNER.



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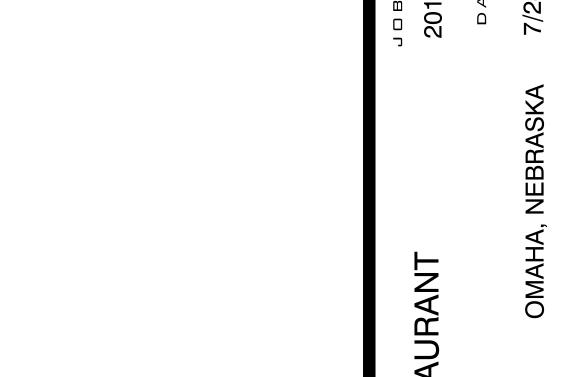
I PANIC EXIT DEVICE

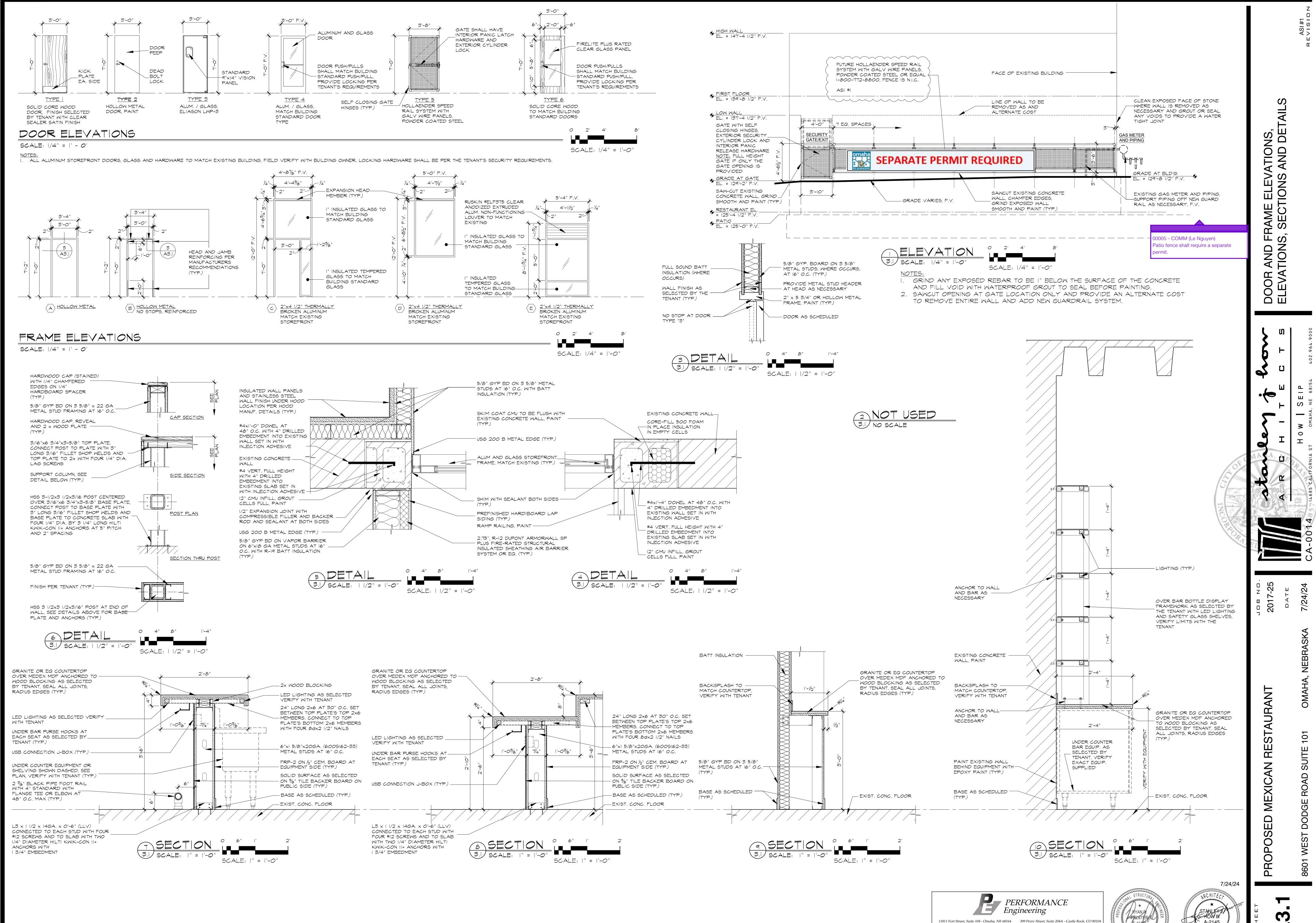


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TENANT OCCUPANT LOAD PER CODE: LSC = 131 OCC IBC = 93 OCC

1. LSC = LIFE SAFETY CODE, IBC = INTERNATIONAL BUILDING CODE. 2. SEE EGRESS FLOOR PLAN FOR OCCUPANCY LOAD FACTOR PER EACH ROOM OR SPACE TYPE AND NUMBER OF OCCUPANTS.



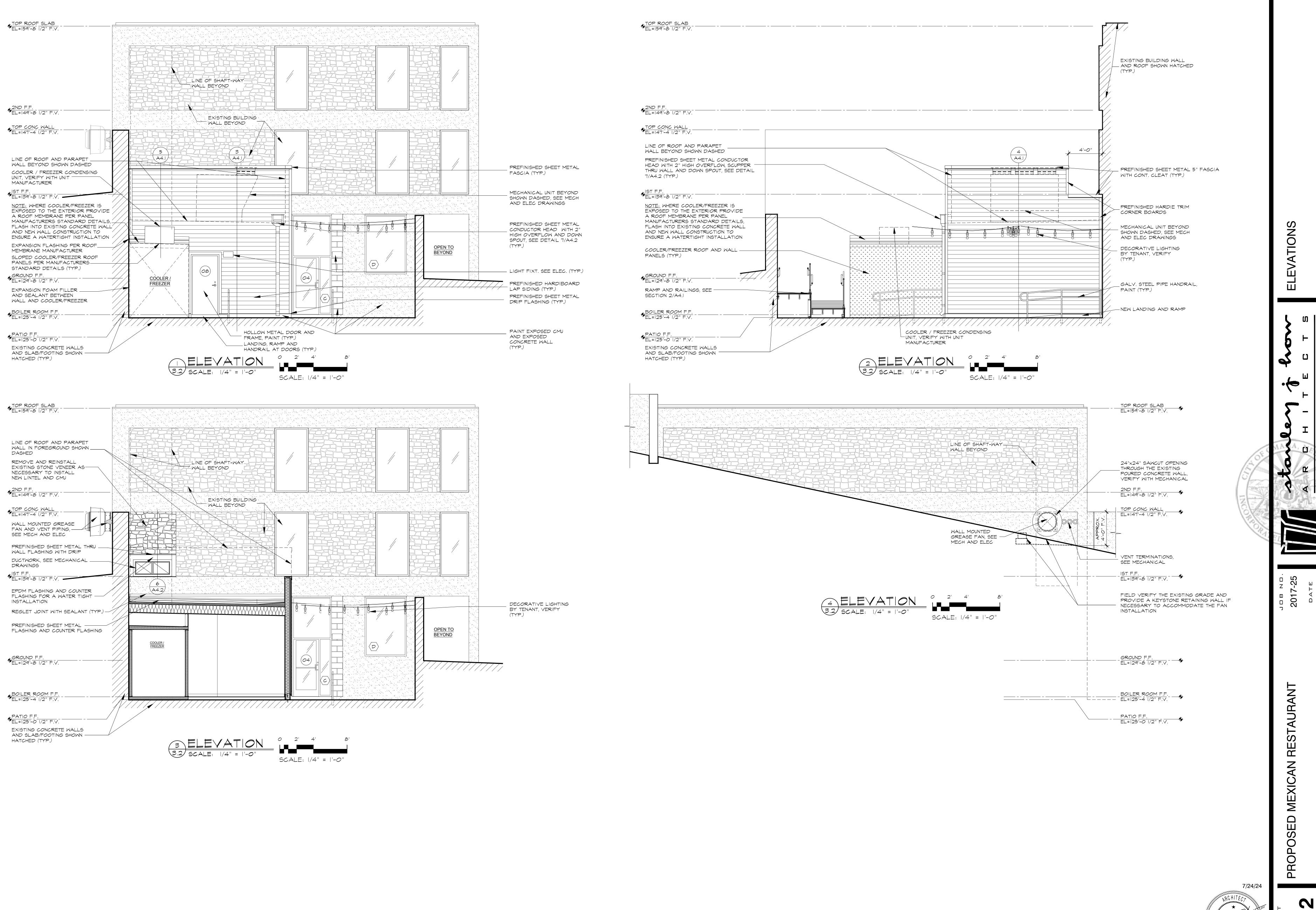


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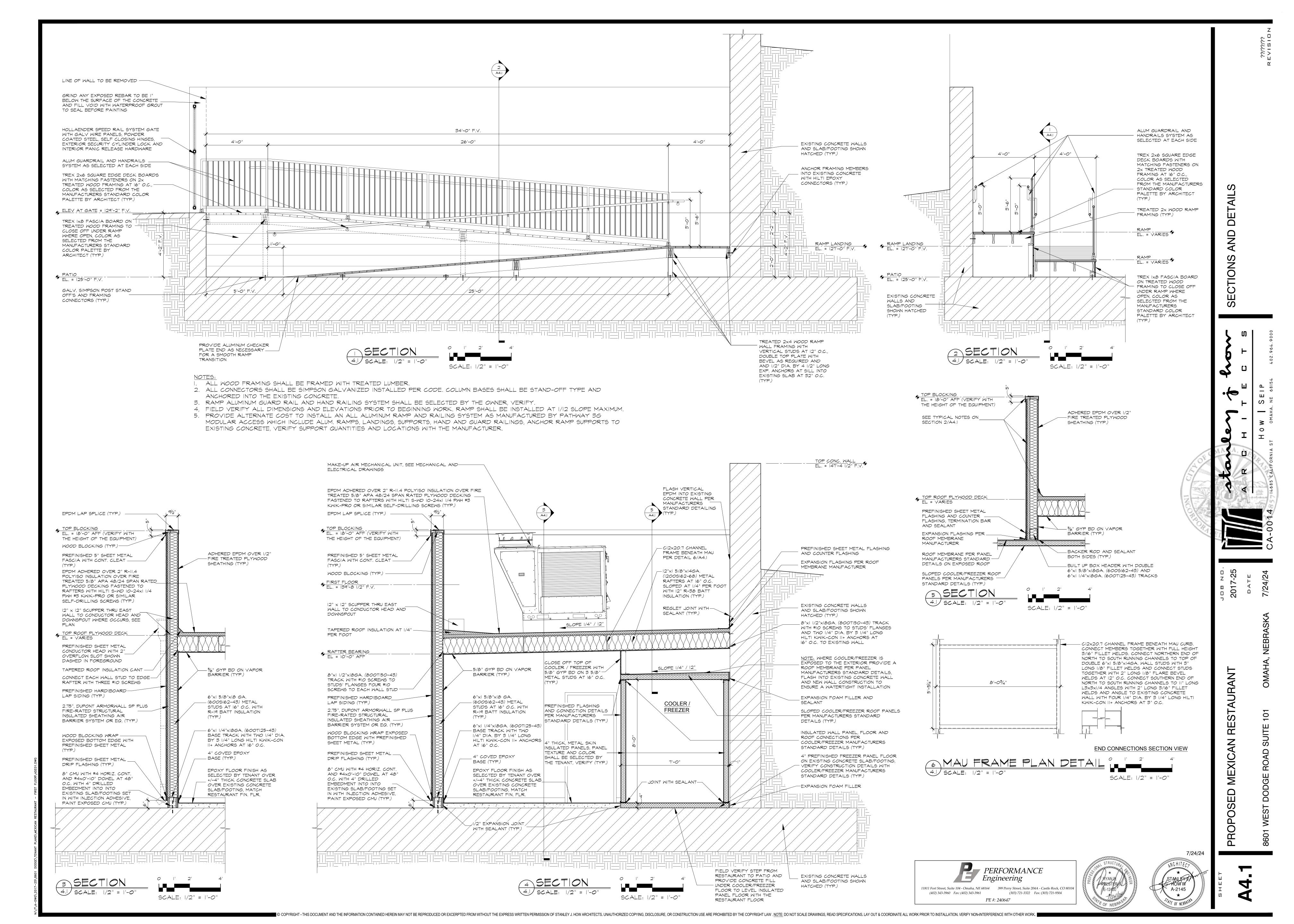
(303) 721-3322 Fax: (303) 721-9504

PE #: 240647

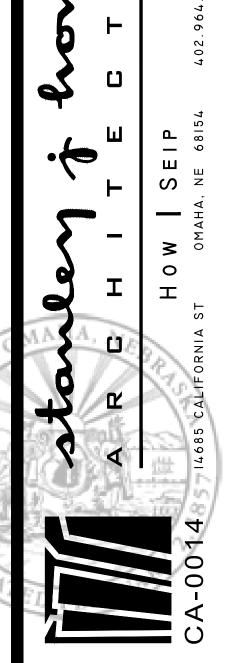
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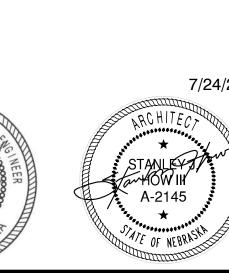








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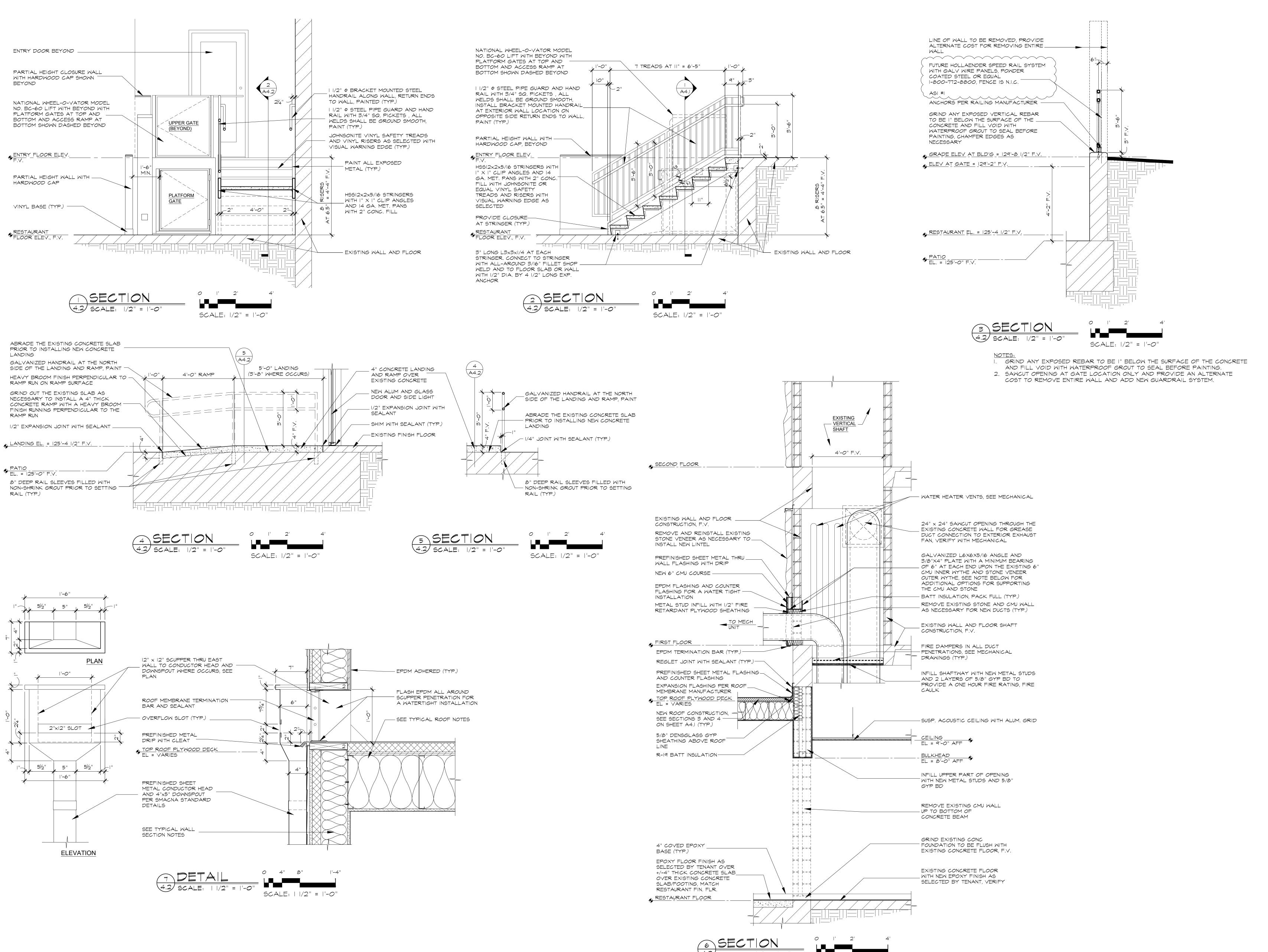
PERFORMANCE

(303) 721-3322 Fax: (303) 721-9504

11811 Fort Street, Suite 104 - Omaha, NE 68164 399 Perry Street, Suite 204A - Castle Rock, CO 80104

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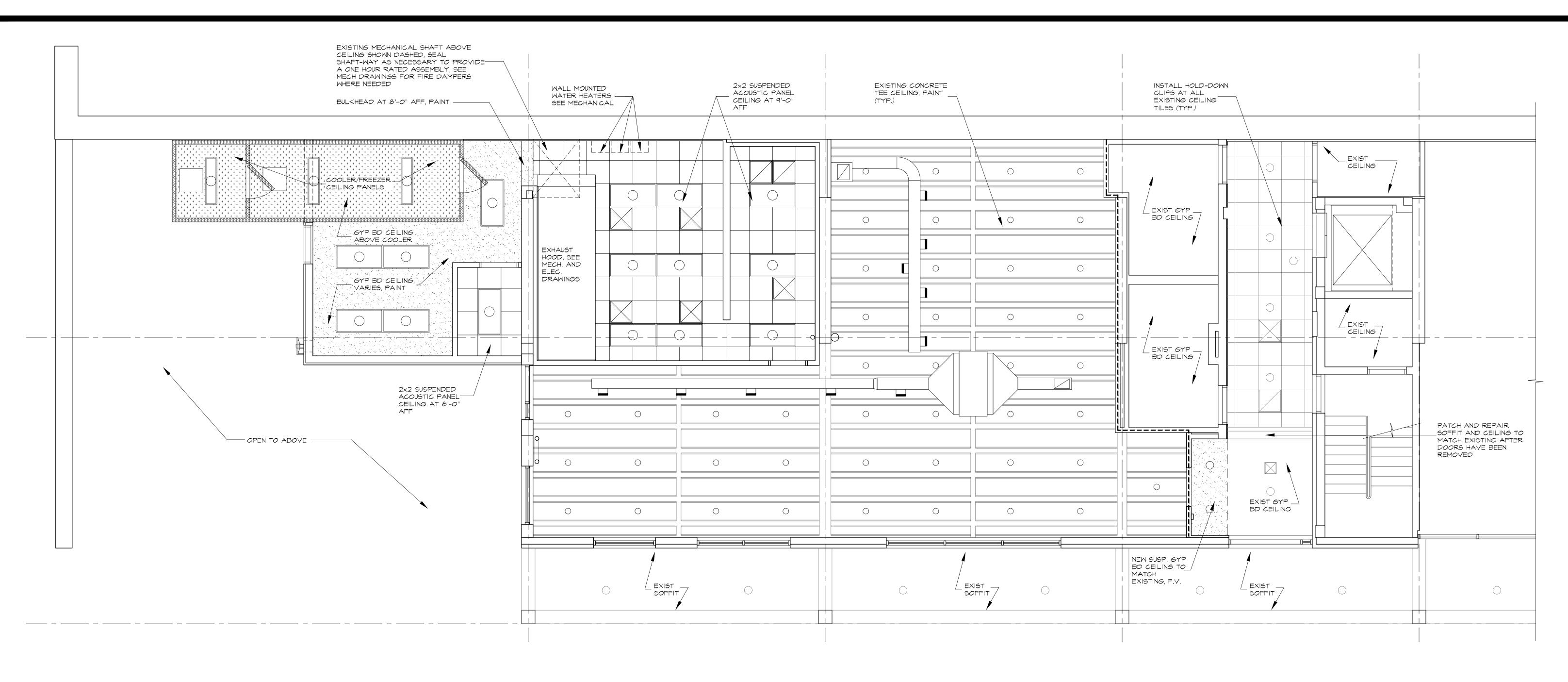


NOTE: OTHER LEDGER BEARING OPTIONS
IT MAY BE FEASIBLE TO SAWCUT INTO THE EXISTING CONCRETE BUILDING AND RETAINING WALLS TO THE SOUTH AT LEAST 4" TO HAVE THE STONE VENEER PLATE LEDGER SLIDE AND BEAR IN AND IF THE VERTICAL LEG OF THE L6x6x5/16 LEDGER CAN BE COPED THE HORIZONTAL LEG COULD BE SIMILARLY SLIDE INTO A SAMCUT. OTHERWISE, A 1'-O" LONG L3x3x1/4

ANGLE WITH THREE 1/4" DIAMETER BY 3 1/4" LONG HILTI KWIK-CON 11+ ANCHORS AT 4" ON CENTER INTO THE EXISTING

CONCRETE WALLS COULD BE PROVIDED FOR THE LEDGERS' SOUTHERN ENDS TO BEAR UPON.

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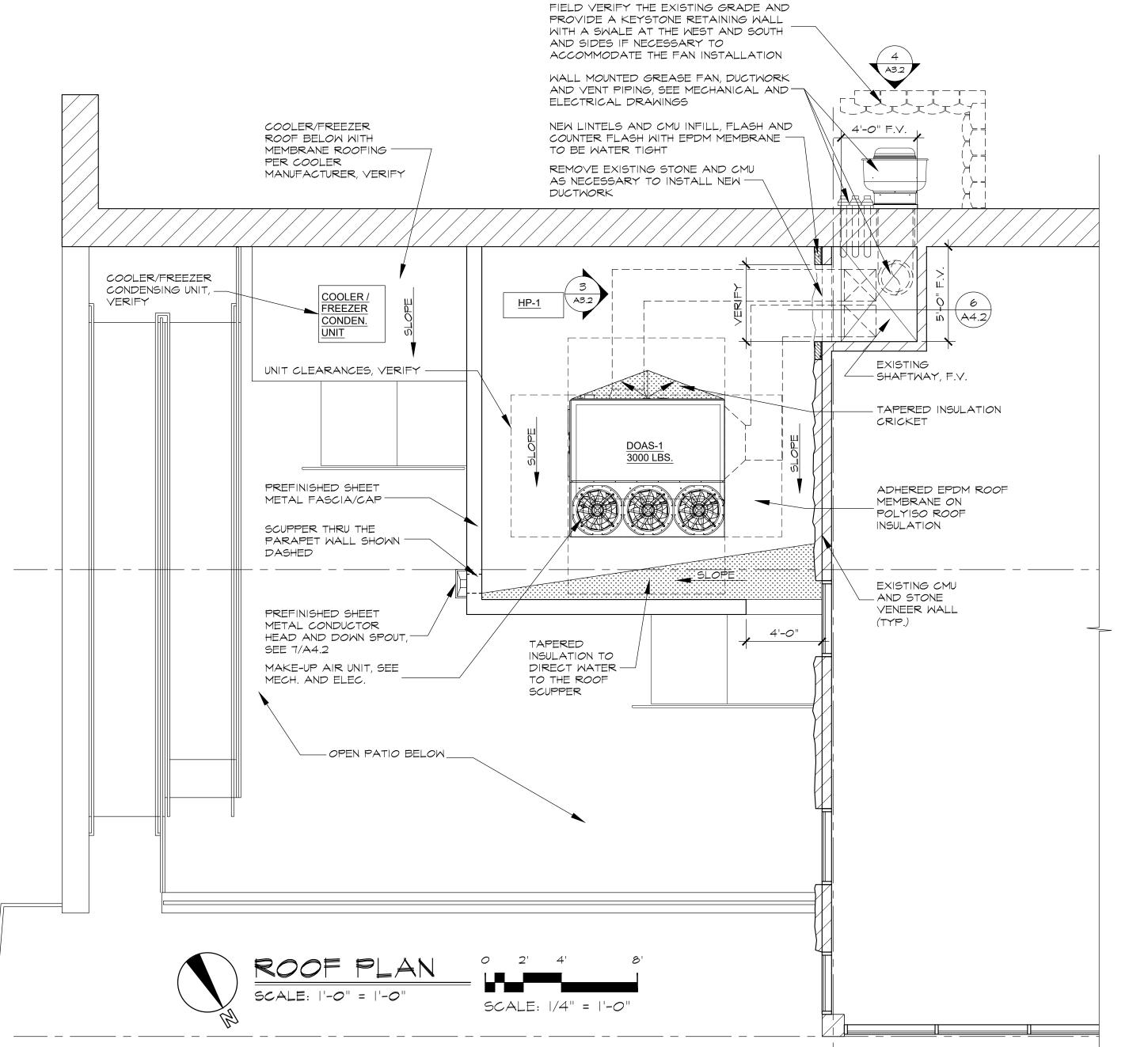


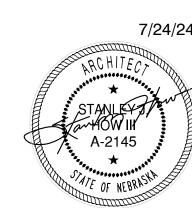
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REFLECTED CEILING NOTES:

- 1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL WALL AND CEILING MOUNTED DEVICES. COORDINATE LOCATIONS OF ALL DUCTWORK, LIGHTING, DIFFUSERS, ETC... WITH STRUCTURAL, ARCHITECTURAL MECHANICAL AND ELECTRICAL DRAWINGS. FIXTURES, DUCTWORK, ETC... SHOWN ON THE REFLECTED CEILING PLAN ARE FOR REFERENCE ONLY.
- 2. WALLS SHOWN WITH A BOLD DASHED LINE -----SHALL EXTEND TO CONCRETE DECKING ABOVE SHALL BE ONE HOUR RATED WALLS AND BE FIRE CAULKED. DOORS AND FRAMES IN WALLS SHALL BE ONE HOUR RATED AND ANY DUCT PENETRATIONS SHALL HAVE FIRE DAMPERS.
- 3. TENANT DEMISING WALLS SHALL EXTEND TO CONCRETE DECKING ABOVE, GYP BD ON ALL OTHER WALLS SHALL EXTEND TO 6" ABOVE THE HIGHEST ADJACENT CEILING. BRACE WALLS AS REQUIRED. TENANT DEMISING WALLS AND WALLS BETWEEN THE KITCHEN/WASHING AND THE SEATING/BAR SHALL HAVE FULL SOUND BATT INSULATION.
- 4. MODIFY THE EXISTING FIRE SPRINKLER SYSTEM AND HEAD LOCATIONS AS NECESSARY FOR NEW LAYOUT.





SECTION OO 72 OO

GENERAL CONDITIONS

A. GENERAL CONDITIONS:

The "General Conditions of the Contract for Construction" A.I.A. Document A201-2007, Articles I to 15 inclusive, is hereby made a part of this Specification to the same extent as if it were herein written out in

END OF SECTION

SUPPLEMENTARY CONDITIONS I.OI SUMMARY

SECTION 00 13 00

00 73 00

It is the intent and purpose of these specifications and the accompanying drawings that the Contractor shall furnish all work, supervision, labor, equipment, tools and material to complete the erection of the building, except that items herein specifically excepted are not included. With these exceptions, the work shall be complete in every respect. All items necessary to erect a complete building or to complete the work under the Contract shall be furnished as required.

1.02 EXAMINATION OF SITE

The Contractor is requested to visit the site, compare the Drawings and Specifications with any work in place and inform himself as to all conditions including other work, if any, being performed. Failure to visit the site will in no way relieve the Contractor from the necessity of furnishing any materials or performing any work that may be required to complete his work in accordance with Drawings and Specifications without additional cost to the Owner.

1.03 LAYING OUT WORK

The Contractor shall immediately upon entering the project site for purpose of beginning his work locate all general reference points and take such actions as are necessary to prevent their destruction; lay out his own work and be responsible for all lines, elevations and measurements of building, paving, utilities and other work executed by him under the Contract. He must exercise proper precaution to verify figures shown on the Drawings before laying out the work and he will be held responsible for any error resulting from his failure to exercise such precaution.

1.04 TEMPORARY FIELD OFFICE

The General Contractor shall provide and maintain a temporary field office at the site, equipped with heat, telephone, toilet, plan desks and plan files. The office shall be of sufficient size for said use of the Contractor and the Architect's representative. He shall locate the temporary field office on the project site where directed by the Architect and remove when work is completed.

Should relocation of the field office be necessary during the construction period for the purpose of site development or co-ordination with other Contractors, the General Contractor shall comply as directed at no additional cost to the Owner.

1.05 TEMPORARY SANITARY FACILITIES

The General Contractor shall provide and maintain temporary sanitary facilities as necessary for use of workmen, locate where directed, and keep in sanitary condition.

1.06 ELECTRICAL

A. Each Contractor shall furnish all equipment pertaining to his work including motors, relays, control devices, etc. The Electrical Contractor shall furnish and install all disconnect switches and motor starters except those in "pre-wired" or "packaged" units. Multi-speed starters shall be furnished by the Contractor supplying the equipment to be controlled.

B. Each Contractor shall install motors pertaining to his work and all equipment except those requiring only low voltage connections. Line voltage items shall be installed and connected by the Electrical Contractor. All low voltage control wiring shall be furnished and installed by other Contractors unless otherwise specified.

C. Each Contractor shall submit complete wiring and control diagrams for Architect's approval and be responsible for proper operation. Wiring shall be in accordance with the Drawings and Specifications and per approved wiring diagrams. The Electrical Contractor shall be responsible for proper overload protection for all motors.

D. Prior to submitting his bid the Electrical Contractor shall examine the General and Mechanical Drawings and Specifications to clarify the extent of his work.

1.07 SUBCONTRACTS

Divisions and sections in these specifications conform roughly to customary trade practice. They are used for convenience only. The Architect is not bound to define the limits of any subcontract and the specifications sections shall not be interpreted in that fashion.

1.08 DATA AND MEASUREMENTS

The data given herein and on the Drawings is as exact as could be secured. Their absolute accuracy is not quaranteed. The Contractor shall obtain exact locations, measurements, levels, etc. at the site and shall satisfactorily adapt his work to the actual conditions at the building. DO NOT SCALE DRAWINGS. Verify all dimensions with the Architect prior to commencing work. Only Architectural Drawings may be utilized in calculation. Other (Mechanical, etc.) are diagrammatic or schematic.

1.09 DELIVERY AND STORAGE OF MATERIAL

Each Contractor shall make provisions for the delivery and safe storage of all his materials and shall make the required arrangements with other Contractors for the introduction into the building of equipment too large to pass through finished openings. Materials shall be delivered at such stages of the work as will expedite the work as a whole and shall be marked and stored in such a way as to be easily checked

I.IO MATERIALS FOR PROJECT

The successful bidder shall, upon the execution of the agreement, submit to the Architect and Owner a complete list of items of materials and equipment he proposes to use on this project. The list shall be complete with manufacturer's names, if requested by the Architect or Owner. The list shall include deviations from specified items as to operation, physical dimensions, etc. Equipment orders shall not be placed until the list has been returned approved. Four (4) copies of the list shall be furnished, one of which will be returned approved, or approved as noted. Where materials differ from those specified, a sample of same, together with complete data shall be furnished to the Architect which shall be subject to

Material and equipment specified to be one of two or more equally acceptable makes or types may be of any one of the makes or types mentioned but shall be of one make or type throughout the project. Materials and equipment specified to be of a certain make or type, or approved alternate, shall be of the make and type specifically mentioned, unless written approval of an alternate material has been

II SUBSTITUTION FOR MATERIALS AS SPECIFIED

A. All proposals shall be based on providing and installing all materials or items of equipment which are hereinafter specified by name and/or manufacturer. SUBSTITUTIONS for materials or items of equipment as specified, WILL NOT BE ALLOWED, unless approved by Architect prior to (7 days before) bid date. All other substitutions shall conform to the following requirements:

. Each Contractor shall be permitted to list on his Proposal Form, or on the supplemental sheet attached and furnished with his Proposal Form all items of material or equipment he wishes to substitute together with the price of these items which will be deducted from his Base Bid.

2. All items of material or equipment proposed by the Contractor as equal substitutions for items of material or equipment which are specified as "Similar To" or "Equal To" shall be equal in every respect to the quality, quantity, performance, appearance, color, finish, gauge and size of that item which has been used as a basis of equality.

B. The opinion of the Architect or Engineer shall be the sole and final judge as to the suitability of equality of substituted items. The Contractor shall furnish and install the specified items when proposed substitutions are not accepted.

C. The entire cost of all changes of any type necessitated by the substitutions for the material or equipment as specified shall be borne entirely by the Contractor making the substitution at no extra cost to the Owner or other Contractors.

D. After contracts are signed substitutions WILL NOT be allowed without an accompanying deduct amount which shall constitute a deduct change order.

1.12 CONTRACTOR FURNISHED INFORMATION

Prior to signing of the contracts the successful bidder shall submit to the Architect for approval the

A. Executed Performance Bond and Labor Material Payment Bond, A.I.A. Document A3II.

B. Completed Certificate of Insurance Form.

C. A list of all subcontractors which he proposes to employ on the project.

D. A breakdown of cost sufficiently detailed to show the various parts of work.

1.13 DRAWINGS AND SPECIFICATIONS

These Specifications are intended to supplement the Drawings and it will not be the province of the Specifications to mention any part of the work which the Drawings are competent to fully explain in every particular and such omission is not to relieve the Contractor from carruina out portions indicated on the Drawings only. Should items be required by these Specifications and not indicated on the Drawings, they are to be supplied even if of such nature that they could have been indicated thereon.

In case of disagreement between Drawings and Specifications, or within either Drawings or Specifications, the better quality or greater quantity of work shall be estimated and the matter referred to the Architect or Engineer for a decision.

All materials used shall meet the latest standards of the American Society for Testing Materials (ASTM) where applicable or as specified herein.

1.15 ABBREVIATIONS

The word "approved" as used herein means "approved by Architect and Owner". "For Approval" means "For the Architect's and Owner's approval". "Selected" means "selected by the Architect and Owner". "ASTM Specifications" means "Standard Specifications of American Society for Testing Materials". "ASME Code or approved" means "American Society of Mechanical Engineers applicable code, test or requirement". "NBFU" means "National Board of Fire Underwriters". "UL" means "Underwriters Laboratories, Inc.".

1.16 EQUIPMENT AND CONSTRUCTION METHODS

The Contractor shall be responsible for the equipment and methods used in erection of this work covered by the contract, but the Owner reserves the right to approve such equipment and methods.

If, at any time, the Contractor's methods or equipment appear to the Architect and Owner to be unsafe, inefficient or inadequate for securing the safety of workmen, the quality of the work, or the rate of progress required, the Contractor shall, if directed by the Architect, correct such unsafe, inefficient or inadequate conditions to the satisfaction of the Architect and the Owner. By hereby establishing such authority the Architect will in no event assume the responsibility for the safety of workmen.

If, at any time, the Contractor's work force, in the opinion of the Architect and Owner, shall be inadequate for securing the necessary progress as herein stipulated, the Contractor shall, if so directed, increase the work force or equipment to such extent as to give the reasonable assurance of compliance with the schedule of progress but the failure of the Architect to make such demand shall not relieve the Contractor of his obligation to secure the quality, the safe conduct of the work and the rate of progress required by the Contract. The Contractor alone shall be responsible for the safety, efficiency and adequacy of his plant, appliance and methods.

Workmanship shall be of the best. The good appearance of finished work shall be of equal importance with its mechanical efficiency. All portions of the work shall be so laid out and installed that the work as a whole is of uniform quality and appearance.

1.17 CLEANING

The Contractor shall maintain all areas during construction free from hazardous or obstructive rubbish and debris, due to performance of the work. When the electrical sustems have been installed the Contractor shall remove all rubbish and debris from the building site, remove all paint, plaster and accumulated dirt from all equipment.

1.18 REQUIREMENTS OF SUBCONTRACTORS

A. Each Contractor or Subcontractor shall be responsible for the various hangers, sleeves, openings, anchorage, fittings and other items necessary to the accomplishment of his work.

B. Each Contractor or Subcontractor shall be responsible for such excavations and backfilling as he shall require. Backfill which settles shall be taken out and re-compacted at no cost to the Owner. Compaction densities shall be as specified elsewhere.

C. Signs advertising materials or Subcontractors will NOT be allowed.

I.I9 OCCUPATIONAL SAFETY AND HEALTH ACT

It shall be the responsibility of the Contractor and/or Contractors to comply with all the requirements of the Occupational Safety and Health Act of 1970 by the U.S. Department of Labor including all updates issued, and to require all it's subcontractors and employees to comply with this law and any related state

1.20 REGULATIONS

The Contractor shall give all notices and comply with all laws, ordinances, rules, building codes and regulations, including the Americans with Disabilities Act, bearing on the conduct of the work as drawn and specified. If the Contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the Architect in writing, and any necessary changes shall be adjusted as provided in the Contract for "Changes In The Work". If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, building codes or regulations, and without such notice to the Architect, he shall bear all costs arising therefrom.

1.21 NUMBER OF SPECIFIED ITEMS REQUIRED

Wherever in these specifications an article, device or piece of equipment if referred to in the singular number, such reference shall apply to as many such articles as are shown on the drawings or required to complete the installation.

1.22 "AS BUILT" DRAWINGS

The Contractor shall maintain at the construction site one complete set of drawings suitably marked to show all deviations from the original set of drawings and other information as specified. Supplementary sketches may be included, if necessary, to clearly indicate the work in place.

1.23 NEBRASKA STATE SALES TAX

Contractor shall include all Sales Tax in his bid.

1.24 PERMITS, FEES, INSPECTIONS AND ASSESSMENTS Each Contractor shall take out and pay for all permits, fees and inspections required by State and/or local Authorities which pertains to his portion of work.

1.25 SPECIAL INSPECTIONS The Contractor shall insure conformance with the 2012 IBC as amended by the City of Omaha Building Code. Special inspections, as defined and required by the above code, shall be performed by an independent inspection agency approved by the Building Official to perform such work.' The designated Special Inspector shall also be approved by the Architect and Engineer of Record and shall be paid by

The Special Inspector shall observe the work for conformance with approved design drawings and specifications and shall bring all discrepancies to the immediate attention of the Contractor for correction. Uncorrected discrepancies shall be reported to the Building Official and the Architect/Engineer of Record.

The Special Inspector shall furnish inspection reports to the Building Official and the Architect/Engineer of Record at monthly intervals and shall submit a final signed report at the project completion stating whether the work inspected was, to the best of his knowledge, in accordance with approved design drawings and specifications.

END OF SECTION

SECTION 00 73 16 INSURANCE REQUIREMENTS

I.OI GENERAL

A. Contractor shall purchase and maintain insurance to protect Contractor and Owner against all hazards herein enumerated throughout duration of contract. Said insurance shall be by an insurance company approved by insurance commissioner of Nebraska. All policies shall be in form and amounts with companies satisfactory to Owner.

B. "Insurance", "insurance policy", or "insurance contact" when used in these specifications shall have the same meaning as "insurance policy" provided, however, that when "insurance" as demonstrated by an "insurance policy" or "insurance contract" is required to be posted, presented or demonstrated to exist by any person or other entity by virtue of any contract, bid request, specification, rule or other action or request of Owner, said "insurance policy" or "contract insurance" shall provide coverage on an occurrence basis and not on a claims-made basis and person or other entity shall provide evidence of such coverage through an "insurance policy", "contract of insurance" or $^{\text{T}}$ certification of insurance" which clearly discloses on its face coverage on an occurrence basis, except as to insurance coverage required for hazardous materials abatement including removal of lead, asbestos, PCBs or the like, which may be provided on a claims-made basis when it is demonstrated to satisfaction of Owner that occurrence coverage is not reasonably available.

.02 INSURANCE REQUIREMENTS

Contractor shall purchase and maintain such insurance as will protect Contractor from claims set forth below which may arise out of or result from Contractor's operations under contract, whether such operations be by Contractor or by any subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

A. Claims under worker's compensation, disability benefit and other similar employee benefits acts. B. Claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employee.

C. Claims for damages because of bodily injury, sickness or disease, or death of any person other than

D. Claims for damages insured by usual personal injury liability coverage which are sustained: E. Claims for damages other than to work itself, because of injury to or destruction of tangible

F. Claims for damages because of bodily injury or death of any person or property damage arising out of ownership, mainténance, or use of any motor vehicle. 6. Wherever term ©150△ appears in these specifications, an equivalent form or better may be

1.03 LIMITS OF LIABILITY Insurance required by Section II.I - Insurance, shall be written as follows:

property, including loss of use resulting therefrom.

A. Workers Compensation and Employers' Liability Insurance, as prescribed by Nebraska law with

minimum limits shown below covering Employers' Liability limits. Bodily injury by accident \$500,000 each accident Bodily injury by disease \$500,000 each accident

Bodily injury by disease \$500,000 policy limit USL&H and/or Jones Act coverage shall be provided where applicable

B. Commercial General Liability Insurance, which shall be no less comprehensive and no more restrictive than coverage provided by a standard form Commercial General Liability Policy (ISO CGOOOlO798) with standard exclusions "a" through "o", with minimum limits shown below covering bodily injury, property damage and personal injury. Any additional exclusions shall be identified on certificate of insurance and shall be subject to review and approval of Owner:

General Aggregate Limit \$2,000,000 Products Completed Operations Aggregate Limit \$2,000,000 Personal and Advertising Injury Limit \$1,000,000 Each Occurrence Limit \$1,000,000 \$50.000 Fire Damage Limit (any one fire) Medical Damage Limit (any one person)

This insurance must include the following features:

I. Coverage for all premises and operations. Policy shall be endorsed to provide the aggregate per project endorsement.

\$5,*000*

2. Operations by independent contractors.

3. Contractual liability coverage: If work to be performed by Contractor includes construction or trestle, tracks, road beds, tunnel, underpass, or crossing, then such policy will include a Railroad's Contractual Liability Endorsement (150 CG 24 17 10 93; see Figure 1.2).

4. Policy shall not exclude coverage for XCU (explosion, collapse, underground) 5. Any fellow employee exclusions shall be deleted as it applies to managerial and supervisory

6. Policy shall not contain a total or absolute pollution exclusion. Coverage shall be provided for pollution exposures arising from products and completed operations. (As per standard CGOOOI Pollution Exclusion or equivalent)

7. Products and completed operations shall be maintained for duration of work and shall be further maintained for a minimum period of three years after final acceptance and payment, unless modified in the Special Provisions. Completed Operations shall provide coverage for work performed by subcontractors.

8. Contractual liability coverage shall be included and shall not be amended by any limiting endorsements. Defense costs shall be in addition to policy limits.

9. In liev of including Owner as an additional insured on Contractor's commercial general liability insurance, Owner, at its option, may require Contractor to provide an Owner's protective liability policy by special provision, or máy allow Contractor to provide an Owner's protective liability policy by change order. If an Owner's protective liability policy is provided, minimum coverage, limits and exclusions shall be as shown above and Contractor's premium cost of obtaining such insurance shall be considered incidental to work and shall not be subject to reimbursement by

10. Coverage for any EIFS-related work performed by contractor or any tiers of subcontractors

II. Coverage shall be on an occurrence form and not claims made.

\$5,000,000 per occurrence and aggregate.

Owner through special supplemental conditions.

C. Commercial automobile liability insurance, which shall be at least as broad as and no less restrictive than ISO form CA 0001, covering all owned, non-owned, hired and leased vehicles with a minimum combined single limit for bodily injury and property damage of \$1,000,000 per accident. Insurance must include contractual liability coverage. Any fellow employee exclusion shall be deleted. Policy shall provide auto cargo pollution endorsement (ISO CA 99 48), if requested in special provisions.

D. Railroad protective liability, if required by Owner by special provision, or by an affected railroad, Contractor shall procure and maintain railroad protective liability insurance namina railroad as insured with minimum limit for bodily injury and property damage liability of \$2,000,000 per occurrence, \$6,000,000 aggregate, or with such limits as railroad shall require. Original of said policy shall be furnished to railroad and a certified copy of said policy shall be furnished to Owner prior to any construction or entry upon railroad easement premises by Contractor.

E. Umbrella/excess insurance: Policy shall provide liability coverage in excess of the specified Employers Liability, Commercial General Liability, and Commercial Auto Liability with limits of at least

F. At Owner's option, minimum insurance limits specified above may be increased by special provision.

This increase may be satisfied with a combination of primary and umbrella/excess insurance. G. Additional insured endorsements: The Contractor shall cause the commercial general liability and Umbrella policies required by the contract documents to include on a primary and non-contributory basis (1) the Owner as additional insured for claims caused in whole or in part by the Contractor's nealigent acts or omissions during the contractors operations; (2) the owner as additional insured for Completed Operations for 2 years following substantial completion for claims caused in whole or in

part by the Contractor's negligent acts or omissions, (3) the Architect and Architect's Consultants as

additional insured using ISO Form CG 2032 0704 or equivalent; (4) other parties as identified by

H. Contractor waives all rights of subrogation against Owner, Architect and Architect's Consultants and shall cause its insurers for Commercial General Liability, Workers Compensation, Auto Liability, and Umbrella Liability to endorse said policies to waive all rights of subrogation against Owner, Architect and Architect's Consultants with respect to losses arising out of or in connection with the Work.

I. Certificates of insurance acceptable to the Owner, and executed by a licensed representative of the participating insurer, shall be filed with the Owner and Architect prior to commencement of the work and thereafter upon renewal or replacement of each required policy of insurance. If required by Owner, copies of endorsement and/or policies shall be provided. Contractor shall promptly notify Owner of any cancellation, non-renewal, reduction of limits, or material modification of any policies o insurance reauired bu this gareement. Contractor shall cause all policies of insurance to be endorsed to provide Owner 30 days notice prior to cancellation (10 days for non-payment of premium). An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section II.I.2. Failure of Owner to demand such certificate(s) or other evidence of full compliance with these insurance requirements or failure of Owner to identify any deficiency from evidence provided by Contractor shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

END OF SECTION

DEMOLITION PART I GENERAL I.OI SUMMARY

SECTION 02 41 00

The general provisions of the Contract, including General and Supplementary Conditions and General Requirements (if any) apply to the work specified in this section. 1.02 DESCRIPTION OF WORK

Extent of demolition work is indicated on the drawings.

Demolition requires the selective removal and subsequent off site disposal of the following: Portions of building structure indicated on drawings and as required to accommodate new construction.

Removal of interior partitions as indicated on drawings. Removal of mechanical and electrical systems and equipment, as noted.

Removal and protection of existing fixtures and equipment items indicated "salvage" Removal of all demolished materials from the site. 1.03 SUBMITTALS

Storage or sale of removed items on site will not be permitted.

element to be demolished, and adjacent facilities or work to remain.

Submit schedule indicating proposed methods and sequence of operations for selective demolition work to Architect for review prior to commencement of work. Include coordination for shut-off, capping, and continuation of utility services as required, together with details for dust and noise control protection. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations. Co-ordinate with Owner's continuing occupation of portions of existing building.

A. Occupancy: Owner will be continuously occupying areas of the building immediately adjacent to areas of selective demolition. Conduct demolition work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72

hours advance notice to Owner of demolition activities which will severely impact Owner's normal operations.

B. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished. Conditions existing at time of commencement of contract will be maintained by Owner insofar as practicable. However, variations within structure may occur by Owner's removal and salvage operations prior to start of selective demolition work. C. Partial Demolition and Removal: Items indicated to be removed but of salvage value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed.

D. Protection: Provide temporary barricades and other forms of protection as required to protect Owner's personnel and general public from injury due to demolition work. Provide protective measures as required to provide free and safe passage of Owner's personnel and general public to and from occupied portions of building. Maintain required exits at all times. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or

Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.

Protect floors with suitable coverings when necessary Construct temporary insulated solid dustproof partitions where required to separate areas where noisy or extensive dirt or dust operations are performed. Equip partitions with dustproof doors and security locks if required. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces, and installation of new construction to insure that no water leakage or damage occurs to structure or interior

Remove protections at completion of work. E. Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner.

F. Traffic: Conduct demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close, block or otherwise obstruct streets, walks or other occupied or used facilities without written permission from Owner. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

6. Explosives: Use of explosives will Not be permitted. H. Utility Services: Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition

Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities. Standards: Perform all operations in compliance with NFPA 241, Standard for Safeguarding Construction, Alteration, and

Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising

and scattering in air to lowest practical levél. Comply with governing regulations pertaining to environmental protection. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution. PART 2 PRODUCTS (NOT USED)

Provide interior and exterior shoring, bracing or support to prevent movement, settlement or collapse of structures to be

Cease operations and notify the Architect immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations. Erect and maintain dust-proof partitions and closures as required to prevent spread of dust or fumes to occupied portions of

Provide weatherproof closures for exterior openings resulting from demolition work.

Locate, identify, stub off and disconnect utility services that are not indicated to remain. Provide by-pass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of seven (7) days advance notice to Owner if shut-down of service is necessary.

Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on drawings in accordance with demolition schedule and governing regulations. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power-driven impact tools.

Locate demolition equipment throughout structure and promptly remove debris to avoid imposing excessive loads on supporting Provide services for effective air and water pollution controls as required by local authorities having jurisdiction. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to

demolition schedule as necessary to continue overall job progress without delay. Patch all areas damaged or opened up by demolition including walls and ceilings exposed by removal of walls, cabinets or other items. All patching shall be in the same materials and finishes as adjacent

Architect in written, accurate detail. Pending receipt of directive from Architect rearrange selective

3.04 SALVAGE MATERIALS Where indicated on Drawings as "Salvage-Deliver to Owner", or listed below carefully remove indicated items, clean, store and turn over to Owner and obtain receipt. Where indicated on the Drawings as "Salvage-Reinstall", carefully remove indicated items, clean, store and reinstall at appropriate time during

Remove debris, rubbish and other materials resulting from demolition operations from building site. Transport and legally dispose of materials off site. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling and protection against exposure or environmental

Burning of removed materials is <u>Not</u> permitted on project site. 3.06 CLEAN-UP AND REPAIR

surfaces soiled or damaged by selective demolition work.

3.05 DISPOSAL OF DEMOLISHED MATERIALS

Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave interior areas broom clean. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or

END OF SECTION

PART I - GENERAL

RELATED DOCUMENTS Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division°l Specification Sections, apply to this Sectio

This Section includes the following Interior non-load-bearing wall framing Exterior soffit framing.

Minimum Uncoated Steel Thickness: Minimum uncoated thickness of cold-formed framing delivered to the Project site shall be not less than 95 percent of the thicknesses indicated. Lesser thicknesses shall be permitted at bends due to cold forming. Producer: Entity that produces steel sheet coll fabricated Into cold-formed members.

All documents transmitted for submittal review are to be in electronic (pdf) format and transmitted via email. B. Product Data: For each type of cold-formed metal framing product and accessory indicated.

Shop Drawinas: Show layout, spacinas, sizes, thicknesses, and types of cold-formed metal framina; fabrication; and fastening and anchorage details, including mechanical fasteners. Show reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining Work. D. Mill certificates signed by steel sheet producer or test reports from a qualified independent testing agency indicating steel sheet

E. Welding Certificates: Copies of certificates for welding procedures and personnel. F. Product Test Reports: From a qualified testing agency indicating that each of the following complies with requirements, based on

comprehensive testing of current products: Expansion anchors Power-actuated anchors Mechanical fasteners. Vertical deflection clips

16 DELIVERY STORAGE AND HANDLING

2. Dietrich Industries, Inc.

Miscellaneous structural clips and accessories

2.3 INTERIOR NON-LOAD-BEARING WALL AND EXTERIOR SOFFIT FRAMING

Minimum Uncoated-Steel Thickness: Matching steel studs.

Flange Width: 1-1/4 inches (32 mm) unless noted otherwise.

Installer Qualifications: An experienced installer who has completed cold-formed metal framing similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service

Mill certificates signed by steel sheet producer or test reports from a qualified independent testing agency indicating steel sheet complies with requirements, including uncoated steel thickness, yield strength, tensile strength, total elongation, chemical requirements, ductility, and galvanized-coating thickness. g Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM É 329 to conduct the testing indicated, as documented according to ASTM E 548.

Welding: Qualify procedures and personnel according to AWS° DI.1, "Structural Welding Code-Steel," and AWS° DI.3, "Structural Welding Code-Sheet Steel. AISI Specifications: Comply with AISI's "Specification for the Design of Cold-Formed Steel Structural Members" for calculating structural characteristics of cold-formed metal framing.

A. Protect cold-formed metal framing from corrosion, deformation, and other damage during delivery, storage, and handling.

B. Store cold-formed metal framing, protect with a waterproof covering, and ventilate to avoid condensation. PART 2 - PRODUCTS 2.I MANUFACTURERS A. Manufacturers: Subject to compliance with requirements, provide cold-formed metal framing by one of the following: I. Clark Steel Framing Industries.

3. Approved equal. 2.2 MATERIALS A. Steel Sheet: ASTM A 653/A 653M, structural steel, zinc coated, of grade and coating as follows: l. Grade: 33 for minimum uncoated steel thickness of 0.0428 inch (1.09 mm) and less; 50, Class I or 2 for minimum uncoated steel thickness of 0.0538 inch (1.37 mm) and greater. 2. Coating: 660 (ZI80).

Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges, complying with STM C 955, and as follows: Minimum Uncoated-Steel Thickness: As indicated on the structural drawings. Flange Width: As indicated on the structural drawings. B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with unstiffened flanges, complying

Vertical Deflection Clips: Manufacturer's standard bypass or head clips, capable of accommodating upward and downward vertical displacement of primary structure. 2.4 FRAMING ACCESSORIES Fabricate steel-framing accessories of the same material and finish used for framing members, with a minimum yield strength of

33.000 psi (230 Mpa). Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated, as follows: Bracing, bridging, and solid blocking. Web stiffeners

Foundation clips Gusset plates. Stud kickers, knee braces, and airts Joist hangers and end closures 10. Backer plates.

End clips.

with ASTM C 955, and as follows:

ANCHORS, CLIPS, AND FASTENERS A. Steel Shapes and Clips: ASTM A 36/A 36M, zinc coated by hot-dip process according to ASTM A 123. B. Anchor Rods: ASTM F 1554, Grade 36, threaded carbon-steel hex-headed, bolts and carbon-steel nuts; and flat, hardened-steel

washers; zinc coated by hot-dip process according to ASTM A I53/A I53M, Class C. Expansion Anchors: Fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 5 times design load, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency. Power-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 10 times design load, as determined by testing per ASTM E 1190 conducted

Mechanical Fasteners: Corrosion-resistant-coated, self-drilling, self-threading steel drill screws. . Head Type: Low-profile head beneath sheathing, manufacturer's standard elséwhere. Welding Electrodes: Comply with AWS standards.

2.6 MISCELLANEOUS MATERIALS A. Galvanizing Repair Paint: ASTM A 780.

parts sand, by volume, with minimum water required for placement and hydration. Nonmetallic, Non-shrink Grout: Premixed, nonmetallic, noncorrosive, nonstaining grout containing selected silica sands, portland cement, shrinkage-compensating agents, and plasticizing and water-reducing agents, complying with ASTM C 1107, with fluid consistency and 30-minute working time. A. Fabricate cold-formed metal framing and accessories plumb, square, and true to line, and with connections securely fastened, according to manufacturer's written recommendations and requirements in this Section.

Fabricate framing assemblies using jigs or templates. Cut framing members by sawing or shearing; do not torch cut Fasten cold-formed metal framing members by welding. Wire tying of framing members is not permitted. Comply with AWS DI.3 requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work. . Fasten cold-formed metal framing members by welding or screw fastening, as standard with fabricator. Wire tying of framing a. Comply with AWS DI.3 requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.

b. Locate mechanical fasteners and install according to Shop Drawings, with screw penetrating joined members by not less than

three exposed screw threads. Fasten other materials to cold-formed metal framing by welding, bolting, or screw fastening, according to Shop Drawings. Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery, and erection stresses. Lift fabricated assemblies to prevent damage or permanent distórtion. Fabrication Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in Spacing: Space individual framing members no more than plus or minus 1/8 inch (3 mm) from plan location. Cumulative error shall

not exceed minimum fastening requirements of sheathing or other finishing material 2. Squareness: Fabricate each cold-formed metal framing assembly to a maximum out-of-square tolerance of 1/8 inch (3 mm). PART 3 - EXECUTION

conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected. Before sprayed fire-resistive materials are applied, attach continuous angles, supplementary framing, or tracks to structural members indicated to receive sprayed fire-resistive materials.

After applying sprayed fire-resistive materials, remove only as much of these materials as needed to complete installation of old-formed framing without reducing thickness of fire-resistive materials below that are required to obtain fire-resistance rating indicated. Protect remaining fire-resistive materials from damage. C. Grout bearing surfaces uniform and level to ensure full contact of bearing flanges or track webs on supporting concrete or masonry

construction. 3.3 INSTALLATION, GENERAL A. Cold-formed metal framing may be shop or field fabricated for installation, or it may be field assembled. B. Install cold-formed metal framing according to ASTM C 1007, unless more stringent requirements are indicated.

Install shop- or field-fabricated, cold-formed framing and securely anchor to supporting structure.

I.OI SUMMARY

I. Bolt or weld wall panels at horizontal and vertical junctures to produce flush, even, true-to-line joints with maximum variation in plane

The work required under this heading shall include all labor, material, equipment and services necessary for and reasonably and true position between fabricated panels not exceeding 1/16 inch (1.6 mm). Install cold-formed metal framing and accessories plumb, square, and true to line, and with connections securely fastened, according to manufacturer's written recommendations and requirements in this Section. 1. Cut framing members by sawing or shearing; do not torch cut. Fasten cold-formed metal framing members by welding or screw fastening, as standard with fabricator. Wire tying of framing brand stamped clearly thereon.

a. Comply with AMS DI.3 requirements and procedures for welding, appearance and quality of welds, and methods used in

correcting welding work three exposed screw threads. Install framing members in one-piece lengths, unless splice connections are indicated for track or tension members. Install temporary bracing and supports to secure framing and support loads comparable in intensity to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed 2.01 MATERIALS and permanent connections to framing are secured.

6. Do not bridge building expansion and control joints with cold-formed metal framing. Independently frame both sides of joints.

Install insulation in built-up exterior framing members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work. Fasten hole reinforcing plate over web penetrations that exceed size of manufacturer's standard punched openings.

of 1/8 inch in 10 feet (1:960) and as follows: . Space individual framing members no more than plus or minus 1/8 inch (3 mm) from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials. 3.4 INTERIOR NON-LOAD-BEARING WALL AND EXTERIOR SOFEIT INSTALLATION Install continuous tracks sized to match studs. Align tracks accurately and securely anchor to supporting structure as indicated.

 Stud Spacing: As indicated. Set studs plumb, except as needed for diagonal bracing or required for non-plumb walls or warped surfaces and similar D. Isolate non-load-bearing steel framing from building structure to prevent transfer of vertical loads while providing lateral

Fasten both flanges of studs to top and bottom track, unless otherwise indicated. Space studs as follows:

I. Connect vertical deflection clips to bypassing and infill studs and anchor to primary building structure.

H. Field and shop welds will be subject to inspection and testing.

I. Testing agency will report test results promptly and in writing to Contractor and Architect.

Remove and replace Work that does not comply with specified requirements.

Install horizontal bridging in curtain-wall studs, spaced in rows indicated on Shop Drawings but not more than 54 inches (1370 mm) 1. Top Bridging for Single Deflection Track: Install row of horizontal bridging within 12 inches (300 mm) of single deflection track. 3. width and thickness matching studs. Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges. a. Install solid blocking at centers indicated . Bridging: Cold-rolled steel channel, welded or mechanically fastened to webs of punched studs. 3. Bridging: Combination of flat, taut, steel sheet straps of width and thickness indicated and stud-track solid blocking of width and

thickness to match studs. Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges. Install miscellaneous framing and connections, including stud kickers, web stiffeners, clip angles, continuous angles, anchors, fasteners, and stud girts, to provide a complete and stable curtain-wall-framing system. Testing: Owner will engage a qualified independent testing agency to perform field quality-control testing.

Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of corrected Work with Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed metal framing with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

cold-formed metal framing. Paint framing surfaces with same type of shop paint used on adjacent surfaces.

Touch-up Painting: Wire brush, clean, and paint scarred areas, welds, and rust spots on fabricated and installed prime-painted,

Protect paper-surfaced aupsum sheathing that will be exposed to weather for more than 30 days by covering exposed exterio surface of sheathing with a securely fastened air-infiltration barrier. Apply covering immediately after sheathing is installed.

D. Protect cutouts, corners, and joints in sheathing by filling with a flexible sealant or by applying tape recommended by sheathing manufacturer at time sheathing is applied.

Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure cold-formed metal framing is without damage or deterioration at time of Substantial Completion.

PART I GENERAL

Work includes all work required for normal rough carpentry including but not limited to structural lumber, non-structural lumber. blocking, nailers, ground strips, plates, cants, curbs, plywood and fasteners required.

. Lumber Standards: Comply with PS 20 and with applicable rules of the respective grading and inspecting agencies for species and products indicated

. Plywood Product Standards: Comply with PS 1-74 (ANSI 199.1) or, for products not manufactured under PS 1-74 provisions, with applicable APA Performance Standard for type of panel indicated. Identify each plywood panel with the applicable APA Performance Standard for type of panel with the appropriate APA Trademark. Flame Spread: Material, which is pressure treated for fire retardance, shall have a flame spread of 25 or less when

tested under ASTM E 84, NFPA 255, or UL 723. Furnish two (2) copies of a Certification stating that the above D. AMPI Quality Mark: Each piece of lumber which is pressure treated shall bear the American Wood Preservers Institute

Wality Mark to indicate conformance with the AMPI Standard hereinafter specified. The information required by the American Wood Preservers Institute Standard must appear on the label. E. Acceptable manufacturers of pressure treatment materials are those listed by the American Wood Preservers Institute in their current directory as suppliers of the pressure-treated wood products

1.03 DELIVERY, STORAGE, AND HANDLING Immediately upon delivery to job site, place materials in area protected from weather. Store materials a minimum of 6" above ground on framework or blocking and cover with protective waterproof covering, providing for adequate air circulation. Do not store seasoned materials in wet or damp portions of building.

A. Lumber shall be 545, kiln dried with 19 percent maximum moisture content at time of dressing. Lumber shall be grade stamped in accordance with the latest edition of the standard grading rules of WWPA or the association under whose rules' it is graded. Exposed members shall be exposed for straightness.

All roof curbs, parapet caps, roof nailers, roof cants, and all other miscellaneous blocking used in the roofing installation shall be untreated Western Red Cedar, Grade No. 2 or better, pressure treated No. 2 or better Douglas Fir our Southern Pine. Pressure-treat with water-borne preservatives complying with AWPB LP-2. After treatment, kiln-dry to a maximum moisture content of 15%.

Misce laneous Framing and Blocking: Construction, Douglas Fir

Boards: Select, White Pine

B. Interior plywood shall be A-A, G-I, Exposure I APA Plywood where both sides are exposed; A-D where only one side is exposed; óther grades as noted. Exterior plywood shall be A-C, EXT-APA, Exposuré l

C. Cedar siding shall be 1 x 6, "Aye" and Better, T & G, cedar siding.

D. Fasteners and anchorages shall be of the size, type, material and finish as indicated or as recommended by applicable standards complying with applicable Federal Specifications for nails, (staples), screws, bolts, nuts, washers and anchoring devices. Metal hangers and framing anchors shall be of the size and type recommended by the manufacturer for each use including recommending nails. Where rough carpentry work is exposed to the weather, in ground contact or in areas of

high humidity, provide fasteners and anchorages with a hot-dip zinc coating (ASTM A 153). PART 3 EXECUTION

B. Carefully lay out, cut, fit and install rough carpentry items. Use sufficient nails, spikes, screws and bolts to insure rigidity and permanence. Drive nails perpendicular to grain of wood in lieu of toenailing, where feasible. Install work to true lines, plumb and level, except as indicated otherwise. "Simpson" type connectors shall be used to fasten all suspended framing

conditions are corrected. Beginning work constitutes acceptance of conditions as satisfactory.

Provide wood blocking/backing in walls for support of required hardware and accessory items. Verify exact location at time of construction. Anchorage and Framing: All wood framing members shall be bolted to steel, concrete or masonry. In concrete, the bolts shall be built in or expansion bolts shall be installed after concrete is placed. In masonru bolts may be built in as

required, or toggle bolts shall be used. Wood bucks shall be anchored to masonry by meáns of benť anchors 12" x 12" x

A. Verify installation conditions as satisfactory to receive work of this section. Do not install until any unsatisfactory

materials to the rough construction concrete, masonry and elsewhere as required by the various details. "Simpson" type connectors shall be used to fasten all suspended framing members. Wood Furrina: Provide wood furrina strips where and as called for on the drawings and as required. Furring shall be placed as shown and shall be shimmed cut to true and even surface. Strips shall be secured by toggle bolts, built-in

Wood Blocking: The Contractor shall furnish and set all wood blocking, etc., required in the securing of all finished

metal plugs or other devices, as approved. Wood plugs shall not be used. END OF SECTION

'4" screwed to buck with three No. 12 wood screws 1-1/4" long.

PART I GENERAL

1.03 STORAGE AND PROTECTION

All millwork and finish shall be:

I.OI SUMMARY incidental to the furnishing and installing of all millwork, cabinet hardware, paneling, trim, window sills, plastic laminate and other items as shown on the drawings and as specified herein.

Shall be submitted for approval for all casework or mill fabricated items. Fabrication shall not begin until approved shop drawings are returned.

A. Protected against damage. B. Stored in dry and well ventilated areas.

C. Not subjected to extreme changes of temperature or humidity.

B. Hardwood: Hardwood lumber or hardwood plywood shall be white oak, where noted. C. Softwoods shall be No. I clear White Pine or Fir unless otherwise noted. B. Cement Grout: Portland cement, ASTM C 150, Type 1; and clean, natural sand, ASTM C 404. Mix at ratio of 1 part cement to 2-1/2 2. Plywood: Interior plywood shall be Grade AA, where both sides are exposed and grade AC where one side is exposed

to view unless otherwise specified. E. Finish: All exposed surfaces of wood finish shall be mill-sanded. F. Plastic Laminate: Shall be NEMA No. LD3, Class I (high pressure); 0.050" general-purpose type for counter tops, 0.0 post-forming type where post forming is required, 0.032" vertical-surface type for cabinet work, and 0.020" backup sheets for concealed back face where required. All plastic laminate shall be standard colors or patterns as selected by the Architect. New plastic laminate may be placed over existing if the existing plastic laminate does not have any loose

A. Moisture Content for hardwood shall not exceed 6%. Moisture content for softwoods shall not exceed 12%.

spots, chips, or other damage which would affect the appearance of the completed product. A. Interior millwork and trim shall conform to design and details shown. Where practicable, millwork shall be assembled at the mill. All millwork and trim shall be sanded smooth and free from machine marks and tool marks that might show

3. Trim members shall be in single lengths without splicing. Running finish shall be in long lengths and jointed only where solid astening can be made. End joints shall be cut on the diagonal, but not butted. External and internal angles and corners Blocking shall be provided for securing or supporting work in place. No trim shall be installed before being back-primed. Contacts with adjoining work shall be scribed as required.

D. All millwork exposed to view shall be hardwood unless otherwise called for. Concealed framing members shall be softwood of sound grade, except that wood glides for drawers shall be of oak or birch. Drawer sides and backs shall be of oak or birch. Drawer bottoms and cabinet backs shall be one fourth inch (1/4") thick tempered hardboard (masonite) or approved E. All wood used in millwork, paneling or trim shall be clear and all heartwood. Sapwood will be accepted only if concealed, Examine supporting substrates and abutting structural framing for compliance with requirements for installation tolerances and other painted or specific approval is received from the Architect.

END OF SECTION

A. PREPARATION Precondition surfacing materials and surfaces to receive surfacing materials in accordance with manufacturer's printed

Install materials in accordance with manufacturer's printed instructions.

as specified herein.

1.02 DELIVERY, STORAGE, AND HANDLING

voids are sealed prior to work being covered up.

accordance with the insulation manufacturer's recommendations

Fit insulation to form a complete insulation blanket around indicated areas.

PART I GENERAL

incidental to the proper complete installation of all rigid board and blanket insulation as shown or scheduled on the drawings and

A. All materials shall be delivered to the job in the original packages with seals unbroken and with manufacturer's name and the B. Scrap material and cuttings shall be removed from the project daily. Locate mechanical fasteners and install according to Shop Drawings, with screw penetrating joined members by not less than C. Store insulation material to prevent it from becoming wet, soiled or covered with ice or snow. Protect rigid insulation from

> a. Rigid Board Insulation shall be extruded polystyrene board of the thickness shown. The rigid insulation board shall have a five 5) year aged average thermal conductivity, "K" factor, of .20, and an average compressive strength of 25 psi and shall be one (1) Styrofoam SM, Dow Chemical Company, Foamular, U.C. Industries, Amofoam, Amoco Foam Products Company

> B. Kraft-Faced Blanket Insulation shall consist of glass fiber and resinous binders formed into flexible blankets with asphalt and

. Spray Foam Insulation shall be a two-component, quick-cure polyurethane foam, intended for filling cavities, penetrations and

cracks, such as Froth-Pak foam sealant manufactured by Dupont. Contractor shall review construction periodically to ensure that all

resistance of R-19 for six inch (6") blanket, R-13 for three and one half inch (3-1/2") blankets, and as shown on the drawings, and Erection Tolerances: Install cold-formed metal framing level, plumb, and true to line to a maximum allowable tolerance variation shall be one (1) of the following types and manufacturer: Owens-Corning Fiberglas Corp., Schuller, CerainTeed Where the insulation is to be left exposed, substitute foil-faced blankets for kraft-faced.

kraft paper vapor barriers laminated to one face with one inch (I") flanges on long edges. Blankets shall have an installed

D. Adhesives, Mechanical Fastenings and Accessories shall be those recommended by the insulation manufacturer. E. Flame Spread Rating of all insulation not covered by fire resistive material, shall be 25 or less. 3.01 INSTALLATION

A. Install building insulation to comply with thermal and/or acoustical/sound control requirements. Fit insulation to conditions

B. Install rigid insulation directly to faces of concrete walls, progressively as metal furring channels are attached to the wall, in

Position flanged blankets as recommended by manufacturer for application Position vapor retarders on inside (heated side in winter) of insulation blanket Install a combination of flat, taut, steel sheet straps of width and thickness indicated and stud or stud-track solid blocking of 4. Coordinate insulation over or within three inches of lighting fixtures, fans, or other heat-generating electrical devices with manufacturer's recommendations and regulations of authorities having jurisdiction.

7/24/24

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factory-applied finish.

5. UL-Classified and FM-approved for direct to steel deck applications. sub-contracted to others. 6. Ozone Depletion Potential: Zero; made without CFC or HCFC blowing agents. A. Install frames plumb, square, straight and true: rigidly secured in place and properly braced. Anchor frames securely to LO4 PRODUCT DELIVERY STORAGE AND HANDLING 7. Recycled Content: 19 percent post-consumer and 15 percent pre-consumer(post-industrial), average. All sheet metal shall be stored flat in areas protected from weather, wind and other conditions which might cause damage to loor and at jambs. Weld all field joints and grind smooth, to form an unbroken finished surface. Where frames are 8. Acceptable Product: ISO 95+ GL Polyisocyanurate Insulation by Elevate. the form or finish of the metal. All damaged materials are to be removed and replaced with new material. anchored with bolts, bolts shall be countersunk, and surface shall be made smooth. Hang hollow metal doors, preserving all clearances. Install miscellaneous items as shown on the drawings. B. High Density Polyisocyanurate Cover Board: Non-combustible, water resistant, high density closed cell polyisocyanurate core with coated glass mat facers, with the following characteristics: B. Clearances for labeled doors shall conform to NFPA Publications 80 and 101 with applicable local codes. . Size: 48 inches by 96 inches, nominal. A. Metal Flashing, Metal Fascia: shall be formed 24 gauge Una-Clad sheet metal to the profile shown on the drawings. a. Exception: Board to be attached using adhesive or asphalt may be no larger than 48 inches by 48 inches, nominal END OF SECTION Color shall be as selected 2. Thickness: 1/2 inch. 3. Thermal Value: R-value of 2.5, when tested in accordance with ASTM C518 and ASTM C171. B. Provide all other incidental and accessory materials, methods, tools and equipment. Include all materials of sheet metal, 4. Surface Water Absorption: 3 percent, maximum, when tested in accordance with ASTM C209. flashing, and trim required. PREFINISHED WOOD DOORS 5. Compressive Strength: 80 psi, when tested in accordance with ASTM DI621. C. Coating and tapes, for isolation of dissimilar materials, shall meet the recommendations of the sheet metal manufacturer 6. Densitu: 5 pcf, when tested in accordance with ASTM DI622/DI622M. PART I - GENERAL 7. Factory Mutual approved for use with FM 1-60 and 1-90 rated roofing assemblies. Copper and aluminum surfaces or dissimilar surfaces to be placed in contact with each other shall each be coated with paints as specified in Aluminum Construction Manual published by The Aluminum Association, latest edition. 8 Mold Growth Resistance: Passina ASTM D3273. 9. Acceptable Product: ISOGARD HD Cover Board by Elevate. Furnish and install all types of wood doors as shown and scheduled on the drawings and specified in this section. PART 3 EXECUTION C. Commencement of work by Contractor shall constitute acknowledgement by Contractor that this specification can be satisfactorily executed, under the project conditions and with all necessary prerequisites for warranty acceptance by roofing membrane manufacturer. No modification of the Contract Sum will be made for failure to adequately examine the Contract Documents or the Insulation Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; 3.01 FABRICATION Submit shop drawings to Architect for approval of all doors. These submittals shall include door manufacturer's construction details use only fasteners furnished by roof membrane manufacturer. Shop fabricate work to greatest extent possible. Comply with details shown, and with applicable requirements of SMACNA specifications and statement of avarantee. Door manufacturer shall be approved by the Architect. Adhesive for Insulation Attachment: Type as required by roof membrane manufacturer for roofing system and warranty to be rchitectural Sheet Metal Manual" and other recognized industry practices. Fabricate for waterproof and weather-resistant provided; use only adhesives furnished by roof membrane manufacturer. performance and with expansion provisions for running work, sufficient to permanently prevent leakage, damage or deterioration of the work. Form work to fit substrates. Take all steps necessary to form exposed copper sheet metal work without A. Comply with the applicable requirements of the following standards unless otherwise indicated: oil-canning, buckling, tool marks and stains, true to line and levels a's indicated, with exposed edges fòlded back to form hems. 2.05 ACCESSORY MATERIALS Provide uniform neat seams without exposure of solder and sealant. Follow with metal manufacturer's recommendations of A. Wood Nailers: PS 20 dimension lumber, Structural Grade No. 2 or better Southern Pine, Douglas Fir; or PS 1, APA Exterior Grade tinning, soldering, welding, and cleaning flux from metal. B. Section 07 61 00 - Sheet Metal Flashing and Trim: Formed metal flashing and trim items associated with roofing. pluwood: pressure preservative treated . Width: 3-1/2 inches, nominal minimum, or as wide as the nailing flange of the roof accessory to be attached to it. ANSI/NWMA I.S.I, "Industry Standard for Wood Flush Doors" published by the National Woodwork Manufacturers Association (NWMA). 2. Thickness: Same as thickness of roof insulation. Installer shall advise contractor of required procedures for protection of flashings, roofing and sheet metal work during AWI Quality Standard: Section 1300 of "Architectural Woodwork Quality Standards", Fourth Edition, published by the Architectur construction, to ensure work will be without staining, damage or deterioration. PART 3 - INSTALLATION Woodwork Institute (AWI). Designations for grade and core construction under types of doors refer to this standard. END OF SECTION B. Obtain doors from a single manufacturer to ensure uniformity in quality of appearances and construction, unless otherwise indicated. 3.01 GENERAL A. Roofing Terminology: Refer to ASTM DIO79 for definition of terms related to roofing work not otherwise defined in the section. A. Install roofing, insulation, flashings, and accessories in accordance with roofing manufacturer's published instructions and C. Where noted on the drawinas, furnish doors bearing the label of Underwriters Laboratories, Inc., of Factoru Mutual Engineering recommendations for the specified roofing system. Where manufacturer provides no instructions or recommendations, follow good Corporation, indicating the applicable rating and wall opening classification specified. Doors shall bear labels from the same agency PART I GENERA roofing practices and industry standards. Comply with federal, state, and local regulations. A. ASTM CI289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2017. 1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING B. Obtain all relevant instructions and maintain copies at project site for duration of installation period. Include all materials, labor, equipment and incidentals for the completion of work shown, specified, or otherwise required Wood doors shall not be delivered until the building or storage area is enclosed and sufficiently dry so that doors will not be damaged by for both interior and exterior of the building. C. Do not start work until Pre-Installation Notice has been submitted to manufacturer as notification that this project requires a excessive changes in moisture content. Identify each door as to type and location. For the purpose of this specification all EXTERIOR work shall receive SEALANT; all INTERIOR work shall receive a manufacturer's warranty. CAULKING COMPOUND. First-class workmanship only will be acceptable. All doors furnished under this section of the specification shall be UNCONDITIONALLY GUARANTEED for the life of the installation. In case D. Perform work using competent and properly equipped personnel. Completely seal, but do not limit to the following: of failure, doors shall be replaced in operation (including finish) at no cost to the owner. This guarantee shall be afforded the Owner in All joints in conjunction with masonry work writing BY THE GENERAL CONTRACTOR who, in turn, may receive subrogative guarantees from his subcontractors or suppliers to cover his All joints around door frames (interior and exterior) and adjoining materials, except for door frames in gypsum Temporary closures, which ensure that moisture does not damage any completed section of the new roofing system, are the obligation either totally or partially. responsibility of the applicator. Completion of flashings, terminations, and temporary closures shall be completed as

2.05 WORKMANSHIP

PART 3 EXECUTION

3.01 INSTALLATION

PART 2 - PRODUCTS

2 OL APPROVED MANUFACTURERS

Thickness

Thickness:

PART 3 - EXECUTION

operation and durabilitu.

. Access Doors

3. Toilet Enclosures

field by the General Contractor.

4. Folding Doors

.03 DESIGN REQUIREMENTS

3 OLINSTALL ATION

SECTION 08 70 00

PART I GENERAL

This specification is based on Marshfield Architectural Doors with Marshfield Enviroclad UV

Factory finish, custom color selected by Architect.

A. Interior solid core flush doors for transparent finish shall be the following:

Hardwood

1-3/4 inches

As scheduled

Faces and Grade: Match non-rated doors.

1-3/4 inches.

As scheduled

Finish: Factory finish, custom color selected by Architect

B. Fire rated doors shall be solid core and shall include the following:

item's shall be equal in quality and finish to items which are specified.

Core Construction: PC-7 or SLC-7

Provide wood doors complying with applicable requirements of referenced standards for kinds and types of doors indicated and d

Core Construction: Manufacturer's standard core construction as required to provide the fire-resistant rating indicated.

resistance. Edges composed of a single layer of treated lumber will not be acceptable.

Install fire rated doors in corresponding fire-rated frames in accordance with the requirements of NFPA 80.

A. Hardware for the following items is specified under other sections of the specifications, except as noted.

7. Automatic Operators for doors

6. Overhead Doors

Edge Construction: Provide manufacturer's standard laminated edge construction for improved screw holding capacity and spl

Condition doors to average prevailing humidity prior to hanging. Install wood doors in accordance with the manufacturer's instructions of

END OF SECTION

Hardware shall be as hereinafter specified and scheduled. Provide additional items of hardware which are necessary to make a

complete workable and workmanlike installation even though such items are not herein specifically scheduled. Such miscellaneous

B. All lock cylinders and keys for the above items requiring master-keyed locking shall be furnished under this section of the

All hardware coming in contact with metal frames or doors shall be made to template and shall be furnished with machine scre

The hardware supplier shall furnish all necessary templates and schedules required by the wood door supplier or metal door and

rame fabricator for mortised hardware. Doors and frames shall be reinforced, drilled and tapped by the fabricator for mortise

hardware. Reinforcement for surface applied hardware shall be by the metal fabricator, drilling and tapping shall be done in the

as shown on the drawings. Fit doors to frame for proper fit and machine for hardware using templates supplied by the hardware supplier

After fitting, all wood doors shall be hung. Prepare doors for the installation of all hardware items to produce the best possible

necessity and then only on approval.

accurately mortised, reinforced, drilled and tapped for hardware.

All work shall be executed according to the best practice and quality for steel cabinet workmanship. The finished work shall be strong and rigid, neat in appearance and free from defects. Surfaces shall be smooth and free from warps and buckles.

All joints in exposed surfaces of the framing members shall be finished such to make joining invisible. All fastenings, anchors,

etc., shall be concealed. No screws or other fastenings shall be exposed in any hollow metal work, unless from mechanical

All joining, cutting, etc. shall be done to a hairline. All construction marks shall be removed from finished or exposed surfaces.

fabrication. All shearing, cutting, notching, punching, and mitering shall be done to accurate measurements; all work shall be

All moldings shall be sharp and accurate without rounded edges. All work shall be thoroughly protected from rust during

Molded members shall be clean-cut, straight and true, miters shall be well formed and in true alignment

Joint between curb and wall. Door thresholds (set unit in sealant) 6. Protect adjacent construction, property, vehicles, and persons from damage related to roofing work; repair or restore damage 1.02 JOB CONDITIONS Weather Conditions: Do not proceed with installation of liquid sealants under unfavorable weather conditions, Install elastomeric sealants when temperature is in lower tier of temperature range recommended by manufacturer for installation (45 degrees to 55 degrees F).

At all structural steel and masonry such as joints between steel columns and masonry.

All joints around window frames (interior and exterior) and adjoining materials

or where metal contacts masonry, concrete, drywall, plaster, etc.

Deliver, store and handle material in a manner to prevent the entrance of foreign materials and damage of materials oy water or breakage. Damaged material shall be' rejected. The name of the manufacturer and the trade name of the caulking compound shall be on each container. PART 2 PRODUCTS

All joints around louvers (interiors and exterior) and adjoining materials. All building control joints, construction joints, expansion joints, and all other locations where metal contacts metal

The work required under this heading shall include all labor, material, equipment and services necessary for and reasonably

Incidental to the furnishing and installing of all flashing and sheet metal work as shown on the drawings and as specified herein.

Submit shop drawings to Architect showing the manner of forming, jointing and securing of flashing sheet metal, and roofing.

B. All sheet metal, roofing, roof insulation, and associated work shall be subcontracted to a single firm, with undivided

applicable recommendations and details of the Architectural Sheet Metal Manual of the Sheet Metal and Air Conditioning

responsibility for the specified performance of component parts even though some components may be

A. SMACNA STANDARDS: Except as otherwise shown, detailed or specified, flashing and sheet metal work shall comply with

A. Exterior: Compound used for exterior sealing shall be a two component polyurethane sealant to meet or exceed the Manufacturer: Tremco Inc. of Beechwood, Ohio. 1-800-321-7906. Interior: Compound used for interior caulking to be acrylic latex complying with either ASTM C834 type as required for application (gun or knife), non-staining, non-bleeding, paintable. Manufacturer: Tremco Inc. of Beechwood, Ohio. 1-800-321-7906.

Joint backing shall be non-absorbant, closed cell, foam polyethylene material, square or round in shape, and shall be sized to cause a 30% compression in the joint.

Installer must examine substrates and caulkina (joint surfaces) and conditions under which joint sealer work is to be performed and must notify Contractor in writing of unsatisfactory conditions. Do not proceed with joint sealer work until nsatisfactory conditions have been corrected in a manner accéptable to installer. Clean joint surfaces immediately before installation of sealants or caulking compounds. Remove dirt. insecure coatings

moisture and other substrates that could interfere with seal of gasket or bond of sealant or caulking compound. Etch masonry joint surfaces as recommended by sealant manufacturer. Roughen vitreous surfaces as recommended by sealant B. Prime or seal joint surfaces where recommended by sealant manufacturer. Confine primer/sealer to areas of sealant bond.

Do not allow spillage or migration onto adjoining surfaces

3 OLINSTALL ATION A. Install as per manufacturer's printed instructions except where more stringent requirements are shown or specified, and

except where manufacturer's technical representative directs otherwise B. Set joint filler units at depths or position in joint as indicated to coordinate with other work, including installation of bond preakers, backer rods and sealants. Do not leave voids or gaps between ends of joint filler units. C. Apply sealant with a hand or power caulking gun of the proper size to fit the joint. Avoid applying materials to surfaces

2. Joints that are open to a depth greater than I/2" shall receive joint backing material. E. After sealant is applied tool material to insure that joints are filled completely and solidly. Finish joints shall be smooth even and concave and shall be watertight. Unsatisfactory joints shall be completely removed and replaced. Cure sealants and caulking compounds in compliance with manufacturer's instructions and recommendations to obtain high, early bond strenath, internal cohesive strenath and surface dynability. Advise Contractor of procedures required for cure

and protection of joint sealant during construction period so they will be without deterioration or damage (other than normal wear and weathering) at time of substantial completion. Cure and protect sealants in a manner that will minimize increases in modulus of elasticity and other accelerated aging effects. Replace or restore sealants that are damaged or deteriorated during construction period. CLEANING A. Any adjacent materials that have become soiled due to installation of this work shall be thoroughly cleaned with a suitable

solvent of the type as recommended by the sealant compound manufacturer B. Site shall be cleaned up at the end of each day's work. All unused materials shall be placed in tightly sealed containers and stored. Upon completion of all the work, this Contractor shall remove cartons and other debris related to this work from the project site at the direction of the project superintendent.

END OF SECTION

SECTION OB IL 13

METAL DOORS AND FRAMES

I.OI SUMMARY

PART I GENERAL

1.03 QUALITY ASSURANCE

Furnish all labor, materials, tools equipment and services for all steel doors, steel door frames, and steel frame components such as sidelites, borrowed lites, transom frames and architectural stick assemblies as shown on plans and schedules. Furnisi and install all supplementary or miscellaneous items, appurtenances and devices incidental to, or n'ecessary for a sound, secure, and complete installation.

Submit complete shop drawings for all items specified herein. Shop drawings shall show all quantities, types, and locations. Door construction shall be fully detailed showing weights of materials, finish, framing reinforcing, method of making joints and indicate conformance with all other technical requirements specified hereinafter.

A. Furnish hollow metal doors and frames complying with the Steel Door Institute "Recommended Specifications for Standard

I. Furnish hollow metal doors and frames manufactured by a member of Steel Door Institute. 2. Steel for door face sheets shall be prime quality, cold rolled, stretcher leveled steel, free from defects

3. Steel for frames shall be prime quality steel sheet free from defects. 1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

oors shall be shipped individually packed. Frames shall be shipped with spreaders at door opening bottom or may be pai bundled. Doors and frames shall be stored on the building site, in an upright position, on wood sills or floors, in a manner that will prevent rust or damage.

All metal door frame and trim work shall be the product of one (1) of the following manufacturers at Contractor's option:

Pioneer, Steelcraft, Curries, Ceco, Kewanee

A HOLLOW METAL DOORS shall be of the sizes and thickness shown on the drawings and schedules. Doors shall be seamless

flush-type, constructed to two (2) 18 gauge steel sheets. Reinforced with steel channels, hat sections or zee-bars extending the full height of the door, spaced not more than six inches (6") apart. The face sheets shall be spot welded to the reinforcement leaving both faces absolutely flat and level without depressions or distortion. All spaces betweer reinforcing members shall be filled with a sound deadening, insulating urethane filler. Hinge reinforcement shall be 3/16" thick

Internal reinforcing or core construction differing from that specified above may be used. However, it shall be the

esponsibility of the Contractor to submit full copies of tests by an independent testing laboratory showing that the door submitted is equal to doors manufactured as specified. All joints shall be reinforced and welded. At top and bottom edges install 16 gauge steel channels full width of the door spot welded to both steel sheets. At all exterior doors the top edge shall have a channel insert or shall be otherwise inished flush to prevent the accumulation of moisture. A similar flush closure shall be provided at all exterior doors which

close over a vinul weather sealed threshold. Louvers where called for shall be standard with the manufacturer and shall be

sight-proof. Where glazed panels are indicated, panels shall have metal channel edging and removable inside glazing

B. Labeled doors shall be furnished where noted on the schedule or drawings. These doors shall carry the Underwriter's Label for the scheduled rating, the doors shall conform to that rating in all other respects and shall be accompanied by the certificate of inspection. This information must be included with the shop drawings.

C. Doors shall be mortised, reinforced, drilled and tapped for scheduled mortise hardware and reinforced for surface applied

2.03 HOLLOW METAL FRAMES A. UNIT STEEL FRAMES shall be of design as detailed by the drawings. Provide three (3) Glynn-Johnson No. 64 door mytes for each frame. Frames shall be formed of No. 16 gauge steel of design shown. All breaks, angles and arises shall be uniform, straight, sharply defined and true. The corners shall be mitered, accurately fitted, welded, properly fluxed and finished with smooth rigid, invisible joints. Frames shall have adjustable anchors not more than twenty-four inches (24") apart for setting

into partitions. These anchors shall be of corrugated 16 gauge steel and shall be permanently fastened to the frame in such manner that they will have vertical adjustment to fit the masonry joints. For the proper anchorage at the bottom of

the jambs, a bent plate adjustable clip bolted to frames and of material as specified for the jambs shall extend on the

all hinge, closér and hold-arm reinforcing shall be 3/16" thick. Provide special head reinforcing for frames over 3'-6" wide.

iloor construction to which it shall be secured with 3/8" x 2" expansion bolts, or shot-in studs. All frames shall be provided with temporary spreader channel at bottom. All frames reinforcing shall be the responsibility of the door manufacturer and

Frames in metal stud partitions shall be anchored to stud members by welded channel anchors extending over three (3) B. UNIT STEEL FRAMES FOR LABELED DOORS: Where doors are to be labeled, the frames for these doors shall also receive a corresponding label. When frame openings are larger than the maximum allowable for the required rating, or when the necessary method of anchoring will not qualify for labeling, all other requirements of that rating shall be met, and a Certificate of Inspection supplied. This information shall be included with the shop drawings. TRANSOMS, SIDELIGHTS, BORROWED LIGHTS AND VIEW WINDOWS shall be as detailed on the drawings. Construction and

Doors, frames, and other work of ferrous metals, unless specified hereinbefore, shall have surfaces washed with benzene or naphtha, then gone over with emery cloth until free from oil, dirt, rust, or other imperfections. After the surfaces are clean and ry, they shall receive a dip of prime coat of rust resisting paint, color selected, then baked at proper temperature to obtain the most satisfactory results. Prime coat shall be best quality enamel base paint to receive the enamel paint finish to be applied in the field as specified under Division 9, Section 09900 Painting. Submit samples of paint finish.

Prior to delivery of hardware, submit hardware shop drawings and a hardware schedule of all hardware required. The schedule shall follow the requirements of this specification and shall list type, manufacturer's name and number, finish and location. Provide catalog cuts for all substituted items. In addition, furnish a schedule fully identifying all abbreviations and symbols used. Approval of

schedule will not relieve the Contractor of responsibility for furnishing all necessary hardware. The firm supplying hardware for this project shall employ a member of the American Society of Architectural Hardware Consultants or a person of equivalent capability who is approved by the Architect. The Consultant shall be available during all phases of construction for consultation and technical assistance.

The General Contractor shall receive hardware when delivered at the building. A room shall be set aside for storing hardware and all hardware shall be kept locked therein. The General Contractor shall unpack, tag, index and file all hardware as follows:

A. Package each item of hardware separately in individual containers, complete with necessary screws, keys, instructions and installation templates for spotting mortising tools.

B. Mark each container with item number corresponding to number shown on the Contractor's hardware schedule.

Supply three (3) copies of installation and maintenance instructions for each operating item, and parts manuals for all locksets, closers, exit devices and other operating devices to the Owner. Supply three (3) complete sets of all installation and adjustment tools to the Owner for each different style, type and series of

lockset, latch exit device, closer or other adjustable hardware item provided and installed at this project. PART 2 PRODUCTS

Brands and models designated in this section are intended to define the exact standards of quality, function and design required. Substitutions, other than as below noted, will not be permitted unless given prior approval via Addendum

SPECIFIED <u>ACCEPTABLE</u> McKinney, Stanley

Locksets, Latchsets, Deadbolts, Cylinders & Covers No substitutions Wall Stops

All locks shall be provided with keyed alike construction cores. Supply six (6) construction pass keys to Contractor. Final keying system to be established by Architect and Owner will be a master keyed system and shall be installed just prior to final acceptance of the project. The quantity of keys and distribution thereof will be determined at that time. Installation of final keying shall be done by the General Contractor unless instructed otherwise.

Provide hardware which meets the requirements of Underwriter's Laboratories and local building codes for all fire doors and frames. Consult Architect before applying any hardware with hex bolts or through bolting of any type.

Install each hardware item in compliance with the manufacturer's recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished another way, coordinate removal, storage and reinstallation. Do not install surface-mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper

Drill, tap and countersink units for surface applied hardware and other items which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards and manufacturer's recommendation

Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace any unit which cannot be adjusted or operate freely and smoothly as intended for the application made. 3.03 SCHEDULE OF HARDWARE: AS NOTED ON THE PLANS

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E. ASTM D4637/D4637M - Standard Specification for EPDM Sheet Used in Single-Ply Roof Membrane; 2015. F. ASTM D48II/D48IIM - Standard Specification for Nonvulcanized (Uncured) Rubber Sheet Used as Roof Flashing; 2016. Stego Tape by Stego Industries LLC, (877) 464-7834, <u>www.stegoindustries.com</u>. 6. CAN-ULC-ST70 - Standard Test Method Determination of L-Term Thermal Resistance Of Closed-Cell Thermal Insulating Foams; 2015. B. Vapor-proofing mastic: I. Stego Mastic by Stego Industries LLC, (877) 464-7834 <u>www.stegoindustries.com</u>. H. FM (AG) - FM Approval Guide; current edition FM DS 1-28 - Wind Design; 2016 PART 3 - EXECUTION J. FM D5 I-29 - Roof Deck Securement and Above-Deck Roof Components; Factory Mutual System; 2016. DI PREPARATION K. PS I - Structural Plywood; 2009. A. Ensure that subsoil is approved by Architect or Geotechnical Engineer. I. Level and compact base material. L. PS 20 - American Softwood Lumber Standard; 2015.

02 INSTALLATI*O*N

1. Vapor barrier, seam tape, and mastic for installation under concrete slabs.

I. ASTM E 1745-09 Standard Specification for Plastic Water Vapor Retarders

2. ASTM E 154-99 (2005) Standard Test Methods for Water Vapor Retarders

4. ASTM F 1249-06 Standard Test Method for Water Vapor Transmission Rate

5. ASTME 1643-09 Selection, Design, Installation, and Inspection of Water Vapor

ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive

3. Manufacturer's installation instructions for placement, seaming and penetration

Permeance as tested before and after mandatory conditioning (ASTM E 1745

I. Basis of Design: Stego Wrap Vapor Barrier (15-mil) by Stego Industries LLC,

Section 7.1 and sub-paragraphs 7.1.1 - 7.1.5): less than O.OI Perms [grains/(ft2 · hr

Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.

3. ASTM E 96-05 Standard Test Methods for Water Vapor Transmission of

Through Plastic Film and Sheeting Using a Modulated Infrared Sensor.

Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.

Used in Contact with Soil or Granular Fill Under Concrete Slabs.

Summary of test results as per paragraph 8.3 of ASTM E 1745.

A. Install vapor barrier in accordance with manufacturer's instructions and ASTM E I. Unroll vapor barrier with the longest dimension parallel with the direction of the concrete placement 2. Lap vapor barrier over footings and/or seal to foundation walls.

3. Overlap joints 6 inches and seal with manufacturer's tape. 4. Seal all penetrations (including pipes) per manufacturer's instructions. 5. No penetration of the vapor barrier is allowed except for reinforcing steel and 6. Repair damaged areas by cutting patches of vapor barrier, overlapping

damaged area 6 inches and taping all sides with tape. CTION 07 46 46

<u>DER-SLAB VAPOR BARRIER</u>

Products supplied under this section:

B. American Concrete Institute (ACI):

Manufacturer's samples, literature.

Vapor barrier must have all of the following qualities:

(877) 464-7834 <u>www.stegoindustries.com</u>.

Flooring Materials.

repair instructions.

2. Other performance criteria:

a.Strength: ASTM E 1745 Class A.

b.Thickness: Not less than 15mils

A. Quality control/assurance:

A. American Society for Testing and Materials (ASTM):

'ART I GENERAL

SUMMARY

2 REFERENCES

3 SUBMITTALS

PART 2 - PRODUCTS

· inHq)].

B. Vapor barrier products:

2. No substitutions.

02 ACCESSORIES

ART I - GENERAI

A. Fasteners

FINISHES

PART 3 - EXECUTION

EXAMINATION

PREPARATION

OL MATERIALS

ECTION INCLUDE A. Fiber cement lap siding, panels, shingle, trim, fascia, moulding and accessories; James Hardie HZ 5 Engineered for Climate Siding. B.Factory-finished fiber cement lap siding, panels, shingle, trim, fascia, moulding and accessories; James Hardie HZ 5 Engineered for Climate

A. ASTM D3359 - Standard Test Method for Measuring Adhesion by Tape Test, Tool and Tape. B. ASTM El36 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.

SUBMITTALS A. Product Data: Manufacturer's data sheets on each product to be used includina: Preparation instructions and recommendations 2. Storage and handling requirements and recommendations

3. Shop Drawings: Provide detailed drawings of atypical non-standard applications of cementitious siding materials which are outside the 1.08 DELIVERY, STORAGE AND HANDLING scope of the standard details and specifications provided by the manufacturer. . Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of

2. Verification Samples: For each finish product specified, two samples, minimum size 4 by 6 inches (100 by 150 mm), representing actual A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

Installer Qualifications: Minimum of 2 years' experience with installation of similar products. B. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

2.Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect. 3.Refinish mock-up area as required to produce acceptable work.

DELIVERY, STORAGE, AND HANDLING A. Store products in manufacturer's unopened packaging until ready for installation. 3. Store siding on edge or lay flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and

. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction. PROJECT CONDITIONS

A. Acceptable Manufacturer - Roofing System: Elevate (formerly Firestone), Carmel, IN. A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

A. Product Warranty: Limited, non-pro-rated product warranty for 30 years. B.Finish Warranty: Limited product warranty against manufacturing finish defects.

. When used for its intended purpose, properly installed and maintained according to Hardie's published installation instructions, James Hardie's ColorPlus finish with ColorPlus Technology, for a period of 15 years from the date of purchase: will not peel; will not crack; and will not chip. Finish warranty includes the coverage for labor and material. 3. Workmanship Warranty: Application limited warranty for 2 years.

MANUFACTURERS A. Acceptable Manufacturer: James Hardie Building Products, Inc., which is located at: 26300 La Alameda Suite 400; Mission Viejo, CA 92691; Toll Free Tel: 866-274-464; Tel: 949-367-4980; Fax: 949-367-4981.

A. HardiePlank HZ 5 lap siding, requirement for Materials: B. Fiber-cement Siding - complies with ASTM C 1186 Grade 11, Type A. C. Fiber-cement Siding - classified as noncombustible when tested in accordance with ASTM E 136. D. Fiber-cement Siding - have a flame-spread index of O and a smoke-developed index of 5 when tested in accordance with ASTM E

As recommended by manufacturer based on the total overall thickness of the wall materials being fastened to.

B. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project

Install a water-resistive barrier is required in accordance with local building code requirements and as detailed. The water-resistive

barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements.

E. Allow minimum vertical clearance between the edge of siding and any other material in strict accordance with the manufacturer's

2. Fasteners shall be pre-finished MAZE nails painted to match the siding or trim.

Install materials in strict accordance with manufacturer's installation instructions

7. Place fasteners no closer than 3/8 inch from panel edges and 2 inches from panel corners.

B. Block framing between studs where HardiePanel siding horizontal joints occur.

. Install metal Z flashing and provide a 1/4-inch gap at horizontal panel joints.

. Maintain clearance between siding and adjacent finished grade.

A. Do not begin installation until substrates have been properly prepared

A. Clean surfaces thoroughly prior to installation

INSTALLATION - HARDIEPANEL HZ 5 SIDING

A. Factory finished by James Hardie in colors as selected from manufacturers standard color pallet.

Roofing System Components: Listed in order from the top of the roof down: AS SHOWN ON THE DRAWINGS. I. Membrane: 60 MIL 2. Insulation Cover Board: High density polyisocyanurate; cold adhesive attached E. Lap Siding: HardiePlank HZ 5 Lap as manufactured by James Hardie Building Products, Inc. 3. Insulation: . Type: Select Cedarmill 8.25 inches with a 7-inch exposure F. Shingle Siding: Hardie Shingle Siding Staggered Edge Panel as manufactured by James Hardie Building Products, Inc.

a. Maximum Board Thickness: 2.5 inches; use as many layers as necessary; stagger joints in adjacent layers. b. Top Layer: 2.2" (R-12.6) Polyisocyanurate foam board, non-composite; cold adhesive attached. c. Bottom Layer: 2.2" (R 12-6) Polylsocyanurate foam board, non-composite; mechanically fastened d. Crickets: Tapered insulation of same type as specified for top layer; slope as indicated. C. Provide neoprene membrane in grease catch pans as indicated on the drawings. I. HardieTrim HZ 5 boards as manufactured by James Hardie Building Products, Inc.

a.Sizes as noteo Roofing and Flashing Membrane: Black, cured synthetic single-ply membrane composed of ethylene propylene diene terpolymer (EPDM) with the following properties: b.Texture: Wood Grained Reinforcement: None; membrane complying with ASTM D4637/D4637M Type I. 2. Thickness: 0.060 inch. c.Length: 12 fee 3. Nominal Thickness Tolerance: Plus/minus 10 percent. d.Thickness: 3/4 inch 4. Sheet Width: Provide the widest available sheets to minimize field seaming. 5. Acceptable Product: RubberGard Non-Reinforced Low Slope Fire Retardant EPDM Membrane by Elevate. **FASTENERS**

G. Allow 1/8-inch gap between trim and siding.

1. Shim frieze board as required to align with corner trim.

fasten HardieTrim boards to HardieTrim boards.

A. Protect installed products until completion of project.

ELASTOMERIC SHEET ROOFING - FULLY ADHERED - EPDM

D. Section 08 62 00 - Unit Skylights.

1.04 REFERENCE STANDARDS

1.05 ADMINISTRATIVE REQUIREMENTS

1.06 SUBMITTALS

A. Product Data:

1.07 QUALITY ASSURANCE

materials and requirements to achieve the warranty

2. Notify Architect well in advance of meeting

B. Samples: Submit samples of at least the following:

D. Specimen Warranty: Submit prior to starting work.

Sample of each insulation type and cover board

A. Installer Qualifications: Roofing installer shall have the following

2. Fully staffed office within 100 miles of the job site.

C. Keep combustible materials away from ignition sources

system, for the term indicatéd.

billion dollars

d. 150 9000 certified.

Membrane Attachment: Fully adhered.

Limit of Liability: No dollar limitation.

a. Ordinary wear and tear of the elements

d. Damage due to winds up to 72 mph.

b. Manufacturing defect in Elevate brand materials.

and covered under a manufacturer's system warranty.

. Current approval, license, or authorization as applicator by the manufacturer

B. Store materials clear of ground and moisture with weather protective covering.

2. Scope of Coverage: Repair leaks in the roofing system caused by:

warranty conditions and the manufacturer meets the following qualifications:

b. Minimum ten years of experience manufacturing the roofing system to be provided

e. Able to provide polyisocyanurate insulation that is produced in own facilities.

. Submit evidence that the proposed substitution complies with the specified requirements

4. Provide assembly having Underwriters Laboratories, Inc. (UL) Class A Fire Hazard Classification.

Roofing System: Ethylene-propylene-diene-monomer (EPDM) single-ply membrane.

a. Specializing in manufacturing the roofing system to be provided.

Substitutions: See Section OI 6000 - Product Requirements

insulation, membrane accessories, and metal edging and coping.

meeting minimum requirements of FM 1-90 wind uplift rating.

3. Comply with applicable local building code requirements.

Defective workmanship used to install these materials

4. Capability to provide payment and performance bond to building owner.

Sample of roof membrane.

C. Shop Drawings: Provide:

J. Fasten through overlapping boards. Do not nail between lap joints.

L. Install HardieTrim Fascia boards to rafter tails or to sub fascia.

B.Touch-up, repair or replace damaged products before Substantial Completion.

A. EPDM membrane roofing system, including all components specified.

A. Factory finished by James Hardie in colors as selected from manufacturers standard color pallet.

B. Comply with the published recommendations and instructions of the roofing membrane manufacturer.

A. Section 06 10 00 - Rough Carpentry: Wood nailers associated with roofing and roof insulation.

C. Section 07 72 00 - Roof Accessories: Roof hatches, vents, and manufactured curbs

B. ASTM D1079 - Standard Terminology Relating to Roofing and Waterproofing; 2016.

C. ASTM DI621 - Standard Test Method for Compressive Properties Of Rigid Cellular Plastics; 2016.

D. ASTM DI622/DI622M - Standard Test Method for Apparent Density of Rigid Cellular Plastics; 2014.

A. Pre-Installation Conference: Before start of roofing work, Contractor shall hold a meeting to discuss the proper installation of

the system type specified; include data for each product used in conjunction with roofing membrane.

E. Installer Qualifications: Letter from manufacturer attesting that the roofing installer meets the specified qualifications.

5. Contractor must self-perform the installation of the roofing system. Sub-contracting to a third party is not allowed.

A. Deliver products in manufacturer's original containers, dry and undamaged, with seals and labels intact and legible

B. Comply with all warranty procedures required by manufacturer, including notifications, scheduling, and inspections.

Warranty: Elevate (formerly Firestone) Limited Warranty covering membrane, roof insulation, and other indicated components of the

c. Able to provide a no dollar limit, single source roof system warranty that is backed by corporate assets in excess of one

Manufacturer of Insulation and Cover Boards: Same manufacturer as roof membrane to be included in the roof warrantu.

2. Warranty: Full system warranty; Elevate (formerly Firestone) 20 year Red Shield Limited Warranty covering membrane, roof

5. Provide assembly complying with Factory Mutual Corporation (FM) Roof Assembly Classification, FM D5 1-28 and FM D5 1-29, and

Manufacturer of Metal Roof Edging: Same manufacturer as roof membrane to be included in the roof warranty.

F. Pre-Installation Notice: Copy to show that manufacturer's required Pre Installation Notice (PIN) has been accepted and approved

installed; where instructions allow installation options, clearly indicate which option will be used.

base tie-ins, roof edges, terminations, expansion joints, penetrations, and drains.

For tapered insulation, provide project-specific layout and dimensions for each board.

Provide membrane manufacturer's printed data sufficient to show that all components of roofing sustem, including insulation and

UL-Classified or FM-approved, as applicable; include data itemizina the components of the classified or approved sustem.

The roof membrane manufacturer's standard details customized for this project for all relevant conditions, including flashings,

2. Where UL or FM requirements are specified, provide documentation that shows that the roofing system to be installed is

3. Installation Instructions: Provide manufacturer's instructions to installer, marked up to show exactly how all components will be

fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for

B. LTTR: Long Term Thermal Resistance, as defined by CAN-ULC-STTO.

K. Overlay siding with single board of outside corner board then align second corner board to outside edge of first corner board. Do not

END OF SECTION

H. Seal gap with high quality, paint-able caulk.

3.5 FINISHING

3.6 PROTECTION

SECTION 07 53 23

I.OI SECTION INCLUDES

Neoprene Membrane: Self-curing, non-reinforced membrane composed of nonvulcanized polychloroprene rubber, complying with Thickness: 0.055 inch. 2. Acceptable Product: Neoprene Membrane by Elevate C. Membrane Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; use only fasteners furnished by roof membrane manufacturer.

. If installation of walkway pads over field fabricated splices or within 6 inches of a splice edge cannot be avoided, adhere Flashing Membrane: Self-curing, non-reinforced membrane composed of nonvulcanized EPDM rubber, complying with ASTM D4811/D4811M Type 11, and with the following properties: Thickness: 0.055 inch. 2. Acceptable Product: RubberGard EPDM FormFlash by Elevate. E. Self-Adhesive Flashing Membrane: Semi-cured 45 mil EPDM membrane laminated to 35 mil EPDM tape adhesive; QuickSeam Flashing F. Pre-Molded Pipe Flashings: EPDM, molded for quick adaptation to different sized pipes; Elevate EPDM Pipe Flashing.

G. Self-Adhesive Lap Splice Tape: 35 mil EPDM-based, formulated for compatibility with EPDM membrane and high-solids primer; H. Splice Adhesive: Synthetic polymer-based, formulated for compatibility with EPDM membrane and metal surfaces; SA-1065 Splice Bondina Adhesive: Neoprene-based, formulated for compatibility with EPDM membrane and wide variety of substrate materials, including masonry, wood, and insulation facings; Bonding Adhesive BA-2004 by Elevate.

Adhesive Primer: Synthetic rubber based primer formulated for compatibility with EPDM membrane and tape adhesive; QuickPrime K. Seam Edge Treatment: EPDM rubber-based sealant, formulated for sealing exposed edges of membrane at seams; Lap Sealant L. Pourable Sealer: Two-part polyurethane, two-color for reliable mixing; Pourable Sealer by Elevate.

roofing to original condition

M. Water Block Seal: Butul rubber sealant for use between two surfaces, not exposed; Water Block Seal by Elevate

H. Until ready for use, keep materials in their original containers as labeled by the manufacturer. Consult membrane manufacturer's instructions, container labels, and Material Safety Data Sheets (MSDS) for specific safety instructions. Keep all adhesives, sealants, primers and cleaning materials away from all sources of ignition Require attendance with all parties directly influencing the quality of roofing work or affected by the performance of roofing 3.02EXAMINATION A. Examine roof deck to determine that it is sufficiently rigid to support installers and their mechanical equipment and that deflection B. Verify that surfaces and site conditions are ready to receive work. Correct defects in the substrate before commencing with Examine roof substrate to verify that it is properly sloped to drains.

F. Install roofing membrane only when surfaces are clean, dry, smooth and free of snow or ice; do not apply roofing membrane during

procedures during cold weather. Do not work with sealants and adhesives when material temperature is outside the range of 60

inclement weather or when ambient conditions will not allow proper application; consult manufacturer for recommended

2. Particularly protect metal, glass, plastic, and painted surfaces from bitumen, adhesives, and sealants within the range of

3. Protect finished areas of the roofing system from roofing related work traffic and traffic by other trades.

Metal Plates and Strips Used for Fastening Membrane and Insulation: Steel with Galvalume coating; corrosion-resistance meeting

O. Termination Bars: Aluminum bars with integral caulk ledge; I.3 inches wide by O.IO inch thick; Elevate Termination Bar by Elevate.

P. Roof Walkway Pads: EPDM, 0.30 inch thick by 30 by 30 inches with EPDM tape adhesive strips laminated to the bottom;

A. Polyisocyanurate Board Insulation: Closed cell polyisocyanurate foam with black glass reinforced mat laminated to faces,

a. Exception: Insulation to be attached using adhesive or asphalt may be no larger than 48 inches by 48 inches, nominal.

complying with ASTM C1289 Type II Class I, with the following additional characteristics:

4. Compressive Strength: 20 psi when tested in accordance with ASTM Cl289.

QuickSeam Walkway Pads by Elevate.

. Thickness: As indicated elsewhere.

2. Size: 48 inches by 96 inches, nominal

a. 2.2 inch Thickness: 12.6, minimum.

required to provide a watertight condition

1. Protect from spills and overspray from bitumen, adhesives, sealants and coatings

caused by roofing work.

wind-borne overspray.

2.04ROOF INSULATION AND COVER BOARDS

3. R-value (LTTR):

D. Verify that the specifications and drawing details are workable and not in conflict with the roofing manufacturer's recommendations ind instructions; start of work constitutes acceptable of project conditions and requirements. E. Verify that wood nailers have been properly installed. A. Take appropriate measures to ensure that fumes from adhesive solvents are not drawn into the building through air intakes. B. Prior to proceeding, prepare roof surface so that it is clean, dry, and smooth, and free of sharp edges, fins, roughened surfaces,

loose or foreign materials, oil, grease and other materials that may damage the membrane. Fill all surface voids in the immediate substrate that are greater than 1/4 inch wide with fill material acceptable insulation to D. Seal, grout, or tape deck joints, where needed, to prevent bitumen seepage into building. 3.04INSULATION AND COVER BOARD INSTALLATION

B. Install only as much insulation as can be covered with the completed roofing system before the end of the day's work or before C. Lay roof insulation in courses parallel to roof edges. Neatly and tightly fit insulation to all penetrations, projections, and nailers, with gaps not greater than 1/4 inch. Fill gaps greater 3. At least five year's experience in installing specified system with a minimum of 1,000,000 sf of low-slope roofing membrane installed than 1/4 inch with acceptable insulation. Do not leave the roofing membrane unsupported over a space greater than 1/4 inch. E. Mechanical Fastening: Using specified fasteners and insulation plates engage fasteners through insulation into deck to depth and

in pattern required by Factory Mutual for FM Class specified in PART 2 and membrane manufacturer, whichever is more stringent. F. Cold Adhesive Attachment: Apply in accordance with membrane manufacturer's instructions and recommendations; "walk-in" individual roof insulation boards to obtain maximum adhesive contact. 3.05 SINGLE-PLY MEMBRANE INSTALLATION

A. Beginning at low point of roof, place membrane without stretching over substrate and allow to relax at least 30 minutes before attachment or splicing; in colder weather allow for longer relax time. B. Lay out the membrane pieces so that field and flashing splices are installed to shed water. Install membrane without wrinkles and without gaps or fishmouths in seams; bond and test seams and laps in accordance with membrane manufacturer's instructions and details.

Install insulation in configuration and with attachment method(s) specified in PART 2, under Roofing System.

Adhered Membrane: Bond membrane sheet to substrate using membrane manufacturer's recommended bonding material, Edge Securement: Secure membrane at all locations where membrane terminates or goes through an angle change greater than in 12 inches using mechanically fastened reinforced perimeter fastening strips, plates, or metal edging as indicated or as recommended by roofing manufacturer. Exceptions: Round pipe penetrations less than 18 inches in diameter and square penetrations less than 4 inches square. 2. Metal edging is not merely decorative; ensure anchorage of membrane as intended by roofing manufacturer.

Metal Roof Edging with Exposed Decorative Fascia: Provide 20 year warranty for painted finish covering color fade, chalk, and A. Install flashings, including laps, splices, joints, bonding, adhesion, and attachment, as required by membrane manufacturer's B. Metal Accessories: Install metal edgings, gravel stops, and copings in locations indicated on the drawings, with horizontal leg of edge member over membrane and flashling over metal onto membrane. Roofing systems manufactured by others are acceptable provided the roofing system is completely equivalent in materials and Follow roofing manufacturer's instructions.

D. Install membrane adhered to the substrate, with edge securement as specified.

2. Remove protective plastic surface film immediately before installation 3. Install water block sealant under the membrane anchorage leg. 4. Flash with manufacturer's recommended flashing sheet unless otherwise indicated. 5. Where single application of flashing will not completely cover the metal flange, install additional piece of flashing to cover the metal edge 6. If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, install an additional piece of self-adhesive flashling membrane over the metal lap to the top of the gravel stop; apply seam edge treatment at the intersections of the two flashina sections.

7. When the roof slope is greater than I:12, apply seam edge treatment along the back edge of the flashing. C. Scuppers: Set In sealant and secure to structure; flash as recommended by manufacturer. D. Roofing Expansion Joints: Install as shown on drawings and as recommended by roofing manufacturer.

Flashing at Walls, Curbs, and Other Vertical and Sloped Surfaces: Install weathertight flashing at all walls, curbs, parapets, curbs

skylights, and other vertical and sloped surfaces that the roofing membrane abuts to; extend flashing at least 8 inches high above mémbrane surface. . Use the longest practical flashing pieces. 2. Evaluate the substrate and overlay and adjust installation procedure in accordance with membrane manufacturer's 3. Complete the splice between flashing and the main roof sheet with specified splice adhesive before adhering flashing to the vertical surface. 4. Provide termination directly to the vertical substrate as shown on roof drawings

Roof Drains: I. Taper insulation around drain to provide smooth transition from roof surface to drain. Use specified pre-manufactured tapered insulation with facer or suitable bonding surface to achieve slope; slope not to exceed manufacturer's recommendations 2. Position membrane, then cut a hole for roof drain to allow 1/2 to 3/4 inch of membrane to extend inside clamping ring past drain 2.02 HOLLOW METAL DOORS 3. Make round holes in membrane to align with clamping bolts; do not cut membrane back to bolt holes. 4. Apply sealant on top of drain bowl where clamping ring seats below the membrane

5. Install roof drain clamping ring and clamping bolts, tighten clamping bolts to achieve constant compression. 5. Flashing at Penetrations: Flash all penetrations passing through the membrane; make flashing seals directly to the penetration. Pipes, Round Supports, and Similar Items: Flash with specified pre-molded pipe flashings wherever practical; otherwise use 2. Pipe Clusters and Unusual Shaped Penetrations: Provide penetration pocket at least 2 inches deep, with at least 1 inch clearance from penetration, sloped to shed water. 3. Structural Steel Tubing: If corner radii are greater than 1/4 inch and longest side of tube does not exceed 12 inches, flash as for pipes; otherwise, provide a standard curb with flashing. 4. Flexible and Moving Penetrations: Provide weathertight gooseneck set in sealant and secured to deck, flashed as recommended 5. High Temperature Surfaces: Where the in-service temperature is, or is expected to be, in excess of 180 degrees F, protect the elastomeric components from direct contact with the not surfaces using an intermediate insulated sleeve as flashing substrate as

A. Install walkways at access points to the roof, around rooftop equipment that may require maintenance, and where indicated on the 1. Use specified walkway pads unless otherwise indicated. B. Walkway Pads: Adhere to the roofing membrane, spacing each pad at minimum of 1.0 inch and maximum of 3.0 inches from each other to allow for drainage.

recommended by membrane manufacturer

another layer of flashing over the splice and extending beyond the walkway pad a minimum of 6 inches on either side. 2. Prime the membrane, remove the release paper on the pad, press in place, and walk on pad to ensure proper adhesion. 3.08 FIELD QUALITY CONTROL A. Inspection by Manufacturer: Provide final inspection of the roofing system by a Technical Representative employed by roofing system manufacturer specifically to inspect installation for warranty purposes (i.e. not a sales person). B. Perform all corrections necessary for issuance of warranty.

A. Clean all contaminants generated by roofing work from building and surrounding areas, including bitumen, adhesives, sealants, and Repair or replace building components and finished surfaces damaged or defaced due to the work of this section; comply with recommendations of manufacturiers of components and surfaces. Remove leftover materials, trash, debris, equipment from project site and surrounding areas. A. Where construction traffic must continue over finished roof membrane, provide durable protection and replace or repair damaged

installation shall conform to the applicable portions of the above paragraph, "Unit Steel Frames". Removable 18 gauge metal glass stops shall be provided for all glazed openings.

3.03 CURE, PROTECTION AND CLEANING Cure glazing sealant and compounds in compliance with manufacturer's instruction and recommendations to obtain high early bond <u>LUMINUM-FRAMED STOREFRONTS</u> strength, internal cohesive strength and surface durability. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during the construction period, PART I GENERAL including natural causes, accidents and vandalism

END OF SECTION

After all other construction activities, and before acceptance by the Owner, all glass shall have labels removed and shall be

thoroughly washed on both sides, leaving it clean, clear and free of scratches or defects. Use special care not to scratch glass with razor blades.

Prior to fabrication, submit shop drawings. Include system and component dimensions; components within assembly; framed opening requirements and tolerances; anchorage and fasteners; glass and infills; and door hardware requirements. Submit color samples of

03 SYSTEM DESCRIPTION System to provide for expansion and contraction within system components caused by a cycling temperature range of 170 F degrees without causing detrimental effect to system

Mork required under this section shall include all materials and installation and all related

items necessary to complete the storefront installation as shown on the drawings and

Design and size members to withstand dead loads and live loads caused by pressure and 1.03 TEMPERATURE AND VENTILATION

suction of wind as calculated in accordance with U.B.C. code. Limit maximum deflection to 1/175, or flexure limit of glass with full recovery of glazing

materials, whichever is less. Drain water entering joints, condensation occurring in glazing channels, or migrating

moisture occurring within system, to exterior. Limit air infiltration through assembly to 0.06 cubic feet minimum square feet of assembly

surface area, measured at a reference differential pressure across assembly of 0.3

System to accommodate, without damage to system or components, or deterioration of perimeter seal: movement within system; movement between system and perimeter framing components; dynamic loading and release of loads; and deflection of structural support

4 DELIVERY, STORAGE AND HANDLING Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturer's unopened containers or packaging.

inches water gauge as measured in accordance with ASTM E283.

Provide equipment and personnel to handle products by methods to prevent damage. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

Store products in accordance with manufacturer's instructions, with seals and labels intact

Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged and are maintained under required conditions.

PART 2 PRODUCTS

I SUMMARY

specified herein.

2 SUBMITTALS

specified finish.

DI MATERIALS Extrusions shall be 6063-T5 alloy and temper (ASTM B 221 alloy G.S. 10A-T5). The thermal barrier shall consist of a two-part, chemically curing, high density polyurethane. Fasteners, where exposed, shall be aluminum, stainless steel or plated steel in accordance with ASTM A 164. Perimeter anchors shall be aluminum or steel, providing the steel is properly isolated from the aluminum. Glazing gaskets shall be elastomeric

DO APPROVED MANUFACTURERS Specifications are based on standard systems manufactured by Kawneer Company, Inc. Systems by the following manufacturers are approved, subject to being equal or better to the specified systems in performance, appearance, and function:

A. EFCO Corporation B. MANKO Window Systems C. U.S. Aluminum D. Vistawall

A. Type I: Kawneer VG 45I-T, $2" \times 4$ -I/2", Center glazed, thermal break frame system. B. Type 2: Kawneer 350 doors with 10" bottom rail.

04 FINISH SPECIFICATIONS All exposed surfaces shall be free of scratches and other serious blemishes and shall receive an architectural Class I Color Anodic Coating conforming with Aluminum Association Standard AAMI2C22A42/44. Permanodic color - clear anodized.

The framing system shall provide for center glazing on all sides with no projecting stops. Entrance framing members shall be compatible with glass framing in appearance. All single acting entrance frames shall include the Sealair positive barrier weathering, including the EPDM sweep strip.

PART 3 EXECUTION

.OI INSTALLATION

All glass framing shall be set in correct locations as shown in the details and shall be level, square, plumb and in alignment with other work in accordance with the manufacturer's installation instructions and approved shop drawings. All joints between framing and the building structure shall be sealed in order to secure a watertight installation.

Install doors and hardware in compliance with manufacturer's recommendations. Coordinate hardware installation to assure proper function.

D2 PROTECTION AND CLEANING After installation, adequately protect exposed portions of aluminum surfaces from damage by grinding and polishing compounds, plaster, lime, acid, cement, or other contaminants.

Prior to acceptance, remove protective materials and clean exposed members.

03 SCHEDULE *O*F HARDWARE As scheduled on drawings

END OF SECTION

<u>ECTION 08 80 00</u>

ART I GENERAL

Furnish and install all types of glass and glazing for sash, windows, storefront, curtain walls, borrowed lights, glazing doors, and insulated spandrel glazing as indicated on the drawings.

Submit one 12" \times 12" sample of each product specified. A. REQUIREMENTS OF REGULATORY AGENCIES: All areas of glazing shall comply with all applicable codes. In case of conflict

between that regulation and these drawings and specifications, the requirements of the regulatory agency shall B. GLASS STANDARDS: Glass installations shall meet the requirements of the Prime Glass Standard FS DD-G-451. Heat-treated glass shall meet the requirements of Standard FS DD-6-1403. Safety glass shall meet the requirements of

i. Glass material containing bubbles, scratches, or other glass shall be removed immediately upon notice.

D. MANUFACTURER'S LABEL: Each piece of glass shall bear the manufacturer's label. E. Watertight and airtight installation of each piece of glass is required, except as otherwise shown. Each installation must withstand normal temperature changes, wind loading, impact loading (for operating sash and doors) without failure of any kind including loss or breakage of glass, fallure of sealant or gaskets to remain watertight and airtight, deterioration of glazing materials and other defects in the work.

F. Comply with combined recommendations of glass manufacturer and manufacturer of sealant and other materials used in glazing, except where more stringent requirements are shown or specified, and except where manufacturer's technical

Comply with "Glazing Manual" and other applicable publications by Flat Glass Marketing Association except as shown and specified otherwise and except as specifically recommended otherwise by the manufacturers of the glass and glazing

H. Cut and install colored (tinted) and heat absorbing glass as recommended in "Technical Services Report No. 104" by PPG Industries, or similar reports by other manufacturers.

A. WARRANTY ON HERMETIC SEALS: Provide insulating glass manufacturer's written warranty, agreeing to, furnish replacement units for insulating glass units which have defective hermetic seals; defined to include intrusion of moisture or dirt, internal condensation at temperatures above 20F, and other visual evidence of seal failure or performance failure; provided manufacturer's instructions for handling, installation, protection, and maintenance have been adhered to during warranty

B. All glass shall be guaranteed for ten years against breakage due to defects in materials, workmanship or installation with all such glass immediately removed and replaced with matching new material at no additional cost to the Owner.

A. TEMPERED CLEAR LOW-E INSULATING: shall be two (2) sheets of 1/4" clear tempered safety glass such as PPG Herculite "K"

CLEAR LOW-E INSULATING: shall be I" thick units, (1) sheet of 1/4" thick clear float glass on exterior and one (1) sheet clear float glass on interior with a 1/2" sealed air space between

TEMPERED CLEAR GLASS: shall be 1/4" clear tempered safety glass. D. FIRE RATED GLASS: shall be 3/16" fire rated glass such as "Firelite" glass.

2 DELIVERY, STORAGE, AND HANDLING Stack glazing sheets at 5 to 7 degrees from vertical. Separate sheets with interleaving of protection paper and cushion top and bottom edges with felt. Cover to protect material from wind-blown water or run-off but provide for ventilation and circulation of cool, dry air. Maintain temperature above dew point. Protect glazing material from welding, sandblasting, and other potentially damaging operations before and after installation. ART 3 EXECUTION

I PREPARATION Protect glass from edge damage at all times during handling, installation and operation of the building. Glazina channel dimensions as shown are intended to provide for necessary minimum bite on the glass, minimum edge clearance and adequate sealant thickness, with reasonable tolerances. The Glazier is responsible for correct glass size for each opening, within the tolerances and necessary dimensions established. Sizes shown on the Drawings are approxímate only.

Coordinate with painter to assure that all metal frames have received their first coat of paint before glazing is started. Clean glazing channel and other framing members to receive glass immediately before glazing. Remove coatings which are not firmly bonded to substrate. Remove lacquer from metal surfaces where elastomeric sealant is used. Apply primer or sealant to joint surfaces where recommended by sealant manufacturer.

2 INSTALLATION Inspect each piece of glass immediately before installation and discard, any which have observable edge damage or face

when they differ from the Glazing Manual. Continuous glazing tape shall be installed at all glass.

Unify appearance of each series of lights by setting each piece to match others as nearly as possible. Inspect each piece and set with pattern, draw and bow oriented in the same direction as other pieces. Install glass and all glazing sheets together with miscellaneous glazing accessories, to meet the recommendations of the Glazing Manual for Flat Glass Products of the Flat Glass Marketina Association except the manufacturer's recommendations shall prevai

I.OI WORK INCLUDED The work required under this heading shall include all labor, materials, tools, equipment, and services necessary for and

1.02 PACKAGING, DELIVERY AND STORAGE All manufactured materials shall be delivered in unopened containers or bundles bearing the name of manufacturer, brand, type Store off the ground in dry, well ventilated space. Protect from rusting damage.

reasonably incidental the furnishing and installing of all metal framing as shown on the drawings and as specified herein.

Shall be as recommended by manufacturer

PART 2 PRODUCTS

Furring channels shall be 25 gauge, hat-shaped channel 1-3/8" wide, 7/8" deep, unless other depths required; manufactured from

B. Runner, furring channels shall be 16 gauge: cold rolled steel, black painted, 1-1/2" deep (475 pounds per M) 3/4" (300 pounds per

C. Z furring channels, 25 gauge, in depth as required by wall insulation; manufactured with slotted web from hot-dip galvanized steel. Interior partition studs shall be 25 gauge, in widths and dimensions as required, made from 40 ksi hot-dipped galvanized steel

(0.179 base metal), listed by ICBO for structural design properties. Openings in webs for services maximum 24" o.c., runners,

E. Fasteners shall be in accordance with ASTM C646, and in required lengths and types. PART 3 EXECUTION

Verify installation conditions as satisfactory to receive work of this section. Do not install until any unsatisfactory conditions are corrected. Beginning work constitutes your acceptance of conditions as satisfactory.

3.02 PREPARATION Protect installed finish work of other trades and surfaces to preclude damage from work of this section.

A. Erect the work in accordance with specifications, manufacturer's directions, and ASTM C754. Where these may be in conflict, the more stringent requirements govern. Install fire rated systems in accordance with the requirement of the system as approved by the governing Code.

B. Allowable tolerances for placement of metal studs shall be 1/8" in 8'0" for plane, level, plumb. All inside and outside wall corners shall be 90 degrees unless shown otherwise with an allowable tolerance of one degree

Install runner tracks at floor and ceiling; align to insure plumb partitions; secure with approved fastening method two inches (2") from each end and not over 2'-0" o.c. maximum. Install continuous tracks sized to match studs. Align tracks accurately to

D. Erect studs at sixteen inch (16") o.c.; install additional studs as detailed or required at all partition intersections, corners or openings. Place studs against walls of dissimilar materials and securely anchor in place. In areas of possible water penetration place asphalt felt strip between runners, studs and adjacent surface.

E. Coordinate stud erection with detailed or required blocking/backing for fixtures and surface mounted casework. F. Shim all metal furring as required to provide true and level surface for application of wall board. Cross brace all chase partitions as recommended by manufacturer. Where metal studs are surfaced on side only, or surfacing does not run full height of studs, the stud flanges must be laterally braced and braced to adjacent surfaces, as recommended by manufacturer, to meet

6. Where stud systems abut horizontal or vertical structural elements, isolate as shown, or required, to prevent transfer of structural Install supplementary framing, blocking, and backing wherever walls of partitions support fixtures, equipment, services, casework, heavy trim, furnishings, and the like. Where type of supplementary support is not otherwise indicated, comply with stud manufacturer's recommendations and industry standards for resulting weight and loading requirements.

I. Provide for mechanical/electrical penetrations. END OF SECTION

PART I GENERAL

The work required under this heading shall include all labor, materials, tools, equipment and services necessary for and reasonably incidental to the furnishing and installing of all gypsum work as shown on the drawings and as specified herein.

U.S. Gypsum's Manual: "Architectural Reference Library" current as of date of Project Manual. 103 SUBMITTALS

Submit copies of fire resistance data: Include required fire test results for all gypsum wallboard systems on partitions, ceilings, columns, and the like. Correlate with supporting framing detail. 1.04 DELIVERY, STORAGE AND HANDLING

Materials shall be delivered in the original packages or containers bearing the name of manufacturer and brand. Cementitious material shall be kept dry until ready to be used. They shall be kept off the ground, under cover, and away from sweating walls and other damp surfaces. Premixed compounds and other materials shall not be allowed to freeze. 1.05 TEMPERATURE AND VENTILATION

In cold weather, a uniform temperature of not less than 55 degrees F., and not more than 80 degrees F., shall be continuously maintained in the building for a week before the application. The heat shall be well distributed in all areas and deflective or protective screens shall be used to prevent concentrated or uneven heat or greas near the hear source. Where required, heat shall be furnished by General Contractor. In enclosed areas or buildings lacking openings for natural ventilation, air circulation shall be provided by the use of temporary circulators. Conform to all requirements of product manufacturer.

Comply with "References", Specifications and Manufacturer's data. Where these may be in conflict, the more stringent requirements

A. FASTENERS shall be in accordance with ASTM C646, and in required lengths and types. B. WALLBOARD shall be Fire Rated 1/2" or 5/8" as detailed, U.L. labeled and ICBO approved for fire resistive system detailed.

C. WATER RESISTANT BOARD shall be 5/8" DensGuard, ICBO approved for installation in moisture areas. U.L. labeled and ICBO approved for fire resistive system detailed. Use Water Resistant board for following: walls and ceilings of janitor rooms, toilet rooms, and any other "wet" areas. D. TILE BACKER BOARD shall be 1/2" thick Dens-Shield Tile Backer. Install and finish joints in accordance with manufacturer's

E. SHEATHING shall be 5/8" thick Dens-Glass Gold Firestop manufactured by Georgia Pacific.

TRIM ACCESSORIES: Hot-dipped galvanized coated trims in shapes and sizes as detailed. Casing beads for drywall shall be U.S.G NO. 200A OR 200B. Corner metal trim shall be used on all exterior corners. Beads shall be the proper size for drywall thickness. The finished product shall be straight and completely concealed. Metal beads and trim shall be mastic applied where mechanical anchorage is impractical to achieve. All trim pieces thus anchored shall be verified with Architect G. JOINT CEMENT, REINFORCING TAPE AND ADHESIVES: As recommended by Gypsum Board Manufacturer for intended purpose

Joint Treatment System shall be U.S. Gypsum's Durabond, for all high moisture areas, W/R Sheetrock Compound for taping W/R Joints and sealing of all cut edges and penetrations. a) USG or Tremco. b) Non-setting, non-staining, acoustically tested.

Sound Sealant Tape: Polyvinyl chloride, minimum 14 pounds density, non-porous, acoustically tested. b) Norton in required thickness and widths.

PART 3 EXECUTION

Verify installation conditions as satisfactory to receive work of this section. Do not install until any unsatisfactory conditions are corrected. Beginning work constitutes your acceptance of conditions as satisfactory.

Protect installed finish work of other trades and surfaces to preclude damage from work of this Section. Protect surrounding areas and surfaces to preclude damage. Exercise care to avoid soiling, spatter, and damage to work of other trades. Use cover cloths, or other means of protection. Remove, clean and repair any soiled or damaged work, as required. Protect from

3.03 INSTALLATION A. Erect the work in accordance with Specifications, Manufacturer's directions, and ASTM C840. Where these may be in conflict, the more stringent requirements govern. Install fire rated systems in accordance with the requirement of the system as approved by

B. Allowable Tolerances for wall board shall be 1/16" offset between planes and board faces and 1/8" in 8'-0" for plane, level, warp, and bow. Shim panels as necessary to comply with tolerances. C. Install trims and expansion joints where required.

E. Panel Joints: Analyze all walls to determine panel application to reduce joints to minimum. Apply in maximum lengths to minimize

D. Provide for mechanical/electrical penetrations.

space. Leave floors broom-clean.

both horizontal and vertical joints. Start installation of panels at exterior wall to position but joints as far away from exterior wall as possible. Place edges in contact and fit neatly, without forcing into place. All joints are to be staggered on opposite sides of the partitions and butt joints are to be staggered on the same surface. F. Fire rating of partitions shall be maintained at all equipment recesses.

A. Prepare joint compound according to Manufacturer's directions. Center reinforcing tape over joint and coat into compound leaving approximately 1/64" to 1/32" under tape to provide proper bond. Follow with skim coat to embed tape, but not to

B. Allow embedding coat to thoroughly dry prior to application of second coat. C. Apply joint compound and taping to fastener depressions as first coat. Follow with a minimum of two (2) additional applications. Leave all depressions level with surface plane same as above. All beads and trims to receive three (3) coat

applications same as joints. Make them true and level with adjacent surfaces. D. Allow second coat to thoroughly dry, apply finish coat evenly over and extending beyond second coat on all joints, feathering to

END OF SECTION

Clean all beads, screeds, metal base, metal trim, mechanical, and electrical items, and the like. Wipe clean, leaving work ready for decoration under other sections. As work is completed in each space, clean all rubbish, utensils, and surplus materials from the

PART I GENERAL

The work required under this heading shall include all labor, materials, equipment and services necessary for and reasonably incidental to the proper installation complete of all acoustical tile and panel cellings, including suspensión systems, luminous ceilings and other acoustical treatments all as shown or scheduled on the drawings and as specified herein.

A. Performance Requirements Ceiling suspension systems must be capable of accepting and supporting specified mechanical and electrical items and other specified ceiling accessories. Acoustical tile shall have been tested under ASTM E84, shall have a Class A rating with a flame spread of 25 or less, and carry an Underwriters Laboratories, Inc. label.

Manufacturer's Data: For information only, submit copies of the manufacturer's product specifications and installation instructions for each acoustic ceiling material required, and for each suspension system, including certified laboratory tests and other data

as required to show compliance with these specifications. Include manufacturer's recommendations for cleaning and refinishing acoustical units, including precautions against materials and methods which may be detrimental to finishes and acoustical Samples: Submit three sets of 4-inch square samples for each acoustic unit required. In each set of samples, show the full range of exposed color and texture to be expected in the completed work. Sample submittal and Architect's review will be for color

and texture only. Compliance with finished aesthetic appeal and all performance characteristics is the exclusive responsibility of Submit one 12-inch long sample of each exposed runner and molding. Architect's review will be for color only. Compliance with all other requirements is exclusive responsibility of the Contractor.

1.04 QUALITY ASSURANCE Subcontract the installation of acoustical ceilings to an experienced firm which is acceptable to the manufacturer of the acoustical units and suspension system.

brand stamped clearly thereon. No seconds or remnants shall be used. No materials shall be delivered or stored in the building until all glazing has been completed and all exterior openings closed in. All wet work, including concrete, masonry, etc., shall be completed and dried out.

Temperature shall be maintained uniformly at a minimum of 60 degrees Fahrenheit before, during and after installation. Humidity shall not exceed 40 percent before, during or after installation

Material shall be delivered to the project in the original packages, with seals unbroken and with the manufacturer's name and

At the completion of the project the acoustical ceiling subcontractor shall furnish the Owner with one (1) full carton, seals unbroken, of all ceiling and tile panel types scheduled for use on this project.

Provide manufacturer's 15 year warranty for ceiling systems. PART 2 PRODUCTS

A. Acoustical Tile: As selected by the owner. ACT-I Shall be: Armstrong "Optima" or equa 2. ACT-2 Shall be: Armstrong "Kitchen Zone" or equal.

Suspension Systems: Double-web, hot-dip galvanized with 6-30 coating. 2. Aluminum grid in kitchen and dishwashing areas.

PART 3 EXECUTION A. Install a suspension system to comply with ASTM C636, with hanger support coming from building structure only. Install hangers with concrete nails or drive pins into solid structural members, toggles into hollow areas, or eye screws as appropriate to comply with

of each member. Extra hanger wires shall be required as recommended by the grid manufacturer where grilles or troffers are installed parallel to main runners. B. Install edge moldings, corners, special corners, or reveal moldings to coordinate with the grid system at edges of each acoustical ceiling area as noted on the reflected ceiling plan, and at locations where edge of units would otherwise be exposed after completion of work. Secure wall angle molding to building construction by fastening through holes made not more

ASTM C 636. Attachment to ducts, conduit, or other similar support will not be permitted. Space hangers not more than 4 feet on

center as recommended by arid manufacturer along each member, plus provide a hanger wire not more than 6 inches from ends

3 inches from end of mold and 6 inches on center. All moldings shall be standard wall angle moldings specified except where shown otherwise on the drawings. . Main tees and cross tees shall be framed out as shown on the drawings and as required for coordination with light fixtures,

The ceiling system installer shall advise the Prime Contractor of required protection for the acoustical tile and suspension,

D. Ceiling tile and panels shall be neatly scribed and fit where field cutting is required and in accordance with the manufacturer's instructions. Finish and scribe to fit where field cutting is required. Ceiling tiles and panels shall be placed into grid system or other suspension systems listed completely free of voids and openings. Hold down clips shall be installed where noted on the drawings and at vestibules and other areas adjacent to exterior entrance.

diffusers, access doors and other equipment. All joints in main tees shall be mechanically spliced, cross tees shall be locked into

including temperature and humidity limitations and dust control, so that all work will be without damage at the time of acceptance by Upon completion of the installation, all soiled, deformed, discolored or otherwise damaged tile surfaces shall be cleaned or replaced. Completed acoustical ceiling system installation shall neither be altered nor disturbed by any other trade without specific prior approval from the prime Contractor and ceiling subcontractor. Contractor is responsible for adjusting all units and accessories for complete and proper placement and alignment. All soiled or otherwise damaged acoustic tile units and accessories shall be replaced with new Items If minor finish damage cannot be

END OF SECTION

successfully cleaned or repaired to original condition status completely free of damage or soil evidence to the satisfaction of the

3.02 ADJUSTING, CLEANING AND PROTECTION

The work required under this heading shall include all labor, materials, equipment and services necessary for and reasonably incidental the furnishing and installing of all fiberglass reinforced plastic panels as shown on the drawings and as specified herein.

Submit two 8-inch by 10-inch samples of each type of panel. Shop Drawings: Indicate and dimension the location of joints and fastener attachments.

Provide panels, molding and adhesive only from the manufacturer specified to ensure warranty and color harmonization of

1.04 DELIVERY, STORAGE AND HANDLING A. Delivery of Materials I. Package sheets on skids or pallets for shipment to project site.

2. Deliver adhesive in sealed containers with labels legible and intact B. Storage of Materials I.Store sheets in a dry place at the project site.

1. When moving more than a single sheet, place sheets face-to-face and back-to-back. 2. Protect surface during cutting and working by application of temporary, strippable coating or by other means recommended

3. Remove foreign matter from face of panel by use of a soft bristle brush, avoiding abrasive action. A.Installation shall not begin until building is enclosed, permanent heating and cooling equipment is in operation, and residual

moisture has dissipated. B. During installation and for not less than 48 hours before, maintain an ambient temperature and relative humidity within limits required by type of adhesive used. C.Do not allow containers of Kemlite 101 adhesive to be opened until all potential sources of flame or spark have been shut

D. Provide ventilation to disperse fumes during application of solvent-based adhesive. A. Class I(A) Finish. Wall panels shall be Kemlite Fire-X Glasbord with Surfaseal fiberglas reinforced plastic panels as

manufactured by Kemlite Company. Color to be Soft Beige. Panel thickness shall be nominal .09" or 3/32". Alternate products shall meet or exceed the following properties: P. Flame spread of 20 or lower, smoke developed 200 or lower per ASTM E-84. 3. Barcol hardness (scratch resistance) of 55 per ASTM D-2583. 4. Panels will exhibit no more than a 0.038% weight loss after a 25-cycle Taber test

down or extinguished and until warnings against their ignition during adhesive application have been posted.

6. FMRC approved. Subject to the conditions of approval as described in FMRC Report J.I. OF 9A3.AM. 7. USDA accepted. 8.1CBO Report Number 4583. B. Adhesive: As recommended by panel manufacturer for application to substrate.

5. Impact strength (IZOD) of 12 ft.lbs./in. per ASTM D-256.

C.Corner Trim: Panel manufacturer's standard single length extruded vinyl pieces; longest length possible--to eliminate end PART 3 EXECUTION A. Examine backup surfaces to determine that corners are plumb and straight, surfaces are smooth, uniform, clean and free from foreign matter, nails countersunk, joints and cracks filled flush and smooth with the adjoining surface.

B. Do not begin installation until backup surfaces are put into satisfactory condition. A. Do all cutting with carbide tipped saw blades or drill bits, or cut with snips. of this section. B. Install panels with manufacturer's recommended gap for panel field and corner joints.

C. Using a 1/4" notched trowel, apply adhesive to panel back for 100 percent coverage. D. Using products acceptable to manufacturer, install the frp system in accordance with manufacturer's printed instructions.

E. Joints shall be sealed with Kemlite Silicone sealant A. Remove any adhesive or excessive sealant from face using solvent or cleaner recommended by panel manufacturer <u>SECTION 09 91 00</u> PAINTING

PART I GENERAL

The work required under this heading shall include all labor, material, equipment, and services necessary for and reasonably incidental to preparation, painting, and finishing of all finish surfaces

A. Examine the specifications for various other trades and become thoroughly familiar with all their provisions regarding painting. All surfaces left unfinished by requirements of other specifications shall be painted or finished as a part of this work.

B. Interior face brick, ceramic tile, structural glazed tile, copper, bronze, chromium plate, nickel, stainless steel, aluminum, monel metal, lead and lead coated copper shall not be painted or finished unless otherwise specified

C. If woodwork, metal or any other surface to be finished cannot be put in proper condition for finishing by customary cleaning sanding and puttying operations, the Painting Contractor shall immediately notify the General Contractor or Architect in writing or assume responsibility for and rectify any unsatisfactory finish. Application of first coat of paint shall be construed as an

acceptance of the base D. Spray application of paints will not be permitted, except as specified, unless approval has been secured in writing from the

Árchitect and unless surfaces and materials are entirely suitable to this type of application as proven by on-the-job

B. Applicator: Company specializing in commercial painting and finishing with five (5) years documented experience, and approved by Following award of Contract, General Contractor shall submit the following information to the Architect for his approval and shall

A. Product Manufacturer: Company specializing in production and distribution of quality Architectural finishes and provides technical

not proceed with any painting and finishing work until such approval has been given: A. Name of painting contractor.

B. Name of manufacturer whose products are being proposed for use. Only one line of materials shall be used throughout the job, except for specified special products

C. Manufacturer's complete and detailed specifications for materials to be used for each application.

Specification shall include the following: Chemistry of Product Dry Mil Thickness Spreading Rate

Non-volatile bu Weight Non-volatile bý Volúme Dust Free Timé Re-Coat Time

or other method during progress of the work.

and specification assistance for the Specifier

Provide item by item comparison to specified products.

D. An $8" \times 10"$ brush out and roll out of each product in each color for sheen evaluation and color match. 1.05 DELIVERY, STORAGE, AND HANDLING Deliver paints and enamels ready-mixed to job site. All material must be delivered in their original containers with labels intact.

Areas to be painted shall be clean and free of dust and shall remain in that condition through the painting process.

All materials used on the job shall be stored in a single place designated by the Owner or Architect. Such storage place shall be kept neat and clean and all damage thereto or to its surroundings shall be made good by the painting subcontractor. All soiled or used rags, waste and trash must be removed from the building every night and every precaution taken to avoid the danger of fire. Paints must be stored at temperatures above 50 degrees.

All materials shall be applied at temperatures above 50 degrees surface temperature. Do not paint exteriors during frosty or rainy weather. Avoid painting surfaces while they are exposed to hot sun. Do not apply paint to areas where dust is being generated. Provide lighting level of 80 foot candles for all application procedures if natural lighting is not adequate.

The painter shall not only protect his work at all times but shall also protect all adjacent work and materials by suitable covering

A. Provide owner with a new, unopened container of each product in each color used on this project. B. Affix a typewritten $3" \times 5"$ card to each container showing location where used.

The Contractor shall have the option of using materials and finishes manufactured by any one of the following manufacturers hereinafter listed. Materials use'd throughout shall be the product of one manufacturer only and shall be the first line and top grade materials produced by the manufacturer selected. Pratt and Lambert, Sherwin Williams

2.02 PAINTING SCHEDULE METAL WORK - Three (3) coats, in addition to shop prime coat. This to include all exposed structural steel, metal doors and frames, louvers, metal handrails, quard posts and aluminum or steel heating/air conditioning grilles. All mounted mechanical equipment shall be painted per Árchitect's instructions

l Coat "SW" B66W00310 Pro-Cryl Primer 2 Coats "SW" B66W01151 Pro Industrial DTM Acrylic Semi-Gloss 2 Coats "SW" B53-1150 Pro Industrial Waterbased Alkyd Urethane Enamel Semi- Gloss

B. INTERIOR WORK GYPSUM BOARD - Three (3) Coats Coat "SW" B28W02600 Pro Mar 200 Zero VOC Interior Latex Primer

2 Coats "SW" B20-2600 Pro Mar 200 Zero VOC Interior Latex Eggshell

2 Coats "SW" K33-200 Duration Exterior Acrylic Satin Coating

Special finishes other than the products listed above shall be used as specified.

FIBER CEMENT SIDING, SOFFIT AND TRIM - Three (3) coats

GYPSUM BOARD-EPOXY - Three (3) Coats l Coat "SW" B28W02600 Pro Mar 200 Zero VOC Interior Latex Primer 2 Coats "SW" K45-I50 Pro Industrial Pre-Catalyzed Water-based Epoxy Eggshell

2 Coats "SW" B73-360 Pro Industrial Catalyzed Epoxy Eggshell NEW CONCRETE & CONCRETE MASONRY - Three (3) Coats

Coat "SW" A24WOO2O Loxon Block Surfacer 2 Coats "SW" B20-2600 Pro Mar 200 Zero VOC Interior Latex Eggshell 2 Coats "SW" K45-150 Pro Industrial Pre-Catalyzed Waterbased Epoxy Eggshell NEW METAL, including other exposed structural steel, hollow metal doors and frames, metal frames for door lights, louvers,

Coat "SW" B66W00310 Pro Industrial Pro-Cryl Primer 2 Coats "SW" B66W01151Pro Industrial DTM Acrylic Semi-Gloss 2 Coats "SW" B53-1150 Pro Industrial Waterbased Alkyd Urethane Enamel Semi-Gloss

mechanical grilles and sprinkler piping exposed in finished areas -Three (3) Coats.

I Coat "SW" 564 Series Sher-Wood BAC Wiping Stain 2 Coats "SW" A68 Series Wood Classics Waterborne Polyurethane Varnish Satin NEW WOOD PAINTED - Three (3) Coats

NEW WOOD STAINED - Three (3) Coats

Beginning of installation means acceptance of substrates.

I Coat "SW" B51-450 Multi Purpose Latex Primer/Sealer 2 Coats "SW" A76 Series Solo 100% Acrylic Semi-Gloss 2 Coats "SW" B31-1100 Pro Classic Waterborne Acrylic Semi-Gloss

2.03 VINYL WALL COVERING The Painting Contractor shall provide and install all vinyl wall coverings where noted on the drawings. All wall surfaces that receive vinyl wall covering shall receive one (1) coat of primer per the recommendation of the covering manufacturer. After hanging, all surfaces must be cleaned of paste and dirt by washing with clean water. Do not use carbon tetrachloride or lacaver solvents for cleaning. Vinyl wall covering shall be installed per manufacturer's recommendations with all seams plumb and stratight. PART 3 EXECUTION

Verify that substrate conditions are ready to receive work as detailed by manufacturer of the product. Examine surfaces scheduled to be finished prior to commencement of work. Report conditions that may potentially affect proper

Do not apply interior finishes if substrate moisture is greater than 12%. Sponge all wood to receive clear finish system with clean water. Allow to dry, sand with 150A sandpaper. Sand all glossy areas to break the old film.

All surfaces to receive finishes must be solid, dry, smooth, clean, and free from any abnormal conditions or contaminants. If Contractor is unfamiliar with any surface condition, immediately consult with supplier for assistance.

A. The workmanship shall be of the very best and all materials evenly spread and smoothly flowed on without runs or sags. ONLY SKILLED MECHÀNICS SHALL BE EMPLOYED B. Enamel or varnish finish applied to wood or metal shall be sanded between coats with fine sandpaper to produce an even, smooth finish. All coats shall be thoroughly dry before applying succeeding coats.

C. All interior wood trim shall be back-primed before installation with an approved interior trim primer. D. All exterior wood trim shall be back-primed before installation with the house paint exterior primer recommended by the manufacturer of the paint to be used for finishing. After fitting by the carpenter, tops and bottoms of wood doors or sash shall be E. Stipple finish shall be uniform in nature, and free from lap marks, brush marks, or hat bands.

F. Final roll-off of all materials shall be free from shadows, roller shedding, roller tailing, and sags.

G. Clear finishes shall be brush or pad applied. H. Sprau application is permitted for hollow metal doors and frames. Other sprau application is permitted only on written approva Contractor will be responsible for any damage due to overspray conditions that may arise.

1. Apply materials to provide total color and sheen uniformity on all surfaces, regardless of number of coats necessary.

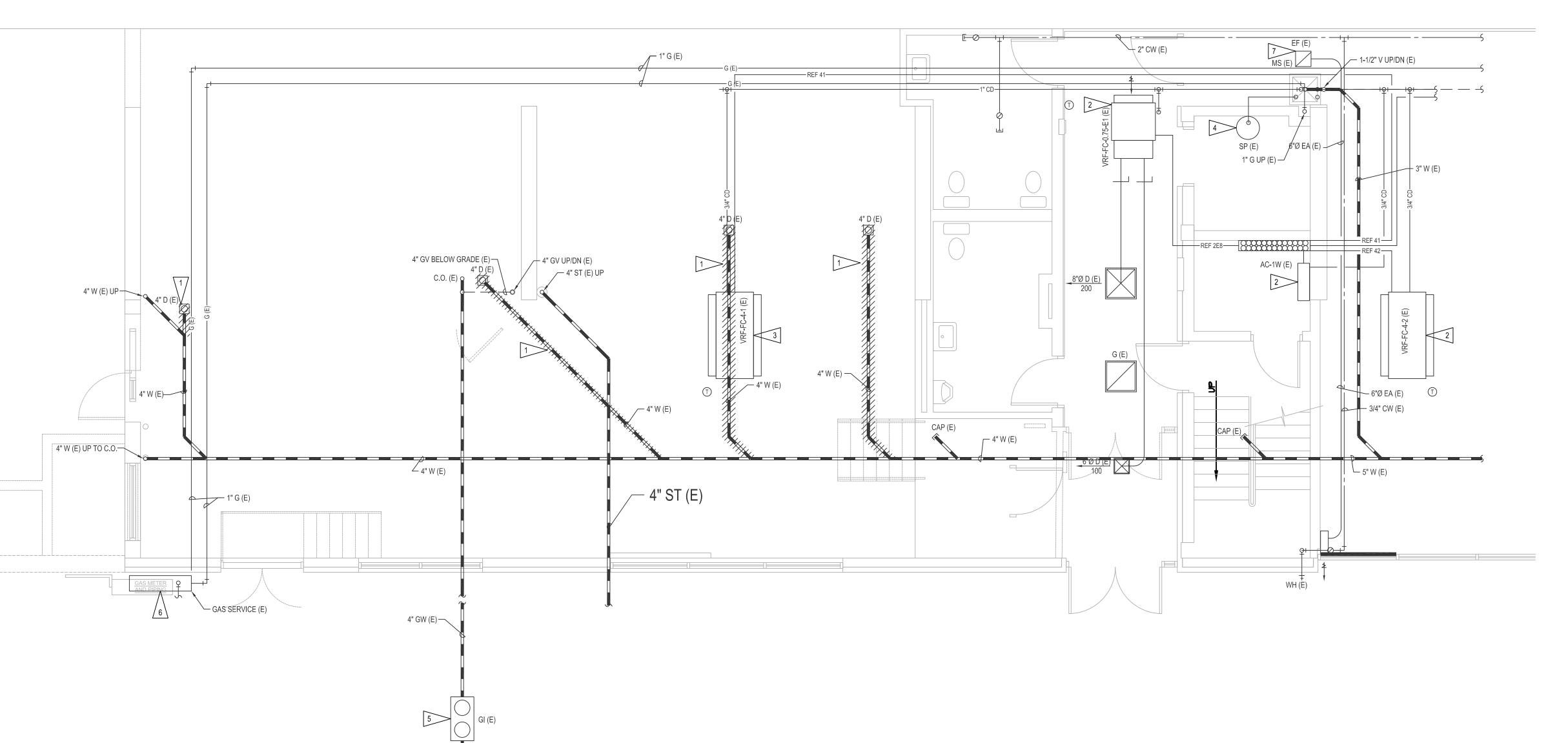
J. All materials shall be applied in conformance with manufacturer's standard specifications for materials and surface involved

A. Remove spills, splatters, and paint from surfaces not to be painted. B. Remove equipment and leftover materials upon initial completion of work.

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00002 - MPE (Frank Reida) Plumbing to meet OPC 2018

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DEMOLITION NOTES

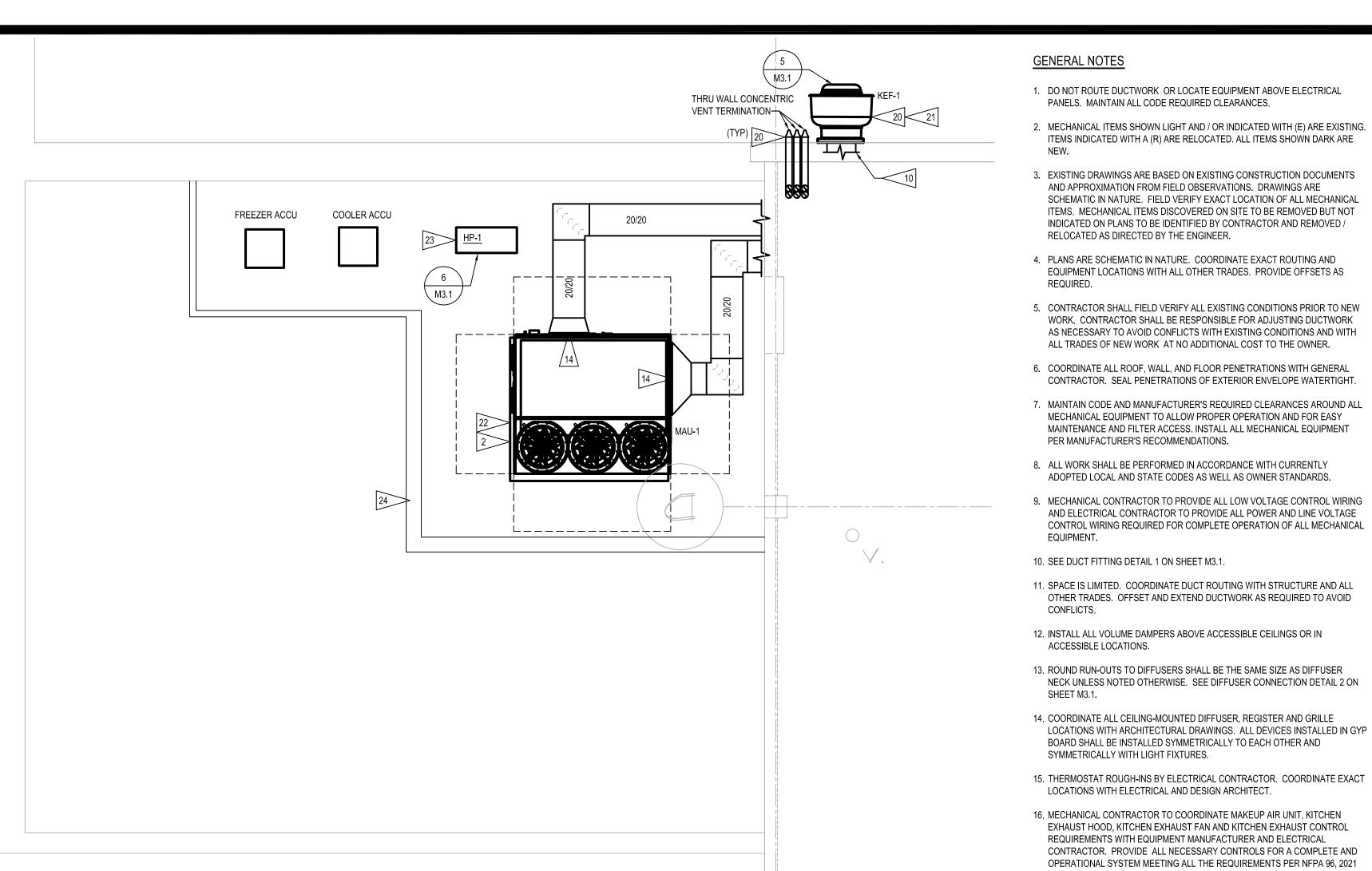
- 1. ALL MECHANICAL ITEMS SHOWN ARE EXISTING. NOT ALL EXISTING MECHANICAL ITEMS ARE SHOWN. ITEMS SHOWN DASHED/HATCHED ARE TO BE REMOVED.
- 2. EXISTING DRAWINGS ARE BASED ON APPROXIMATIONS FROM FIELD OBSERVATIONS. DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT LOCATION OF ALL EXISTING EQUIPMENT, DUCTWORK AND PIPING. EQUIPMENT, DUCTWORK AND PIPING DISCOVERED ON SITE TO BE REMOVED BUT NOT INDICATED ON PLANS TO BE IDENTIFIED BY CONTRACTOR AND REMOVED AS REQUIRED. 3. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO
- PROVIDING NEW WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING REMOVAL AS REQUIRED TO ACCOMMODATE ACTUAL CONDITIONS.
- 4. COORDINATE ALL REQUIRED SHUT-DOWNS WITH GENERAL CONTRACTOR.
- 5. HOLES CUT IN WALLS, FLOORS AND CEILINGS TO PERMIT THE REMOVAL OF EXISTING EQUIPMENT, PIPING, ETC. SHALL BE CAREFULLY MADE AND RESTRICTED TO THE SMALLEST PRACTICAL SIZE. PATCH ALL HOLES NOT REQUIRED FOR NEW WORK TO MATCH EXISTING. SEAL ALL HOLES OF EXTERIOR ENVELOPE WATER TIGHT.
- 6. THE OWNER RESERVES THE FIRST RIGHT OF SALVAGE OF ANY ITEMS REMOVED. CONTRACTOR SHALL REMOVE ALL UNWANTED MATERIALS FROM THE SITE. OWNER'S DUMPSTER OR OTHER TRASH RECEPTACLES ARE NOT TO BE UTILIZED.
- 7. WHERE APPLICABLE, COORDINATE EXTENT OF DEMOLITION WITH NEW WORK. 8. COORDINATE ALL ROOF WORK WITH GENERAL CONTRACTOR AND ROOFING CONTRACTORS.
- 9. LOCATION OF BELOW GRADE PIPING IS BASED ON EXISTING DRAWINGS AND HAS NOT BEEN VERIFIED. CONTRACTOR SHALL PROVIDE COMPLETE CAMERA SCOPE AND DOCUMENTATION OF ALL EXISTING BELOW GRADE PIPING. INCLUDE THE FOLLOWING INFORMATION: LOCATION, SIZE, ELEVATION, AND CONDITION OF ALL BELOW GRADE PIPING.
- 10. UNLESS OTHERWISE NOTED ALL BELOW GRADE PIPING SHALL REMAIN. SEE NEW WORK PLAN FOR RECONNECTION TO EXISTING BELOW GRADE PIPING. ALL PIPING NOT USED IN NEW DESIGN SHALL BE CUT, CAPPED, AND ABANDONED IN PLACE. DO NOT ALLOW DEAD LEGS OF SANITARY PIPING. HAZARDOUS MATERIAL COORDINATION NOTES
- 1. WHENEVER THE CONTRACTOR ENCOUNTERS A MATERIAL WHICH COULD POSSIBLY BE HAZARDOUS, THE CONTRACTOR SHALL STOP WORK AND CONTACT THE OWNER IMMEDIATELY FOR DIRECTION. DO NOT DISTURB THE MATERIAL IN ITS LOCATION.
- 2. CONTRACTORS SHALL AND MUST COORDINATE REMOVAL OF ANY ITEMS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS WITH THE OWNER. REMOVAL OF ANY HAZARDOUS MATERIALS SHALL BE IN ACCORDANCE WITH ANY EPA REQUIREMENTS AS WELL AS ANY REQUIREMENTS OF ANY OTHER AGENCIES WITH JURISDICTION OVER SUCH WORK.

DEMOLITION FLAG NOTES

- 1 REMOVE SANITARY PIPING SHOWN HATCHED COMPLETE. REMOVE SANITARY BACK TO MAIN AND CAP. DO NOT ALLOW DEAD LEGS OF
- 2 EXISTING VRF UNIT, DUCT, REFIRGERANT PIPING, CONTROLS AND ETC.
- RELOCATE VRF UNIT. SEE SHEET M1.1 FOR ADDITIONAL INFORMATION.
- 4 EXISTING SUMP PUMP, PIPING AND CONTROLS TO REMAIN.
- 5 EXISTING GREASE INTERCEPTOR AND PIPING TO REMAIN.
- 6 EXISTING GAS SERVICE TO REMAIN. SEE SHEET M2.1 FOR ADDITIONAL
- INFORMATION. 7 EXISTING EXHAUST FAN, DUCT AND CONTROLS TO REMAIN.

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

GENERAL NOTES

- 1. DO NOT ROUTE DUCTWORK OR LOCATE EQUIPMENT ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
- 2. MECHANICAL ITEMS SHOWN LIGHT AND / OR INDICATED WITH (E) ARE EXISTING. ITEMS INDICATED WITH A (R) ARE RELOCATED. ALL ITEMS SHOWN DARK ARE
- 3. EXISTING DRAWINGS ARE BASED ON EXISTING CONSTRUCTION DOCUMENTS AND APPROXIMATION FROM FIELD OBSERVATIONS. DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT LOCATION OF ALL MECHANICAL ITEMS. MECHANICAL ITEMS DISCOVERED ON SITE TO BE REMOVED BUT NOT INDICATED ON PLANS TO BE IDENTIFIED BY CONTRACTOR AND REMOVED / RELOCATED AS DIRECTED BY THE ENGINEER.
- 4. PLANS ARE SCHEMATIC IN NATURE. COORDINATE EXACT ROUTING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES. PROVIDE OFFSETS AS
- 5. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO NEW WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING DUCTWORK AS NECESSARY TO AVOID CONFLICTS WITH EXISTING CONDITIONS AND WITH ALL TRADES OF NEW WORK AT NO ADDITIONAL COST TO THE OWNER.
- 6. COORDINATE ALL ROOF, WALL, AND FLOOR PENETRATIONS WITH GENERAL CONTRACTOR. SEAL PENETRATIONS OF EXTERIOR ENVELOPE WATERTIGHT.
- 7. MAINTAIN CODE AND MANUFACTURER'S REQUIRED CLEARANCES AROUND ALL MECHANICAL EQUIPMENT TO ALLOW PROPER OPERATION AND FOR EASY MAINTENANCE AND FILTER ACCESS. INSTALL ALL MECHANICAL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
- 8. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CURRENTLY ADOPTED LOCAL AND STATE CODES AS WELL AS OWNER STANDARDS.
- 9. MECHANICAL CONTRACTOR TO PROVIDE ALL LOW VOLTAGE CONTROL WIRING AND ELECTRICAL CONTRACTOR TO PROVIDE ALL POWER AND LINE VOLTAGE CONTROL WIRING REQUIRED FOR COMPLETE OPERATION OF ALL MECHANICAL
- 10. SEE DUCT FITTING DETAIL 1 ON SHEET M3.1.
- 11. SPACE IS LIMITED. COORDINATE DUCT ROUTING WITH STRUCTURE AND ALL OTHER TRADES. OFFSET AND EXTEND DUCTWORK AS REQUIRED TO AVOID CONFLICTS.
- 12. INSTALL ALL VOLUME DAMPERS ABOVE ACCESSIBLE CEILINGS OR IN ACCESSIBLE LOCATIONS.
- 13. ROUND RUN-OUTS TO DIFFUSERS SHALL BE THE SAME SIZE AS DIFFUSER NECK UNLESS NOTED OTHERWISE. SEE DIFFUSER CONNECTION DETAIL 2 ON 14. COORDINATE ALL CEILING-MOUNTED DIFFUSER, REGISTER AND GRILLE
- BOARD SHALL BE INSTALLED SYMMETRICALLY TO EACH OTHER AND SYMMETRICALLY WITH LIGHT FIXTURES.
- LOCATIONS WITH ELECTRICAL AND DESIGN ARCHITECT.
- 16. MECHANICAL CONTRACTOR TO COORDINATE MAKEUP AIR UNIT, KITCHEN EXHAUST HOOD, KITCHEN EXHAUST FAN AND KITCHEN EXHAUST CONTROL REQUIREMENTS WITH EQUIPMENT MANUFACTURER AND ELECTRICAL CONTRACTOR. PROVIDE ALL NECESSARY CONTROLS FOR A COMPLETE AND OPERATIONAL SYSTEM MEETING ALL THE REQUIREMENTS PER NFPA 96, 2021 IMC AND ALL LOCAL CODES.
- 17. COORDINATE ALL WORK WITH ACTUAL KITCHEN EQUIPMENT PROVIDED. SEE MECHANICAL SUPPLEMENTAL DRAWINGS SHEETS M6.1-M6.2 FOR MORE INFORMATION REGARDING KITCHEN VENTILATION EQUIPMENT.
- 18. PROVIDE PAINT GRIP FINISH ON ALL SHEET METAL DUCTWORK IN AREAS WHERE EXPOSED. DUCTWORK AND ASSOCIATED REGISTERS TO BE PAINTED BY GENERAL CONTRACTOR. COORDINATE PAINTING REQUIREMENTS WITH ARCHITECTURAL.
- 19. VERIFY ALL HVAC CONNECTIONS AND HOOD SIZE WITH THE KITCHEN EQUIPMENT AND KITCHEN EQUIPMENT SUPPLIER.

KITCHEN HOOD CONTROL & INTERLOCK REQUIREMENTS

- 1. TYPE 1 HOOD SHALL INCLUDE HEAT DETECTOR AND MANUAL PUSH BUTTON STATION. UPON DETECTION OF HEAT OR ACTIVATION OF THE "ON" BUTTON, THE MAKEUP AIR UNIT SHALL PROVE TO BE ON. UPON PROOF THAT THE MAKEUP AIR UNIT IS RUNNING, THE KITCHEN EXHAUST FAN WILL BE ACTIVATED. IF THE MAKEUP AIR UNIT DOES NOT GIVE PROOF, THE EXHAUST FAN DOES NOT ACTIVATE. IN A FIRE SITUATION WHERE THE ANSUL SYSTEM OPERATES, THE EXHAUST FAN WILL CONTINUE TO OPERATE AND THE MAKEUP
- 2. TYPE 1 HOOD SHALL BE INTERLOCKED WITH KITCHEN ROOFTOP UNIT. KITCHEN ROOFTOP UNIT MUST OPERATE IN "FAN ON" MODE WHILE TYPE 1 HOOD EXHAUST FAN IS OPERATING.

AIR UNIT WILL CEASE OPERATION.

- N/E CONNECT NEW TO EXISTING. FIELD VERIFY EXISTING SIZE AND LOCATION PRIOR TO PROVIDING NEW WORK. 1 DO NOT ROUTE DUCTWORK OR PIPING ABOVE ELECTRICAL
- PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES. 2 INTERLOCK HOOD FIRE SUPPRESSION SYSTEM WITH MAKE-UP AIR UNIT SUCH THAT MAKE-UP AIR UNIT SHUTS
- DOWN IF FIRE SUPPRESSION SYSTEM IS ACTIVATED. 3 INTERLOCK HOOD FIRE SUPPRESSION SYSTEM WITH ALL FUEL SHUTOFFS.
- > PROVIDE GAS WATER HEATER VENT UP TO CONCENTRIC TERMINATION PER MANUFACTURER'S RECOMMENDATIONS AND NFPA 54. SEE DETAIL 4 ON SHEET M3.1. SEAL WALL PENETRATION WATER TIGHT.
- 5 INSTALL DUCT TIGHT TO BOTTOM OF STRUCTURE. TRANSITION DUCT TO FOLLOW SLOPE OF ROOF.
- 6 PAINT EXPOSED DUCTWORK AND REGISTERS VISIBLE TO PUBLIC. COORDINATE EXACT COLOR WITH ARCHITECT AND OWNER. CONSTRUCT DUCT TO BE PAINTED WITH GRIP FINISH.
- 7 CONNECT NEW SA/RA DUCT TO EXISTING SA/RA DUCT. FILED VERIFY EXISTING DUCT LOCATION AND SIZE. TRANSITION SA/RA DUCT TO EXISTING DUCT AS REQUIRED.
- 8 MOUNT DUCT AS HIGH AS POSSIBLE AND MAINTAIN 12" AIR GAP ABOVE OPENING. ELBOW RETURN AIR OPENING UP TOWARD EXISTING STRUCTURE. PROVIDE 1/2"x1/2" WIRE MESH SCREEN WITH FRAME OVER OPENING.
- 9 EXPOSED RECTANGULAR DUCT SHALL BE LINED. ROUTE DUCT TIGHT TO BOTTOM OF STRUCTURE. COORDINATE DUCT ROUTING WITH LIGHT FIXTURES AND ARCHITECTURAL.
- 10 > 18"Ø EA DUCT UP IN EXISTING CHASE TO WALL MOUTNED KEF-1. COORDINATE WITH STRUCTURE. TRANSITION TO KEF-1 OPENING SIZE AS REQUIRED. COORDINATE DUCT SIZE AND ROUTING WITH HOOD, EXHAUST FAN AND OVEN MANUFACTURER'S RECOMMENDATIONS AND CODE REQUIREMENTS.
- 15. THERMOSTAT ROUGH-INS BY ELECTRICAL CONTRACTOR. COORDINATE EXACT

 LOCATIONS WITH ELECTRICAL AND DESIGN ADDITION. COLLAR TO KEF-1. DUCTWORK SHALL BE ALL WELDED CARBON STEEL PER NFPA 96 AND ALL LOCAL CODE REQUIREMENTS. PROVIDE FIRE RATED DUCT INSULATION PER MANUFACTURER'S REQUIREMENTS TO MAINTAIN ZERO CLEARANCE TO COMBUSTIBLES.
 - 12 KITCHEN HOOD, KEH-1. INSTALL TYPE I RANGE HOOD PER NFPA 96, IMC 2021, MANUFACTURER'S RECOMMENDATIONS AND ALL LOCAL CODES.
 - 13 >> PROVIDE MANUAL PULL STATION FOR HOOD FIRE SUPPRESSION SYSTEM PER NFPA 96 REQUIREMENTS. VERIFY LOCATION WITH LOCAL AUTHORITY HAVING JURISDICTION AND COORDINATE THE COMPLETE INSTALLATION WITH ALL OTHER TRADES. REMOTE PULL STATION FOR HOODS SHALL BE NO LESS THAN 10'-0" AND NO MORE THAN 20'-0" FROM HOOD ALONG PATH OF
 - 20/20 O.A./RA DUCT TO MUA-1 LOCATED ON LOWER ROOF. COORDINATE WITH ARCHITECTURE AND STRUCTURE. TRANSITION DUCT TO MAU-1 OPENING SIZE AS REQUIRED.

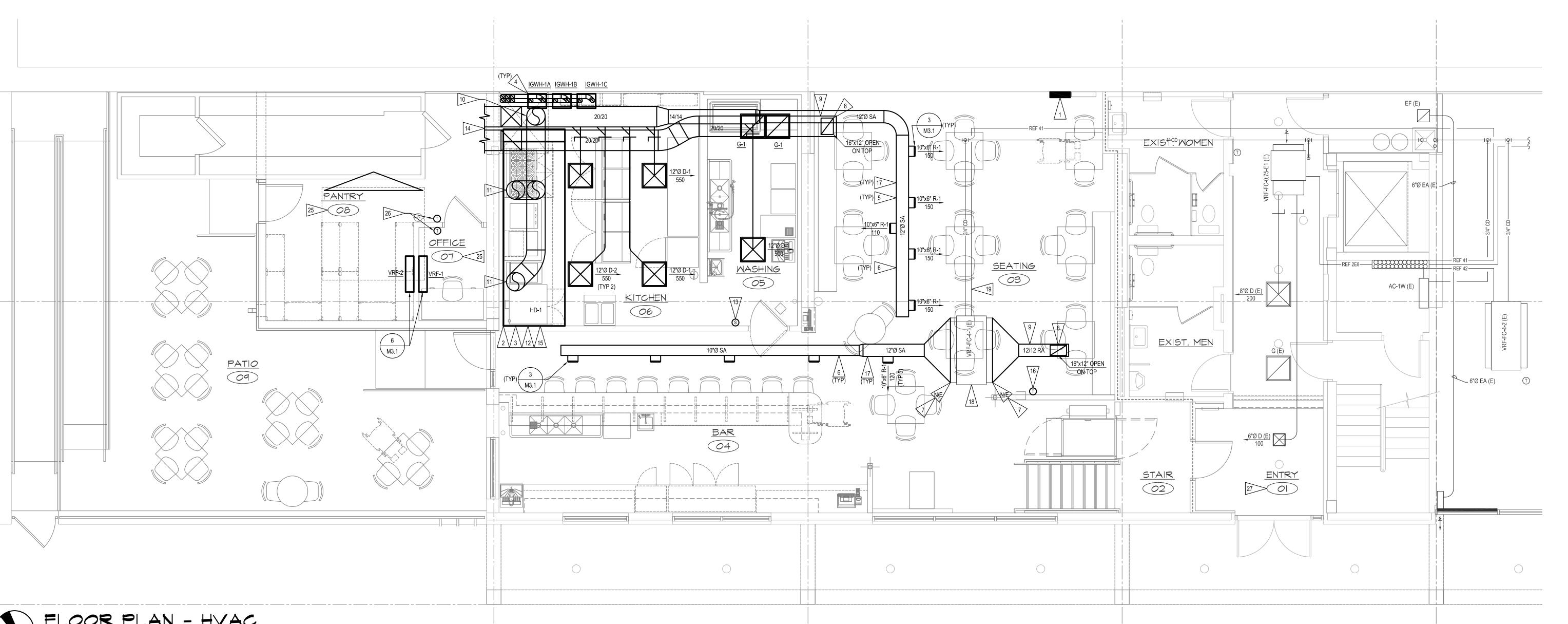
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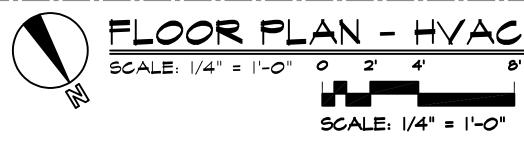
- 15 TYPE 1 HOOD LISTED AND LABELED MATERIALS, INSTALLATION, FIRE SUPPRESSION, GREASE DUCT WITH CLEANOUTS CLEARANCES, TERMINATIONS AND MAKE-UP AIR ALL IN ACCORDANCE WITH REQUIREMENTS SET FORTH
- IN IMC 2021 WITH LOCAL AMENDMENTS. 16 RELOCATE EXISTING THERMOSTAT TO LOCATION INDICATED. PROVIDE ADDITIONAL CONTROL WIRING AS REQUIRED. COORDINATE T-STAT LOCATION WITH ARCHITECT AND TENANT.
- 17 EXPOSED ROUND DUCT SHALL BE DOUBLE WALL WITH 1" INTERSTITIAL LINER. ROUTE DUCT TIGHT TO BOTTOM OF STRUCTURE. COORDINATE DUCT ROUTING WITH LIGHT FIXTURES AND ARCHITECTURAL. MOUNT DUCT AS HIGH AS
- 18 > EXISTING VRF UNIT TO REMAIN. PROVIDE COMPLETE SERVICE INCLUDING, CLEANING OF COILS COMPLETE CHARGE OF REFRIGERANT, CHANGE OF BELTS AND NEW FILTERS. REPORT ADDITIONAL NEEDED REPAIRS TO BUILDING OWNER. BALANCE SUPPLY AIR TO 600 CFM. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AROUND UNIT.
- 19 EXISTING REFRIGERANT PIPING UP TO OUTDOOR UNIT TO REMAIN. VERIFY EXACT LOCATION IN FIELD PROVIDE COMPLETE SERVICE INCLUDING, CLEANING, COMPLETE CHARGE OF REFRIGERANT AND CHANGE OF BELTS. REPORT ADDITIONAL NEEDED REPAIRS TO BUILDING OWNER. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AROUND UNIT.
- 20 MAINTAIN 10'-0" MINIMUM FROM ALL OUTSIDE AIR INTAKES. 21 NTERLOCK HOOD EXHAUST FAN WITH MAKE-UP AIR UNIT SUCH THAT EXHAUST FAN CANNOT RUN IF MAKE-UP AIR

UNIT IS NOT RUNNING.

- 22 LOCATE NEW MAKE-UP AIR UNIT AT APPROXIMATE LOCATION INDICTED. COORDINATE EXACT LOCATION WITH STRUCTURE. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES.
- 23 LOCATE NEW VRF-HP UNIT AT APPROXIMATE LOCATION INDICTED. COORDINATE EXACT LOCATION WITH GENERAL CONTRACTOR. MAINTAIN MANUFACTURER'S
- RECOMMENDED CLEARANCES. 24 PROVIDE GUARD RAIL FOR MECHANICAL EQUIPMENT
- LOCATED WITHIN 10'-0" OF ROOF EDGE. COORDINATE WITH GENERAL CONTRACTOR AND ARCHITECTURAL. 25 ELECTRIC HEAT BY ELECTRICAL CONTRACTOR. SEE
- ELECTRICAL DRAWINGS. 26 INSTALL NEW VRF ROOM SENSORS AND ALL REQUIRED CONTROL WIRING PER MANUFACTURERS RECOMMENDATIONS. COORDINATE SENSOR LOCATION WITH ELECTRICAL CONTRACTOR.
- 27 EXISTING ELECTRIC UNIT HEATERS TO REMAIN. SEE







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	KITCHEN EQUIPMEN	T CON	INEC	TION S	SCHE	DULE	(1) (2)	(3) (4) (15	j)
MARK	ITEM	CW	HW	FILTERED CW	WASTE	VENT	GAS	NATURAL GAS LOAD (CFH)	REMARKS
1	THREE COMPARTMENT SINK	3/4"	3/4"	-	(3) 2"	-	-	-	(7) (10)
2	SODA WITH ICE BIN	1/2"	-	-	1"	-	-	-	(5) (11) (13)
3	CONVECTION OVEN	-	-	-	-	-	3/4"	90	(6)
4	CHAR BROILER	-	-	-	-	-	3/4"	80	(6)
5	UNDER COUNTER DISHWASHER	1/2"	1/2"	-	1-1/2"	-	-	-	(5) (8)
6	DISHMACHINE	3/4"	3/4"	-	2"	-	-	-	(5) (8)
7	FRYER	-	-	-	-	-	3/4"	150	(6)
8	GRIDDLE	-	-	-	-	-	3/4"	50	(6)
9	HAND SINK	1/2"	1/2"	-	1-1/2"	1-1/2"	-	-	(14)
10	ICE CUBE MACHINE	-	-	1/2"	3/4"	-	-	-	(5) (9) (12)
11	CONVECTION OVEN	-	-	-	-	-	3/4"	390	(6)
12	WALK-IN FREEZER (EVAP. COIL)	-	-	-	3/4"	-	-	-	(5)
13	WALK-IN COOLER (EVAP. COIL)	-	-	-	3/4"	-	-	-	(5)
14	WATER SOFTENER	1-1/2"	-	-	3/4"	-	-	-	(3) (5) (8) (15)

- VERIFY ALL EQUIPMENT CONNECTION SIZES AND LOCATIONS WITH FOOD SERVICE EQUIPMENT SUPPLIER, EQUIPMENT MANUFACTURER AND FOOD SERVICE DRAWINGS. FIELD VERIFY CONNECTION SIZES AND MODIFY SIZE AND LOCATION OF UTILITIES AS REQUIRED. INSTALL ALL EQUIPMENT PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND LOCAL PLUMBING CODE.
- VERIFY ALL BACKFLOW PREVENTION REQUIREMENTS WITH AHJ. PROVIDE BACKFLOW PREVENTION DEVICES AS REQUIRED BY LOCAL PLUMBING CODE. PROVIDE ISOLATION VALVES, FLOW CONTROL VALVE, SIPHON BREAKER AND LL OTHER SPECIALTIES PER EQUIPMENT MANUFACTURER'S
- RECOMMENDATIONS AND LOCAL PLUMBING CODE. PROVIDE WATER STOPS AT EACH PIECE OF EQUIPMENT. WATER STOPS SHALL BE IN AN ACCESSIBLE LOCATION. HARD PIPE INDIRECT WASTE CONNECTION FROM EQUIPMENT DRAIN TO NEAREST FLOOR SINK. MAINTAIN CODE REQUIRED AIR GAP AND
- DISCHARGE TO FLOOR SINK. PROVIDE GAS COCK, LBS. TO OZ. GAS PRESSURE REGULATOR, DIRT LEG AND UNION AT APPLIANCE. VERIFY CONNECTION REQUIREMENTS WITH FOOD SERVICE EQUIPMENT SUPPLIER. PROVIDE QUICK CONNECT FLEXIBLE GAS CONNECTIONS AT KITCHEN
- APPLIANCES. VENT REGULATOR TO OUTSIDE AS REQUIRED. PROVIDE 1-1/2" WASTE FROM EACH SINK COMPARTMENT DRAIN TO 2" CONTINUOUS WASTE HEADER. DISCHARGE 2" WASTE HEADER
- INDIRECT TO FLOOR SINK. MAINTAIN CODE REQUIRED AIR GAP AND DISCHARGE TO FLOOR SINK. PROVIDE BACKFLOW PREVENTER AT APPLIANCE WATER CONNECTION PER LOCAL PLUMBING CODE REQUIREMENTS. ICE MAKER IS AIR-COOLED. PROVIDE BACKFLOW PREVENTER AND ANY REQUIRED SPECIALITIES PER MANUFACTURER'S
- RECOMMENDATIONS AND LOCAL PLUMBING CODE. ROUTE 3/4" CW AND 3/4" HW TO MULTI-COMPARTMENT SINK. PROVIDE DRAIN AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. PIPE INDIRECT WASTE CONNECTION FROM EQUIPMENT TO
- NEAREST FLOOR SINK. PIPE FLOOR SINK WITH CORROSIVE RESISTANT MATERIALS PER LOCAL PLUMBING CODE. ROUTE 1/2" CW TO FILTER. ROUTE 1/2" FILTERED CW FROM FILTER TO ICE MAKER.
- PROVIDE 6" PVC PIPING BELOW FLOOR AND ABOVE CEILING FROM BAG & BOX TO BEVERAGE DISPENSERS. COORDINATE EXACT ROUTING AND REQUIREMENTS WITH BEVERAGE SUPPLIER. PROVIDE BELOW DECK THERMOSTATIC MIXING VALVE SERVING HOT WATER SUPPLY. SET MAX TEMPERATURE TO 110° F.
- INFORMATION INCLUDED IN SCHEDULE HAS BEEN BASED ON LIMITED DESIGN INFORMATION AVAILABLE AT TIME OF CONSTRUCTION DOCUMENTS. COORDINATE EQUIPMENT LOCATIONS, CONDUIT ROUTING, DEVICE MOUNTING HEIGHTS AND POWER CONNECTIONS INCLUDING VOLTAGE, PHASE, BREAKER, CONDUCTOR, CONDUIT AND RECEPTACLE CONFIGURATION WITH WITH OWNER, KITCHEN EQUIPMENT SUPPLIER AND REVIEWED KITCHEN EQUIPMENT SUBMITTALS PRIOR TO ROUGH IN AND PURCHASE OF LONG LEAD TIME EQUIPMENT. COORDINATE ANY CHANGES REQUIRED TO THE INFORMATION ABOVE WITH THE ENGINEER OF RECORD. MAKE ANY CHANGES REQUIRED AT NO ADDITIONAL COST TO OWNER.

GENERAL NOTES

- 1. NOT ALL EXISTING MECHANICAL ITEMS ARE SHOWN ON PLAN. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO NEW WORK, MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING PIPING AS NECESSARY TO AVOID CONFLICTS WITH EXISTING CONDITIONS AND WITH ALL TRADES OF NEW WORK.
- 2. MECHANICAL ITEMS SHOWN LIGHT AND / OR INDICATED WITH (E) ARE EXISTING. ALL ITEMS SHOWN DARK ARE NEW. ALL ITEMS INDICATED WITH (R) ARE RELOCATED.
- 3. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
- 4. MECHANICAL CONTRACTOR TO COORDINATE ALL KITCHEN EQUIPMENT ROUGH-IN REQUIREMENTS WITH FOOD SERVICE EQUIPMENT SUPPLIER AND EQUIPMENT MANUFACTURER.
- 5. MECHANICAL CONTRACTOR TO MAKE FINAL CONNECTIONS TO KITCHEN EQUIPMENT. COORDINATE CONNECTION SIZE, LOCATION AND REQUIRED PLUMBING SPECIALTIES WITH FOOD SERVICE EQUIPMENT SUPPLIER AND EQUIPMENT MANUFACTURER.
- 6. PROVIDE BACKFLOW PREVENTERS AT WATER CONNECTIONS TO KITCHEN EQUIPMENT AS REQUIRED BY LOCAL PLUMBING CODE.
- 7. PROVIDE WATER STOPS AT EACH PIECE OF KITCHEN EQUIPMENT. WATER STOPS SHALL BE IN AN ACCESSIBLE LOCATION.
- 8. SPACE ABOVE CEILINGS IS LIMITED. COORDINATE PIPE ROUTING WITH ENTIRE TENANT FINISH SHALL HAVE NEW FIRE SPRINKLER HEADS. SEE ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AND FIRE SPRINKLER SPEC SECTION 211000 ON SHEET M5.1 FOR FIRE TRANSITIONS AS REQUIRED TO COMPLETE INSTALLATION. SPRINKLER HEAD REQUIREMENTS.

JURISDICTION.

- 9. INSTALL ALL ISOLATION VALVES AND BALANCING VALVES IN ACCESSIBLE LOCATIONS.
- GAS PIPING CONCEALED IN CHASES, IN WALLS OR ABOVE CEILINGS AS REQUIRED.

10. ALL PIPING SHOWN FOR CLARITY, ROUTE WASTE, VENT, WATER AND

11. DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON WARM -IN-WINTER SIDE OF INSULATION.

PLUMBING CODE. COORDINATE CLEANOUT LOCATIONS WITH GENERAL

13. COORDINATE ALL BELOW GRADE PIPING WITH EXISTING STRUCTURAL FOOTINGS. OFFSET BELOW GRADE PIPING AS REQUIRED TO AVOID

CONTRACTOR.

12. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE CLEANOUTS PER LOCAL

- 14. SEE PLUMBING FIXTURE SCHEDULE ON SHEET M4.1 FOR PLUMBING FIXTURE CONNECTION REQUIREMENTS.
- 15. SEE KITCHEN EQUIPMENT SCHEDULE ON THIS SHEET FOR KITCHEN EQUIPMENT CONNECTION REQUIREMENTS.
- 16. ALL PLUMBING SHALL BE IN ACCORDANCE WITH THE LOCAL PLUMBING
- 17. VERIFY ALL PLUMBING CONNECTIONS WITH THE KITCHEN EQUIPMENT AND KITCHEN EQUIPMENT SUPPLIER.
- 18. SEE WASTE AND VENT DIAGRAM ON SHEET M3.1 FOR WASTE AND VENT PIPE SIZES.
- 19. SEE FLOOR PLANS FOR HOT WATER CIRCULATION (HWC) MAIN SIZES. ALL HWC BRANCHES SHALL BE 1/2", ALL BALANCE VALVES SHALL BE AUTOMATIC BALANCING VALVES SET AT 0.5 GPM.

FIRE SPRINKLER NOTES

- 1. THE EXISTING BUILDING IS PROTECTED BY A WET PIPE NFPA 13 FIRE SPRINKLER SYSTEM. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS INCLUDING PIPE SIZES AND LOCATIONS, SPRINKLER HEAD LOCATIONS, FLOW SWITCHES, ZONE VALVES, AVAILABLE PRESSURE. ETC. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND MATERIALS NECESSARY TO MODIFY SYSTEM TO MEET REQUIREMENTS OF NFPA 13
- AND THE AUTHORITY HAVING JURISDICTION. 2. EXISTING FIRE SPRINKLER PIPING SHALL BE REMOVED AS REQUIRED FOR NEW WORK ASSOCIATED WITH TENANT FINISH. COORDINATE EXTENT OF DEMOLITION REQUIRED WITH MECHANICAL DRAWINGS AND ARCHITECTURAL DRAWINGS. NEW DUCTWORK AND NEW CEILINGS HAVE PRIORITY OVER EXISTING FIRE SPRINKLER PIPING. IF CONFLICTS OCCUR WITH EXISTING FIRE SPRINKLER PIPING, EXISTING FIRE SPRINKLER SHALL BE REMOVED.
- 3. MODIFY EXISTING FIRE SPRINKLER SYSTEM TO ACCOMMODATE TENANT FINISH SUCH TO PROVIDE A FIRE SPRINKLER SYSTEM THAT MEETS THE REQUIREMENTS OF NFPA 13 AND AUTHORITY HAVING

4. CONNECT NEW FIRE SPRINKLER PIPING TO THE EXISTING SPRINKLER

PIPING. RELOCATE EXISTING SPRINKLER PIPING AS REQUIRED BY NEW

- WALLS, CEILINGS, LIGHTS, MECHANICAL EQUIPMENT, DUCTWORK, ETC. COORDINATE WITH ALL OTHER TRADES. 5. PIPING MATERIAL AND SPRINKLER HEADS SHALL MEET THE REQUIREMENTS OF NFPA 13. CPVC PIPING WILL NOT BE ALLOWED.
- 6. COORDINATE LOCATION OF ALL SPRINKLER HEADS AND PIPING WITH ALL OTHER TRADES. IF CONFLICTS DO OCCUR SUCH THAT LIGHTS, DUCTWORK OR CEILING SYSTEMS CANNOT BE INSTALLED DUE TO SPRINKLER PIPING INTERFERENCE, THE PIPING SHALL BE RELOCATED
- 7. SEE SPECIFICATION SECTION 211000 ON SHEET M5.1.

AT NO ADDITIONAL EXPENSE TO THE PROJECT.

FLAG NOTES

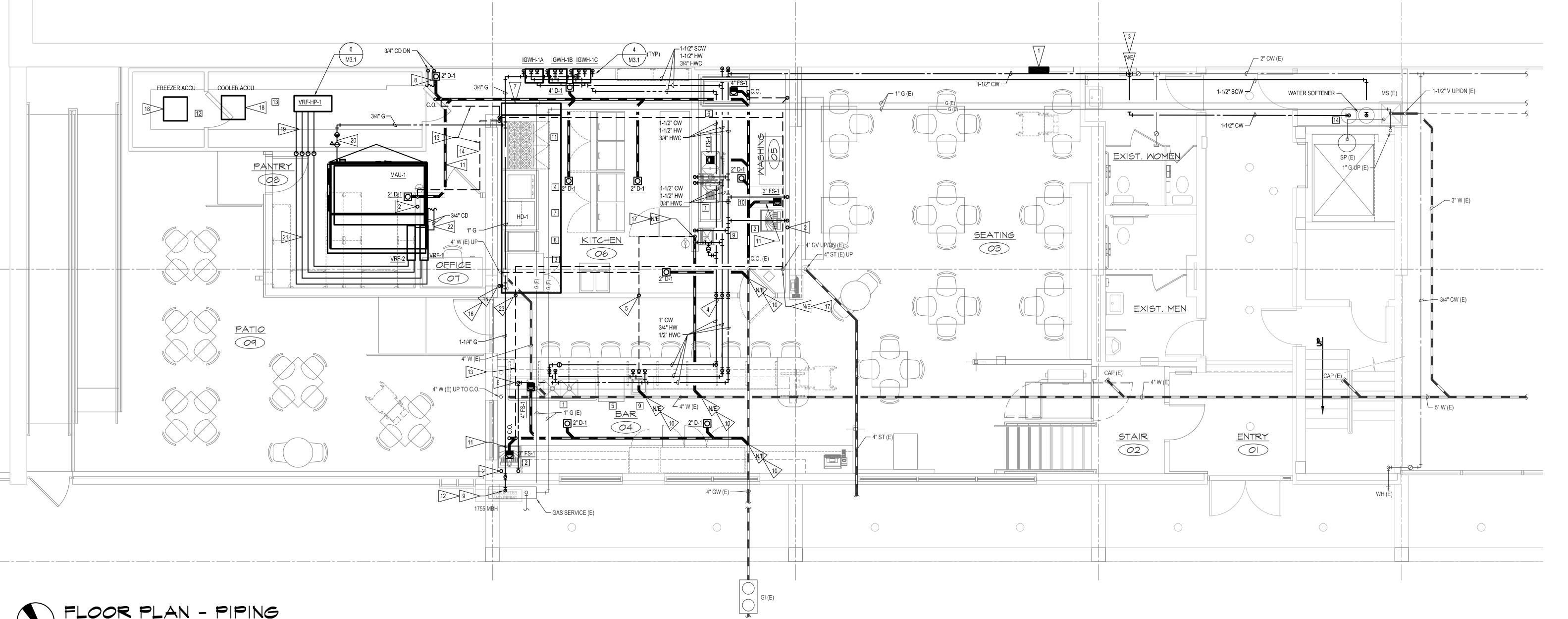
- N/E >> CONNECT NEW TO EXISTING. FIELD VERIFY EXISTING SIZE AND
- LOCATION PRIOR TO PROVIDING NEW WORK. 1 DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN
- ALL CODE REQUIRED CLEARANCES. 2 CONTRACTOR TO PROVIDE 6" PVC PATHWAYS WITH LONG SWEEPS FOR BEER/SODA LINES SHOWN ON FOOD SERVICE EQUIPMENT DRAWINGS FROM COOLER/BAG IN BOX TO BEER/SODA DISPENSER. COORDINATE ABOVE CEILING ROUTING WITH EXISTING CONDITIONS AND ALL OTHER TRADES. COORDINATE ANY BELOW GRADE PIPING WITH EXISTING STRUCTURAL AND BELOW GRADE UTILITIES. COORDINATE ALL
- REQUIREMENTS WITH BEER/SODA SUPPLIER. 3 CONNECT NEW 2" CW TO EXISTING 2" CW WITH ISOLATION VALVE. FIELD VERIFY EXACT SIZE AND CONNECTION LOCATION OF EXISTING CW. EXTEND AND OFFSET NEW PIPING AS REQUIRED TO MAKE CONNECTION TO EXISTING CW PIPING.
- ROUTE 1" CW, 3/4" HW AND 1/2" HWC DOWN IN WALL TO BELOW FLOOR. ROUTE 1" CW, 3/4" HW AND 1/2" HWC TO BACK OF COUNTER TO BAR EQUIPMENT. SEE KITCHEN EQUIPMENT SCHEDULE ON THIS SHEET AND KITCHEN EQUIPMENT SUPPLIER DRAWINGS FOR FINAL CONNECTION REQUIREMENTS.
- 5 > 1-1/2" ISLAND VENT IN WALL FROM HAND SINK.
- 6 ROUTE 1/2" CW DOWN TIGHT TO BACK OF COUNTER TO BELOW FLOOR. ROUTE 1" CW TO BACK OF COUNTER TO BAR EQUIPMENT. SEE KITCHEN EQUIPMENT SCHEDULE ON THIS SHEET AND KITCHEN EQUIPMENT SUPPLIER DRAWINGS FOR FINAL CONNECTION REQUIREMENTS.
- ANSUL R102 WET CHEMICAL KITCHEN HOOD FIRE PROTECTION SYSTEM (OR EQUAL). PROVIDE WET CHEMICAL AGENT, PIPING, NOZZLES, AND CONTROLS AS REQUIRED FOR A COMPLETE OPERATIONAL SYSTEM. SYSTEM SHALL MEET NFPA 17A, NFPA 96 AND ALL OTHER APPLICABLE CODES. MOUNT SYSTEM ON HOOD PER MANUFACTURER'S RECOMMENDATIONS. LOCATE PULL STATION AS REQUIRED BY CODE. COORDINATE EXACT LOCATION OF ALL SYSTEM COMPONENTS WITH ALL OTHER TRADES, KITCHEN EQUIPMENT PLACEMENT AND KITCHEN EQUIPMENT SUPPLIER. SEE SUPPLEMENTAL MECHANICAL DRAWINGS SHEETS M6.1-M6.2 FOR MORE INFORMATON.
- > ROUTE CONDENSATE DRAIN FROM WALK-IN COOLER/FREEZER EVAPORATOR TO INDIRECT DISCHARGE AT FLOOR SINK. 9 CONNECT NEW 1-1/4" GAS AND METER TO EXISTING GAS HEADER. FIELD VERIFY EXACT SIZE AND CONNECTION LOCATION OF

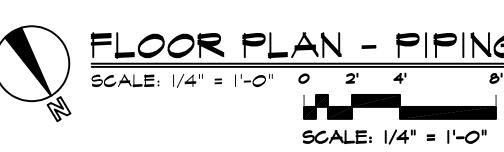
EXISTING GAS. EXTEND AND OFFSET NEW PIPING AS REQUIRED

- TO MAKE CONNECTION TO EXISTING GAS PIPING. 10 CONNECT NEW WASTE/GREASE WASTE TO EXISTING WASTE/GREASE WASTE AT LOCATION INDICATED. FIELD VERIFY EXACT SIZE. LOCATION. ELEVATION AND DIRECTION OF FLOW OF EXISTING WASTE. EXTEND AND OFFSET PIPING AS REQUIRED TO MAKE CONNECTION IF EXISTING LOCATION VARIES FROM WHAT IS INDICATED ON PLAN. SAW CUT FLOOR AS REQUIRED. PATCH FLOOR TO MATCH EXISTING.
- > WASTE PIPING FOR FLOOR SINKS SERVING SODA AND BEER WASTE SHALL BE OF CORROSIVE RESISTANT MATERIAL PER LOCAL PLUMBING CODE.

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- 12 NEW 1-1/4" GAS PIPE BACK TO EXISTING GAS METER CENTER. FIELD VERIFY EXACT LOCATION OF EXISTING METER CENTER. COORDINATE NEW METER AND SERVICE LOAD WITH LOCAL GAS COMPANY. APPROXIMATE NEW CONNECTED LOAD = 1755 CFH AT
- 75'-0" OF EQUIVALENT LENGTH. 13 BELOW GRADE VENT. SEE WASTE AND VENT RISER DIAGRAM ON
- SHEET M3.1. 14 3/4" GAS THROUGH WALL TO MAU-1. SEAL WALL PENETRATION
- WATERTIGHT. 15 AUTOMATIC GAS SHUT-OFF VALVE. VALVE SHALL BE INTERLOCKED TO THE KITCHEN HOOD FIRE PROTECTION SYSTEM. VALVE TO CLOSE UPON ACTIVATION OF FIRE SUPPRESSION SYSTEM. PROVIDE ALL REQUIRED WIRING.
- 16 1" GAS DOWN TO GAS HEADER SERVING COOKLINE. PROVIDE VENTLESS LBS. TO OZ. PRV AT START OF HEADER. ROUTE 2" GAS (AT 7" W.C.) FROM PRV TO KITCHEN EQUIPMENT ALONG COOKLINE. SEE KITCHEN EQUIPMENT SCHEDULE FOR INDIVIDUAL EQUIPMENT
- GAS CONNECTION REQUIREMENTS. 17 CONNECT NEW VENT/GREASE VENT TO EXISTING 4" VENT/GREASE VENT AT LOCATION INDICATED. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING VENT. EXTEND AND OFFSET PIPING AS REQUIRED TO MAKE CONNECTION IF EXISTING LOCATION VARIES
- FROM WHAT IS INDICATED ON PLAN. 18 REMOTE ACCU UNIT FOR COOLER/FREEZER EVAPORATOR. COORDINATE EXACT LOCATION, REFRIGERANT PIPE ROUTING AND ROOF PENETRATION WITH GENERAL CONTRACTOR. SEAL ALL ROOF PENETRATIONS WATER TIGHT. ROUTE AND SIZE
- REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. 19 ROUTE REFRIGERANT PIPING FROM HEAT PUMP DOWN THROUGH ROOF TO WALL MOUNTED VRF UNITS. COORDINATE PIPING WITH ALL TRADES. SIZE OF REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. SEAL ROOF PENETRATION
- WATER TIGHT. 20 > PROVIDE GAS COCK, PRV, AND DIRT LEG PRIOR TO CONNECTION TO MECHANICAL EQUIPMENT. CONNECT GAS PIPING TO EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
- 21 > PROVIDE COMPLETE REFRIGERANT PIPING FOR VRF SYSTEM. ROUTING IS INDICATED SCHEMATICALLY. ALL PIPING SHALL BE SIZED, INSTALLED, AND INSULATED PER MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS. PIPE ROUTING SHALL BE COORDINATED WITH EXISTING CONDITIONS. ALL PIPING SHALL BE CONCEALED ABOVE CEILINGS OR IN WALL.
- 22 ROUTE PUMPED CONDENSATE FROM VRF UNIT TO INDIRECT CD DISCHARGE AT FLOOR DRAIN. 23 2" VENT IN WALL FROM FLOOR SINK.



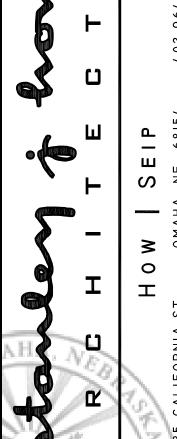


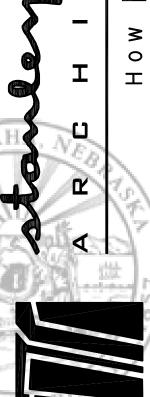
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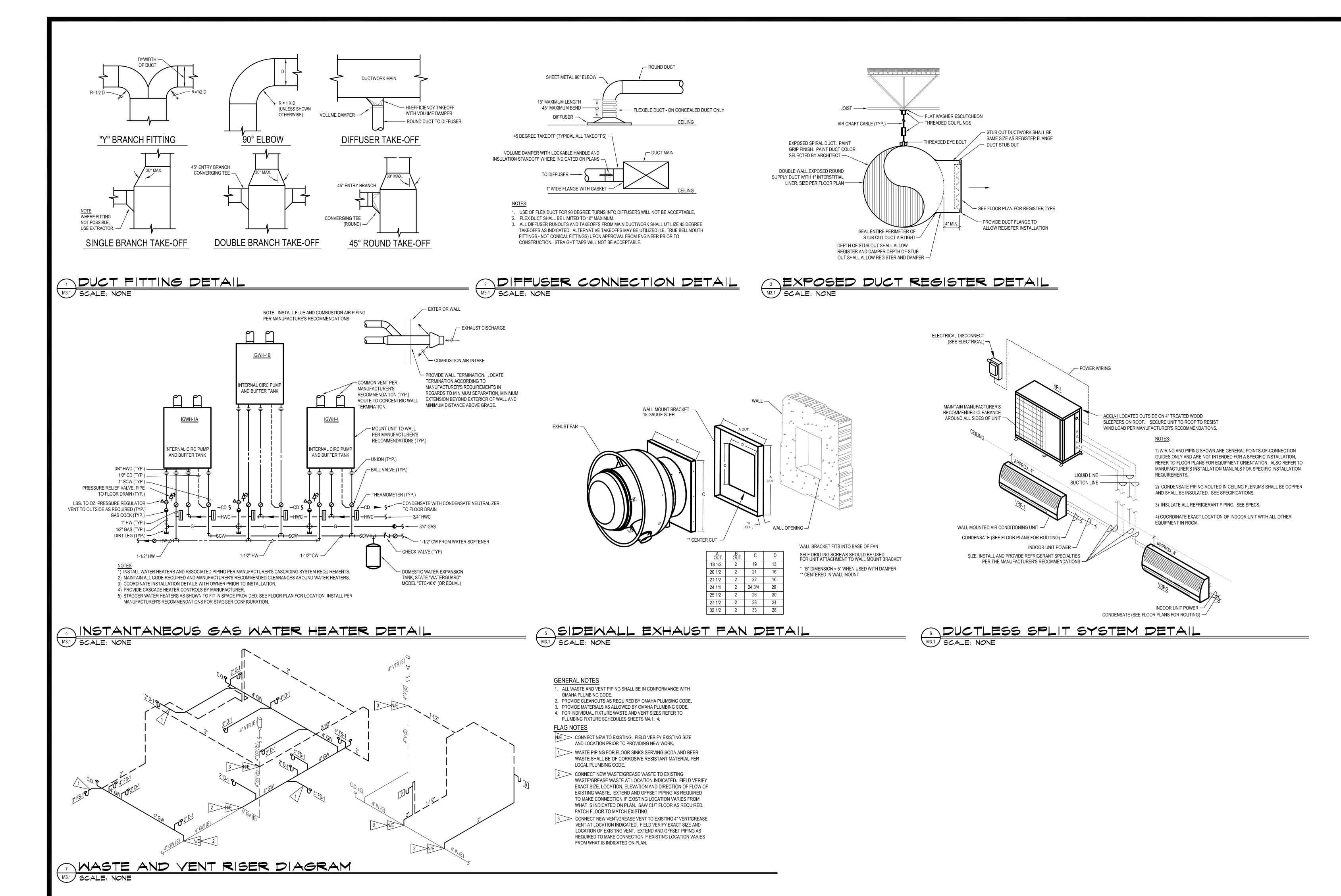
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07/24/24

BUILDING AIR BALA	NCE SUMMARY	/			
ITEM	EXHAUST (CFM)	MAKEUP AIR (CFM)	VENTILATION AIR (CFM)	COMBUSTION AIR (CFM)	OVERALL BALANCE
KITCHEN EXHAUST FAN - <u>KEF-1</u>	3,036 CFM	-	-	-	-3,036 CFM
KITCHEN MAKEUP AIR UNIT - MAU-1	-	3,410 CFM	-	-	+ 3,410 CFM
TOTALS	- 3,036 CFM	+ 3,410 CFM	-	-	374 CFM POSITIVE

COMMERCIAL KITCHEN VENTILATION EQUIPMENT

1. COMMERCIAL KITCHEN VENTILATION EQUIPMENT IS SHOWN ON THE MECHANICAL SUPPLEMENTAL DRAWINGS BY CAPTIVE AIRE (SEE DRAWINGS M6.1 - M6.2). EQUIPMENT LIST AS FOLLOWS:

CAPTIVE AIRE EQUIPMENT

- . <u>HD-1</u> (KH-1 AND KH-2) TYPE I KITCHEN EXHAUST HOOD
- KEF-1 (KEF-1) ROOF MOUNTED GREASE RATED UTILITY SET EXHAUST FAN (SERVES KITCHEN HOOD <u>HD-1</u>)
- MAU-1 (MAU-1) GAS-FIRED MAKEUP AIR UNIT (SERVES KITCHEN HOODS HD-1)
- FIRE PROTECTION SYSTEM #1 ANSUL FIRE PROTECTION SYSTEM WITH AUTOMATIC GAS VALVE (SERVES KITCHEN HOODS $\underline{ ext{HD-1}}$)
- EMS-PLUS ENERGY MANAGEMENT SYSTEM (SERVES KITCHEN HOODS <u>HD-1</u>)

	MECHANIC	AL SY	'MBOLS
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	TYPIC	CAL PIPING	
<u>т</u> т	PIPE TEE / PIPE ELBOW		UNION
+++ +-	ELBOW DN / ELBOW UP		STRAINER WITH BLOWDOWN
- Ø-	ISOLATION VALVE (BALL OR BUTTERFLY)		CHECK VALVE (ARROW INDICATES FLOW)
_	BALANCING VALVE	-\$\$-	
_ _	GATE VALVE		PRESSURE REGULATING VALVE (PRV)
- -	GLOBE VALVE	 	PRESSURE GAUGE
T P.T.T.	PRESSURE/TEMPERATURE TEST PORT	<u> </u>	THERMOMETER
	PI	UMBING	
	DOMESTIC COLD WATER (CW)		GAS COCK
	DOMESTIC HOT WATER (HW) (NUMBER INDICATES TEMPERATURE)	O 2" D-1	FLOOR DRAIN - SIZE TYPE
	DOMESTIC HOT WATER CIRCULATION (HWC) (NUMBER INDICATES TEMPERATURE)	(Ô2" RD-1	ROOF DRAIN - SIZE TYPE
	SANITARY WASTE (BELOW GRADE)	© 2" OFD-1	OVERFLOW ROOF DRAIN - SIZE TYPE
	SANITARY WASTE (BELOW GRADE)	十 <u> </u>	HOSE BIBB
	VENT PIPING	++ WH	WALL HYDRANT (NON-FREEZE)
==ST===	STORM PIPING (BELOW GRADE)	VTR	VENT THROUGH ROOF
—ST—	STORM PIPING (ABOVE GRADE)	I.E.	I.E. INVERT ELEVATION
OF==	OVERFLOW STORM PIPING (BELOW GRADE)	F.L.	FLOW LINE
— 0F —	OVERFLOW STORM PIPING (ABOVE GRADE)	wc	WATER CLOSET (SEE SPECIFICATIONS FOR TYPE)
	ACID WASTE PIPING (BELOW GRADE)	UR	URINAL (SEE SPECIFICATIONS FOR TYPE)
— AW —	ACID WASTE PIPING (ABOVE GRADE)	LAV	LAVATORY (SEE SPECIFICATIONS FOR TYPE)
AV	ACID VENT PIPING	S	SINK (SEE SPECIFICATIONS FOR TYPE)
——A——	COMPRESSED AIR PIPING	EWC	ELECTRIC WATER COOLER (SEE SPECIFICATIONS FOR TYPE)
—-G—	NATURAL GAS PIPING	MS	MOP SINK (SEE SPECIFICATIONS FOR TYPE)
—SAN—	SITE SANITARY PIPING	DI	DUCTILE IRON
st	SITE STORM PIPING	CI	CAST IRON
w	SITE WATER PIPING	PVC	POLY VINYL CHLORIDE
	REFRIGE	RATION PIPIN	G
— RL —	REFRIGERANT LIQUID LINE		SOLENOID VALVE
— RS —	REFRIGERANT SUCTION LINE	_₹	THERMOSTATIC EXPANSION VALVE (TXV)
— RD —	REFRIGERANT HOT GAS DISCHARGE LINE		SIGHT GLASS
—CD—	COIL CONDENSATE DRAIN (SLOPE TO DRAIN)		
		HVAC	
6x6 R-1	NEOV ARE WAS TAKE	<u> </u>	SENSOR
100	SIDEWALL SUPPLY REGISTER OR GRILLE NECK SIZE (IN), TAG AIRFLOW (CFM)	1	THERMOSTAT
6x6 R-1	SIDEWALL RETURN OR EXHAUST REGISTER OR GRILLE NECK SIZE (IN), TAG	H	HUMIDISTAT
100	SIDEWALL RETURN OR EXHAUST REGISTER OR GRILLE NECK SIZE (IN), 1AG AIRFLOW (CFM)	M— -—	MOTORIZED CONTROL DAMPER WITH ACTUATOR
6"Ø D-1	SUPPLY AIR REGISTER NECK SIZE (IN), TAG	— → B.D.D.	BACKDRAFT DAMPER
100	AIRFLOW (CFM)	V.D.	VOLUME DAMPER
	SUPPLY AIR, OUTSIDE AIR OR MIXED AIR DUCT END OR RISER UP / RISER DN	— FR.D.	
	33.7.2.7.4.1., 30 TOIDE MIK OK MIKED MIK DOOT END OK MOEK OF MIGER DIN	M S.D.	SMOKE DAMPER WITH SLEEVE AND ACCESS DOOR
	RETURN AIR, EXHAUST AIR OR RELIEF AIR DUCT END OR RISER UP / RISER DN	M ← F.S.D.	
	THE STATE OF THE S	S.A.	SUPPLY AIR
12/8	RECTANGULAR DUCTWORK (WIDTH/DEPTH)(IN) (FIRST NUMBER IS SIDE SHOWN)	R.A.	RETURN AIR
		E.A.	EXHAUST AIR
\[12"\@\\ \]	ROUND DUCTWORK (DIAMETER)(IN) (SPIRAL DUCT IN EXPOSED AREAS)	RLF.A.	RELIEF AIR
ر ن		O.A.	OUTSIDE AIR
CCC.	TURNING VANES	M.A.	MIXED AIR
ш-г		DOTECTION	
		ROTECTION	
<u> </u>	FIRE SPRINKLER PIPING	₩ FH	FIRE HYDRANT
— SP —	STANDPIPE PIPING	PIV PIV	
	SPRINKLER BRANCH AND HEADS	\square	ALARM CHECK VALVE
FHC	FIRE HOSE CABINET	\$	O,S&Y VALVE
	FIRE VALVE CABINET	FS	FLOW SWITCH

TAG	FIXTURE (2)	DESCRIPTION		CONNE	CTIONS	
		DESCRIPTION: FLOOR DRAIN WITH CAST IRON BODY,	CW	HW	WASTE	VE
		FLASHING COLLAR, 6" SQUARE ADJUSTABLE NICKEL BRONZE GRATE.	-	-	2"	1-1
		SIGNEE SIVILE.	-	-	3"	1-1
			-	-	4"	2
	MODEL: J.R. SMITH #2010		I VENT SI	ZE KEQUI	REMENTS.	
		DESCRIPTION: FLOOR SINK WITH SEDIMENT BUCKET, ACID	CW	HW	WASTE	VE
		RESISTANT COATED CAST IRON BODY, FLASHING COLLAR, AND REMOVABLE 8-1/2" SQUARE NICKEL BRONZE TOP.	-	-	2"	1-1
		PROVIDE THE FOLLOWING FEATURES:	<u> </u>	-	3"	1-1
		1. HINGED GRATE	-	-	4"	2
<u>FS-1</u>		2. 3/4 GRATE		OR PLAN	S FOR WA	
			1			

FIXTURE AND MODEL.

	PLAN TAG	VRF-HP-1			
	MANUFACTURER	MITSUBISHI/TRANE (10)			
	MODEL NUMBER	NTXMPH20A122CA			
GENERAL	SERVES	SEE PLANS			
GENERAL	CONFIGURATION	(9)			
	MAXIMUM SIZE (HxWxD)(IN)	38" x 17" x 42"			
	MAXIMUM WEIGHT (LBS.)	300			
	REMARKS	(3) (4) (6) (8) (9)			
	VOLTS	208			
	PHASE	1			
EL ECTRICAL	MAXIMUM UNIT KW	-			
ELECTRICAL	MAXIMUM OCP (AMPS)	40			
	MINIMUM CIRCUIT AMPACITY (MCA)	26.9			
	REMARKS	(7)			
	AMBIENT AIR TEMPERATURE (F)	95			
	MINIMUM NET EER (ARI)	13.5			
COOLING (1)	NOMINAL CAPACITY (TONS)	1.5			
	TOTAL COOLING (MBH)	18.0			
	SENSIBLE COOLING (MBH)	-			
	AMBIENT AIR TEMPERATURE (F)	47 / 17 / 5			
HEATING (2)	MINIMUM NET COP (ARI)	4.0 / 2.1 / 1.89			
	MINIMUM HEATING CAPACITY (MBH)	22.0			
	TYPE	R410A			
REFRIGERANT	MIN. NUMBER OF CIRCUITS	-			
	REMARKS	-			
	TYPE	(5)			
00115550050	QUANTITY	1			
COMPRESSORS	HP	-			
	REMARKS	-			
	TYPE	PROP.			
CONDENSER	QUANTITY	1			
FANS	HP	-			
	REMARKS	-			
REMARKS	 COOLING CAPACITY AT 100% COMBIT TEMPERATURE AND 67°F INDOOR WIDTEMPERATURE AND 67°F INDOOR WIDTEMPERATURE AND 67°F INDOOR WIDTEMPERATURE AND 67°F INDOOR WIDTEMPERATURE AND 67°F OUT 75% HEATING CAPACITY AT 5° F OUT 75% HEATING CAPACITY AT -13°F OUT 75% HEATING CAPACITY AT -13°F OUT 75% HEATING COMPRESSOR AIR-TO-AIR HEAT PUMP SERVING MUREFRIGERANT VOLUME UNITS WITH 5. MANUFACTURER'S STANDARD INVERCOMPRESSOR AND CONTROLS. PROVIDE WITH LOW AMBIENT KIT FO AMBIENT, SNOW / HAIL GUARDS AND 7. SINGLE POINT ELECTRICAL CONNECTS BY ELECTRICAL DISCONNECTS BY ELECTRICAL DRAWINGS. SUBJECT TO COMPLIANCE WITH RECOMPLIANCE WITH RECOMPLI	TDOOR AMBIENT. TDOOR AMBIENT. TDOOR AMBIENT. DR WARRANTY. PLTIPLE INDOOR VARIABLE MANUFACTURER'S CONTROLS. RTER-DRIVEN SCROLL R OPERATION DOWN TO -20°F BASE PAN HEATER. TION. SEE ELECTRICAL DRAWINGS. ETRICAL CONTRACTOR. SEE			

DIFFUSER REGISTER AND GRILLE SCHEDULE								
PLAN TAG		D-1	D-2	R-1	G-1			
MANUFACTUF	RER	TITUS	CAPTIVE AIRE	TITUS	TITUS			
MODEL NUME	BER	OMNI	DI-PSP	300RL	PAR			
FUNCTION		SUPPLY	SUPPLY	SUPPLY	RETURN			
DESCRIPTION	V	FLAT PLATE	PERF.	REGISTER	PERF. GRILLE			
DEFLECTION		360°	4-WAY	DOUBLE	-			
MAX. STATIC	PRESSURE (IN W.G.)	0.1"	-	0.1"	0.08"			
CONSTRUCTI	ON MATERIAL	STEEL	STEEL	STEEL	STEEL			
FINISH		WHITE	WHITE	WHITE	WHITE			
NECK SIZE (IN	N)	SEE PLANS	SEE PLANS	SEE PLANS	22x22			
FACE SIZE (IN	N)	24x24	24x24	NECK + 1-3/4"	24x24			
ACCESSORIE	S	(3)	SRD	(3)	(4)			
REMARKS		(1) (2)	(5)	(1) (2)	(1) (2)			
REMARKS (1) VERIFY CEILING C		NC) SHALL BE LESS	OR TO FURNISHING THAN 25 ON DIFFUS		AND GRILLES			

SEE SUPPLEMENTAL DRAWING M6.1 FOR ADDITIONAL INFORMATION.

B) PROVIDE OPPOSED BLADE DAMPER.

1) PROVIDE INSULATED BACK PAN.

	MODEL TAG (1)	/RF-1A/B, 2A/B,3A/E	VRF-2	
	MANUFACTURER	TRANE (5)	TRANE (5)	
	MODEL NUMBER	MSZ-EF09NAW-U2	MSZ-EF12NAW-U2	
GENERAL (1)	MAX WEIGHT (LBS.)	35	35	
	CONFIGURATION	(6)	(8)	
	MAXIMUM SIZE (WxDxH)(IN)	35 x 8 x 12	35 x 8 x 12	
	REMARKS	(2) (4) (7)	(2) (4) (7)	
	AIRFLOW RANGE (CFM)	141-371	141-371	
FAN	EXTERNAL STATIC PRESSURE (IN. W.C.)	-	-	
	FAN MOTOR OUTPUT (W)	-	-	
	MIN. CIRCUIT AMPS (MCA) (A)	1.0	1.0	
	MAXIMUM FUSE SIZE	15	15	
ELECTRICAL	VOLTS	208	208	
	PHASE	1	1	
	REMARKS	(3)	(3)	
REMARKS	 REFER TO SPECIFIC INDOOR VRF UN SERVED, SYSTEMS, HEATING AND C TAG INDICATES TONNAGE. PROVIDE WITH CONCEALABLE CONT DISCONNECT BY ELECTRICAL CONT PROVIDE WITH MANUFACTURER'S B DIGITAL CONTROL INTERFACE PANE SUBJECT TO COMPLIANCE WITH REF FOLLOWING MANUFACTURERS: TRA WALL MOUNTED 0.75 TON NOMINAL. PROVIDE MANUFACTURER'S STAND. WALL MOUNTED 1.0 TON NOMINAL. 	OOLING PERFORMA DENSATE PUMP. RACTOR. ACNET COMPATIBLE EL. QUIREMENTS, PROV NE, MITSUBISHI, DAI 9.0 MBH COOLING, ARD FILTER.	NCES, ACCESSORIE CONTROL SYSTEM IDE PRODUCT BY O KIN, SAMSUNG. 10.0 MBH HEATING.	S ETC. MODEL

CODE ComCHECK COMMISSIONING TAB REPORT		2018 IECC					
		YES	(1)				
		YES	(2) (3) (4)				
		YES	(3) (4)				
REMARKS	COMMISSIC REQUIRED OR OWNER CERTIFICAT	COMPLIANCE REPORT CAN BE FOUND IN THE PRODNING IS REQUIRED. DOCUMENTS (REFER TO CODE) SHALL BE PROVID REPRESENTATIVE WITHIN 90 DAYS OF THE DATE TE OF OCCUPANCY. CCTIVE SPECIFICATION SECTIONS FOR ADDITIONAL	ED TO THE BUILDING OWNER				

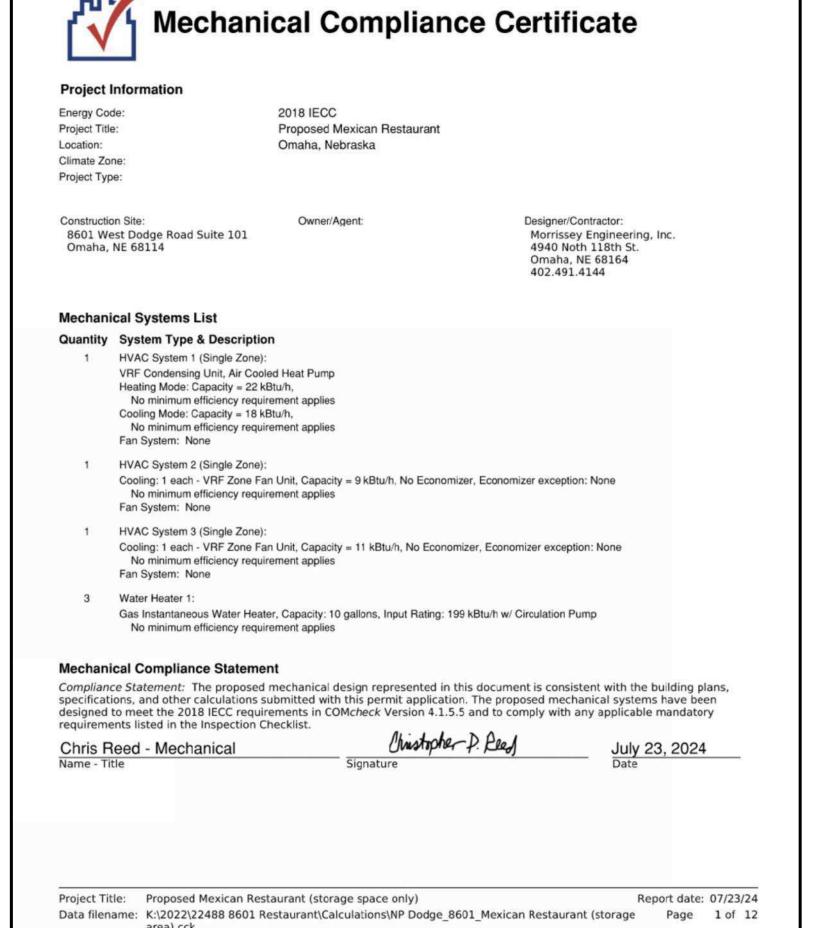
	PLAN TAG	IGWH-1A, B, C				
	MANUFACTURER	NAVIEN				
GENERAL	MODEL NUMBER	NPE-240A NG				
	SERVES	HOT WATER				
	RECOVERY (GPH@ 90°F RISE)	(1)				
	TYPE	INSTANT				
TANK	STORAGE CAPACITY (GAL.)	-				
17 (141)	DIMENSIONS (WxDxH) (IN.)	18" x 14" x 29"				
	REMARKS	(2)				
	FUEL	NATURAL GAS				
	INPUT (MBH)	199				
GAS	EFFICIENCY	(3)				
FIRED	VENT CONNECTION	(4)				
	BURNER MOTOR HP	-				
	BURNER MOTOR VOLTS/PHASE	120 / 1				
	REMARKS	(5) (6)				
REMARKS	 (1) INSTANTANEOUS GAS WATER HEATER WITH 5.1 GPM FLOW @ 77°F TEMPERATURE RISE. (2) INTERNAL CIRCULATION PUMP, 0.5 GALLON BUFFER TANK, TEMPERATURE/PRESSURE RELIEF VALVE. (3) 0.95 ENERGY FACTOR. 					
	(4) PVC OR CPVC VENT PIPING PER M TO CONCENTRIC ROOF TERMINAT		TIONS			

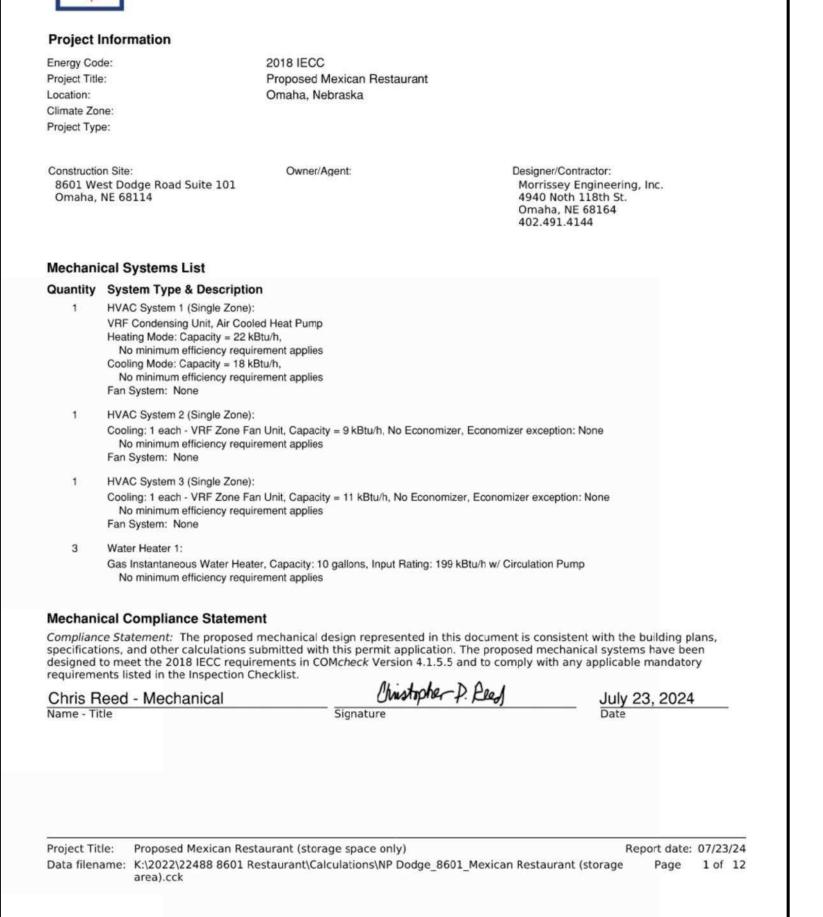
MANUFACTURER'S RECOMMENDATIONS.

NEUTRALIZER KIT.

) MODULATING GAS BURNER WITH MINIMUM 19.9 MBH FIRING RATE.

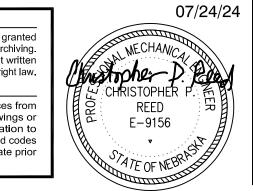
B) PROVIDE READY-LINK COMMUNICATION CABLE AND CONDENSATE





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2. Division 21, 22 and 23 Conditions apply to this Section.

B. SUMMARY

. This Section includes general mechanical requirements and shall apply to all phases of the work specified indicated on the drawings or required to provide for complete installation of fire suppression systems.

2. Refer to Section 230100 for General Requirements for Mechanical

3. Refer to Section 230500 for Basic Mechanical Materials and Methods

4. Refer to Section 230505 for Basic Piping Materials and Methods

SECTION 211000 - WATER-BASED FIRE-SUPPRESSION SYSTEMS (RENOVATION)

A. The building is protected by an existing wet pipe NFPA 13 fire sprinkler system. Contractor shall verify existing conditions including pipe sizes and locations, sprinkler head locations, flow switches, zone valves, available pressure and flow, etc. Contractor shall provide all equipment and materials necessary to modify system to meet requirements of NFPA 13 and the Authority Having Jurisdiction.

B. Drawings indicate general layout. Final pipe sizing, pipe routing, and sprinkler head layout shall be by the fire sprinkler contractor.

C. Piping material, fire sprinkler heads, and accessories shall be constructed of materials that meet the requirements of NFPA 13 and the Authority Having Jurisdiction. Steel piping shall be minimum Schedule 10 wall

D. Sprinkler heads shall be as follows:

Sprinkler heads in areas without ceilings shall be upright or pendant type. Sprinkler heads in areas with ceiling shall be concealed sprinkler heads with cover plate. Cover plate color shall be selected by the architect from manufacturer's standard colors. Fire sprinkler heads shall be centered in tile where installed in lay-in tile ceilings.

E. Space above ceilings is limited. Coordinate location of all sprinkler heads and all existing and new piping with all other trades. If conflicts do occur such that lights, mechanical piping, plumbing or ceiling systems cannot be installed due to sprinkler piping interference, the sprinkler piping shall be relocated at no additional cost to the

SECTION 220100 - GENERAL REQUIREMENTS FOR PLUMBING

A. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this

2. Division 22 and 23 Conditions apply to this Section.

B. SUMMARY

1. This Section includes general mechanical requirements and shall apply to all phases of the work specified indicated on the drawings or required to provide for complete installation of plumbing systems.

2. Refer to Section 230100 for General Requirements for Mechanical

3. Refer to Section 230500 for Basic Mechanical Materials and Methods

SECTION 220720 - PIPE INSULATION FOR PLUMBING

A. MINERAL-FIBER INSULATION: Glass fibers bonded with a thermosetting resin. Preformed Pipe Insulation: Comply with ASTM C 547, Type 1, with factory-applied, all-purpose, vapor-retarder jacket. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Apply insulation to pipes buy securing each laver of preformed pipe insulation to pipe with wire, tape, or bands without deforming insulation materials.

B. FLEXIBLE ELASTOMERIC THERMAL INSULATION: Closed-cell, sponge- or expanded-rubber materials. Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials. Adhesive as recommended by insulation material manufacturer. Ultraviolet-Protective coating as recommended by insulation manufacturer. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Follow manufacturer's written instructions for applying insulation. Seal longitudinal seams and end joints with manufacturer's recommended

C. VAPOR RETARDER: On piping systems operating below ambient space temperature, seal joints and seams with vapor-retarder mastic. Seal penetrations in insulation at hangers, supports, anchors, and other projections with vapor-retarder mastic Mastics.

D. INSULATION APPLICATION SCHEDULE

Service: Domestic cold water (CW) Thickness/Material: 1/2" Mineral Fiber Vapor Retarder Required: Yes

Service: Domestic hot water and circulating water (HW, HWC) Thickness/Material: Mineral Fiber. Apply the following insulation thicknesses:

 a. Systems without recirculation: 1/2" b. 1/2" to 2" pipe: 1"

c. 2 ½" and larger: 1-1/2" Vapor Retarder Required: No

Service: Domestic hot and cold water, direct buried Thickness/Material: 3/4" Flexible Elastomeric

Vapor Retarder Required: Yes Plumbing vents (V or AV), 2 foot section below roof

Vapor Retarder Required: Yes

Thickness/Material: 1/2" Mineral Fiber

Service: Sanitary waste and Grease waste piping Insulation Material: None

SECTION 221116 - WATER DISTRIBUTION PIPING

A. DOMESTIC WATER PIPING: Above ground; hard copper tube, ASTM B 88, Type L; copper, 95-5 solder-joint fittings; and soldered joints. Underground; Soft copper tube, ASTM B 88, Type K; wrought-copper, solder-joint pressure fittings; and soldered joints.

B. VALVES: Provide gate, ball or butterfly isolation valves close to main on each branch and riser serving plumbing fixtures or equipment, and where indicated . Provide globe, ball or butterfly valve for throttling where indicated. Provide supply stops at each plumbing fixture. Provide calibrated or automatic balancing valves as

C. TESTING: Test water distribution piping according to authority having jurisdiction. Clean and disinfect water distribution piping. Fill water piping. Check components to determine that they are not air bound and that piping is

SECTION 221316 - DRAINAGE AND VENT PIPING

A. ABOVEGROUND, SANITARY WASTE AND VENT AND STORM PIPING: CISPI 301, ASTM A888, Hubless. cast-iron soil pipe; hubless, cast-iron, soil-pipe fittings and hubless, cast-iron, Neoprene sleeve coupling with stainless steel clamps.

B. UNDERGROUND, SANITARY WASTE, AND VENT AND STORM PIPING: ASTM A74. Hub-and-spigot, cast-iron soil pipe, Service class; hub-and-spigot, cast-iron, soil-pipe fittings, lead & oakum or compression joints.

C. PIPING INSTALLATION: Make changes in direction for drainage and vent piping using appropriate branches, bends, and long-sweep bends. Do not make change in direction of flow greater than 90 degrees. Lay buried building drain piping beginning at low point of each system. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream. Install required gaskets according to manufacturer's written instructions.

D. SLOPE: Install drainage and vent piping at the following minimum slopes, unless otherwise indicated:

1. Sanitary Piping: 2 percent downward in direction of flow for piping 3-inch NPS and smaller; 1 percent downward in direction of flow for piping 4-inch NPS and larger.

2. Vent Piping: 1 percent down toward vertical fixture vent or toward vent stack.

E. TESTING: Test drainage and vent piping according to procedures of authorities having jurisdiction.

SECTION 221319 - PLUMBING SPECIALTIES

A. WATER HAMMER ARRESTERS: ASME A112.26.1M, ASSE 1010, or PDI-WH 201, bellows or piston type with pressurized cushioning chamber. Provide at each battery of fixtures.

B. WATER PRESSURE REGULATORS: water regulators, rated for initial working pressure of 150 psig minimum, of size, flow rate, and inlet for 80 psig outlet pressure. Install on building service piping.

C. WALL HYDRANTS (WH-1): nonfreeze, automatic draining, antibackflow type, key operation, with 3/4-inch NPS threaded or solder-joint inlet, and garden-hose threads on outlet. Include operating key for each hydrant, Nickel bronze finish. Woodford Model B65 or equal.

D. WALL CLEANOUTS (WCO): Cast iron body adaptable to pipe with cast bronze, brass cleanout plug; stainless steel cover, vandal proof screws. Install as shown and as required by code.

E. CLEANOUT PLUGS (CO): Cast iron or brass, threads complying with ANSI B2.1, countersunk head. Engrave heads to identify system.

F. FLOOR CLEANOUTS (FCO): Cast iron body and frame with cleanout plug and adjustable round nickel bronze

top. Provide to match floor system:

Exposed finish type, standard mill finish.

2. Exposed flush type, standard non-slip scored or abrasive finish. 3. Exposed flush type, standard mill finish and carpet marker. 4. Heavy duty for traffic applications.

G. VENT FLASHING (VTR): 24" square minimum. Non-plasticized, chlorinated, polyethylene, concealed, waterproof membrane, 0.40" thick, solvent weldable or Lead sheet, 2-1/2" lb/sf, concealed.

224000 PLUMBING FIXTURES A. Installation: Install handles for accessible water closets and urinals with handle mounted on wide side of compartment. Install individual stop valve in each water supply to fixture. Install water-supply stop valves in accessible locations. Install traps on fixture outlets. Omit traps on fixtures having integral traps and on indirect wastes. Vent all fixtures as required by local code. Seal joints between fixtures and walls, floors, and counters using sanitary-type, 1-part, mildew-resistant, silicone sealant. Match sealant color to fixture color. Install hot and

cold water supply, waste and vent piping of sizes indicated, but not smaller than required by authorities having

B. See Plumbing Fixture Schedule on sheet M4.2 for plumbing fixture specifications.

<u>SECTION 230100 - GENERAL REQUIREMENTS FOR MECHANICAL</u>

A. WARRANTIES - All materials, workmanship and equipment shall be warranted against defects or against injury from proper and usual wear for a period of one year after the date of substantial completion. Any item that becomes defective within the warranty period shall be repaired or replaced, at no additional cost to the Owner. Warranty shall include repair of faulty workmanship.

B. DEFINITIONS ABBREVIATIONS - The following shall apply throughout the contract documents: Supply and deliver to site ready for installation Noted, scheduled or specified

Provide Furnish, install and connect complete and ready for final use Americans with Disabilities Act

American National Standards Institute American Society of Mechanical Engineers American Society of Heating, Refrigeration and Air Conditioning Engineers

National Electric Code (NFPA 70) National Electrical Manufacturers Association National Fire Protection Association

Sheet Metal and Air Conditioning Contractors National Association Underwriters Laboratories Inc.

C. CODES AND STANDARDS - All work shall be performed by competent craftsmen skilled in the trade involved and shall be done in a manner consistent with normal industry standards. All work shall conform to the currently adopted edition of the National Electric Code (NEC), Local Building Code, Local Plumbing Code, Local Mechanical Code, Local Fire Code, and all other applicable state and local codes or standards. Where there is a conflict between the code and the contract documents, the code shall have precedence only then it is more stringent than the contract documents.

D. PERMITS - Contractor shall become familiar and comply with all requirements regarding permits, fees, ilcenses, etc. Ali permits, licenses, inspections and arrangements required for the work shall be obtained by Contractor's effort and expense. All utilities shall be installed in accordance with the local rules and regulations and all charges shall be paid by the Contractor.

E. SUBMITTALS - Shop drawings shall be submitted to Architect/Engineer for all items of mechanical equipment including the following:

Diffusers, Registers, Grilles Sheet Metal Accessories HVAC equipment Plumbing Fixtures

Plumbing Specialties

1. Shop drawings include fabrication and installation drawings, diagrams, schedules and other data specifically prepared for the project. Include dimensions and notations showing compliance with specified standards. Unless otherwise noted, submit a minimum of six (6) copies of shop drawings for review. Electronic copies (in pdf format) by e-mail are acceptable in lieu of hard copies.

2. Architect/Engineer will review or take appropriate action for submittals. Review is only to determine general conformance with design shown in contract documents. Review of submittals shall not relieve contractor of responsibility for deviation from requirements of the contract documents or from errors or omissions within

F. MATERIALS - All materials and equipment used in the construction of the project shall be new unused and undamaged unless otherwise specified. Materials and equipment shall be of latest design standards of manufacturer specified. Verify installation details and requirements for materials and equipment furnished by others and installed under this contract.

G. DEMONSTRATION AND TRAINING - Instruct Owner's personnel to adjust, operate, and maintain mechanical systems. Schedule training with Owner with at least seven days' advance notice.

H. STARTING AND ADJUSTING - Start and test all equipment and operating components to confirm proper operation. Test and adjust all systems to achieve designed capacity and performance. All equipment and systems discrepancies shall be corrected prior to final acceptance.

<u>SECTION 230500 - BASIC MECHANICAL MATERIALS AND METHODS</u>

A. PIPING INSTALLATION: Install piping at required slope. Install components with pressure rating equal to or greater than system operating pressure. Install piping in concealed locations, except in equipment rooms and service areas. Install piping free of sags and bends. Install piping at right angles or parallel to building walls. Install piping tight to slabs, beams, joists, columns, walls, and other building elements. Locate groups of pipes parallel to each other, spaced to permit valve servicing. Install fittings for changes in direction and branch connections. Install pipe escutcheons for exposed pipe penetrations walls and ceilings. Install sleeves for pipes passing through concrete and masonry walls, and concrete floor and roof slabs. Provide dielectric fitting where two different types of pipe materials are joined. Comply with MSS-69 for pipe hanger selection and application.

B. EQUIPMENT INSTALLATION: Install equipment per manufacturer's recommendations Install equipment as high as possible. Install equipment level and plumb, parallel and perpendicular to building. Install mechanical equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations. Install equipment giving right of way to piping installed at required slope.

C. LABELING AND IDENTIFYING

Piping: Provide pipe markers on each system where pipe is exposed to view and above removable ceilings. Include pipe description of system and arrows showing normal direction of flow.

Equipment: Install engraved plastic-laminate sign or equipment marker on or near each major item of mechanical

D. CUTTING AND PATCHING: Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces necessary for mechanical installations. Perform cutting by skilled mechanics of trades involved. Repair cut surfaces to match adjacent surfaces.

SECTION 230593 - TESTING, ADJUSTING, AND BALANCING

A. Examine air-handling equipment to ensure clean filters have been installed, bearings are greased, belts are aligned and tight, and equipment with functioning controls is ready for operation. Check dampers for proper

B. Perform testing and balancing procedures on each system according to the procedures contained in NEBB's "Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems" and this Section.

C. Adjust fans to deliver total design airflow within the maximum allowable rpm listed by the fan manufacturer. Provide new fan sheaves as required. Measure fan airflow, static pressure, rpm and amp draw.

D. Adjust volume dampers to achieve design airflow within 10% of specified values. Adjust diffusers, registers and grilles. Adjust minimum and maximum outside airflow.

E. Prepare report listing date, project information, equipment data and measured airflow results. Report shall include drawing indicating locations of air outlets and final measured airflow of each outlet. Submit four copies of report to engineer for review.

SECTION 230700 - DUCT INSULATION

A. MINERAL-FIBER BLANKET THERMAL INSULATION: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type II, with all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Apply insulation materials, accessories, and finishes according to the manufacturer's written instructions with the least number of joints practical. Seal joints and seams with vapor-retarder mastic on cold air ducts. Seal penetrations in insulation at hangers, supports, anchors, and other projections with vapor-retarder mastic.

B. ACOUSTICAL DUCT LINER: ASTM C 518 with resin and black mat coated surface exposed to air stream to prevent erosion of glass fibers. Thermal Conductivity (k-Value): 0.26 at 75 deg F mean temperature. Nominal Density 1.5 lbs per cubic foot, minimum noise reduction characteristic shall be 0.55 for 1" thickness; rated for 6000 fpm air velocity; air friction multiplier less than 1.6 at 2000 fpm. Adhere a duct liner with 100 percent coverage of adhesive. Butt transverse joints without gaps and coat joint with adhesive. Secure liner with mechanical fasteners. Apply metal nosing on leading edge of liner.

C. FIRE RATED DUCT INSULATION: UL Classified glass fiber blanket completely encapsulated in UL Classified aluminum foil facing. Flame spread rating of 25 or less, and smoke-developed rating of 50 or less. Insulation shall meet the requirements of NFPA 96 for zero clearance from the duct to the interior surfaces of enclosures of noncombustible and limited combustible construction. Apply insulation materials, accessories, and finishes according to the manufacturer's written instructions with the least number of joints practical. Seal joints and seams with vapor retarder mastic on cold air ducts. Seal penetrations in insulation at hangers supports, anchors, and other projections with vapor retarder mastic bonded with a thermosetting resin.

D. EXISTING INSULATION: All existing insulation damaged by this contractor shall be replaced with new insulation as specified within.

E. APPLICATION SCHEDULE

Service: SUPPLY AIR - Rectangular, concealed Thickness/Material: 2-3/16" Mineral-Fiber Blanket Minimum Installed R-Value: R6 Vapor Retarder Required: Yes

Service: SUPPLY AIR - Round, concealed Thickness/Material: 2-3/16" Mineral-Fiber Blanket Minimum Installed R-Value: R6 Vapor Retarder Required: Yes

Service: SUPPLY AIR - Round, exposed Thickness/Material: Double wall 1" interstitial liner Minimum Installed R-Value: R6 Vapor Retarder Required: NA

Service: RETURN AIR - Rectangular, exposed in finished spaces Thickness/Material: 1-1/2" Duct Liner Minimum Installed R-Value: R6

Service: RETURN AIR - Rectangular, concealed Thickness/Material: 2-3/16" Mineral-Fiber Blanket Vapor Retarder Required: Yes

Vapor Retarder Required: Yes

Service: OUTSIDE AIR Thickness/Material: 2-3/16" Mineral-Fiber Blanket Minimum Installed R-Value: R6 Vapor Retarder Required: Yes

Service: OUTSIDE AIR and RETURN AIR exposed to outdoors Thickness/Material: 2" Rigid Styrofoam Board Minimum Installed R-Value: R8 Vapor Retarder Required: Yes Provide Alumaguard jacket or equivalent, slope top of duct to allow water to drain and seal all duct

Service: TYPE I KITCHEN HOOD EXHAUST AIR Material: Fire Rated Duct Insulation Thickness as required to maintain zero clearance to combustibles. Vapor Retarder Required: Yes

SECTION 230720 - PIPE INSULATION FOR HVAC

A. MINERAL-FIBER INSULATION: Glass fibers bonded with a thermosetting resin. Preformed Pipe Insulation: Comply with ASTM C 547, Type 1, with factory-applied, all-purpose, vapor-retarder jacket. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Apply insulation to pipes buy securing each layer of preformed pipe insulation to pipe with wire, tape, or bands without deforming insulation materials.

B. FLEXIBLE ELASTOMERIC THERMAL INSULATION: Closed-cell, sponge- or expanded-rubber materials. Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials. Adhesive as recommended by insulation material manufacturer. Ultraviolet-Protective coating as recommended by insulation manufacturer. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Follow manufacturer's written instructions for applying insulation. Seal longitudinal seams and end joints with manufacturer's recommended

C. VAPOR RETARDER: On piping systems operating below ambient space temperature, seal joints and seams with vapor-retarder mastic. Seal penetrations in insulation at hangers, supports, anchors, and other projections with vapor-retarder mastic.

D. INSULATION APPLICATION SCHEDULE

1. Service: Condensate drain piping (CD) Thickness/Material: Mineral Fiber. Apply the following insulation thicknesses: a. PVC piping: None b Copper 1/2" Vapor Retarder Required: Yes

Finish: Two coats of manufacturer's coating when exposed to outside

Service: Refrigerant suction (RS), refrigerant liquid (RL) and refrigerant hot gas discharge (RD) Thickness/Material: 1-1/2" Flexible Elastomeric Vapor Retarder Required: Yes

A. STEEL PIPE: Pipe: ASTM A 53; Type E or S; Grade B; Schedule 40; black. Malleable-Iron. Threaded Fittings ASME B16.3, Class 150, standard pattern, with threaded ends according to ASME B1.20.1. Unions: ASME B16.39, Class 150, malleable iron with brass-to-iron seat, ground joint, and threaded ends according to ASME B1.20.1. Joint Compound and Tape: Suitable for natural gas.

B. Install and test gas piping according to NFPA 54 "National Fuel Gas Code" and Authority having jurisdiction

1. Aboveground, ASTM B 280, Type ACR copper tubing with brazed joints (using AWS A5.8 filler material).

c) Seat: Polytetrafluoroethylene.

2. Solenoid Valves: Comply with ARI 760 and UL 429; listed and labeled by an NRTL.

c) Seat: Polytetrafluoroethylene.

d) End Connections: Threaded e) Electrical: Molded, watertight coil in NEMA 250 enclosure of type required by location with 1/2-inch conduit adapter, and 24-V ac coil.

g) Maximum Operating Temperature: 240 deg F. h) Manual operator.

C. INSTALLATION:

2. Sizing, pipe arrangement, and refrigerant specialties shall be determined by the equipment manufacturer based on the final layout / routing worked out in the field. Installation shall follow the recommended

3. Piping shall be free of sags and bends and routed in as direct as possible path between components. 4. Pipe shall be insulated per insulation schedule. Use of thermal shields must be used at support points

layout with suspended ceiling, fire- and smoke-control dampers, lighting layouts, and similar finished work.

(attaching support/clamps directly to the piping will be unacceptable).

ASHRAE 15. Charge system refrigerant. SECTION 233113 - METAL DUCTS AND ACCESSORIES

A. GENERAL: Drawings indicate general arrangement of ducts, fittings, and accessories. Minor modifications to route, size and shape of duct may be made to meet structural and other interference. Changes which could affect

B. DUCT FABRICATION: Sizes shown on plans are inside clear dimensions. Ductwork utilizing duct liner shall

C. MATERIAL: Construct all rectangular and round ducts from galvanized sheet steel: Lock-forming quality;

D. QUALITY ASSURANCE: Fabricate and install duct per SMACNA's "HVAC Duct Construction Standards-Metal and Flexible" and applicable codes. Comply with requirements for metal thickness, reinforcing types and intervals, tie-rod applications, and joint types and intervals. Comply with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems," unless otherwise indicated.

E. PRESSURE CLASS: Unless otherwise noted construct all ducts to 2.0" WG positive or 2.0" WG negative

F. DUCT SEALING: UL classified, non-combustible, flame spread 25 or less, smoke developed rating of 540 or less, resistant to water, pressure rupture rating of 16" WG minimum, suitable for use alone or with tape, application an operational temperature ranges appropriate for usage. Seal all duct per SMACNA class 'C' duct seal requirements.

G. TURNING VANES: Fabricate of 1-1/2" wide, curved blades 3/4" on center. Provide turning vanes in all mitered elbows and duct turns.

H. DUCT ACCESS DOORS: Install insulated duct access doors with hinges and latches for access to inlet side of coils, equipment, control dampers, fire dampers, and smoke dampers.

I. VOLUME DAMPERS: Fabricate single blade dampers for duct sizes 9 1/2: high x 30" width maximum. Fabricate multi-blade dampers of opposed blade pattern using minimum 16 gauge steel with maximum blade sizes 6" x 48" for larger ducts. Provide end bearings with end seals for pressure class required except in round duct 12" in diameter and smaller. Provide locking indicating quadrant regulators on all volume dampers. Mark ends of damper shanks for open/closed indication. Insulated ducts to have elevated dial indicators. Motorized dampers to have 115 volt operators. Provide manual volume dampers at branch take-offs and as shown. Provide motorized

J. FIRE DAMPERS: Labeled to UL 555, One and one-half hours fire rating with 165°F fusible link unless otherwise indicated. SMACNA Type B Frame with blades out of airstream. Factory- or field-installed galvanized, sheet steel Mounting Sleeve. Include a blade lock and stainless-steel negator closure spring for horizontal dampers. Provide fire dampers at locations indicated and where required by applicable codes. Install fire and smoke dampers according to manufacturer's UL-approved written instructions.

one-and-one-half-hour rating to UL 555. 165 deg F fusible link unless otherwise as indicated. Factory-installed mounting sleeve, 0.052-inch-thick, galvanized, sheet steel; length to suit wall or floor application. 115 V, single phase, 60 Hz., damper Motors: provide for modulating or two-position action per application. Provide fire and smoke dampers at locations indicated and where required by applicable codes. Install fire and smoke dampers according to manufacturer's UL-approved written instructions.

L. FLEXIBLE CONNECTORS: Flame-retarded or noncombustible fabrics, coatings, and adhesives complying

for temperatures and pressures of application, approximately 6" wide, crimped into metal edge strip. Provide

with UL 181, Class 1. Neoprene double-coated woven glass fibber fabric in accordance with NFPA 90A, suitable

K. SMOKE DAMPERS: Labeled to UL 555S. Combination fire and smoke dampers shall be labeled for

flexible connections to motor driven equipment. M. FLEXIBLE DUCTS: Factory-fabricated, insulated, round duct, with an outer jacket enclosing 1-1/2-inch-thick, glass-fiber insulation around a continuous inner liner, steel-wire helix encapsulated in polyethylene inner liner. Comply with UL 181, Class 1. Final connections to air outlets and terminal units may be made with flexible duct.

SECTION 231123 - NATURAL GAS PIPING

SECTION 232300 - REFRIGERANT PIPING A. REFRIGERANT PIPING

 B. REFRIGERANT VALVES Service Valves:

a) Body: Forged brass with brass cap including key end to remove core. b) Core: Removable ball-type check valve with stainless-steel spring.

d) End Connections: Copper spring. e) Working Pressure Rating: 500 psig.

 a) Body and Bonnet: Plated steel. b) Solenoid Tube, Plunger, Closing Spring, and Seat Orifice: Stainless steel.

f) Working Pressure Rating: 400 psig.

1. Refrigerant piping to be installed per ASHRAE 15.

requirements of the equipment manufacturer.

B. TESTING: Purge refrigerant piping systems with dry nitrogen. Prepare and pressure test piping according to

system performance shall be reviewed by Architect/Engineer prior to fabrication or installation of duct. Coordinate

be increased in size to accommodate the duct liner thickness.

ASTM A 653/A 653M, G90 coating designation, mill-phosphatized finish for surfaces of ducts exposed to view.

Install flexible ducts with metal collars or sleeves with draw bands. Length of flexible duct shall not exceed 36" path shall not exceed 45°.

07/24/24

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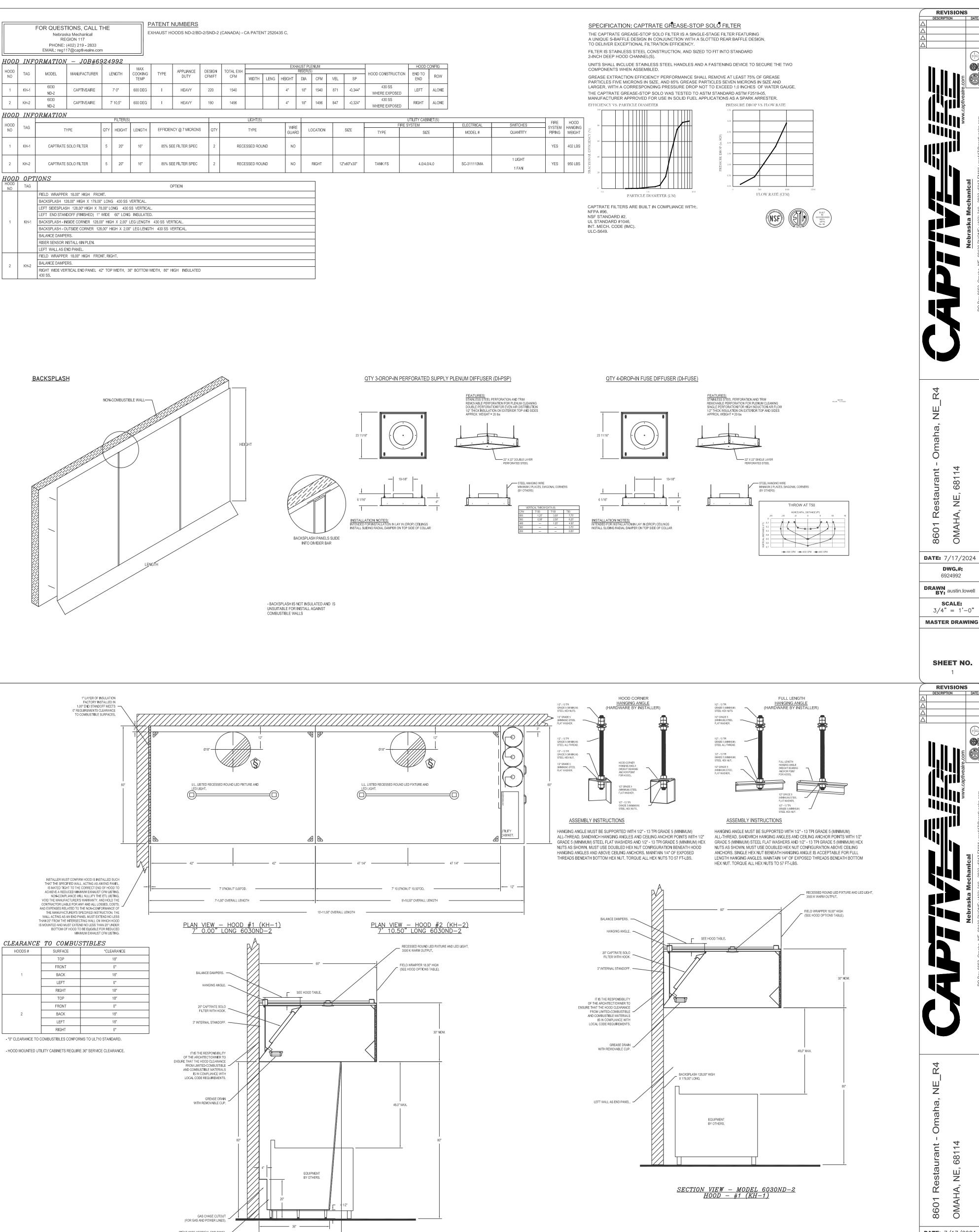
architectural, structural, shop and other appropriate drawings or at site. lav out and coordinate all work prior to installation to provide clearances required for operation, maintenance, and codes and verify non-interference with other work. do not fabricate prior o verification of clearance for all trades.

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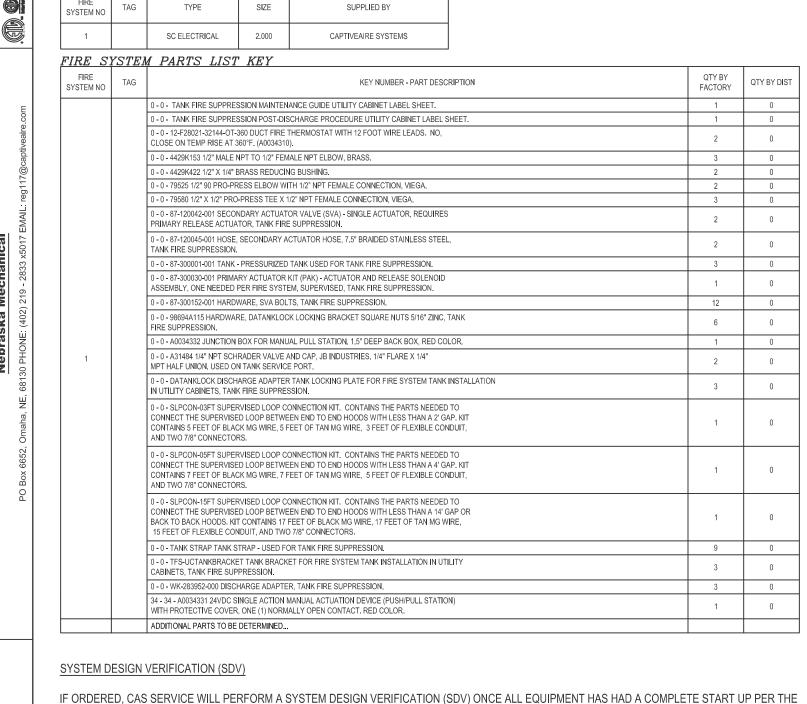
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SYSTEM

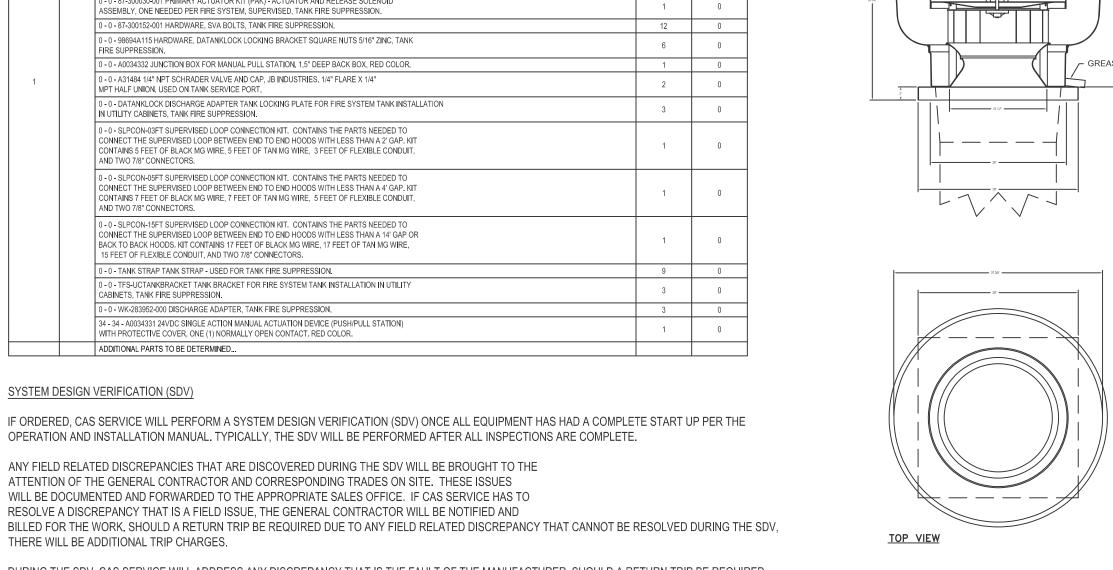
MANUFACTURER CFM ESP RPM MOTOR HP BHP PHASE VOLT FLA DISCHARGE VELOCITY

CAPTIVEAIRE 3036 1.400 1300 ODP, PREMIUM 3.000 1.5120 3 208 9.5 701 FPM

NOTE: THESE DRAWINGS PROVIDED BY CAPTIVEAIRE ARE SUPPLEMENTAL INFORMATION TO

THE MECHANICAL DRAWINGS. SEE FLOOR PLANS FOR MORE DETAILS AND SYSTEM LAYOUT.

LOCATION ON HOOD



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

OPTIONS - GREASE BOX. - FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE SOLATORS), 70LB MOTOR MAX FOR WALL ISOLATORS), 70LB MOTOR MAX FOR WALL MOUNTING.

- THROUGH WALL CURB MOUNT INSTALLATION. CURB HEIGHT MUST BE MINIMUM 10" TALLER THAN WALL THICKNESS FOR USE WITH A HINGE KIT.
- SHIP LOOSE DISCONNECT FOR REMOTE MOUNT.

- HINGE KIT LOCKING (XHD). SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS.
- 2 YEAR PARTS WARRANTY.

FEATURES:

- ROOF MOUNTED FANS.

- UL705 AND UL762 AND ULC-S645

- HIGH HEAT OPERATION 300°F (149°C). - GREASE CLASSIFICATION TESTING. - NEMA 3R SAFETY DISCONNECT SWITCH.

· VARIABLE SPEED CONTROL.

- RESTAURANT MODEL.

- INTERNAL WIRING.

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).

- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY

HERMAL EQUILIBRIUM, AND WITHOUT ANY

DETERIORATING EFFECTS TO THE FAN WHICH

ABNORMAL FLARE-UP TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY

WHILE EXHAUSTING BURNING GREASE VAPORS

DAMAGED TO ANY EXTENT THAT COULD CAUSE

AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING

AN UNSAFE CONDITION.

WHILE EXHAUSTING AIR AT 300°F (149°C)

UNTIL ALL FAN PARTS HAVE REACHED

WOULD CAUSE UNSAFE OPERATION.

DATE: 7/17/2024 6924992 3/4" = 1'-0

REVISIONS

DESCRIPTION DATE

MASTER DRAWING

07/24/24

Omaha, NE 68164 P: 402.491.4144

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DATE: 7/17/2024 6924992

DRAWN BY: austin.lowell 3/4" = 1'-0' **MASTER DRAWING**

SHEET NO.

DOAS/RTU FAN SCHEDULE - JOB#6924992 RETURN AIR CFM USING EAR CFM (LBS) ESP HP PHASE VOLT MCA MOCP DB WB DB WB DB WB DP TOTAL SENS. TOTAL NOTES REQUIRED INPUT GAS PRESSURE 3410 3410 2797 0.500 3.00 3 208 82.5A 90A 84.0°F 76.6°F 84.0°F 76.6°F 54.4°F 53.0°F 52.1°F 264.0 MBH 104.0 MBH 18.2 6.0 70.0°F 59.1°F 57.3 MBH 129.6 MBH 144.2 LBS/HR NATURAL 397907 322305 79°F 7 IN. W.C. - 14 IN. W.C. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16 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

	OPTIO	NS_	
FAN JNIT NO	TAG	QTY	DESCRIPTION
		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	WALL MOUNT CONSTRUCTION 18/20 (D60 ISOLATORS), 70LB MOTOR MAX FOR WALL MOUNTING
1	KEF-1	1	THROUGH WALL CURB MOUNT INSTALLATION. CURB HEIGHT MUST BE MINIMUM 10" TALLER THAN WALL THICKNESS FOR USE WITH A HINGE KIT
		1	SHIP LOOSE DISCONNECT FOR REMOTE MOUNT
		1	HINGE KIT LOCKING (XHD)- SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS
		1	2 YEAR PARTS WARRANTY
		1	RTU HEATED FURNACE CONDENSATE DRAIN KIT. REQUIRED FOR WINTER DESIGN TEMP OF 0 DEGREES F AND LOWER
		1	INLET PRESSURE GAUGE, 0-35"
		1	TOTAL CFM MONITORING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	SHIP LOOSE GAS STRAINER 1"
		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	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
		1	OVERHEAT STAT
		1	CONTROL PANEL ENCLOSURE HEATER 100W - RECOMMENDED FOR WINTER DESIGN TEMPERATURES LESS THAN 0°F
		1	20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL - R410A
2	MAU-1	1	RTU3 SIDE DISCHARGE
		1	24VAC FIRE INPUT
		1	DUCT MOUNTED SMOKE DETECTOR - SHIPS LOOSE
		1	HIGH TURNDOWN OPTION FOR DOAS UNITS
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 2 FURNACES
		1	OCCUPIED SCHEDULING
		1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI
		1	RTU3 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	RTU3 HAIL GUARD
		1	RTU3 SIDE RETURN
		1	RTU INTAKE/RETURN DAMPER - OA PERCENTAGE CONTROL
		1	RTU3 CURB DUCT HANGER
		1	UNIT MOUNTED VFD CONFIGURED FOR DCV
		1	RTUVZH117 COMPRESSOR SOUND BLANKET 230V - FACTORY INSTALLED
	1	1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE
		1	MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)

NO GREASE GRAVITY WALL SIDE GRAVITY MOTORIZED WAL	FAN	FA.O.		EXHAUST	SUPPLY						
	I	AG			 			WALL MOUNT			
1 KEF-1 YES	1 K	EF-1	YES								

	NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
	1	# 1	KEF-1	80 LBS	CURB	26.500"W X 26.500"L X 24.000"H INSULATED VENTED 16 GAUGE.
	2	# 2	MAU-1	159 LBS	CURB	59.500"W X 91.000"L X 12.000"H INSULATED 16 GAUGE.
	3			48 LBS	CURB	26.500"W X 26.500"L X 24.000"H.
ĺ				HMI SCHEDULE		

UNIT NUMBER HMI # HMI LOCATION TEMP AVERAGING MODBUS ADDRESS

FAN #2 HMI #1 - UNIT IN UNIT NOT AVERAGED 55

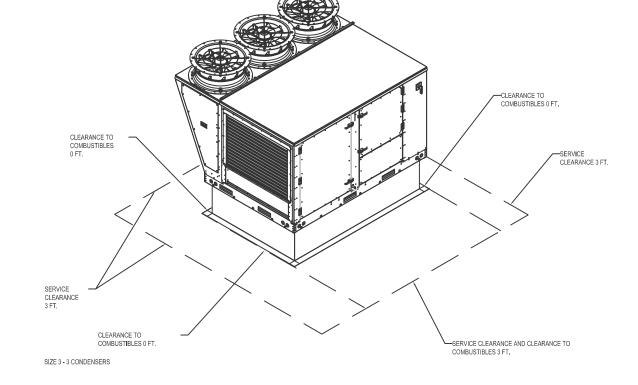
FAN #2 HMI #2 - SPACE AVERAGED 56

FAN #2 CAS-HVAC3-I.400-20-20T - HEATER (MAU-1)

1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.

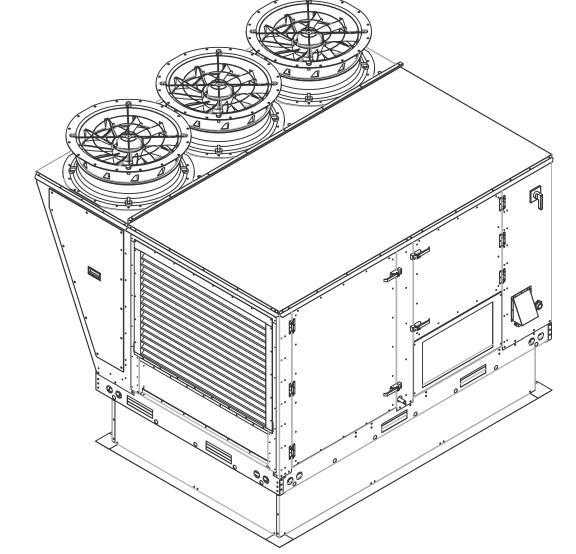
DENOTES CORNER WEIGHT. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS. 4. CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER

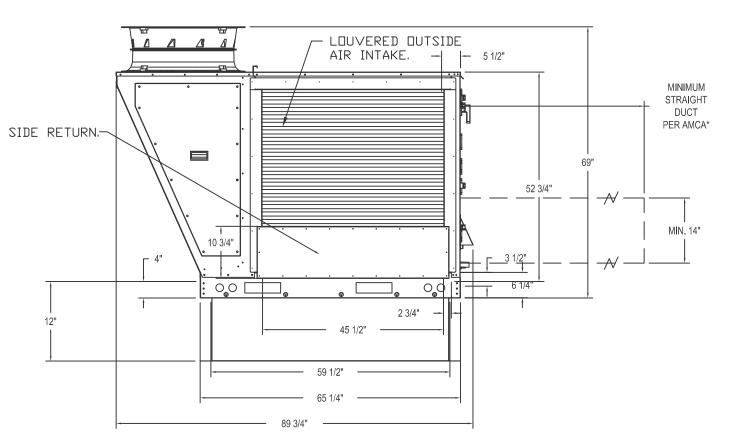
5. EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.

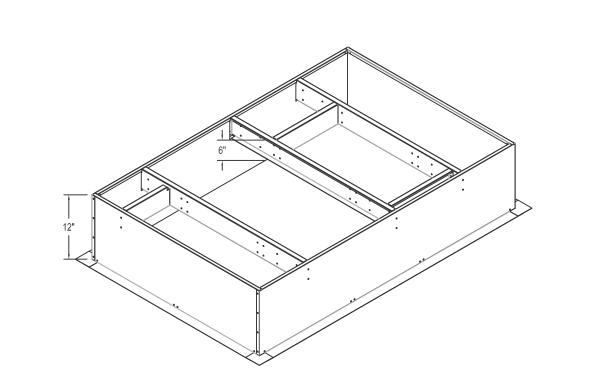


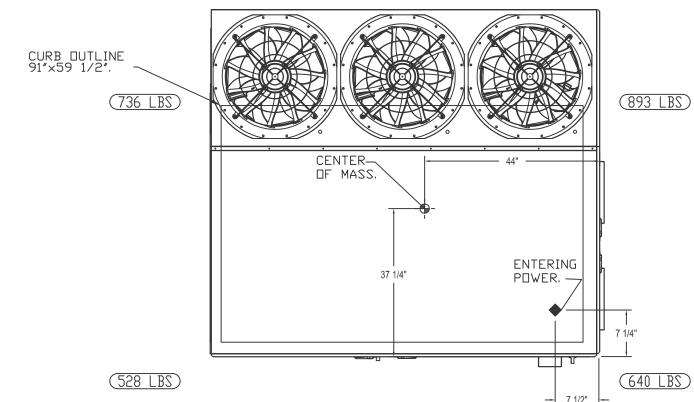
REVISIONS DESCRIPTION DATE:

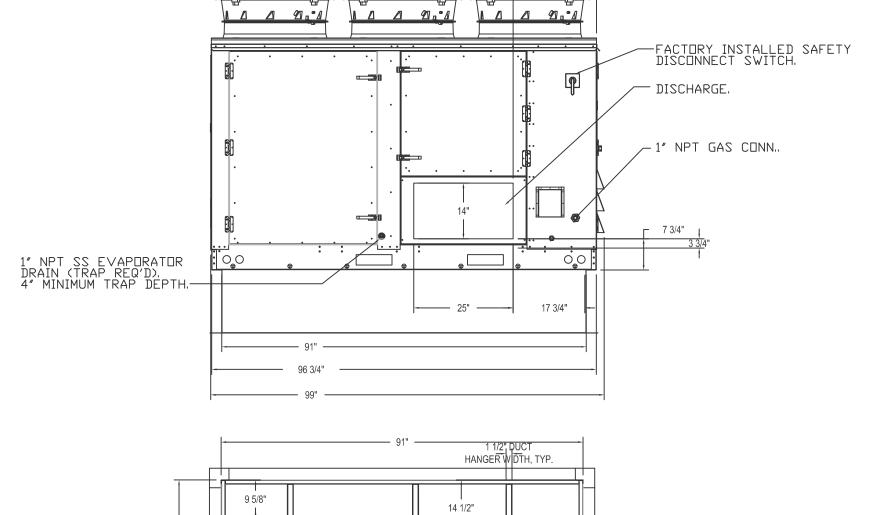
OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 25" x 14".

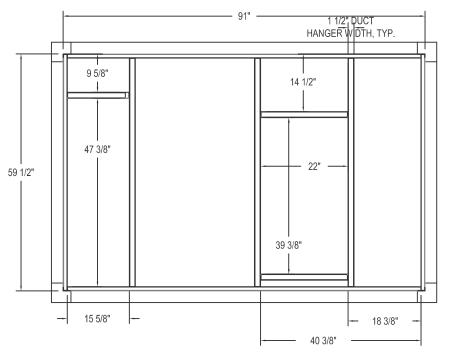












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NOTE: THESE DRAWINGS PROVIDED BY CAPTIVEAIRE ARE SUPPLEMENTAL INFORMATION TO THE MECHANICAL DRAWINGS. SEE FLOOR PLANS FOR MORE DETAILS AND SYSTEM LAYOUT.



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DATE: 7/17/2024

DWG.#:

6924992

DRAWNBY: austin.lowell

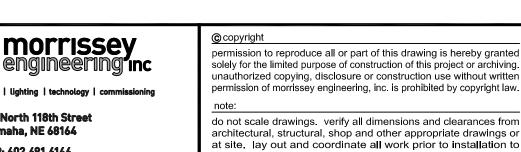
SCALE: 1/2" = 1'-0"

MASTER DRAWING

SHEET NO.

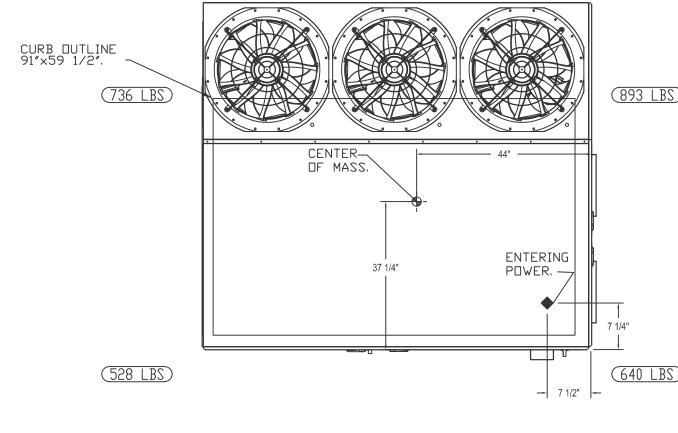
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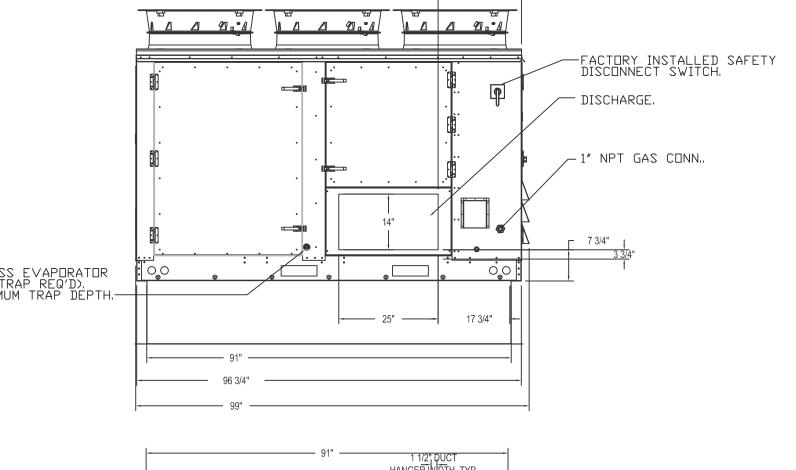
07/24/24



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 20GA EXTERIOR W. / 14GA BASE
11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 15:1 TURNDOWN WITH NG AND 12:1 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 GILARD FOR CONDENSING COIL 14. HAIL GUARD FOR CONDENSING COIL
15. FACTORY INSTALLED COMPRESSOR SOUND BLANKET 16. SIDE DISCHARGE/SIDE RETURN

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS





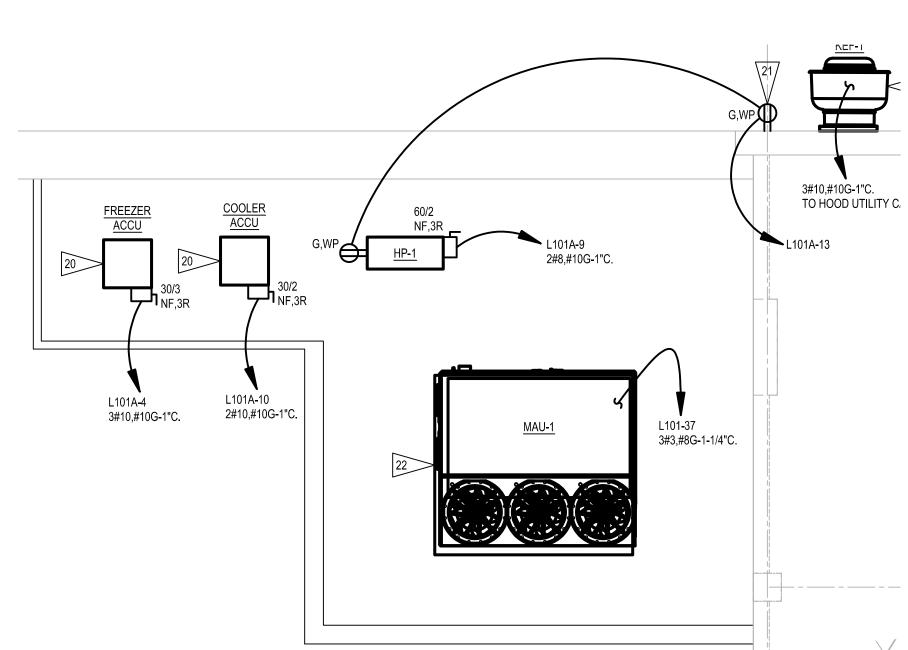
PRODUCTS LISTED INDICATE BASIS OF DESIGN PRODUCTS. REFER TO SPECIFICATIONS FOR ACCEPTABLE EQUIVALENT MANUFCATURERS. 2. COORDINATE DIMMING TYPE REQUIRED WITH ASSOCIATED LIGHT FIXTURE TYPE CONTROLLED.

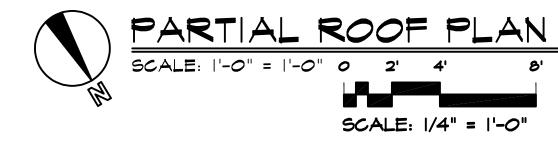
	LIGHTING FIXTURE SCHEDULE													
		CATALOGNO		LAMP DATA				N	10U	INTII	NG			
FIXT#	MANUFACTURER	CATALOG NO. (NOTE 2)	QTY.	SIZE	TYPE (NOTE 3)	VOLTAGE	SURF	FLUSH	CLG.	WALL	HEIGHT	DESCRIPTION	REMARKS	
1	LITHONIA, NOTE 1	EPANL 2X4 6000LM 80CRI 40K MIN10 ZT MVOLT	N/A	6,000 LM / 4000K	LED	120/277		Х	Х			2X4 FLAT PANEL		
1E	LITHONIA, NOTE 1	EPANL 2X4 6000LM 80CRI 40K MIN10 ZT MVOLT EL14L	N/A	6,000 LM / 4000K	LED	120/277		Х	Х			2X4 FLAT PANEL	WITH EM BATTERY	
2	LITHONIA, NOTE 1	LDN4CYL 30/15 L04AR LSS MVOLT GZ10 PM DBL	N/A	1,500LM / 3000K	LED	120/277	Х		Х			BLACK 4IN CYLINDER		
3	LITHONIA	LHQM LED B R HO	N/A	N / A	LED	120/277	Х			Х		EXIT LIGHT	WITH EM HEADS	
4	LITHONIA	ELM2L B	N/A	N / A	LED	120/277	Х		Х			EM BATTERY LIGHT	WITH EM BATTERY	
5	LITHONIA, NOTE 1	LDN4 35/15 L04AR LSS MVOLT EZ1	N/A	1,500LM / 3500K	LED	120/277		Х	Х			4IN DOWN LIGHT		
6	LITHONIA, NOTE 1	EPANL 2X4 6000LM 80CRI 40K MIN10 ZT MVOLT 2X4SMKSH	N/A	6,000 LM / 4000K	LED	120/277	Х		Х		-	2X4 FLAT PANEL		
6E	LITHONIA, NOTE 1	EPANL 2X4 6000LM 80CRI 40K MIN10 ZT MVOLT EL14L 2X4SMKSH	N/A	6,000 LM / 4000K	LED	120/277	Х		Х		-	2X4 FLAT PANEL	WITH EM BATTERY	
7	BL LIGHTING	BL FLEXFORM D2 30 65 BL DRIVELINE MG 9610	-	200 LM/FT / 3000K	-	120	Х					TAPE LIGHT	NOTE 4	
8	LITHONIA	WPX1 LED P1 30K MVOLT DBLXD	N/A	2,900 LM / 3000K	LED	120/277	Х			Х	NOTE 5	WALL PACK		
9	ALPHABET	750X 30K VA PC XX XX	N/A	170 LM / 3000K	LED	120/277		Х		Х	NOTE 6	RAIL LIGHT		
10	LITHONIA	WLTE B 1 R EL	N/A	N / A	LED	120/277	Х			Х		EXIT LIGHT	WITH EM HEADS	

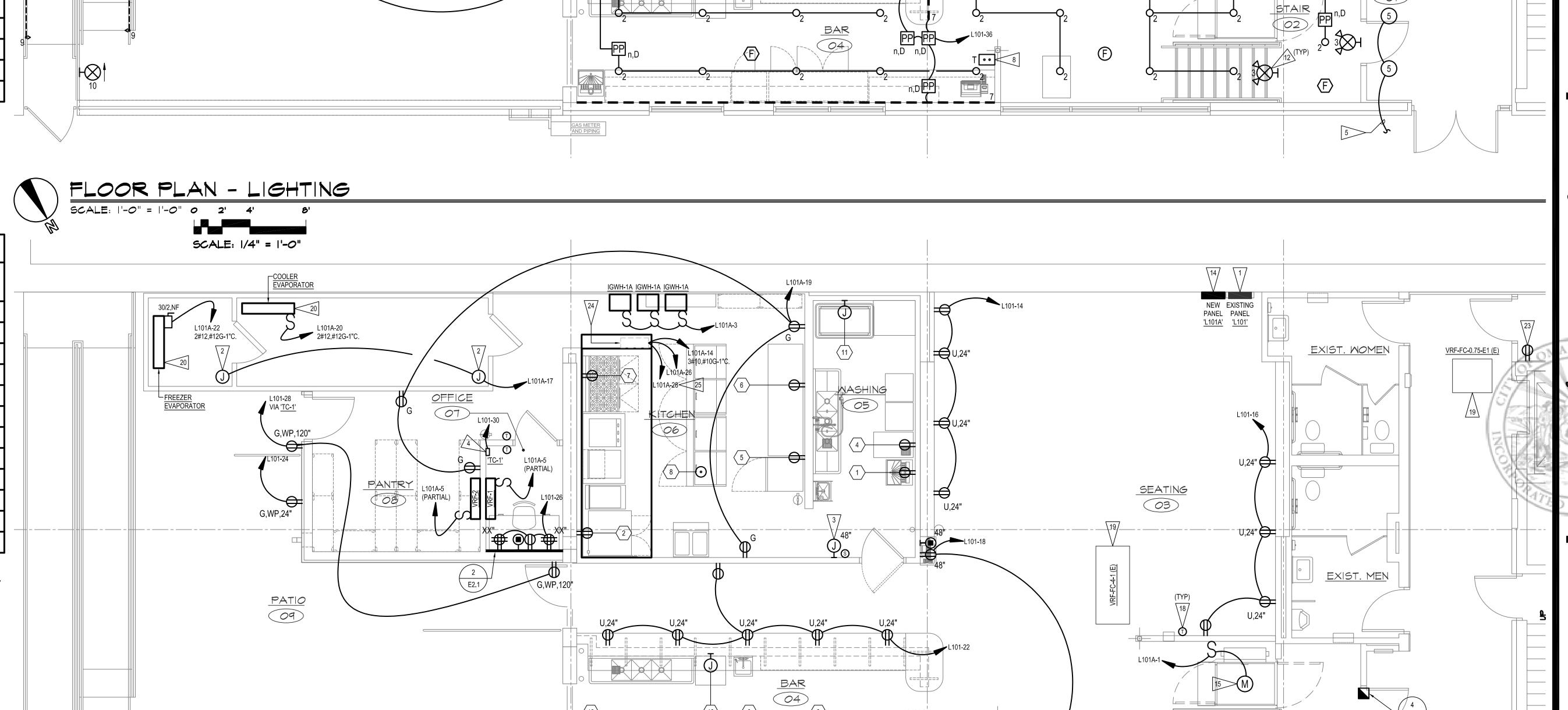
- I. FIXTURE SHALL BE CONSIDERED EQUAL AS MANUFACTURED BY COLUMBIA, DAY-BRITE, COOPER, AND H.E. WILLIAMS.
- CONTRACTOR SHALL VERIFY LIGHT FIXTURE CATALOG NUMBER & INSTALLATION REQUIREMENTS PRIOR TO ORDERING.
- LAMP TYPE DESCRIPTION: LED=LIGHT EMITTING DIODE
- REFER TO ARCHITECTURAL PLANS FOR RUN LENGTHS REQUIRED. LUMINAIRE SHALL BE CONTINUOUS FOR ENTIRE LENGTHS. PROVIDE ACCESSORY MOUNTING CABLE AND ALL REQUIRED HARDWARE FOR INSTALLATION PER MANUFACTURER'S INSTRUCTIONS.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT.
- 6. COORDINATE BEZEL COLOR, FACE TYPE AND INSTALLATION OF LIGHT WITH ARCHITECT, RAILING VENDOR AND GENERAL CONTRACTOR PRIOR TO ROUGH IN.

	KI ⁻	ТСНЕ	ΞN	EQI	JIPM	ENT	С	ONI	NECTIO	N SCHE	DUL	E		
MARK	ITEM	VOLTAGE	PH	HP (KW)	AMPS	BREAKER	DIRECT 🥰	CORD AND PLUG	RECEPTACLE CONFIGURATION	MOUNTING HEIGHT	WIRE	GROUND WIRE	CONDUIT	CIRCUIT
$\langle 1 \rangle$	SODA DISPENSER	120	1		3.2	20/1		Х	5-20R	48"	#12	#12	3/4"	L101-9
2	CONVECTION OVEN	120	1		8.0	20/1		Х	5-20R	48"	#12	#12	3/4"	L101-11
3	GLASS CHILLER	120	1		2.5	20/1		X	5-20R	16"	#12	#12	3/4"	L101-15
4	ICE MACHINE	120	1		5.9	20/1		Х	5-20R	48"	#12	#12	3/4"	L101-17
5	PREP TABLE	120	1		4.4	20/1		Х	5-20R	48"	#12	#12	3/4"	L101-19
6	PREP TABLE	120	1		4.4	20/1		Χ	5 - 20R	48"	#12	#12	3/4"	L101-21
$\overline{7}$	RANGE	120	1		6.0	20/1		Χ	5 - 20R	16"	#12	#12	3/4"	L101-23
8	REACH IN FREEZER	120	1		4.2	20/1		Х	5-20R	NOTE 2	#12	#12	3/4"	L101-27
9	BACK BAR COOLER	120	1		10.7	20/1		Χ	5 - 20R	16"	#12	#12	3/4"	L101-29
(10)	GLASS WASHER	208	1		32.2	45/2	Х			16"	#6	#10	1"	L101-31
(11)	DISH WASHER	120	1		26.0	35/2	Х			16"	#8	#10	1"	L101-35
(12)	SODA DISPENSER	120	1		3.2	20/1		Х	5-20R	48"	#12	#12	3/4"	L101A-1

- INFORMATION INCLUDED IN SCHEDULE HAS BEEN BASED ON LIMITED DESIGN INFORMATION AVAILABLE AT TIME OF CONSTRUCTION DOCUMENTS. COORDINATE EQUIPMENT LOCATIONS, CONDUIT ROUTING, DEVICE MOUNTING HEIGHTS AND POWER CONNECTIONS INCLUDING VOLTAGE, PHASE, BREAKER, CONDUCTOR, CONDUIT AND RECEPTACLE CONFIGURATION WITH WITH OWNER, KITCHEN EQUIPMENT SUPPLIER AND REVIEWED KITCHEN EQUIPMENT SUBMITTALS PRIOR TO ROUGH IN AND PURCHASE OF LONG LEAD TIME EQUIPMENT. COORDINATE ANY CHANGES REQUIRED TO THE INFORMATION ABOVE WITH THE ENGINEER OF RECORD. MAKE ANY CHANGES REQUIRED AT NO ADDITIONAL COST TO OWNER.
- 2. SEE DETAIL 3/E2.1 FOR ADDITIONAL INFORMATION.







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

PATIO O9

WHERE POSSIBLE. PROVIDE NEW BREAKERS AS REQUIRED TO ACCOMMODATE REMODEL. PROVIDE AN UPDATED TYPED CIRCUIT DIRECTORY AFTER REMODEL IS

COMPLETE. 2 PROVIDE FINAL CONNECTION TO WALK IN EQUIPMENT INTERIOR LIGHTING, PRESSURE RELIEF PORTS, DOOR HEATERS, PILOT LIGHT SWITCH, ETC. FIELD COORDINATE EXACT ELECTRICAL REQUIREMENTS (BRANCH CIRCUIT SIZE, OVER CURRENT PROTECTION DEVICE SIZE, LOCAL DISCONNECTING MEANS SIZE, ETC.) WITH EQUIPMENT MANUFACTURER PRIOR TO ROUGH IN.

PROVIDE TWO DEAD FRONT REMOTE 'GFCI' DEVICES TO PROVIDE 'GFCI' PROTECTION OF THE TWO BRANCH CIRCUITS SERVING EQUIPMENT UNDER THE HOOD. 4 PROVIDE NEW TWO CHANNEL, SEVEN DAY DIGITAL TIME CLOCK - TORK #DG SERIES OR EQUAL. COORDINATE TIME CLOCK LOCATION WITH OWNER PRIOR TO ROUGH IN.

PROVIDE 120V CONNECTION TO TIME CLOCK. 5 CONNECT NEW DOWN LIGHTING IN EXISTING VESTIBULE TO EXISTING VESTIBULE

6 INSTALL AND CONNECT LIGHT FIXTURES AND SWITCHES FURNISHED WITH WALK IN REFRIGERATION EQUIPMENT. SEE POWER PLAN FOR ADDITIONAL INFORMATION. 7 PROVIDE LIGHTING CONTROL NETWORK SYSTEM BACKBONE WITH REQUIRED QUANTITY OF BRIDGES AND POWER PACK(S) - nLIGHT #nECY MVOLT ENC GFXK.

ADDITIONAL INFORMATION.

PROVIDE 120V CONNECTION WITH LOCKABLE CIRCUIT BREAKER. NEATLY ARRANGE

ASSOCIATED DEVICES ADJACENT TO SYSTEM BACKBONE. SEE SPECIFICATIONS FOR

PROVIDE LIGHTING CONTROL NETWORK ENTRY STATION - SEE LIGHTING CONTROL

16 PROVIDE 1"C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO

16 PROVIDE 1"C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO

18 PROVIDE 1 TO ALL OW FOR POLITICAL TO ALL OW DEVICE SCHEDULE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. 9 LIGHTING CONTROL NETWORK POWER PACK - SEE LIGHTING CONTROL DEVICE

SCHEDULE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. LOCATE ABOVE NEAREST ACCESSIBLE CEILING. PROVIDE ALL REQUIRED LOW VOLTAGE AND LINE VOLTAGE CONNECTIONS. 10 PROVIDE LINE VOLTAGE WALL BOX OCCUPANCY SENSOR - SEE LIGHTING CONTROL DEVICE SCHEDULE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

11 CONNECT TO BRANCH CIRCUIT SERVING GENERAL LIGHTING IN SAME ROOM AS EMERGENCY LIGHT. CONNECT BATTERY SENSING LEADS AHEAD OF LOCAL

12 CONNECT EXIT LIGHTS TO EXISTING CIRCUIT SERVING EXIT LIGHTS PRIOR TO REMODEL. 13 EXTEND EXISTING FIRE ALARM NOTIFICATION LOOP TO NEW DEVICES AND CONNECT.

14 FEED NEW PANEL FROM NEW (100/3) CIRCUIT BREAKER IN EXISTING PANEL 'L101' WITH 4#2,#8G-1-1/2"C. 15 PROVIDE FINAL CONNECTION TO WHEEL CHAIR LIFT. COORDINATE LOCATION OF ALL COMPONENTS AND REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH IN.

BASE OF HAND RAIL POST TO ALLOW FOR ROUTING OF LOW VOLTAGE CABLES SERVING RAIL LIGHTING. COORDINATE WITH ARCHITECTURAL AND GENERAL CONTRACTOR PRIOR TO CONSTRUCTION. 17 PROVIDE NEW CENTRAL INVERTER - EVENLITE #PWII 12 LC TB OR EQUAL.

18 PROVIDE ROUGH IN FOR THERMOSTAT / SENSOR. PROVIDE 1/2"C. WITH PULL STRING FROM ROUGH IN TO MECHANICAL EQUIPMENT SERVED. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH IN. 19 EXISTING MECHANICAL EQUIPMENT TO REMAIN. MAINTAIN BRANCH CIRCUIT AND

PROTECT EQUIPMENT DURING REMODEL. 20 EXACT ELECTRICAL REQUIREMENTS NOT KNOWN AT TIME OF DESIGN. COORDINATE REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN. MAKE REQUIRED CHANGES AT NO ADDITIONAL COST TO THE OWNER.

21 LOCATE SERVICE RECEPTACLE ADJACENT TO EXHAUST FAN. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR AND GENERAL CONTRACTOR PRIOR TO ROUGH IN. 22 EQUIPMENT PROVIDED WITH INTEGRAL DISCONNECT. PROVIDE SPARE 1"C. WITH PULL STRING FROM EQUIPMENT TO HOOD UTILITY CABINET FOR CABLING BY OTHERS. COORDINATE WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN.

23 PROVIDE NEW RECEPTACLE FOR WATER SOFTENER. CONNECT TO EXISTING PANEL SERVING SAME ROOM AS WATER SOFTENER. COORDINATE EXACT LOCATION OF RECEPTACLE WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH IN.

3-PHASE VFDS AND OVERLOADS FOR EXHAUST AND SUPPLY FANS, CONNECTIONS FOR HOOD LIGHTS, AND HOOD ON/OFF CONTROLS. VERIFY LOCATION WITH KITCHEN EQUIPMENT SUPPLIER. PROVIDE BUILDING POWER CONNECTION TO PANEL FOR EACH HOOD FAN AND HOOD LIGHTS, THEN FINAL CONNECTIONS FROM PANEL TO FAN AND LIGHTS. PROVIDE ALL ADDITIONAL LINE VOLTAGE AND LOW VOLTAGE CONNECTIONS NOT INDICATED ON THIS PLAN REQUIRED TO ENSURE HOOD IS OPERATIONAL. COORDINATE ALL REQUIREMENTS WITH REVIEWED HOOD EQUIPMENT

L101-32 (PARTIAL)

SEATING

03

SHOP DRAWINGS AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH IN. 25 PROVIDE 120V ELECTRICAL CONNECTION TO HOOD ANSUL FIRE SUPPRESSION SYSTEM CONTROL PANEL. UPON ALARM FROM HOOD FIRE DETECTION SYSTEM THE ANSUL SYSTEM CONTROL PANEL SHALL DISCONNECT ELECTRICAL POWER TO ALL EQUIPMENT UNDER HOOD THROUGH SHUNT TRIP CONTROLLED BREAKERS IN PANEL SERVING EQUIPMENT UNDER HOOD.

GENERAL NOTES

MINIMUM SIZE FOR BRANCH CIRCUIT CONDUITS SHALL BE 1/2." MINIMUM DATA/COMMUNICATIONS CONDUIT SIZE SHALL BE 1." SEE DRAWINGS FOR AREAS

EXIST. MEN

AT CONTRACTOR'S OPTION, THE USE OF MULTI-WIRE BRANCH CIRCUITS IS ALLOWED. PROVIDE MEANS TO SIMULTANEOUSLY DISCONNECT ALL CIRCUIT BREAKERS SHARING A COMMON NEUTRAL.

PROVIDE A GREEN INSULATED GROUND WIRE IN ALL LIGHTING AND POWER BRANCH

ALL EXISTING WIRING DEVICES (LIGHTING, POWER AND DATA AS APPLICABLE) LOCATED WITHIN THE SCOPE OF REMODEL SHALL BE REMOVED AND REPLACE WITH NEW AS REQUIRED TO MATCH DEVICE AND FACEPLATE COLORS AND TYPES INDICATED IN ELECTRICAL SPECIFICATIONS.

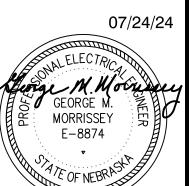
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B. DEFINITIONS ABBREVIATIONS - The following shall apply throughout the contract documents:

Furnish Supply and deliver to site ready for installation

Indicated Noted, scheduled or specified

Provide Furnish, install and connect complete and ready for final use

National Electric Code (NFPA 70)

NEMA National Electrical Manufacturers Association

NFPA National Fire Protection Association

Underwriters Laboratories Inc.

C. CODES AND STANDARDS - All work shall be performed by competent craftsmen skilled in the trade involved and shall be done in a manner consistent with normal industry standards. All work shall conform to the currently adopted edition of the National Electric Code (NEC), Local Building Code, and all other applicable state and local codes or standards. Where there is a conflict between the code and the contract documents, the code shall have precedence only then it is more stringent than the contract documents.

D. PERMITS - Contractor shall become familiar and comply with all requirements regarding permits, fees, licenses, etc. All permits, licenses, inspections and arrangements required for the work shall be obtained by Contractor's effort and expense. All utilities shall be installed in accordance with the local rules and regulations and all charges shall be paid by the Contractor.

E. SUBMITTALS - Shop drawings shall be submitted to Architect/Engineer for the following items of electrical

Enclosed switches

Panelboards

equipment

Lighting fixtures Lighting control

1. Shop drawings include fabrication and installation drawings, diagrams, schedules and other data specifically prepared for the project. Include dimensions and notations showing compliance with specified standards. Unless otherwise noted, submit a PDF copy of shop drawings for review.

2. Architect/Engineer will review or take appropriate action for submittals. Review is only to determine general conformance with design shown in contract documents. Review of submittals shall not relieve contractor of responsibility for deviation from requirements of the contract documents or from errors or omissions within

undamaged unless otherwise specified. Materials and equipment shall be of latest design standards of

manufacturer specified. Verify installation details and requirements for materials and equipment furnished by others and installed under this contract. G. DEMONSTRATION AND TRAINING - Instruct Owner's personnel to adjust, operate, and maintain electrical

F. MATERIALS - All materials and equipment used in the construction of the project shall be new unused and

systems. Schedule training with Owner with at least seven days' advance notice. H. STARTING AND ADJUSTING - Start and test all equipment and operating components to confirm proper

operation. Test and adjust all systems to achieve designed capacity and performance. All equipment and systems discrepancies shall be corrected prior to final acceptance. TEMPORARY POWER AND LIGHTING - Use electric power from Owner's existing system without metering

1. Provide receptacle outlets adequate for connection of power tools and construction equipment.

2. Provide temporary lighting with local switching that provides adequate illumination for construction operations

SECTION 260500 - BASIC ELECTRICAL MATERIALS AND METHODS

and without payment of use charges.

A. QUALITY ASSURANCE - Electrical Components, Devices, and Accessories shall be listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended

B. COORDINATION - Coordinate chases, slots, inserts, sleeves, and openings with general construction work and arrange in building structure during progress of construction to facilitate the electrical installations that follow. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the work.

C. CONDUCTORS - All conductors shall be installed in raceways. Conductors for pilot and control circuits shall be #14. All other conductors shall be #12 or larger.

1. Conductors, No. 10 AWG and Smaller: Solid or stranded copper.

2. Conductors, Larger Than No. 10 AWG: Stranded copper.

3. Insulation: Thermoplastic, rated at 75 deg C minimum.

4. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service

D. RACEWAYS - Minimum raceway size shall be ½". Raceway types and applications shall be as follows: 1. Electrical metallic tubing (EMT): ANSI C80.3, zinc-coated steel, with set-screw or compression fittings. EMT shall be used for all other applications not listed below.

2. Liquid tight flexible metal conduit (LFMC): Zinc-coated steel with sunlight-resistant and mineral-oil-resistant plastic jacket. LFMC shall be used for connections to vibrating equipment or in wet or damp locations

3. Rigid non-metallic conduit (RNC): NEMA TC 2, Schedule 40 PVC, with NEMA TC3 fittings. RNC shall be used for all underground applications.

4. Raceway Fittings: Specifically designed for the raceway type with which used.

required. Box types and applications shall be as follows

E. JUNCTION AND DEVICE BOXES - Minimum box size shall be 4" square with extension or plaster ring as

1. Sheet metal boxes: NEMA OS 1 galvanized steel. Sheet metal boxes shall be used for all surface mounted applications and flush mounting in gypsum or plaster walls.

2. Masonry boxes: square cornered suitable for flush mounting in masonry construction.

3. Cast metal boxes: NEMA FB 1, Type FD, cast box with gasketed cover. Cast metal boxes shall be used for exterior surface mounted applications.

F. ELECTRICAL IDENTIFICATION - All conductors shall be color coded throughout the installation. Color coding shall be as prescribed by ANSI A13.1 and NFPA 70.

continuous-printed, vinyl tape not less than 6 inches wide by 4 mils thick with embedded continuous metallic strip and shall be compounded for permanent direct-burial service.

1. Provide underground warning tape for all buried conductors tape shall be permanent, bright-colored,

G. FIRESTOPPING - Apply firestopping to cable and raceway penetrations of fire-rated floor and wall assemblies to achieve fire-resistance rating of the assembly.

H. WORK IN EXISTING BUILDINGS - Protect existing electrical equipment and installations indicated to remain. If damaged or disturbed in the course of the Work, remove damaged portions and install new products of equal

capacity, quality, and functionality. 1. Existing utilities shall not be interrupted without prior written approval from the Landlord. All interruptions shall

I. CUTTING AND PATCHING - Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces

required to permit electrical installations. Perform cutting by skilled mechanics of trades involved.

1. Repair and refinish disturbed finish materials and other surfaces to match adjacent undisturbed surfaces. Install new fireproofing where existing firestopping has been disturbed. Repair and refinish materials and other surfaces by skilled mechanics of trades involved.

SECTION 262416 - PANELBOARDS

A. GENERAL - Panelboard cabinets shall be NEMA PB 1, type 1 zinc coated steel with manufacturer's standard enamel finish over corrosion-resistant treatment or primer coat. Each new panelboard and existing panelboard modified in remodel shall be furnished with a new and typed directory card indicating the load served by each branch

1. Panelboard bus material shall match existing.

2. Provide each panelboard with an equipment ground bus adequate for feeder and branch-circuit equipment ground conductors. Bus shall be bonded to box.

3. Where future devices (spaces) are scheduled provide mounting brackets, bus connections, and necessary appurtenances required for future installation of devices.

4. Each panelboard shall be fully rated to interrupt symmetrical short-circuit current available at terminals. See schedules for required interrupting current (A.I.C.).

5. Panelboards shall be mounted with top of trim at 74" above finished floor, unless otherwise indicated.

6. Panelboards shall be mounted plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish.

7. Panelboards shall be manufactured by Cutler-Hammer, General Electric, Siemens, or Square D. B. LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

1. Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.

2. Doors: Front mounted with concealed hinges; secured with flush latch with tumbler lock; keyed alike.

C. OVERCURRENT PROTECTIVE DEVICES - Thermal-magnetic circuit breakers with inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger. Circuit breaker lugs shall be mechanical style, suitable for number, size, trip ratings, and material of conductors.

1. Each overcurrent protective device shall have an application listing appropriate for the application. SECTION 262726 - WIRING DEVICES

A. GENERAL - Devices shall be installed plumb and secure. Unless otherwise indicated, flush mount wiring devices with long dimension vertical, and grounding terminal of receptacles on bottom.

1. Unless otherwise indicated wiring devices shall be mounted at the following heights, measured from finished floor to centerline of device.

Wall switches and wall box dimmers = 48"

Receptacles = 16"

2. Group adjacent devices under single multi-gang wall plates.

3. Wiring devices shall be manufactured by Pass and Seymour, Leviton, Hubbell, or General Electric.

B. RECEPTACLES - Duplex receptacles shall be specification grade 20 ampere, 120 volt.

1. Ground fault interrupting (GFI) receptacles shall be feed-through type arranged to protect connected downstream receptacles on same circuit.

2. Receptacles serving owner furnished equipment shall have configuration to match that of equipment plug.

C. SWITCHES - Snap switches shall be specification grade, quiet type, single pole, two pole, or three-way to suit D. DEVICE COLOR - Coordinate color with Owner prior to purchase for devices in areas accessible to public. In

back of house areas, color shall be gray. E. WALL PLATES - Plates in areas accessible to public shall be smooth finish plastic in single and combination types

1. Weatherproof plates in wet locations: Self closing transparent cover, lockable weatherproof enclosure, the integrity

to match corresponding wiring devices. Match color of associated device(s). Plates in back of house areas shall be type 302 satin finish stainless steel in single and combination types to match corresponding wiring devices.

of which is not affected when the attachment plug cap is inserted. Equal to Hubbell #ML series.

SECTION 262816 - ENCLOSED SWITCHES A. ENCLOSED SWITCHES - Enclosed switches shall be heavy-duty grade with lockable handle. Switches shall be non-fusible unless otherwise indicated and shall have clips to accommodate fuse sizes indicated on the drawings.

1. Exterior mounted switches shall be NEMA 3R rated and shall be bolted closed. 2. Cartridge fuses shall be class dual-element time delay, Class "RK-1" Bussman low peak. Equivalent fuses as

manufactured by Gould Shawmut, littlefuse, or GE are acceptable. 3. Enclosed switches shall be manufactured by Cutler-Hammer, General Electric, Siemens, or Square D.

SECTION 265100 - LIGHTING

A. LUMINAIRE AND FIXTURE COMPONENTS - All metal parts and components shall be free from burrs, sharp corners, and edges. All fixtures shall be shipped pre-wired and ready for mounting.

1. Doors, frames, and other internal access mechanisms shall be smooth operating, free from light leakage under operating conditions, and arranged to permit relamping without use of tools.

B. EMERGENCY LIGHTING UNITS - Unit shall be a self-contained units with sealed, maintenance-free, lead-acid type with minimum 5-year nominal life and fully automatic, solid-state type charger with sealed transfer relay.

1. Relay shall automatically turn lamp(s) on when supply circuit voltage drops to 80 percent of nominal voltage or below. Lamp automatically disconnects from battery when voltage approaches deep-discharge level. When normal voltage is restored, relay disconnects lamps, and battery is automatically recharged and floated on charger.

C. EMERGENCY POWER SUPPLY UNIT - Unit shall be a self-contained, modular, battery-inverter unit factory mounted within fixture body, 1100 lumen output minimum.

1. Fixture shall be provided with a test switch and light-emitting diode indicator light which is visible and accessible without opening fixture or entering ceiling space.

2. Battery shall be a sealed, maintenance-free, nickel-cadmium type with minimum 5-year nominal life with fully automatic, solid-state, constant-current type charger.

3. Relay shall automatically energize lamp or LEDs from unit when normal supply circuit voltage drops to 80 percent of nominal voltage or below. When normal voltage is restored, relay disconnects lamp, and battery is automatically recharged and floated on charger.

D. LED LIGHT SOURCE REQUIREMENTS:

1. Rated life (L70): Minimum 50,000 hours as defined by IES LM80 and TM21.

2. Color Rendering Index (CRI): 80 CRI minimum.

3. Each luminaire type type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among

E. LED DRIVER REQUIREMENTS:

1 0-10V Dimming

2. Total Harmonic Distortion Rating: Less than 20 percent.

3. Ambient Temperature Rating: -40° to + 55° C. 4. Power Factor (100% output): >0.95

F. WARRANTY - Include labor allowance required for replacement on-site at no extra cost to Owner within 1-year construction warranty. Transfer remainder of the manufacturer's warranty, including ballast manufacturer's labor stipend to owner after 1-year construction warranty.

1. Ballast and Drivers: 5-year replacement warranty.

2. LED system Warranty: 5-year replacement warranty.

manufacturer's written instructions and approved submittal materials.

G. FINISHES - Luminaire finishes shall be manufacturer's standard, unless otherwise indicated. Painted finishes shall be applied over corrosion-resistant treatment or primer, free of defects. Metallic finishes shall be corrosion resistant. H. INSTALLATION - Luminaires shall be set level, plumb, and square with ceiling and walls, and secured according to

1. Luminaires in or on grid-type suspended ceilings shall be supported with support clips and a minimum of four ceiling support system rods or wires for each fixture, located not more than 6 inches from fixture corners.

SECTION 265200 - LIGHTING CONTROL

A. OCCUPANCY SENSORS - Sensor adapts or "learns" patterns of use specific to controlled space to reduce false

1. Wall Box Sensors: Passive dual technology with 180 degree adjustable field of view capable of sensing small motion to 20' when mounted at 4'. Pushbutton on sensor face provides manual on/manual off load control, load may be manually turned on or off at any time. Mount in wall box with decorator style faceplate, sensor shall have gray finish with 302 stainless steel plate. Integral switch in sensor housing shall be rated for 800W ballast or incandescent load at 120V, 1200W ballast load at 277V, and 1/4 hp motor load at 120V. Sensorswitch WSD PDT or equivalent by Hubbell or Wattstopper.

3. Adjust occupancy sensors tailored to actual use conditions of controlled space. Make adjustments before and after Owner has occupied space

B. LIGHTING CONTROL - See plans, schedules, and details for requirements of network type lighting control. C. WARRANTY - Manufacturer and Installer agree to repair or replace devices that fail in materials or workmanship

D. MANUFACTURERS 1. Lighting control system shall be manufactured by SensorSwitch nLight, Wattstopper, Encelium.

SECTION 268100 - FIRE ALARM

within two years from date of substantial completion.

A. GENERAL - All new devices shall be connected to the existing addressable fire alarm control panel. All new devices shall be compatible with the existing control equipment. The existing fire alarm system shall remain functional throughout construction. Any required outages shall be coordinated with the fire marshal and owner. Provide panel modifications and programming at the existing fire alarm control panel as required by new work.

B. SUBMISSIONS TO AUTHORITIES HAVING JURISDICTION - Submit to authorities having jurisdiction. Include copies of annotated Contract Drawings as needed to depict component locations to facilitate review. Resubmit if required to make clarifications or revisions to obtain approval. On receipt of comments from authorities having jurisdiction, submit them to Engineer for review.

C. SMOKE DETECTORS - Smoke detectors shall be photoelectric type with integral LED indicating light and adjustable sensitivity settings.

1. Duct smoke detector shall be ionization type with sampling tube sized as recommended by the manufacturer for the

specific duct size, air velocity, and installation conditions where applied. 2. Provide fan shutdown relay(s) rated to interrupt fan motor-control circuit where required.

D. NOTIFICATION APPLIANCES - Devices shall be combination type with factory-integrated audible and visible devices in a single-mounting assembly.

1. Audible alarm device shall be electric-vibrating-polarized type horn with provision for housing the operating mechanism behind a grille. Horns produce a sound-pressure level of 90 dB, measured 10 feet from the horn. 2. Visible alarm devices shall be xenon strobe lights listed under UL 1971 with clear or nominal white polycarbonate

lens. The word "FIRE" shall be engraved in minimum 1-inch high letters on the lens. Unit candela output shall meet the

3. Notification devices shall be mounted at 82" A.F.F. or 6" below finished ceiling whichever is lower. E. WIRE - wiring shall be as follows unless otherwise recommended by the manufacturer or required by the authority

Non-Power-Limited Circuits: Solid-copper conductors with 600-V rated, 75 deg C, color-coded insulation.

Line-Voltage Circuits: No. 12 AWG, minimum.

Low-Voltage Circuits: No. 16 AWG, minimum.

Power-Limited Circuits: NFPA 70, Types FPL, FPLR, or FPLP, as recommended by manufacturer.

1. Fire alarm wiring shall be installed in raceway. Conceal raceway except in unfinished spaces and as indicated. F. MANUFACTURERS - Match existing.

L. FIELD SERVICE AND TESTING - Upon completion of work a re-acceptance test shall be performed by a licensed party in accordance with NFPA 72.

1. Occupancy Adjustments: When requested within one year of date of Substantial Completion, provide on-site assistance in adjusting sound levels, controls, and sensitivities to suit actual occupied conditions. Provide up to two requested visits to Project site for this purpose.

LIGHTING PANE IGHTING PANEL: L101 RATING: 400A	L S	SC		EDUL VOLTAGE	,
				VOLTAGE	. 200/4201/
DATING: 400A				VOLINGE	. 208/120V
TATING. 400A				PHASE:	3
MOUNTING: SURFACE				WIRE:	4
TYPE: MLO W/ GND.				A.I.C. RA	TING: SERIES
BAR					
DESCRIPTION 0/0	;	CK	T.	O/C	DESCRIPTION
SPARE 20/1 ((X)	1	2	15/2 (X)	EXISTING VRF UNITS
SPARE 20/1 ((X9) (3	4		
EXISTING VRF-HP-4-1 45/2 ((X) !	5	6	20/1 (X)	LTG - RESTROOMS (EXISTING)
	7	7	8	20/1 (X)	REC - RESTROOMS (EXISTING)
REC - SODA DISPENSER 20/1 ((G) 9	9	10	20/2 (X)	EXISTING WATER HEATER
REC - CONVECTION OVEN 20/1 ((S) 1	11	12		
SHUNT TRIP SPACE ONLY	1	13	14	20/1	REC - SEATING
REC - GLASS CHILLER 20/1 ((G) 1	15	10	20/1	REC - SEATING
REC - ICE MACHINE 20/1 (10	20/1	REC - POS
REC - PREP TABLE 20/1 ((G) 1	19	20	20/1	REC - BOH BAR
REC - PREP TABLE 20/1 ((G) 2	21	22	20/1	REC - BAR SEATING
REC - RANGE 20/1 ((S) 2	23	24	20/1	REC - EXTERIOR
SHUNT TRIP SPACE ONLY	2	25	20	20/1	REC - MANAGER'S OFFICE
REC - REACH IN FREEZER 20/1 (- /	27	20	20/1	REC - EXTERIOR
REC - BACK BAR COOLER 20/1 ((G) 2	29	30	20/1	TIME CLOCK 'TC-1'
GLASS WASHER 45/2 ((L) 3	31	32	20/1	LTG - SEATING / BAR
	3	33	34	20/1	LTG - BACK OF HOUSE
DISH WASHER 35/1 ((L) 3	35	30	20/1	LTG - BAR LIGHTING
MAU-1 90/3	3	37	30	100/3	PANEL 'L101A'
	3	39	40		
	4	11	42		

1. (X) INDICATES EXISTING CIRCUIT BREAKER TO REMAIN.

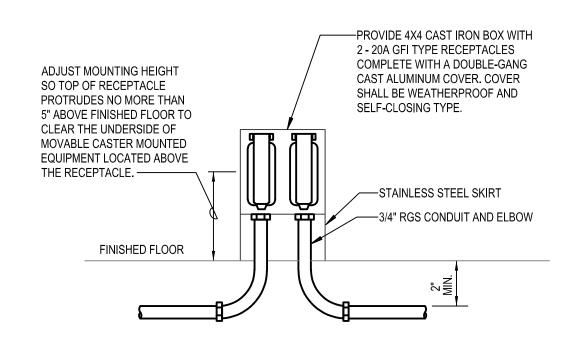
2. (S) INDICATES TO PROVIDE A SHUNT TRIP TYPE CIRCUIT BREAKER.

3. (L) INDICATES TO PROVIDE A LOCKABLE CIRCUIT BREAKER. 2. (G) INDICATES TO PROVIDE A 'GFCI' TYPE CIRCUIT BREAKER.

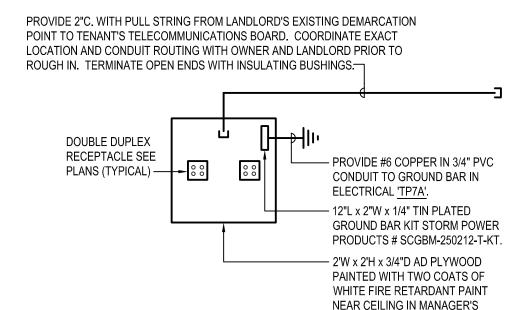
	LIGHTING	PANI	EL	S	CHEC	DULE (NEW)
Lighting Panel: Rating: Mounting: Type:					VOLTAGI PHASE: WIRE:	E: 208/120V
DESC	CRIPTION	O/C	Cł	(T.	O/C	DESCRIPTION
WHEEL CHAIR LIF	-T	20/1	1	2	20/1	LTG - EXTERIOR
WATER HEATERS	6	20/1	3	4	30/3	FREEZER ACCU
VRF-1 / 2		15/2	5	6		
			7	8		
HP-1		40/2	9	10	30/2	COOLER ACCU
			11	12		
REC - ROOF TOP		20/1	13	14	30/3	KEF-1
REC - SODA DISP	PENSER	20/1 (G)	15	10		
MISC WALK IN EC	QUIPMENT	20/1 (L)	17	10		
REC - KITCHEN		20/1	19	20	20/1	COOLER EVAPORATOR
			21	22	20/2	FREEZER EVAPORATOR
			23	24		
			25	20	20/1	HOOD UTILITY CABINET
			27	20	20/1	ANSUL SYSTEM
			29	30		
			31	32		
			33	34		
			35	30		
			37	30		
			39	40		
			41	42		

NOTES:

1. (G) INDICATES TO PROVIDE A 'GFCI' TYPE CIRCUIT BREAKER. 2. (L) INDICATES TO PROVIDE A LOCKABLE CIRCUIT BREAKER.



KITCHEN FLOOR RECEPTACLE DETAIL



COMMUNICATIONS BOARD DETAIL

DATA/COMM ROUGH-IN DETAIL

LABEL END OF

CONDUIT ---

PULLSTRING -

ARLINGTON PRESS-ON

INSULATING BUSHING —

TURN CONDUIT OUT

ABOVE ACCESSIBLE

WALL STUD ----

1" CONDUIT STUBBED

MOUNT DATA OUTLET

4-11/16" SQUARE BOX

BLANK COVER PLATE —

WITH SINGLE GANG

PLASTER RING —

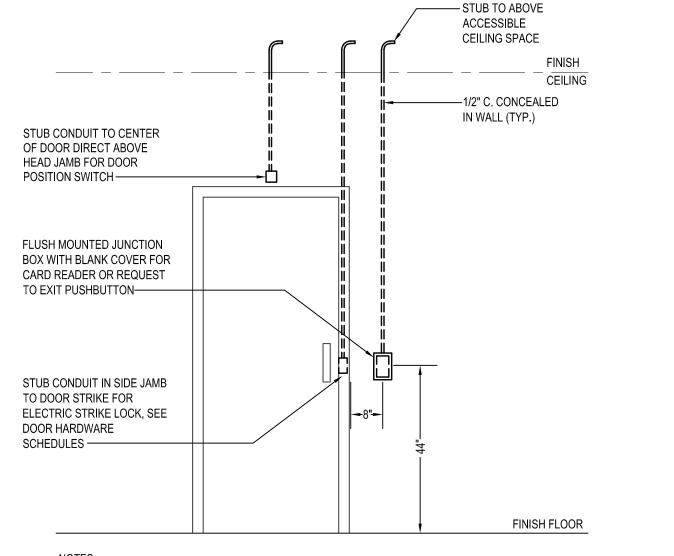
ADJACENT TO

RECEPTACLE -

CONCEALED IN WALL —

CEILING -

PROVIDE



1. ROUGH-IN REQUIREMENTS AND LOCATIONS SIMILAR FOR DOUBLE DOORS.

2. SEE POWER PLANS FOR SPECIFIC DOOR ROUGH-IN REQUIREMENTS. 3. COODINATE ACCESS CONTROL ROUGH-IN REQUIREMENTS WITH ARCHITECTURAL DOOR SCHEDULES.

4. COODINATE ACCESS CONTROL ROUGH-IN REQUIREMENTS WITH SECURITY EQUIPMENT SUPPLIER.

ACCESS CONTROL ROUGH-IN

	ELE	ECTRICA	L SY	MBOLS			
SYMBOL	DESCRIPTION		SYMBOL	DESCRIPTION			
		LIGH	HTING				
	LUMINAIRE		S	SINGLE POLE SWITCH			
0	LUMINAIRE		S₃	3 - WAY SWITCH			
	LUMINAIRE CONNECTED TO EMERGENCY CIRCUIT OR BATTERY		S ₄	4 - WAY SWITCH			
-	STRIP LUMINAIRE			WALL BOX DIMMER SWITCH			
	WALL MOUNTED LUMINAIRE		•	CEILING MOUNTED MOTION SENSOR/SWITCH			
		NUMBER OR LETTER	H	WALL MOUNTED MOTION SENSOR/SWITCH			
Ю	WALL MOUNTED LUMINAIRE	DENOTES TYPE, SEE CORRESPONDING MARK		LOW VOLTAGE LIGHTING CONTROL SWITCH			
\Diamond	TRACK LUMINAIRE	IN LUMINAIRE SCHEDULE	⊢®	PHOTOCELL			
<u> </u>	EMERGENCY BATTERY PACK		8	CEILING MOUNTED EXIT LIGHT WITH DIRECTIONAL ARROW			
$\stackrel{\sim}{\mapsto}$	POLE MOUNTED LUMINAIRE		<u>⊢⊗</u> I	WALL OR END MOUNTED EXIT LIGHT WITH DIRECTIONAL ARROW			
¤	BOLLARD LUMINAIRE						
		FIRE /	ALARM				
�	FIRE ALARM SMOKE DETECTOR		FK	FIRE ALARM HORN & STROBE COMBINATION			
	DUCT MOUNTED SMOKE DETECTOR		F◀	FIRE ALARM MINI-HORN & STROBE COMBINATION			
F	FIRE ALARM MANUAL PULL STATION		Ē	CEILING FIRE ALARM STROBE			
F -X	FIRE SPRINKLER VALVE TAMPER SWITCH		⊢₽	WALL FIRE ALARM STROBE			
₽₩	FIRE SPRINKLER FLOW SWITCH		F	CEILING FIRE ALARM HORN & STROBE COMBINATION			
		PO	WER				
\Rightarrow	DUPLEX RECEPTACLE		••	FLOOR BOX - COMBINATION POWER & DATA			
—————————————————————————————————————	"G" DENOTES GFCI TYPE		0	POKE-THRU FLOOR BOX			
⊕⊳	"▶" DENOTES ISOLATED GROUND TYPE			MULTI-OUTLET ASSEMBLY - LENGTH AS INDICATED			
⊕ ⊬	"H" DENOTES HOSPITAL GRADE TYPE		W∉	MOTOR ("#" DENOTES HORSEPOWER RATING)			
→ TR	"TR" DENOTES TAMPER RESISTANT TYPE		<u>-</u>	DISCONNECT SWITCH			
→ ∪	"U" DENOTES UNIVERSAL SERIAL BUS (USB) TYPE		STE	THERMAL ELEMENT SWITCH			
•	DOUBLE SHADING DENOTES RED DEVICE		■ W	SWITCH & FUSE			
—	SINGLE SHADING DENOTES SPLIT WIRED DEVICE			SWITCH & FUSTAT			
Ф	HORIZONTAL MOUNTED DUPLEX RECEPTACLE		\boxtimes	MAGNETIC MOTOR STARTER			
Ø	CEILING MOUNTED DUPLEX RECEPTACLE		⊠ ¹	COMBINATION MAGNETIC STARTER/DISCONNECT			
#	DOUBLE DUPLEX RECEPTACLE			MOTOR CONTROL PUSHBUTTON STATION			
Ю	SINGLE RECEPTACLE		R	RELAY			
H	DRYER RECEPTACLE NEMA 14-30 (125/250V 30A)						
<u> </u>	RANGE RECEPTACLE NEMA 14-50 (125/250V 50A)						
₩	"W" DENOTES WELDER RECEPTACLE NEMA 6-50 (250V 50A)						
Θ	SPECIAL PURPOSE RECEPTACLE (NEMA CONFIG. AS NOTED)						
		COMMUI	NICATION	/¿~			
▼	WALL PHONE OUTLET		(S)	CEILING SPEAKER			
⊢	WALL COMMUNICATIONS DATA OUTLET		K₃	WALL SPEAKER			
•	CEILING COMMUNICATIONS DATA OUTLET		₩	WALL MICROPHONE OUTLET			
■WAP	CEILING WIRELESS ACCESS POINT OUTLET		♦	CEILING MICROPHONE OUTLET			
H™	TELEVISION/VIDEO OUTLET		V	VOLUME CONTROL			
\vdash	CONDUIT SLEEVE (1" UNLESS NOTED OTHERWISE ON PLANS)		C	CALL-IN DEVICE			
		GEN	ERAL	part .			
	LIGHTING PANEL		HO	WALL MOUNTED JUNCTION BOX			
777777	DISTRIBUTION PANEL SWITCHBOARD OR MOTOR CONTROL CENTE	R	0	JUNCTION BOX			
	CABINET, ENCLOSURE, OR CONTROL PANEL, TYPE INDICATED ON	PLANS		CONDUIT SEAL			
	BRANCH CIRCUIT - EXPOSED			CIRCUIT DOWN			
	BRANCH CIRCUIT CONCEALED IN CEILING OR WALL		-	CIRCUIT UP			
/	BRANCH CIRCUIT CONCEALED IN FLOOR		7	111			
_	HOMERUN TO PANEL (QUANTITY OF ARROWS INDICATES QUANTIT	Y OF CIRCUITS)		CIRCUIT BREAK			
	SPECIAL PURPOSE HOMERUN AS INDICATED			BELL			
Ū	THERMOSTAT			PUSH BUTTON			
WP	SUBSCRIPT "WP" APPLIED TO ANY SYMBOL INDICATES WEATHERP	ROOF	<u> </u>	BUZZER			
	NEMA TYPE 3R OR EQUIVALENT			OUDOODICT IS LABORD TO LAW OF THE LABOR TO SALES			
RT	SUBSCRIPT "RT" APPLIED TO ANY SYMBOL INDICATES RAINTIGHT NEMA 3 OR EQUIVALENT		E	SUBSCRIPT "E" ADDED TO ANY SYMBOL INDICATES EXISTING			
			R (TVP)	SUBSCRIPT "R" ADDED TO ANY SYMBOL INDICATES RELOCATED			
PD	SUBSCRIPT "PD" ADDED TO ANY FLOOR OUTLET INDICATES		(TYP)	WHERE (TYP) IS USED ON PLANS INDICATES A TYPICAL NOTE OR CONDITION			
	PEDESTAL MOUNTED SUBSCRIPT "EP" APPLIED TO ANY SYMBOL INDICATES EXPLOSION	PPOOF	K	SUBSCRIPT "DL" ADDED TO ANY SYMBOL INDICATES DAMP LOCATION SUBSCRIPT "K" ADDED TO ANY SYMBOL INDICATES KEY OPERATED			
EP	OODOOLUL I EL VILLEIEN LO VIAL STAIDOF IMPIONTES EVEROSION	11001	P	SUBSCRIPT R ADDED TO ANY SYMBOL INDICATES RET OPERATED SUBSCRIPT "P" ADDED TO ANY SYMBOL INDICATES PILOT LIGHT			



Data filename: K:\2022\22488 8601 Restaurant\Calculations\NP Dodge_8601_Mexican Restaurant (storage Page 1 of 8

Report date: 07/23/24

Project Title: Proposed Mexican Restaurant

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www.morrisseyengineering.com

ENERGY	CODE COM	PLIANCE
CODE	2018 IECC	
ComCHECK	YES	
COMMISSIONING	YES	NOTE 1

REQUIRED DOCUMENTS (REFER TO CODE) SHALL BE PROVIDED TO THE BUILDING OWNER OR OWNER REPRESENTATIVE WITHIN 90 DAYS OF THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

07/24/24 GEORGE M. MORRISSEY E-8874

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to not scale drawings. verify all dimensions and clearances from

architectural, structural, shop and other appropriate drawings or

at site. lay out and coordinate all work prior to installation to

provide clearances required for operation, maintenance, and codes and verify non-interference with other work. do not fabricate prior

to verification of clearance for all trades.