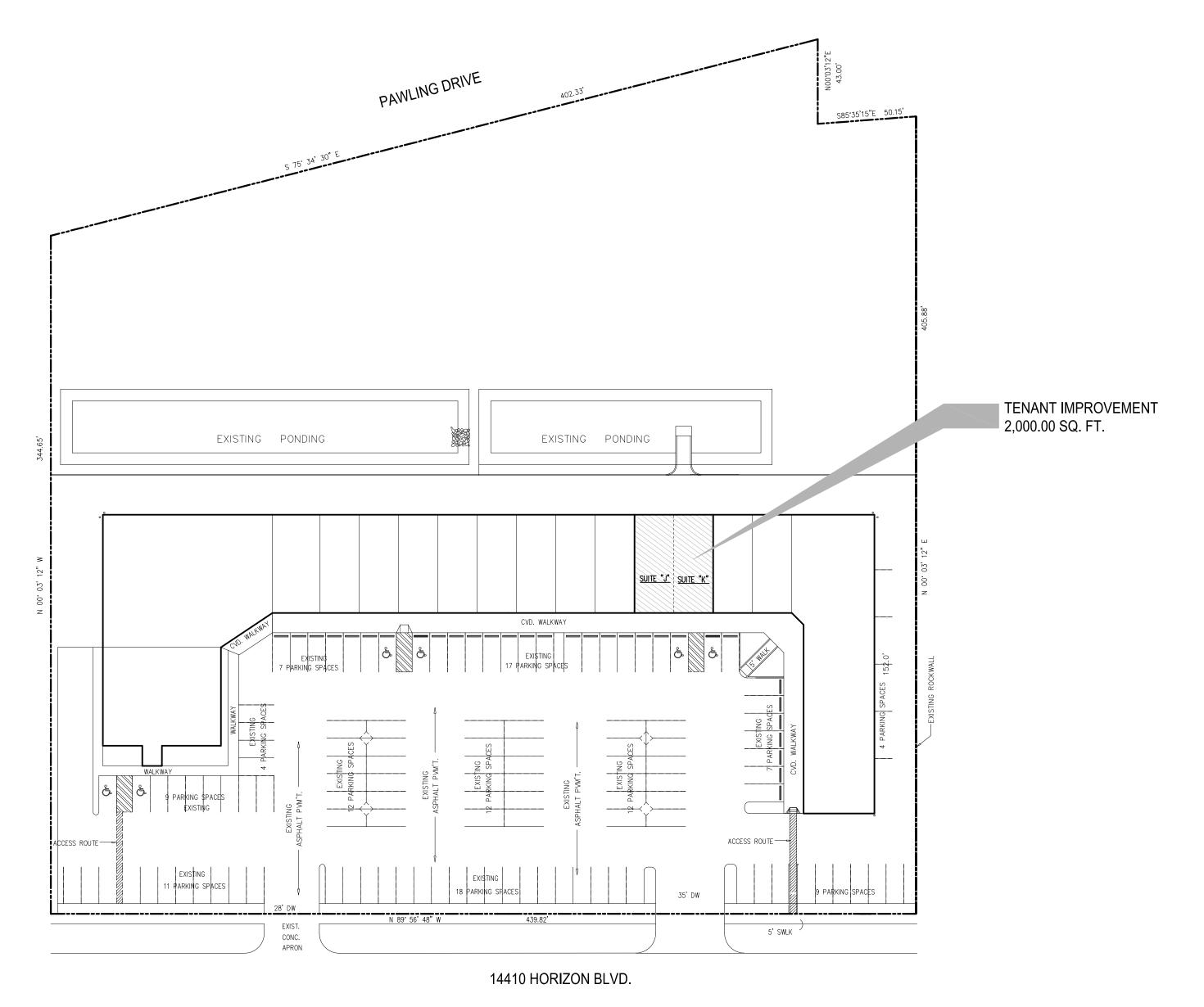
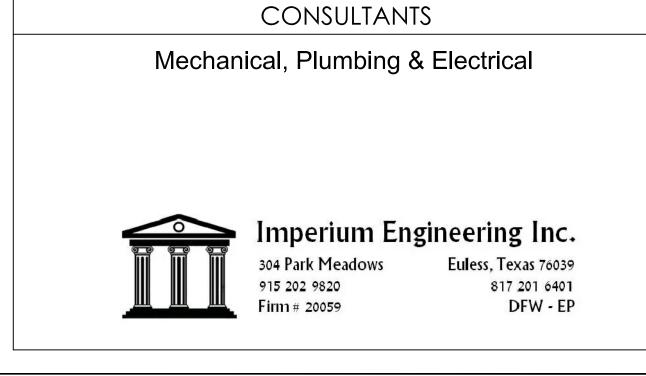
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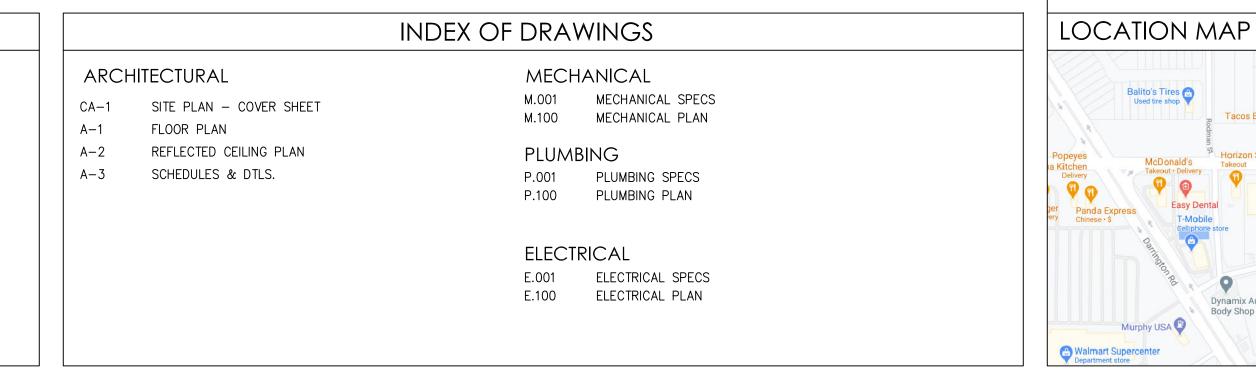
14010 Horizon Blvd. Suite J&K Horizon City, TX 79928

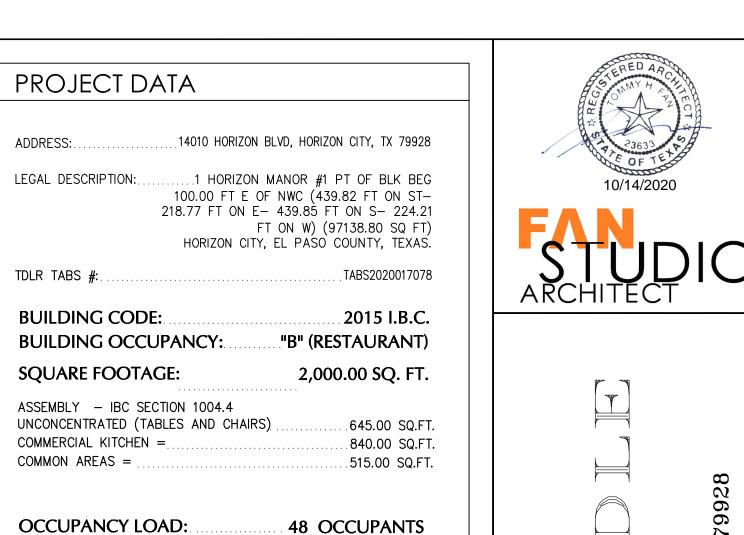


SITE PLAN

# **ARCHITECT** Fan Studio Architect PLLC PO Box 920412 El Paso, Texas 79902 T: 915.494.6668







TDLR TABS #:.

ASSEMBLY AREA - UNCONCENTRATED (TABLES AND CHAIRS)

COMMERCIAL KITCHEN/STORAGE = 1 PER EA. 200 S.F. GROSS

TENANT SPACE LOCATED ON EXISTING APPROVED RETAIL CENTER

COMMERCIAL (C-1)

TOTAL OCCUPANCY LOAD: 43 + 4.2 = 48 PEOPLE

645 S.F. / 15 = 43 PEOPLE

**CONSTRUCTION TYPE:** 

PARKING REQUIREMENTS:

PLUMBING FIXTURE REQUIREMENTS:

WATER CLOSETS PROVIDED = 1 MALE, 1 FEMALE

WATER CLOSETS PROVIDED = 1 MALE, 1 FEMALE

FIRE EXTINGUISHERS SHALL BE INSTALLED AS PER 2009 I.B.C

1 PER 3,000 S.F. FIRE EXTINGUISHERS REQUIRED = 2 FIRE EXTINGUISHERS PROVIDED = 2

48 OCCUPANTS / 2 = 24 MEN & 24 WOMEN

1 WATER CLOSET PER EA. 75 PERSONS MALE 24 / 75 = 0.32  $\sim$  1 REQUIRED FEMALE 24 / 75 = 0.32  $\sim$  1 REQUIRED

MALE  $24 / 200 = 0.12 \sim 1 \text{ REQUIRED}$ FEMALE 24 / 200 = 0.12  $\sim$  1 REQUIRED

1 LAVATORY PER 200 PERSONS

1 SERVICE SINK REQUIRED SERVICE SINK PROVIDED = 1

**SPRINKLER:** 

ZONING:

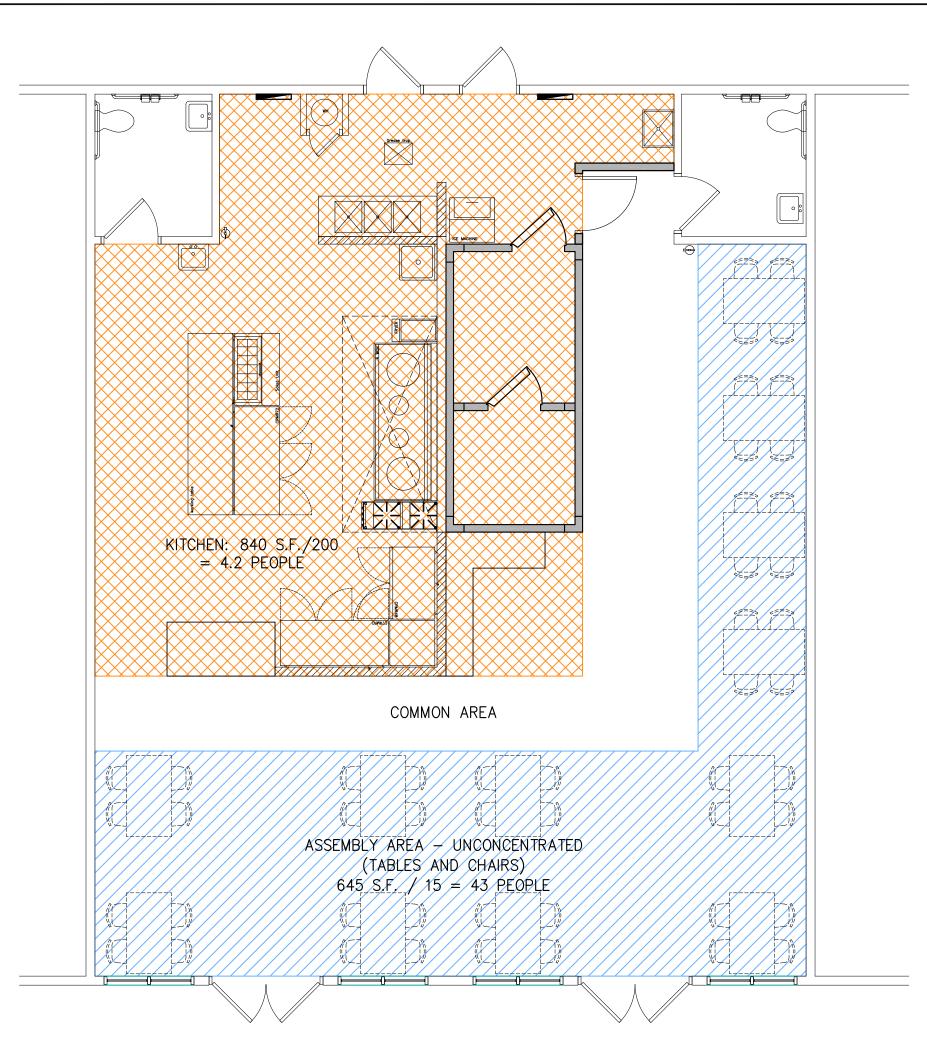
KITCHEN: 840 S.F./200 = 4.2 PEOPLE

CONSTRUCTION DOCUMENTS Revisions Date Description

Project Number: 2015 Designed By: T.F.

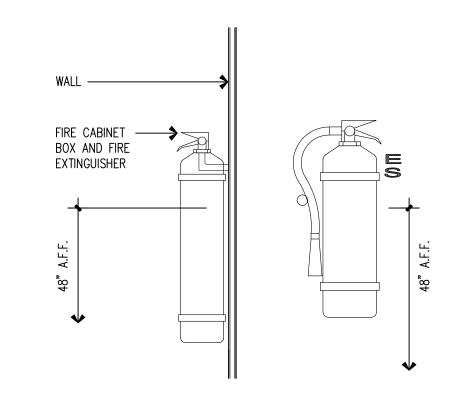
Sheet Title:

SITE PLAN - COVER



AREA FLOOR PLAN

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

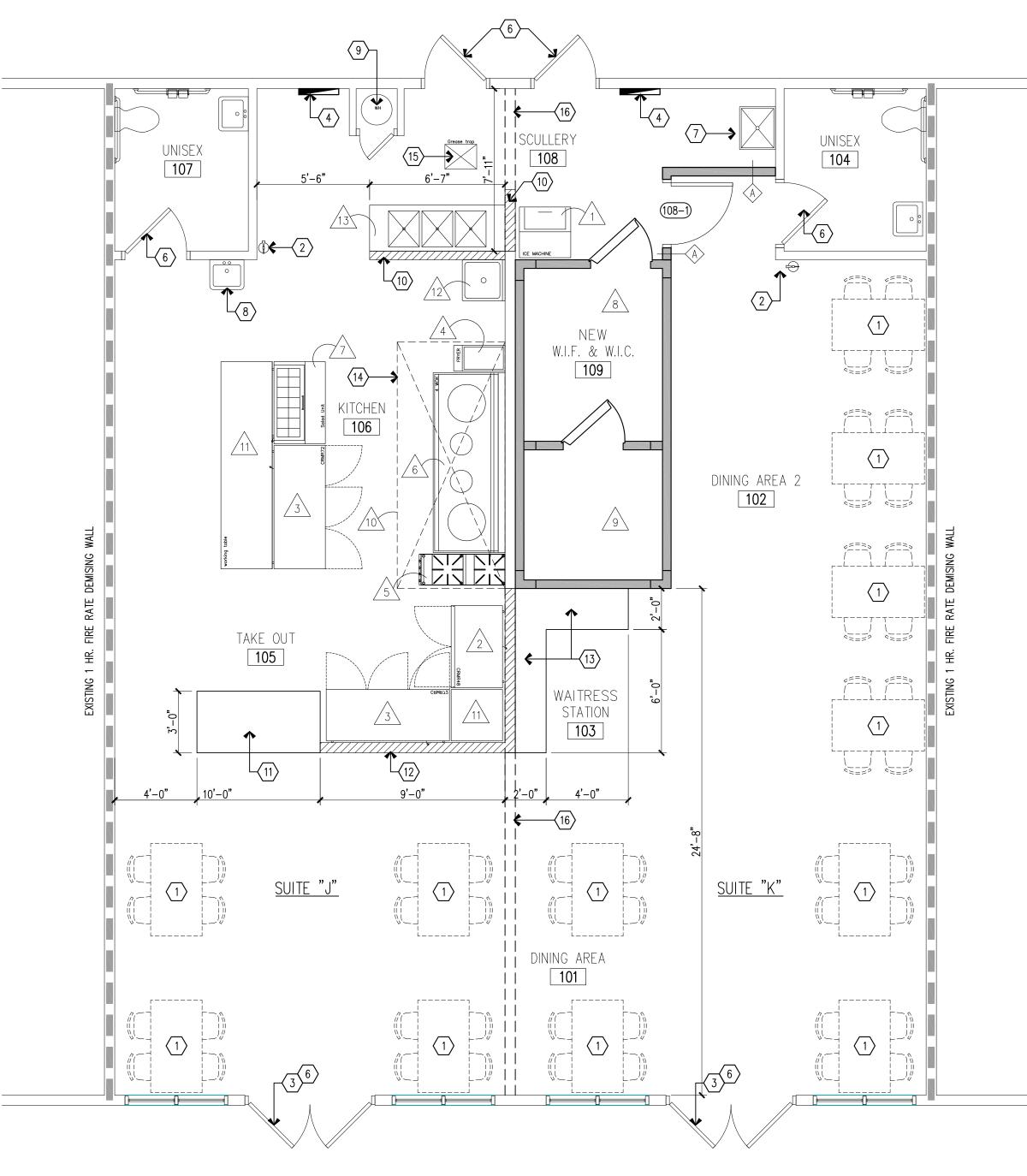


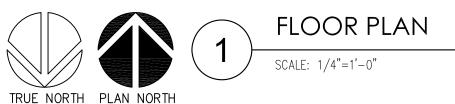
FIRE EXTINGUISHER

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

EQUIPMENT SCHEDULE NO. QTY. ITEM DESCRIPTION MANUFACTURER REMARKS MODEL NO. ICE MAKER MANITOWOC IYT0750A W/ICE STORAGE BIN HOSHIZAKI CRMR48 2 DOOR UNDERCOUNTER FRIG. CRMR72 HOSHIZAKI 3 DOOR UNDERCOUNTER FRIG. CENTAUR CGF-4 GAS FLOOR FRYER STOCK POT RANGE, 2 BURNERS CENTAUR CSP-2-N 4 BURNERS WOK RANGE EXISTING 2 DOOR SANDWICH/SALAD PREP TURBO AIR ST-48SD-08S-N-CL WALKING-IN-COOLER WALKING-IN-FREEZER --12' LONG KITCHEN HOOD EXISTING WORK TABLE TBD BY OWNER SINGLE SINK N/A 3-COMPARTMENT SINK N/A

NOTE: ALL APPLIANCES AND FIXTURES SHALL BE LISTED, LABELED AND INSTALLED ACCORDING TO THE MANUFACTURERS INSTALLATION INSTRUCTIONS OR THE ADOPTED CODES WHICHEVER IS MORE RESTRICTIVE.





# SYMBOLS

A WALL TYPE

(100-X) DOOR NUMBER

A WINDOW TYPE

WALL MOUNTED FIRE EXTINGUISHER 

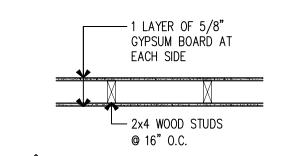
PROJECT GENERAL NOTES PROVIDE INFORMATION CONCERNING THE WORK OF THE ENTIRE PROJECT AND ARE NOT LIMITED TO ANY INDIVIDUAL DRAWING OR SHEET.

MAKE THE NECESSARY ARRANGEMENTS WITH THE OWNER TO VISIT THE SITE PRIOR TO SUBMITTING A PROPOSAL EXAMINE THE EXISTING SITE AND FACILITIES, FIELD VERIFY ALL CONDITIONS. SUBMISSION OF A PROPOSAL SHALL BE TAKEN AS EVIDENCE THAT THE CONTRACTOR HAS PHYSICALLY INSPECTED THE SITE AND MADE HIMSELF FAMILIAR WITH AND UNDERSTANDS THE REQUIRED SCOPE OF WORK.

PROJECT GENERAL NOTES:

- ACTUAL FIELD CONDITIONS FOUND TO BE AT VARIANCE WITH THE INTENT OF THE CONSTRUCTION DOCUMENTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR HIS CONSIDERATION BEFORE PROCEEDING WITH THE WORK.
- ALL DIMENSIONS ARE NOMINAL AND REQUIRE FIELD VERIFICATION AND COORDINATION. DIMENSIONS ARE TO FACE OF CONCRETE, FACE OF GYPSUM BOARD OR FACE OF CMU. UNLESS NOTED OTHERWISE, DO NOT SCALE DRAWINGS.
- . LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION AND COORDINATE ALL WORK WITH RESPECTIVE UTILITY OWNERS.
- . GENERAL DATA SHOWN ON ONE PART OF THE DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS .
- 6. ALL COLORS, TEXTURES, ETC. NOT INDICATED, SHALL BE AS SELECTED BY ARCHITECT.
- THE CONSTRUCTION DOCUMENTS DO NOT CONTAIN THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. CARE OF ADJACENT PROPERTIES DURING CONSTRUCTION MUST COMPLY WITH ALL GOVERNING REGULATIONS CONCERNING SAFETY, IS AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 8. REPORT ALL DISCREPANCIES TO THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- 9. ALL TEMPORARY UTILITIES SHALL BE PAID BY THE CONTRACTOR.
- 10. THE BUILDING PERMIT AND INSPECTIONS REQUIRED FOR THIS PROJECT
- SHALL BE OBTAINED AND PAID BY THE CONSTRUCTION MANAGER. 1. CONTRACTOR TO PROVIDE INSULATION AND GYPSUM BOARD IN EXTERIOR WALL FOR ANY WORK IN THE EXTERIOR WALL.
- **FLOOR PLAN KEY NOTES**
- (1) FURNITURE/EQUIPMENT BY OWNER. WALL MOUNTED FIRE EXTINGUISHER.
- PROVIDE PANIC DEVICE AT EXISTING DOOR.
- (4) EXISTING ELECTRICAL PANEL.
- $\overline{5}$  EXISTING THERMOSTAT.
- $\langle 6 \rangle$  EXISTING DOOR TO REMAIN.
- EXISTING MOP SINK
- $\langle 8 \rangle$  EXISTING HAND SINK
- (9) EXISTING WATER HEATER CLOSET
- 10 NEW 42" HEIGHT PONY WALL
- 41" HEIGHT GRANITE COUNTERTOP WITH OPEN SHELF UNDER COUNTERTOP. (12) 38" HEIGHT GRANITE SILL TOP.
- NEW GRANITE SERVER WORKING COUNTERTOP WITH OPEN SHELF UNDER COUNTERTOP.
- $\langle 14 \rangle$  EXISTING KITCHEN HOOD.  $\langle 15 \rangle$  EXISTING GREASE TRAP.
- REMOVE PORTION OF EXISTING PARTY WALL PARTITION BETWEEN TWO SUITES.

### WALL TYPES



A INTERIOR WALL PARTITION, TYP.



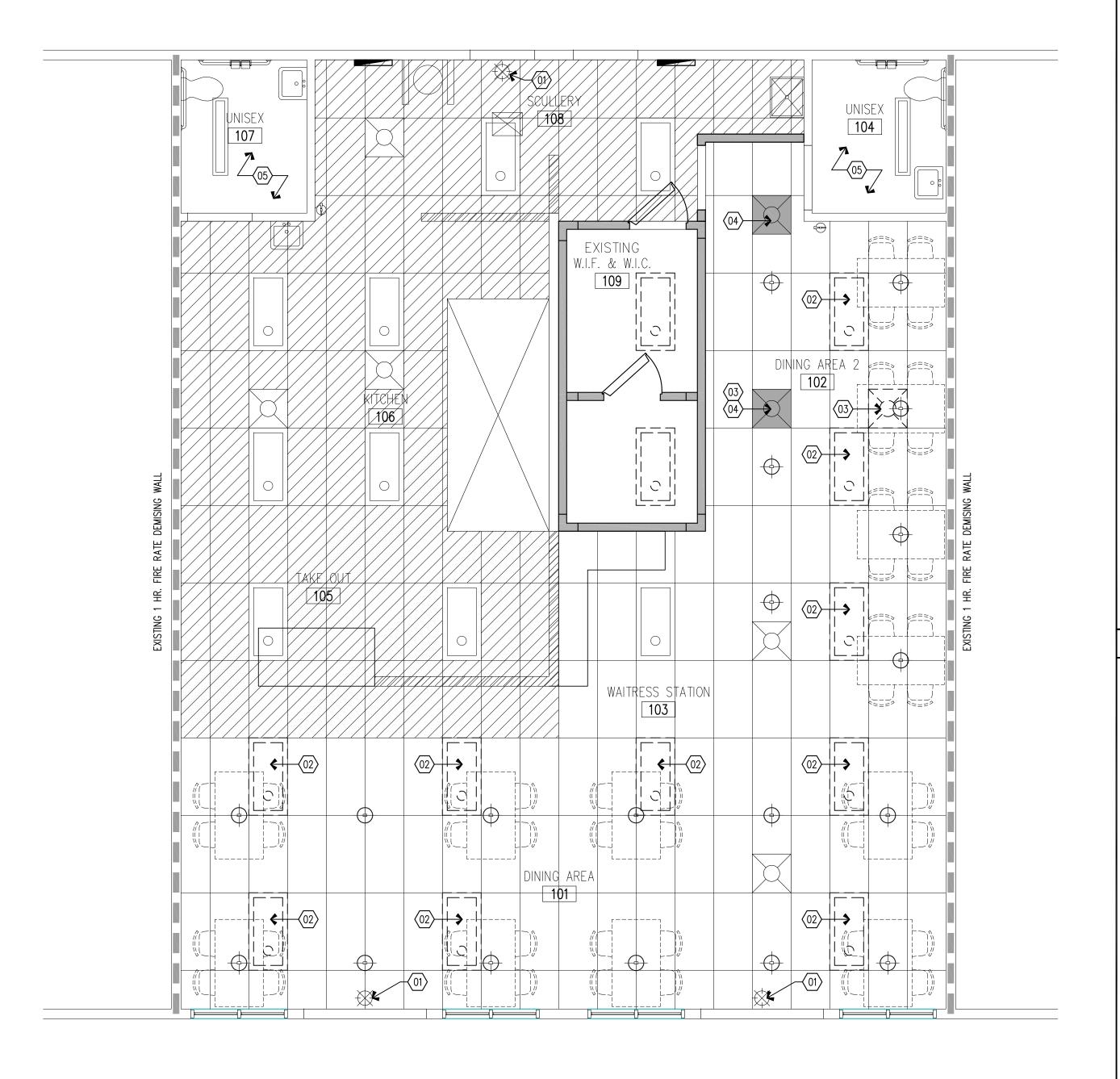
	CONSTRUCTION DOCUMENTS							
su	sue Date: OCTOBER 14, 2020							
	Revisions							
).	Date	Description						

Project Number: 2015

Designed By: T.F.

Sheet Title:

FLOOR PLAN





CEILIN	G TYPE LEGEND			ERED ARC	A TEN
	2'-0" X 2'-4" LAY-IN CEILING W/ WHITE METAL GRID.		//	10/14/202	
	2'-0" X 4'-0" (WASHABLE) LAY-IN CEILING W/ WHITE METAL GRID.		FA	NIC	
0	EXISTING 2' X 4' LIGHT FIXTURE — SEE ELECTRICAL DWG'S.		ARC	HITECT	
[]	EXISTING 2' X 4' LIGHT FIXTURE TO BE REMOVED				
<b>+</b>	PENDANT LIGHT FIXTURE  -COORDINATE LIGHTING DROP LOCATION WITH OWNER FOR FINAL BOOTH/TABLE LOCATION.				
0	6" RECESSED LIGHT FIXTURE				20
₩	EMERGENCY EXIT LIGHT FIXTURE  - SEE ELECTRICAL DWG'S.				86664 7
	EXISTING SUPPLY DIFFUSER TO REMAIN, TYP.				XL
	RELOCATED SUPPLY DIFFUSER				); +
	RETURN DIFFUSER		For:		٦
RCP (	GENERAL NOTES:		ent		Horizo
	AND ELECTRICAL CONDUIT MUST BE CONCEALED AS MUCH E BEHIND STRUCTURAL ELEMENTS.		Improvement	<b>/</b>	
2. MESSY AND	IMPROPER ELECTRICAL INSTALLATION WILL BE REJECTED.		pro		7×1
	LIGHT FIXTURES WITH FURNITURE AND EQUIPMENT.		Im		٥
	"J" BOXES LOCATION WITH OWNER. SHABLE CEILING AT KITCHEN.		$\mathbf{n}\mathbf{t}$		Ţ.
		$\left\{ \ \right\}$	tenant		Rlvd
	OR PLAN KEY NOTES	$\frac{1}{2}$		7 =	A
	G EMERGENCY LIGHTS TO REMAIN AT ENTRY DOORS.  E EXISTING FLUORESCENT LIGHT FIXTURES.		New		707
	ATE EXISTING DIFFUSER.				Horizon
	ATED DIFFUSER.				
05 EXISTIN	G GYP. BD. CEILING TO BE PAINTED.			<b>/</b>	14010
					1
				, 	
				TRUCTION DOCUM	
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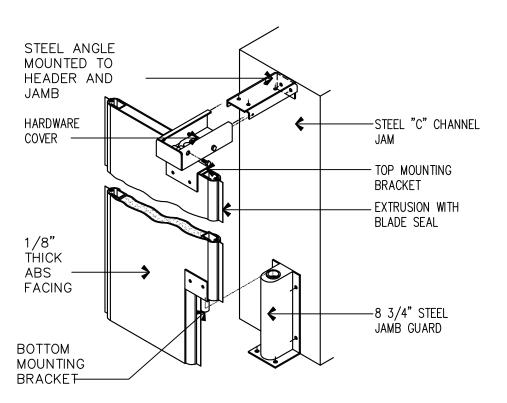
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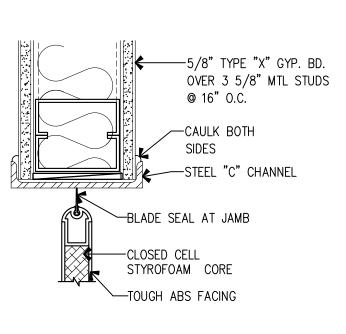
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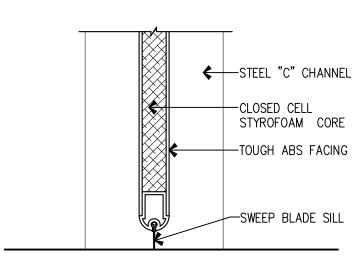
REFLECTED CEILING PLAN

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**A-2** 



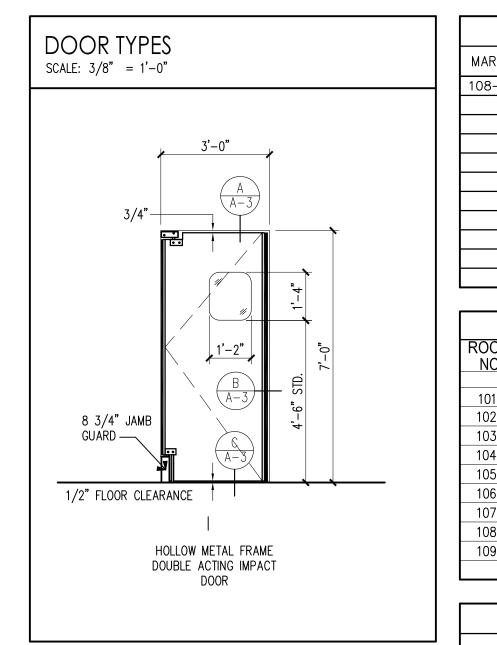












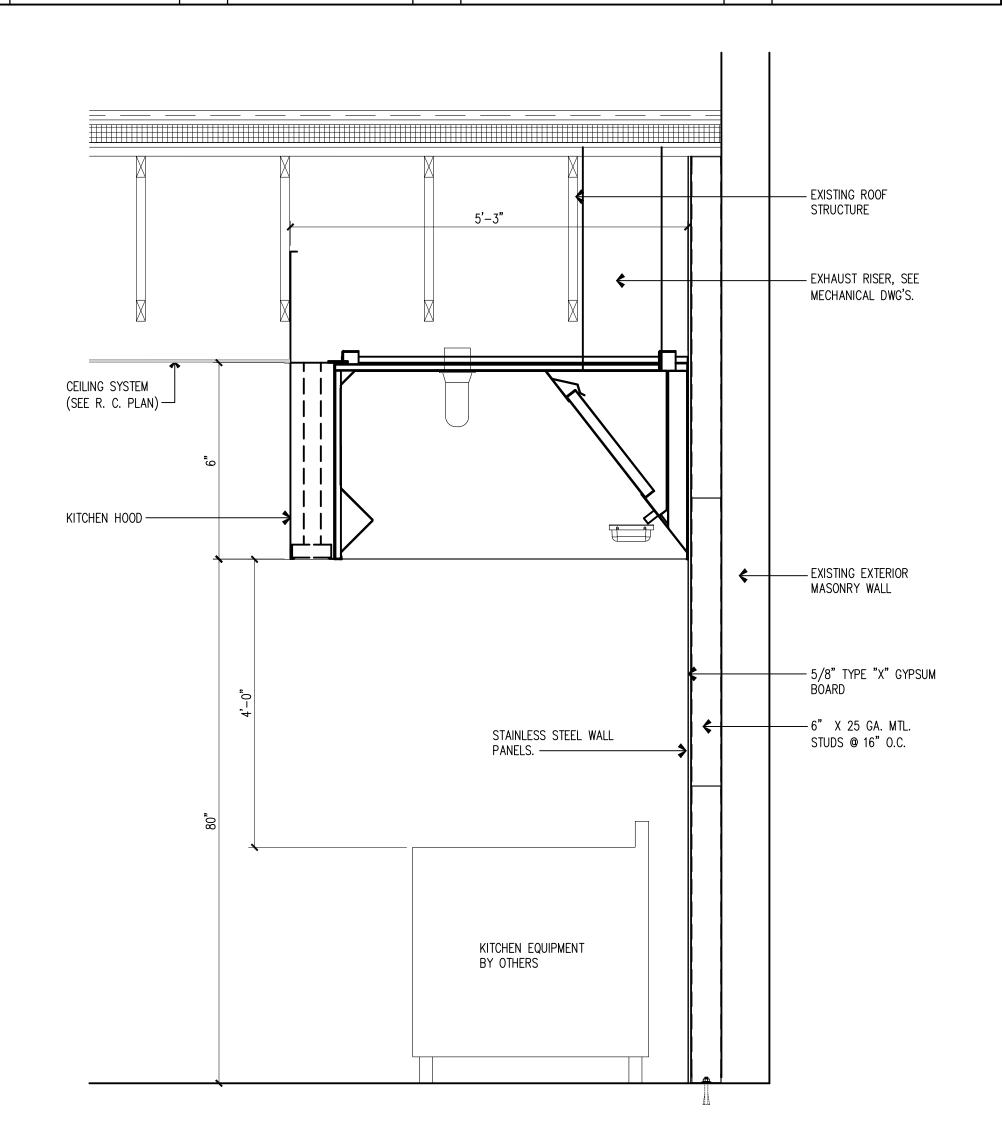
#### FINISH NOTES:

- 1. ALL PAINTS AND WALL COVERINGS SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURES SPECIFICATIONS AND RECOMMENDATIONS FOR THE PARTICULAR SURFACE.
- 2. SAMPLES OF FINISH COLORS SHALL BE FIELD APPLIED FOR APPROVAL TO ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
- 3. ALL WALLS SHALL BE PROPERLY SPACKLED, SANDED, AND PRIMED FOR PAINTING OR WALL COVERING.
- 4. ALL METAL SURFACES SHALL BE SANDED SMOOTH PRIOR TO PAINTING.
- 5. FLOOR MATERIAL TRANSITION SHALL OCCUR AT CENTERLINE OF DOOR UNLESS NOTED OTHERWISE.
- 6. CONTRACTOR SHALL COORDINATE FINISHES WITH INTERIOR ELEVATIONS.
- 7. TILE INSTALLATION: CONTRACTOR SHALL LAYOUT FLOOR, BASE, AND REVIEW WITH ARCHITECT PRIOR TO INSTALLATION.
- 8. FINISH EXPOSED EDGES OF PORCELAIN TILE W/SEALER.
- 9. PROVIDE FLOOR TRANSITION STRIPS AT: CARPET TO VCT, CARPET TO CERAMIC TILE & CONCRETE TO CERAMIC TILE OR CARPET. 10 REFER TO PLAN NORTH FOR FINISHES SCHEDULES.

					<u>r schi</u>						
MARK	SIZE	TYPE	DOOR MTRL.	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	FIRE RATING		<u>IE DETAI</u> JAMB	L No. THRESHOLD	NOTES
08–1	3'-0" x 7'-0" x 1 3/4" (SWING IMPACT)	1	ALUMINUM	PRE-FIN.	H.M.	PAINTED		A/A-3	B/A-3	C/A-3	
				ROOM	A FINIS	SH SC	HEDU	LE			
ROOM	ROOM NAME FLOOR	BASE			WALLS			CEILING			REMARKS

				F	ROOM	FINISH	SCHED	ULE	
ROOM	OM ROOM NAME FLOOR BASE			WALLS			CEILING	REMARKS	
NO.	11001011071011	12001	D/ (OL	NORTH	SOUTH	EAST	WEST	OLILINO	TEMATIO
101	DINING AREA	F1	B1	W1	W1	W1	W1	C4	
102	DINING AREA 2	F1	B1	W1	W1	W1	W1	C4	
103	WAITRESS STATION	F1	B1	W1			W1	C4	
104	UNISEX	F1	В3	W1	W1	W1	W1	C3	
105	TAKE OUT	F1	B1			W1	W1	C4	
106	KITCHEN	F1	В3	W1/W4	W1/W4	W1/W4	W3	C2	WASHABLE CEILING
107	UNISEX	F1	В3	W1	W1	W1	W1	C3	
108	SCULLERY	F1	В3	W1/W4	W1/W4	W1/W4	W1/W4	C2	WASHABLE CEILING
109	NEW W.I.F. & W.I.C.								MANUFACTURER FINISHES

	ROOM FINISH CODES								
FLOOR E			BASE	WALLS			CEILING		
F1	EXISTING PORCELAIN TILE	B1	4" RUBBER BASE	W1	PAINTED GYP. BD.	C1	2'x4' LAY-IN CEILING		
F2	PORCELAIN TILE	B2	EXISTING TO REMAIN	W2	CERAMIC TILE	C2	2'x4' LAY-IN CEILING WASHABLE		
		В3	SANITARY CERAMIC COVE BASE	W3	FULL HEIGHT STAINLESS STEEL PANELING	C3	PAINTED GYP. BD.		
				W4	F.R.P. PANELS	C4	EXISTING 2'x4' LAY-IN TO REMAIN		







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CONSTRUCTION DOCUMENTS Issue Date: OCTOBER 14, 2020 Revisions No. Date Description Project Number: 2015 Designed By: T.F. Sheet Title: SCHEDULES & INTERIOR **ELEVATIONS** 

#### H.V.A.C. SYSTEM SCOPE OF WORK & REQUIREMENTS

- THE WORK INCLUDES PROVIDING THE HVAC SYSTEMS. INCLUDING DUCTWORK. DIFFUSERS AND GRILLES. INSULATION, CONTROLS, AND ALL OTHER EQUIPMENT NECESSARY FOR A COMPLETE FUNCTIONING SYSTEM. HVAC SYSTEM SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING:
- HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) UNITS.
- SUPPLY, RETURN, AND EXHAUST DUCTWORK SYSTEMS WITH GRILLES. DIFFUSERS, FILTERS, AND DAMPERS.
- TEMPERATURE CONTROL SYSTEM INCLUDING LOW VOLTAGE WIRING AND CONDUIT.
- DUCT, PIPING, AND EQUIPMENT INSULATION, WHERE INDICATED HEREIN. ROOF CURBS, ROOFING AND FLASHING OF ROOF PENETRATIONS FOR EQUIPMENT NOTED.
- CONTROLS AND WIRING FOR CONNECTION TO LANDLORD'S FIRE-SMOKE ALARM SYSTEM (WHERE APPLICABLE)

EQUIPMENT INDICATED ON THE DRAWINGS OR AS REQUIRED FOR A COMPLETE INSTALLATION, SUCH AS ROOFTOP UNITS, DUCTWORK, EXHAUST FANS, SUPPLY AND RETURN DIFFUSERS, ETC., SHALL BE PROVIDED WITHIN THE SCOPE OF WORK OF THIS SECTION. ALL EQUIPMENT OF SAME OR SIMILAR TYPE SHALL BE BY THE SAME MANUFACTURER IF POSSIBLE, WARRANTY: PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT. PROVIDE A SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE, AT THE OWNER'S OPTION.

DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS, AS REQUIRED. PROVIDE ALL DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE SYSTEM FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED. THE WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES OR ORDINANCES AND SUBJECT TO INSPECTION.

COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE LANDLORD, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

DUCT DIMENSIONS: UNLESS OTHERWISE NOTED, DUCT DIMENSIONS ON DRAWING ARE NET INSIDE DIMENSIONS.

SHEET METAL DUCTWORK: SHEET METAL DUCTWORK SHALL BE FABRICATED AND INSTALLED TO MEET ASHRAE AND SMACNA STANDARDS, FOR 1" W.G. PRESSURE CLASS. SHEET METAL SHALL BE GALVANIZED SHEET STEEL OF LOCK FORMING QUALITY, ASTM A-525. ALL ANGLE IRON USED FOR SUPPORT SHALL BE GALVANIZED. CONNECTIONS TO WALLS OR FLOOR SHALL BE AIR TIGHT WITH ANGLE IRON AND CAULKING. SEAL ALL DUCT SEAMS, TRANSVERSE AND LONGITUDINAL, AIR TIGHT. PROVIDE TURNING VANES AT ALL ELBOWS OR OFFSETS EXCEEDING 30°.

TRAPEZE DUCT HANGERS: MINIMUM 1"X2"X1"X 18 GAUGE CHANNELS WITH 1" X 18 GAUGE STRAPS TO STRUCTURAL SUPPORT ABOVE.

DUCT LINER: PROVIDE MINIMUM 1" THICK, 2 PCF DENSITY, NEOPRENE COATED, LONG TEXTILE FIBER TYPE DUCT LINER, WITH COATING ON THE AIR STREAM SIDE CONFORMING TO NFPA 90A. DUCT LINER ADHESIVE SHALL BE AS RECOMMENDED BY DUCT LINER MANUFACTURER, AND SHALL COMPLY WITH ASTM C-916. DUCT LINER FASTENERS SHALL COMPLY WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS", LATEST EDITION.

RIGID ROUND GALVANIZED DUCT SHALL BE SPIRAL OR SNAP LOCK GALVANIZED SHEET METAL COMPLYING WITH

DUCTS, SUPPORTS AND INSULATION SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH 2017 IMC AND SMACNA REQUIREMENTS.

ROUND BALANCING DAMPERS: FABRICATED OF SAME MATERIAL AS DUCT, TWO METAL GAUGES HEAVIER THAN DUCT. MOUNT ON 3/8" SQUARE ROD WITH SAW SLOT POSITION INDICATOR, PIVOT AND BEARING, LOCKING POSITION REGULATOR (YOUNG REGULATOR CO., SERIES 443) . REGULATOR SHALL BE POSITIONED WITH SHEET METAL

GRILLES AND DIFFUSERS: PROVIDE GRILLES, DIFFUSERS, AND DAMPERS IN SIZES, CAPACITIES, MATERIALS, AND PATTERN INDICATED ON THE DRAWINGS.

ACCESS PANELS: PROVIDE HINGED ACCESS PANELS IN DUCTWORK WHERE REQUIRED FOR ACCESS TO EQUIPMENT. PROVIDE INSULATED ACCESS DOORS IN INSULATED DUCTWORK.

ROOF PENETRATIONS SHALL COMPLY WITH SMACNA AND NRCA STANDARDS.

BRACKET BEYOND DUCT COVERING.

TEST AND ADJUST EACH PIECE OF EQUIPMENT AND EACH SYSTEM AS REQUIRED TO ASSURE PROPER BALANCE AND OPERATION. TEST AND BALANCE SHALL BE PERFORMED BY AN INDEPENDENT NEBB OR AABC REGISTERED CONTRACTOR. ELIMINATE NOISE AND VIBRATION, AND ASSURE PROPER FUNCTION OF ALL CONTROLS, MAINTENANCE OF TEMPERATURE, AND OPERATION. BALANCE MECHANICAL SYSTEM, AND SUBMIT COMPLETED TEST REPORT TO CONSTRUCTION MANAGER AND ENGINEER PRIOR TO REQUEST FOR FINAL PAYMENT. ALL SYSTEMS SHALL BE BALANCED TO WITHIN 5% OF AIR VOLUMES INDICATED. ANY DISCREPANCY SHALL BE REPORTED TO HVAC INSTALLER FOR IMMEDIATE CORRECTION, PRIOR TO PREPARATION OF FINAL REPORT, AFTER FINAL DUCT ADJUSTMENTS HAVE BEEN MADE, FINAL BALANCING SHALL BE PERFORMED AND THE RESULTS REPORTED IN A CERTIFIED BALANCE REPORT. FINAL BALANCED POSITIONS SHALL BE MARKED ON THE DAMPER WITH A PERMANENT MARKER. NOTE ALL AIR QUANTITIES OUTSIDE OF TOLERANCE IN REPORT.

### **GENERAL MECHANICAL NOTES:**

- 1. DO NOT SCALE DRAWINGS, SEE ARCHITECTURAL DRAWINGS AND REFLECTED CEILING FOR EXACT LOCATION OF DOORS, WINDOWS, CEILING DIFFUSERS, ETC.
- 2. ALL MECHANICAL WORK SHALL BE COORDINATED WITH THE WORK PERFORMED UNDER OTHER DIVISIONS TO AVOID INTERFERENCE.
- 3. HVAC CONTRACTOR SHALL REPAIR, REPLACE, AND REPAINT TO MATCH EXISTING SURFACES DAMAGED BY THE HVAC CONTRACTOR DURING INSTALLATION OF MECHANICAL EQUIPMENT.
- 4. ANY DEMOLITION WORK SHALL BE COMPUTED IN CONTRACT.
- 5. INSTRUMENT TEST HOLES SHALL BE LOCATED IN ALL NEW SUPPLY, EXHAUST AND RETURN DUCTS. 6. HVAC CONTRACTOR SHALL PROVIDE AND INSTALL MANUAL BALANCING DAMPERS IN DUCTWORK FIVE FEET, UPSTREAM OF ALL DUCTED DIFFUSERS. IF FIVE FEET CANNOT BE MAINTAINED THE MAXIMUM DISTANCE POSSIBLE SHOULD BE OBSERVED. THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL ALL DAMPERS NECESSARY TO BALANCE THE SYSTEM TO AIR FLOW VALUES SHOWN
- ON PLANS. 7. HVAC CONTRACTOR SHALL PROVIDE AND INSTALL FIRE AND/OR SMOKE DAMPERS WHERE INDICATED ON PLANS AND IN SUCH LOCATIONS AS REQUIRED BY APPLICABLE CODE. INSTALLATION OF FIRE AND/OR SMOKE DAMPERS SHALL BE IN STRICT ACCORDANCE WITH THE
- DAMPER MANUFACTURER'S RECOMMEDATIONS
- 8. ALL VALVES AND PIPING SPECIALTIES SHALL BE LINE SIZED UNLESS NOTED OTHERWISE. USE ECCENTRIC REDUCERS ON CONTROL VALVES WHERE REQUIRED.
- 9. DUCTWORK SHALL BE GALVANIZED SHEET METAL CONTRUCTED IN ACCORDANCE WITH THE LATEST SMACNASTANDARDS. FIBERGLASS DUCTBOARD SHALL BE BID AS A SEPERATE LINE ITEM. 10. ALL PIPING, DUCTS, VENTS, ETS,. EXTENDING THROUGH THE WALL AND/OR ROOF SHALL BE
- FLASHED AND COUNTER FLASHED IN A WATERPROOF MANNER. 11. ALL PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOOR, WALLS
- AND PARTIONS. 12. ALL PIPING SHALL BE SUPPORTED ADJACENT TO EQUIPMENT, TO PREVENT WEIGHT OF PIPING
- BEING PLACED ON EQUIPMENT. 13 .PAINT ALL VISIBLE PIPING ON THE EXTERIOR OF THE BUILDING TO MATCH THE BUILDING COLOR.
- 14. HVAC CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS ON JOB SITE.
- 15. VERIFY ROUTING ON ALL WORK AT JOB SITE.
- 16. GENERAL CONTRATOR SHALL FURNISH AND INSTALL ALL SUPPORTING ANGLES AND SUPPORT BEAMS FOR AC UNITS, EXHAUST FANS, ETC.
- 17. HVAC CONTRACTOR SHALL HAVE THE MECHANICAL SYSTEMS BALANCED BY AND INDEPENDENT CERTIFED BALANCED CONTRACTOR. THIS CONTRACTOR SHALL PREPARE A WRITTEN REPORT FOR SUBMISSION TO THE ENGINEER AND OWNER PRIOR TO CLOSEOUT..
- 18. ALL EQUIPMENT, DUCT WORK AND PIPING SHALL BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH ALL LOCAL CODES.
- 19. HVAC CONTRACTOR SHALL CHANGE OUT THE EQUIPMENT FILTERS AT THE TIME OF POSSESSION OF THE PROJECT BY THE OWNER, USING ONLY NEW FILTTERS OF THE PROPER SIZE AND TYPE. 20. THE HVAC CONTRACTOR SHALL LEAVE HIS WORK IN PERFECT WORKING CONDITION AND SHALL

GUARANTEE SAME FOR A PERIOD OF 12 MONTHS FROM DATE OF FINAL ACCEPTANCE.

### MECHANICAL SPECIFICATION SECTIONS:

#### SECTION 15850 - AIR HANDLING

#### PART 1 GENERAL

- 1.01 SECTION INCLUDES
- A. Centrifugal fans and utility/vent sets.
- B. Power ventilators.
- 1.02 SUBMITTALS (as required by owner) A. Product Data: Include catalog performance ratings,
- construction, and dimensions. B. Operating and Maintenance Instructions: Include instructions for lubrication, motor and drive

replacement, spare parts lists, and wiring diagrams.

#### PART 2 EXECUTION

- 2.01 INSTALLATION A. Install in accordance with manufacturer's instructions.
- B. Do not operate fans for any purpose until ductwork is clean, bearings lubricated, and fan has been test run under observation.
- C. Install fans with resilient mountings and flexible electrical leads. Install flexible connections
- specified between fan inlet and discharge ductwork. Flexible connectors shall not be in tension while running.
- D. Provide safety screen where fan inlet or outlet is exposed.
- E. Provide backdraft dampers on inlet of exhaust fans as indicated.

#### END OF SECTION

#### SECTION 15880 - AIR DISTRIBUTION

- 1.01 SECTION INCLUDES A. Ductwork and ductwork accessories.
- B. Insulation
- C. Volume control dampers
- D. Flexible duct connectors E. Duct access doors

### PART 2 PRODUCTS (SEE SECTION 15780 PART 2)

#### 2.01 DUCTWORK

PART 1 GENERAL

- A. Materials
- 1. Steel Ducts: Galvanized steel sheet, lock-forming quality. Insulation shall be provided with vapor
- 2. Insulated Flexible Ducts: Flexible duct wrapped with flexible glass fiber insulation, enclosed by vapor barrier jacket.
- 3. Sealant: Mastic, water resistant, fire resistive. B. Metal Ductwork
- 1. Fabricate and support in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible except as indicated.
- 2. Construct T's, bends, and elbows with radius of 1-1/2 times width of duct on center line. Where not
- possible provide turning vanes. 3. Increase duct sizes gradually, not exceeding 30
- degrees divergence and 45 degrees convergence 4. Connect flexible ducts to metal ducts with draw
- bands plus tape. 5. Use crimp joints with or without bead for joining round duct sizes 8 inch (200 mm) and smaller with

crimp in direction of air flow.

#### 2.02 INSULATION

- A. Insulation shall have a vapor barrier with a maximum permeance of .05 perms or aluminum foil having a minimum thickness of 2 mils. R-value shall be as listed on plans.
- B. All insulation materials, coatings and other accessories shall have a fire hazard rating not to exceed 25 for flame spread, 50 for fuel contribution, and 50 for smoke developed: materials shall not produce flaming droplets when subjected to fire. All products or their cartons shall bear label indicating conformance to the above requirements.

#### 2.03 VOLUME CONTROL DAMPERS

- A. Fabricate in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated.
- B. Fabricate splitter dampers of material same gauge as duct to 24 inches size in either direction, and two gauges heavier for larger sizes. Secure with continuous hinge or rod. Operate with minimum 1/4 inch diameter
- C. Fabricate single blade dampers for duct sizes to 12 x 30

#### D. Fabricate multi-blade damper of opposed blade pattern with maximum blade sizes 12 x 72 inch. Assemble center and edge crimped blades in prime coated or galvanized

- channel frame with suitable hardware. E. Except in round ductwork 12 inches and smaller, provide
- end bearings. F. Provide locking, indicating quadrant regulators on
- single and multi-blade dampers. Where width exceeds 30 inches, provide regulator at both ends.

#### 2.04 BACKDRAFT DAMPERS

- A. Gravity backdraft dampers, size 18 x 18 inches or smaller, furnished with air moving equipment, may be air moving equipment manufacturers standard construction.
- B. Fabricate multi-blade, parallel action gravity balanced backdraft dampers of galvanized steel, or extruded aluminum, with center pivoted blades, with sealed edges, linked together, steel ball bearings, and plated steel pivot pin.

#### 2.05 FLEXIBLE DUCT CONNECTIONS

A. UL listed fire retardant neoprene coated woven glass fiber fabric to NFPA 90A, approximately 3 inches wide, crimped into metal edging strip.

#### 2.06 DUCT ACCESS DOORS

- A. Fabricate in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible.
- B. Access doors smaller than 12 inches square may be secured with sash locks. Access doors with sheet metal screw fasteners are not acceptable.

#### PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install flexible connections specified between fan inlet and discharge ductwork. Flexible connectors shall not
- be in tension while running. C. Provide backdraft dampers on inlet of exhaust fans where indicated.
- D. Prevent passage of unfiltered air around filters with
- felt, rubber, or neoprene gaskets. E. Locate ducts with sufficient space around equipment to
- allow normal operating and maintenance activities. F. During construction provide temporary closures of metal
- or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system. G. Check location of air outlets and inlets and make necessary adjustments in position to conform with
- architectural features, symmetry, and lighting arrangement. H. Provide balancing dampers on duct take-off to diffusers. grilles and registers, regardless of whether dampers are

specified as part of the diffuser, grille or register

assembly. **END OF SECTION** 

#### SECTION 15990 - TESTING, ADJUSTING AND BALANCING

#### PART 1 GENERAL

1.01 SECTION INCLUDES

#### A. Air systems.

PART 2 PRODUCTS

- 2.01 UNDERWRITER'S LABORATORIES APPROVAL A. All equipment furnished shall be UL approved
  - and shall be labled or listed by UL. B. No equipment shall be approved which fails to meet these conditions

#### PART 3 EXECUTION

#### 3.01 CLEAN-UP

- A. Contractor shall remove all debris due to his work and shall repair, clean and replace all surfaces damaged or soiled as a result of his work at no additional expense to the owner.
- B. Removal of debris shall be daily and as required to maintain safe working conditions.

#### 3.02 INSTALLATION TOLERANCES

- A. Air Handling Systems: Adjust to within plus or minus 5 percent for supply systems and plus 5 percent for exhaust systems of design.
- B. Air Outlets and Inlets: Adjust to within plus or minus 10 percent of design.

### 3.03 BALANCE AIRFLOW

- A. Air balance shall be performed by a independent licenced approved AABC or NEBB contractor.
- B. Air flow shall be balanced to obtain quantities shown on
- air balance schedule. C. Carefully adjust dampers for all ductwork, and air outlets and record readings which correspond to design flow rates at each outlet.

#### D. Record final readings on clean print.

- E. Test and balance the complete system in
- accordance with SMACNA T.A.B. procedures. F. Provide owner with a copy of the completed air balance report.

### **END OF SECTION**

# **GENERAL SPECIFICATION NOTES:**

- 1. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION. 2. ALL MECHANICAL WORK SHALL BE INSTALLED IN STRIICT ACCORDANCE WITH 2017 INTERNATIONAL MECHANICAL CODE, LOCAL CODES AND MANUFACTURERS WRITTEN INSTRUCTIONS. 3. HVAC, WORK SHALL BE AS INDICATED ON THE PLANS AND AS HEREIN SPECIFIED. THE WORK SHALL CONSIST OF PROVIDING COMPLETE HVAC SYSTEMS AS INDICATED ON THE DRAWINGS. THE SYSTEM SHALL BE TESTED AND BALANCED. CAPACITY SHALL BE AS SHOWN ON THE DRAWINGS. ADJUSTMENTS AS REQUIRED SHALL BE MADE BY THE CONTRACTOR TO INSTALL THE WORK WITHIN THE INTENT OF THE DRAWINGS AND SPECIFICATIONS AND TO PROVIDE AN ACCEPTABLE SYSTEM IN ACCORDANCE WITH STATE CODES, LOCAL CODES, ASHRAE,
- AND SMACNA REQUIREMENTS. 4. WHENEVER A MATERIAL, ARTICLE, OR PIECE OF EQUIPMENT IS IDENTIFIED ON THE DRAWINGS BY REFERENCE TO MANUFACTURES OR VENDORS NAMES, TRADENAMES, CATALOGUE NUMBERS, OR THE LIKE, IT IS SO IDENTIFIED FOR THE PURPOSE OF ESTABLISHING A STANDARD. ANY MATERIAL, ARTICLE, OR PIECE OF EQUIPMENT OF OTHER MANUFACTURER OR VENDORS WHICH WILL PERFORM ADEQUATELY THE DUTIES IMPOSED BY THE GENERAL DESIGN WILL BE CONSIDERED EQUALLY ACCEPTABLE PROVIDED THE MATERIAL, ARTICLE, OR PIECE OF EQUIPMENT SO PROPOSED IS OF EQUAL PERFORMANCE, SUBSTANCE, APPEARANCE AND FUNCTION.
- 1. DUCTWORK SHALL BE OF THE SIZE AS INDICATED ON THE PLANS WITH 2" INSULATION PROVIDED ON ALL RECTANGULAR SUPPLY AND RETURN DUCTWORK. INSULATION SHALL BE
- FIBERGLASS BY KNAUF OR APPROVED EQUAL WITH 25 FLAME SPREAD & 50 SMOKE DEVELOPED, ANTI BACTERIAL. ALL DUCTWORK BOTH METAL AND FLEXIBLE, SHALL BE INSULATED WITH 2" FIBERGLASS INSULATION. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA RECOMMENDATION. ALL DUCTWORK SIZES INDICATED ARE NET SIZES. DUCTWORK SHALL BE INCREASED TO ALLOW FOR INTERNAL INSULATION. ALL ELBOWS SHALL INCLUDE SINGLE
- 2. FLEXIBLE DUCTWORK SHALL NOT BE LONGER THAN 5 FEET. ALL TAKE-OFF FITTINGS SHALL HAVE EXTRACTORS AND DAMPERS. STAINLESS STEEL CLAMPS SHALL BE USED FOR ALL FLEXIBLE CONNECTIONS. FLEXIBLE DUCTWORK SHALL BE EXTERNALLY INSULATED AND CONFORM TO UL 181.
- 1. ALL AIR HANDLING EQUIPMENT, DIFFUSERS, GRILLES, REGISTERS, FANS, REFRIGERATION UNITS, ETC., SHALL BE PROVIDED AS SCHEDULED ON THE DRAWINGS AND IN COMPLIANCE WITH LOCAL ENERGY CODES. ALL CONTROL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH NEC REQUIREMENTS. ALL RELAYS, INTERLOCKS, ETC., SHALL BE PROVIDED AS REQUIRED. POWER WIRING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UP TO AND INCLUDING FINAL CONNECTION. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL STARTERS, DISCONNECTS, AND OTHER DEVICES AS REQUIRED BY CODE UNLESS INDICATED TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL MOUNT ALL DEVICES, ETC., AND THE ELECTRICAL CONTRACTOR SHALL WIRE THROUGH THEM AS REQUIRED. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NEC. REFRIGERANT PIPING WHERE REQUIRED SHALL BE OF THE PRECHARGED TYPE AS SUPPLIED BY THE REFRIGERATION EQUIPMENT MANUFACTURER, PROPERLY SIZED AND INSULATED OR FIELD FABRICATED AT THE CONTRACTOR'S OPTION. FIELD FABRICATED REFRIGERANT PIPING SHALL BE TYPE "L" A.R.I. COPPER SOLDERED WITH 95/5 SOLDER, INSULATED WITH 1" ARMAFLEX AND WEATHERPROOFED. PIPING SHALL BE ARRANGED AND PIPED IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND SHALL INCLUDE SIGHT GLASSES, SERVICE VALVES, AND FILTER DRYERS WITH
- 2. THE CONTRACTOR SHALL TEST ALL DUCT AND PIPING SYSTEMS FOR LEAKAGE, BALANCE AIR AS INDICATED, CHARGE REFRIGERATION EQUIPMENT, PROVIDE CLEAN FILTERS, START SYSTEMS, AND INSTRUCT THE OWNER IN OPERATION OF THE SYSTEM AFTER ALL TEST AND BALANCING HAS BEEN ACCOMPLISHED. ALL LEAKS OBSERVED IN THE SYSTEM SHALL BE REPAIRED BY EITHER REPLACING OR REPAIRING THE DEFECTIVE MATERIAL OR EQUIPMENT IN A MANNER APPROVED BY THE ENGINEER. THE ENTIRE HVAC SYSTEM SHALL BE UNCONDITIONALLY GUARANTEED FOR ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. ALL DEFECTIVE EQUIPMENT AND/OR MATERIAL SHALL BE REPLACED AT NO EXPENSE TO THE OWNER. ALL REFRIGERATION COMPRESSORS SHALL HAVE AN EXTENDED WARRANTY FOR FOUR ADDITIONAL YEARS. ALL GUARANTEES SHALL BE WRITTEN, DATED, AND FORWARDED TO THE OWNER. EQUIPMENT SHALL BE PROVIDED WITH ISOLATORS, FLEXIBLE CONNECTORS AT EQUIPMENT CONNECTIONS AND INSULATED DRAIN LINES PIPED TO FLOOR DRAINS, HUB DRAINS, OR OTHER APPROVED DRAIN POINTS.

### **MECHANICAL LEGEND:**

HARD DUCT AS SPECIFIED FLEX DUCT AS SPECIFIED

SUPPLY AIR DUCT

RETURN AIR DUCT UP

THERMOSTAT

M

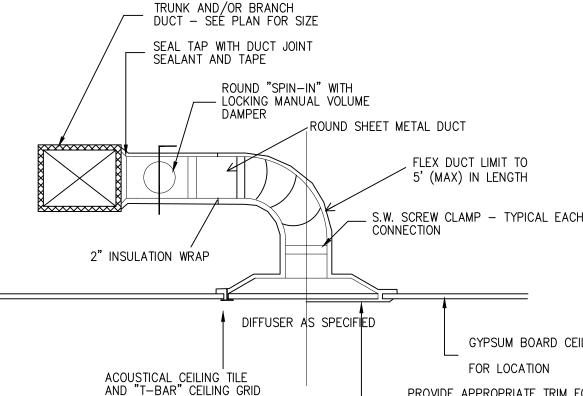
CEILING DIFFUSER RETURN AIR GRILLE FIRE DAMPER

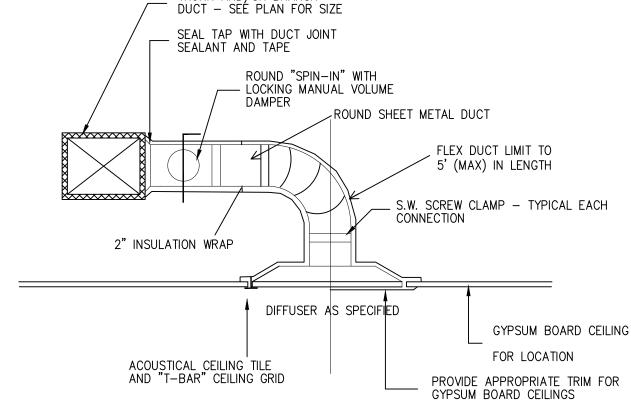
BY-PASS OPERATION. ALL PIPING ARRANGEMENTS SHALL BE APPROVED BY BOTH THE EQUIPMENT MANUFACTURER AND THE ENGINEER PRIOR TO INSTALLATION.

**≠**FD

DUCT SMOKE DETECTOR

VOLUME DAMPER





**DUCT - DIFFUSER CONNECTION DETAIL** 



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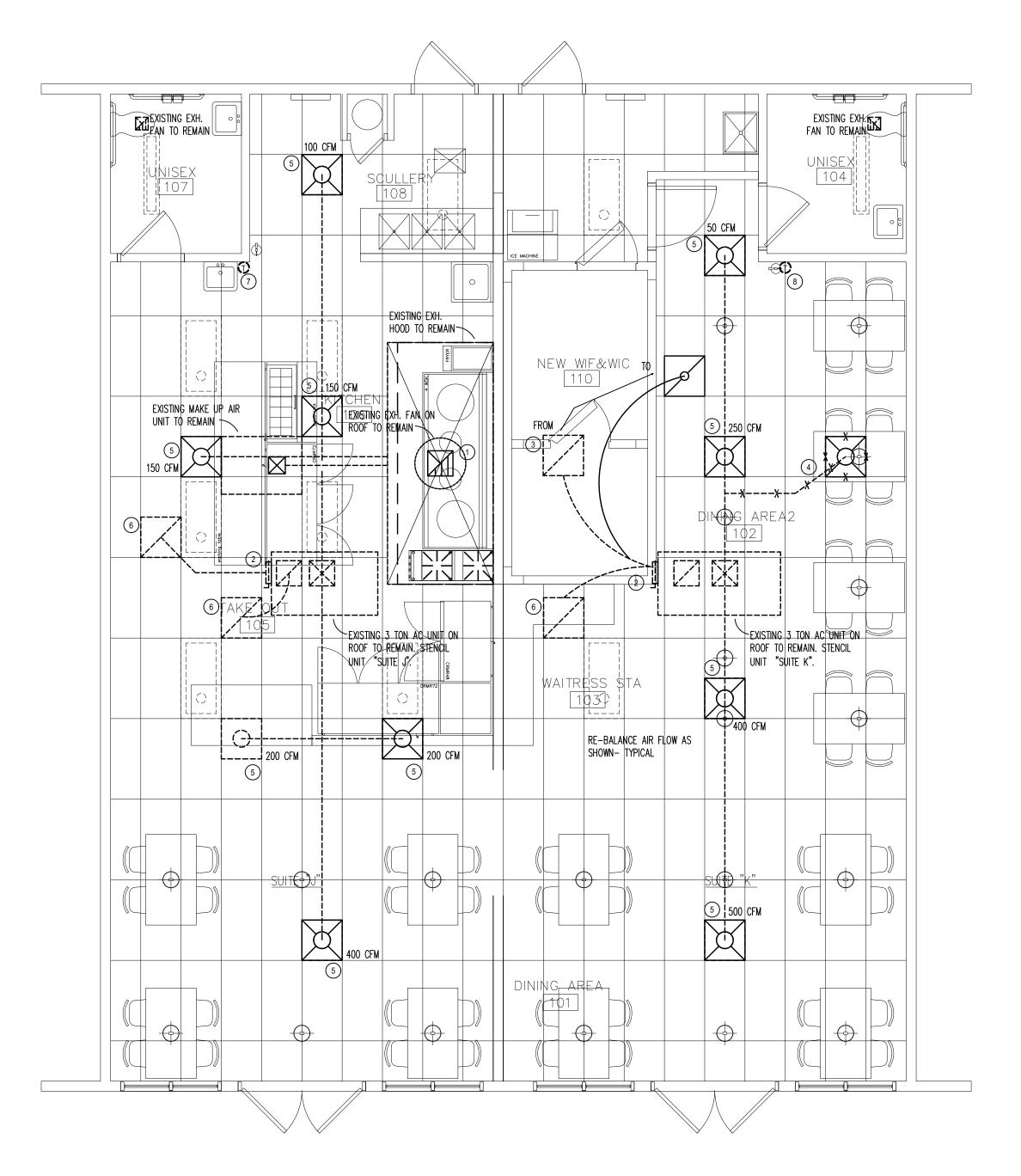
CONSTRUCTION DOCUMENTS

Issue Date: OCTOBER 03, 2020								
Revisions								
No.	Date	Description						

Project Number: 2015

Designed By: T.F.

Sheet Title: MECHANICAL SPECS



### MECHANICAL KEYED NOTES:

- 1 CONFIRM THAT THE EXISTING GREASE EXHAUST SYSTEM HAS BEEN COMPLETELY CLEANED OUT AND THE DUCTWORK HAS BEEN INSTALLED PER IMC SECTION 506. IF UPON TEARDOWN AND INSPECTION THE DUCTWORK IS NOT PROTECTED AS REQUIRED BY CODE, THE MECHANICAL CONTRACTORS OPTION TO USE ASTM E2336 STANDARD FLEXIBLE FIRE WRAP SYSTEM. CONTRACTOR TO PROVIDE MANUFACTURERS INSTALLATION INSTRUCTIONS ALONG WITH ICC-ESR REPORTY TO AUTHORITY OF OF JURISDICTION AND SHALL ADHERE TO ASTM E2336 NOTE: MANUFACTURER REQUIRE (2) LAYERS OF WRAP PLUS BANDING.
- SET OUTSIDE AIR DAMPER AS REQUIRED TO COMPENSATE FOR REMAINDER OF CFM REQUIRED TO BALANCE EXHAUST AND MAKE UP
- 3 EXISTING RETURN AIR GRILLE TO BE RELOCATED AS SHOWN. EXTEND DUCTWORK AS REQUIRED.
- REMOVE EXISTING SUPPLY AIR DIFFUSER AND DUCTWORK. SEAL CAP BRANCH OPENING.
- (5) EXISTING SUPPLY AIR DIFFUSER TO REMAIN.
- (6) EXISTING RETURN AIR DIFFUSER TO REMAIN.
- 7 PROVIDE PERMANENT MARKING ON T-STAT "SUITE "J" AC UNIT.
- 8 PROVIDE PERMANENT MARKING ON T-STAT "SUITE "K" AC UNIT.

The seal appearing on this document was authorized by Erik Gonzalez, P.E. 111426, on







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CONSTRUCTION DOCUMENTS Issue Date: OCTOBER 03, 2020 Date Description

Project Number: 2015

Sheet Title: MECHANICAL PLAN

Sheet Number:

M1.0

### **GENERAL SPECIFICATION NOTES:**

THE WORK INCLUDES PROVIDING NEW MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM. THE WORK ALSO INCLUDES ROUGH-IN AND FINAL CONNECTIONS SERVICE EQUIPMENT AND EQUIPMENT PROVIDED BY OTHERS, ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES, ORDINANCES AND IS SUBJECT TO INSPECTION.

HOOK-UP CHARGES, PERMITS AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM ARE INCLUDED AS A PART

THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, FIXTURES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURE INSTALLATION REQUIREMENTS. COMPLY WITH ALL APPLICABLE ADA INSTALLATION REQUIREMENTS.

COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

PIPING SYSTEMS-GENERAL: ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS, AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT. PROVIDE AN ISOLATING DIALECTRIC UNION AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION.

PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

SEWER AND WASTE PIPING: PROVIDE ALL DRAINS AND SEWERS WITHIN THE SPACE WITH CONNECTION TO THE PSB EXISTING DRAINAGE SYSTEMS ON-SITE. SANITARY DRAINAGE PIPING ABOVE GRADE SHALL BE SCH. 40 PVC PIPE, WITH SOLVENT WELD FITTINGS, OR CAST IRON HUBLESS PIPE WITH FITTINGS AND CONNECTIONS. BELOW GRADE PIPING SHALL BE SCH. 40 PVC PIPE WITH SOLVENT WELD FITTINGS, OR CAST IRON SERVICE WEIGHT HUB AND SPIGOT PIPE WITH NEOPRENE GASKET JOINT SYSTEM. NO PVC DWV PIPING ALLOWED WITHIN CEILING VOIDS USED FOR NON-DUCTED RETURN AIR PLENUM.

CONDENSATE AND INDIRECT DRAIN PIPING: TYPE M COPPER TUBING UP TO 1" ID, TYPE DWV TUBING AND FITTINGS FOR 1-1/4" AND LARGER

CLEANOUTS: PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE, CONFORMING TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBSCURE FROM VIEW.

WATER DISTRIBUTION PIPING: LAYOUT WATER PIPING SO THAT THE ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE 1/2" MINIMUM TYPE L COPPER TUBING WITH WROUGHT COPPER FITTINGS AND SWEAT CONNECTIONS. PROVIDE MINIMUM 16" HIGH FULL AIR CHAMBER AT EACH FIXTURE STOP. INSTALL CHROME PLATED BRASS ESCUTCHEON PLATES AT ALL PENETRATIONS THROUGH FINISHED SURFACES (INCLUDING CABINET INTERIORS). USE TIN-ANTIMONY SOLDER, 95/5 FOR ALL SWEAT FITTINGS

PIPE INSULATION: INSULATE ALL HOT AND COLD WATER PIPING. PROVIDE 1" PREFORMED FIBERGLASS, ASJ-VB, FLAME SPREAD 25, SMOKE DEVELOPED 50, ASTM C-547. WHEN PERMITTED BY LOCAL CODE, PROVIDE 1/2" SELF-ADHESIVE UNICELLULAR FOAM PIPE INSULATION WITH PREFORMED PVC FITTING COVERS (EQUAL TO SELF-ADHESIVE ARMSTRONG 2000) WITH K FACTOR OF 0.27 AT 75°F MEAN TEMPERATURE. INSULATE ALL EXPOSED CONDENSATE PIPING WITH WASTE TEMPERATURES BELOW 60°F.

SHUTOFF VALVES WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE, OR OTHER EQUIPMENT ITEM ,TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. VALVES SHALL BE EQUAL TO JENKINS #902-T BALL VALVE, CHROME-FINISHED BRONZE, TEFLON SEATS AND PACKING, 400 LB. W.O.G., SOLDER END.

ACCESS PANELS SHALL BE PROVIDED WHERE CONTROL DEVICES, VALVES, ETC. ARE CONCEALED WITHIN WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN SUSPENDED CEILINGS, ACCESS PANELS ARE NOT REQUIRED.

INSTALLATION: THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. PROCEED AS RAPIDLY AS CONSTRUCTION WILL PERMIT. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL FOR SANITARY JOINT, AND OMIT ESCUTCHEON.

REPAIR EXISTING PLUMBING SYSTEM COMPONENTS DAMAGED BY CONSTRUCTION OPERATIONS AND RESTORE TO ORIGINAL CONDITION.

TEST WATER SYSTEM UNDER 150 PSIG HYDROSTATIC PRESSURE FOR A MIN, OF 4 HOURS, WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP IS DEFICIENT, REPLACE OR REPAIR AS REQUIRED AND REPEAT TESTING UNIT STANDARDS ARE ACHIEVED. PROVIDE 10' STATIC TEST OF DWV FOR A 24 HOUR PERIOD. REPAIR OR REPLACE AS REQUIRED IF TESTING FAILS.

NSF 61 CPVC OR ASTM F2023 RATED PEX PIPE WITH CHLORINE INHIBITOR PERMITTED FOR INSTALLATION WHERE APPROVED BY CODE OR UNLESS DETAILED OR NOTED OTHERWISE.

# **GENERAL PLUMBING NOTES:**

- A. SPECIFICATIONS, REFER TO "PLUMBING" SECTIONS 15400 SERIES AND ELSEWHERE IN DRAWINGS FOR FURTHER INFORMATION AND REQUIREMENTS FOR PLUMBING CONTRACTOR.
- B. SUSPEND ALL HORIZONTAL SERVICE PIPING SHOWN ON THIS PROJECT SUCH AS, BUT NOT LIMITED TO, WATER, SAN. WASTE/VENT, STORM WATER, GAS, ETC. FROM UNDERSIDE OF ROOF AND/OR FLOOR STRUCTURE, UNLESS OTHERWISE NOTED OR INDICATED. HOLD SUCH PIPING HIGH AS POSSIBLE. EXTEND PIPING DOWN IN WALLS, PARTITIONS, CHASES, ETC.. TO SERVE FIXTURES AND EQUIPMENT AS
- C. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- D. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE PIPE RISES, DROPS, AND OFFSETS, AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- E. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS, PROVIDE PIPING, CONNECTIONS, FITTINGS, VALVES, OFFSETS, ETC. AND ALL MATERIALS NECESSARY FOR A COMPLETE SYSTEM. SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS.
- F. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK, OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- G. PROVIDE BACKFLOW PREVENTION DEVICES, (BPD) IN WATER LINES FEEDING PLUMBING FIXTURES AND/OR EQUIPMENT, AS SHOWN ON PLANS AND ELSEWHERE AS REQUIRED BY LOCAL AUTHORITIES, USE DEVICES OF APPROVED TYPE AND MANUFACTURER (ATMOSPHERIC VACUUM, PRESSURE VACUUM, DOUBLE CHECK, AND REDUCED PRESSURE)
- H. VERIFY SERVICE CONNECTION POINTS, SIZES, ELEVATIONS, AND METERING LOCATIONS FOR PROJECT WITH LOCAL UTILITIES CO. AND/OR CIVIL ENGINEER. SERVICES TO INCLUDE BUT NOT LIMITED TO (DOMESTIC WATER, FIRE, SANITARY SEWER, STORM SEWER, GAS, ETC.)
- I. WATER PRESSURE, PLUMBING CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. IF PRESSURE AT BUILDING ENTRY PRIOR TO ALL LOCALLY REQUIRED DEVICES SUCH AS WATER METER, BACKFLOW PREVENTION DEVICES, ETC. IS LESS THAN 55 PSIG STATIC, CONTACT OWNERS REPRESENTATIVES. IF PRESSURE IS IN EXCESS OF 80 PSIG STATIC, INSTALLATION OF PRESSURE REDUCING VALVE IS REQUIRED.
- J. WATER HAMMER ARRESTERS SHALL BE INSTALLED THROUGHOUT PLUMBING WATER SYSTEMS AS REQUIRED.

### PLUMBING SPECIFICATION SECTIONS:

SECTION 15400 - PLUMBING

- PART 1 GENERAL
- 1.01 SECTION INCLUDES A. Pipe and pipe fittings, valves
- B. Plumbing Specialties: Roof and floor drains, interceptors, cleanouts, backflow preventers, water hammer arrestors, thermostatic mixing valves, hose bibbs/hydrants.
- C. Plumbing Fixtures. D. Plumbing Equipment.
- E. Identification.
- 1.02 SUBMITTALS (AS REQUIRED BY OWNER) A. Product Data: Provide for plumbing specialties,
- fixtures, and equipment.
- 1.03 WARRANTY A. Provide one year manufacturer's warranty.
- 1.04 SYSTEM DESCRIPTION Provide complete and fully operational systems to meet requirements indicated and

in accord with applicable codes and ordinances. Contractor

- Project Manager of any conflict between drawings or specifications and applicable codes or ordinances.
- 1.05 SUBSTITUTIONS

must immediately notify

- A. Major Fixtures, equipment, devices and specialties shall be as noted on the drawings. B. Manufacturers shown or noted are intended for reference as to
- the quality and type of equipment desired. Comparable fixtures by other manufactures will be considered for approval by the owner where the level of quality is equivalent.

PART 2 PRODUCTS

- 2.15 PIPING INSULATION A. Shall be provided for all domestic hot and cold
- water piping and rain leader piping above grade. B. Pipe insulation to be ASTM C547-77 Class 1 preformed 1" fiberglass, 10 PCF max density (k-value=0.27 min.) with all purpose paper and foil jacket equal to Manville 3003
- alloy, h-14 temper. C. Factory cut 16 Mil thick stucco embossed aluminum jacketing
- w/ PVC elbow jackets. D. Provide vapor barrier on all pipe insulation.
- 2.16 MECHANICAL IDENTIFICATION
- A. Plastic Nameplates: Laminated three-layer plastic with engraved black letters on light background color.
- B. Plastic Tags: Laminated three-layer plastic with
- engraved black letters on light background color, minimum 1-1/2 inch (38 mm) diameter.

#### PART 3 EXECUTION

companies.

- 3.01 PREPARATION A. Ream pipe and tube ends. Remove burrs.
- B. Remove scale and dirt on inside and outside piping before assembly.
- C. Prepare piping connections to equipment with flanges or D. Coordinate cutting or forming of roof or floor
- construction to receive drains to required invert
- E. Review shop drawings. Confirm location and size of
- fixtures and openings before rough-in and installation. Verify adjacent construction is ready to receive rough in work of this Section. Coordinate sequence of work with other trades, controlling agencies, and service

PLUMBING LEGEND:

GREASE WASTE PIPING

----- COLD WATER PIPING

— – – — — — HOT WATER PIPING

— - — HWR — - — HOT WATER RETURN PIPING

— — — — VENT PIPING

SANITARY SEWER / WASTE PIPING

#### 3.02 INSTALLATION A. Provide dielectric connections wherever jointing

- dissimilar metals. B. Install piping to conserve building space and not interfere with use of space. Group piping whenever
- practical at common elevations. C. Install piping to allow for expansion and contraction
- without stressing pipe, joints, or connected equipment. D. Provide clearance for installation of insulation and
- access to valves and fittings. E. Slope water piping and arrange to drain at low points. F. Install bell and spigot pipe with bell end upstream. G. Install specialties in accordance with manufacturer's
- instructions. H. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of
- graphite and linseed oil. Ensure clearance at cleanout for rodding of drainage system. I. Install each fixture with chrome plated rigid or
- escutcheons. J. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.

flexible supplies with screwdriver stops, reducers, and

- K. Install water heaters in accordance with manufacturer's instructions and to AGA, NSF, NFPA, and UL requirements. Coordinate with plumbing piping and related fuel piping, gas venting, electrical work to achieve operating
- L. All water supplies throughout the project shall be adequately protected from water and air hammer by the use of water hammer arresters as required by local code. Water hammer arrestors shall be located at or near the end of risers for each fixture or group of fixtures and at other locations deemed necessary to effect a quiet operating system.
- M. Connections to stacks and sewers shall be arranged so
- that operation of any fixture will not cause fluctuation of water level in traps of other fixtures. N. Vent Flashing Sleeves: Install on stacks passing
- through roof, secure over stack flashing in accordance with manufacturer's instructions.
- 1. The top of each vent stack shall be vented through the roof by means of an increaser in cold area where frost may build up on vent stack.
- 2. Where PVC pipe is used, vent stacks and floor drains above other rooms shall be flashed with collars and flashing materials suitable for the purpose. Lead flashing is not allowed on PVC vent stacks.
- O. Install all materials in accordance with manufacturer's
- 3.03 APPLICATION A. Use grooved mechanical couplings and fasteners, and
- dielectric connections only in accessible locations. B. Install unions downstream of valves and at equipment or
- apparatus connections. C. Install brass male adapters each side of valves in
- copper piped system. Sweat solder adapters to pipe.
- D. Install gate, ball valves for shut-off and to isolate
- equipment, part of systems, or vertical risers. E. Provide spring loaded check valves on discharge of water pumps.
- 3.04 SERVICE CONNECTIONS

——— G ———— GAS PIPING

SC0

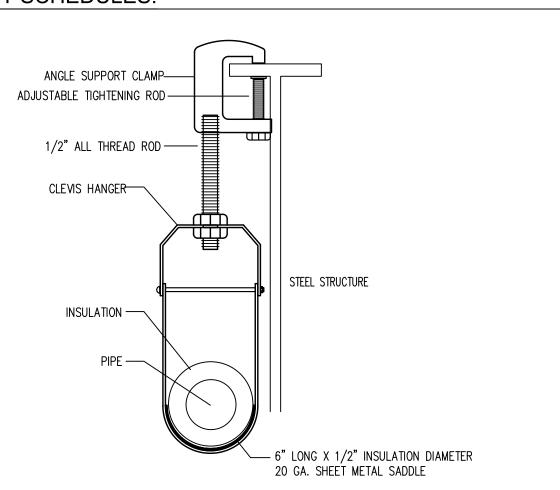
——— CA ——— COMPRESSED AIR PIPING

SURFACE CLEAN OUT

WALL CLEAN OUT

- A. Provide new sewer services. Before commencing work check invert elevations required for sewer connections, confirm inverts and ensure that these can be properly connected with slope for drainage and cover to avoid
- B. Provide new water service complete with water meter with pressure reducing valve backflow preventer. Provide sleeve in wall for service main and supported at wall, caulked and made watertight. END OF SECTION

### **EQUIPMENT SCHEDULES:**



PIPE SUPPORT DETAIL

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CONSTRUCTION DOCUMEN

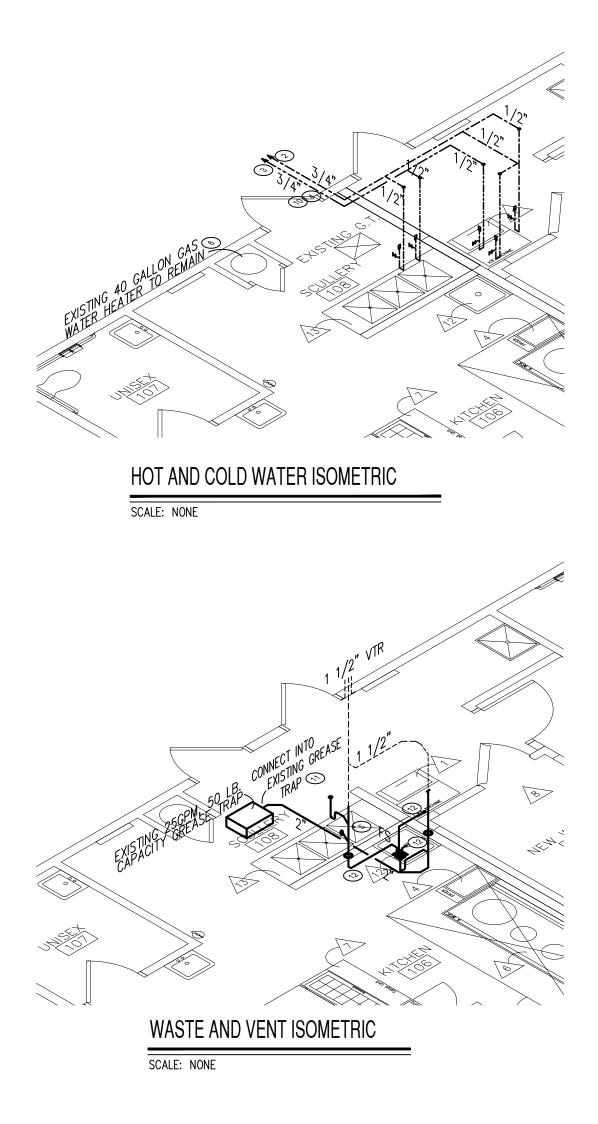
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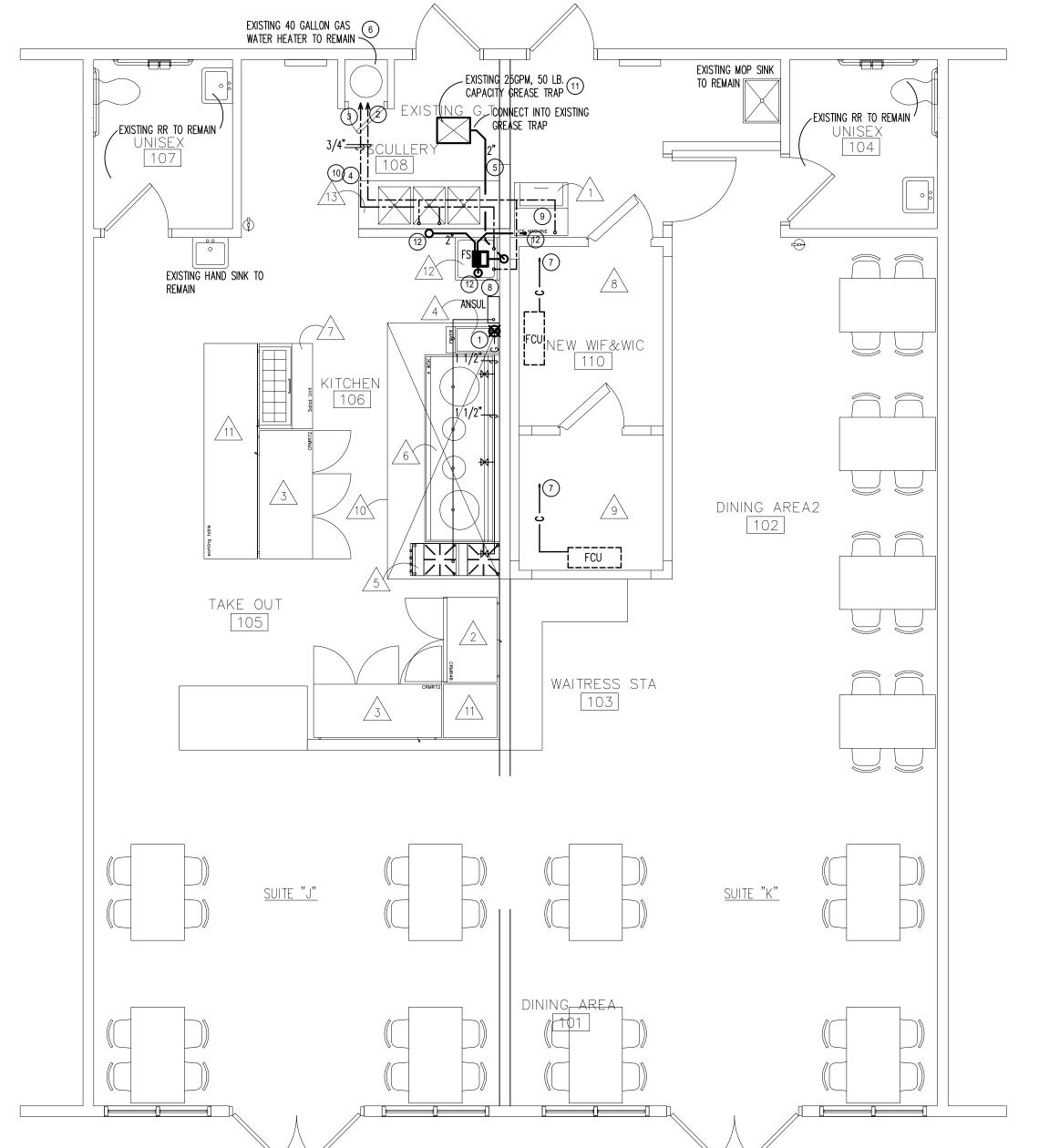
Project Number: 2015

Sheet Title:

Designed By: T.F.

PLUMBING SPECS



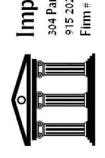


## PLUMBING KEYED NOTES:

- CONNECT INTO EXISTING 1 1/2" MAIN GAS LINE IN AREA. FIELD VERIFY EXACT LOCATION.EXISTING EMERGENCY SHUT OFF VALVE TO REMAIN
- 2 CONNECT INTO EXISTING MAIN COLD WATER LINE IN AREA. FIELD VERIFY EXACT LOCATION.
- CONNECT INTO EXISTING MAIN HOT WATER LINE IN AREA. FIELD VERIFY EXACT LOCATION.
- DOMESTIC WATER SERVICE PIPE SHALL BE INSTALL PER IPC 604.8, SECTION 605,606,607 AND 608 REQUIREMENTS.
- 5 BUILDING SEWER SHALL CONFORM TO IPC CHAPTER 7.
- 6 CONFIRM THAT THE EXISTING HOT WATER HEATER DISCHARGE SHALL CONFORM WITH IPC 504.6.1.
- 7 DISCHARGE CONDENSATE AS REQUIRED PER IMC 307.2 AND IPC SECTION 314 REQUIREMENTS. DISCHARGE CONDENSATE INTO FLOOR SINK.
- 8 PROVIDE AUTOMATIC FIRE EXTINGUISHING SYSTEM FOR COMMERCIAL COOKING EQUIPMENT PER IBC 904.11 AND NFPA 96.
- 9 PROVIDE BACKFLOW DEVICE CONNECTION PER IPC 608 REQUIREMENTS.
- 10 INSTALL PROPER PIPE SUPPORT PER IPC SECTION 308.
- CONFIRM THAT THE EXISTING GREASE INTERCEPTOR AND SEPERATOR IS INSTALLED PER IPC SECTION 1003. INTERCEPTOR SHALL BE CLEANED OUT..

12 INDIRECT DISCHARGE INTO FLOOR SINK

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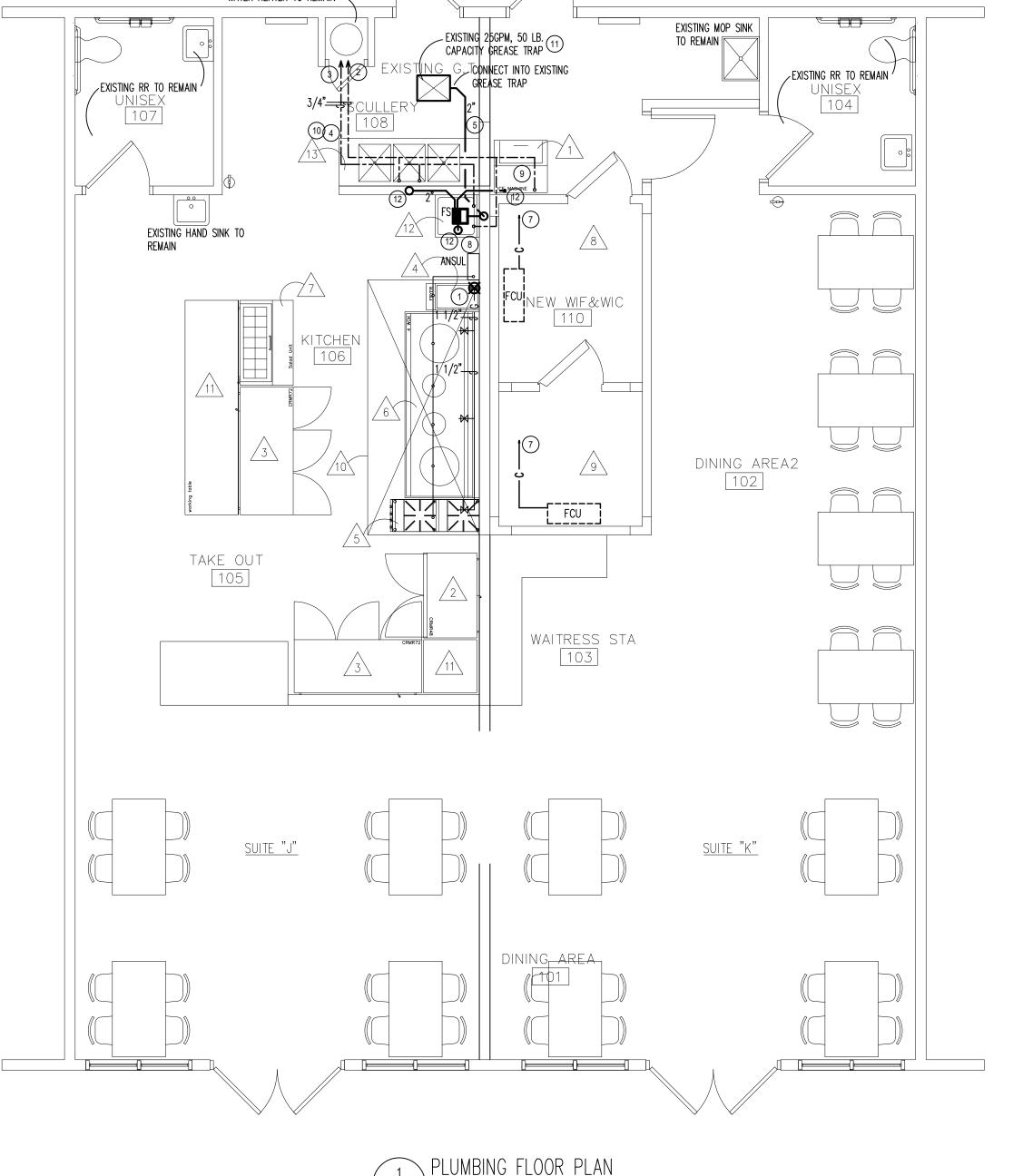
CONSTRUCTION DOCUMENTS Issue Date: OCTOBER 03, 2020 Date Description

Project Number: 2015 Designed By: T.F.

Sheet Title:

PLUMBING PLAN

Sheet Number:



NO.	QTY.	ITEM DESCRIPTION	MANUFACTURER	MODEL NO.	REMARKS
1.	1	ICE MAKER	MANITOWOC	IYT0750A	W/ICE STORAGE BIN
2.	1	2 DOOR UNDERCOUNTER FRIG.	HOSHIZAKI	CRMR48	PROVIDE WORKING TOPS
3.	2	3 DOOR UNDERCOUNTER FRIG.	HOSHIZAKI	CRMR72	
4.	1	GAS FLOOR FRYER	CENTAUR	CGF-4	
5.	1	STOCK POT RANGE, 2 BURNERS	CENTAUR	CSP-2-N	
6.	1	4 BURNERS WOK RANGE			EXISTING
7.	1	2 DOOR SANDWICH/SALAD PREP	TURBO AIR	TST-48SD-08S-N-CL	
8.	1	WALKING-IN-FREEZER			
9.	1	WALKING-IN-COOLER			
10.	1	12' LONG KITCHEN HOOD			
11.	1	WORK TABLE	N/A	TBD BY OWNER	
12.	1	SINGLE SINK	N/A		
13.	1	3-COMPARTMENT SINK	N/A		
14.					

NOTE: ALL APPLIANCES AND FIXTURES SHALL BE LISTED, LABELED AND INSTALLED ACCORDING TO THE MANUFACTURERS INSTALLATION INSTRUCTIONS OR THE ADOPTED CODES WHICHEVER IS MORE RESTRICTIVE.

#### **GENERAL ELECTRICAL NOTES:**

THE ELECTRICAL WORK INCLUDES PROVIDING NEW MATERIALS. FIXTURES, DEVICES AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING ELECTRICAL SYSTEM, ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES OR ORDINANCES AND SUBJECT TO INSPECTION.

THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR ELECTRICAL WORK ARE DIAGRAMMATIC, SHOWING THE LOCATION, TYPE DEVICES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. PROVIDE ALL FIXTURES, LAMPS, DEVICES, ACCESSORIES, OFFSETS AND MATERIALS NECESSARY TO FACILITATE THE SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

COORDINATE WITH THE WORK OF OTHER SECTIONS. VERIFY EXISTING SITE CONDITIONS BEFORE BIDDING. MAKE ALL CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS. COMPLY WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

ALL WORK SHALL COMPLY WITH LOCAL LAWS GOVERNING ELECTRICAL INSTALLATIONS, AND THE MOST RECENT EDITION OF THE "NATIONAL ELECTRIC CODE". PROVIDE CODE REQUIRED CLEARANCES AROUND ALL ELECTRICAL EQUIPMENT. OBTAIN ALL PERMITS RELATING TO ELECTRICAL WORK.

MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM TO NEMA, NATIONAL ELECTRIC CODE (NEC), AND UNDERWRITERS LABORATORIES (U.L.) STANDARDS IN EVERY CASE WHERE SUCH STANDARDS HAVE BEEN ESTABLISHED.

VERIFY VOLTAGE DROPS AND A.I.C. RATINGS FOR ALL EQUIPMENT CONNECTED AND VERIFY SIZE OF ELECTRICAL SYSTEM BREAKERS,

ROOF PENETRATIONS SHALL COMPLY WITH "SMACNA" AND "NRCA" STANDARDS, AND WITH THE REQUIREMENTS OF THE EXISTING ROOFING WARRANTY, IF APPLICABLE, DO NOT PERFORM ROOFING PENETRATIONS IN A MANNER WHICH WOULD VOID OR OTHERWISE LIMIT THE EXISTING ROOFING WARRANTY

DISCONNECT SWITCHES SHALL BE STANDARD-DUTY, QUICK-MAKE, QUICK-BREAK TYPE NEMA 1 ENCLOSURE (NEMA 3R FOR OUTDOOR) . SWITCHES SHALL BE AS MANUFACTURED BY SQUARE "D". PROVIDE ALL FUSES AS MANUFACTURED BY BUSSMAN, GOULD-SHAWMUT, OR LITTLE-FUSE. ALL CONDUCTOR TERMINALS TO BE U.L. FOR MINIMUM 75°C. ALL DISCONNECT SWITCHES SHALL BE LABELED TO INDICATE EQUIPMENT SERVED.

BREAKERS TO BE THERMAL MAGNETIC TYPE, SNAP-IN, QUICK-MAKE, QUICK- BREAK TYPE SINGLE UNIT CONSTRUCTION, TWO AND THREE POLE BREAKERS SHALL BE SINGLE UNIT COMMON TRIP TYPE. ALL BREAKERS CONNECTED TO LIGHTING BRANCH CIRCUITS SHALL BE APPROVED FOR THAT USE AND MARKED "SWD".

GROUNDING SYSTEM: PERMANENTLY AND EFFECTIVELY GROUND ALL METALLIC CONDUITS. SUPPORTS. CABINETS. PANELBOARDS AND SYSTEM GROUNDING NEUTRAL. MAINTAIN CONTINUITY OF EQUIPMENT GROUND THROUGHOUT THE SYSTEM. GROUND CLAMPS SHALL BE APPROVED TYPE. SPECIFICALLY DESIGNED FOR GROUNDING. WHERE GROUNDING CONDUCTOR IS ENCLOSED IN CONDUIT, GROUND CLAMP SHALL BE OF A TYPE WHICH GROUNDS BOTH CONDUCTOR AND CONDUIT. ALL CIRCUITS IN FLEXIBLE CONDUIT OR PLASTIC CONDUIT SHALL INCLUDE A GROUND WIRE SIZED IN ACCORDANCE WITH "NEC" TABLE 250-66.

CONDUIT SHALL BE SIZED TO COMPLY WITH "NEC" FOR NUMBER AND SIZE OF CONDUCTORS INSTALLED. MINIMUM SIZE OF 1/2" ABOVE GRADE (UNLESS 3/4" IS REQUIRED BY LOCAL JURISDICTION) . PROVIDE SCHEDULE 40 PVC PLASTIC OR RIGID STEEL CONDUIT BELOW GRADE, MINIMUM SIZE OF 3/4". PROVIDE ELECTRICAL METAL TUBING (EMT) MEETING FS #W-C563, OR FLEXIBLE CONDUIT (IN LENGTHS 6'-0" OR LESS) FOR INTERIOR LOCATIONS. EMT CONNECTORS AND COUPLINGS SHALL BE SET-SCREW TYPE, CLAMP CONDUIT TO BOXES WITH BUSHINGS INSIDE AND LOCKNUT OUTSIDE. MC CABLE PERMITTED FOR INSTALLATION WHERE APPROVED BY CODE.

CONDUCTORS SHALL BE INSULATED SOFT ANNEALED 98% PURE COPPER WITH COLOR CODING, B & S GAGE, #10 AND SMALLER TO BE SOLID, #8 AND LARGER TO BE STRANDED, MINIMUM #12 UNLESS OTHERWISE INDICATED. ALUMINUM CONDUCTORS SHALL NOT BE ALLOWED. "THHN" MAY NOT BE USED UNDERGROUND, AT SERVICE ENTRANCE, OUTSIDE, OR IN WET LOCATIONS. ALL INSULATION TO BE RATED FOR 600 VOLT AND TYPES AS FOLLOWS:

#10 AND SMALLER: THW, THHN, OR THWN

#8 AND LARGER: THW OR THHN SERVICE ENTRANCE: USE-RHW

DEVICES SHALL BE MANUFACTURED BY EATON. ALL DEVICES AND COVER PLATES SHALL BE STAINLESS STEEL. STANDARD DUPLEX RECEPTACLES SHALL BE GROUNDING TYPE, 20 AMP, NEMA 5-20R, BACK AND SIDE WIRED, OTHER DEVICES SHALL BE AS INDICTED ON THE DRAWINGS OR AS REQUIRED BY THE EQUIPMENT ITEM INTENDED TO BE SERVED. WHERE SWITCHES ARE GROUPED, PROVIDE

LAYOUT BRANCH CIRCUIT WIRING AND ARRANGEMENT OF HOME RUNS FOR MAXIMUM ECONOMY AND EFFICIENCY. INCREASE WIRE SIZE IF VOLTAGE DROP EXCEEDS 3% OR CONDUCTOR LENGTH EXCEEDS 100 FEET.

CONCEAL WIRING SYSTEM IN WALL OR FLOOR CONSTRUCTION WHERE POSSIBLE. INSTALL CONDUIT PARALLEL TO BUILDING LINES AND TO CLEAR ALL OPENINGS, DEPRESSIONS, PIPES, DUCTS, STRUCTURE, ETC.

INSTALL CONDUIT CONTINUOUS BETWEEN BOXES AND CABINETS WITH NO MORE THAN FOUR (4) 90° BENDS. SECURELY FASTEN IN PLACE WITH STRAPS, HANGERS AND STEEL SUPPORTS AS REQUIRED. DO NOT SUPPORT CONDUIT FROM SUSPENDED CEILING GRID OR SUSPENSION WIRES. REAM CONDUIT ENDS BEFORE INSTALLATION AND THOROUGHLY CLEAN BEFORE INSTALLATION. OPENINGS SHALL BE PLUGGED OR COVERED TO KEEP CONDUIT CLEAN. TERMINALS ON SWITCHES AND RECEPTACLES SHALL NOT BE USED TO "FEED-THRU" TO THE NEXT SWITCH OR RECEPTACLE. THE DISCONNECTING OR REMOVAL OF A DEVICE FROM A BOX SHALL NOT INTERFERE WITH OR INTERRUPT THE CONDUCTOR CONTINUITY.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EQUIPMENT AND SYSTEMS AGAINST HARMFUL EXPOSURE. OR ACCUMULATION OF DUST OR MOISTURE, FLOODING, CORROSION, AND ALL OTHER FORMS OF DAMAGE. CLEAN AND RESTORE DAMAGED FINISHES AND EQUIPMENT TO "LIKE-NEW" CONDITION.

ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED AND TESTED FOR PROPER OPERATION. AFTER WIRES ARE IN PLACE AND CONNECTED TO DEVICES AND EQUIPMENT, THE SYSTEM SHALL BE TESTED FOR SHORTS AND GROUNDS. ALL HOT AND NEUTRAL CONDUCTORS, IF SHORTED OR GROUNDED, SHALL BE REMOVED AND REPLACED. ALL METERS, INSTRUMENTS, CABLE CONNECTIONS, EQUIPMENT, OR APPARATUS NECESSARY FOR MAKING ALL TESTS SHALL BE FURNISHED BY THIS CONTRACTOR.

ALL PANELBOARDS, SWITCHBOARDS, AND LINE VOLTAGE CONTROL EQUIPMENT SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTING, SERVICING, OR MAINTENANCE OR EQUIPMENT. MARKING SHALL BE SELF ADHESIVE, COMMERCIAL LABEL CONFORMING TO N.E.C. 110.16 AND A.N.S.I. Z535.4 AS MANUFACTURED BY IDEAL OR APPROVED EQUAL. COMPLY WITH LOCK-OUT, TAG OUT PROCEEDURES.

ELECTRICAL DESIGN HAS BEEN BASED ON THE INSTALLATION OF 75°C CONDUCTORS CONNECTED TO TERMINAL LUGS AND EQUIPMENT U.L. LISTED FOR A MINIMUM 75°C. CONDUCTORS TERMINATED ON EQUIPMENT WITH A LOWER RATING (60°C) OR NO RATING SHOWN TO HAVE CONDUCTOR SIZE INCREASED TO CONFORM TO N.E.C. TABLE 310-16 AND U.L. NO. 489 REQUIREMENTS.

SWITCHBOARDS, PANELBOARDS, DISCONNECT SWITCHES, TRANSFORMERS AND CONTACTORS ARE TO BE "LISTED" AND "IDENTIFIED" AS RATED FOR A MINIMUM OF 75°C CONDUCTOR TERMINATION.

ALL CONDUCTORS TO BE A MINIMUM OF #12 THHN/THWN, COPPER UNLESS NOTED OTHERWISE. BRANCH CIRCUIT RUNS WITH NO MARKS OR IDENTIFICATION ARE TO BE PROVIDED WITH ONE HOT, ONE NEUTRAL & ONE EQUIPMENT GROUND CONDUCTOR.

ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULL WIRE.

TELEPHONE CABLE TO BE FURNISHED AND INSTALLED BY OTHERS. ALL CABLING TO BE PLENUM RATED.

ELECTRICAL CONTRACTOR TO INCLUDE GROUND WIRE IN ALL RACEWAYS. SIZE RACEWAYS AS NECESSARY TO COMPLY WITH N.E.C.

REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND DETAILS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES AND ANY OTHER EQUIPMENT INSTALLED IN THE CEILING SYSTEM. VERIFY EXACT MOUNTING HEIGHTS AND FINISHES WITH ARCHITECT PRIOR TO ROUGH-IN.

CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR INSTALLATION OF PLUMBING AND MECHANICAL INSTALLATION. CONDUIT RUNS TO BE RUN THROUGH TRUSSES WHERE

ELECTRICAL CONTRACTOR TO VERIFY EXACT PLACEMENT OF ALL DEVICES SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS PRIOR TO FINAL PLACEMENT.

### **ELECTRICAL SPECIFICATION SECTIONS:**

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

- 1.01 SECTION INCLUDES
- A. Grounding and bonding. B. Connection of utilization equipment.
- C. Supports.
- D. Identification
- E. Temporary electric service.
- 1.02 REGULATORY REQUIREMENTS requirements indicated and conform to requirements of ANSI/NFPA 70, and all other applicable codes and ordinances. Contractor must immediately notify Project manager of any conflict between drawings or
- 1.03 PROJECT CONDITIONS
- A. Verify field measurements and circuiting arrangements are as shown on drawings. 1.04 COORDINATION
- A. Obtain and review shop drawings, product data, and manufacturer's instructions for equipment furnished under other Sections to determine connection locations
- B. Sequence rough-in of electrical connections to coordinate with installation and start-up of equipment furnished under other Sections.

#### PART 2 PRODUCTS

- A. Ground Rod: Copper, 3/4 inch diameter x 10 foot length.
- B. Mechanical Connectors: Bronze.
- A. Steel channel: Galvanized or painted steel. B. Miscellaneous Hardware: Treat for corrosion resistance.
- black letters on white background. D. Wire and Cable Markers: Cloth markers or split sleeve
- B. Install ground electrodes at locations indicated.
- C. Provide bonding to meet regulatory requirements. circuits as indicated on drawings.
- E. Make electrical connections to utilization equipment in accordance with equipment manufacturer's instructions. 1. Verify that wiring and outlet rough-in work is
- complete and that utilization equipment is ready for electrical connection, wiring, and energization. 2. Make wiring connections in control panel or in
- interconnecting wiring where indicated or as required. 3. Install and connect disconnect switches, controllers, control stations, and control devices
- 4. Make conduit connections to equipment subject to movement and vibration using flexible conduit. Use
- 5. Install prefabricated cord set where connection with attachment plug is indicated or specified, or use
- attachment plug with suitable strain-relief clamps. 6. Provide suitable strain-relief clamps for cord connections to outlet boxes and equipment connection
- F. Install support systems sized and fastened to accommodate weight of equipment and conduit, including wiring, which they carry.
- beam clamps. masonry, plaster, or gypsum board partitions and masonry walls; self-drilling anchors or expansion
- sheet metal studs; and wood screws in wood construction. 3. Do not fasten supports to piping, ceiling support
- 4. Do not use powder-actuated anchors. Do not drill structural steel members.
- 7. Install freestanding electrical equipment on
- 8. Install surface-mounted cabinets and panelboards with minimum of four anchors. 9. Bridge studs top and bottom with channels to support
- G. Identify electrical distribution and control equipment,
- and loads served, to meet regulatory requirements and as
- 2. Secure nameplates to equipment fronts using screws, rivets, or adhesive, with edges parallel to equipment lines. Secure nameplate to inside face of recessed panelboard doors in finished locations.
- gutters, pull boxes, and at load connections. 1. Use branch circuit or feeder number to identify power and lighting circuits.

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Conduit and fittings.

B. Surface raceway.

D. Electrical boxes.

PART 2 PRODUCTS

plastic conduit.

metallic tubing.

tubing.

PVC jacket.

B. Conduit Fittings:

threaded hubs.

2.04 SERVICE FITTINGS

PART 3 EXECUTION

3.02 INSTALLATION

appearance.

A. Flush Floor Box Covers:

A. Boxes:

2.03 ELECTRICAL BOXES

3. Nonmetallic: NEMA OS 2.

Semi-adjustable, formed steel.

Cover Material: Aluminum.

3.01 EXAMINATION AND PREPARATION

and work areas, prior to rough-in.

locations, unless dimensioned

walls and adjacent piping.

roof jack with pitch pocket.

NFPA 70 requirements

wire or perforated pipe straps.

to weather, and wet locations.

heating appliances.

A. Conduit:

2.01 PRODUCT REQUIREMENTS

be encased in 3" of concrete.

A. Use only specified raceway in the following locations:

2. In or Under Interior Slab: Electrical metallic

tubing, with concrete-tight fittings, rigid PVC

3. Exposed Outdoor Locations: 5'-0" above grade or

lower, rigid steel conduit or intermediate metal

5. Exposed Dry Interior Locations: Electrical metallic

conduit. Above 5'-0" above grade, electrical

metallic tubing. Use threaded or raintight

4. Concealed Dry Interior Locations: Electrical

1. Metal Conduit and Tubing: Galvanized steel.

5. Rigid Steel Conduit: ANSI C 80.1 and UL 6.

1. Metal Fittings and Conduit Bodies: NEMA FB 1.

1. Sheet Metal: NEMA OS 1; galvanized steel.

2. Cast Metal: Aluminum, deep type, gasket cover,

B. Floor Boxes for Installation in Poured Concrete Floors:

2. Duplex Convenience Receptacle: Duplex flap.

3. Provide brass, aluminum finish protective rings,

A. Electrical boxes are shown on drawings, in approximate

1. Obtain verification from Project Manager of floor

box locations, and locations of outlets in offices

A. Arrange conduit to maximize headroom and to present neat

1. Route exposed raceway parallel and perpendicular to

Maintain minimum 6 inch clearance to piping and 12

inch clearance to heat surfaces such as flues and

rating when penetrating walls, floors, and ceilings.

4. Route conduit through roof openings for piping and

ductwork where possible; otherwise, route through

3. Maintain required fire, acoustic, and vapor barrier

5. Group in parallel runs where practical. Use rack

constructed of steel channel. Maintain spacing

between raceways or derate circuit ampacities to

6. Use conduit hangers and clamps; do not fasten with

7. Terminate conduit stubs with insulated bushings.

B. Install electrical boxes as shown on the drawings, and

as required for splices, taps, wire pulling, equipment

1. Use cast outlet box in exterior locations, exposed

2. Locate and install electrical boxes to allow access.

headroom and to present neat mechanical appearance.

3. Locate and install electrical boxes to maximize

5. Provide knockout closures for unused openings

6. Align wall-mounted outlet boxes for switches,

7. Install lighting outlets to locate luminaires as

C. Use recessed outlet boxes in finished areas and where

1. Secure boxes to interior wall and partition studs.

2. Use stamped steel stud bridges for flush outlets in

hollow stud wall, and adjustable steel channel

D. Install floor boxes in accordance with manufacturer's

1. Set boxes level and flush with finish flooring

3. Coordinate masonry cutting to achieve neat openings

fasteners for flush ceiling outlet boxes.

4. Install pull boxes and junction boxes above accessible ceilings or in unfinished areas.

connections and regulatory requirements.

Provide access panels if required.

thermostats, and similar devices.

shown on reflected ceiling plan.

indicated.

for boxes.

instructions.

material. END OF SECTION

split nozzle. Provide brass carpet rings.

2. Flexible Metal Conduit: FSWW-C-566 and UL 1.

3. Liquidtight Flexible Conduit: Flexible conduit with

4. Rigid PVC Plastic Conduit: NEMA TC 2; PVC. Use

Schedule 40, 90 degrees C conduit in conformance

6. Intermediate Metal Conduit: FSWW-C-581 and UL 1242.

B. Size raceways for conductor type installed.

1. Minimum Size Conduit: 1/2 inch.

2.02 CONDUIT AND FITTINGS

with NEC Article 347.

1. Installations In or Under Exterior Concrete Slab, or

Underground: Rigid steel conduit, intermediate

metal conduit; rigid PVC plastic conduit may be used

where corrosive soil conditions exist. Conduits shall

E. Service fittings.

C. Wireway

SECTION 16110 - RACEWAYS

- PART 1 GENERAL

- A. Provide complete and fully operational systems to meet
- specifications and applicable codes or ordinances. B. Furnish products listed by Underwriters Laboratories. Inc. or other testing firm acceptable to authority
- having jurisdiction.
- and requirements.

- 2.01 GROUNDING MATERIALS
- 2.02 BASIC MATERIALS
- C. Nameplates: Engraved three-layer laminated plastic,

#### PART 3 EXECUTION

- 3.01 INSTALLATION A. Install products in accordance with manufacturer's
- instructions.
- D. Provide isolated equipment grounding conductor for
- wiring compartment of pre-wired equipment. Provide
- as indicated.
- liquidtight flexible conduit in greasy, damp or wet

- 1. Fasten hanger rods, conduit clamps, and outlet and junction boxes to steel building structure using
- 2. Use toggle bolts or hollow wall fasteners in hollow walls; expansion anchors or preset inserts in solid anchor on concrete surfaces; sheet metal screws in
- wires, ductwork, mechanical equipment, or conduit.
- 6. Fabricate supports from structural steel or steel
- concrete pads.
- flush-mounted cabinets and panelboards in stud
- 1. Degrease and clean surfaces to receive nameplates.
- H. Install wire markers on each conductor in panelboard

SECTION 16120 - WIRES AND CABLES

- PART 1 GENERAL
- 1.01 SECTION INCLUDES A. Wire and cable
- B. Wiring devices. C. Service fittings
- 1.02 QUALITY ASSURANCE A. Perform Work in accordance with NECA Standard of
- PART 2 PRODUCTS
- 2.01 WIRING METHODS
- A. Concealed Interior Locations: Building wire in raceway. B. Exposed Interior Locations: Building wire in raceway. C. Above Accessible Ceilings: Building wire in raceway or
- armored cable. D. Wet or Damp Interior Locations: Building wire in
- raceway E. Exterior Locations: Building wire in raceways. F. Underground Locations: Building wire in raceway.
- G. Use no wire smaller than 12 AWG for power and lighting circuits. 2.02 WIRE AND CABLE
- A. Building Wire: 1. Copper conductor (except as noted on drawings), 600 volt insulation, THW, THHN/THWN. 8 AWG, and larger stranded conductor; smaller than 8 AWG, solid
- conductor. B. Thermostat and HVAC Unit Control Cable: As required by NEC Article 725. C. Cords: Oil-resistant thermoset insulated multiconductor
- flexible cord with identified equipment grounding conductor, suitable for hard usage in damp locations. 2.03 SERVICE FITTINGS
- A. Receptacle Service Fitting: 1. Comply with UL 498 and NEMA WD1. 2. Color: white
- 3. Device Plate: Type 302, stainless steel, satin
- 4. Configuration: One duplex.
- B. Wall Switches: 1. Quiet type. 2. Comply with UL 20 and NEMA WD1.
- Color: white 4. Device Plate: Type 302, stainless steel, satin
- 5. Configuration: As indicated on plan. PART 3 EXECUTION

conductors has been completed.

- 3.01 EXAMINATION AND PREPARATION A. Verify that interior of building is physically protected from weather. B. Verify that mechanical work which is likely to injure
- 3.02 INSTALLATION A. Neatly train and secure wiring inside boxes, equipment,
- and panelboards. B. Use wire pulling lubricant for pulling 4 AWG and larger
- C. Support cables above accessible ceilings to keep them from resting on ceiling tiles. D. Make splices, taps, and terminations to carry full
- ampacity of conductors without perceptible temperature E. Terminate spare conductors with electrical tape. F. Install wiring devices in accordance with manufacturer's
- instructions. 1. Install wall switches 48 inches above floor to top of switch, OFF position down.
- 2. Install convenience receptacles 18 inches above floor to bottom of box. Install specific purpose receptacles at heights shown on drawings.
- 4. Install cord and attachment plug caps on equipment under the provisions of Section 16050. Size cord for connected load and rating of branch circuit
- protection. G. Install wall plates flush and level. 1. Install decorative plates on switch, receptacle, and blank outlets in finished areas, using jumbo size
- plates for outlets installed in masonry walls. 2. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface-mounted outlets.

END OF SECTION

SECTION 16500 - LIGHTING

- PART 1 GENERAL
- 1.01 SECTION INCLUDES A. Luminaires and lampholders.

2.01 LUMINAIRES AND LAMPHOLDERS

- B. Emergency lighting.
- PART 2 PRODUCTS
- A. Luminaire Schedule: Product requirements for each luminaire and lampholder are specified in luminaire schedule on drawings.
- B. Accessories: Provide required accessories for mounting and operation of each luminaire as required.
- 1. Recessed Luminaires: Provide trim type suitable for ceiling system in which luminaire is installed. 2. Thermal Protection: Provide thermal protection
- devices to meet NFPA 70 requirements. 3. Surface Luminaires: Provide spacers and brackets required for mounting. 4. Prior approval to bid required on all lighting substitutions.
- Prior approval does not constitute acceptance. 2.02 EMERGENCY AND EXIT LIGHTING A. It shall be the responsibility of this contractor to obtain requirements and approval from local code authorities on emergency and exit lighting, and to include all costs for such emergency and exit lighting

#### PART 3 EXECUTION

in the Contractor's bid.

- 3.01 EXAMINATION AND PREPARATION
- A. Examine adjacent surfaces to determine that surfaces are ready to receive work.
- 3.02 INSTALLATION
- A. Install luminaires and accessories in accordance with manufacturers instructions. 1. Install recessed luminaires to permit removal from
- 2. Install lamps in luminaires and lampholders 3. All recessed lay-in ceiling fixtures shall be
- 3.03 ADJUSTING AND CLEANING A. Align luminaires and clean lenses and diffusers at

supported separately at all four corners.

- completion of work. B. Aim adjustable luminaires and lampholders as indicated or as directed. C. Adjust directional arrows on exit signs to meet approval
- D. Clean paint splatters, dirt and debris from installed E. Touch up luminaire finish at completion of work. F. Relamp luminaires which have failed lamps at completion

**END OF SECTION** 

of work.

of authority having jurisdiction.

ZE BI

CONSTRUCTION DOCUMENTS

sue Date: OCTOBER 03, 2020

	Revisions						
No.	Date	Description					

Designed By: T.F.

**ELECTRICAL SPECS** 

**ELECTRICAL LEGEND:** 

20 AMP, 120V. DUPLEX RECEPTACLE +18" A.F.F. (SEE SPECIFICATIONS) TELEPHONE OUTLET +18" A.F.F. (SEE SPECIFICATIONS) J-BOX WITH FLEX CONDUIT.

120/277V. +48" A.F.F. (SEE SPECIFICATIONS) • FLUSH MOUNT LED SURFACE LED

DISCONNECT SWITCH. EXHAUST FAN OR MOTOR. EXIT LIGHT. EMERGENCY FIXTURE.

SPECIAL RECPTACLE. (SEE SPECIFICATIONS & DWGS) DATA RCPT. (SEE SPECIFICATIONS)

HOMERUN WITH HOT, NEUTRAL, AND GROUND WIRES RESPECTIVELY. DATA / TELE. COMBO RCPT. (SEE SPECIFICATIONS) KEYED NOTE REFERENCE GROUND FAULT INTERUPT

KEYED HANDLE SWITCH

3 WAY TOGGLE SWITCH NON FUSED DISCONNECT SWITCH

DIMMER CONTROL

WEATHER RESISTANT 120/277V. +48" A.F.F. (SEE SPECIFICATIONS) 20 AMP, 120V. QUADRAPLEX RECEPTACLE

SURFACE MOUNTED FIXTURE.

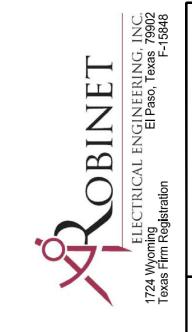
SINGLE POLE TOGGLE SWITCH

WALL MOUNTED FIXTURE.

Project Number: 2015

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LIGHT FIXTURE SCHEDULE

0	MANUFACTURER #	# LAMPS/TYPE	MOUNTING	VOLTS	REMARKS
Α	BY OWNER, INSTALLED BY E.C.	20 w. LED	PENDANT	120	
В	LITHONIA # LHQMLEDR	WITH FIXTURE	UNIVERSAL	120	EMERGENCY BATTERY PACK
С	LITHONIA # ELM	WITH FIXTURE	WALL	120	EMERGENCY BATTERY PACK
D	LITHONIA # AFN	WITH FIXTURE	WALL	120	EMERGENCY BATTERY PACK

# Interior Lighting Compliance Certificate

			Total Allowed Watt
1-Dining: Family		2000	0.95
	Area Category	Floor Area (ft2)	Allowed Watts / ft2
	A	В	С
Allowed Interior Lighti	ng Power		
Additional Efficiency F Unspecified	Package(s)		
Construction Site: HORIZON, TX	Owner/Agent:	Designe	r/Contractor:
Project Type:	New Construction		
Project Title:	KUNG FU NOODLE		
Energy Code:	2015 IECC		

Linear Fluorescent 1: B: EXIST. FLUORESCENT: 48" T8 28W (Super T8): Electr

ior Lighting PASSES: Design 47% better than code

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory

EXISTING BUILDING SERVICE LOAD CALCULATION	NS	
EXISTING 120/240 VOLT 1 PHASE 3 WRE 600 AMP SERVICE  1. ESTIMATED EXISTING CALCULATED LOAD 2. ESTIMATED HOUSE PANEL 3. EXISTING PANEL "J" = 18,590 W. 4. EXISTING PANEL "K" = 16,050 W.  TOTAL WATTS TOTAL AMPS  ■ 98,984 ■ 412.4		= 14,000 W. = 4,000 W

POWER FLOOR PLAN

 $\sqrt{\text{E1.0}} \int \frac{-}{\text{SCALE: 1/4"=1'-0"}}$ 

| EXISTING 3 TON AC

EXISTING E.F. 1

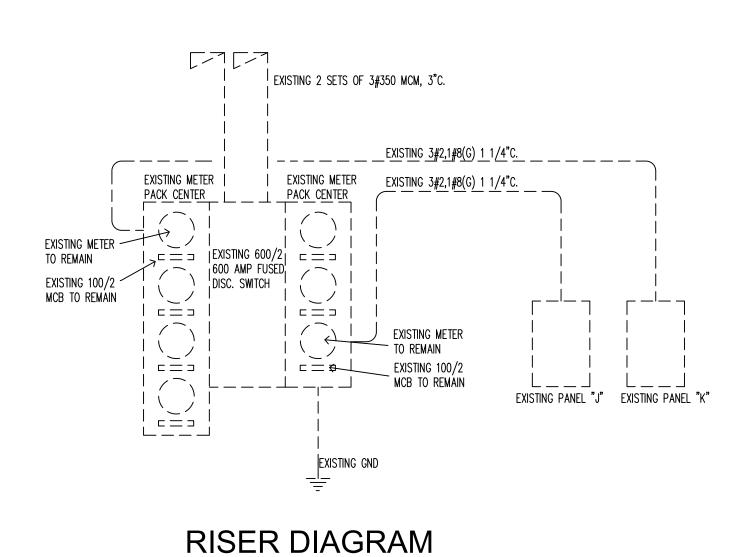
EXISTING PNL K

| EXISTING 3 TON AC | UNIT TO REMAIN

EXISTING REMAIN

# PANEL SUMMARIES:

(4) EXISTING PANEL "J" SUMMARY		EXISTING PANEL "K" SUMMARY	
120/240V 1 PHASE, 3 WIRE, 125 AMP MLO		4 120/240V 1 PHASE, 3 WIRE, 125 AMP MLO	
DESCRIPTION	LOAD	DESCRIPTION	LOAD
1. EXISTING 3 TON AC UNIT	=5,760W	1. EXISTING 3 TON AC UNIT	=5,760W
2. EXISTING RCPTS	=3,720W	2. EXISTING RCPTS	= 900W
3. EXISTING LTG.	=800 W	3. EXISTING LTG.	= 240W
4. EXISTING EXH. FAN	=1,920W	4. EXISTING ELEC. WTR. HTR	=1,500W
5. EXISTING MAU	=1,920W	5. EXISTING SIGN	= 720W
6. EXISTING EQUIPMENT	= 720W	6. NEW LTG	= 450W
7. EXISTING SIGN	= 720W	7. NEW ICE MAKER	= 960W
8. NEW LTG	= 150W	8. NEW WALK IN COOLER	=1,920W
9. NEW KIT. EQUIP.	=2,880W	9. NEW WALK IN FREEZER	=3,660W
TOTAL WATTS	= 18,590	TOTAL WATTS	= 16,050
TOTAL AMPS	= 77.4	TOTAL AMPS	= 66.8



EXISTING PNL J

TAKE DUT

EXISTING LTG TO REMAIN

WALK IN LTG.

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

$\sqrt{\chi}$	Z E	QUIPMENT SCHE	E D U L E		
NO.	QTY.	ITEM DESCRIPTION	MANUFACTURER	MODEL NO.	REMARKS
1.	1	ICE MAKER	MANITOWOC	IYT0750A	W/ICE STORAGE BIN
2.	1	2 DOOR UNDERCOUNTER FRIG.	HOSHIZAKI	CRMR48	PROVIDE WORKING TOPS
3.	2	3 DOOR UNDERCOUNTER FRIG.	HOSHIZAKI	CRMR72	
4.	1	GAS FLOOR FRYER	CENTAUR	CGF-4	
5.	1	STOCK POT RANGE, 2 BURNERS	CENTAUR	CSP-2-N	
6.	1	4 BURNERS WOK RANGE			EXISTING
7.	1	2 DOOR SANDWICH/SALAD PREP	TURBO AIR	TST-48SD-08S-N-CL	
8.	1	WALKING-IN-FREEZER			
9.	1	WALKING-IN-COOLER			
10.	1	12' LONG KITCHEN HOOD			
11.	1	WORK TABLE	N/A	TBD BY OWNER	
12.	1	SINGLE SINK	N/A		
13.	1	3-COMPARTMENT SINK	N/A		
1./					

NOTE: ALL APPLIANCES AND FIXTURES SHALL BE LISTED, LABELED AND INSTALLED ACCORDING TO THE MANUFACTURERS INSTALLATION INSTRUCTIONS OR THE ADOPTED CODES WHICHEVER IS MORE RESTRICTIVE.

### **ELECTRICAL KEYED NOTES:**

- 1 PROVIDE EGRESS EXIT DISCHARGE ILLUMINATION PER IFC 1006 REQUIREMENTS.
- (2) MOUNT RECEPTACLE AT +24" GFI.
- 3 PROVIDE MEANS OF CIRCUIT & EQUIPMENT
- PROTECTION PER NEC 440.21.
- PROVIDE A COMPLETE PANEL DIRECTORY PER NEC 408.4 REQUIREMENTS. 5 ALL SINGLE PHASE 125 VOLT THROUGH 250 VOLT RECEPTACLES, 50 AMPS OR LESS AND ALL THREE PHASE RECEPTACLES, 100 AMPS OR LESS TO BE
- 6 3/4" CONDUIT WITH PULL STRING UP TO ACCESSIBLE CEILING WITH NYLON BUSHINGS.
- 7) AT COLD STORAGE AREA AND EXTERIOR TO INTERIOR INSTALLATIONS, THE RACEWAY OR SLEEVE SHALL BE FILLED WITH AN APPROVED MATERIAL TO PREVENT CONDENSATION OR CIRCULATION OF WARM AIR TO A COLDER SECTION OF THE RACEWAY OR SLEEVE PER NEC 300.7 (A)

PROVIDED WITH GFCI PROTECTION PER NEC 210.8(B)

- 8) EMERGENCY BATTERY PACK IN LIGHT FIXTURE TO BE WIRED INTO NON SWITCHED LIGHTING CIRCUITIN AREA.
- EXISTING RECEPTACLE TO BE REMOVED AND REPLACED

  WATH OF STATE WITH GFCI RECEPTACLE.
- EXISTING RECEPTACLE TO BE REMOVED. RESPLICE WIRING TO KEEP CIRCUIT CONTINUOUS.
- (11) EXISTING RECEPTACLE TO BE REMAIN.
- 2#12,1#12(G) 1/2"C. TO EXISTING PANEL "J" PROVIDE NEW 20/1 CIRCUIT BREAKER IN PANEL SPACE.
- 2#12,1#12(G) 1/2"C. TO EXISTING PANEL "K" PROVIDE NEW 20/1 CIRCUIT BREAKER IN PANEL SPACE.
- 2#12,1#12(G) 1/2"C. TO EXISTING PANEL "K" PROVIDE NEW 20/2 CIRCUIT BREAKER IN PANEL SPACE. EXISTING 2X4 LAY IN FLUORESCENT TO BE REMOVED.

  RE-USE EXISTING LIGHTING CIRCUIT TO CONNECT INTO NEW LED PENDANT FIXTURES.
- FIRE MARSHAL REQUIRES DOOR TO BE PERMANENTLY STENCILED "ELECTRICAL".

CONSTRUCTION DOCUMENTS

CONSTRUCTION DOCOMENTS						
Issue Date: OCTOBER 03, 2020						
Revisions						
No.	Date	Description				
Droiget Numbers 2015						

Project Number: 2015 Designed By: T.F.

Sheet Title:

POWER/LIGHTING PLAN