BONCHON & BROWN DONKATSU

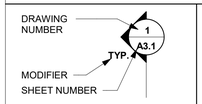
CONSTRUCTION DOCUMENTS
OCTOBER 11, 2024

ABBREVIATIONS

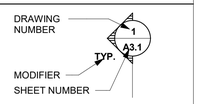
#	POUND(S) or NUMBER	IECC	INTERNATIONAL ENERGY CONSERVATION CODE	TOS	TOP OF STEEL
&	AND			TPD	TOILET PAPER DISPENSER
+/-	PLUS OR MINUS	IN	INCH	TPO	THERMOPLASTIC POLYOLEFIN
<	ANGLE OR LESS THAN	INCL	INCLUDING	TYP	TYPICAL
>	GREATER THAN	INSUL	INSULATION OR INSULATED		
@	AT	INT	INTERIOR	U	U-VALUE
		IPC	INTERNATIONAL PLUMBING CODE	UG	UNDERGROUND
ACT	ACOUSTICAL CEILING TILE			UNFIN	UNFINISHED
ADJ	ADJACENT or ADJUSTABLE	JAN	JANITOR	UNO	UNLESS NOTED OTHERWISE
AFF	ABOVE FINISHED FLOOR	JC	JANITOR'S CLOSET	UOS	UNLESS OTHERWISE SPECIFIED
ALT	ALTERNATE	JT	JOINT	USGBC	UNITED STATES GREEN BUILDING COUNCIL
ALUM	ALUMINUM				
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	KITCH	KITCHEN		
		KPL	KICK PLATE	VB	VAPOR BARRIER
ARCH	ARCHITECTURAL OR ARCHITECT			VCT	VINYL COMPOSITION TILE
ASHRAE	AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS	LAB.	LABORATORY	VERT	VERTICAL
		LAM.	LAMINATE	VEST	VESTIBULE
		LAV	LAVATORY	VOL	VOLUME
AUTO	AUTOMATIC	LEED	LEADERSHIP IN ENERGY EFFICIENT DESIGN	VWC	VINYL WALL COVERING
AWB	AIR AND WEATHER BARRIER				
		LS	LANDSCAPE	W	WEST OR WOMEN
BD	BOARD	LSL	LAMINATED STAND LUMBER	W/	WITH
BET	BETWEEN	LT	LIGHT	W/C	WATER TO CEMENT RATIO
BH	BULKHEAD	LVL	LAMINATED VENEER LUMBER	W/IN	WITHIN
BIA	BRICK INSTITUTE OF AMERICA	LW	LIGHT WEIGHT	W/O	WITHOUT
BIT	BITUMINOUS			WC	WATER CLOSET
BLDG	BUILDING	M	MEN or METER	WD	WOOD
BM	BEAM OR BENCH MARK	MAS	MASONRY	WF	WIDE FLANGE
BO	BOTTOM OF	MATL	MATERIAL	WIN	WINDOW
BOT	BOTTOM	MAX	MAXIMUM	WP	WATERPROOF(ING)
BR	BEDROOM	MBM	METAL BUILDING MANUFACTURER	WR	WATER RESISTANT
BRG	BEARING	MDO	MEDIUM DENSITY OVERLAY	WSCT	WAINSCOT
BSMT	BASEMENT	MDP	MEDIUM DENSITY PARTICLEBOARD	WWF	WELDED WIRE FABRIC
CAB	CABINET	MECH	MECHANICAL		
CBU	CEMENTITIOUS BACKER BOARD	MFR	MANUFACTURER		
CG	CORNER GUARD	MIN	MINIMUM OR MINUTE		
CJ	CONTROL JOINT	MIR	MIRROR		
CL	CENTERLINE OR CLOSET	MISC	MISCELLANEOUS		
CLG	CEILING	MM	MILIMETER		
CLO	CLOSET	MO	MASONRY OPENING (NOMINAL)		
CLR	CLEAR	MPH	MILES PER HOUR		
CM	CENTIMETER	MR	MOISTURE RESISTANT		
CMU	CONCRETE MASONRY UNIT	MTD	MOUNTED		
COL	COLUMN	MTL	METAL		
CONC	CONCRETE	MVET	MOISTURE VAPOR EMMISSIVITY TEST		
CONN	CONNECTION				
CONSTR.	CONSTRUCTION				
CONTN	CONTINUOUS	N	NORTH		
CORR	CORRIDOR	NIC	NOT IN CONTRACT		
CPT	CARPET	NO. or #	NUMBER		
CT	CERAMIC TILE	NOM	NOMINAL		
CTBB	CEMENTITIOUS TILE BACKER BOARD	NTS	NOT TO SCALE		
CTR	CENTER OR COUNTER	O/O	OUT TO OUT (DIMENSION)		
CTRTOP	COUNTER TOP	OC	ON CENTER		
		OD	OUTSIDE DIAMETER (DIM.)		
DBL	DOUBLE	OD	OVERFLOW DRAIN		
DEMO	DEMOLISH or DEMOLITION	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED		
DEPT	DEPARTMENT				
DET	DETAIL	OFF	OFFICE		
DF	DRINKING FOUNTAIN	OFI	OWNER FURNISHED AND INSTALLED		
DIA	DIAMETER				
DIM	DIMENSION	OH	OPPOSITE HAND		
DISP	DISPENSER	OPG	OPENING		
DN	DOWN	OPP	OPPOSITE		
DR	DOOR	OSB	ORIENTED STAND BOARD		
DS	DOWNSPOUT	OTS	OPEN TO STRUCTURE		
DTL	DETAIL				
DW	DISHWASHER	PART	PARTITION		
DWG	DRAWING	PC	PRECAST		
		PERIM	PERIMETER		
(E)	EXISTING	PL	PLATE		
E	EAST	PLAM	PLASTIC LAMINATE		
EA	EACH	PLYWD	PLYWOOD		
EJ	EXPANSION JOINT	POLY	POLYETHELENE		
ELEC	ELECTRICAL	POLYISO	POLYISOCYANURATE		
ELEV	ELEVATOR OR ELEVATION	PR	PAIR		
EMER	EMERGENCY	PREFIN	PREFINISHED		
ENCL	ENCLOSURE	PT	PRESERVATIVE TREATED OR PAVER TILE		
ENG	ENGINEER				
EPDM	ETHYLENE PROPYLENE DIENE MONOMER	PTD	PAINTED		
		PVC	POLYVINYL CHLORIDE		
EQ	EQUAL				
EQUIP	EQUIPMENT	QT	QUARRY TILE		
EWC	ELECTRC WATER COOLER				
EXH	EXHAUST	R	RISER OR RADIUS		
EXIST	EXISTING	R	R-VALUE		
EXP	EXPANSION	R&S	ROD AND SHELF		
EXT	EXTERIOR	RB	RUBBER BASE		
		RCP	REFLECTED CEILING PLAN		
FA	FIRE ALARM	RD	ROOF DRAIN		
FACP	FIRE ALARM CONTROL PANEL	RE or REF	REFER TO or REFERENCE		
FAP	FIRE ALARM PANEL	REC	RECESS(ED)		
FBS	FULL BUILDING SECTION	RECT	RECTANGULAR		
FD	FLOOR DRAIN	REF	REFRIGERATOR		
FDC	FIRE DEPARTMENT CONNECTION	REINF	REINFORCED		
FDN	FOUNDATION	REQD	REQUIRED		
FE	FIRE EXTINGUISHER	RESIL	RESILIENT		
FEC	FIRE EXTINGUISHER CABINET	RFS	ROOM FINISH SCHEDULE		
FG	FIBERGLASS	RM	ROOM		
FHC	FIRE HOSE CABINET	RO	ROUGH OPENING		
FIN	FINISH(ED)	RTU	ROOF TOP UNIT		
FIXT	FIXTURE	RUB	RUBBER		
FLR	FLOOR				
FLUOR.	FLUORESCENT	S	SOUTH		
FO	FACE OF	SC	SOLID CORE OR SOLDIER COURSE		
FOC	FACE OF CONCRETE	SCHED	SCHEDULE		
FOS	FACE OF STUDS	SECT	SECTION		
FOUND.	FOUNDATION	SF	SQUARE FEET OR STOREFRONT		
FP	FIREPROOF(ING)	SH	SHELF		
FPHB	FROST PROOF HOSE BIB	SHGC	SOLAR HEAT GAIN COEFFICIENT		
FRT	FIRE RETARDANT TREATED	SHT	SHEET		
FT	FOOT OR FEET	SIM	SIMILAR		
FTG	FOOTING	SMACNA	SHEETMETAL AND AIR CONDITIONING CONTRACTORS ASSOCIATION		
FURR	FURRING				
		SOG	SLAB ON GRADE		
GA	GAUGE	SPEC	SPECIFICATION(S)		
GA	GYPSUM ASSOCIATION	SPEC'D	SPECIFIED		
GALV	GALVANIZED	SPF	SPRAY POLYURETHENE FOAM		
GB	GRAB BAR	SQ	SQUARE		
GBCI	GREEN BUILDING CERTIFICATION INSTITUTE	SS or S/S	STAINLESS STEEL		
		STA	STATION		
GC	GENERAL CONTRACTOR	STD	STANDARD		
GD	GARBAGE DISPOSAL	STL	STEEL		
GEOTECH	GEOTECHNICAL	STOR	STORAGE		
GI	GALVANIZED IRON	STRUCT	STRUCTURE or STRUCTURAL		
GL	GLASS or GLAZING	SUB	SUBCONTRACTOR		
GLU LAM	GLUE LAMINATED	SUBS	SUBSTITUTION		
GND	GROUND	SUSP	SUSPEND(ED)		
GR	GRADE	SV	SHEET VINYL		
GWB	GYPSUM WALLBOARD	SYM	SYMMETRICAL		
GYP	GYPSUM	SYN	SYNTHETIC		
		SYS	SYSTEM		
HB	HOSE BIB				
HC	HOLLOW CORE or HANDICAPPED	T or TLT	TOILET		
HDO	HIGH DENISTY OVERLAY	T&G	TONGUE AND GROOVE		
HDWR	HARDWARE	TB	TOWEL BAR		
HGT	HEIGHT	TBD	TO BE DETERMINED		
HM	HOLLOW METAL	TCA or TCNA	TILE COUNCIL OF NORTH AMERICA		
HORIZ	HORIZONTAL				
HR	HOUR	TEL	TELEPHONE		
HT	HEIGHT	TER	TERRAZZO		
		TH	THRESHOLD		
IBC	INTERNATIONAL BUILDING CODE	THRU	THROUGH		
ID	INSIDE DIAMETER (DIM.)	TO	TOP OF		

NOTE: SEE LEGENDS, DOOR SCHEDULE, ROOM FINISH SCHEDULE, AND CONSULTANTS' DRAWINGS FOR ADDITIONAL ABBREVIATIONS.

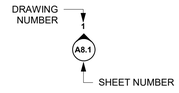
DRAFTING SYMBOLS



BUILDING SECTION

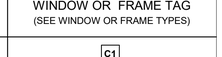


WALL SECTION OR DETAIL

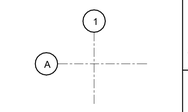


ELEVATION TAG

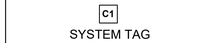
DOOR TAG
(SEE DOOR SCHEDULE)



WINDOW OR FRAME TAG
(SEE WINDOW OR FRAME TYPES)

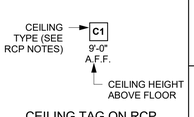


COLUMN GRIDS

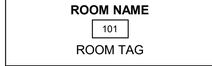


SYSTEM TAG
(SEE SYSTEMS NOTES FOR DESCRIPTION)

TOILET ACCESSORY TAG
(SEE TOILET ACCESSORIES SCHEDULE)



CEILING TAG ON RCP



ROOM TAG

SHEET NOTES
(SEE LEGEND ON SHEET)

PARTITION TAG
(SEE INTERIOR PARTITION TYPES)

MATERIALS LEGEND

BATT INSULATION	MORTAR OR STUCCO
BLOWN-IN INSULATION	PLYWOOD OR OSB
BRICK	STONE OR SYNTHETIC STONE
CONCRETE	RIGID INSULATION
CONCRETE MASONRY	WALL OR PARTITION
EARTH	WOOD FINISH LUMBER
GRAVEL	WOOD DIMENSION LUMBER
GYPSUM BOARD	WOOD BLOCKING

VICINITY MAP

PROJECT DIRECTORY

LEECOOP, LLC. — OWNER

7250 S. SICILY CT.
AURORA, CO 80016
CONTACT: HENRY LEE
EMAIL: HLEE16868@GMAIL.COM

VFLA ARCHITECTS, INC. — ARCHITECT

419 CANYON AVE., SUITE 200
FORT COLLINS, COLORADO 80521
PHONE: 970.224.1191
CONTACT: MARRI WOOD
EMAIL: MARRI@VFLA.COM

NEWERA CONSTRUCTION, LLC. — GENERAL CONTRACTOR

3314 ADOBE CT.
COLORADO SPRINGS, CO 80907
PHONE: 719.358.3318
CONTACT: ZACH VANDYKE
EMAIL: ZACH@NEWERACONSTRUCTIONCO.COM

LARSEN STRUCTURAL DESIGN — STRUCTURAL ENGINEER

320 MAPLE STREET, SUITE 120
FORT COLLINS, CO 80521
PHONE: (970) 568-3355
CONTACT: BLAKE LARSEN
EMAIL: BLAKE@LARSENSD.COM

INTEGRATED MEP, LLC — MECHANICAL ENGINEER

320 MAPLE ST, SUITE 110
FORT COLLINS, CO 80521
PHONE: (970) 556-0570
CONTACT: THOMAS SEGELHORST
EMAIL: THOMAS-S@INT-MECH.COM

APS INC. ELECTRICAL ENGINEERS — ELECTRICAL ENGINEER

7726 PARK RIDGE CIRCLE
FORT COLLINS, CO 80528
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CONTACT: RANDY BREMMER
EMAIL: RANDYB@APSINC.BIZ

PROJECT INFORMATION

PROJECT DESCRIPTION
THE PROJECT CONSISTS OF AN ALTERATION OF AN EXISTING 4,694 S.F. RESTAURANT TENANT SPACE FOR A NEW RESTAURANT TENANT SPACE. EXISTING KITCHEN AND DINING AREA WILL BE MODIFIED AND NEW EXIT DOOR WILL BE ADDED. EXISTING BAR TO BE MODIFED TO BECOME A NEW KITCHEN.

PROJECT NOTES
1. THE GC IS RESPONSIBLE FOR OBTAINING ALL PERMITS, PAYMENT OF ALL FEES AND SUBMITTING ALL APPLICATIONS ASSOCIATED WITH THE PROJECT CONSTRUCTION PER THE AHJ.

2. UPON COMPLETION OF PROJECT, GC SHALL OBTAIN ALL FINAL INSPECTIONS AS REQUIRED BY LOCAL JURISDICTIONS AND FURNISH ARCHITECT / OWNER WITH EVIDENCE OF ALL SUCH INSPECTIONS AND CERTIFICATES OF OCCUPANCY.

3. ALL MEANS OF EGRESS AND FIRE PROTECTION SHALL BE MAINTAINED AT ALL TIMES AND ANY SHUT DOWN OF LIFE SAFETY OR BUILDING SYSTEMS SHALL BE APPROVED AND COORDINATED IN ADVANCE WITH THE ARCHITECT, OWNER AND LOCAL BUILDING DEPARTMENT.

4. VENDOR OR OWNER FURNISHED AND INSTALLED ITEMS AND SYSTEMS:
DESIGN/BUILD VENDORS CONTRACTED DIRECTLY TO THE OWNER SHALL DESIGN AND INSTALL THE FOLLOWING SYSTEMS WHICH ARE NOT INCLUDED IN THE CONTRACT FOR CONSTRUCTION BETWEEN THE GENERAL CONTRACTOR AND THE OWNER. THE G.C. SHALL, HOWEVER, COORDINATE WITH THESE VENDORS TO INCLUDE THEIR INSTALLATIONS WITHIN THE OVERALL CONSTRUCTION SCHEDULE AND PROVIDE THEM ACCESS TO THE SITE AS NEEDED. THE G.C. AND OWNER SHALL REVIEW, COORDINATE, AND CONFIRM THE BELOW LIST FOR ACCURACY. NOTE THAT EMPTY BACK BOXES AND EMPTY CONDUIT AS SHOWN ON THE ELECTRICAL DRAWINGS TO ACCOMMODATE VENDOR-FURNISHED LOW VOLTAGE SYSTEMS IS INCLUDED IN THE CONTRACT FOR CONSTRUCTION:
- COMMUNICATIONS, PHONE, DATA AND CABLE OR SATELLITE TV SYSTEMS INCLUDING ALL WIRING AND DEVICES.
- AUDIO VISUAL SYSTEMS INCLUDING ALL WIRING AND DEVICES
- NON-CODE REQUIRED, WAYFINDING, AND BUILDING MOUNTED SIGNAGE PROCUREMENT AND INSTALLATION
- SECURITY SYSTEMS INCLUDING ALL WIRING AND DEVICES
- OTHER VENDOR OR OWNER FURNISHED AND INSTALLED ITEMS AND SYSTEMS FOR THE PROJECT.

5. SIGNAGE:
- ALL INTERIOR AND EXTERIOR CODE REQUIRED SIGNAGE SHALL BE INSTALLED IN CONTRACT BY THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL COORDINATE SCHEDULING OF THE SIGNAGE INSTALLATION TO ENSURE THAT CODE-REQUIRED SIGNAGE IS IN PLACE BEFORE C.O. INSPECTION. SEE SHEET G0.4 FOR LIST OF CODE REQUIRED SIGNAGE.
- NON-CODE REQUIRED, WAYFINDING, AND BUILDING MOUNTED SIGNAGE SHALL BE DESIGNED BY OTHERS.

6. ALL DIMENSIONS ARE FROM FACE OF STUD, OR FINISHED FACE OF EXISTING PARTITION, UNLESS NOTED OTHERWISE. DO NOT SCALE THE DRAWINGS. GC IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES, CONFLICTS OR DEVIATIONS REQUIRED IMMEDIATELY UPON DISCOVERY.

7. TESTING: QUALITY CONTROL TESTING SHALL BE CONDUCTED BY AN INDEPENDENT TESTING AGENCY EMPLOYED BY THE OWNER. AT A MINIMUM THE FOLLOWING TESTS SHALL BE CONDUCTED, ALTHOUGH ADDITIONAL TESTS MAY BE CONTRACTED WITH THE TESTING AGENCY B Y THE OWNER. THE GENERAL CONTRACTOR SHALL COORDINATE AND SCHEDULE THE TESTING BY THE TESTING AGENCY:
- CONCRETE COMPRESSIVE STRENGTH & SLUMP
- CONCRETE SLAB WATER VAPOR EMISSIVITY MVER TEST (LBS OF WATER/24 HRS/1000 S.F.)
- CONCRETE SLAB WATER VAPOR EMISSIVITY RELATIVE HUMIDITY TEST (% RH)
- CONCRETE SLAB PH
- SPECIAL INSPECTIONS AS REQUIRED BY THE STRUCTURAL ENGINEER'S NOTES, BY THE BUILDING PERMIT, OR OTHERWISE REQUIRED BY CODE.

8. DRYING OF CONCRETE SLABS:
THE GC SHALL PROVIDE AN ENVIRONMENT WITHIN THE BUILDING DURING CONSTRUCTION TO PROMOTE THE DRYING OF CONCRETE SLABS TO ACCEPTABLE LEVELS BEFORE ADHERED FLOORING MATERIALS ARE TO BE INSTALLED. OPTIMUM DRYING CONDTIONS ARE A MINIMUM AIR TEMPERATURE OF 70 DEGREES F. AND A MAXIMUM RH OF 30% MAINTAINED 24/7. PROPANE FIRED HEATERS AND PERMANENT HVAC EQUIPMENT SHALL NOT BE USED TO PROVIDE TEMPORARY HEAT DURING CONSTRUCTION.

9. OWNER STOCK OF MATERIALS:
THE G.C. SHALL PROVIDE THE OWNER WITH EXTRA FINISH MATERIALS FOR MAINTENANCE/REPLACEMENT PURPOSES. FOR EACH, PROVIDE A MINIMUM OF 1% OF THE AMOUNT OF INSTALLED MATERIAL OR ONE FULL PACKAGE OF THE MATERIAL AS DELIVERED (WHICHEVER IS GREATER) FOR EACH COLOR/STYLE OF MATERIAL USED. MATERIALS SHALL INCLUDE, BUT NOT BE LIMITED TO:
- ACOUSTIC CEILING TILE
- PORCELAIN FLOOR TILE
- QUARRY FLOOR TILE AND WALL BASE
- RUBBER WALL BASE AND ADHESIVE USED
- PAINT (1 UNOPENED GALLON OF EACH COLOR FOR EACH TYPE OF PAINT USED)
- WALL COVERING AND THE ADHESIVE USED

DESIGN/BUILD SYSTEMS:
THE FOLLOWING SYSTEMS SHALL BE FURNISHED AND INSTALLED IN CONTRACT BY DESIGN/BUILD SUBCONTRACTORS UNDER THE G.C.
- ANY MODIFICATIONS TO THE EXISTING FIRE SPRINKLERS (TYPE 13)
- ANY MODIFICATIONS TO THE EXISTING FIRE ALARM
- EMERGENCY RESPONDER RADIO AMPLIFICATION SYSTEM:

DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY THOSE DESIGN-BUILD SUBCONTRACTORS AND SUBMITTED DIRECTLY TO THE LOCAL FIRE DEPARTMENT AS DEFERRED SUBMITTALS:

BID ALTERNATES:
1. VAPOR EMISSIVITY AND PH MITIGATION FOR CONCRETE SLABS ON GRADE AND ON DECK (TO BE USED AT OWNER'S OPTION FOR SLABS WHICH FAIL VAPOR AND PH TESTING). PROVIDE BOTH A TOTAL COST FOR ALL CONCRETE SLABS AND A COST PER S.F. FOR THIS TREATMENT:
   - BEAD BLASTING
   - APPLICATION OF EPOXY-BASED SEALER (KOESTER VAP I 2000 SYSTEM WITH CAP 1 PRIMER LEVEL PRO-E & VAP 1 PRO-FINISH TROWELABLE UNDERLAYMENT OR APPROVED SUBSTITUION)
2. PH ONLY MITIGATION FOR CONCRETE SLABS ON GRADE AND ON DECK (TO BE USED AT OWNER'S OPTION FOR SLABS WHICH PASS VAPOR TESTING BUT FAIL PH TESTING). PROVIDE BOTH A TOTAL COST FOR ALL CONCRETE SLABS AND A UNIT COST PER S.F. FOR THIS TREATMENT: MILD CARBONIC ACID SUCH AS CLUB SODA IS AN ACCEPTABLE PH NEUTRALIZER.
3. EMERGENCY RADIO AMPLIFICATION SYSTEM:
   THE BASE BID SHALL INCLUDE ONLY THE INITIAL TESTING TO DETERMINE IF THE SYSTEM IS NECESSARY. THE ALTERNATE, WHICH MAY BE ACCEPTED IF THE BUILDING FAILS THE INITIAL TESTING, WOULD INSTALL THE COMPLETE SYSTEM AND CONDUCT THE FINAL TESTING TO DEMONSTRATE OPERATION OF THE SYSTEM TO THE LOCAL FIRE DEPARTMENT'S SATISFACTION.

SHEET INDEX

PROJECT NUMBER: 2024-53

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
FORT COLLINS, CO 80524

VFLA
ARCHITECTURE + INTERIORS

419 CANYON AVE STE 200, FORT COLLINS, CO 80521
970.224.1191 | WWW.VFLA.COM

STRENGTH IN DESIGN
STRENGTH IN PARTNERSHIP
STRENGTH IN COMMUNITY

PROJECT TEAM

STRUCTURAL ENGINEER:
LARSEN STRUCTURAL DESIGN

MECHANICAL ENGINEER:
INTEGRATED MEP, LLC.

PLUMBING ENGINEER:
INTEGRATED MEP, LLC.

ELECTRICAL ENGINEER:
APS, INC.

DESIGN DEVELOPMENT

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
CONSTRUCTION DOCUMENTS	10-11-2024

SEAL:

SHEET INDEX

DRAWING NUMBER:

G0.1

C:\Users\mann\Documents\Bonchon & Saady _ R24_mann9GPAD.rvt
10/11/2024 11:44:13 AM

OUTLINE SPECIFICATIONS

DIVISION 01 GENERAL REQUIREMENTS:
PROJECT SUMMARY
- THE PROJECT CONSISTS OF AN ALTERATION OF AN EXISTING 4,694 S.F. RESTAURANT TENANT SPACE FOR A NEW RESTAURANT TENANT SPACE. EXISTING KITCHEN AND DINING AREA WILL BE MODIFIED AND NEW EXIT DOOR WILL BE ADDED. EXISTING BAR TO BE MODIFED TO BECOME A NEW KITCHEN.
- THIS IS NOT A LEED PROJECT.

GENERAL CONTRACTOR
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COMPLETION OF ALL WORK DEFINED BY THE CONTRACT. BOTH THE DRAWINGS AND SPECIFICATIONS ISSUED BY THE ARCHITECT ARE CONTRACT DOCUMENTS AND PART OF THE CONTRACT. A COPY OF THE CONTRACT DOCUMENTS ARE TO BE KEPT AT THE JOB SITE AT ALL TIMES, AND ANY CHANGES MUST BE NOTED THEREON BY THE GENERAL CONTRACTOR AT THE TIME ANY CHANGE OR DEVIATION IS PERFORMED. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERING AN "AS BUILT" SET OF RECORD DRAWINGS TO THE OWNER AT THE END OF THE PROJECT DOCUMENTING ALL CHANGES DURING THE COURSE OF CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AS THEY RELATE TO THE WORK AND SHALL ADVISE THE OWNER AND ARCHITECT OF ANY CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE ACCURACY OF FIELD MEASUREMENTS AND EXISTING CONDITIONS.

CONTRACT
- NO BID BONDS OR MATERIALS & PERFORMANCE BONDS WILL BE REQUIRED. THE OWNER IS NOT A TAX EXEMPT ORGANIZATION. GENERAL CONDTIONS SHALL INCLUDE CITY SALES AND USE TAX, AS WELL AS ALL OTHER STATE TAXES.

ALLOWANCES
- INTERIOR FINISHES ARE TO BE SELECTED BY OWNER. COORDINATE ALLOWANCES FOR INTERIOR FINISHES WITH OWNER.

CITY OF FT. COLLINS LOCAL AMENDMENTS:
THE FOLLOWING ARE EXCERPTS FROM THE CITY OF FORT COLLINS LOCAL AMENDMENTS TO THE 2021 IBC AND IECC. THESE ARE NOT, HOWEVER, ALL-INCLUSIVE. IT SHALL BE THE RESPONSIBILITY OF THE GC AND HIS SUBCONTRACTORS TO BE FAMILIAR WITH AND COMPLY WITH ALL APPLICABLE LOCAL CODES AND AMENDMENTS.
- **BUILDING CONSTRUCTION:** THE PUBLIC RIGHT-OF-WAY SHALL NOT BE USED FOR STAGING OR STORAGE OF MATERIALS OR EQUIPMENT ASSOCIATED WITH THE DEVELOPMENT, NOR SHALL IT BE USED FOR PARKING BY ANY CONTRACTORS, SUBCONTRACTORS, OR OTHER PERSONNEL WORKING FOR OR HIRED BY THE DEVELOPER TO CONSTRUCT THE DEVELOPMENT. THE DEVELOPER WILL NEED TO FIND A LOCATION ON PRIVATE PROPERTY TO ACCOMMODATE ANY NECESSARY STAGING AND/OR PARKING NEEDS ASSOCIATED WITH THE COMPLETION OF THE DEVELOPMENT. INFORMATION ON THE LOCATION OF THESE AREAS WILL BE REQUIRED TO BE PROVIDED TO THE CITY AS A PART OF THE DEVELOPMENT CONSTRUCTION PERMIT APPLICATION.
- **CONSTRUCTION WASTE MANAGEMENT PLAN (IBC 3602.1):** FOR REMODELS AND ADDITIONS OVER 2,500 S.F. AND FOR ALL NEW BUILDINGS, A CONSTRUCTION WASTE MANAGEMENT PLAN ACCEPTABLE TO THE BUILDING OFFICIAL SHALL BE PREPARED BY THE G.C. AND SUBMITTED TO THE FORT COLLINS BUILDING DEPARTMENT AT THE TIME OF APPLICATION FOR PERMIT. THE CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE IMPLEMENTED AND CONSPICUOUSLY POSTED ON THE CONSTRUCTION SITE. ALL CONCRETE, ASPHALT, MASONRY, WOOD, METALS, AND CARDBOARD SHALL BE RECYCLED. COMPLIANCE SHALL BE CERTIFIED BY INSPECTION, DOCUMENTATION, AND SIGNED FINAL CONSTRUCTION WASTE MANAGEMENT PLANS. SUBSTANTIVE CHANGES TO THE PLAN SHALL BE SUBJECT TO PRIOR APPROVAL BY THE BUILDING OFFICIAL. ALL ROOFING PERMITS ARE REQUIRED TO SUBMIT A FINAL WASTE MANAGEMENT PLAN AND DOCUMENTATION.
- **BUILDING DEMOLITIONS (IBC 3602.1.1):** BUILDINGS OR PORTIONS OF BUILDING WHICH ARE REMOVED SHALL BE PROCESSED IN SUCH A WAY AS TO SAFELY REMOVE ALL ASBESTOS AND LEAD PAINT CONTAMINANTS. FOR ALL DEMOLITIONS, A DEMOLITION WASTE MANAGEMENT PLAN ACCEPTABLE TO THE BUILDING OFFICIAL IS REQUIRED AT THE TIME OF APPLICATION FOR A DEMOLITION PERMIT. ALL METALS, ASPHALT, CONCRETE, AND MASONRY THAT ARE FREE OF ASBESTOS AND LEAD PAINT SHALL BE RECYCLED, AND WHERE POSSIBLE, ALL REMAINING MATERIALS SUCH AS DOORS, WINDOWS, CABINETS AND FIXTURES, WOOD, AND CARDBOARD SHALL BE "SOFT STRIPPED" AND RECYCLED. COMPLIANCE SHALL BE CERTIFIED BY INSPECTION, DOCUMENTATION, AND SIGNED FINAL DEMOLITION WASTE MANAGEMENT PLANS. SUBSTANTIVE CHANGES TO THE PLAN SHALL BE SUBJECT TO PRIOR APPROVAL BY THE BUILDING OFFICIAL.
- **ENERGY ASSESSMENT (IECC 101.4.2):** PRIOR TO ANY ALTERATIONS, PROJECTS SHALL UNDERGO A CITY OF FORT COLLINS UTILITIES FACILITY ENERGY ASSESSMENT.

SUBMITTALS
- VFLA SHALL REVIEW AND APPROVE, OR TAKE OTHER APPROPRIATE ACTION UPON, THE CONTRACTOR'S SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND OTHER ITEMS, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN CONCEPT AND THE INFORMATION SHOWN IN THE CONSTRUCTION DOCUMENTS. THIS REVIEW SHALL NOT INCLUDE REVIEW OF THE ACCURACY OR COMPLETENESS OF DETAILS, OF THE SUBMITTAL, SUCH AS QUANTITIES, DIMENSIONS, WEIGHTS OR GAUGES, FABRICATION PROCESSES, CONSTRUCTION MEANS OR METHODS, COORDINATION OF THE WORK WITH OTHER TRADES OR CONSTRUCTION SAFETY PRECAUTIONS, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REVIEW OF A SPECIFIC ITEM SHALL NOT INDICATE THAT VFLA HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. VFLA SHALL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS NOT BROUGHT TO THE ATTENTION OF VFLA IN WRITING BY THE CONTRACTOR. VFLA SHALL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
- THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE PLANS OR SPECIFICATIONS
- ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS, APPROVE, AND SUBMIT TO THE ARCHITECT, SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS REQUIRED BY THE CONTRACT DOCUMENTS AND ANY NECESSARY CORRECTIONS NOTED PRIOR TO SUBMISSION FOR ARCHITECT'S REVIEW. IN ADDITION, THE SUBMITTAL SHALL BE STAMPED WITH THE GENERAL CONTRACTOR'S REVIEW STAMP.
- BY SUBMITTING SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS, THE CONTRACTOR REPRESENTS TO THE OWNER AND ARCHITECT THAT THE CONTRACTOR HAS (1) REVIEWED AND APPROVED THEM, (2) DETERMINED AND VERIFIED MATERIALS, FIELD MEASUREMENTS, AND FIELD CONSTRUCTION CRITERIA RELATED THERETO, OR WILL DO SO, AND (3) CHECKED AND COORDINATED THE INFORMATION CONTAINED WITHIN SUCH SUBMITTALS WITH THE REQUIREMENTS OF THE WORK AND OF THE CONTRACT DOCUMENTS.
- SUBMITTALS NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW BY THE ARCHITECT, AND MUST BE RESUBMITTED AFTER REVIEW BY THE GENERAL CONTRACTOR.
- THE CONTRACTOR SHALL DIRECT SPECIFIC ATTENTION, IN WRITING OR ON RESUBMITTED SHOP DRAWINGS, PRODUCT DATA, SAMPLES, OR SIMILAR SUBMITTALS, TO REVISIONS OTHER THAN THOSE REQUESTED BY THE ARCHITECT ON PREVIOUS SUBMITTALS. IN THE ABSENCE OF SUCH NOTICE, THE ARCHITECT'S APPROVAL OF A RESUBMISSION SHALL NOT APPLY TO SUCH REVISIONS.
- SUBMIT SUBMITTALS TO THE DESIGN TEAM IN A TIMELY MANNER TO PERMIT TEN (10) WORKING DAYS FOR REVIEW

SUBSTITUTIONS
- MATERIALS SHALL BE PROVIDED AS SPECIFIED IN THE CONTRACT DOCUMENTS. NO SUBSTITUTIONS WILL BE ALLOWABLE UNLESS FORMALLY ACCEPTED BY THE ARCHITECT AND OWNER. FORMAL REQUESTS FOR SUBSTITUTIONS MAY BE SUBMITTED WITH CSI FORM 1.5C DURING THE BIDDING PROCESS AND CSI FORM 13.1A AFTER THE BIDDING PROCESS IS COMPLETE. NOTE THAT THE ARCHITECT AND OWNER WILL REVIEW REQUESTS, BUT ARE NOT OBLIGATED TO ACCEPT THEM. IF REQUESTS ARE ACCEPTED, THEY WILL BE WITH THE PROVISIONS OF THE CONTRACTOR'S REPRESENTATION AS DESCRIBED HERE. BRIEFLY, THE CONTRACTOR'S REPRESENTATION REQUIRES THE GC (NOT THE ARCHITECT OR THE OWNER) TO ACCEPT FULL RESPONSIBILITY AND LIABILITY FOR ANY SUBSTITUTED MATERIALS. SUBSTITUTED MATERIALS MUST PROVIDE THE SAME WARRANTY AS THE ORIGINALLY SPECIFIED MATERIALS. NO ADDITIONAL COST TO THE OWNER WILL BE ALLOWABLE FOR SUBSTITUTED MATERIALS OR FOR ANY MODIFICATIONS REQUIRED BY THE USE OF THOSE MATERIALS. IF THE SUBSTITUTED MATERIALS DO NO PERFORM AS REQUIRED FOR THE SPECIFIED MATERIALS, THEY WILL BE REPLACED BY THE GC AT NO ADDITIONAL COST TO THE OWNER.

DESIGN/BUILD SUBCONTRACTORS
- NFPA TYPE 13 SPRINKLERS WILL BE REQUIRED THROUGHOUT THE BUILDING. ANY MODIFICATIONS TO THE EXISTING FIRE SPRINKLER SYSTEM WILL BE DESIGNED AND INSTALLED BY A DESIGN-BUILD SUBCONTRACTOR CARRIED BY THE GC. THAT SUB WILL BE REQUIRED TO MAKE DEFERRED SUBMITTALS OF THE SPRINKLER DRAWINGS & CALCULATIONS TO THE LOCAL FIRE DEPARTMENT.
- A FIRE ALARM SYSTEM WILL BE REQUIRED THROUGHOUT THE BUILDING. ANY MODIFICATIONS TO THE EXISTING SYSTEM WILL BE DESIGNED AND INSTALLED BY A DESIGN-BUILD SUBCONTRACTOR CARRIED BY THE GC. THAT SUB WILL BE REQUIRED TO MAKE DEFERRED SUBMITTALS OF THE FIRE ALARM DRAWINGS TO THE LOCAL FIRE DEPARTMENT.
- AN EMERGENCY RESPONDER RADIO AMPLIFICATION SYSTEM MAY BE REQUIRED IN THIS BUILDING. THE NEED FOR THE SYSTEM WILL BE DETERMINED BY TESTING ONCE THE BUILDING SHELL IS COMPLETE. THE INITIAL TESTING IS TO BE PROVIDED AS PART OF THE BASE BID. SEE ALTERNATES. IF THE BUILDING FAILS THE TESTING, THE OWNER MAY ACCEPT THE ALTERNATE, WHICH IS TO INSTALL THE COMPLETE SYSTEM AND PERFORM FINAL TESTING TO DEMONSTRATE TO FIRE DEPARTMENT'S SATISFACTION THAT THE SYSTEM IS FUNCTIONAL. THE EMERGENCY RADIO AMPLIFICATION SYSTEM WILL BE DESIGNED AND INSTALLED BY A DESIGN-BUILD SUBCONTRACTOR UNDER BY THE GC. THAT SUB WILL BE REQUIRED TO MAKE DEFERRED SUBMITTALS OF THE TEST CERTIFICATES TO THE LOCAL FIRE DEPARTMENT IN ADDITION TO SUBMITTALS TO THE ARCHITECT AND OWNER.
- LOW VOLTAGE SYSTEMS, INCLUDING SECURITY, AUDIO VISUAL, INTERCOM, PHONE/COM/DATA, CATV WILL BE DESIGN/BUILD BY VENDORS CONTRACTED DIRECTLY TO THE OWNER. HOWEVER, EMPTY BACK BOXES AND CONDUITS AS SHOWN ON THE ELECTRICAL POWER DRAWINGS AS NEEDED TO ACCOMMODATE THOSE SYSTEMS WILL BE REQUIRED TO BE INSTALLED AS PART OF THE BASE BID BY THE GC/ELECTRICAL SUB. THE DESIGN OF THOSE LOW VOLTAGE SYSTEMS, THE FURNISHING AND INSTALLING OF THE LOW VOLTAGE WIRING AND THE INSTALLATION OF THE DEVICES FOR THOSE SYSTEMS SHALL BE BY THE VENDORS, NIC UNLESS NOTED OTHERWISE ON THE ELECTRICAL DRAWINGS. THE GC WILL BE EXPECTED TO COORDINATE THE SCHEDULING FOR NIC VENDORS AND FACILITATE THEIR ACCESS TO THE PROJECT.

BID ALTERNATES:
1. VAPOR EMISSIVITY AND PH MITIGATION FOR CONCRETE SLABS ON GRADE AND ON DECK (TO BE USED AT OWNER'S OPTION FOR SLABS WHICH FAIL VAPOR AND PH TESTING). PROVIDE BOTH A TOTAL COST FOR ALL CONCRETE SLABS AND A COST PER S.F. FOR THIS TREATMENT:
   - BEAD BLASTING
   - APPLICATION OF EPOXY-BASED SEALER (KOESTER VAP I 2000 SYSTEM WITH CAP 1 PRIMER LEVEL PRO-E & VAP 1 PRO-FINISH TROWELABLE UNDERLAYMENT OR APPROVED SUBSTITUION)
2. PH ONLY MITIGATION FOR CONCRETE SLABS ON GRADE AND ON DECK (TO BE USED AT OWNER'S OPTION FOR SLABS WHICH PASS VAPOR TESTING BUT FAIL PH TESTING). PROVIDE BOTH A TOTAL COST FOR ALL CONCRETE SLABS AND A UNIT COST PER S.F. FOR THIS TREATMENT: MILD CARBONIC ACID SUCH AS CLUB SODA IS AN ACCEPTABLE PH NEUTRALIZER.
3. EMERGENCY RADIO AMPLIFICATION SYSTEM:
   THE BASE BID SHALL INCLUDE ONLY THE INITIAL TESTING TO DETERMINE IF THE SYSTEM IS NECESSARY. THE ALTERNATE, WHICH MAY BE ACCEPTED IF THE BUILDING FAILS THE INITIAL TESTING, WOULD INSTALL THE COMPLETE SYSTEM AND CONDUCT THE FINAL TESTING TO DEMONSTRATE OPERATION OF THE SYSTEM TO THE LOCAL FIRE DEPARTMENT'S SATISFACTION.

PROJECT CLOSEOUT
- AT THE COMPLETION OF THE PROJECT, THE GC SHALL PRESENT TO THE OWNER A FINAL PAY APPLICATION SHOWING A $0 REMAINING BALANCE AND INCLUDE LIEN WAIVERS FROM THE GC AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS.
- GC SHALL PROVIDE THE OWNER WITH COMPLETE OPERATIONS & MAINTENANCE (O&M) MANUALS IN BOTH HARD COPY AND .PDF FORMAT. INCLUDE MATERIALS PRODUCT DATA, COLOR SELECTIONS AND OPERATION & MAINTENANCE DATA FOR ALL SYSTEMS INCUDED IN THE PROJECT. INCLUDE WARRANTIES FROM MANUFACTURERS, SUBCONTRACTORS AND THE GENERAL CONTRACTOR WITH WARRANTY FORMS COMPLETELY FILLED OUT AND SIGNED, STATING THE START AND EXPIRATION DATES. MANUFACTURER'S WARANTIES SHALL BE FOR THE MANUFACTURER'S STANDADARD DURATION FOR THE MATERIAL OR SYSTEM UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS. SUBCONTRACTOR'S AND GC'S WORKMANSHIP WARRANTIES SHALL BE FOR ONE YEAR UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS. ALL WARRANTIES SHALL BE NOTED AS STARTING ON THE DATE OF SUBSTANTIAL COMPLETION.
- OWNER'S STOCK OF MATERIALS: GC SHALL PROVIDE THE OWNER WITH A SUPPLY OF REPLACEMENT FINISH MATERIALS MATCHING THE PRODUCTS INSTALLED. PROVIDE 1% OF THE QUANTITY OF MATERIALS INSTALLED UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS. OWNER'S STOCK MATERIALS SHALL INCLUDE BUT ARE NOT LIMITED TO:
  - EACH COLOR AND TYPE OF PAINT IN LABELED, UNOPENED CANS
  - EACH TYPE AND COLOR OF FINISH FLOORING AND BASE MATERIAL
  - EACH TYPE AND SIZE OF ACOUSTIC CEILING TILE
  - EACH TYPE AND SIZE OF WALL COVERING
- GC SHALL PROVIDE THE OWNER WITH A COPY OF DOCUMENTATION SHOWING COMPLIANCE WITH IECC AND OTHER LOCALLY REQUIRED ENERGY CODE REQUIREMENTS INCLDING BUT NOT LIMITED TO:
  - COMCHECKS FOR MECHANICAL SYSTEMS AND LIGHTING
  - COMMISSIONING REPORTS
  - FENESTRATION INSTALLATION CERTIFICATES
  - WASTE MANAGEMENT PLAN & REPORTS

DIVISION 2: EXISTING CONDITIONS
ALL GC'S WHO SUBMIT A BID WILL BE REQUIRED TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS BEFORE SUBMITTING THEIR PROPOSALS.

DIVISION 3: CONCRETE
- MAXIMUM SLOPE IN THE DIRECTION OF TRAVEL ON A WALKING PATH THAT IS NOT A RAMP IS 5% AND THE MAXIMUM CROSS SLOPE IS 2%.
- 1ST FLOOR WILL BE A 5" THICK CONCRETE SLAB ON EXISTING CONCRETE SLAB REINFORCED WITH REBAR PER STRUCTURAL ENGINEERING DRAWINGS. INSTALL OVER GRAVEL INFILL IN LOCATIONS WHERE DIFFERENCE FROM EXISTING SLAB HEIGHT TO NEW SLAB HEIGHT IS GREATER THAN 6". REFER TO STRUCTURAL DRAWINGS.
- SLABS ON GRADE WILL BE 4,000 PSI CONCRETE WITH A LOW WATER CEMENT RATIO OF 0.45 MAXIMUM.
- SLABS ON GRADE MUST BE WATER CURED OR COVER CURED FOR 7 DAYS. LIQUID OR SPRAY-APPLIED CURING COMPOUND WILL BE ALLOWABLE. IF ALL CURING COMPOUND IS REMOVED PRIOR TO INSTALLATION OF ADHERED FLOOR PRODUCTS.
- THE GC WILL BE RESPONSIBLE FOR PROTECTING SLABS AND PROVIDING TEMPERATURE AND HUMIDITY LEVELS WITHIN THE BUILDING AS REQUIRED FOR PROPER DRYING OF THE CONCRETE SLABS BEFORE THE INSTALLATION OF ADHERED FLOORING MATERIALS. PROPER DRYING CONDITIONS AFTER THE BUILDING IS ENCLOSED ARE 70 DEGREE FAHRENHEIT. AIR TEMPERATURE MINIMUM AND 30% RELATIVE HUMIDITY MAXIMUM MAINTAINED 24/7. THE USE OF PROPANE FIRED HEATERS AND PERMANENT HVAC UNITS TO PROVIDE TEMPORARY HEATING WILL NOT BE ACCEPTABLE.
- SLABS ON GRADE SHALL BE TESTED AT REGULAR INTERVALS AFTER PLACEMENT AND SHORTLY BEFORE INSTALLATION OF ANY ADHERED FLOORING MATERIALS FOR WATER VAPOR EMISSIVITY USING BOTH THE CALCIUM CHLORIDE METHOD (MVER) AND THE RH METHOD AND TESTED FOR PH. MAX. ALLOWABLE VALUES SHALL BE 5 LBS/24 HRS/1000 S.F (MVER). OR 85% (RH) FOR WATER VAPOR AND PH 11 OR THE MAXIMUM VALUES ALLOWED BY THE MANUFACTURERS OF THE FLOORING MATERIALS AND THE ADHESIVES TO BE USED. TESTING SHALL BE DONE BY AN INDEPENDENT TESTING AGENCY EMPLOYED DIRECTLY BY THE OWNER.
- IF THE SLABS FAIL THE TESTING, THE OWNER MAY DECIDE TO HAVE VAPOR AND/OR PH MITIGATION PROCEDURES APPLIED. SEE ALTERNATES.
- THE CONTRACTOR SHALL PROVIDE ALL FORM WORK AND ACCESSORIES FOR ALL CAST-IN-PLACE CONCRETE. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK."
- CONCRETE REINFORCING SHALL CONSIST OF DEFORMED NEW FILLET STEEL BARS CONFORMING TO ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- CONCRETE MATERIAL SHALL BE 3000 PSI IN FOUNDATIONS, 4000 PSI IN SLABS ON GRADE AND EXTERIOR PAVING AND 3000 P.S.I. IN ALL OTHER CONCRETE APPLICATIONS UNLESS NOTED OTHERWISE BY STRUCTURAL ENGINEER'S DRAWINGS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER SHALL APPROVE FINAL CONCRETE DESIGN MIXES.
- SEE STRUCTURAL ENGINEER'S DRAWINGS AND SPECS FOR CONCRETE REINFORCING AND ADDITIONAL CONCRETE REQUIREMENTS.
- POURED IN PLACE CONCRETE TESTING:
  - INDEPENDENT COMPRESSIVE STRENGTH TESTING TO BE DONE FOR EACH CONCRETE BATCH DELIVERY AT 7, 14 AND 28 DAYS AFTER PLACEMENT (TESTS PAID FOR BY OWNER).
  - INDEPENDENT VAPOR EMISSIVITY (MVER AND RH) AND PH TESTING OF CONC. SLABS SHALL BE CONDUCTED (TESTS PAID FOR BY OWNER).
- POURED IN PLACE CONCRETE SUBMITTALS:
  - SUBMIT MIX DESIGN FOR EACH TYPE/APPLICATION OF CONCRETE ON THE PROJECT.
  - SUBMIT PRODUCT DATA FOR ALL ADMIXTURES

DIVISION 4 & 5: NOT USED

DIVISION 6: WOOD, PLASTICS & COMPOSITES
- INTERIOR ROUGH CARPENTRY:
  1. PROVIDE SOLID WOOD OR PLYWOOD BACKING IN WALLS BEHIND TELEVISIONS AND ALL OTHER WALL MOUNTED ITEMS. COORDINATE LOCATIONS WITH OWNER.
- INTERIOR WOODWORK/MILLWORK/FINISH CARPENTRY: PROVIDE MATERIALS THAT COMPLY WITH THE REQUIREMENTS OF THE ARCHITECTURAL WOODWORK INSTITUTE (AWI) FOR EACH TYPE OF WOODWORK AND QUALITY GRADE INDICATED:
  1. LAMINATE CLAD CABINETS (PLASTIC LAMINATE-COVERED CASEWORK)
     - CUSTOM GRADE, FLUSH OVERLAY CABINET CONSTRUCTION
     - PLASTIC LAMINATE OVER PARTICLE BOARD CORE
     - MELAMINE INTERIORS
     - HARDWARE:COMPLY WITH ANSI/BHMA A156.9 "AMERICAN NATIONAL STANDARD FOR CABINET HARDWARE":
     - PULLS: STAINLESS STEEL U-SHAPED WIRE PULLS
     - DRAWER GLIDES: ACCURIDE 3832-EC EASY CLOSE FULL EXTENTION OR APPROVED SUBSTITUTION
     - FINISH: BRUSHED STAINLESS
  2. COUNTERTOPS
     - SOLID SURFACE MATERIAL: QUARTZ SURFACE (NOTE THICKNESS, MFR, COLOR, ETC)
       - OVER 3/4" PARTICLE BOARD SUBSTRATE
       - SQUARE EASED EDGE TREATMENT
       - MITER CORNERS AND EDGES
  3. PLASTIC LAMINATE FACE SHEET AND BACKER SHEET OVER 3/4" PARTICLE BOARD SUBSTRATE. SOLID VINYL EDGING

DIVISION 7: NOT USED

DIVISION 8: OPENINGS
- **HOLLOW METAL DOOR FRAMES & INTERIOR WINDOW FRAMES**
  - FRAMES IN INTERIOR WALLS: 16 GA. STEEL
- **HOLLOW METAL DOORS:**
  - 16 GA. STEEL
  - FULLY WELDED, GROUND SMOOTH, POLYSTYRENE CORE
  - MIN. STC ACOUSTIC RATING: 31
  - VISION LITES AT SOME DOORS AS SHOWN. STEEL GLAZING STOPS. BOTTOM RAIL IN FULL GLASS DOORS 10"H. MIN.
  - LIFETIME WARRANTY
  - VISION LITES AT SOME DOORS AS SHOWN. WOOD GLAZING STOPS (FIRE RATED IN FIRE RATED DOORS). BOTTOM RAIL IN FULL GLASS DOORS 10"H. MIN.
  - LIFETIME WARRANTY
- **DOOR HARDWARE:**
  - ALL LOCKSETS GRADE 1. US 26D FINISH. HANDICAP ACCESSIBLE LEVER HANDLES PER ADA & ANSI A117.1
  - GC SHALL INCLUDE AN APPROPRIATE ALLOWANCE FOR DOOR HARDWARE.DOOR HARDWARE SUB SHALL PROVIDE A DOOR HARDWARE SCHEDULE AND PRODUCT DATA FOR ALL HARDWARE AS PART OF SUBMITTALS.
  - HARDWARE SUBCONTRACTOR AND GC SHALL MEET WITH THE OWNER TO DEVELOP A KEYING SCHEDULE FOR THE BUILDING.
  - HARDWARE SUBCONTRACTOR AND GC SHALL MEET WITH THE OWNER AND HIS SECURITY SYSTEM VENDOR TO COORDINATE HARDWARE AND DOOR MODIFICATIONS REQUIRED TO ACCOMMODATE THE SECURITY SYSTEM.
  - PROVIDE A KEY CABINET OF SUFFICIENT SIZE TO CONTAIN KEYS FOR THE PROJECT.
- **METAL ACCESS DOORS & PANELS**
  - PROVIDE STEEL ACCESS PANELS AS REQUIRED TO ACCESS MECHANICAL/PLUMBING ELEMENTS AND ELSEWHERE AS REQUIRED. FIRE RATED PANELS WHERE PENETRATING A RATED ASSEMBLY.
- **ALUMINUM FRAMES & ENTRY DOORS**
  - EXTERIOR STOREFRONT FRAMES:
    - 2" X 4 ½" THERMALLY BROKEN ALUMINUM FRAMES: KAWNEER 451T, OR OLDCASTLE 3000 THERMAL MULTIPANE, AND TUBELIGHT TU2400 OR APPROVED SUBSTITUTIONS
    - FINISH: DARK BRONZE ANODIZED - *CONFIRM FINISH WITH OWNER*
    - 1" THICK INSULATED GLASS
- **ALUMINUM FULL GLASS EXTERIOR DOORS:**
  - WIDE STILE TYPE. SURFACE MOUNTED PANIC HARDWARE: KAWNEER WIDE STILE OR APPROVED SUBSTITUTION.
    - 1" THICK INSULATED GLAZING
    - FINISH: DARK BRONZE ANODIZED (CONFIRM MATCH TO EXISTING)
    - BOTTOM RAIL 10"H. MIN.
    - "POP" STYLE VERTICAL PULL BAR ON EXTERIOR
    - HARDWARE SUBCONTRACTOR AND GC SHALL MEET WITH THE OWNER AND HIS SECURITY SYSTEM VENDOR TO COORDINATE ALUMINUM FRAME AND DOOR AND HARDWARE MODIFICATIONS

DIVISION 9: FINISHES
- GYPSUM BOARD:
  - 5/8" GYPSUM BOARD ON WALLS, INTERIOR PARTITIONS & CEILINGS AS NOTED ON DRAWINGS & PARTITION TYPES
  - LEVEL 4 FINISH ON WALLS AND CEILINGS.
  - SMOOTH TEXTURE ON WALLS AND CEILINGS
  - COLD FORMED METAL FRAMING:
    - INTERIOR PARTIONS, FURRINGS, SOFFIT AND CEILING FRAMING: 25 GAUGE METAL STUDS @ 16" ON CENTER (20 GAUGE DOUBLE STUDS @ OPENING JAMBS). SIZES AS NOTED ON DRAWINGS.
    - METAL SUSPENSION SYSTEM FOR GYPSUM BOARD CEILINGS
- 4" HIGH COVED RUBBER BASE
  - ADHESIVES FOR ALL ADHERED FLOORING MATERIALS SHALL BE LISTED BY THEIR MFR. TO TOLERATE A MINIMUM OF 5 LBS OF WATER VAPOR PER THE MVER TEST AND/OR 80% RELATIVE HUMIDITY AND A MINIMUM OF 11 PH.
- TILE
  - PORCELAIN AND QUARRY TILE AS SPECIFIED ON DRAWINGS
  - ALL TILE WILL BE SET WITH MODIFIED PORTLAND CEMENT THIN-SET MORTAR PER TILE COUNCIL OF NORTH AMERICA (TCNA) INSTALLATION METHODS. MASTICS OR ADHESIVES WILL NOT BE ACCEPTABLE AS SETTING MATERIALS.
  - GROUT TO BE SELECTED FROM STANDARD COLORS. MANUFACTURER: MAPEI.
  - METAL TRIM PROFILES AT TILE EDGES & THRESHOLDS AND MATERIAL TRANSITIONS AS NOTED ON DRAWINGS. MANUFACTURER: SCHLUTER
- SUSPENDED ACOUSTIC CEILINGS (ACT). REFER TO CEILING TYPES LEGEND FOR MORE INFORMATION.
  - 24" X 24", TEGULAR, BASIS OF DESIGN: ARMSTRONG, DUNE
- INTERIOR PAINT:
  - ALL INTERIOR ELEMENTS EXPOSED TO VIEW THAT ARE NOT FACTORY FINISHED SHALL BE FIELD PAINTED U.N.O.
  - TYPICAL WALLS & INTERIOR PARTITIONS & CEILINGS – 1 COAT PRIMER PLUS 2 COATS LATEX ENAMEL.
  - GYPSUM BOARD WALLS AND CEILINGS IN KITCHEN - SHERWIN WILLIAMS WATER-BASED LIGHT INDUSTRIAL COATING SYSTEM
    1. PRIME COAT: PRIMER SEALER, LATEX, INTERIOR:
       a. S-W PREMIUM 200 ZERO VOC LATEX PRIMER, B28W2600, AT 4.0 WET, 1.0 MILS DRY.
    2. INTERMEDIATE COAT: LIGHT INDUSTRIAL COATING, INTERIOR, WATER BASED, MATCHING TOPCOAT
    3. TOPCOAT: LIGHT INDUSTRIAL COATING, INTERIOR, WATER-BASED, EGGSHELL:
       A. S-W PRO INDUSTRIAL PRE-CATALYZED WATERBASED EPOXY, K45-1151 SERIES, AT 4.0 MILS WET, 1.5 MILS DRY, PER COAT
    4. TOPCOAT: LIGHT INDUSTRIAL COATING, INTERIOR, WATER-BASED, GLOSS:
       A. S-W PRO INDUSTRIAL PRE-CATALYZED WATERBASED EPOXY, K45-1151 SERIES, AT 4.0 MILS WET, 1.5 MILS DRY, PER COAT

DIVISION 10: SPECIALTIES
- FIRE PROTECTION SPECIALTIES:
  - SEMI-RECESSED (HANDICAP COMPLIANT) FIRE EXTINGUISHER CABINETS (FIRE RATED CABINETS IN FIRE RATED WALLS) WITH A,B,C RATED FIRE EXTINGUISHERS.
  - WALL MOUNTED FIRE EXTINGUISHERS A,B,C RATED (FOR USE IN SERVICE OR UTILITARIAN AREAS)

DIVISION 11: EQUIPMENT
- COMMERCIAL KITCHEN EQUIPMENT: COORDINATE WITH OWNER.

DIVISION 12: FURNISHINGS
- FURNISHINGS ARE TO BE SELECTED AND PROVIDED BY OWNER.

DIVISION 13, 14, 15: NOT USED

DIVISION 16: FIRE ALARM SYSTEMS
- A FIRE ALARM SYSTEM WILL BE REQUIRED THROUGHOUT THE BUILDING. ANY MODIFICATIONS TO THE EXISTING SYSTEM WILL BE DESIGNED AND INSTALLED BY A DESIGN-BUILD SUBCONTRACTOR CARRIED BY THE GC. THAT SUB WILL BE REQUIRED TO MAKE DEFERRED SUBMITTALS OF THE FIRE ALARM DRAWINGS TO THE LOCAL FIRE DEPARTMENT.

DIVISION 17, 18, 19, 20: NOT USED

DIVISION 21: FIRE SUPPRESSION
- NFPA TYPE 13 SPRINKLERS WILL BE REQUIRED THROUGHOUT THE BUILDING. ANY MODIFICATIONS TO THE EXISTING FIRE SPRINKLER SYSTEM WILL BE DESIGNED AND INSTALLED BY A DESIGN-BUILD SUBCONTRACTOR CARRIED BY THE GC. THAT SUB WILL BE REQUIRED TO MAKE DEFERRED SUBMITTALS OF THE SPRINKLER DRAWINGS & CALCULATIONS TO THE LOCAL FIRE DEPARTMENT.

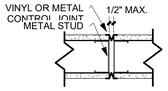
DIVISION 22: PLUMBING
- SEE PLUMBING ENGINEER'S DRAWINGS

DIVISION 23: HVAC
- SEE MECHANICAL ENGINEER'S DRAWINGS

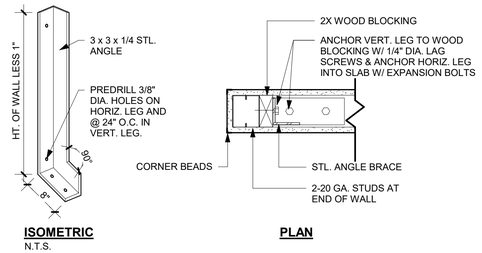
DIVISION 24 & 25: NOT USED

DIVISION 26: ELECTRICAL
- SEE ELECTRICAL ENGINEER'S DRAWINGS

DIVISION 27: COMMUNICATION
- AN EMERGENCY RESPONDER RADIO AMPLIFICATION SYSTEM MAY BE REQUIRED IN THIS BU

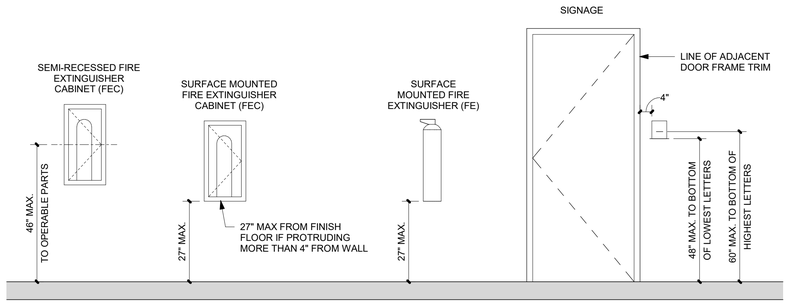


WALL PARTITION - CONTROL JOINT DETAIL - UNRATED WALLS - MTL STUDS

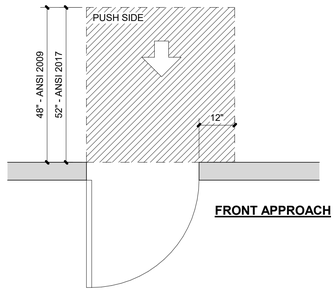


WALL PARTITION - BRACE AT FREE END OF LOW WALLS (MTL. STUDS)

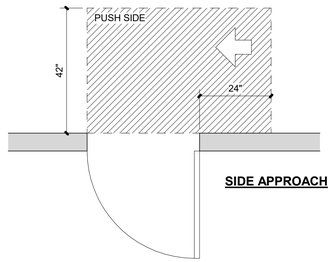
TYPICAL 2017 ANSI DETAILS & MISC. MOUNTING HEIGHTS



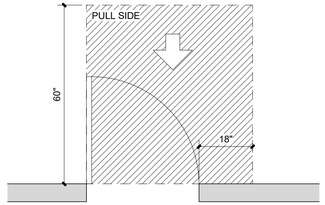
MISCELLANEOUS EQUIPMENT MOUNTING HEIGHTS



FRONT APPROACH



SIDE APPROACH



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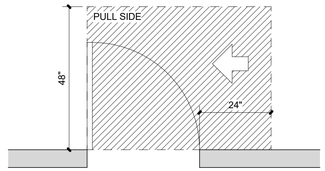
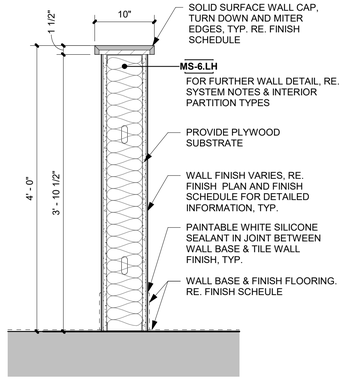
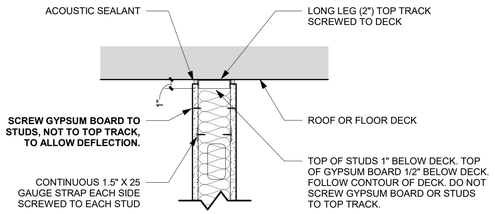


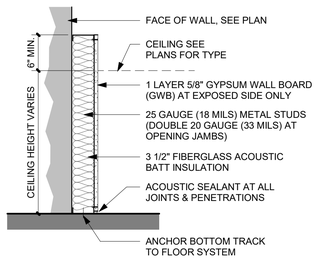
SIDE APPROACH

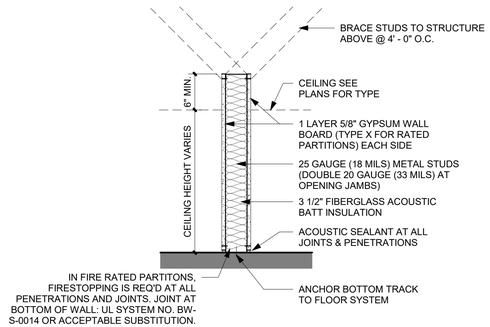


WALL PARTITION - LOW HEIGHT (LH) NON-RATED METAL PARTITION DETAIL



WALL PARTITION - FULL-HEIGHT (H) NON-RATED MTL PARTITION HEAD DETAIL @ FLAT DECK





MF-# - METAL FURRING (NON-LOAD BEARING) W/ GWB ON (1) SIDE

PARTITION TYPE:	STUD SIZE	RATING	UL ASSEMBLY	NOTES
MF-0	7/8"	-	-	SEE INTERIOR PARTITION NOTES FOR SUFFIXES / MODIFIER DESCRIPTIONS
MF-1	1-5/8"	-	-	
MF-2	2-1/2"	-	-	
MF-3	3-5/8"	-	-	
MF-6	6"	-	-	
MF-8	8"	-	-	

MS-# - METAL STUD (NON-LOAD BEARING) W/ GWB ON (2) SIDES

PARTITION TYPE:	STUD SIZE	RATING	UL ASSEMBLY	NOTES
MS-1	1-5/8"	-	-	SEE INTERIOR PARTITION NOTES FOR SUFFIXES / MODIFIER DESCRIPTIONS
MS-2	2-1/2"	-	-	
MS-3	3-5/8"	-	-	
MS-6	6"	-	-	
MS-8	8"	-	-	

SYSTEM NOTES

FLOORS

F1
- CONCRETE SLAB INFILL PER STRUCT.
- COORDINATE WITH STRUCT.

CEILINGS

REFER TO CEILING TYPES LEGEND ON SHEET A2.1

INTERIOR PARTITION NOTES

- ALL INTERIOR PARTITIONS ARE **MS-3** UNLESS NOTED OTHERWISE ON THE FLOOR PLANS.
- METAL STUDS FOR INTERIOR PARTITIONS ARE **25 GA. (18 MILS)** U.N.O. WITH DOUBLE **20 GA. (33 MILS)** STUDS @ DOOR & WINDOW JAMBS.
- INSTALL CONTROL JOINTS VERTICALLY AND HORIZONTALLY IN CONTINUOUS GYPSUM WALL SURFACES GREATER THAN 30' IN LENGTH BETWEEN CORNERS. SPACE JOINTS @ 30' MAX. O.C.
- PROVIDE WOOD BLOCKING IN PARTITIONS AS NEEDED TO PROVIDE BACKING FOR WALL MOUNTED EQUIPMENT, CABINETS, ACCESSORIES, ETC. IT SHALL BE THE RESPONSIBILITY OF THE G.C. TO COORDINATE THE REQUIRED LOCATIONS FOR BACKING. FIRE RATED PARTITIONS REQUIRE FIRE RETARDANT TREATED WOOD BLOCKING.
- ALL PARTITIONS TO HAVE ACOUSTIC TREATMENT U.N.O.: INSTALL 3 1/2" F.G. ACOUSTIC BATTS IN CAVITIES BETWEEN STUDS , SEAL PERIMETER & ALL PENETRATIONS W/ ACOUSTIC SEALANT. WHERE ITEMS PENETRATE PARTITION, CUT GYP. BD. TO WITHIN 1/2" OF PENETRATING ITEM, FOLLOWING CONTOURS, AND FILL JOINTS WITH ACOUSTIC SEALANT. (PENETRATING ITEMS AT FIRE RATED PARTITIONS MUST BE FIRESTOPPED.)

INTERIOR PARTITION SUFFIXES

THE BASIC PARTITION TYPES LISTED SHOWN HERE ARE MODIFIED PER THE SUFFIXES LISTED BELOW.

"H" = FULL HEIGHT PARTITION (UNRATED)
- EXTEND PARTITION FULL HT. TO UNDERSIDE OF FLOOR/ROOF DECK OR TO UNDERSIDE OF A GYP. BD. CLG THAT IS PART OF A ROOF/CLG. OR FLR./CLG. ASSEMBLY: EXTEND ACOUSTIC INSULATION FULL HT. USE LONG LEG (2") TOP TRACK @ UNDERSIDE OF DECK/ROOF W/ STUDS CUT 1" SHORT. EXTEND GYP. BD. FULL HT. TO 1/2" BELOW UNDERSIDE OF DECK. CUT GYP. BD. TO FOLLOW CONTOUR OF DECK, MAINTAINING 1/2" JT. FILL JT. W/ ACOUSTIC SEALANT. DO NOT SCREW GYP. BD. TO TOP TRACK. FILL FLUTES IN METAL DECK OVER TOP TRACK W/ F.G. BATT INSUL.

"LH" = LOW HEIGHT PARTITION (UNRATED)
- EXTEND PARTITION PARTIAL HT. TO 3'-10 1/2". REFER TO WALL TYPE AND SECTION. SEE BRACE DETAIL FOR FREE ENDS OF LOW WALLS ON THIS SHEET.

METAL STUD LIMITING HEIGHTS

DEPTH	SPACING	LIMITING HEIGHT
1-5/8" (162S125-18/33)	24" O.C.	7' - 1"
1-5/8" (162S125-18/33)	16" O.C.	8' - 2"
2-1/2" (250S125-18/33)	24" O.C.	9' - 3"
2-1/2" (250S125-18/33)	16" O.C.	9' - 10"
3-5/8" (362S125-18/33)	24" O.C.	11' - 7"
3-5/8" (362S125-18/33)	16" O.C.	12' - 4"
6" (600S125-18/33)	24" O.C.	16' - 9"
6" (600S125-18/33)	16" O.C.	17' - 11"

NOTE:
- MAXIMUM SPACING/HEIGHT BASED ON USG STUDS. MAY VARY FOR OTHER MANUFACTURERS
- MAXIMUM ALLOWABLE DEFLECTION = L/360
- MAXIMUM LATERAL PRESSURE = 5 PSF
- STUD THICKNESS = 25 GAUGE (18 MIL)

PROJECT NUMBER: 2024-53

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PLUMBING ENGINEER:
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ELECTRICAL ENGINEER:
APS, INC.

DESIGN DEVELOPMENT

SHEET ISSUANCES

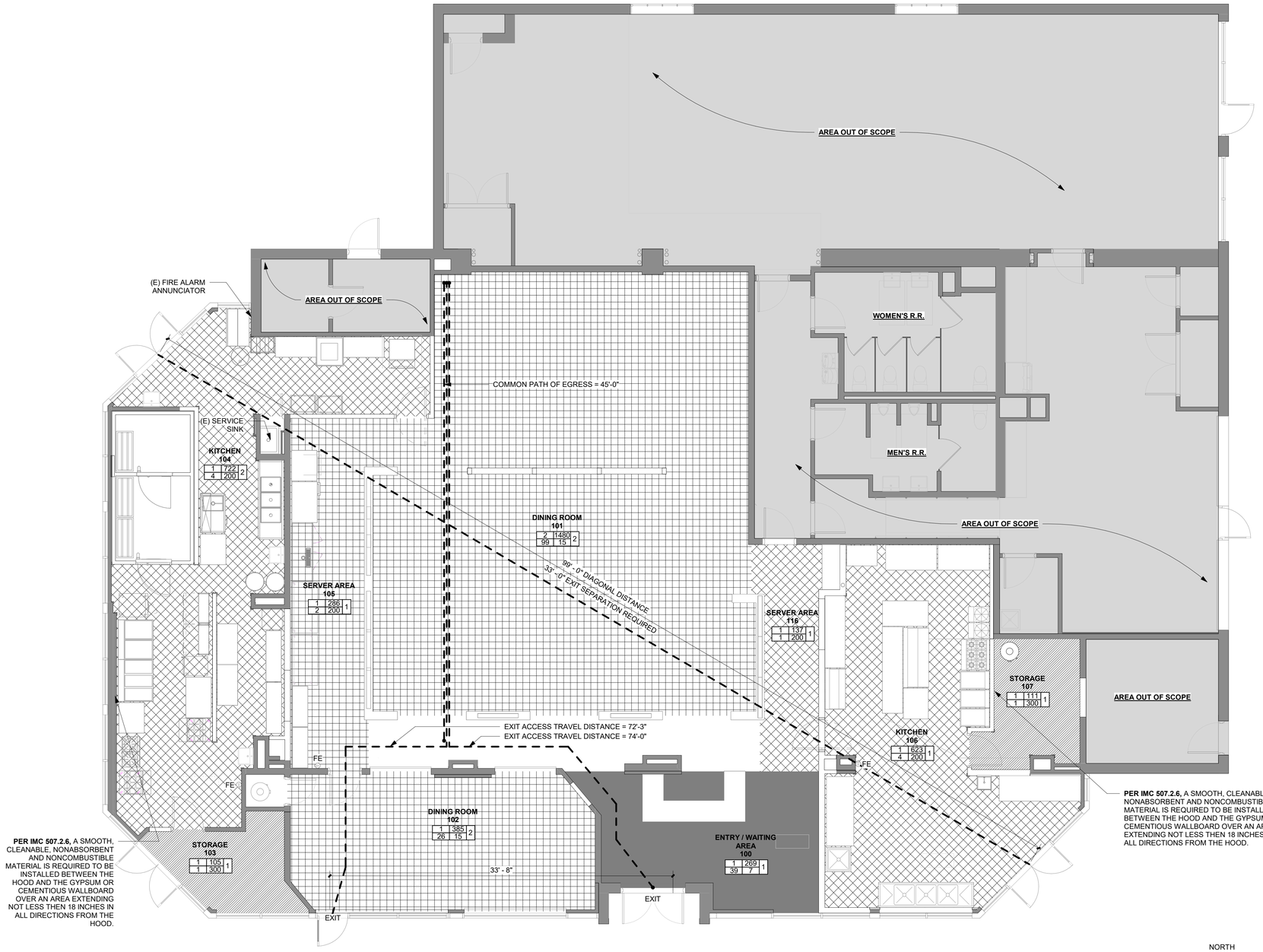
DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
CONSTRUCTION DOCUMENTS	10-11-2024

SEAL:

SYSTEM NOTES & INTERIOR PARTITION TYPES

DRAWING NUMBER:

G0.3



1 **FIRST FLOOR CODE PLAN**

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

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

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CODE DATA

JURISDICTION:
CITY OF FORT COLLINS - BUILDING SERVICES DEPARTMENT POUDRE FIRE AUTHORITY

APPLICABLE CODES:
2021 IBC - INTERNATIONAL BUILDING CODE
2021 IECC - INTERNATIONAL ENERGY CONSERVATION CODE
2021 IFC - INTERNATIONAL FIRE CODE
2021 IFGC - INTERNATIONAL FUEL GAS CODE
2021 IMC - INTERNATIONAL MECHANICAL CODE
2021 IPC - INTERNATIONAL PLUMBING CODE
2023 NEC - NATIONAL ELECTRIC CODE
2021 IEBC - INTERNATIONAL EXISTING BUILDING CODE
CITY OF FORT COLLINS – ORDINANCE #021 - BUILDING CODE AMENDMENTS, REVISED JANUARY 24, 2022
CITY OF FORT COLLINS – LAND USE CODE, REVISED APRIL 4, 2023
2022 FDA FOOD CODE (ADOPTED JAN 18, 2023)

ACCESSIBILITY STANDARDS:
2017 ICC / ANSI A117.1 - ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

OCCUPANCY GROUP(S): A-2

CONSTRUCTION TYPE: V-B

SPRINKLER SYSTEM: NFPA TYPE 13

OCCUPANCY SEPARATION: NO

COMMON PATH OF EGRESS TRAVEL *(TABLE 1006.2.1)*
[A] OCCUPANCY WITH SPRINKLERS 75'-0"

EXIT ACCESS TRAVEL DISTANCE *(TABLE 1017.2)*
[A] OCCUPANCY WITH SPRINKLERS 250'-0"

DEAD END CORRIDORS *(TABLE 1020.5)*
[A] OCCUPANCY WITH SPRINKLERS 20'-0"

CODE REQUIRED INTERIOR SIGNAGE:
THE FOLLOWING SIGNAGE WILL BE REQUIRED BY CODE AS A MINIMUM WHETHER SIGNAGE IS BEING FURNISHED BY THE OWNER THROUGH A VENDOR OR BY THE GC THROUGH A SUB. SIGNAGE LETTERING AND BRAILLE SHALL COMPLY WITH ICC/ANSI A117.1.

- EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE SPACE POSTED IN A CONSPICUOUS PLACE NEAR THE MAIN DOORWAY FROM THE ROOM OR SPACE.
- SIGNAGE ON DOORS TO BATHROOMS
- SIGNAGE ON DOORS TO SPACES POTENTIALLY HAZARDOUS TO THE PUBLIC I.E. MECHANICAL ROOMS, JANITOR'S CLOSETS, ETC.
- SIGNAGE INDICATING ROOF ACCESS

IN ADDITION TO SIGNAGE NOTED ABOVE, WHERE THERE IS AN ACCESSIBLE CONCEALED FLOOR, FLOOR CEILING OR ATTIC SPACE, FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING IN THE CONCEALED SPACE. SUCH IDENTIFICATION SHALL: BE LOCATED WITHIN 15' OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30' MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION. INCLUDE LETTERING NOT LESS THAN 3" IN HEIGHT WITH A MINIMUM 3/8" STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORDING "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS" OR OTHER WORDING.

PLUMBING CALCS

OCCUPANCY COUNT: 177 OCCUPANTS / 89 PER GENDER

REQUIRED FIXTURES

WATER CLOSETS		LAVATORIES	
M	F	M	F
1/75	1/75	1/200	1/200
1.19	1.19	.445	.445

PROVIDED FIXTURES

WATER CLOSETS		LAVATORIES	
M	F	M	F
2	2	2	2

REQUIRED SERVICE SINKS: 1 SERVICE SINK

PROVIDED SERVICE SINKS: 1 SERVICE SINK

REQUIRED DRINKING FOUNTAINS: 1:500

PROVIDED DRINKING FOUNTAINS: 2 DRINKING FOUNTAINS

IPC 410.3
WHERE DRINKING FOUNTAINS ARE REQUIRED, NO FEWER THAN TWO DRINKING FOUNTAINS SHALL BE PROVIDED. ONE DRINKING FOUNTAIN SHALL COMPLY WITH THE REQUIREMENTS FOR PEOPLE WHO USE A WHEELCHAIR AND ONE DRINKING FOUNTAIN SHALL COMPLY WITH THE REQUIREMENTS FOR STANDING PERSONS.

IPC 410.4 SUBSTITUTION
WHERE RESTAURANTS PROVIDE DRINKING WATER IN A CONTAINER FREE OF CHARGE, DRINKING FOUNTAINS SHALL NOT BE REQUIRED IN THOSE RESTAURANTS. IN OTHER OCCUPANCIES WHERE THREE OR MORE DRINKING FOUNTAINS ARE REQUIRED, WATER DISPENSERS SHALL BE PERMITTED TO BE SUBSTITUTED FOR NOT MORE THAN 50 PERCENT OF THE REQUIRED NUMBER OF DRINKING FOUNTAINS.

CODE REVIEW PLANS LEGEND

FEC FIRE EXTINGUISHER IN CABINET

FE FIRE EXTINGUISHER WALL MTD

ROOM TAG - CODE
ROOM
ROOM #
EXITS REQUIRED — ROOM AREA
OF OCCUPANTS — # OF EXITS PROVIDED
LOAD FACTOR

OCCUPANY TYPE LEGEND

STORAGE @ 300 S.F. PER OCCUPANT
2 OCCUPANTS SHOWN

KITCHEN, COMMERCIAL @ 200 S.F. PER OCCUPANT
11 OCCUPANTS SHOWN

ASSEMBLY (STANDING) @ 7 S.F. PER OCCUPANT
39 OCCUPANTS SHOWN

ASSEMBLY (TABLES & CHAIRS) @ 15 S.F. PER OCCUPANT
125 OCCUPANTS SHOWN

OCCUPANCY COUNT = **177 OCCUPANTS**

PROJECT NUMBER: 2024-53

BONCHON & BROWN DONKATSU

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PLUMBING ENGINEER:
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ELECTRICAL ENGINEER:
APS, INC.

DESIGN DEVELOPMENT

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
CONSTRUCTION DOCUMENTS	10-11-2024

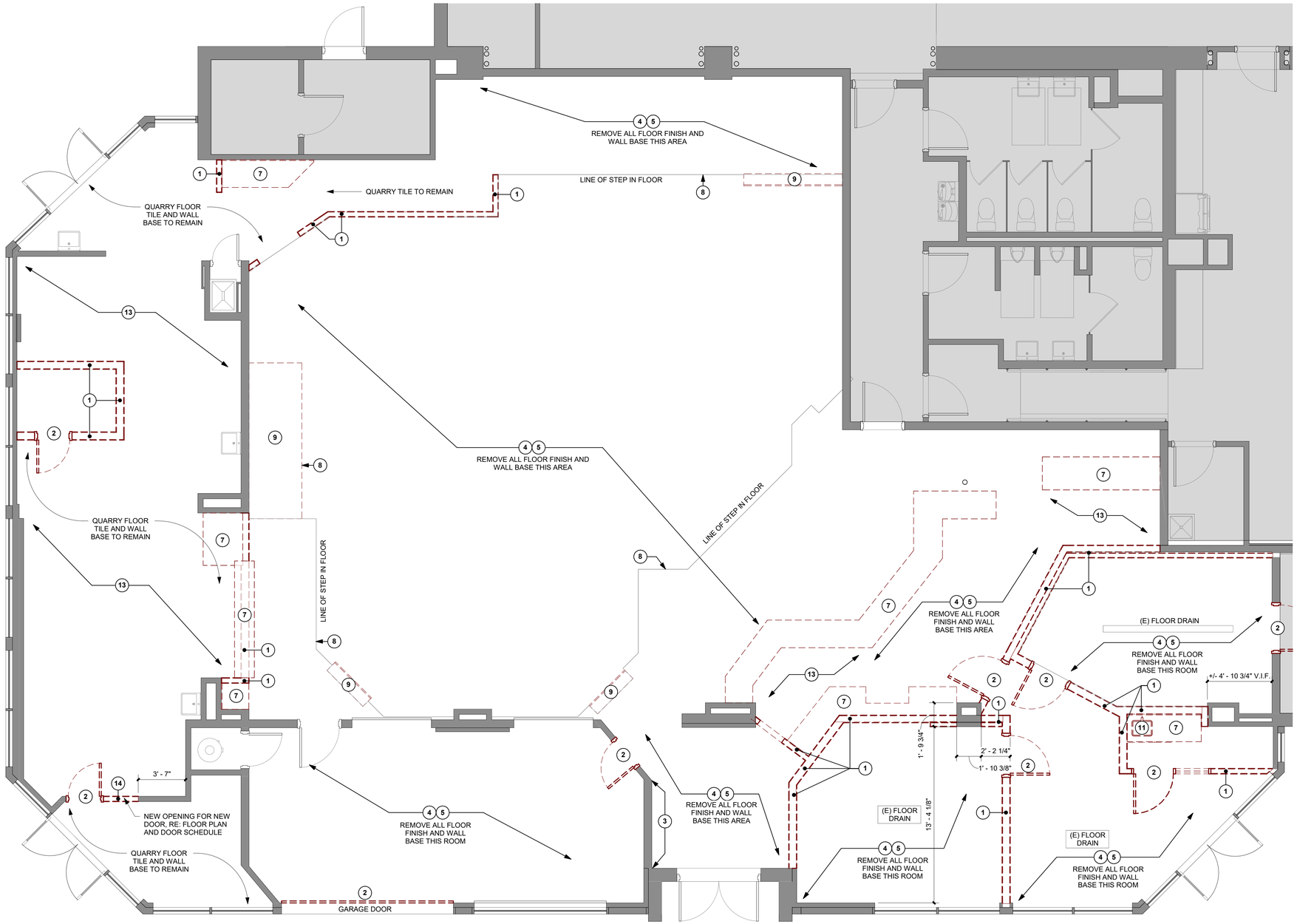
SEAL:

STATE OF COLORADO
ANDREW M. GOLDMANN
40078
LICENSED ARCHITECT

CODE REVIEW PLANS

DRAWING NUMBER:

G0.4



1 DEMOLITION FLOOR PLAN

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

0' 2' 4' 8' 16'

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

NORTH

DEMOLITION PLAN GENERAL NOTES

1. GC SHALL FIELD VERIFY ALL ITEMS TO BE SALVAGED WITH OWNER PRIOR TO DEMOLITION
2. DEMO/REMOVE EXISTING CONSTRUCTION AS REQUIRED TO ACCOMPLISH INSTALLATION OF NEW BUILDING SYSTEMS AND NEW CONSTRUCTION. PATCH AND REPAIR ALL CONSTRUCTION TO MATCH EXISTING OR TO RECEIVE NEW WORK/FINISHES. GENERAL CONTRACTOR IS TO DETERMINE THE EXTENT OF DEMO REQUIRED. SCOPE OF DEMO EXCEEDS THE SPECIFIC WORK NOTED OR SHOWN ON THIS SHEET.
3. THE CONTRACTOR AND SUB-CONTRACTOR SHALL FIELD INSPECT ALL EXISTING CONDITIONS WHICH MAY REMAIN, IDENTIFY ANY DAMAGED CONDITIONS AND PROVIDE PATCHING AND REPAIR AS REQUIRED.
4. REMOVE ALL EXPOSED PIPING, CONDUIT, AND FIXTURES THAT ARE UNUSED, ABANDONED OR REPLACED WITH NEW WORK AS A PART OF THIS PROJECT WHETHER SPECIFICALLY NOTED OR NOT WITHIN THE BOUNDARY OF THE SCOPE OF WORK. CONFIRM ALL ITEMS WITH OWNER.
5. LEAVE CLEAN, STRAIGHT EDGES WITH NO LOOSE OR CRACKED MATERIAL WHERE NEW FINISHES SUCH AS TRIM OR SEALANT WILL ADJOIN EXISTING FINISHES.
6. REMOVE ANY NON-STRUCTURAL EXPOSED METAL FASTENERS INCLUDING WHERE FASTENERS ARE EXPOSED BY DEMOLITION, TYPICAL THROUGHOUT INTERIOR AND EXTERIOR OF THE PROJECT.
7. CLEAN AND PREPARE ALL EXISTING SURFACES TO ACCEPT/RECEIVE NEW WORK.
8. CAP AND SEAL ALL EXISTING UNUSED PLUMBING, MECHANICAL OR ELECTRICAL UTILITIES. CONCEAL WITHIN WALL OR BELOW SLAB.
9. GC SHALL PROVIDE DUST AND SOUND CONTROL AS REQUIRED DURING DEMOLITION AND CONSTRUCTION
10. SAW CUT AND REPLACE CONCRETE FLOOR AS REQUIRED FOR INSTALL OF PLUMBING, ELECTRICAL AND OTHER BUILDING SYSTEMS. SEE ELECTRICAL, MECHANICAL AND PLUMBING SHEETS FOR LOCATIONS.
11. DUE TO THE AGE OF THE BUILDING DISCREPANICES ARE EXPECTED. GC SHALL FIELD VERIFY ALL CONDITIONS AND NOTIFY ARCHITECT OF DISCREPANICES IMMEDIATELY.

DEMOLITION PLAN LEGEND

- EXISTING PARTITION TO REMAIN
- EXISTING DOOR TO REMAIN
- DEMOLISH PARTITION, DOOR, DOOR FRAME, GLAZING ASSEMBLY, CABINET, SHELVING, FIXTURES SHOWN DASHED U.N.O.

BUILDING DEMOLITIONS (IBC 3602.1.1):
BUILDINGS OR PORTIONS OF BUILDING WHICH ARE REMOVED SHALL BE PROCESSED IN SUCH A WAY AS TO SAFELY REMOVE ALL ASBESTOS AND LEAD PAINT CONTAMINANTS. FOR ALL DEMOLITIONS, A DEMOLITION WASTE MANAGEMENT PLAN ACCEPTABLE TO THE BUILDING OFFICIAL IS REQUIRED AT THE TIME OF APPLICATION FOR A DEMOLITION PERMIT. ALL METALS, ASPHALT, CONCRETE, AND MASONRY THAT ARE FREE OF ASBESTOS AND LEAD PAINT SHALL BE RECYCYLED, AND WHERE POSSIBLE, ALL REMAINING MATERIALS SUCH AS DOORS, WINDOWS, CABINETS AND FIXTURES, WOOD, AND CARDBOARD SHALL BE "SOFT STRIPPED" AND RECYCLED. COMPLIANCE SHALL BE CERTIFIED BY INSPECTION, DOCUMENTATION, AND SIGNED FINAL DEMOLITION WASTE MANAGEMENT PLANS. SUBSTANTIVE CHANGES TO THE PLAN SHALL BE SUBJECT TO PRIOR APPROVAL BY THE BUILDING OFFICIAL.

DEMO PLAN KEYED NOTES LEGEND

1. REMOVE (E) WALL AS INDICATED (VIF)
2. REMOVE (E) DOOR / JAMB ASSEMBLY (VIF)
3. REMOVE (E) WALL FINISH (VIF)
4. REMOVE (E) FLOOR FINISH AND ALL ASSOCIATED ADHESIVE / GROUT RESIDUE (VIF)
5. REMOVE (E) WALL BASE
6. REMOVE EXTENT OF (E) CEILING / SOFFIT (VIF)
7. REMOVE (E) CASEWORK / FURNITURE
8. REMOVE (E) HANDRAILS / GUARDRAILS
9. REMOVE (E) STAIR / RAMP
10. REMOVE (E) LIGHT FIXTURES, AND ASSOCIATED CONDUIT, J-BOXES, RECEPTACLES, ETC AS REQ'D U.N.O. (VIF), RE: ARCH AND ELEC DWGS
11. REMOVE (E) PLUMBING FIXTURES AND ASSOCIATED PIPING NOT SCHEDULED TO REMAIN; FIELD VERIFY EXTENT OF REMOVAL BACK TO MAIN SERVICE ELEMENTS: COORD W/ ARCH AND PLUMBING DWGS
12. REMOVE / MODIFY (E) HVAC SYSTEM COMPONENTS; COORD EXTENT OF MODIFICATIONS PER ARCH AND MECH DWGS
13. REMOVE EXISTING KITCHEN EQUIPMENT, CONFIRM ALL ITEMS TO BE SALVAGED PRIOR TO DEMOLITION W/ OWNER
14. PROVIDE NEW OPENING IN EXISTING WALL (VIF), COORD W/ STRUCT DWGS AND ARCH PLANS

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DEMOLITION FLOOR PLAN

DRAWING NUMBER:

A0.1

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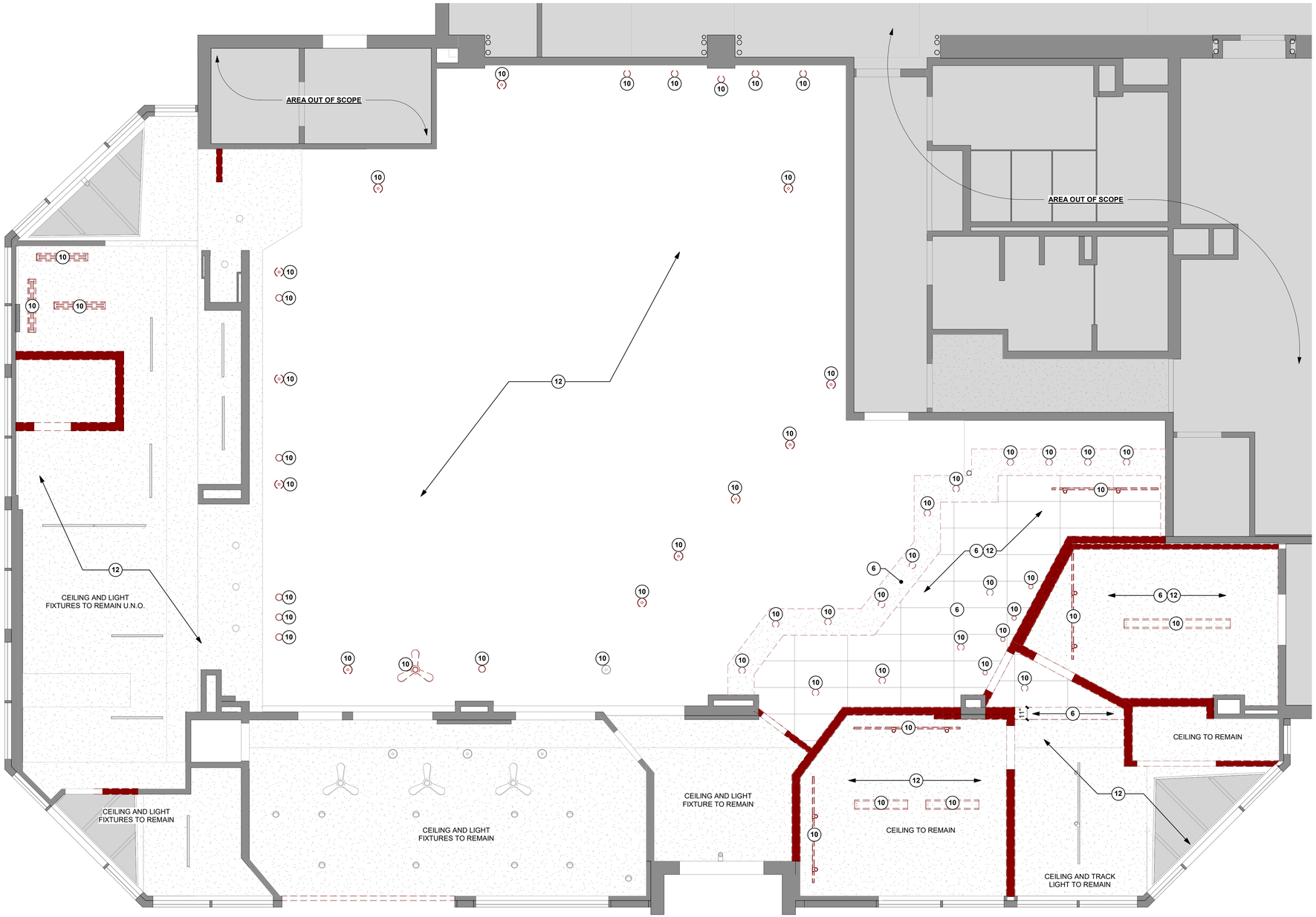

1 DEMOLITION REFLECTED CEILING PLAN

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

NORTH

0' 2' 4' 8' 16'

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

DEMOLITION PLAN GENERAL NOTES

1. GC SHALL FIELD VERIFY ALL ITEMS TO BE SALVAGED WITH OWNER PRIOR TO DEMOLITION
2. DEMO/REMOVE EXISTING CONSTRUCTION AS REQUIRED TO ACCOMPLISH INSTALLATION OF NEW BUILDING SYSTEMS AND NEW CONSTRUCTION. PATCH AND REPAIR ALL CONSTRUCTION TO MATCH EXISTING OR TO RECEIVE NEW WORK/FINISHES. GENERAL CONTRACTOR IS TO DETERMINE THE EXTENT OF DEMO REQUIRED. SCOPE OF DEMO EXCEEDS THE SPECIFIC WORK NOTED OR SHOWN ON THIS SHEET.
3. THE CONTRACTOR AND SUB-CONTRACTOR SHALL FIELD INSPECT ALL EXISTING CONDITIONS WHICH MAY REMAIN, IDENTIFY ANY DAMAGED CONDITIONS AND PROVIDE PATCHING AND REPAIR AS REQUIRED.
4. REMOVE ALL EXPOSED PIPING, CONDUIT, AND FIXTURES THAT ARE UNUSED, ABANDONED OR REPLACED WITH NEW WORK AS A PART OF THIS PROJECT WHETHER SPECIFICALLY NOTED OR NOT WITHIN THE BOUNDARY OF THE SCOPE OF WORK. CONFIRM ALL ITEMS WITH OWNER.
5. LEAVE CLEAN, STRAIGHT EDGES WITH NO LOOSE OR CRACKED MATERIAL WHERE NEW FINISHES SUCH AS TRIM OR SEALANT WILL ADJOIN EXISTING FINISHES.
6. REMOVE ANY NON-STRUCTURAL EXPOSED METAL FASTENERS INCLUDING WHERE FASTENERS ARE EXPOSED BY DEMOLITION, TYPICAL THROUGHOUT INTERIOR AND EXTERIOR OF THE PROJECT.
7. CLEAN AND PREPARE ALL EXISTING SURFACES TO ACCEPT/RECEIVE NEW WORK.
8. CAP AND SEAL ALL EXISTING UNUSED PLUMBING, MECHANICAL OR ELECTRICAL UTILITIES. CONCEAL WITHIN WALL OR BELOW SLAB.
9. GC SHALL PROVIDE DUST AND SOUND CONTROL AS REQUIRED DURING DEMOLITION AND CONSTRUCTION
10. SAW CUT AND REPLACE CONCRETE FLOOR AS REQUIRED FOR INSTALL OF PLUMBING, ELECTRICAL AND OTHER BUILDING SYSTEMS. SEE ELECTRICAL, MECHANICAL AND PLUMBING SHEETS FOR LOCATIONS.
11. DUE TO THE AGE OF THE BUILDING DISCREPANICES ARE EXPECTED. GC SHALL FIELD VERIFY ALL CONDITIONS AND NOTIFY ARCHITECT OF DISCREPANICES IMMEDIATELY.

DEMOLITION PLAN LEGEND

EXISTING PARTITION TO REMAIN

EXISTING DOOR TO REMAIN

DEMOLISH PARTITION, DOOR, DOOR FRAME, GLAZING ASSEMBLY, CABINET, SHELVING, FIXTURES SHOWN DASHED U.N.O.

BUILDING DEMOLITIONS (IBC 3602.1.1):
BUILDINGS OR PORTIONS OF BUILDING WHICH ARE REMOVED SHALL BE PROCESSED IN SUCH A WAY AS TO SAFELY REMOVE ALL ASBESTOS AND LEAD PAINT CONTAMINANTS. FOR ALL DEMOLITIONS, A DEMOLITION WASTE MANAGEMENT PLAN ACCEPTABLE TO THE BUILDING OFFICIAL IS REQUIRED AT THE TIME OF APPLICATION FOR A DEMOLITION PERMIT. ALL METALS, ASPHALT, CONCRETE, AND MASONRY THAT ARE FREE OF ASBESTOS AND LEAD PAINT SHALL BE RECYCYLED, AND WHERE POSSIBLE, ALL REMAINING MATERIALS SUCH AS DOORS, WINDOWS, CABINETS AND FIXTURES, WOOD, AND CARDBOARD SHALL BE "SOFT STRIPPED" AND RECYCLED. COMPLIANCE SHALL BE CERTIFIED BY INSPECTION, DOCUMENTATION, AND SIGNED FINAL DEMOLITION WASTE MANAGEMENT PLANS. SUBSTANTIVE CHANGES TO THE PLAN SHALL BE SUBJECT TO PRIOR APPROVAL BY THE BUILDING OFFICIAL.

DEMO PLAN KEYED NOTES LEGEND

1. REMOVE (E) WALL AS INDICATED (VIF)
2. REMOVE (E) DOOR / JAMB ASSEMBLY (VIF)
3. REMOVE (E) WALL FINISH (VIF)
4. REMOVE (E) FLOOR FINISH AND ALL ASSOCIATED ADHESIVE / GROUT RESIDUE (VIF)
5. REMOVE (E) WALL BASE
6. REMOVE EXTENT OF (E) CEILING / SOFFIT (VIF)
7. REMOVE (E) CASEWORK / FURNITURE
8. REMOVE (E) HANDRAILS / GUARDRAILS
9. REMOVE (E) STAIR / RAMP
10. REMOVE (E) LIGHT FIXTURES, AND ASSOCIATED CONDUIT, J-BOXES, RECEPTACLES, ETC AS REQ'D U.N.O. (VIF), RE: ARCH AND ELEC DWGS
11. REMOVE (E) PLUMBING FIXTURES AND ASSOCIATED PIPING NOT SCHEDULED TO REMAIN; FIELD VERIFY EXTENT OF REMOVAL BACK TO MAIN SERVICE ELEMENTS: COORD W/ ARCH AND PLUMBING DWGS
12. REMOVE / MODIFY (E) HVAC SYSTEM COMPONENTS; COORD EXTENT OF MODIFICATIONS PER ARCH AND MECH DWGS
13. REMOVE EXISTING KITCHEN EQUIPMENT, CONFIRM ALL ITEMS TO BE SALVAGED PRIOR TO DEMOLITION W/ OWNER
14. PROVIDE NEW OPENING IN EXISTING WALL (VIF), COORD W/ STRUCT DWGS AND ARCH PLANS

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PROJECT TEAM

STRUCTURAL ENGINEER:
LARSEN STRUCTURAL DESIGN

MECHANICAL ENGINEER:
INTEGRATED MEP, LLC.

PLUMBING ENGINEER:
INTEGRATED MEP, LLC.

ELECTRICAL ENGINEER:
APS, INC.

DESIGN DEVELOPMENT

SHEET ISSUANCES

DESCRIPTION	DATE
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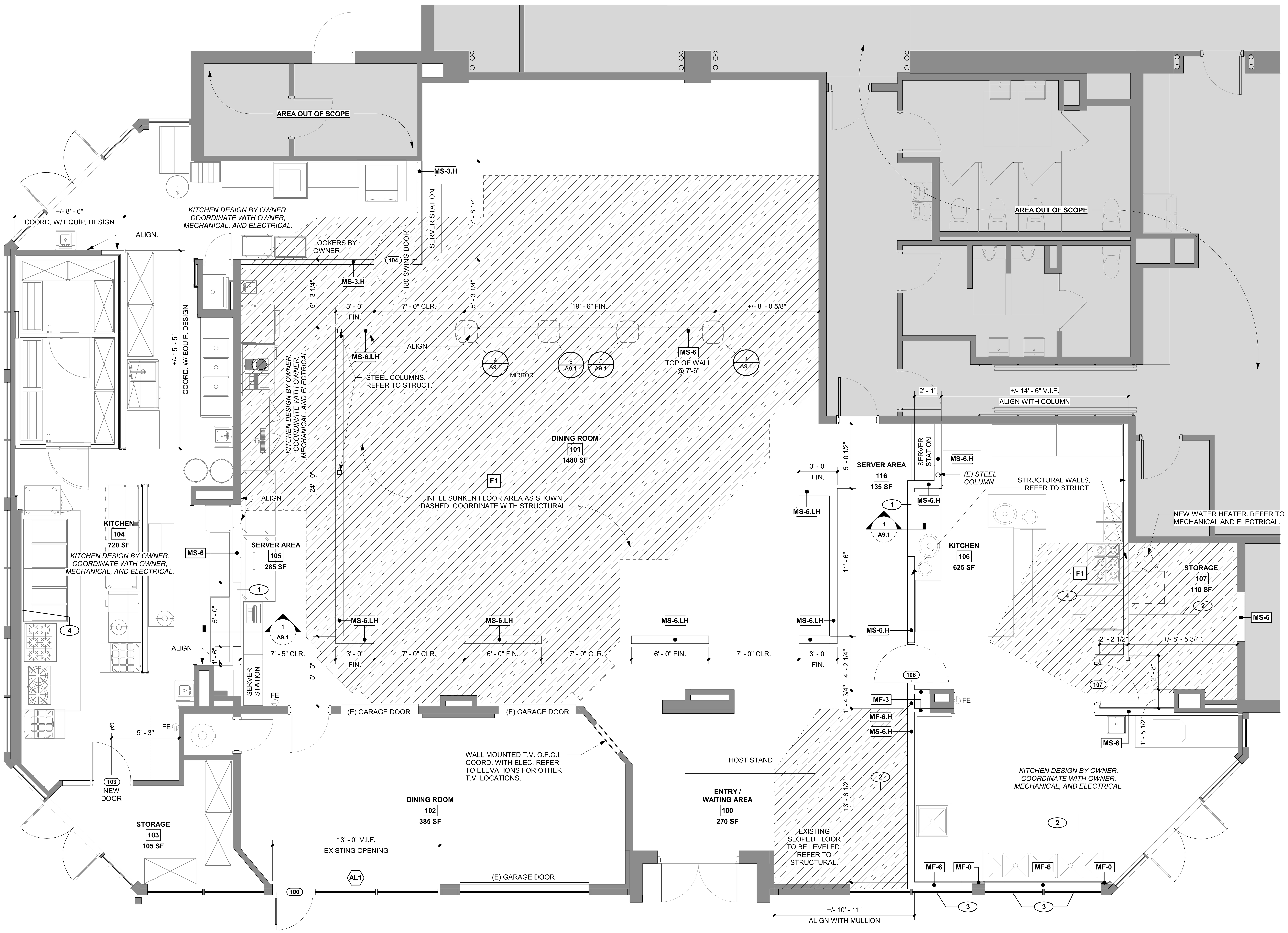
SEAL:

STATE OF COLORADO
ANDREW M. GOLDMAN
400765
LICENSED ARCHITECT

DEMOLITION REFLECTED CEILING PLAN

DRAWING NUMBER:

A0.2



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

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FLOOR PLAN GENERAL NOTES

1. REFER TO SHEET G0.3 FOR SYSTEM NOTES
2. REFER TO FINISH PLANS FOR FLOOR FINISHES / INTERIOR CASEWORK ELEVATION TAGS AND INTERIOR ELEVATION VIEWS FOR WALL FINISHES
3. REFER TO A7.1 FOR DOOR AND WINDOW SCHEDULE
4. PARTITIONS TO BE "MS-3" U.N.O. SEE SHEET G0.3 FOR PARTITION SCHEDULE
5. ALL SCHEDULED INTERIOR DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE 4" MIN FROM THE ADJACENT WALL FACE OF FINISH, U.N.O.
6. ALL EXPOSED SLAB-ON-GRADE JOINTS, INCLUDING PERIMETER JOINTS, SHALL BE FILLED WITH SEALANT; GC SHALL VERIFY SEALANT COLOR WITH ARCHITECT FOR ALL JOINTS EXPOSED TO VIEW
7. GC SHALL PRIME AND PAINT ALL EXPOSED STEEL, RE: INTERIOR FINISH LEGEND FOR SCHEDULED COLOR
8. GC SHALL COORDINATE LOCATION AND EXTENT OF PLYWOOD BACKING AND/OR 2x BLOCKING AT ALL SCHEDULED ACCESSORY LOCATIONS INCLUDING BUT NOT LIMITED TO EQUIPMENT, TOILET ACCESSORIES, RESTROOM PARTITIONS, GRAB BARS, HANDRAILS, SHELVES, WALL-MOUNTED CABINETS, CLOSET RODS, MOUNTING BRACKETS, SHOWER ENCLOSURES AND WALL-MOUNTED TV'S
9. FLOOR FINISHES LEFT OFF PLAN FOR CLARITY. REFER TO SHEET A8.1 FOR FINISH PLANS
10. CONTROL JOINTS IN GYP WALLS AND CEILINGS TO BE INSTALLED EVERY 30' MAX PER MANUFACTURER
11. ALL EXPOSED PLUMBING, PIPING, CLEANOUT COVERS, CONDUIT, SPRINKLERS, ETC SHALL BE PAINTED TO MATCH ADJACENT FINISH, TYP U.N.O.
12. THE OWNER IS RESPONSIBLE FOR COORDINATING INTERIOR SIGNAGE AND ARTWORK AS REQ'D.
13. THE OWNER IS RESPONSIBLE FOR COORDINATING DESIGN APPROVAL BY FRANCHISE ENTITY.
14. KITCHEN DESIGN BY OTHERS. KITCHEN EQUIPMENT IS SUPPLIED AND INSTALLED BY THE KITCHEN EQUIPMENT VENDOR. GC TO COORDINATE INSTALLATION OF MECHANICAL, ELECTRICAL, AND PLUMBING. SEE KITCHEN EQUIPMENT SHOP DRAWINGS, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS. G.C. TO MAKE FINAL CONNECTIONS.
15. GC SHALL PROVIDE AND VERIFY QUANTITY / LOCATION OF FIRE EXTINGUISHERS PER LOCAL AHJ
16. REPLACE OR REPAIR DAMAGED, DETERIORATED OR UNSUITABLE SUBSTRATES AS REQUIRED TO RECEIVE NEW WALL FINISHES AS SCHEDULED.
17. DUE TO THE AGE OF THE BUILDING DISCREPANCIES ARE EXPECTED. GC SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL BUILDING DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT & OWNER'S REP OF ANY VARIANCE OR DISCREPANCY AFFECTING NEW CONSTRUCTION PRIOR TO PROCEEDING WITH WORK.
18. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, GC SHALL VERIFY EXISTENCE AND LOCATION OF ALL EXISTING ABOVE AND BELOW GRADE UTILITIES,INCLUDING SANITARY SEWER, STORM SEWER, WATER, GAS, ELECTRICAL, TELEPHONE, ETC. ANY DISCREPANCIES IN UTILITY LOCATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT & OWNER'S REP.
19. GC SHALL BE RESPONSIBLE FOR VERIFICATION OF THE BUILDING'S STRUCTURAL SYSTEM. STRUCTURAL MEMBERS, INCLUDING BEARING AND SHEAR WALLS, SHALL NOT BE REMOVED, CUT OR OTHERWISE MODIFIED WITHOUT WRITTEN AUTHORIZATION FROM THE ARCHITECT.
20. GC SHALL COORDINATE NEW CONSTRUCTION INCLUDING MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL WORK WITH EXISTING STRUCTURE.
21. ALL PENETRATIONS SHALL RECEIVE CAULKING TO SEAL ANY TYPE OF ENERGY LOSS.

FLOOR PLAN LEGEND

- EXISTING WALLS TO REMAIN
- NEW PARITIONS/WALLS. SEE SCHEDULE FOR TYPE.
- FE — FIRE EXTINGUISHER WALL MTD
- FD — FLOOR DRAIN: SEE PLUMBING DRAWINGS FOR TYPE. REMOVE (E) CONCRETE FLOOR AS REQUIRED TO INSTALL
- WH — WATER HEATER SEE PLUMBING DRAWINGS FOR TYPE
- NO WORK THIS AREA (NOT IN SCOPE)
- FLOOR AREA TO BE INFILLED AND/OR LEVELED. COORDINATE WITH STRUCTURAL

PLAN / RCP KEYED NOTES LEGEND

1. EXPO PASSTHROUGH. 5'-0" W X 2'-0" H, 3'-0" A.F.F.
2. INFILL AT EXISTING FLOOR DRAIN. COORDINATE WITH STRUCTURAL.
3. WINDOW FILM TO BE APPLIED FULL HEIGHT TO INTERIOR FACE OF EXISTING GLAZING
4. AT TYPE I HOODS A SMOOTH, CLEANABLE, NONABSORBENT AND NONCOMBUSTIBLE MATERIAL IS REQUIRED TO BE INSTALLED BETWEEN THE HOOD AND THE GYPSUM OR CEMENTIOUS WALLBOARD OVER AN AREA EXTENDING NOT LESS THEN 18 INCHES IN ALL DIRECTIONS FROM THE HOOD.

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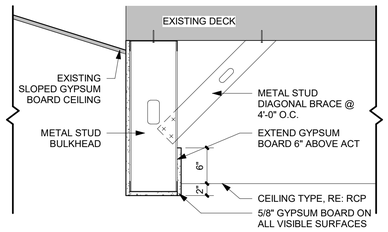
LICENSED ARCHITECT

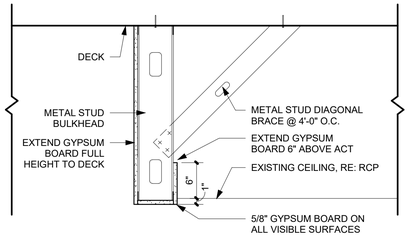
FLOOR PLAN

DRAWING NUMBER:
A1.0



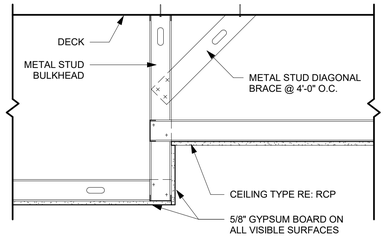
4 BULKHEAD DETAIL - METAL STUD

SCALE: 1" = 1'-0"



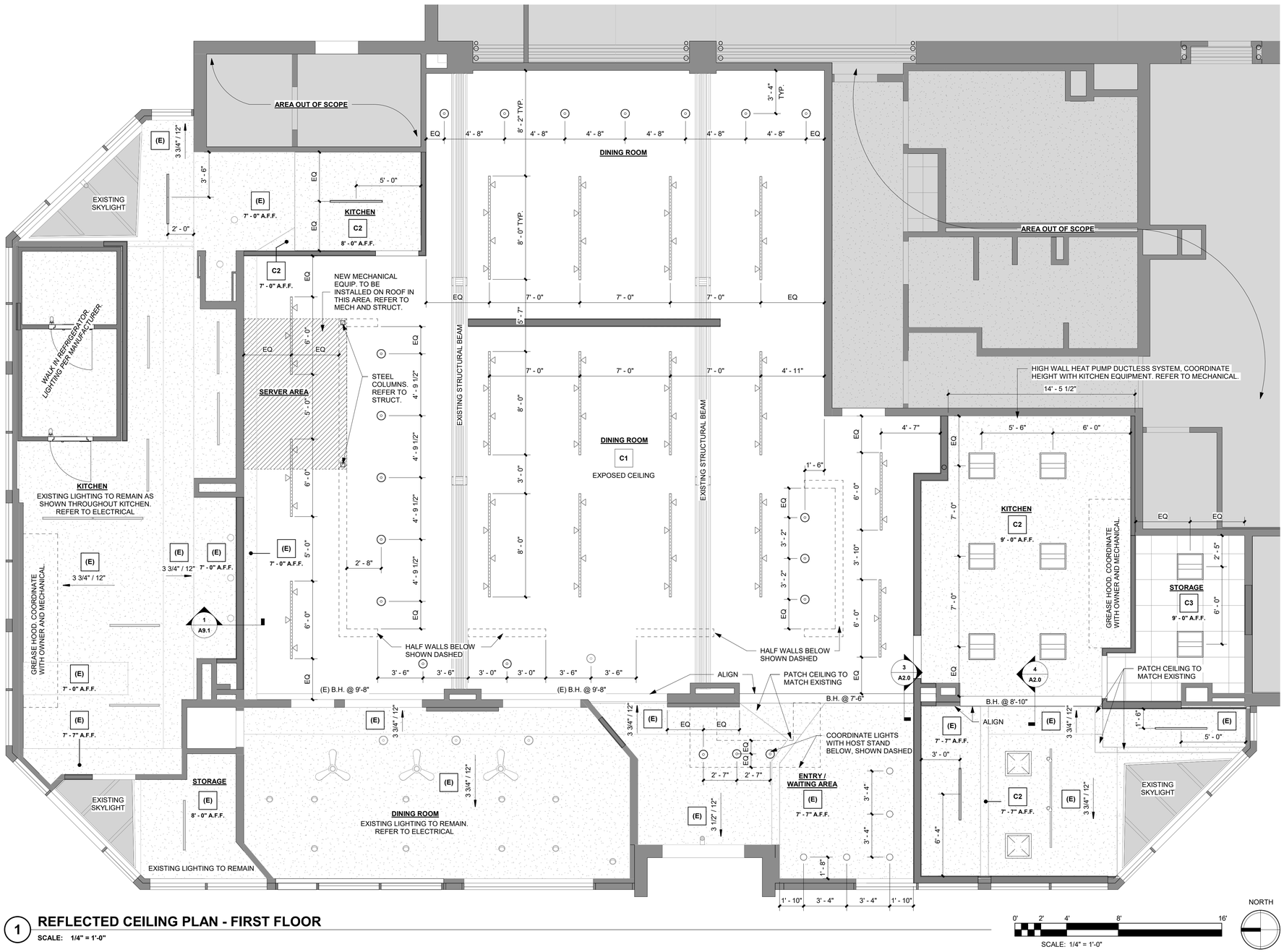
3 BULKHEAD DETAIL - METAL STUD - EXPOSED CEILING

SCALE: 1" = 1'-0"



2 GYP. BD. RETURN DETAIL - METAL STUD

SCALE: 1" = 1'-0"



1 REFLECTED CEILING PLAN - FIRST FLOOR

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

0' 2' 4' 8' 16'

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

NORTH

RCP GENERAL NOTES

1. GC SHALL PRIME AND PAINT ALL EXPOSED STEEL, U.N.O.
2. GC SHALL COORDINATE SCHEDULED LIGHTING WITH FURNITURE AND CASEWORK SHOWN BELOW PER FINISH AND CASEWORK PLANS. COORDINATE FINAL LOCATIONS AND TYPES WITH OWNER.
3. INSTALL ALL LIGHTS PER LOCATION SHOWN ON ARCHITECTURAL RCP. REFER TO ELECTRICAL DWGS FOR LIGHT TYPES
4. GC SHALL COORDINATE ALL SUSPENDED MOUNTING HEIGHTS W/ ARCHITECT PRIOR TO INSTALLATION, U.N.O.
5. REFER TO ELEVATION DWGS FOR WALL-MOUNTED LIGHT FIXTURE HEIGHT DIMENSIONS
6. CENTER ACT PANELS IN ROOM, TYP U.N.O.
7. ALL BULKHEADS TO BE MS-6, U.N.O.
8. ALL EXISTING CEILINGS TO REMAIN ARE TO BE PATCHED AND REPAIRED AS NEEDED.
9. INSTALL DIFFUSERS PER LOCATION SHOWN ON ARCHITECTURAL RCP. REFER TO MECHANICAL DRAWINGS FOR DIFFUSER TYPES
10. ALL FIRE SPRINKLER HEADS AND RECESSED CAN LIGHTS SHALL BE LOCATED AT CENTER OF CEILING TILES. SPRINKLER HEADS & ESCUTCHEONS IN WOOD CEILINGS TO BE BROWN OR BLACK
11. ALL EXPOSED PLUMBING, CONDUIT, SPRINKLERS, ETC SHALL BE PAINTED TO MATCH ADJACENT CEILING FINISH, TYP U.N.O.
12. ALL EXPOSED SUPPORTING WIRES, CONDUIT AND SERVICE LINES SHALL BE MOUNTED IN A CLEAN AND ORGANIZED ARRANGEMENT WITH THEIR ROUTING PARALLEL OR PERPENDICULAR TO ADJACENT ROOF FRAMING, TYP
13. REFER TO GENERAL FINISH NOTES (A8.0) FOR ADDITIONAL FINISH INFORMATION
14. REFER TO INTERIOR FINISH NOTES (A8.0) FOR FINISH ON DUCTWORK AND GRILLES
15. DUE TO THE AGE OF THE BUILDING DISCREPANICES ARE EXPECTED. GC SHALL FIELD VERIFY ALL CONDITIONS AND NOTIFY ARCHITECT AND OWNER OF DISCREPANICES IMMEDIATELY.

RCP LIGHTING TYPE LEGEND

- BH — GYP. BD. BULKHEAD
- SUPPLY AIR DIFFUSER PER MECH. DWG.
- RETURN AIR DIFFUSER PER MECH. DWG.
- RECESSED LIGHT FIXTURE PER ELECT. DWG.
- SURFACE MOUNT LIGHT FIXTURE PER ELECT. DWG.
- TRACK LIGHT FIXTURE PER ELECT. DWG. SELECTION BY OWNER
- RECESSED LIGHT FIXTURE PER ELECT. DWG.
- PENDANT LIGHT FIXTURE PER ELECT. DWG. SELECTION BY OWNER
- CEILING FAN PER ELECT. DWG.

CEILINGS

C1 EXPOSED STRUCTURE
- EXPOSED ROOF DECK & STRUCTURE.
- PAINT (PT-2)

C2 GYPSUM BOARD
- 5/8" GYPSUM BOARD (PAINTED)
- METAL FRAMING OR METAL SUSPENSION SYSTEM (CONTRACTOR OPTION)

C3 ACT
- 24"x24" ACOUSTIC CEILING TILE IN
- 9/16" PREFIN. METAL SUSPENSION SYSTEM (WHITE)
- MANUFACTURER AS DETERMINED BY G.C.

(E) EXISTING CEILING
- TO REMAIN
- PATCH AND REPAIR AS NEEDED

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400765
LICENSED ARCHITECT

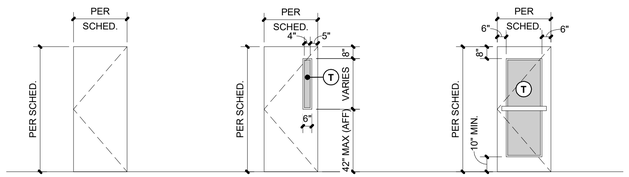
REFLECTED CEILING PLAN

DRAWING NUMBER:

A2.0

DOOR SCHEDULE

NUMBER	DOOR TYPE	DOOR # OF PANELS	DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	HARDWARE SET	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	COMMENTS
FIRST FLOOR - RESTAURANT															
100	D-3		3' - 0"	6' - 10"	1 3/4"	ALUM / GLS	PREFIN	AL1	ALUM	PREFIN	3	-	-	-	
103	D-1		3' - 0"	7' - 0"	1 3/4"	HM	PTD	HM1	HM	PTD	1	1 / A7.1	1 / A7.1	-	
104	D-2		3' - 0"	7' - 0"	1 3/4"	ALUM	PREFIN	HM1	HM	PTD	2	1 / A7.1	1 / A7.1	-	
106	D-2		3' - 0"	7' - 0"	1 3/4"	ALUM	PREFIN	HM1	HM	PTD	2	1 / A7.1	1 / A7.1	-	
107	D-1		3' - 0"	7' - 0"	1 3/4"	HM	PTD	HM1	HM	PTD	1	1 / A7.1	1 / A7.1	-	



DOOR TYPE D-1
SOLID FLUSH DOOR

HOLLOW METAL
RE: DOOR SCHEDULE

DOOR TYPE D-2
FLUSH DOOR WITH NARROW LITE

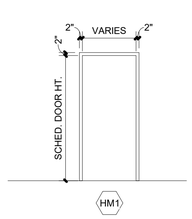
GLAZED WITH 1/4" CLEAR TEMPERED GLASS

B.O.D. ELIASON LWP-3 TRAFFIC DOOR

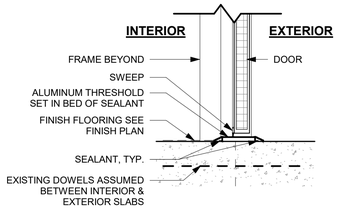
DOOR TYPE D-3
FULL GLASS WIDE STILE ALUMINUM ENTRY DOOR. SLIMLINE PANIC HARDWARE - FINISH TO MATCH DOOR

GLAZE WITH 1" INSULATED CLEAR TEMPERED GLASS
U-VALUE OF DOOR ASSEMBLY = 0.63, MAX.
SHGC OF GLAZING = 0.33, MAX.

DOOR TYPES

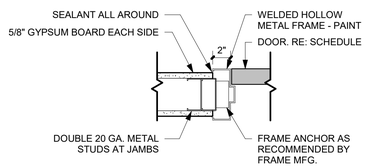


FRAME TYPES



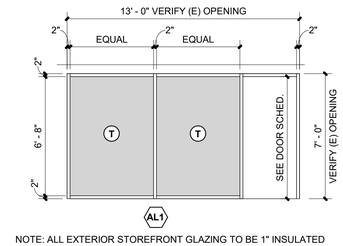
2 TYP. SILL DETAIL @ EXT. SWING DOORS

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



1 HM WELDED FRAME IN MTL. STUD PARTITION - JAMB DETAIL (HEAD SIM.)

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



NOTE: ALL EXTERIOR STOREFRONT GLAZING TO BE 1" INSULATED GLASS, TYP. EXTERIOR GLAZING IN 2"X4 1/4" ALUMINUM FRAME. FRAME FINISH TO MATCH EXISTING STOREFRONT FRAME, TYP.

ALUMINUM FRAME TYPES

DOOR AND WINDOW NOTES

1. ALL EXTERIOR DOORS SHALL BE INSULATED AND WEATHER-STRIPPED PER MFR.
2. CONTRACTOR SHALL PROVIDE STOREFRONT AND DOOR SHOP DRAWINGS FOR ARCHITECT REVIEW PRIOR TO ORDERING.
3. WHERE SCHEDULED DOOR FINISH IS TBD, CONTRACTOR SHALL PROVIDE SAMPLES TO OWNER AND ARCHITECT FOR APPROVAL PRIOR TO ORDERING.
4. DOOR / WINDOW MANUFACTURER SHALL PROVIDE COLOR COORDINATING GLASS SPACERS AT ALL INSULATED GLASS ASSEMBLIES (IE BLACK SPACERS FOR BLACK FRAMES AND BRONZE SPACERS AT BRONZE FRAMES, ETC)
5. GC SHALL COORDINATE KEYING OF ALL EXISTING AND NEW LOCKSETS PER OWNER'S DIRECTION.
6. REFER TO PLANS FOR DOOR LOCATIONS AND SWING DIRECTIONS.
7. MAXIMUM DOOR OPERATING PRESSURE : 5 LBS INTERIOR : 8.5 LBS EXTERIOR MEASURED AT 90 DEGREES TO THE DOOR AT STRIKE EDGE.

DOOR HARDWARE GROUPS

NOTE:
HARDWARE AND LOCK SYSTEMS TO BE DISCUSSED AND CONFIRMED WITH CLIENT, HARDWARE SUB, GC AND ARCHITECT

HARDWARE SET #1 - STORAGE
HINGES
WALL STOP
DOOR SILENCER
LEVER TYPE LOCKSET TO BE DETERMINED

HARDWARE SET #2 - KITCHEN ENTRY
HINGES - 180 DEGREE DOUBLE ACTING SWING (MANUFACTURER PROVIDED)
KICKPLATE BOTH SIDES

HARDWARE SET #3 - RESTAURANT ENTRY DOOR
CYLINDER LOCK
CONTINUOUS HINGES BY STOREFRONT MANUFACTURER
SURFACE CLOSER, FINISH TO MATCH FRAME
THRESHOLD - MILL FINISH ALUMINUM
CONTINUOUS DOOR SEALS, BLACK
DOOR SWEEPS, FINISH TO MATCH DOOR
SURFACE MOUNTED EXIT HARDWARE, FINISH TO MATCH DOOR COLOR
VERTICAL BAR PULLS - TO MATCH EXISTING DOOR SETS, FINISH TO MATCH NEW DOOR

DOOR SCHEDULE SYMBOLS & ABBREVIATIONS

(T) TEMPERED GLASS PANEL

ABBREVIATIONS

ALUM	ALUMINUM
HM	HOLLOW METAL
PREFIN	PRE-FINISHED
PTD	PAINTED
S&C	SAND AND CLEAR FINISH (FACTORY APPLIED)
STL	STEEL
WD	WOOD

FORT COLLINS LOCAL AMENDMENT RE FENESTRATION INSTALLATION:
FOR ALL NEW CONSTRUCTION AND ADDITIONS, ALL NEW FENESTRATION INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA) STANDARDS/SPECIFICATIONS FOR WINDOWS, DOORS AND SKYLIGHTS AND SHALL BE SUPERVISED BY AN INDIVIDUAL CERTIFIED AS AN INSTALLATION MASTER BY ARCHITECTURAL TESTING INC. (ATI) OR OTHER NATIONALLY RECOGNIZED AGENCY ACCEPTABLE TO THE CITY OF FORT COLLINS BUILDING OFFICIAL. THE CERTIFIED INDIVIDUAL MAY BE EMPLOYED BY THE GENERAL CONTRACTOR OR ONE OF HIS SUBCONTRACTORS OR MAY BE AN INDEPENDENT INSPECTOR EMPLOYED BY THE G.C. THE CITY OF FORT COLLINS OFFERS CLASSES TO INDIVIDUALS FOR CERTIFICATION AS AN INSTALLATION MASTER. NOTE THAT CERTIFICATION IS AVAILABLE ONLY TO INDIVIDUALS, NOT TO COMPANIES. NOTE THAT THE ARCHITECT WILL *NOT* PROVIDE CERTIFIED SUPERVISION OR INSPECTION OF FENESTRATION INSTALLATION. A REPORT CERTIFYING COMPLIANT INSTALLATION OF FENESTRATION MUST BE SUBMITTED TO THE OWNER, ARCHITECT, AND THE CITY OF FORT COLLINS BUILDING OFFICIAL ON THE CITY'S FORM BEFORE A CERTIFICATE OF OCCUPANCY CAN BE OBTAINED.

IBC 2406.3 IDENTIFICATION OF SAFETY GLAZING.
EXCEPT AS INDICATED IN SECTION 2406.3.1, EACH PANE OF SAFETY GLAZING INSTALLED IN HAZARDOUS LOCATIONS SHALL BE IDENTIFIED BY A MANUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION, THE MANUFACTURER OR INSTALLER AND THE SAFETY GLAZING STANDARD WITH WHICH IT COMPLIES, AS WELL AS THE INFORMATION SPECIFIED IN SECTION 2403.1. THE DESIGNATION SHALL BE ACID ETCHED, SAND BLASTED, CERAMIC FIRED, LASER ETCHED, EMBOSSED OR OF A TYPE THAT ONCE APPLIED, CANNOT BE REMOVED WITHOUT BEING DESTROYED. A LABEL MEETING THE REQUIREMENTS OF THIS SECTION SHALL BE PERMITTED IN LIEU OF THE MANUFACTURER'S DESIGNATION.

IBC 2406.4.1 GLAZING IN DOORS
GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION.

2406.4.2 GLAZING ADJACENT TO DOORS
GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE OF THE GLAZING IS WITHIN A 24-INCH (610 MM) ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) ABOVE THE WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION.

2406.4.3 GLAZING IN WINDOWS
GLAZING IN AN INDIVIDUAL, FIXED, OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS SHALL BE CONSIDERED A HAZARDOUS LOCATION:

1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SQUARE FEET (0.84 M2).
2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES (457 MM) ABOVE THE FLOOR.
3. THE TOP EDGE OF THE GLAZING IS GREATER THAN 36 INCHES (914 MM) ABOVE THE FLOOR.
4. ONE OR MORE WALKING SURFACE(S) ARE WITHIN 36 INCHES (914 MM), MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE PLANE OF THE GLAZING.

STOREFRONT GENERAL NOTES

1. ALUMINUM STOREFRONT WINDOW SYSTEM - BASIS OF DESIGN: KAWNEER 451T OR OLDCASTLE 3000 THERMAL MULTIPANE, AND TUBELITE TU24000 OR APPROVED SUBSTITUTIONS. **DARK BRONZE ANODIZED FINISH** OR APPROVED EQUAL (CONFIRM MATCH TO EXISTING)
2. ALL EXTERIOR FRAMES TO BE ALUMINUM STOREFRONT U.N.O. ALL EXTERIOR ALUM. FRAMES TO BE THERMALLY BROKEN FRAMES. PROVIDE SAMPLE OF FRAME IN SUBMITTAL. ASSEMBLY U-FACTOR NOT TO EXCEED 0.36
3. PROVIDE MATCHING BRAKE METAL COVERS AND ACCESSORIES WHERE REQUIRED TO MEET ADJACENT CONSTRUCTION, U.N.O.
4. EXTERIOR GLAZING TO BE PPG 1" LOW-E SOLARBAN 72 INSULATED GLASS, CLEAR + CLEAR, U.N.O. MAX U (WINTER) 0.29 (SUMMER) 0.24 **MAX SHGC 0.33.**
5. MAX AIR LEAKAGE RATE SHALL BE 0.2 CUBIC FOOT PER MINUTE PER SQUARE FOOT OF FENESTRATION AREA PER 2021 IECC.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL OPENING SIZES BEFORE PROCEEDING WITH FABRICATION.
7. DIMENSIONS PROVIDED REPRESENT NOMINAL UNIT SIZE. INSTALLER TO PROVIDE ADDITIONAL ALLOWANCES FOR CONSTRUCTION TOLERANCES, BLOCKING, SHIMMING, ATTACHMENTS, ETC.
8. PROVIDE ELASTOMERIC JOINT SEALANT AT PERIMETER OF STOREFRONT UNITS, TYPICAL. DO NOT BLOCK WEEP HOLES OR OTHER DRAINAGE PATHWAYS
9. PROVIDE SAFETY GLAZING AT LOCATIONS INDICATED AND AS REQUIRED BY 2021 IBC AND PROJECT CONDITIONS.

PROJECT NUMBER: 2024-53

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STRENGTH IN DESIGN
STRENGTH IN PARTNERSHIP
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LARSEN STRUCTURAL DESIGN

MECHANICAL ENGINEER:
INTEGRATED MEP, LLC.

PLUMBING ENGINEER:
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ELECTRICAL ENGINEER:
APS, INC.

DESIGN DEVELOPMENT

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
CONSTRUCTION DOCUMENTS	10-11-2024

SEAL:

DOOR AND WINDOW SCHEDULES

DRAWING NUMBER:

A7.1

INTERIOR FINISH SELECTIONS

FLOORING SELECTIONS & ABBREVIATIONS

FT-1	PORCELAIN TILE: SELECTION BY OWNER
FT-2	QUARRY TILE: SELECTION BY OWNER

BASE AND WALL SELECTIONS & ABBREVIATIONS

WB-1	RUBBER WALL BASE: SELECTION BY OWNER
WB-2	QUARRY TILE COVE BASE: SELECTION BY OWNER
WT-1	PORCELAIN WALL TILE: SELECTION BY OWNER
VWC-1	VINYL WALL COVERING: SELECTION BY OWNER
PL-1	PLASTIC LAMINATE: SELECTION BY OWNER
EP	SCHLUTER: EDGE PROTECTION - JOLLY - SATIN ALUMINUM
CB	SCHLUTER: COVE BASE - DILEX - SATIN ALUMINUM
FRP	MARLITE: FIBER REINFORCED PANEL - STANDARD PEBBLE - P100 WHITE

PAINT AND STAIN SELECTIONS & ABBREVIATIONS

PT-1	SHERWIN WILLIAMS: OVERALL PAINT - NOMADIC DESERT SW6107 - EGGSHELL FINISH. CONFIRM COLOR W/ OWNER
PT-2	SHERWIN WILLIAMS: EXPOSED CEILING PAINT - BLACK BEAN SW6006 - EGGSHELL FINISH. CONFIRM COLOR W/ OWNER
PT-3	SHERWIN WILLIAMS: ACCENT PAINT - COLOR TO BE SELECTED BY OWNER. MULTIPLE ACCENT COLORS MAY BE USED. COORDINATE WITH OWNER.
ST-1	MINWAX: WOOD TRIM STAIN - RED MAHOGONY - MW225 CONFIRM COLOR W/ OWNER

CASEWORK AND MISCELLANEOUS SELECTIONS & ABBREVIATIONS

SS-1	SOLID SURFACE: SELECTION BY OWNER
PL-1	PLASTIC LAMINATE: SELECTION BY OWNER
CG-1	CORNER GUARD: SELECTION BY OWNER

TRANSITION STRIP SELECTIONS & ABBREVIATIONS

TS	REFER TO DETAILS ON THIS SHEET FOR ALL TRANSITIONS

CEILING SELECTIONS

REFER TO REFLECTED CEILING PLAN SHEET(S) & SYSTEM NOTES FOR NOTES ON FINISHES

INTERIOR MATERIAL ABBREVIATIONS

KEY	DESCRIPTION
ACT	ACOUSTIC CEILING TILE
CG	CORNER GUARD
CPT	CARPET
DS	DOOR STAIN
EM	ENTRY MAT
FRP	FIBER REINFORCED PANEL
LVT	LUXURY VINYL TILE
PL	PLASTIC LAMINATE
PLAM	PLASTIC LAMINATE
PT	PAINT
PTD	PAINTED
RB	RUBBER BASE
SC	SEALED CONCRETE
SS	SOLID SURFACE
TP	TOILET PARTITIONS
TS	TRANSITION STRIP
VWC	VINYL WALL COVERING
WDB	WOOD WALL BASE

GENERAL FINISH NOTES

FLOORING FINISH NOTES

1. FLOORING TRANSITIONS TO ALIGN WITH FINISH BASE EXCEPT AT DOORS, U.N.O. PROVIDE FLOORING TRANSITIONS AS REQUIRED THROUGHOUT INCLUDING METAL EDGE PROTECTIVE TRIM FOR ALL TILE TO OTHER FLOOR MATERIAL TRANSITION AS REQUIRED.
2. SEE FINISH PLANS FOR LOCATIONS OF FLOORING TRANSITIONS AT OPENINGS.
3. TILE TO BE INSTALLED PER CURRENT TCNA METHODS.
4. TILE FLOORS (CERAMIC, LUXURY VINYL, CARPET TILE) TO BE CENTERED WITHIN SPACE, U.N.O.
5. AVOID PARTIAL FLOOR TILES LESS THAN 3" WIDE OR HALF THE TILE SIZE, WHICHEVER IS SMALLER.
6. ALL ADHESIVES TO BE USED WITH ADHERED FLOORING MATERIALS SHALL TOLERATE THE FOLLOWING MAXIMUM LEVELS OF WATER VAPOR AND PH:
   a. WATER VAPOR PER MVER TEST: 5 LBS/24 HRS/1000 S.F.
   b. WATER VAPOR PER RELATIVE HUMIDITY TEST: 85%
   c. PH: 11

WALL AND CEILING FINISH NOTES

1. WALLS TO BE PAINTED (PT-1) WITH A LEVEL 4 SMOOTH TEXTURE FINISH. EXISTING WALL TEXTURE TO REMAIN ON EXISTING WALLS. ALL GYPSUM WALL BOARD AND CEILINGS TO BE 5/8" THICK. CEILINGS TO RECEIVE SMOOTH LEVEL 4 FINISH. PAINT ALL GYP BOARD EXPOSED TO VIEW, U.N.O.
2. ALL GYP BOARD WALLS EXPOSED TO VIEW TO BE PAINTED, U.N.O.
3. WALLS AND CEILINGS IN KITCHENS TO BE PAINTED WITH SHERWIN WILLIAMS WATER-BASED LIGHT INDUSTRIAL COATING SYSTEM. REFER TO OUTLINE SPECIFICATIONS.
4. GYPSUM CEILINGS, BULKHEADS AND SOFFITS TO BE PAINTED, U.N.O. REFER TO INTERIOR ELEVATIONS AND RCP FOR ACCENT COLORS ON SOFFITS AND BULKHEADS.
5. GYPSUM WALLS AND CEILINGS RECEIVING DARK ACCENT PAINT, FLAT OR EQUIVALENT PAINT OR EPOXY PAINT TO HAVE LEVEL 5 SMOOTH FINISH PRIOR TO PAINT APPLICATION, U.N.O.
6. EXPOSED STRUCTURE AND BAR JOISTS TO BE PAINTED WITH DRYFALL PAINT, U.N.O., REFER TO RCP & SYSTEM NOTES.
7. ALIGN WALL AND FLOOR TILE GROUT JOINTS, WHERE APPLICABLE. CONFIRM WITH INTERIOR ELEVATIONS AND FINISH PLAN.
8. REFER TO THE REFLECTED CEILING PLAN(S) & SYSTEM NOTES FOR CEILING FINISHES AND CEILING HEIGHTS.
9. PAINT FINISHES ARE AS FOLLOWS, U.N.O.:
   - WALLS THROUGHOUT – EGGSHELL OR APPROVED EQUAL
   - WALLS AT TOILETS, AND EQUIPMENT ROOMS - SEMI-GLOSS
   - DOOR FRAMES AND HANDRAILS - SEMI-GLOSS
   - CEILINGS IN RESTROOMS AND SHOWER ROOMS - EPOXY
   - EXPOSED CEILING SCHEDULED TO BE PAINTED - FLAT
   - DRYWALL CEILING SCHEDULED TO BE PAINTED - EGGSHELL
   - WALLS AND DRYWALL CEILINGS AT KITCHENS - GLOSS

DOOR, WINDOW AND ARCHITECTURAL METAL FINISH NOTES

1. INTERIOR DOOR FRAMES TO BE PAINTED, U.N.O.
2. INTERIOR HOLLOW METAL WINDOW FRAMES TO BE PAINTED, U.N.O.
3. METAL TRIM KITS & DOOR LOUVERS AT INTERIOR DOORS TO BE PAINTED, U.N.O.
4. STRINGERS, ANY EXPOSED METAL, BACKS OF STAIR RISERS, AND RAILINGS TO BE PAINTED, U.N.O.

CASEWORK NOTES

1. GC TO PROVIDE ALL WOOD BLOCKING IN STUD WALLS TO ALLOW FOR THE ANCHORING OF ALL WALL ATTACHED CABINETS AND WALL MOUNTED TVS. COORDINATE LOCATIONS WITH OWNER.
2. FIELD VERIFY ALL CASEWORK AND SHELVING DIMENSIONS PRIOR TO FABRICATION. COORDINATE CASEWORK AND SHELVING DESIGNS WITH OWNER.
3. ALL SHELVING, IN REFERENCE TO CASEWORK ONLY, SHOWN WITH DASHED LINES TO BE ADJUSTABLE.
4. ALL PLASTIC LAMINATE COUNTERTOPS TO HAVE SQUARE CORNERS, U.N.O.
5. LIP OF SINK SHALL BE 34" ABOVE FINISHED FLOOR MAXIMUM.
6. ALL PLASTIC LAMINATE WORK SURFACES AND COUNTERS TO HAVE CHAMFERED EDGE, U.N.O. DOORS AND DRAWERS TO HAVE 3MM PVC EDGE BANDING, U.N.O. 1MM EDGEBANDING ON BASE AND UPPER CABINET BOXES AND SHELVES TO MATCH ADJACENT PLASTIC LAMINATE COLOR.
7. PROVIDE A FINISHED PANEL AT EXPOSED CASEWORK ENDS AND BACKS AS NEEDED, TO MATCH ADJACENT CASEWORK PLASTIC LAMINATE. ALL FINISHED END PANELS TO BE SCRIBED TO THE FLOOR
8. ADD FILLER PANEL AS NEEDED AT CABINETS, DRAWERS, ETC. TO ENDURE FULL DOOR SWING AND DRAWER OPERATION. PROVIDE A MINIMUM OF 1 1/2" FILLERS WHEN ADJACENT TO WALLS. MATCH ADJACENT PLASTIC LAMINATE COLOR.
9. PROVIDE GROMMETS; TO BE LOCATED IN THE FIELD WITH THE OWNER AND G.C. AT ALL WORK SURFACE LOCATIONS. GROMMET COLOR TO BE AS CLOSE AS POSSIBLE TO COUNTERTOP MATERIAL. INTERIOR DESIGNER TO APPROVE FINAL COLOR PRIOR TO INSTALLATION.
10. PROVIDE 2 1/2" MELAMINE WITH EDGEBANDING CLEAT AT ALL COUNTERTOPS NOT SUPPORTED BY BASE CABINETS. MELAMINE CLEAT TO MATCH ADJACENT WALL.
11. ALL UPPER CASEWORK WITH DOORS TO HAVE SCREWS WITH A BEAUTY RING OR FINISH WASHER. ALL EXPOSED UPPER CASEWORK TO HAVE RECESSED SCREW HEADS AND CAP OR COVER TO MATCH THE PLASTIC LAMINATE.
12. PROVIDE CAULKING AS INDICATED BELOW:
    a. TRANSLUCENT SILICONE ADHESIVE WHERE BACKSPLASH AND COUNTER MEET AND AT COUNTER JOINTS.
    b. AT WALL / CASEWORK TRANSITION, PROVIDE WHITE, PAINTABLE CAULKING.
13. CONCEALED BLACK METAL BRACE SUPPORT TO OCCUR PER MANUFACTURER'S RECOMMENDATIONS, U.N.O.
14. WOOD GRAIN TO RUN VERTICALLY ON CABINETS IN ACCORDANCE WITH CUSTOM GRADE AWS, 2009 EDITION 1, U.N.O.
15. APPLY PLASTIC LAMINATE TO ALL EXPOSED SURFACES - NO EXPOSED PARTICLE BOARD WILL BE ACCEPTED. REFERENCE FINISH MATERIAL LEGEND FOR LAMINATE COLORS. PROVIDE SAMPLES FOR OWNER/DESIGNER APPROVAL.
16. CASEWORK TO BE MANUFACTURED AND STORED IN COMPLIANCE WITH THE LATEST EDITION OF THE ARCHITECTURAL WOODWORK INSTITUTE QUALITY STANDARD. ALL CABINETS SHALL BE OF STANDARD FULL OVERLAY CONSTRUCTION, CUSTOM GRADE. PROVIDE PLASTIC LAMINATE CABINETS AS SHOWN ON INTERIOR ELEVATIONS.

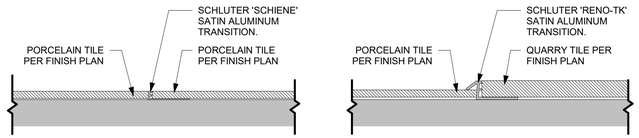
MISCELLANEOUS FINISH NOTES

1. GROUT JOINT WIDTHS TO BE PER MANUFACTURER'S RECOMMENDATION, U.N.O.
2. EXPOSED METAL DUCTS TO BE PAINTED TO MATCH CEILING, INCLUDING GRILLES IN DUCT, U.N.O. CONFIRM WITH OWNER.
3. ELECTRICAL SWITCH PLATES AND OUTLET COVERS IN PUBLIC AREAS TO BE WHITE WITH WHITE DEVICES, U.N.O. CONFIRM WITH OWNER.
4. ELECTRICAL SWITCH PLATES AND OUTLET COVERS IN NON-PUBLIC AREAS TO BE WHITE WITH WHITE DEVICES, U.N.O. CONFIRM WITH OWNER.
5. MECHANICAL (INCLUDING THERMOSTATS), AND FIRE DEVICES (INCLUDING HORNS AND STROBES) TO BE WHITE, U.N.O.
6. ELECTRICAL PANELS, METAL ACCESS PANELS, LOUVERS, DIFFUSERS, AND NON-PREFINISHED FIRE EXTINGUISHER CABINETS SHALL BE PAINTED TO MATCH ADJACENT WALL.

FINISH KEY

CPT-1 / RB-1 — FLOORING / BASE

P-1 — MATERIAL FINISHES



TS-2
PORCELAIN TILE TO PORCELAIN TILE

TS-1
QUARRY TILE TO PORCELAIN TILE

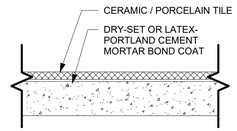
FLOOR TRANSITION DETAILS

NOTE: TRANSITION TYPES SHOWN ARE BASIS OF DESIGN FOR TYPICAL THICKNESSES OF MATERIAL TYPES. VERIFY TRANSITION TYPES WITH FINAL FINISH SELECTIONS. CONFIRM TRANSITION FINISH WITH OWNER.

STANDARD TCNA DETAILS

INTERIOR FLOORS

DRY-SET MORTAR or LATEX-PORTLAND CEMENT MORTAR — F113-05



RECOMMENDED USES:
- ON PLANE, CLEAN CONCRETE
- ON SLAB-ON-GRADE CONSTRUCTION WHERE NO BENDING STRESSES OCCUR
- SEE PAGE 17 NOTE FOR EXTERIOR USES
- SEE CAUTION AT BOTTOM OF PAGE

LIMITATIONS:
- METHOD F111 IS THE PREFERRED METHOD OVER PRECAST CONCRETE FLOOR SYSTEMS, POST-TENSIONED CONCRETE FLOOR SYSTEMS, AND OTHER FLOORS SUBJECT TO MOVEMENT OR DEFLECTION
- METHOD F113 MAY BE SUITABLE FOR ABOVE-GRADE STRUCTURAL SLAB INSTALLATIONS WHEN SPECIFIC MORTAR AND GROUT PRODUCTS RECOMMENDED BY THE MANUFACTURER ARE SPECIFIED. NOT ALL MODIFIED MORTAR AND GROUT PRODUCTS ARE SUITABLE FOR THIS APPLICATION
- DEFLECTION NOT TO EXCEED 1/360 OF SPAN FOR ABOVE-GRADE STRUCTURAL SLABS

REQUIREMENTS:
- SLAB TO BE WELL CURED, DIMENSIONALLY STABLE, AND FREE OF CRACKS, WAXY OR OILY FILMS, AND CURING COMPOUNDS
- BOND COAT 3/32" MIN.

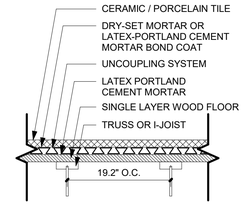
MATERIALS:
- MORTAR - USE ANSI A118.1 or A118.4 FOR SLAB-ON-GRADE INSTALLATIONS; *USE ONLY A MANUFACTURER'S DESIGNATED MORTAR FOR ABOVE-GRADE STRUCTURAL SLABS*
- GROUT - USE ANSI 118.3, A118.6, A118.7, or A118.8 FOR SLAB-ON-GRADE INSTALLATIONS; *USE ONLY A MANUFACTURER'S DESIGNATED GROUT FOR ABOVE-GRADE STRUCTURAL SLABS*

PREPARATION BY OTHER TRADES:
- SLAB - STEEL TROWEL AND FINE BROOM FINISH FREE OF CURING COMPOUNDS (WHEN USED, MECHANICALLY SCARIFYING IS NECESSARY)
- SLOPE, WHEN REQUIRED, TO BE IN SUBFLOOR
- MAX. VARIATION IN THE SLAB - 1/4" IN 10'-0" FROM THE REQUIRED PLANE

MOVEMENT JOINT (ARCHITECT MUST SPECIFY TYPE OF JOINT AND SHOW LOCATION AND DETAILS ON DRAWINGS):
- FOLLOW EJ171, PAGE 68, FOR SLAB-ON-GRADE INSTALLATIONS
- ABOVE-GRADE STRUCTURAL SLABS REQUIRE: EXTERIOR JOINT SPACING; PERIMETER JOINTS ARE MANDATORY

INSTALLATION SPECIFICATIONS:
- TILE - ANSI A108.5
- GROUT - ANSI A108.10

WOOD SUBFLOOR, 19.2" O.C. JOIST SPACING, WITH UNCOUPLING SYSTEM — F148-03



RECOMMENDED USES:
- OVER STRUCTURALLY SOUND WOOD FLOORS SUBJECT TO RESIDENTIAL TRAFFIC WITH 19.2" ON CENTER FLOOR JOIST SPACING
- INTERIOR DRY OR WET AREAS

LIMITATIONS:
- REQUIRES SPECIALTY UNCOUPLING SYSTEM
- 4"x4" AND LARGER TILE ONLY

REQUIREMENTS:
- MAXIMUM SPACING OF FLOOR TRUSSES OR I-JOISTS IS 19.2" ON CENTER
- DESIGN FLOOR AREAS OVER WHICH TILE IS TO BE APPLIED TO HAVE A DEFLECTION NOT GREATER THAN 1/360 OF THE SPAN WHEN MEASURED UNDER 300 POUND CONCENTRATED LOAD (SEE ASTM C627)

MATERIALS:
- LATEX -PORTLAND CEMENT MORTAR - ANSI A118.4
- DRY-SET MORTAR - ANSI A118.1
- POLYMER MODIFIED TILE GROUT - ANSI 118.7

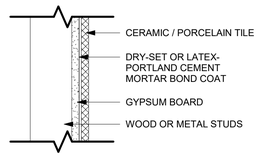
PREPARATION BY OTHER TRADES:
- SUBFLOOR - 23/32" TONGUE & GROOVE EXTERIOR-GLUE PLYWOOD WITH 1/8" GAP BETWEEN SHEETS
- MAXIMUM VARIATION IN PLYWOOD SURFACE SHALL NOT EXCEED 1/4" IN 10'-0" FROM THE REQUIRED PLANE.

MOVEMENT JOINT (ARCHITECT MUST SPECIFY TYPE OF JOINT AND SHOW LOCATION AND DETAILS ON DRAWINGS):
- MOVEMENT JOINTS - MANDATORY IN ACCORDANCE WITH METHOD EJ171, PAGE 44

INSTALLATION SPECIFICATIONS:
- TILE - ANSI A108.5
- GROUT - ANSI A108.10
- UNCOUPLING SYSTEM - FOLLOW MANUFACTURER'S DIRECTION

WOOD or METAL STUDS

GYPSUM BOARD THIN-SET — W243-05



RECOMMENDED USES:
- DRY INTERIORS OVER GYPSUM BOARD
- FOR DRY AREAS ONLY
- OVER DRY, WELL-BRACED WOOD STUDS OR FURRING
- OVER WELL-BRACED METAL STUDS

LIMITATIONS:
- IN WET AREAS SUCH AS TUB ENCLOSURES, USE METHOD B413
- DO NOT USE IN AREAS WHERE GYPSUM BOARD IS EXPOSED TO TEMPERATURES ABOVE 125 DEGREES F.

REQUIREMENTS:
- MAX. STUD SPACING - 16" ON CENTER
- MIN. RECOMMENDED METAL STUD DEPTH - 3-5/8"
- METAL STUDS - 20 GAUGE (0.039") OR HEAVIER

MATERIALS:
- GYPSUM BOARD - ASTM C36 or C630
- DRY-SET MORTAR - ANSI A118.1
- LATEX-PORTLAND CEMENT MORTAR - ANSI A118.4
- GROUT - ANSI A118.6 or A118.7

PREPARATION BY OTHER TRADES:
- MAX. VARIATION IN THE GYPSUM BOARD SURFACE - 1/4" IN 10'-0" FROM THE REQUIRED PLANE
- GYPSUM BOARD JOINTS - TREATED WITH TAPE AND JOINT COMPOUND, BEDDING COAT ONLY (NO FINISH COATS), NAIL HEADS, ONE COAT ONLY

INSTALLATION SPECIFICATIONS:
- GYPSUM BOARD - GA-216
- TILE - ANSI A108.5
- GROUT - ANSI A108.10

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DESIGN DEVELOPMENT

SHEET ISSUANCES

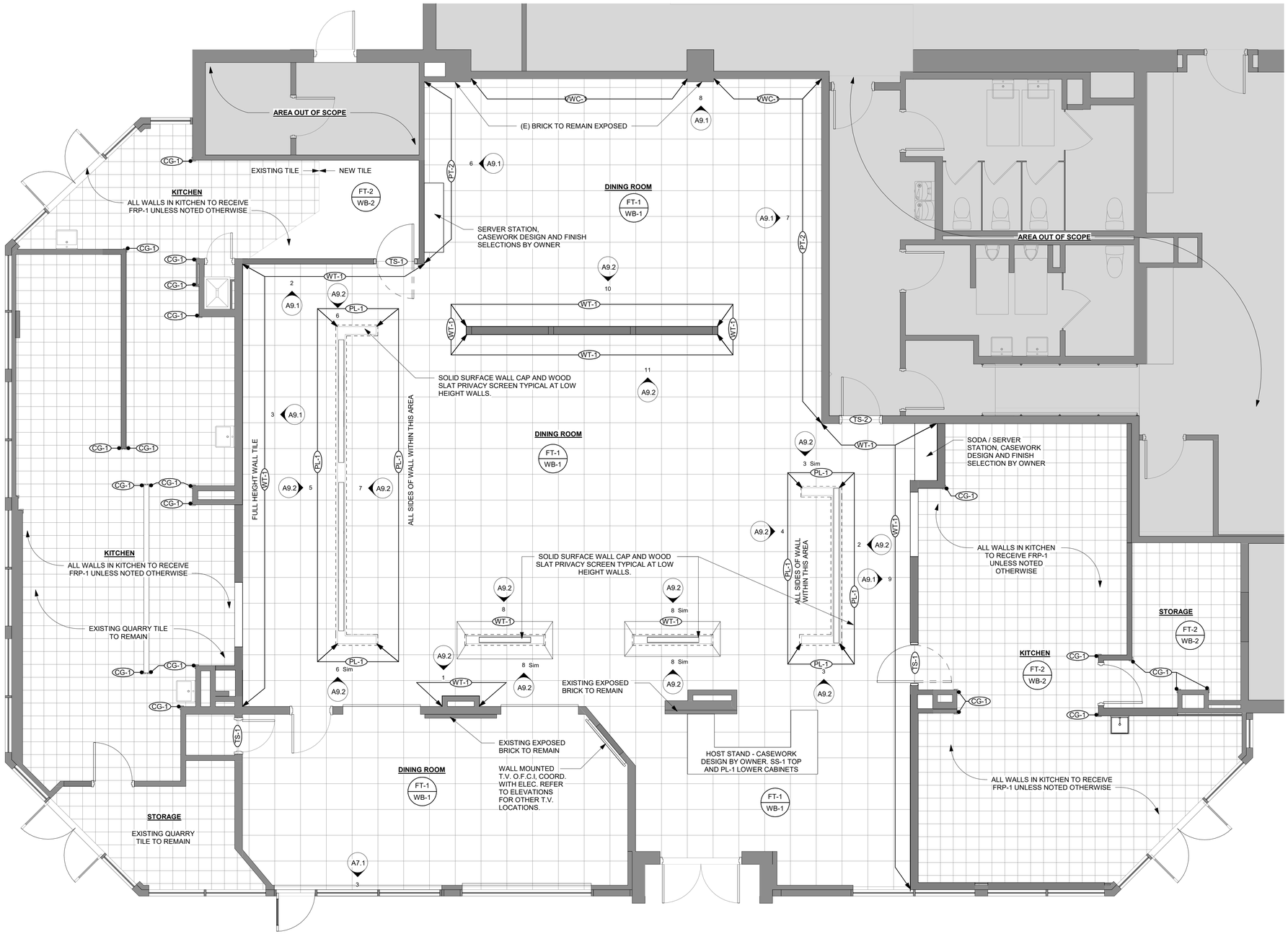
DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
CONSTRUCTION DOCUMENTS	10-11-2024

SEAL:

MATERIAL FINISH LEGEND & NOTES

DRAWING NUMBER:

A8.0



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

0' 2' 4' 8' 16'
SCALE: 1/4" = 1'-0"

NORTH

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PROJECT NUMBER: 2024-53

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DESIGN DEVELOPMENT

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
CONSTRUCTION DOCUMENTS	10-11-2024

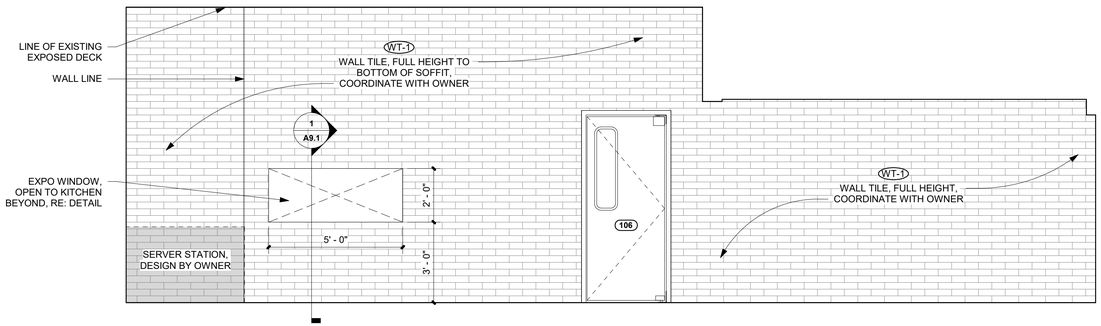
SEAL:

STATE OF COLORADO
ANDREW M. GOLDMAN
400785
LICENSED ARCHITECT

FINISH PLAN

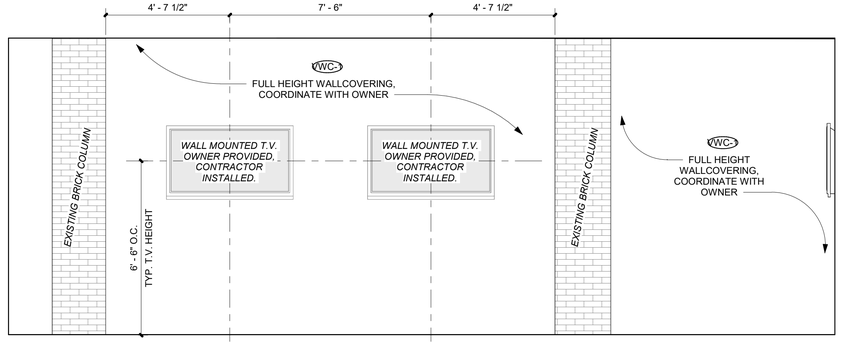
DRAWING NUMBER:

A8.1



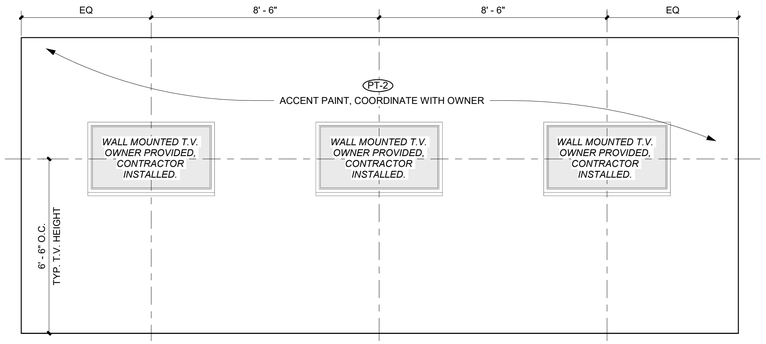
9 SOUTH SERVER AREA - SOUTH ELEVATION

SCALE: 3/8" = 1'-0"



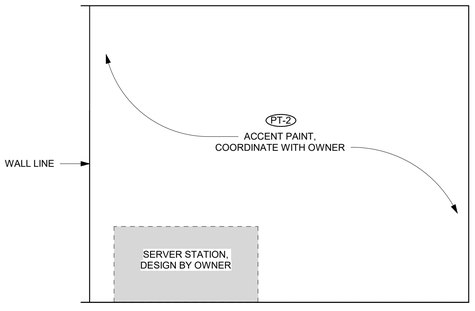
8 EAST DINING ROOM - EAST ELEVATION

SCALE: 3/8" = 1'-0"



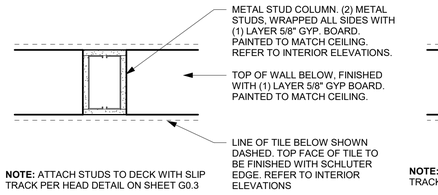
7 EAST DINING ROOM - SOUTH ELEVATION

SCALE: 3/8" = 1'-0"



6 EAST DINING ROOM - NORTH ELEVATION

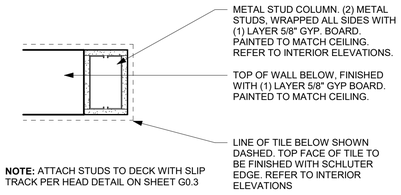
SCALE: 3/8" = 1'-0"



NOTE: ATTACH STUDS TO DECK WITH SLIP TRACK PER HEAD DETAIL ON SHEET G0.3

5 WRAPPED STUD COLUMN DETAIL

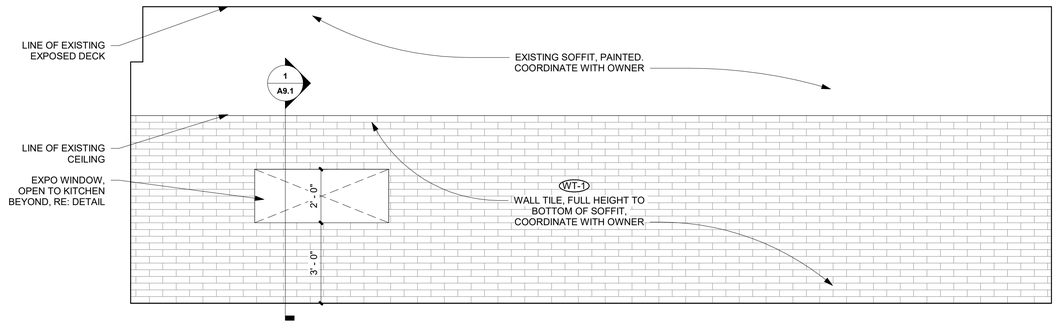
SCALE: 1 1/2" = 1'-0"



NOTE: ATTACH STUDS TO DECK WITH SLIP TRACK PER HEAD DETAIL ON SHEET G0.3

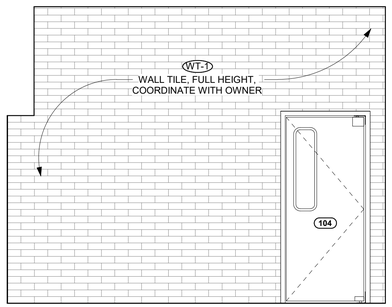
4 WRAPPED STUD COLUMN DETAIL - @ ENDS OF WALL

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



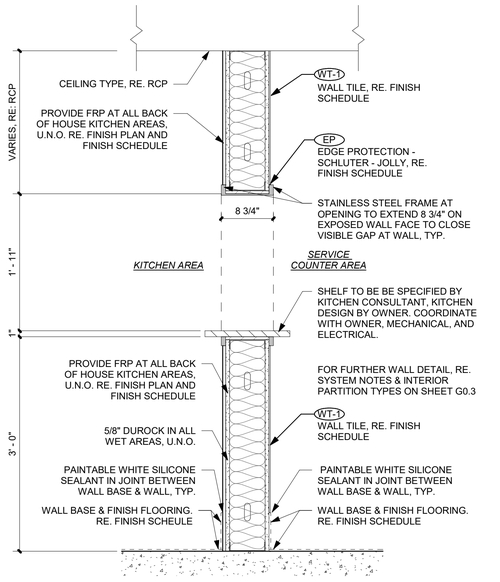
3 NORTH SERVER AREA - NORTH ELEVATION

SCALE: 3/8" = 1'-0"



2 NORTH SERVER AREA - EAST ELEVATION

SCALE: 3/8" = 1'-0"



1 EXPO PASSTHROUGH DETAIL

SCALE: 1" = 1'-0"

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PROJECT NUMBER: 2024-53

BONCHON & BROWN DONKATSU

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STRENGTH IN DESIGN
STRENGTH IN PARTNERSHIP
STRENGTH IN COMMUNITY

PROJECT TEAM

STRUCTURAL ENGINEER:
LARSEN STRUCTURAL DESIGN

MECHANICAL ENGINEER:
INTEGRATED MEP, LLC.

PLUMBING ENGINEER:
INTEGRATED MEP, LLC.

ELECTRICAL ENGINEER:
APS, INC.

DESIGN DEVELOPMENT

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
CONSTRUCTION DOCUMENTS	10-11-2024

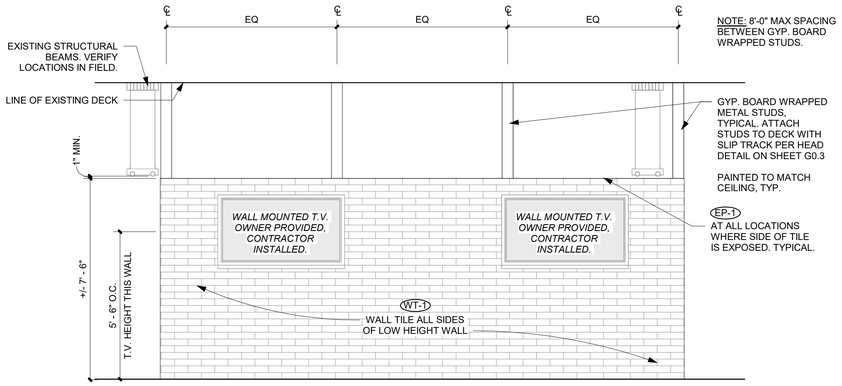
SEAL:

STATE OF COLORADO
ANDREW M. GOLDMAN
400785
LICENSED ARCHITECT

INTERIOR ELEVATIONS & DETAILS

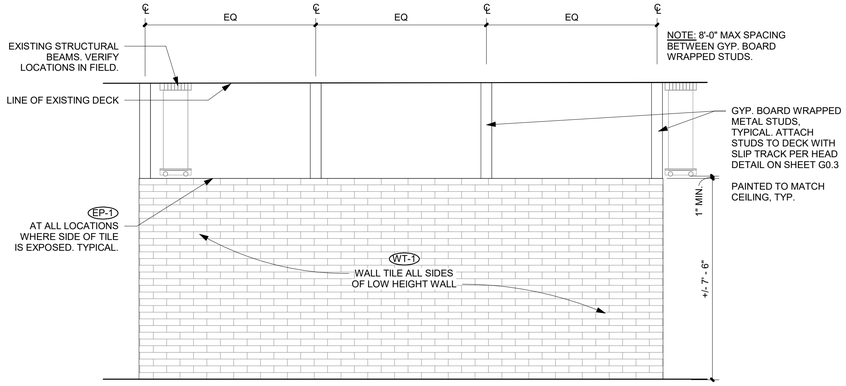
DRAWING NUMBER:

A9.1



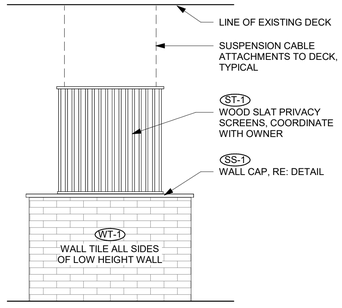
11 DINING ROOM - PLAN NORTH DIVIDING WALL - EAST ELEVATION

SCALE: 3/8" = 1'-0"



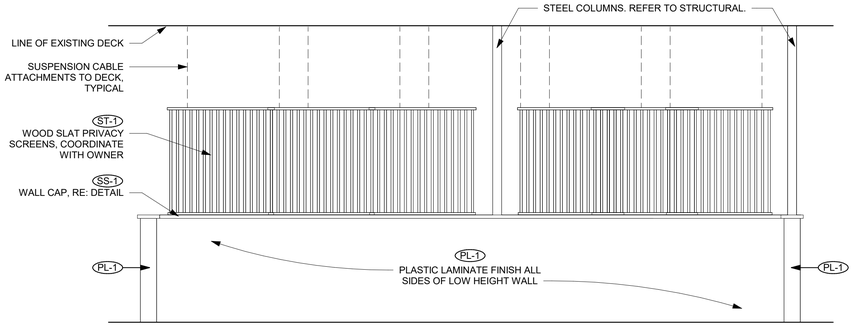
10 DINING ROOM - PLAN NORTH DIVIDING WALL - WEST ELEVATION

SCALE: 3/8" = 1'-0"



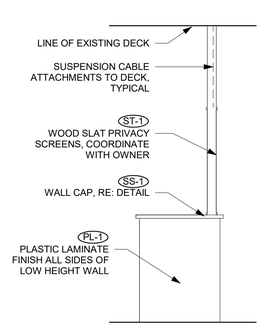
8 DINING ROOM - PLAN SOUTH DIVIDING WALL - WEST ELEVATION (EAST SIMILAR)

SCALE: 3/8" = 1'-0"



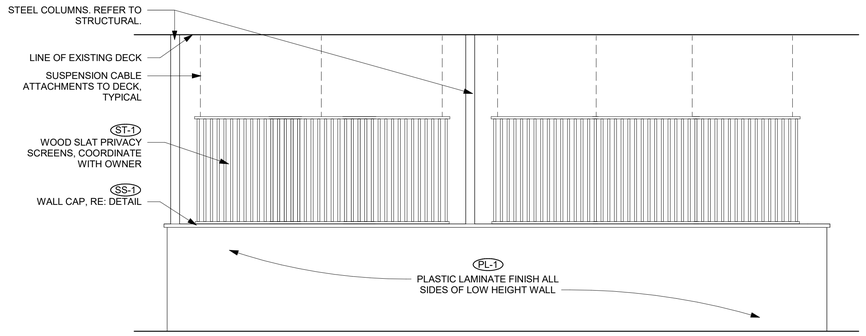
7 DINING ROOM NORTH BOOTH SURROUND - NORTH ELEVATION

SCALE: 3/8" = 1'-0"



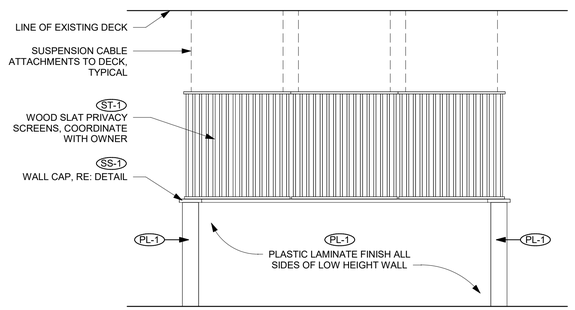
6 DINING ROOM NORTH BOOTH SURROUND - WEST ELEVATION (EAST SIMILAR)

SCALE: 3/8" = 1'-0"



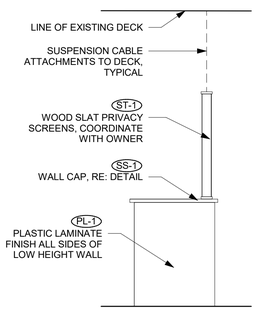
5 DINING ROOM NORTH BOOTH SURROUND - SOUTH ELEVATION

SCALE: 3/8" = 1'-0"



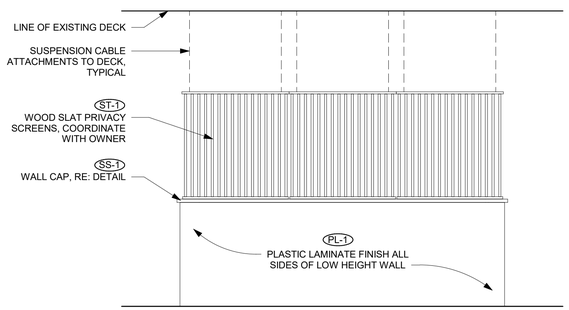
4 SOUTH DINING ROOM BOOTH SURROUND - SOUTH ELEVATION

SCALE: 3/8" = 1'-0"



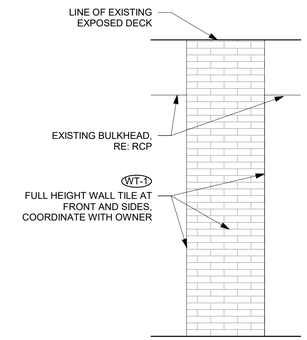
3 SOUTH DINING ROOM BOOTH SURROUND - EAST ELEVATION (WEST SIMILAR)

SCALE: 3/8" = 1'-0"



2 SOUTH DINING ROOM BOOTH SURROUND - NORTH ELEVATION

SCALE: 3/8" = 1'-0"



1 DINING ROOM - WEST ELEVATION

SCALE: 3/8" = 1'-0"

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PROJECT NUMBER: 2024-53

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APS, INC.

DESIGN DEVELOPMENT

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
CONSTRUCTION DOCUMENTS	10-11-2024

SEAL:

STATE OF COLORADO
ANDREW M. GOLDMAN
400765
LICENSED ARCHITECT

INTERIOR ELEVATIONS

DRAWING NUMBER:

A9.2

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION - BOLTING

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
1. INSPECTION TASKS PRIOR TO BOLTING:		
a. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	--	X
b. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	--	X
c. CORRECT FASTNERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE EXCLUDED FROM SHEAR PLANE)	--	X
d. CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	--	X
e. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	--	X
f. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	X	--
g. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENET COMPONENTS	--	X
2. INSPECTION TASKS DURING BOLTING:		
a. FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	--	X
b. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	--	X
c. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATNG	--	X
d. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	--	X
3. INSPECTION TASKS AFTER BOLTING:		
a. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	X	--

- PERIODIC: OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
- CONTINUOUS: PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.
- OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROGRESS AND COMPLETED WELDS SHALL BE THE PRIMARY METHOD TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS.
- FOR STRUCTURAL STEEL, ALL PROVISIONS OF AWSD1.1/D1.1M SHALL APPLY.
- FOR STRUCTURES IN RISK CATEGORY III/IV (ASCE 7 TABLE 1.5-1), ULTRASONIC TESTING SHALL BE PERFORMED ON ALL COMLETE-JOINT-PENETRATION GROOVE WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING IN BUTT, T- AND CORNER JOINTS, IN MATERIALS 5/16" (8 mm) THICK OR GREATER.
- FOR STRUCTURES IN RISK CATEGORY I/II (ASCE 7 TABLE 1.5-1), ULTRASONIC TESTING SHALL BE PERFORMED ON 10% OF COMPLETE-JOINT-PENETRATION GROOVE WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING IN BUTT, T- AND CORNER JOINTS, IN MATERIALS 5/16" (8 mm) THICK OR GREATER.
- THERMALLY CUT SURFACES OF ACCESS HOLES SHALL BE TESTED USING MAGNETIC PARTICLE TESTING OR PENETRANT TESTING WHEN THE FLANGE THICKNESS EXCEEDS 2" (20 mm) FOR ROLLED SHAPES, OR WHEN THE WEB THICKNESS EXCEEDS 2" (50 mm) FOR BUILT-UP SHAPES. ANY CRACK SHALL BE DEEMED UNACCEPTABLE REGARDLESS OF SIZE OR LOCATION.
- ALL NON-DESTRUCTIVE TESTING OF WELDED JOINTS SHALL BE DOCUMENTED.
- SEE AISC 360-10 CHAPTER N FOR ADDITIONAL WELD INSPECTION REQUIREMENTS.
- SEE AISC 360-10 CHAPTER N FOR ADDITIONAL BOLT INSPECTION REQUIREMENTS.
- INSPECTION SHALL OCCUR DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, INCLUDING DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE.
- FABRICATED STEEL AND ERECTED STEEL FRAMES, AS APPROPRIATE, SHALL BE INSPECTED FOR COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS, INCLUDING BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER JOINT DETAIL APPLICATION.

TABLE RECREATED FROM AISC 360-16 TABLES N5.6-1, N5.6-2, N5.6-3.

ABBREVIATIONS:

#	POUND
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
ARCH('L)	ARCHITECT (URAL)
B / or BO	BOTTOM OF ELEMENT
BL	BRICK LEDGE
CFMF	COLD FORMED METAL FRAMING
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
DEFL	DEFLECTION
DL	DEAD LOAD
DO	DITTO
(E)	EXISTING
EJ	EXPANSION JOINT
ELEV	ELEVATION
EOD	EDGE OF DECK
EOR	ENGINEER OF RECORD
EOS	EDGE OF SLAB
FTG	FOOTING
FS	FAR SIDE
GALV	GALVANIZED
GL	GLULAM
HAS	HEADED ANCHOR STUDS
HD	HOLD DOWN
ISF	INSIDE FACE
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LVL	LAMINATED VENEER LUMBER
K	KIP (1000 POUNDS)
MAX	MAXIMUM
MIN	MINIMUM
NS	NEAR SIDE
OC	ON CENTER
OH	OPPOSITE HAND
OH	OVERHANG
OSB	ORIENTED STRAND BOARD
OSF	OUTSIDE FACE
PEMB	PRE-ENGINEERED METAL BLDG
PJP	PARTIAL JOINT PENETRATION
PSF	POUNDS PER SQUARE FOOT
PT	PRESSURE TREATED
SIM	SIMILAR
SL	SLOPED
SW	SHEAR WALL
T / or TO	TOP OF ELEMENT
T&B	TOP AND BOTTOM
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
WWF	WELDED WIRE FABRIC

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS	PERIODIC	REFERENCED STANDARD [a]	IBC REFERENCE
1. INSPECT REINFORCEMENT AND VERIFY PLACEMENT.	--	X	ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3	--
2.REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706; b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND c. INSPECT ALL OTHER WELDS.	-- x	x x	AWS D1.4 ACE 318: 26.6.4	--
3. INSPECT ANCHORS CAST IN CONCRETE	--	X	ACI 318: 17.8.2	--
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS: [b] a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS OR AT ANCHOR RODS FOR LATERAL BRACE AND MOMENT FRAME BASES RESISTING CYCLIC TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	X	 X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	--
5. VERIFY USE OF REQUIRED DESIGN MIX.	--	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF CONCRETE.	X	--	ASTM C 172 ASTM C 31 ACI 318: 26.5, 26.12	--
7. INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	--	ACI 318: 26.5	--
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	--	X	ACI 318: 26.5.3-26.5.5	--
9. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	--	X	ACI 318: 26.11.1.2(b)	--

a. WHERE APPLICABLE , SEE SECTION 1705.12, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.
b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

TABLE RECREATED FROM IBC 2021 TABLE 1705.3

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STRUCTURAL GENERAL NOTES

Project: Bonchon & Brown
Larsen Structural Design Job Number: 2687

DESIGN CODE:
International (Existing) Building Code; IBC 2021 Edition, and 2021 IEBC
Risk Category: Table 1604.5 II Standard

DESIGN LOADS:
Roofs:

Ground Snow:	Pg	35 psf	(used for drifting calculations)
Flat Roof Snow:	Pf	30 psf	(Min.)
Snow Exposure Factor:	Ce	ASCE 7-16 Table 7.3-1	1.0
Snow importance Factor:	Is	ASCE 7-16 Table 1.5-2	1.0
Snow Thermal Factor:	Ct	ASCE 7-16 Table 7.3-2	1.0

FOUNDATION DESIGN:
Soils engineer shall verify soil conditions and types during excavation and prior to concrete placement.
Design of footings is based on a maximum allowable bearing pressure of: 1500 psf

STRUCTURAL CONCRETE:
Design is based on "Building Code Requirements for Structural Concrete"(ACI 318-19). Concrete work shall conform to "Standard Specifications for Structural Concrete" (ACI 301-20).

Structural concrete shall have the following properties:

Intended Use	Exposure Category	f'c, (psi) 28 day	Maximum w/cm	Maximum Aggregate	Entrained Air (±1.5%)	Cement Type
Foundations	F0/S0/W0/C1	3,500	0.50	1" Stone	6%	I/II
Interior Slab-on-Grade	F0/S0/W0/C0	3,500	N/A	¾" Stone	N/A	I/II

Concrete mix designs shall be submitted to the engineer of record no less than 15 working days prior to the commencement of pouring. Water cement ratios shall in no case exceed 0.55. Slump of concrete shall be specified by the concrete sub-contractor to provide adequate workability and finishing of the concrete being placed.
No concrete admixture containing calcium chloride shall be permitted in any concrete.
Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the "Guide to Presenting Reinforcing Steel Design Details (ACI 315R-18).
Welded wire fabric shall conform to ASTM A185. Splice welded-wire fabric by lapping one full mesh space plus 2".
Reinforcing bars shall conform to ASTM A615, Grade 60, reinforcement to be welded shall be ASTM 706 grade 60 reinforcing.
Splice reinforcing 54 bar diameters minimum.
At corners and intersections, make horizontal bars continuous or provide matching corner bars. Provide standard hooks on bars terminating at a concrete face unless noted otherwise on plan.
Around openings in walls and slabs, provide 2-#5, extending 2'-0 beyond edge of opening.
Except as noted on the drawings, concrete protection for reinforcement in cast-in-place concrete shall be as follows:

a. Cast against and permanently exposed to earth 3"
b. Exposed to earth or weather:
   #6 through #18 bars 2"
   #5 bar, W31 or D31 wire, and smaller 1-1/2"
c. Not exposed to weather or in contact with ground:
   Slabs, walls, joists: #11 bar and smaller 3/4"

Anchor bolts and rods for beam and column-bearing plates shall be placed with setting templates.
Concrete shall not be placed until reinforcing and embedded items have been inspected by a qualified special inspector employed by the owner in accordance with IBC Section 1704.4.
Frequency of concrete testing shall be as follows:
1. A minimum of one sample from each days pour of each mix of concrete
2. A minimum of one sample for each 150 cubic yards of concrete for each mix placed each day.
3. A minimum of 5 samples total for each mix design are required. If the frequency or amount of concrete to be placed provides less than 5 total samples for a particular mix, than samples shall be obtained from five randomly selected batches or from each batch if fewer than five batches are used.
4. If fewer than 25 cubic yards total of a mix are to be installed, then no concrete testing is required provided 30 or more test results are provided showing satisfactory performance of the approved mix design.

POST-INSTALLED ANCHORS AND REBAR NOTES:
1. Drill and install post-installed anchors according to manufacturer's printed installation instructions and per manufacturer's on-site training.
2. All post-installed anchors shall meet ICC-ES Compliance for each type of application.
3. Anchor capacities are dependent upon spacing between anchors and proximity to edges of concrete or masonry. Installations shall be in accordance with minimum or maximum dimensions shown on structural plans. Deviations from these dimensions due to field conditions shall be verified by an RFI or other means prior to installing anchors.
4. Unless otherwise noted on the plans, product information and ICC-ES Evaluation Reports must be submitted for each anchor.
5. Concrete must be at least 21 days old before installation of anchors.
6. All anchor designs are for installation in the following conditions, unless noted otherwise. Written approval must be received from EOR prior to installation of anchors in alternate conditions.
   a. Concrete or masonry conditions shall be dry.
   b. Concrete or masonry temperature at time of installation for adhesive anchors must be between manufacturer's published minimum and maximum temperature range. During winter temperatures, certain adhesives will not be permissible and increased cure times may not meet the construction schedule. General contractor shall reference manufacturer's printed installation instructions for permissible temperature range and cure times.
   c. Anchor holes shall be hammer drilled.
   d. Anchor holes shall be cleaned per manufacturer's printed installation instructions prior to adhesive injection or installation of anchor.
7. The contractor shall arrange an anchor manufacturer's representative to provide onsite installation training and shall be certified in accordance with ACI/CRSI Adhesive Anchor Installer certification program, or equivalent. Submit certificates of the personnel who will be installing the anchors to the EOR.
8. All post-installed anchors in concrete shall be suited for use in cracked concrete applications.
9. Post-installed anchors shall be stainless steel when exposed to exterior conditions or corrosive environments or else installed in an interior or protected environment.
10. Unless otherwise noted on plans, anchors shall be the following types:
   a. Adhesive anchors in cracked concrete shall be Hilti HIT HY-200V3 Safe-Set, or Simpson SET-3G, Simpson Set-XP or Simpson AT-XP, or approved equal.
   b. Adhesive anchors in uncracked solid grouted CMU at the anchor shall be Hilti HIT HY-270, or Simpson SET-XP or Simpson AT-XP, or approved equal. Cells at the anchor and one course above and below the anchor shall be grouted solid.
   c. Adhesive anchors in masonry and hollow CMU shall be Hilti HIT HY-270 with matching Hilti screens or Simpson SET-XP or Simpson AT-XP with matching Simpson screens, or approved equal.
   d. Mechanical anchors in concrete shall be Hilti Kwik HUS EZ, or Simpson Titen-HD, or approved equal.
   e. Mechanical anchors in grouted solid CMU shall be Hilti Kwik HUS EZ, or Simpson Titen-HD. Cells at the anchor and one course above and below the anchor shall be grouted solid.
   f. When doweling continuously deformed rebar into concrete, Hilti RE-500v3 or Simpson SET-3G, Simpson Set-XP or Simpson AT-XP.
11. Anchor Capacity used in design shall be based on the technical data published by manufacturer or such other method as approved by the EOR. Substitution request for alternate products must be approved in writing by the EOR prior to use. Contractor shall provide calculations demonstrating that the substituted product is capable of achieving the same performance values of the specified product. Substitutions will be evaluated by their having and ICC ESR showing compliance with the relevant building code for seismic uses, load resistance, installation category, and availability of comprehensive installation instructions. Adhesive anchor evaluation will also consider creep, in-service temperature and installation temperature.

STRUCTURAL STEEL:
Structural steel shall be detailed, fabricated, and erected in accordance with the "Specification for Structural Steel Buildings" (AISC 360-16) and the "Code of Standard Practice for Steel Building and Bridges" (AISC 303-16), by the American Institute of Steel Construction (AISC).
Structural steel wide flange beams shall conform to ASTM A992.
Other rolled shapes, including plates, channels, and angles shall conform to ASTM A36.
Hollow structural section (HSS) tube shapes shall conform to ASTM A500, Grade B, 46 ksi yield.
Pipe shapes shall conform to ASTM A53 Grade B.
Except as noted, framed beam connections shall be bearing-type with 3/4" diameter, snug tight, A325-N bolts, detailed in conformance with the Structural Drawings and the "Steel Construction Manual" by AISC, 15th Edition. Install bolts in accordance with AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts", 2004.
All beams shall have full depth web stiffeners each side of webs above and below columns
Anchor rods shall conform to ASTM F1554, Grade 36 (or high strength Gr 55 or Gr 105 as noted), with weldability supplement S1.
Headed anchor studs (HAS) shall be attached to structural steel with equipment approved by the stud manufacturer according to the stud manufacturer's recommendations.
Welding shall be done by a certified welder in accordance with AISC and AWS specifications and recommendations using E70- electrodes. Where not specifically noted, minimum weld shall be 3/16" fillet by length of contact edge.
Grout beneath column base and beam-bearing plates shall be minimum 28-day compressive strength of 7,500 psi, approved non-metallic,non-shrink, when tested in accordance with ASTM C1107 Grade B or C at a flow cone fluid consistency of 20 to 30 seconds.

STRUCTURAL WOOD FRAMING:
In-Grade Base Values have been used for design.
2x framing shall be Hem-Fir S4S No. 2 and better unless noted.
All lumber shall be 19% maximum moisture content, unless noted.
Conventional light framing shall comply with IBC Section 2308.
Except as noted otherwise, minimum nailing shall be provided as specified in IBC Table 2304.10.2 "Fastening Schedule".
Plywood and oriented strand board (OSB) floor and roof sheathing shall be APA graded with panel identification index, thickness, and nailing as noted on the drawings.
All roof rafters, joists, trusses, beams shall be anchored to supports with metal framing anchors.
Light gage framing anchors shown or required, shall be Simpson "Strong Tie" or equal Code approved connectors and installed with the number and type of nails recommended by the manufacturer to develop the rated capacity.
Note that heavy-duty hangers and skewed hangers may not be stocked locally and require special order from the factory.
All beams and trusses shall be braced against rotation at points of bearing.

PLANT FABRICATED / PRE-ENGINEERED WOOD FRAMING:
Beams noted as LVL on plan shall be 1-3/4" wide Laminated Veneer Lumber beams of the depth noted on plan
Shall be plant-fabricated and manufactured by Red-Built or equal,
Shall have the following minimum allowable design stresses:
Fb = 2600 psi Fv = 285 psi Fc (||) = 2510 psi Fc(perp) = 750 psi E = 2000 ksi

SHOP DRAWINGS:
Construction Documents are copyrighted and shall not be copied for use as erection plans or shop details.
Use of Larsen Structural Design's electronic files as base for shop drawings requires prior approval by Larsen Structural Design, signed release of liability by subcontractor, and deletion of Larsen Structural Design's name and Logo from all sheets so used.
The General Contractor and his subcontractors shall submit in writing any requests to modify the plans or specifications.
All shop and erection drawings shall be checked and stamped by the General Contractor prior to submission for Engineer's review.
Unchecked submittals will be returned without review.
Furnish one (1) electronic copy of shop and erection drawings to the Structural Engineer for review prior to fabrication for:
- Concrete Mix Designs
- Reinforcing Steel in Concrete
- Structural Steel
- Engineered Lumber

Submit in a timely manner to permit ten (10)working days for review.
Shop drawings submitted for review do not constitute "request for change in writing" unless specific suggested changes are clearly marked. In any event, such changes by means of the shop drawing submittal process become the responsibility of the one initiating such change.

LETTERS OF CONSTRUCTION COMPLIANCE:
The General Contractor shall determine from the local building official at the time the building permit is obtained whether any letters of construction compliance will be requested from the Structural Engineer.
The Contractor shall notify the engineer about all such requirements in writing before the start of construction.
One-week advance notice shall be given when requesting site visits necessary as the basis for the compliance letter.

INSPECTIONS AND REVIEWS:
All site soils related work and footing excavations prior to placing forms, as well as site drainage, shall be reviewed by the project geotechnical engineer.

Normal reviews by Local Building Department.

Notify 48 hours prior to required review.

Required special inspections per I.B.C. Section 1705 by an approved special inspector retained by owner:
* Concrete: Observation of reinforcing, embeds, and forms prior to placement of concrete and observation during placement of concrete as well as taking and testing of specimens. Refer to Section 1705.3 and Table 1705.3 of the I.B.C.
* Steel: Periodic and continuous inspections of steel frame joint details. Refer to Section 1705.2 and Table 1705.2.2 of the I.B.C; and Tables N5.4-1 thru N5.4-3 and N5.6-1 thru N5.6-3 of the AISC 360-16.

Approved agencies shall provide written documentation to the building official demonstrating the competence and relevant experience or training of the special inspectors who will perform the special inspections and testing prior to and during construction as required per IBC 2021 Section 1704.2.1.

Duties and responsibilities of the special inspector shall be to observe and/or test the work assigned and outlined above for conformance with the approved construction documents. All discrepancies shall be brought to the immediate attention of the contractor for correction.

The special inspector shall furnish regular reports to the building official, the engineer and architect of record, and other designated persons. Progress reports for continuous inspection shall be furnished weekly. Individual reports of periodic inspections shall be furnished within one week of inspection dates. The reports shall note uncorrected deficiencies, correction of previously reported deficiencies, and changes to the approved construction documents authorized by engineer of record.

The special inspector shall submit a final signed report within 10 days of the final special inspection stating whether the work requiring special inspection was, to the best of the inspector's knowledge and belief, in conformance with the approved construction documents and the applicable workmanship provisions of the International Building Code.
Work not in compliance shall be noted in the report.

FIELD VERIFICATION OF EXISTING CONDITIONS:
Contractor shall thoroughly inspect and survey existing structure to verify conditions that affect the work shown on the drawings.
Contractor shall report any variations or discrepancies to the Architect before proceeding.

Contract documents have been prepared using limited site observations.
During construction, the contractor may encounter existing conditions which are not now known or are variance with project documentation (discovery). contractor shall notify the engineer of all conditions not per the contract Documents. examples include:
sizes or dimensions other than those shown.
damage or deterioration to materials or components.
conditions of instability or lack of support.
items noted as existing on the drawings but not found in the field include, but are not limited to:
Contractor shall prepare dimensional drawings of all discovered items.
Contractor shall field verify all existing structural conditions prior to submitting shop drawings.
Contractor shall make allowance for the resolution of such discoveries in the construction schedule.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS:
The structural drawings illustrate the completed structure with elements in their final positions, properly supported and braced.
These construction documents contain typical and representative details to assist the contractor.
Details shown apply at all similar conditions unless otherwise indicated.
Although due diligence has been applied to make the drawings as complete as possible, not every detail is illustrated, nor is every exceptional condition addressed.
All proprietary connections shall be installed in accordance with the manufacturers' recommendations.
All work shall be accomplished in a workmanlike manner and in accordance with the applicable code and local ordinances.
The general contractor is responsible for coordination of all work, including layout and dimension verification, materials coordination, shop drawing review, and the work of subcontractors.
Any discrepancies or omissions discovered in the course of the work shall be immediately reported to the architect for resolution.
Continuation of work without notification of discrepancies relieves the architect and engineer from all consequences.
Unless otherwise specifically indicated, the drawings do not describe methods of construction.
The contractor, in the proper sequence, shall perform or supervise all work necessary to achieve the final completed structure, and to protect the structure, workmen, and others during construction.
Such work shall include, but not be limited to, bracing, shoring for construction equipment, shoring for excavation, formwork, scaffolding, safety devices and programs of all kinds, support and bracing for cranes and other erection equipment.
Do not backfill against basement or retaining walls until supporting slabs and floor framing are in place and securely anchored, unless adequate bracing is provided.
Temporary bracing shall remain in place until all floors, walls, roofs and any other supporting elements are in place.
The architect and engineer bear no responsibility for the above items, and observation visits to the site do not in any way include inspection of them.

PROJECT NUMBER: 2687

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
FORT COLLINS, CO 80524

VFLA
ARCHITECTURE + INTERIORS
419 CANYON AVE STE 200, FORT COLLINS, CO 80521
970.224.1191 | WWW.VFLA.COM

STRENGTH IN DESIGN
STRENGTH IN PARTNERSHIP
STRENGTH IN COMMUNITY

PROJECT TEAM

STRUCTURAL ENGINEER:
LARSEN STRUCTURAL DESIGN

MECHANICAL ENGINEER:
INTEGRATED MECHANICAL, LLC.

PLUMBING ENGINEER:
INTEGRATED MECHANICAL, LLC.

ELECTRICAL ENGINEER:
APS, INC.

CONSTRUCTION DOCUMENTS

SHEET ISSUANCES

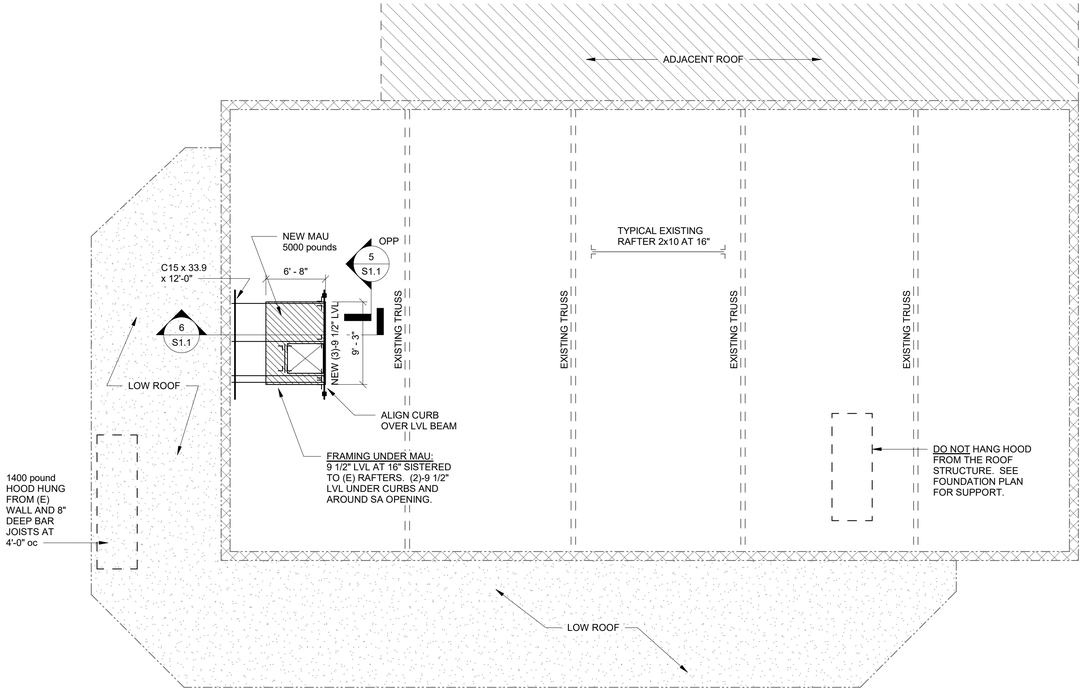
DESCRIPTION	DATE
CONSTRUCTION DOCUMENTS	10/11/2024

SEAL:

GENERAL NOTES AND SPECIAL INSPECTIONS

DRAWING NUMBER:

S0.1



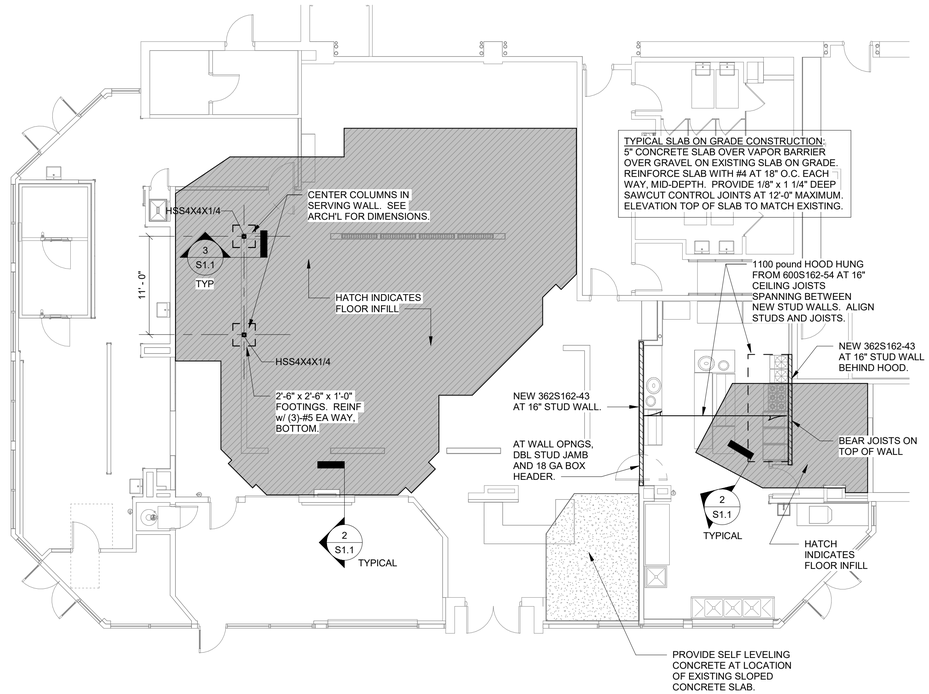
PLAN NORTH

4 / S1.1 ROOF FRAMING PLAN
1/8" = 1'-0"

JOIST/BEAM HANGER SCHEDULE

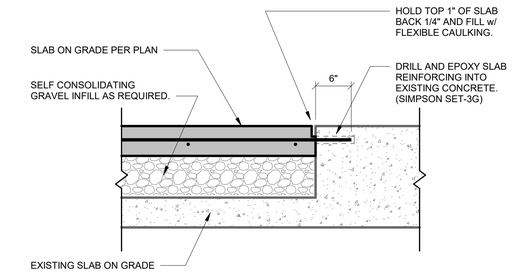
JOIST/BEAM SIZE	SIMPSON HANGER	
	TOP FLANGE	FACE MOUNT
(E) 2x10	--	LU28
9 1/2" LVL	--	HU9 MIN
(2) - 9 1/2" LVL	--	U410
NEW LVL + (E) RAFTER	--	U410 w/ SHIM

NOTES:
1. PROVIDE MAXIMUM NUMBER OF FASTENERS FOR HANGER AS SPECIFIED BY MANUFACTURER
2. PROVIDE HANGER IN SCHEDULE U.N.O. ON PLAN
3. IF A BEAM OR JOIST REQUIRES A HANGER THAT HAS NOT BEEN SHOWN IN THE SCHEDULE, CONTACT STRUCTURAL ENGINEER WITH PREFERRED HANGER FOR VERIFICATION

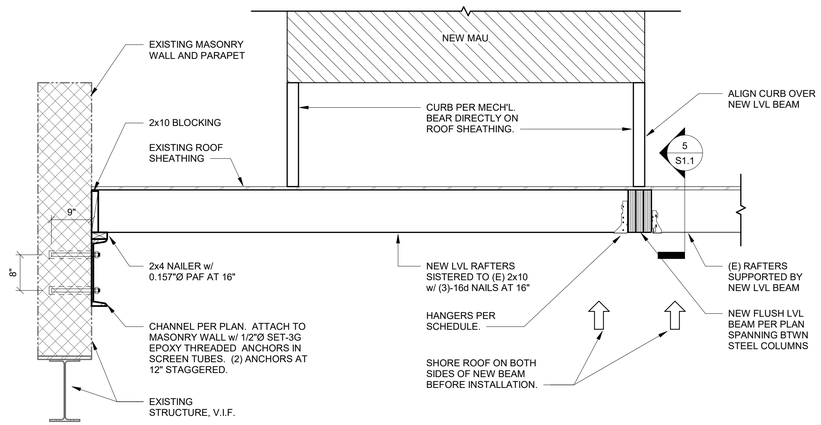


PLAN NORTH

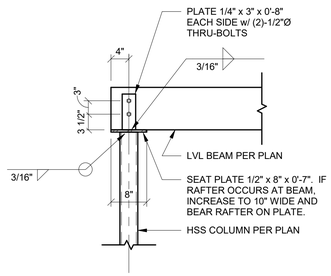
1 / S1.1 FOUNDATION AND MAIN LEVEL PLAN
1/8" = 1'-0"



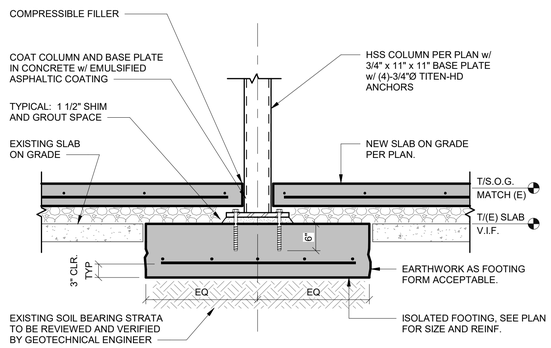
2 / S1.1 FLOOR INFILL EDGE DETAIL
1" = 1'-0"



6 / S1.1 NEW MAU SUPPORT
3/4" = 1'-0"



5 / S1.1 COLUMN TO BEAM CONNECTION
3/4" = 1'-0"



3 / S1.1 NEW INTERIOR COLUMN ON ISOLATED FOOTING AT EXISTING SLAB
3/4" = 1'-0"

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10/7/2024 11:15:32 AM

PROJECT NUMBER: 2687

BONCHON & BROWN DONKATSU

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FORT COLLINS, CO 80524

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STRENGTH IN DESIGN
STRENGTH IN PARTNERSHIP
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PROJECT TEAM

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LARSEN STRUCTURAL DESIGN

MECHANICAL ENGINEER:
INTEGRATED MECHANICAL, LLC.

PLUMBING ENGINEER:
INTEGRATED MECHANICAL, LLC.

ELECTRICAL ENGINEER:
APS, INC.

CONSTRUCTION DOCUMENTS

SHEET ISSUANCES

DESCRIPTION	DATE
CONSTRUCTION DOCUMENTS	10/11/2024

SEAL:

COLORADO REGISTERED
BLAKE R. LARSEN
38903
PROFESSIONAL ENGINEER
October 11, 2024

FOUNDATION, MAIN LEVEL, AND ROOF FRAMING PLANS AND DETAILS

DRAWING NUMBER:

S1.1

GENERAL MECHANICAL REQUIREMENTS:

CODES AND PERMITS
WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES, REGULATIONS AND ORDINANCES. PERMITS NECESSARY FOR PERFORMANCE OF WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR.

PRE-BID
FOR EXISTING BUILDINGS, THE BIDDERS SHALL PERFORM A BUILDING AND SPACE SITE VISIT PRIOR TO BID. THE ACT OF SUBMITTING A BID INDICATES THE BIDDER DOES AGREE THEY HAVE A FULL UNDERSTANDING OF THE SCOPE OF WORK INVOLVED WITH THE EXISTING CONDITIONS.

DRAWINGS AND COORDINATION
DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC IN NATURE, AND ARE NOT INTENDED TO BE SCALED FOR EXACT MEASUREMENTS NOR TO SERVE AS SHOP DRAWINGS. CHANGES FROM THE PLANS MADE WITHOUT CONSENT OF THE ENGINEER SHALL RELIEVE THE ENGINEER OF RESPONSIBILITY FOR ALL CONSEQUENCES ARRIVING OUT OF SUCH CHANGES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. WHERE CONDITIONS REQUIRE REASONABLE CHANGES TO THOSE INDICATED ON THE DRAWINGS, MAKE SUCH CHANGES WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE ALL WORK WITH OTHER TRADES.

WARRANTY
WORKMANSHIP, MATERIALS, EQUIPMENT AND PROPER OPERATION SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE FROM THE OWNER. INITIAL ACCEPTANCE OF WORK SHALL NOT WAIVE THIS GUARANTEE. THIS GUARANTEE SHALL NOT INCLUDE NORMAL MAINTENANCE REQUIRED BY THE OWNER AS DESCRIBED IN EQUIPMENT OPERATION AND MAINTENANCE MANUALS.

SUBMITTALS
CONTRACTOR SHALL SUBMIT TO THE ARCHITECT/ENGINEER A PORTABLE DOCUMENT FORMAT "PDF" COPY OF SUBMITTAL BROCHURES FOR REVIEW. PROVIDE INFORMATION ON ALL MAJOR EQUIPMENT AS LISTED ON DRAWING EQUIPMENT SCHEDULES, AS WELL AS VALVES, DUCTWORK ACCESSORIES AND TEMPERATURE CONTROL DIAGRAMS AS APPLICABLE.

OPERATION AND MAINTENANCE MANUALS
CONTRACTOR SHALL FURNISH AT THE COMPLETION OF THE PROJECT A PORTABLE DOCUMENT FORMAT "PDF" COPY OF COMPLETE OPERATION AND MAINTENANCE MANUALS TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO TURNOVER TO OWNER. MANUALS TO BE BOUND AND INCLUDE INSTALLATION INSTRUCTIONS, REPLACEMENT PARTS LISTS AND MAINTENANCE INFORMATION ON ALL EQUIPMENT AS DESCRIBED IN THE SUBMITTALS SECTION. COMPLETED OPERATION AND MAINTENANCE MANUALS ARE TO BE FORWARDED TO THE OWNER WITHIN 90 DAYS AFTER OWNER BUILDING ACCEPTANCE.

PRODUCT SUBSTITUTIONS
MANUFACTURER MODEL NUMBERS LISTED ON THE DRAWINGS AND/OR SPECIFICATIONS ARE TO BE CONSIDERED AS THE BASIS OF DESIGN. WHERE TWO OR MORE ALTERNATE MANUFACTURERS OR MATERIALS ARE LISTED, THE CHOICE OF THESE SHALL BE OPTIONAL WITH THE CONTRACTOR. PRIOR TO THE AWARDING OF THE CONTRACT, CONTRACTOR MAY REQUEST A PROPOSED SUBSTITUTION OF MATERIALS IN WRITING TO THE ARCHITECT/ENGINEER NO LATER THAN SEVEN DAYS PRIOR TO THE RECEIPT OF BIDS. THE COST OF ANY CHANGES REQUIRED BY OTHER TRADES, INCLUDING A/E DESIGN, DUE TO THE USE OF EQUIPMENT AND/OR MATERIALS OTHER THAN THAT OF THE BASIS OF DESIGN SHALL BE PAID BY THE CONTRACTOR.

RECORD DRAWINGS
CONTRACTORS SHALL MAINTAIN A COMPLETE AND ACCURATE SET OF MARKED UP DRAWINGS SHOWING ACTUAL LOCATIONS OF INSTALLED WORK. THESE DRAWINGS ARE TO BE FORWARDED TO THE OWNER AS PART OF THE OPERATION AND MAINTENANCE MANUALS AT THE COMPLETION OF THE PROJECT.

ACCESS DOORS
PROVIDE ALL ACCESS DOORS/PANELS AS REQUIRED FOR ACCESS TO VALVES, DAMPERS, CONTROL DEVICES, FILTERS AND ANY OTHER ITEMS FOR WHICH ACCESS IS REQUIRED FOR EITHER OPERATION OR SERVICING. WHERE ACCESS DOORS ARE TO BE INSTALLED IN ASSEMBLIES REQUIRED TO HAVE A SPECIFIC FIRE RATING, ACCESS DOORS SHALL ALSO BE FIRE RATED.

PIPING AND DUCTWORK SEALANT THROUGH RATED ASSEMBLIES
PENETRATIONS SHALL BE SEALED AS REQUIRED IN ACCORDANCE WITH BUILDING AND MECHANICAL CODES TO RESIST THE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION IN ORDER TO MAINTAIN THE RESISTANCE RATING OF THE CONSTRUCTION BEING PENETRATED.

PROTECTION OF MATERIALS AND EQUIPMENT
CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL WORK, MATERALS, AND EQUIPMENT PROVIDED UNDER THIS SECTION. PIPE OPENINGS SHALL BE CLOSED WITH CAPS OR PLUGS TO PREVENT THE ENTRANCE OF DEBRIS DURING CONSTRUCTION. ALL DUCTWORK OPENINGS SHALL BE SEALED CLOSED DURING CONSTRUCTION.

ALTITUDE
SUPPLIERS SHALL CONFIRM THAT ALL EQUIPMENT BEING FURNISHED IS APPROPRIATE FOR USE AT THE ALTITUDE OF THE SITE.

EQUIPMENT AND PIPING IDENTIFICATION
PROVIDE EQUIPMENT LABELS FOR ALL MAJOR EQUIPMENT, INCLUDING BUT NOT LIMITED TO AIR HANDLING SYSTEMS, FANS, VAV BOXES, CONTROLS, DAMPERS, CONTROL VALVES AND PUMPS. PROVIDE PIPE MARKERS ON CW, HW AND HWC SYSTEMS. LABELS TO BE AT MAXIMUM 8 FEET APART, WITH FLOW DIRECTION INDICATED, AS APPLICABLE. ADDITIONALLY, PROVIDE LABELING ON POTABLE WATER MANIFOLDS INDICATING PLUMBING FIXTURE SERVED BY THE OUTLET, AS APPLICABLE. LABELS SHALL BE AFFIXED OR ADHERED PERMANENTLY TO EQUIPMENT. EQUIPMENT INSTALLED INDOORS TO BE LABELED WITH EMBOSSING TAPE. EQUIPMENT INSTALLED OUTDOORS TO BE LABELED WITH ENGRAVED PLASTIC LAMINATE SIGNS. PIPE MARKERS TO BE SELF-ADHESIVE, MANUFACTURED FOR SUCH PURPOSE.

STARTERS AND DISCONNECTS
EQUIPMENT STARTERS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. EQUIPMENT DISCONNECTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE ON THE DRAWINGS. STARTERS SHALL BE NEMA TYPE, AND SHALL INCLUDE PHASE MONITORING FOR MOTORS 5 HP AND LARGER.

TESTING
TESTING SHALL BE PERFORMED ON THE FOLLOWING SYSTEMS SPECIFIED. ALL SYSTEMS LISTED MAY NOT BE INCLUDED IN PROJECT, REFER TO DRAWINGS FOR APPLICABLE SYSTEMS. SOIL, WASTE AND STORM DRAINAGE PIPING SHALL BE TESTED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL CODES. DOMESTIC WATER PIPING SHALL BE TESTED AND PROVEN WATERTIGHT UNDER A PRESSURE NOT LESS THAN THE WORKING PRESSURE OF THE SYSTEM FOR A 24 HOUR PERIOD. POTABLE WATER PIPING SYSTEM SHALL BE CHLORINATED AND STERILIZED IN ACCORDANCE WITH REQUIREMENTS OF LOCAL JURISDICTION. NATURAL GAS PIPING SHALL BE TESTED WITH AN AIR PRESSURE OF MINIMUM TWO TIMES THE DESIGN SYSTEM PRESSURE, BUT NO LESS THAN 3 PSIG, FOR A PERIOD OF 24 HOURS WITHOUT PRESSURE DROP.

BALANCING
SYSTEM BALANCING SHALL BE PERFORMED BY A CERTIFIED BALANCING CONTRACTOR. BALANCE ALL SYSTEMS INCLUDING AIRFLOW TO AND FROM ALL OPENINGS, AND PUMPED WATER SYSTEMS INCLUDING DOMESTIC WATER RECIRCULATION SYSTEMS AS APPLICABLE. MAKE ANY ADJUSTMENTS NECESSARY TO RESULT IN CONDITIONS INDICATED AND PROVIDE READJUSTMENTS TO ITEMS IN REPORT AS MAY BE REQUESTED BY ARCHITECT/ENGINEER. SUBMIT TWO COPIES OF TEST AND BALANCE REPORT FOR APPROVAL. FAN AND PUMP SYSTEMS TO BE BALANCED WITHIN PLUS OR MINUS 5 PERCENT OF LISTED VALUES. AIR INLETS AND OUTLETS TO BE BALANCED WITHIN PLUS 10 PERCENT OR MINUS 5 PERCENT OF LISTED VALUES. BALANCE REPORT TO INCLUDE:

- UNIT IDENTIFICATION
- MANUFACTURER AND NAMEPLATE DATA
- EQUIPMENT NAMEPLATE AMPERAGE AND ACTUAL AMPERAGE
- RPM (DESIGN AND ACTUAL)
- FAN CFM (DESIGN AND ACTUAL)
- FAN STATIC PRESSURE (DESIGN AND ACTUAL)
- PUMP GPM (DESIGN AND ACTUAL)
- PUMP DISCHARGE AND SUCTION PRESSURE
- REGISTER, GRILLE, DIFFUSER REFERENCE NUMBER AND LOCATION
- INLET/OUTLET CFM (DESIGN AND ACTUAL)
- FLOW DEVICE PRESSURE DROP, CFM OR GPM

A FINAL BALANCING REPORT SHALL BE PROVIDED TO THE OWNER AFTER COMPLETION OF THE PROJECT.

CLEANING
AT THE COMPLETION OF WORK, ALL FIXTURES AND EQUIPMENT SHALL BE THOROUGHLY CLEANED AND DELIVERED IN A CONDITION SATISFACTORY TO THE ARCHITECT. ALL FILTERS SHALL BE REPLACED WITH NEW PRIOR TO OWNER ACCEPTANCE OF THE BUILDING.

OPERATIONS AND MAINTENANCE
AT MECHANICAL TURN OVER, THIS CONTRACTOR SHALL PERFORM A DETAILED OPERATIONAL WALK THROUGH OF ALL SYSTEMS AND EQUIPMENT SHOWN IN THE MECHANICAL DRAWINGS. THE WALK THROUGH SHALL INCLUDE ONE HOUR OF TRAINING AND REQUIRED MAINTENANCE FOR EACH TYPE OF EQUIPMENT AND TWO HOURS FOR THE TEMPERATURE CONTROLS OF THE BUILDING. THE MECHANICAL CONTRACTOR SHALL PROVIDE A SHEET LISTING EACH TYPE OF EQUIPMENT. IT SHALL BE SIGNED, LINE BY LINE, BY THE CLIENT INDICATING THAT THEY HAVE RECEIVED INSTRUCTION ON THE OPERATIONS AND MAINTENANCE OF THE EQUIPMENT. ADDITIONALLY, A CHECK BOX WILL ASK THE CLIENT IF THEY WISH TO HAVE THE MECHANICAL CONTRACTOR PROVIDE A QUOTE FOR MAINTENANCE FOR EACH OF THE ITEMS OR IF THEY WILL TAKE CARE OF IT ON THEIR OWN, WITH THE CLIENT'S INITIALS. A COMPLETED COPY OF THIS FORM SHALL BE INCLUDED IN THE O & M MANUALS AND SUBMITTED TO THE ENGINEER.

GENERAL MECHANICAL NOTES

1 THE MECHANICAL DESIGN IS BASED ON THE 2021 INTERNATIONAL MECHANICAL CODE. MECHANICAL WORK SHALL COMPLY WITH ALL APPLICABLE CODES AND LOCAL CODE AMENDMENTS. VERIFY ALL REQUIREMENTS PRIOR TO SUBMITTING BID OR COMMENCING WORK.

2 WHERE CEILING SPACE IS TO BE USED AS A RETURN AIR PLENUM, COMPLY WITH ALL APPLICABLE CODES. ALL MATERIALS WITHIN THE CEILING PLENUM SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50.

3 ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL – CONSTRUCTION AND INSTALLATION SHALL CONFORM TO THE CURRENT EDITION OF SMACNA OR AS REQUIRED BY ALL APPLICABLE CODES.

4 DIMENSIONS OF DUCTWORK SHOWN INDICATES CLEAR INSIDE DIMENSIONS – WHERE DUCT LINER IS TO BE ADDED, INCREASE THE SIZE OF SHEET METAL ACCORDINGLY.

5 UNLESS NOTED OTHERWISE, THE SIZE OF THE BRANCH DUCT SERVING A SINGLE DIFFUSER SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSER SERVED. FLEXIBLE DUCTWORK SHALL NOT EXCEED 8'-0" IN LENGTH. FLEXIBLE DUCTWORK SHALL BE UL181 LISTED WITH 50/25 SMOKE/FLAME RATING, CONSISTING OF POLYESTER FILM ENCAPSULATING AN INNER CORROSION RESISTANT STEEL WIRE HELIX CORE. FLEXIBLE DUCT SHALL INCLUDE AN EXTERIOR FIBERGLASS INSULATION WITH FOIL SCRIM FILM VAPOR BARRIER JACKET, R-6.

6 PLENUM WRAP: PIPING SYSTEMS LOCATED WITHIN A RETURN PLENUM SPACE IN WHICH THE PIPING MATERIAL HAS A FLAME SPREAD INDEX GREATER THAN 25 OR A SMOKE DEVELOPED INDEX OF MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 SHALL BE PROVIDED WITH PLENUM WRAP LISTED AND LABELED FOR SUCH APPLICATION. PROVIDE BLANKET WRAP INSULATION WITH A NOMINAL THICKNESS OF 0.5" WITH A DENSITY OF 4-POUNDS PER CUBIC FOOT. BLANKET WRAP SHALL BE FULLY ENCAPSULATED WITH A POLY-ALUMINUM FOIL, FIBERGLASS REINFORCED SCRIM COVERING AND BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. 3M FIRE BARRIER PLENUM WRAP 5A OR APPROVED.

7 CONSTRUCT ALL CONSTANT VOLUME SUPPLY DUCTWORK TO SMACNA 2" PRESSURE CLASS.

8 CONSTRUCT ALL RETURN DUCTWORK TO SMACNA 2" PRESSURE CLASS.

9 CONSTRUCT ALL EXHAUST DUCTWORK TO SMACNA 1" PRESSURE CLASS.

10 MAINTAIN A MINIMUM 10'-0" SEPARATION FROM OUTSIDE AIR INTAKES TO EXHAUST TERMINATIONS AND PLUMBING VENTS.

11 MAINTAIN A MINIMUM 3'-0" SEPARATION FROM EXHAUST TERMINATIONS TO OPERABLE WINDOWS AND DOORS.

12 WALL MOUNTED THERMOSTATS AND SENSORS SHALL BE INSTALLED 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. THERMOSTATS AND SENSORS LOCATED ON EXTERIOR WALL SURFACES SHALL BE PROVIDED WITH AN INSULATED SUB-BASE.

13 THERMOSTATS FOR COOLING AND HEATING EQUIPMENT SHALL BE 7-DAY PROGRAMMABLE TYPE, 4 PERIODS PER DAY, 10-HOUR BATTERY BACK-UP, 2-HOUR OVERRIDE, 5 DEG DEAD-BAND, HEAT/COOL/OFF/AUTO CHANGEOVER, AUTO SETBACK TO 55 DEG F (HEAT) AND 85 DEG F (COOL), LCD BACKLIT DISPLAY, HARD WIRED POWER, HARD WIRED CONTROL.

14 TEMPORARY HEATING: THE PERMANENT HVAC SYSTEM MAY NOT BE UTILIZED FOR HEATING UNTIL ALL GYPSUM WORK IS COMPLETED AND HAS BEEN PAINTED. IF THE PERMANENT HVAC SYSTEM IS UTILIZED DURING CONSTRUCTION, ALL DUCT INTAKES SHALL BE COVERED WITH FILTER MEDIA (MERV-8 RATING). IF EXCESSIVE DUST OR DEBRIS HAS ENTERED THE SYSTEM THEN ALL COIL AND DUCT SURFACES SHALL BE CLEANED. NEW FILTERS ARE TO BE PROVIDED JUST PRIOR TO TURNOVER TO OWNER. TEMPORARY HEATING OF THE BUILDING PRIOR TO ANY USE OF THE PERMANENT HVAC SYSTEM SHALL BE THE RESPONSIBILITY OF THE G.C.

15 DISHWASHER HOOD EXHAUST DUCTWORK SHALL BE CONSTRUCTED OF ALUMINUM AND SEALED WATERTIGHT WITH SILICONE SEALANT.

16 GREASE DUCTWORK (RECTANGULAR): DUCTWORK SHALL BE CONSTRUCTED OF STEEL OF NOT LESS THAN 16 GAUGE. JOINTS, SEAMS AND PENETRATIONS SHALL BE MADE WITH A CONTINUOUS LIQUID-TIGHT WELD OR BRAZE MADE ON THE EXTERNAL SURFACE OF THE DUCT SYSTEM. JOINTS, DUCT SLOPING AND CLEANOUTS SHALL BE IN ACCORDANCE WITH THE MECHANICAL CODE. PRIOR TO CONCEALMENT OF DUCT, A LEAKAGE TEST SHALL BE PERFORMED IN THE PRESENCE OF A CODE OFFICIAL.

17 RECTANGULAR GREASE DUCTWORK INSULATION: PROVIDE TWO LAYERS OF BLANKET WRAP INSULATION WITH A MINIMUM NOMINAL THICKNESS OF 1.5" EACH, COMPOSED OF MINERAL WOOL FIBERS AND FIBERGLASS WITH A DENSITY OF 1.4 POUNDS PER SQUARE FOOT. BLANKET WRAP SHALL BE FULLY ENCAPSULATED WITH A POLYPROPYLENE/FOIL SCRIM. SYSTEM AND INSTALLATION SHALL COMPLY WITH REQUIREMENTS OF ASTM E 2336, LOCAL BUILDING CODES AND AUTHORITY HAVING JURISDICTION. 3M FIRE BARRIER DUCT WRAP 15A OR APPROVED.

18 HANGING, ANCHORING AND SUPPORT OF EQUIPMENT, DUCTS, PIPING AND ACCESSORIES IS DESIGN BUILD BY THE MC. THE SUPPORTS SHALL MEET CODE.

19 ALWAYS INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

20 REFRIGERATION PIPING FOR SYSTEMS 5 TONS AND LESS SHALL BE KIT TYPE. THE KIT SHALL BE SIZED AND PROVIDED BY THE EQUIPMENT SUPPLIER AND INSTALLED BY THE MC. THE SUCTION LINE SHALL BE INSULATED WITH MINIMUM 1 INCH CLOSED CELL FOAM INSULATION. INSULATION INSTALLED OUTSIDE OF THE BUILDING SHALL BE ADDITIONALLY ENCASED IN A UV/TEAR PROTECTIVE SLEEVE.

21 TEMPERATURE CONTROLS SHALL BE DESIGN BUILD, CUSTOM, FIELD FABRICATED TO MATCH CORRESPONDING EQUIPMENT. THE SYSTEM SHALL UTILIZE STAND ALONE ELECTRONIC COMPONENTS. THE CONTRACTOR SHALL PROPERLY SELECT, PROVIDE AND INSTALL SYSTEM(S) INCLUDING ALL COMPONENTS NECESSARY FOR A FULL AND COMPLETE, OPERATIONAL SYSTEM. THIS INCLUDES, BUT IS NOT LIMITED TO: LOW VOLTAGE WIRING, THERMOSTATS, DAMPER MOTORS, SOLENOIDS, RELAYS, CONTACTORS, STARTERS, TIME CLOCKS, CONTROL PANELS, SYSTEM COMMISSIONING AND OWNER TRAINING. ALL LINE VOLTAGE INTERFACING SHALL BE COORDINATED DIRECTLY WITH THE ELECTRICAL CONTRACTOR. PROVIDE SUBMITTALS ON COMPONENTS AND WIRING DIAGRAMS PRIOR TO ORDERING

INSULATION NOTES AND MECHANICAL ENERGY CODE

1 THE MECHANICAL DESIGN IS BASED ON THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE.

2 ALL SUPPLY, RETURN AND EXHAUST DUCTWORK SHALL BE SEALED AIRTIGHT WITH DUCT SEALANT ALONG ALL SEAMS AND JOINTS.

3 SEE HVAC INSULATION SCHEDULE FOR DUCT INSULATION REQUIREMENTS.

HVAC LEGEND:

- RECT DUCT (NEW SHADED/EXISTING UNSHADED)
- ROUND DUCT (NEW SHADED/EXISTING UNSHADED)
- RECT DUCT SIZE CHANGE
- RECT DUCT CHANGE TO ROUND
- RECT ELBOW UP (SUPPLY)
- RECT ELBOW UP (NON-SUPPLY)
- RECT ELBOW DOWN (SUPPLY)
- RECT ELBOW DOWN (NON-SUPPLY)
- ROUND ELBOW UP
- ROUND ELBOW DOWN
- RECT ELBOW W/ TURNING VANES
- ROUND ELBOW
- ROUND TAKE-OFF W/ DAMPER FROM RECT MAIN
- ROUND TAKE-OFF W/ DAMPER FROM ROUND MAIN
- RECT TAKE-OFF W/ DAMPER FROM RECT MAIN
- RECT TAKE-OFF W/ DAMPER FROM ROUND MAIN
- DIFFUSER WITH FLEX DUCT
- RETURN GRILLE (UNDUCTED)
- RETURN/EXHAUST GRILLE (DUCTED)
- AIRFLOW PATTERNS
- (T$_{z,\cdot}$) THERMOSTAT WITH ZONE TAG
- (S$_{z,\cdot}$) SENSOR WITH ZONE TAG
- (C$_{z,\cdot}$) CARBON DIOXIDE SENSOR
- (F) FIRE DAMPER TAG
- (R) CEILING RADIATION DAMPER TAG
- (FS) FIRE/SMOKE DAMPER WITH DUCT DETECTOR
- (SD) SMOKE DAMPER WITH DUCT DETECTOR
- DUCT WITH VOLUME DAMPER
- DUCT WITH MOTORIZED DAMPER
- DUCT WITH COUNTERBALANCED DAMPER
- DEMOLISHED DUCTWORK
- RL REFRIGERANT LIQUID
- RS REFRIGERANT SUCTION

MECHANICAL DRAWING INDEX

PROJECT NUMBER: 00-000

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
FORT COLLINS, CO 80524

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2	PERMIT SET	11 OCT 2024
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Revisions

No.	Description	Date

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COLORADO LICENSED THOMAS M. SEGELHORST 32190 PROFESSIONAL ENGINEER

10 Oct 2024

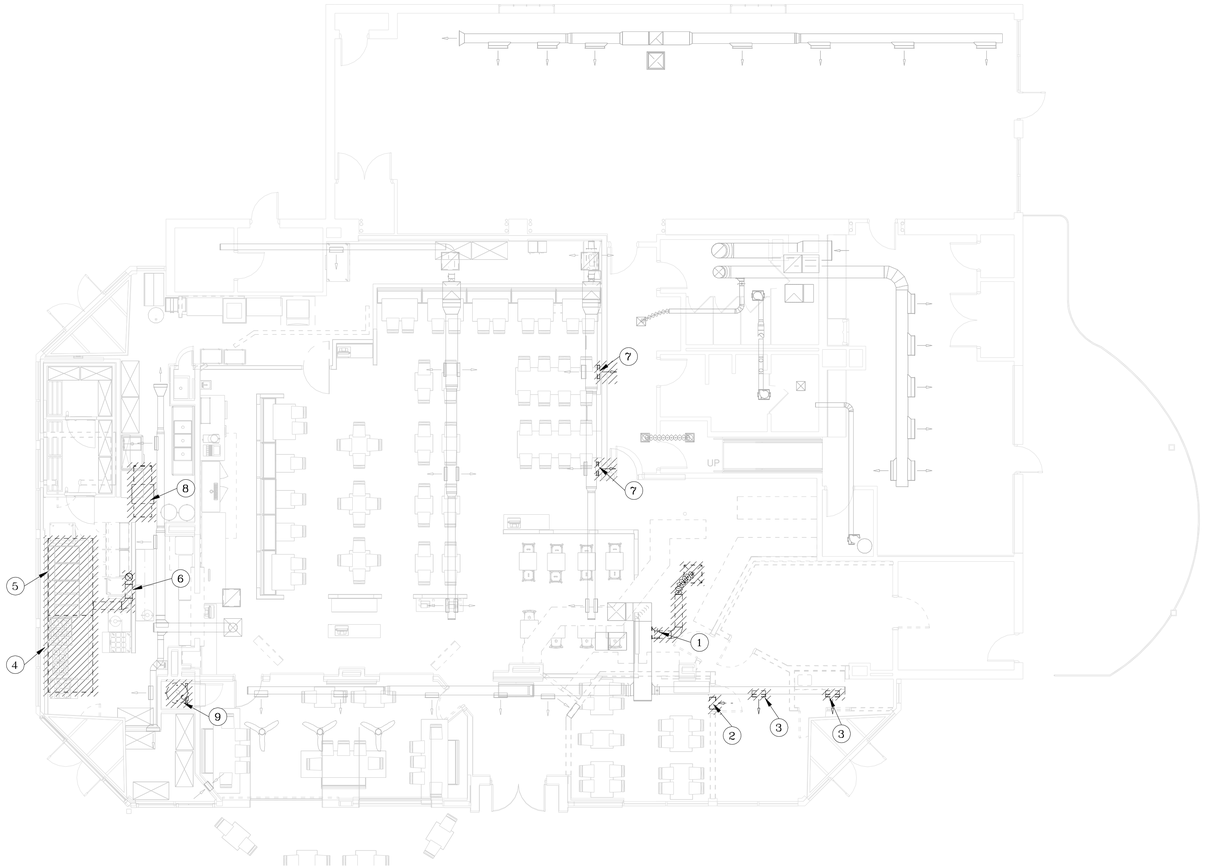
HVAC NOTES, LEGEND, INDEX

DRAWING NUMBER:

H0.1

FLAG NOTES:

1 DEMO DUCTWORK AS SHOWN. SEAL DUCT MAIN AIRTIGHT.
2 DEMO TRANSFER GRILLE(S).
3 DEMO SUPPLY DIFFUSER. SEAL REMAINING DUCT AIRTIGHT.
4 DEMO EXISTING GREASE HOOD.
5 DEMO EXISTING HEAT HOOD.
6 DEMO EXISTING HEAT HOOD EXHAUST DUCTWORK.
7 REMOVE (E) SUPPLY DIFFUSER. SEAL REMAINING DUCT AIRTIGHT. DIFFUSER TO BE RELOCATED. SEE SHEET H2.1.
8 DEMO EXISTING MAKE-UP AIR AND AIR INTAKE THRU ROOF.
9 DEMO EXISTING WATER HEATER AND FLUE THRU ROOF.



HVAC DEMO PLAN

1/8" = 1'-0"

0" 1" 2"

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10 Oct 2024

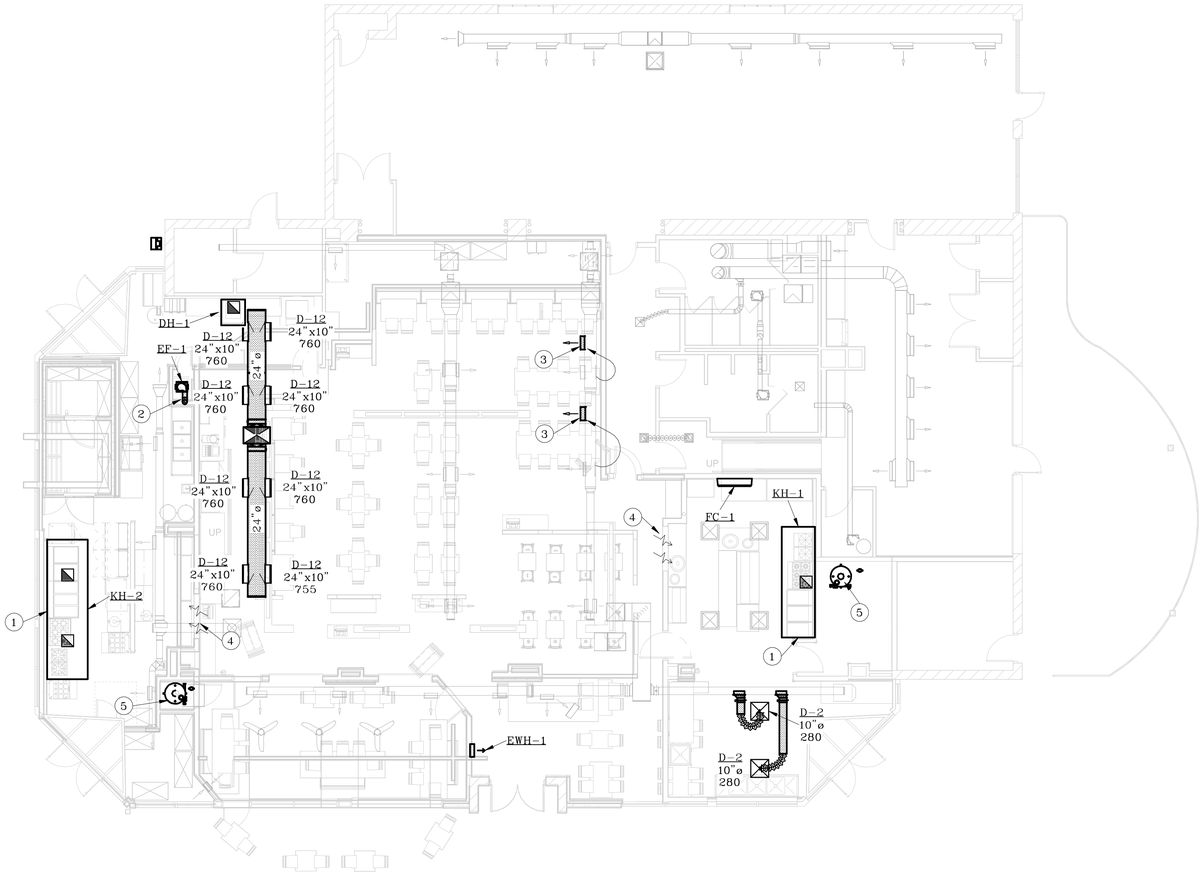
HVAC DEMO FLOOR PLAN

DRAWING NUMBER:

H1.1

FLAG NOTES:

1. PROVIDE AND INSTALL NEW GREASE HOOD.
2. RUN 6" EXHAUST DUCT FROM FAN THROUGH ROOF TO ROOFCAP.
3. RELOCATED SUPPLY DIFFUSER. REPROPORTION SUPPLY AIRFLOW EVENLY ACROSS ALL DIFFUSERS ON THIS SYSTEM.
4. PERMANENT 24" HIGH BY 60" WIDE WALL OPENING. THIS WILL SERVE AS A TRANSFER AIR PATH TO THE KITCHEN.
5. RUN 3" PVC CA AND FLUE UP THROUGH ROOF. OFFSET AS NEEDED TO STAY 10' CLEAR FROM ANY OA INTAKE.



HVAC FLOOR PLAN

1/8" = 1'-0"

0" 1" 2"

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HVAC FLOOR PLAN

DRAWING NUMBER:

H2.1

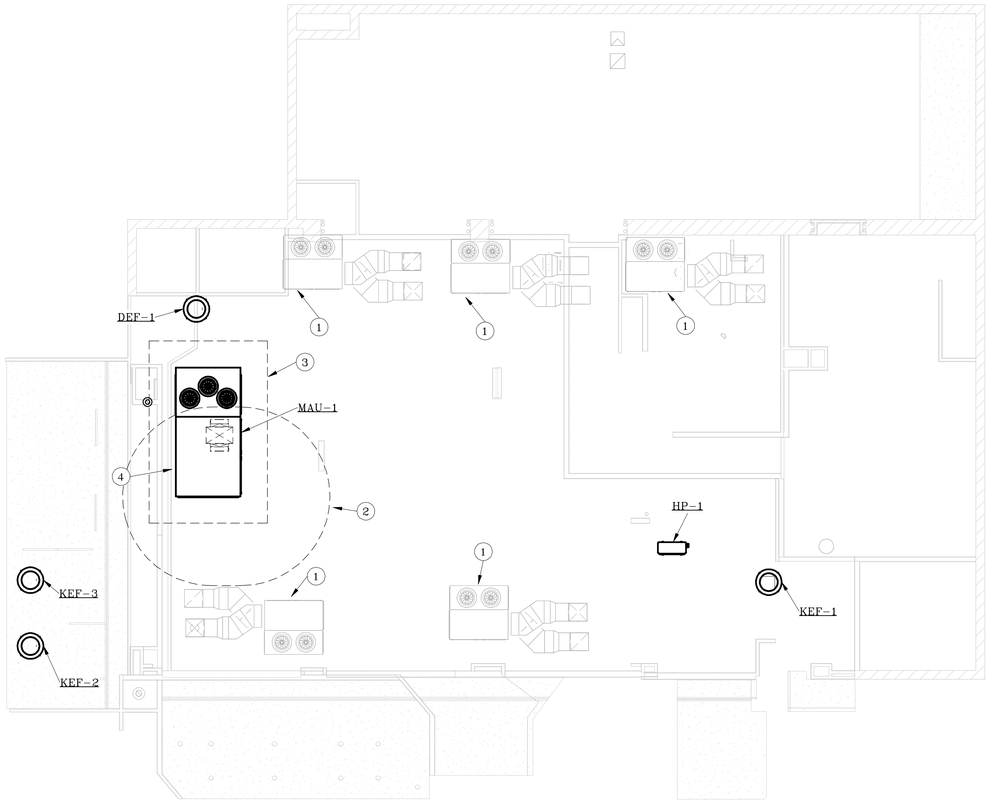
FLAG NOTES:

1 EXISTING HVAC EQUIPMENT TO REMAIN.

2 DO NOT INSTALL ANY EXHAUST, VENTS OR FLUES WITHIN THIS OUTSIDE AIR INTAKE ZONE.

3 MC TO PROVIDE AND INSTALL SCREEN WALL ON MAU-1.

4 INSTALL MAU ON 20" HIGH CURB TO CLEAR EXISTING PARAPET.



HVAC ROOF PLAN

1/8" = 1'-0"

0" 1" 2"

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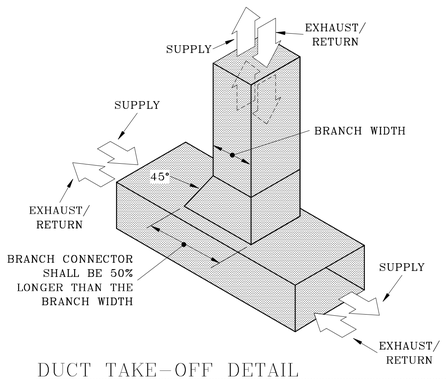
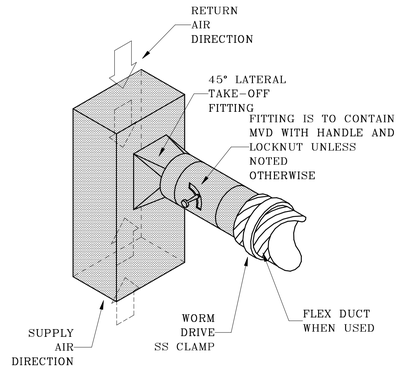
HVAC ROOF PLAN

DRAWING NUMBER:

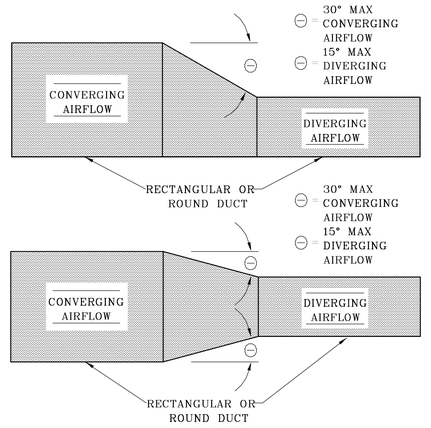
H2.2



DUCT TAKE-OFF DETAIL
RECTANGULAR
SCALE: NONE



DUCT TAKE-OFF DETAIL
ROUND
SCALE: NONE



NOTE: 1) DETAIL APPLIES TO ALL DUCTWORK

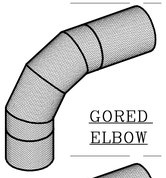
2) ON DUCTWORK TRANSITIONING ON ALL FOUR SIDES, NONE OF THE TRANSITION ANGLES MAY EXCEED 15°

DUCT TRANSITION
DETAIL
SCALE: NONE

ADJUSTABLE ELBOW

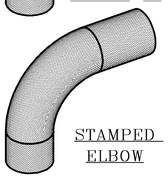
PERMITTED USES:
- ALL RESIDENTIAL SYSTEMS
- DUCT SYSTEMS 12" DIAMETER AND LESS AND CONCURRENTLY 2"WC PRESSURE CLASS AND LESS

PROHIBITED USES:
- DUCT SYSTEMS OVER 2"WC PRESSURE CLASS
- DUCTS LARGER THAN 12" DIAMETER
- DUST COLLECTION SYSTEMS
- STAINLESS OR ALUMINUM DUCT SYSTEMS
- GREASE DUCT SYSTEMS



GORED ELBOW

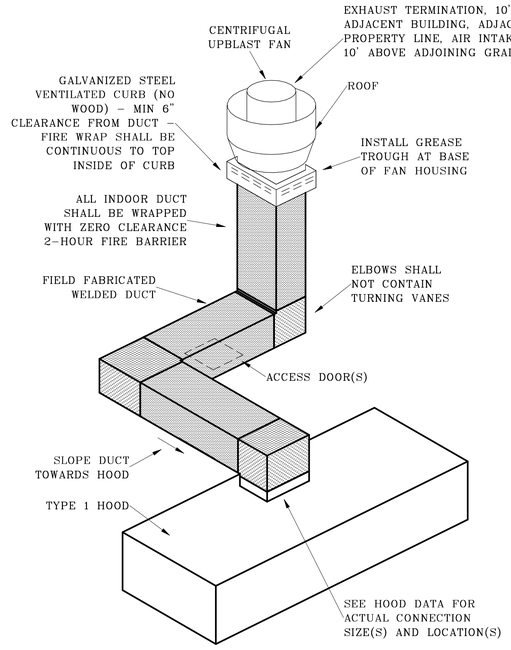
REQUIREMENTS:
- MINIMUM 5 GORE
- MAY BE USED FOR ANY SIZE
- 1.5 CENTERLINE RADIUS
- JOINTS MAY REQUIRE FULL WELDING – SEE GENERAL NOTES



STAMPED ELBOW

REQUIREMENTS:
- ANY PRESSURE CLASS
- MAY BE USED FOR ANY SIZE
- 1.5 CENTERLINE RADIUS
- JOINTS MAY REQUIRE FULL WELDING – SEE GENERAL NOTES

ROUND DUCT ELBOW
DETAIL
SCALE: N/A



GREASE DUCT NOTES:
- GREASE DUCTS SERVING TYPE I HOODS SHALL BE CONSTRUCTED OF STEEL HAVING A MINIMUM THICKNESS OF 0.0575 INCH (1.463 MM) (NO. 16 GAUGE) OR STAINLESS STEEL NOT LESS THAN 0.0450 INCH (1.14 MM) (NO. 18 GAUGE) IN THICKNESS.
- JOINTS, SEAMS AND PENETRATIONS OF GREASE DUCTS SHALL BE MADE WITH A CONTINUOUS LIQUID-TIGHT WELD OR BRAZE MADE ON THE EXTERNAL SURFACE OF THE DUCT SYSTEM. DUCT JOINTS SHALL BE BUTT JOINTS, WELDED FLANGE JOINTS WITH A MAXIMUM FLANGE DEPTH OF 1/2 INCH (12.7 MM) OR OVERLAPPING DUCT JOINTS OF EITHER THE TELESCOPING OR BELL TYPE. OVERLAPPING JOINTS SHALL BE INSTALLED TO PREVENT LEDGES AND OBSTRUCTIONS FROM COLLECTING GREASE OR INTERFERING WITH GRAVITY DRAINAGE TO THE INTENDED COLLECTION POINT.
- PRIOR TO THE USE OR CONCEALMENT OF ANY PORTION OF A GREASE DUCT SYSTEM, A LEAKAGE TEST SHALL BE PERFORMED. DUCTS SHALL BE CONSIDERED TO BE CONCEALED WHERE INSTALLED IN SHAFTS OR COVERED BY COATINGS OR WRAPS THAT PREVENT THE DUCTWORK FROM BEING VISUALLY INSPECTED ON ALL SIDES. THE PERMIT HOLDER SHALL BE RESPONSIBLE TO PROVIDE THE NECESSARY EQUIPMENT AND PERFORM THE GREASE DUCT LEAKAGE TEST. A LIGHT TEST SHALL BE PERFORMED TO DETERMINE THAT ALL WELDED AND BRAZED JOINTS ARE LIQUID TIGHT.
- DUCT SYSTEMS SERVING A TYPE I HOOD SHALL BE CONSTRUCTED AND INSTALLED SO THAT GREASE CANNOT COLLECT IN ANY PORTION THEREOF, AND THE SYSTEM SHALL SLOPE NOT LESS THAN 2-PERCENT SLOPE TOWARD THE HOOD OR TOWARD A GREASE RESERVOIR DESIGNED AND INSTALLED IN ACCORDANCE WITH CODE.
- SECTIONS OF GREASE DUCTS THAT ARE INACCESSIBLE FROM THE HOOD OR DISCHARGE OPENINGS SHALL BE PROVIDED WITH CLEANOUT OPENINGS SPACED NOT MORE THAN 20 FEET APART AND NOT MORE THAN 10 FEET FROM CHANGES IN DIRECTION GREATER THAN 45 DEGREES . CLEANOUTS AND OPENINGS SHALL BE EQUIPPED WITH TIGHT-FITTING DOORS CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN THAT REQUIRED FOR THE DUCT AND HAVE OPENING DIMENSIONS OF NOT LESS THAN 12 INCHES BY 12 INCHES.

GREASE DUCT
DETAIL
SCALE: NONE

PROJECT NUMBER: 00-000

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10 Oct 2024

HVAC DETAILS

DRAWING NUMBER:

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HOOD INFORMATION – JOB#7086703

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	KH-1	5424 ND-2	CAPTIVEAIRE	12' 0"	600 DEG	I	HEAVY	250	3000			4"	18"	3000	1698	-0.951"	430 SS WHERE EXPOSED	ALONE	ALONE
2	KH-2	5424 ND-2	CAPTIVEAIRE	15' 0"	600 DEG	I	HEAVY	250	3750			4"	14"	1875	1754	-0.840"	430 SS	ALONE	ALONE
												4"	14"	1875	1754	-0.840"	WHERE EXPOSED		
3	DH-1	4824 VHB-G-ND	CAPTIVEAIRE	4' 0"	700 DEG	II	N/A	200	800			4"	12"	800	1019	-0.118"	430 SS 100%	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1	KH-1	CAPTRATE SOLO FILTER	9	20"	16"	85% SEE FILTER SPEC	6	RECESSED ROUND	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0	DCV-1011	1 LIGHT 1 FAN	YES	1090 LBS
2	KH-2	CAPTRATE SOLO FILTER	11	20"	16"	85% SEE FILTER SPEC	7	RECESSED ROUND	NO	RIGHT	12"x54"x24"	TANK FS	4.0/4.0/4.0	DCV-2011	1 LIGHT 1 FAN	YES	1385 LBS
3	DH-1						0									NO	201 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	KH-1	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 122.00" HIGH X 108.00" LONG 430 SS VERTICAL.
		BACKSPLASH 122.00" HIGH X 54.00" LONG 430 SS VERTICAL.
		RIGHT SIDESPLASH 122.00" HIGH X 36.00" LONG 430 SS VERTICAL.
		RIGHT SIDESPLASH 122.00" HIGH X 8.00" LONG 430 SS VERTICAL.
		RIGHT END STANDOFF (FINISHED) 1" WIDE 54" LONG INSULATED.
		INSULATION FOR TOP OF HOOD.
		STRUCTURAL FRONT PANEL.
		INSULATION FOR BACK OF HOOD.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
		RIGHT WALL AS END PANEL.
2	KH-2	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 122.00" HIGH X 228.00" LONG 430 SS VERTICAL.
		INSULATION FOR TOP OF HOOD.
		STRUCTURAL FRONT PANEL.
		INSULATION FOR BACK OF HOOD.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
3	DH-1	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.

FIRE SYSTEM INFORMATION – JOB#7086703

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION SYSTEM	INSTALLATION LOCATION ON HOOD
1		TANK FS	4.0/4.0	40	37	FIRE CABINET LEFT	LEFT, HOOD 1
2		TANK FS	4.0/4.0/4.0	60	16	FIRE CABINET RIGHT	RIGHT, HOOD 2

GAS VALVE(S)

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

Hoods are ETL Listed And Complies with UL710, ULC710, and ULC-S646 Standards. Fire Systems ETL Listed and Complies With Ul300 and Meets requirements of NFPA 96 and NFPA 17A

***** NOTE *****

ALL WALLS AND STRUCTURES THAT COME WITHIN 18" OF HOOD MUST BE METAL STUDS AND SHEETROCK. WOOD STUDS OR ANY OTHER COMBUSTIBLE MATERIAL WITHIN 18" OF HOOD NOT ALLOWED

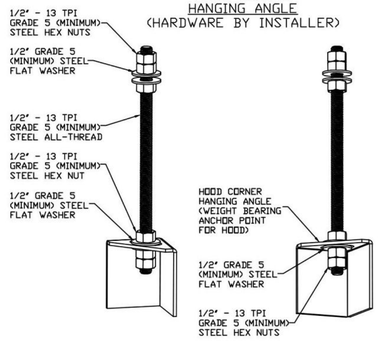
***** NOTE *****

HOOD MANUFACTURER RECOMMENDS NO RETURNS OR 4-WAY DIFFUSERS WITHIN 10 FEET OF HOOD IN ALL DIRECTIONS.

***** NOTE *****

MAKE-UP AIR SHALL BE DELIVERED INTO SPACE IN MANNER THAT WILL NOT DISRUPT HOODS ABILITY TO CAPTURE AND CONTAIN.

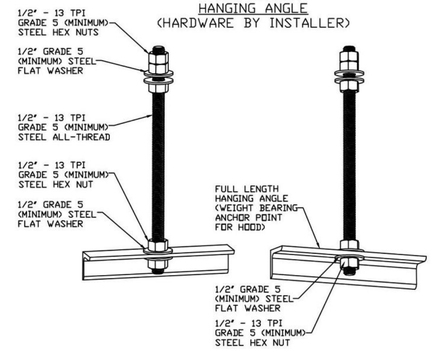
HOOD CORNER
HANGING ANGLE
(HARDWARE BY INSTALLER)



ASSEMBLY INSTRUCTIONS

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

FULL LENGTH
HANGING ANGLE
(HARDWARE BY INSTALLER)



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HVAC SCHEDULES

DRAWING NUMBER:

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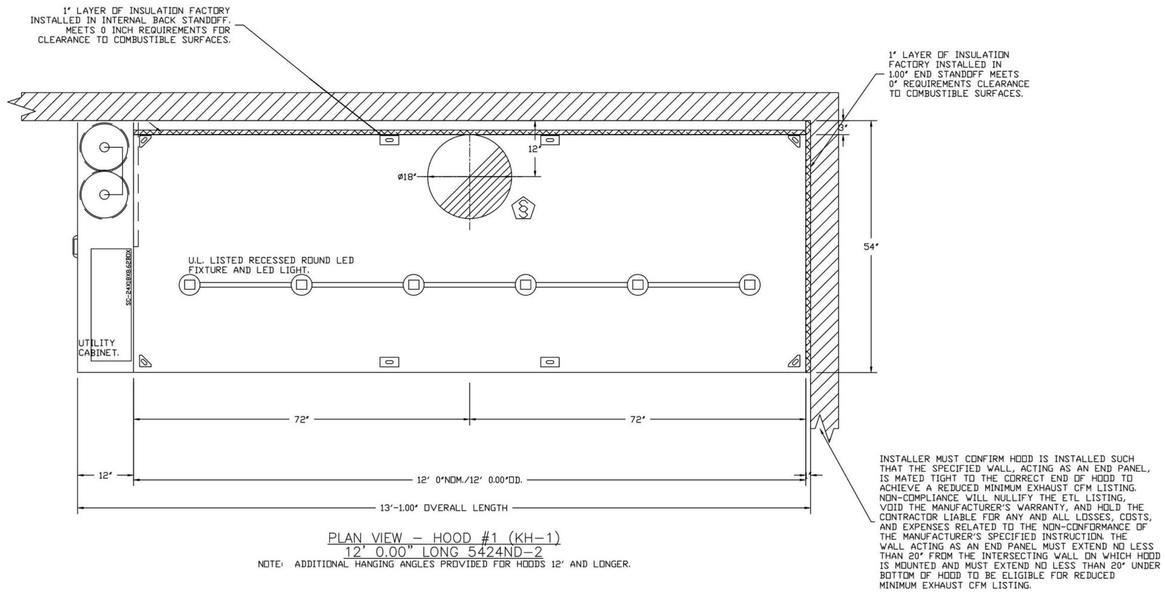
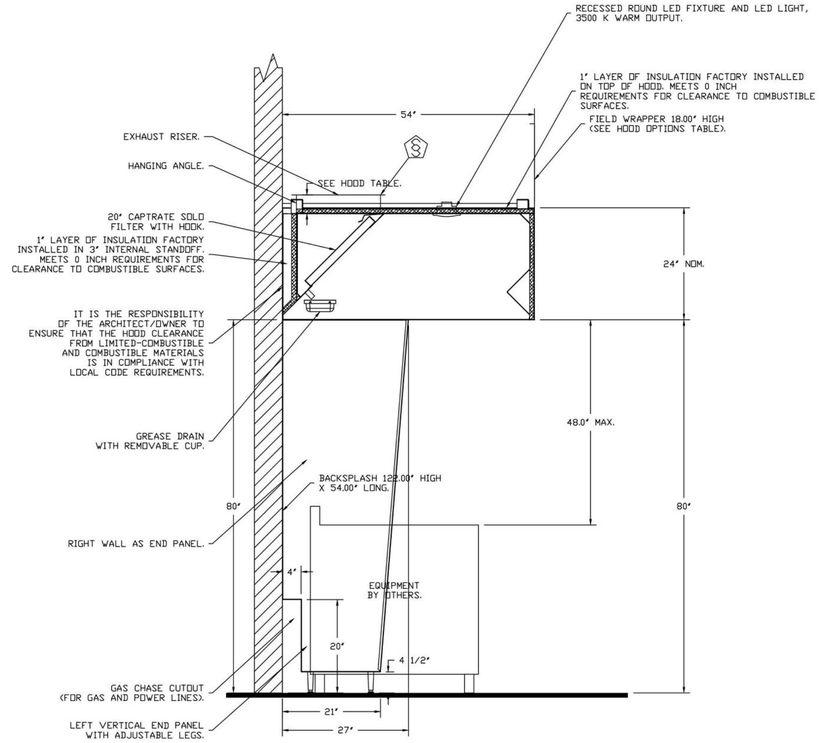


PLAN VIEW – HOOD #1 (KH-1)
12' 0.00" LONG 5424ND-2

NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.



SECTION VIEW – MODEL 5424ND-2
HOOD – #1 (KH-1)

C:\Users\Thomas Segalhorst\Integrated Mech Dropbox\Work\Work-24\24-224-Bonchon-&-Brown-Dakatsu-TMS\10-Revit\R-24-224-M001-R24.rvt

10-Oct-24 7:48:42 PM

PROJECT NUMBER: 00-000

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
FORT COLLINS, CO 80524

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970-556-0570

PERMIT SET

Issued

No.	Description	Date
1	DESIGN DEVELOPMENT	20 SEPT 2024
2	PERMIT SET	11 OCT 2024
3		
4		
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6		

Revisions

No.	Description	Date

DRAWN BY: TMS

CHECKED BY: TMS

SEAL:

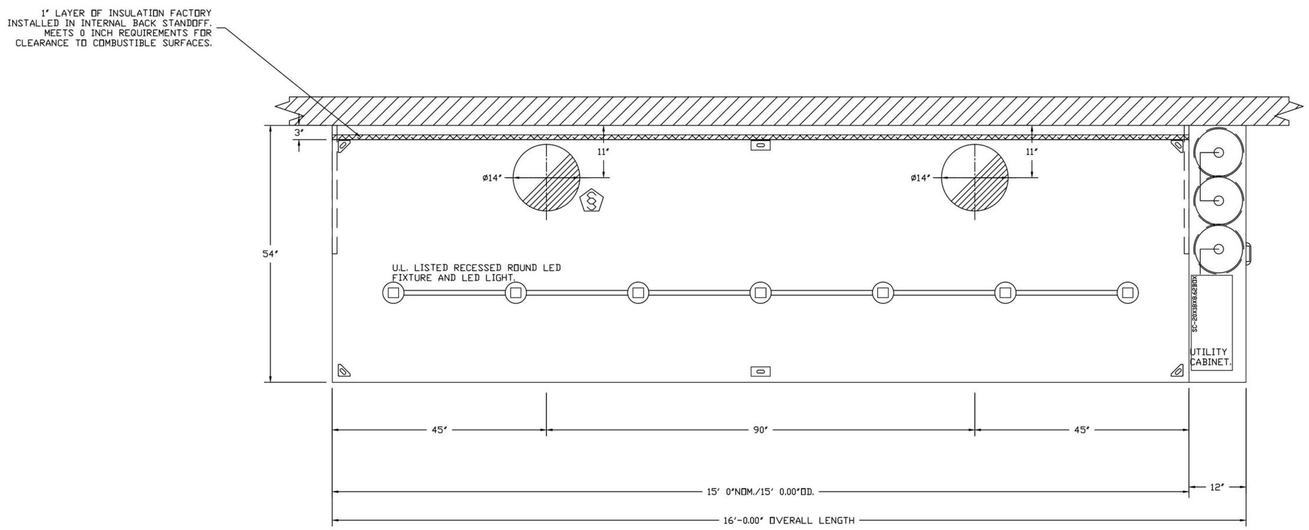
COLORADO LICENSED
THOMAS W. SEGALHORST
37190
PROFESSIONAL ENGINEER

10 Oct 2024

HVAC SCHEDULES

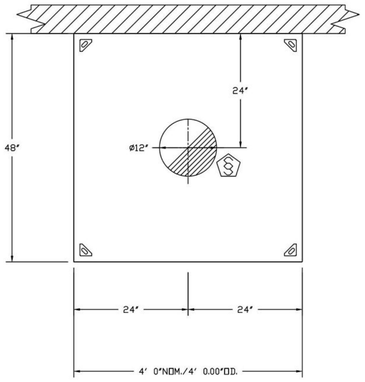
DRAWING NUMBER:

H8.2

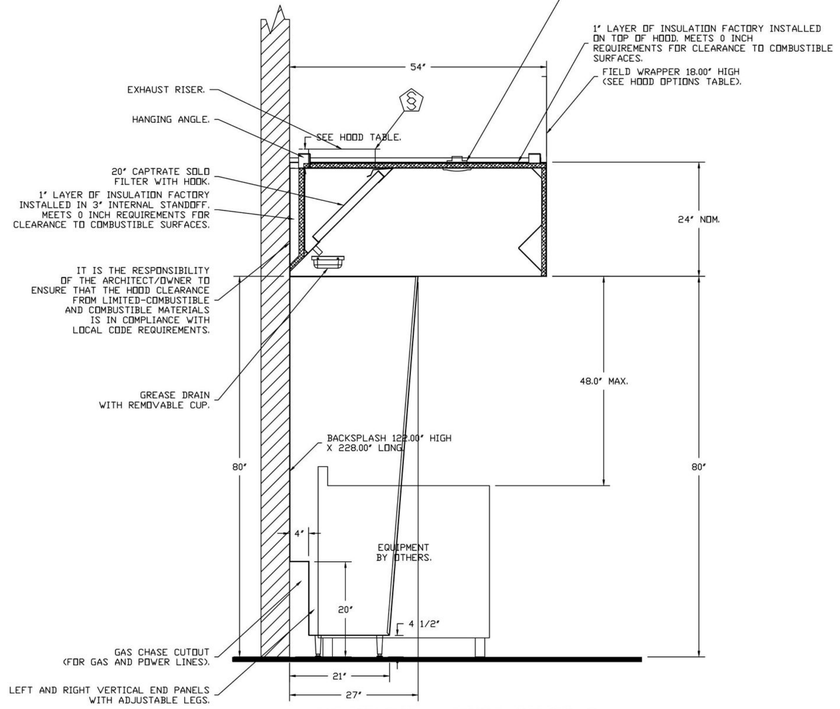


PLAN VIEW – HOOD #2 (KH-2)
15' 0.00" LONG 5424ND-2

NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.



PLAN VIEW – HOOD #3 (DH-1)
4' 0.00" LONG 4824VHB-G-ND



SECTION VIEW – MODEL 5424ND-2
HOOD – #2 (KH-2)

SECTION VIEW – MODEL 4824VHB-G-ND
HOOD – #3 (DH-1)

PROJECT NUMBER: 00-000

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
FORT COLLINS, CO 80524

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COLORADO LICENSED THOMAS M. SEGELHORST 37190 PROFESSIONAL ENGINEER

10 Oct 2024

HVAC SCHEDULES

DRAWING NUMBER:

H8.3

DOAS/RTU FAN SCHEDULE – JOB#7086703

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	ELECTRICAL INFORMATION					COOLING INFORMATION									REHEAT INFORMATION					GAS HEAT INFORMATION						NOTES
											HP	PHASE	VOLT	MCA	MOCP	OUTSIDE AIR		MIXED AIR		LEAVING AIR			CAPACITY		IEER	ISMRE	DISCHARGE		CAPACITY		MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	
																DB	WB	DB	WB	DB	WB	DP	TOTAL	SENS.			DB	WB	DESIRED	MAX						
4	MAU-1	1	CAS-HVAC4-1.700-30-22T	CAPTIVEAIRE	30MF-4-RTU	0	6075	6075	4484	1.000	10.00	3	208	104.3A	125A	72.3°F	64.6°F	72.3°F	64.6°F	51.7°F	51.7°F	51.8°F	212.3 MBH	113.3 MBH	18.1	5.1	70.0°F	58.4°F	104.3 MBH	260 MBH	90.7 LBS/HR	NATURAL	552847	447806	72°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

NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 12:1 TURNDOWN WITH NG AND 10:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FULLY MODULATING HOT GAS REHEAT
14. HAIL GUARD FOR CONDENSING COIL
15. STATIC PRESSURE CONTROLLED OUTSIDE AIR DAMPER
16. DOWN DISCHARGE/DOWN RETURN

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	UPBLAST FAN WHEEL ACCESS PORT
		1	2 YEAR PARTS WARRANTY
2	KEF-2	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	UPBLAST FAN WHEEL ACCESS PORT
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
3	KEF-3	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	UPBLAST FAN WHEEL ACCESS PORT
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
4	MAU-1	1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 2 FURNACES
		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	RTU4 DOWN DISCHARGE
		1	2" MERV 13 FILTERS FOR RTU4 (QTY. 12)
		1	2" MERV 8 FILTERS FOR RTU4 (QTY. 12)
		1	OVERHEAT STAT
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	SPECIAL ORIFICES FOR IF HEATERS ABOVE 2,000'
		1	22 TON MODULATING COOLING OPTION, 208/230V. 3CFS. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	22 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL. - R410A
		1	OCCUPIED SCHEDULING
		1	RTU4 CURB DUCT HANGER
		1	120V FIRE INPUT
		1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK - ALARM SUPPLIED BY OTHERS
		1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI
		1	RTU4 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	RTU4 HAIL GUARD
		1	RTU4 DOWN RETURN
		1	RTU INTAKE/RETURN DAMPER - BUILDING STATIC PRESSURE CONTROL
		1	VAV PACKAGE W/ MANUAL/DDC CONTROL (571 VFD INCLUDED)
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)
		1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET
5	DEF-1	1	I 15-BDD DAMPER
		1	SCR-11 BIRD SCREEN
		1	ECM WIRING PACKAGE - EXHAUST - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -MSC-(TELCO), CCW ROTATION
		1	2 YEAR PARTS WARRANTY

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF-1	YES						
2	KEF-2	YES						
3	KEF-3	YES						
5	DEF-1		YES					

CURB ASSEMBLIES

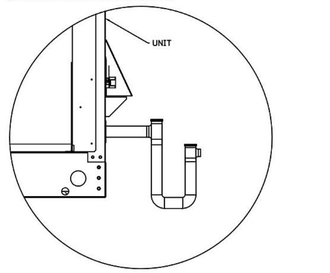
NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	34 LBS	CURB	26.500"W X 26.500"L X 26.000"H VENTED HINGED.
2	# 2	KEF-2	34 LBS	CURB	26.500"W X 26.500"L X 26.000"H VENTED HINGED.
3	# 3	KEF-3	34 LBS	CURB	26.500"W X 26.500"L X 26.000"H VENTED HINGED.
4	# 4	MAU-1	264 LBS	CURB	80.000"W X 111.000"L X 20.000"H INSULATED 16 GAUGE.
5	# 5	DEF-1	27 LBS	CURB	19.500"W X 19.500"L X 20.000"H VENTED.

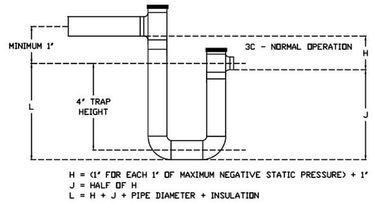
HMI SCHEDULE				
UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #4	HMI #1 - UNIT	IN UNIT	NOT AVERAGED	55
FAN #4	HMI #2 - SPACE		AVERAGED	56

EXHAUST FAN INFORMATION – JOB#7086703

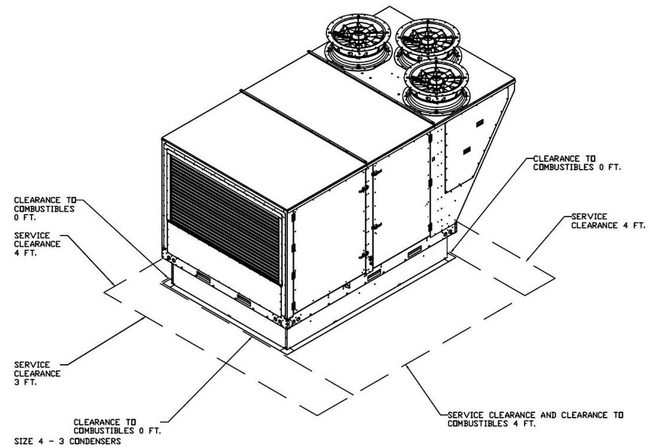
FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	KEF-1	1	DU180HFA	CAPTIVEAIRE	3000	1.750	1461	ODP,PREMIUM	3.000	1.8160	3	208	9.5	693 FPM	186	24.5
2	KEF-2	1	DU180HFA	CAPTIVEAIRE	1875	1.500	1267	TEAO-ECM	2.000	1.0530	3	208	8.5	433 FPM	144	18
3	KEF-3	1	DU180HFA	CAPTIVEAIRE	1875	1.500	1267	TEAO-ECM	2.000	1.0530	3	208	8.5	433 FPM	144	18
5	DEF-1	1	DU33HFA	CAPTIVEAIRE	800	0.350	1533	TEAO-ECM	0.333	0.1860	1	115	4.3	396 FPM	68	16.2

RTU CONDENSATE DRAIN TRAP DETAIL





H = (1" FOR EACH 1" OF MAXIMUM NEGATIVE STATIC PRESSURE) + 1"
J = HALF OF H
L = H + J + PIPE DIAMETER + INSULATION

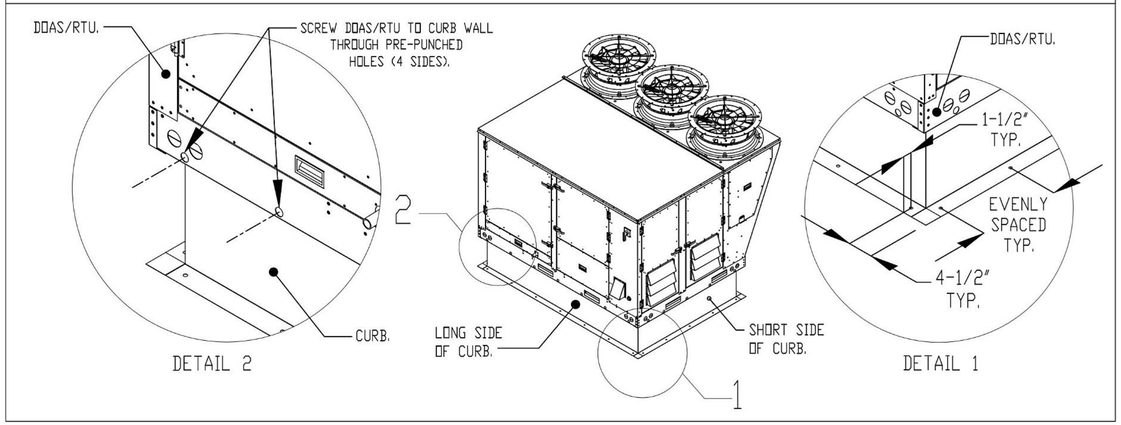


SIZE 4 - 3 CONDENSERS

TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

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

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



PROJECT NUMBER: 00-000

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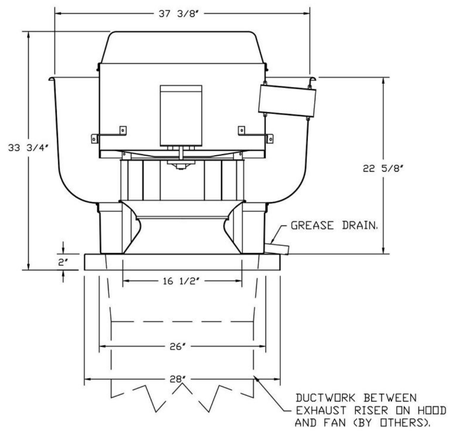
COLORADO LICENSED THOMAS M. SIEGEL 32190 PROFESSIONAL ENGINEER
10 Oct 2024

HVAC SCHEDULES

DRAWING NUMBER:

H8.4

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



FEATURES:

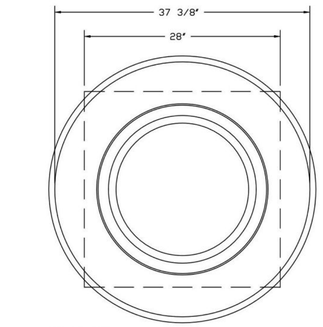
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT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

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

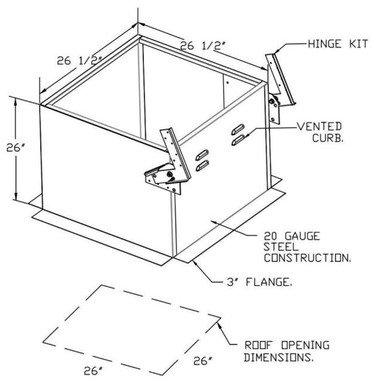
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

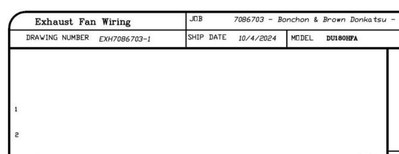
- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR180HFA
- INSTALLED AT PLANT - FOR GREASE DUCTS.
- UPBLAST FAN WHEEL ACCESS PORT.
- 2 YEAR PARTS WARRANTY.



TOP VIEW



Exhaust Fan Wiring	JOB 7086703 - Bonchon & Brown Donkatsu - Fa...	
DRAWING NUMBER EXH7086703-1	SHIP DATE 10/4/2024	MODEL DU180HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
SV-01	Main disconnect switch	[3]

MOTOR INFO
EXHAUST 3.0HP-208V-3P-9.5FLA
VFD PART: ESV528N02YXB57

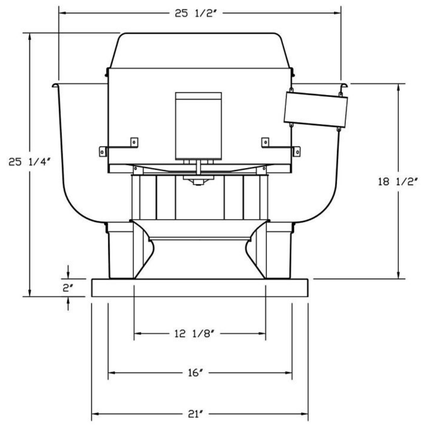
ELECTRICAL INFORMATION
MOTOR/ACTRS MCA 20A
MOTOR/CTRL MOP 20A

NOTES
- - - DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR

BK - BLACK	YW - YELLOW		
BL - BLUE	GR - GREEN		
BR - BROWN	GY - GRAY		
OR - ORANGE	PR - PURPLE		
RD - RED	PK - PINK		
WH - WHITE			

FAN #5 DU33HFA - EXHAUST FAN (DEF-1)



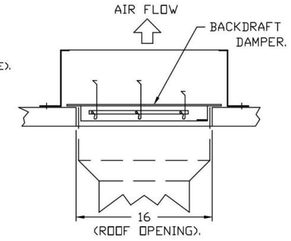
FEATURES:

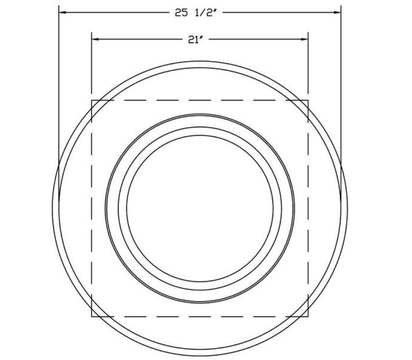
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- NEMA 3R SAFETY DISCONNECT SWITCH.

OPTIONS

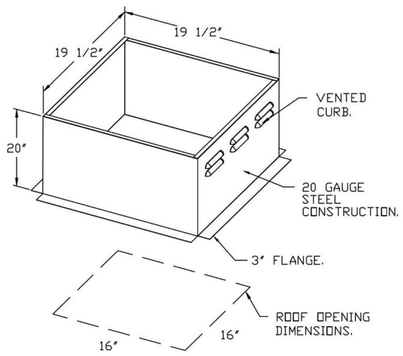
- I 15-BDD DAMPER.
- SCR-11 BIRD SCREEN.
- ECM WIRING PACKAGE - EXHAUST - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -MSC- (TELCOD), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.

BACKDRAFT DAMPER INSTALLATION

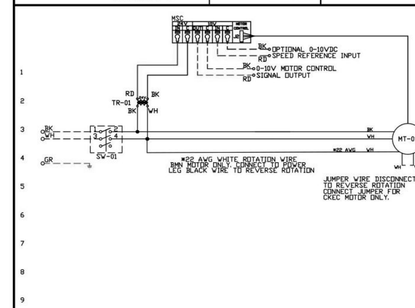




TOP VIEW



Exhaust Fan Wiring	JOB 7086703 - Bonchon & Brown Donkatsu - Fa...	
DRAWING NUMBER EXH7086703-5	SHIP DATE 10/10/2024	MODEL DU33HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
MSC	Motor Speed Controller	[1]
SV-01	Main disconnect switch	[3]
TR-01	24VAC 20VA Transformer	[2]

MOTOR INFO
EXHAUST 0.3HP-115V-1P-4.3FLA

ELECTRICAL INFORMATION
MOTOR/ACTRS MCA 15A
MOTOR/CTRL MOP 15A

NOTES
- - - DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR

BK - BLACK	YW - YELLOW		
BL - BLUE	GR - GREEN		
BR - BROWN	GY - GRAY		
OR - ORANGE	PR - PURPLE		
RD - RED	PK - PINK		
WH - WHITE			

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DRAWN BY: TMS

CHECKED BY: TMS

SEAL:

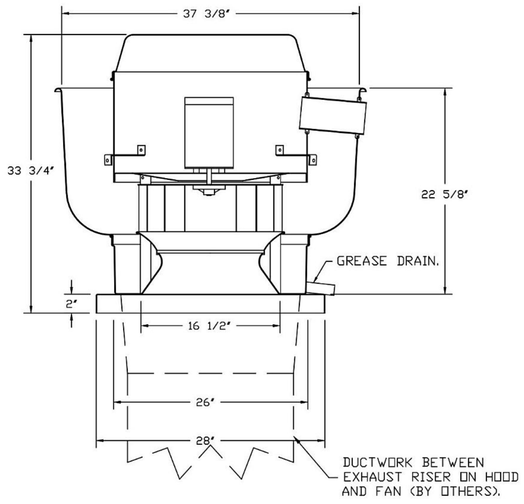
10 Oct 2024

HVAC SCHEDULES

DRAWING NUMBER:

H8.5

FANS #2 (KEF-2), #3 (KEF-3) - DU180HFA EXHAUST FAN



FEATURES:

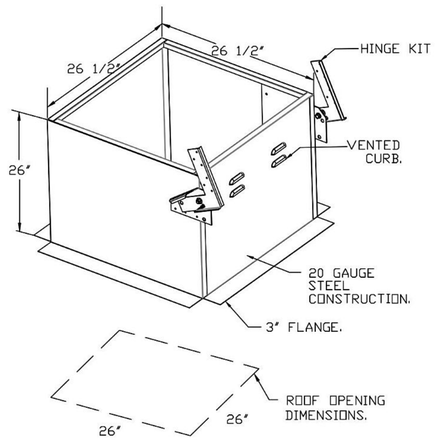
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT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

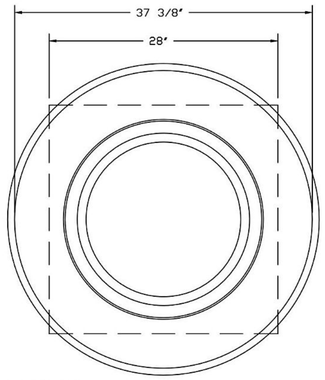
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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

OPTIONS

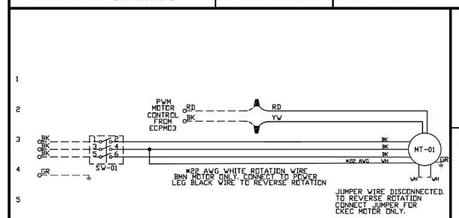
- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
- UPBLAST FAN WHEEL ACCESS PORT.
- ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMD3 PREWIRE (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.





TOP VIEW

Exhaust Fan Wiring | JOB 7086703 - Bonchon & Brown Donkatsu - Fo... | DRAWING NUMBER EXH7086703-2 | SHIP DATE 10/4/2024 | MODEL DU180HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
SW-01	Main disconnect switch	[3]

MOTOR INFO
EXHAUST 2.0HP-208V-3P-8.5FLA

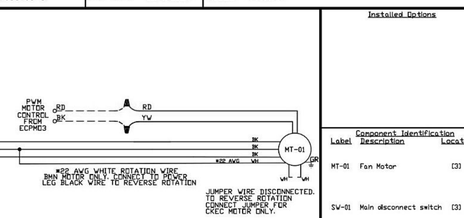
ELECTRICAL INFORMATION
MOTOR RATING MCA= 19.1A
MOTOR/CTRL MOP= 15A

NOTES
- - - DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR

BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PK - PURPLE
RD - RED	PK - PINK
WH - WHITE	

Exhaust Fan Wiring | JOB 7086703 - Bonchon & Brown Donkatsu - Fo... | DRAWING NUMBER EXH7086703-3 | SHIP DATE 10/4/2024 | MODEL DU180HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
SW-01	Main disconnect switch	[3]

MOTOR INFO
EXHAUST 2.0HP-208V-3P-8.5FLA

ELECTRICAL INFORMATION
MOTOR RATING MCA= 19.1A
MOTOR/CTRL MOP= 15A

NOTES
- - - DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR

BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PK - PURPLE
RD - RED	PK - PINK
WH - WHITE	

PROJECT NUMBER: 00-000

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970-556-0570

PERMIT SET

Issued

No.	Description	Date
1	DESIGN DEVELOPMENT	20 SEPT 2024
2	PERMIT SET	11 OCT 2024
3		
4		
5		
6		

Revisions

No.	Description	Date

DRAWN BY: TMS

CHECKED BY: TMS

SEAL:

10 Oct 2024

HVAC SCHEDULES

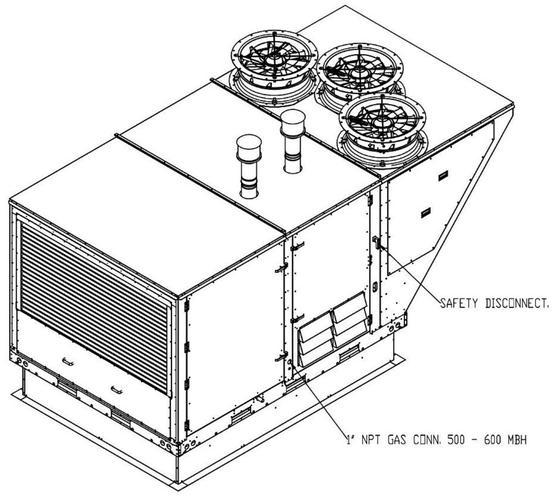
DRAWING NUMBER:

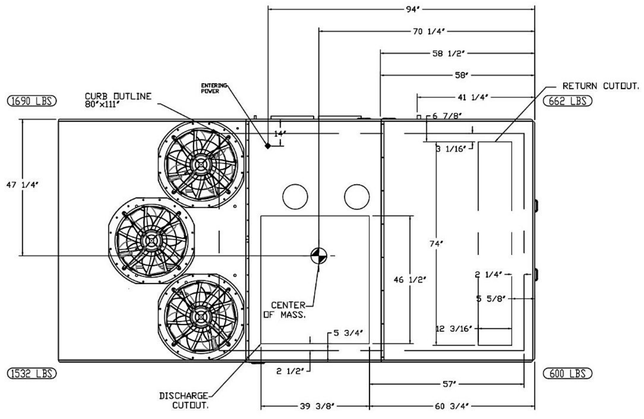
H8.6

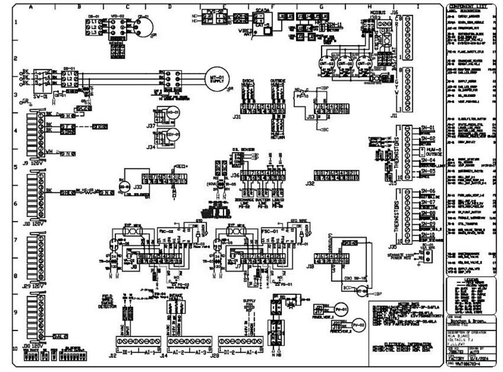
FAN #4 CAS-HVAC4-I.700-30MF-22T - HEATER (MAU-1)

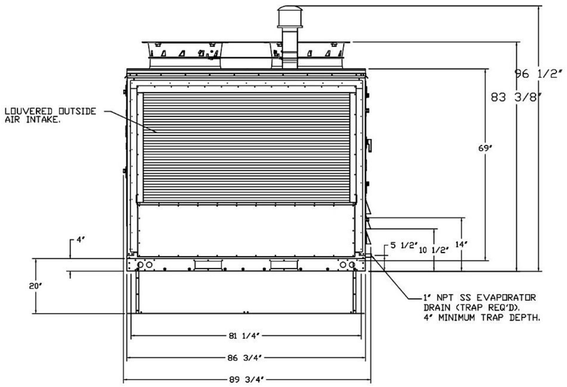
NOTES:
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. ( ) DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
4. CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
5. EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.

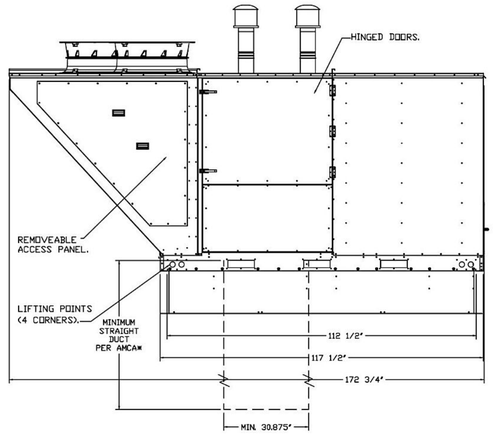
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE 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 30.875" x 39.75".

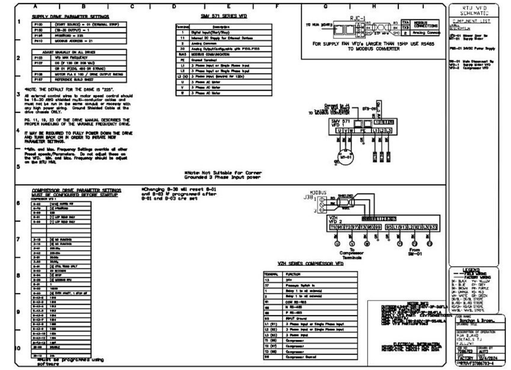


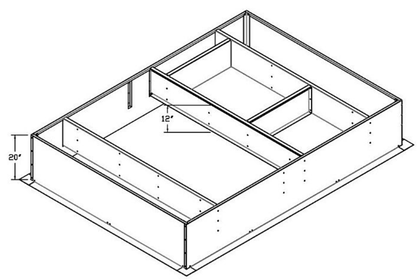


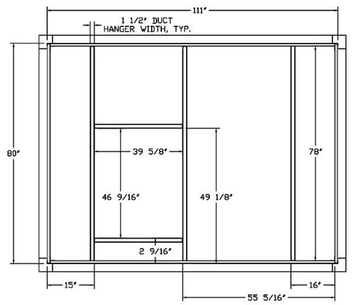


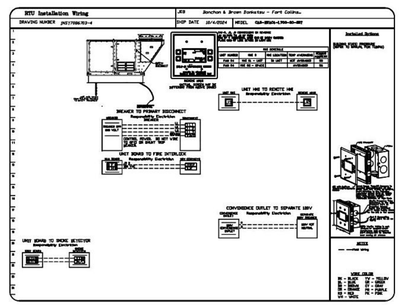












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Revisions

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DRAWN BY: TMS

CHECKED BY: TMS

SEAL:

COLORADO LICENSED THOMAS M. SEGELHORST 32190 PROFESSIONAL ENGINEER
10 Oct 2024

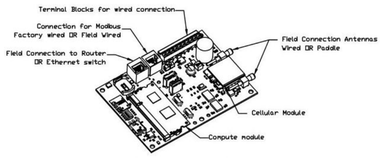
HVAC SCHEDULES

DRAWING NUMBER:

H8.7

ELECTRICAL PACKAGE – JOB#7086703

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	Φ	HP	VOLT	FLA
1		DCV-1011	UTILITY CABINET LEFT	UTILITY CABINET LEFT	1 LIGHT	SMART CONTROLS DCV	KEF-1	EXHAUST	3	3.000	208	9.5
				HOOD # 1	1 FAN							
2		DCV-2011	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT	1 LIGHT	SMART CONTROLS DCV	KEF-2	EXHAUST	3	2.000	208	8.5
				HOOD # 2	1 FAN		KEF-3	EXHAUST	3	2.000	208	8.5



CASlink Monitor and Control

– Hood control panel to support communications to cloud-based Building Management System.
– Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
– Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
– Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

MONITORING AND CONTROL POINTS LIST

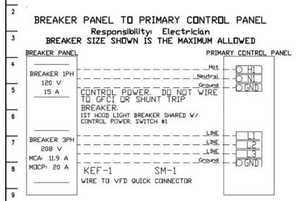
DCV Packages	Function
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Amperage	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults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

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

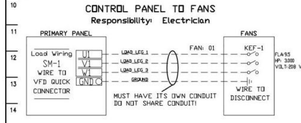
JOB NO 7086703 | MODEL NUMBER DCV-1011 | JOB NAME Bonchon & Brown Donkatsu - Fo... | DRAWN BY | DATE 10/4/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-1

DESCRIPTION OF OPERATION: Demand Control Ventilation, w/ control for 2 Exhaust Fans. Exhaust on in Fire, Lights out in Fire, Fans modulate based on duct temperature. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor shipped loose for Field Installation.Verify distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.

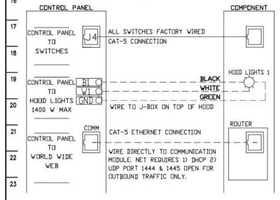
BREAKER PANEL TO PRIMARY CONTROL PANEL
Responsibility: Electrician
BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



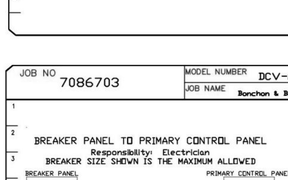
CONTROL PANEL TO FANS
Responsibility: Electrician



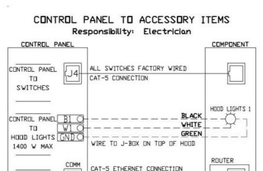
CONTROL PANEL TO ACCESSORY ITEMS
Responsibility: Electrician



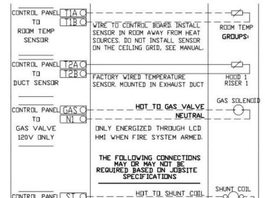
CONTROL PANEL TO FANS
Responsibility: Electrician



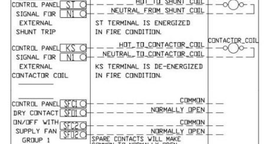
CONTROL PANEL TO ACCESSORY ITEMS
Responsibility: Electrician



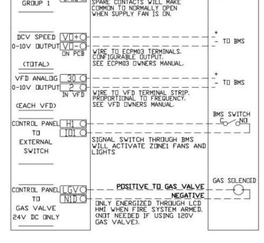
CONTROL PANEL TO ROOM TEMP SENSOR



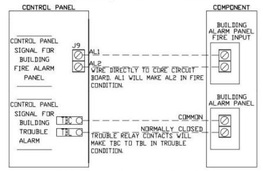
CONTROL PANEL TO DUCT SENSOR



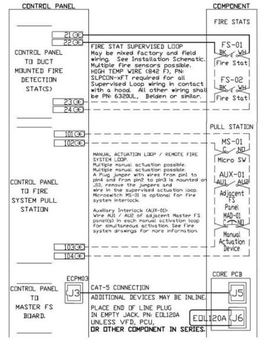
CONTROL PANEL TO GAS VALVE



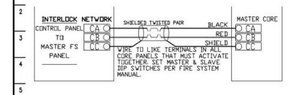
CONTROL PANEL TO FIRE SYSTEM
Responsibility: ALARM CONTRACTOR



CONTROL PANEL TO FIRE SYSTEM
Responsibility: CERTIFIED INSTALLER



JOB NO 7086703 | MODEL NUMBER DCV-10, Fire, Fans modulate on temperature sensor could apply if distance | JOB NAME Bonchon & Bro



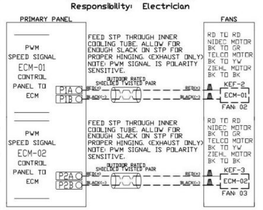
JOB NO 7086703 | MODEL NUMBER DCV-2011 | JOB NAME Bonchon & Brown Donkatsu - Fo... | DRAWN BY | DATE 10/4/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #2-1

DESCRIPTION OF OPERATION: Demand Control Ventilation, w/ control for 2 Exhaust Fans. Exhaust on in Fire, Lights out in Fire, Fans modulate based on duct temperature. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor shipped loose for Field Installation.Verify distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.

BREAKER PANEL TO PRIMARY CONTROL PANEL
Responsibility: Electrician
BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED

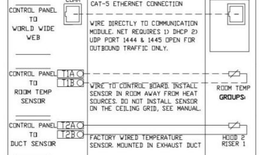
BREAKER PANEL TO FANS
Responsibility: Electrician

CONTROL PANEL TO FANS
Responsibility: Electrician

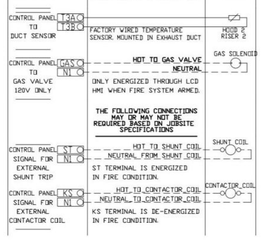


CONTROL PANEL TO ACCESSORY ITEMS
Responsibility: Electrician

CONTROL PANEL TO ROOM TEMP SENSOR

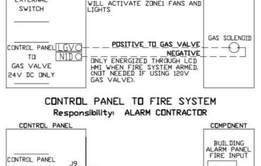


CONTROL PANEL TO GAS VALVE

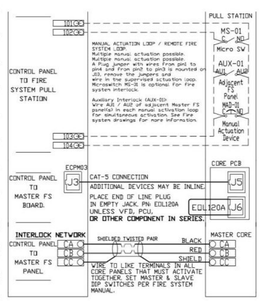


CONTROL PANEL TO FIRE SYSTEM
Responsibility: ALARM CONTRACTOR

CONTROL PANEL TO FIRE SYSTEM
Responsibility: CERTIFIED INSTALLER



JOB NO 7086703 | MODEL NUMBER DCV-x in Fire, Fans modulate on temperature sensor could apply if distance | JOB NAME Bonchon & B



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Revisions

No.	Description	Date

DRAWN BY: TMS

CHECKED BY: TMS

SEAL:

COLORADO LICENSED — THOMAS M. SEGERSTROM — 37190 — PROFESSIONAL ENGINEER

10 Oct 2024

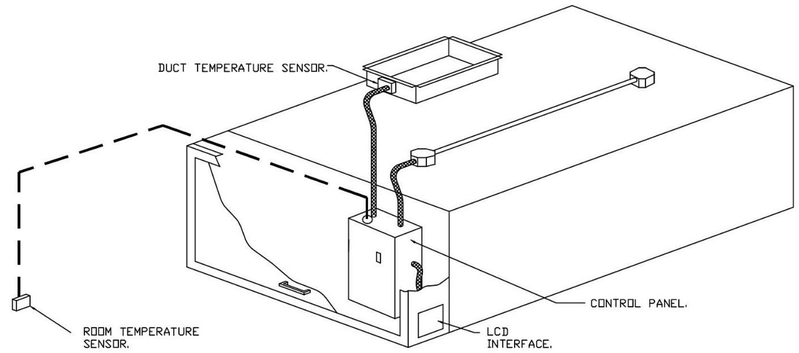
HVAC SCHEDULES

DRAWING NUMBER:

H8.8

DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

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



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS:

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

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

PROJECT NUMBER: 00-000

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PERMIT SET

Issued

No.	Description	Date
1	DESIGN DEVELOPMENT	20 SEPT 2024
2	PERMIT SET	11 OCT 2024
3		
4		
5		
6		

Revisions

No.	Description	Date

DRAWN BY: TMS

CHECKED BY: TMS

SEAL:

COLORADO LICENSED
THOMAS M. SEGELHORST
32190
PROFESSIONAL ENGINEER
10 Oct 2024

HVAC SCHEDULES

DRAWING NUMBER:

H8.9

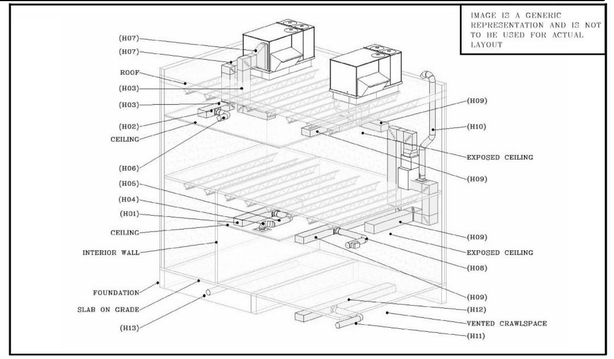
GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

TAG	MAKE & MODEL NUMBER	DESCRIPTION	NECK SIZE	DUTY	COLOR	FRAME SIZE	FRAME TYPE	FRAME CONST	DAMPER	REMARKS
D-2	TITUS OMNI-1	ARCHITECTURAL UNI-FLO DIFFUSER	10"ø	SUPPLY	WHITE	24"x24"	SURFACE	STEEL	YES	WITH TRIM FRAME
D-4	TITUS 300RL-1	SIDEWALL SUPPLY DIFFUSER	18"x8"	SUPPLY	WHITE	NECK +2	SIDEWALL	STEEL	YES	
D-12	TITUS S-DL	DRUM LOUVER - DIRECT SPIRAL MOUNT	24"x10"	SUPPLY	ALUM	NECK +2	DUCT	ALUM	YES	

MECHANICAL DUCT INSULATION SCHEDULE

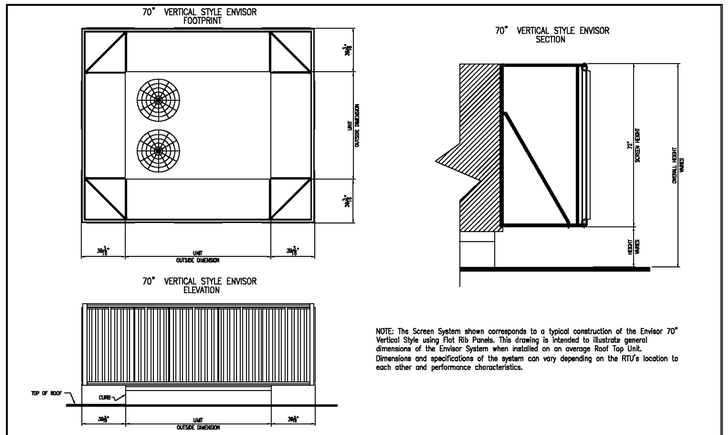
INSULATION KEY	INSULATION DESCRIPTION	TYPE	THICKNESS (IN)	DENSITY (PCF)	TOTAL R VALUE	ACCOUSTICAL (NRC)
H01	RECTANGULAR DUCT IN CEILING SPACE WITH NO ROOF	LINER	1.0	1.5	4.2	0.70
H02	RECTANGULAR DUCT IN CEILING SPACE ADJACENT TO EXTERIOR ROOF	LINER	1.5	1.5	6.0	0.80
H03	RECTANGULAR DUCT IN CEILING SPACE ADJACENT TO EXTERIOR ROOF AND SPACE IS A RETURN PLENUM	LINER	1.0	1.5	4.2	0.70
H04	FLEXIBLE DUCT TO DIFFUSER	FLEX	1.5	~	6.0	~
H05	ROUND DUCT IN CEILING SPACE WITH NO ROOF	WRAP	1.5	0.75	4.2	~
H06	ROUND DUCT IN SPACE ADJACENT TO EXTERIOR ROOF	WRAP	2.1	0.75	6.0	~
H07	RECTANGULAR DUCT EXTERIOR TO BUILDING ENVELOPE. DOUBLE WALL WATER TIGHT CONSTRUCTION. WRAP NOT ACCEPTABLE	LINER	3.0	1.5	12	0.95
H08	ROUND DUCT EXPOSED IN CONDITIONED SPACE	N/R		~	~	~
H09	RECTANGULAR DUCT EXPOSED IN CONDITIONED SPACE	LINER	1.0	1.5	4.2	0.70
H10	ROUND OR RECTANGULAR OUTSIDE AIR DUCT	WRAP	5.0	0.75	12	~
H11	ROUND DUCT IN VENTILATED CRAWL SPACE	WRAP	5.0	0.75	12	~
H12	RECTANGULAR DUCT IN VENTILATED CRAWL SPACE	LINER	3.0	1.5	12	0.95
H13	BURIED ROUND DUCT	INTERNAL		~	6.0	~

IMAGE IS A GENERIC REPRESENTATION AND IS NOT TO BE USED FOR ACTUAL LAYOUT



MC SHALL WORK WITH MANUFACTURER TO DESIGN PROVIDE AND INSTALL THE MAU SCREEN WALL - THE ARCHITECT SHALL SELECT THE COLOR - THE SCREEN SHALL BE ENTIRELY UNIT SUPORTED - USE A 3" LINEAL TOP AND BOTTOM BAND - PANELS SHALL BE LOUVER ACRYLICAP ABS TYPE

MAU-1 SCREEN



NOTE: The Screen System shown corresponds to a typical construction of the Envisor 70" Vertical Style using Flat Rib Panels. This drawing is intended to illustrate general dimensions of the Envisor System when installed on an average Roof Top Unit. Dimensions and specifications of the system can vary depending on the RTU's location to each other and performance characteristics.

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PROJECT DESCRIPTION ENVISOR 70" VERTICAL STYLE	REVISION REF.# AND DATE			SCALE 3/16" = 1'
PROJECT DESCRIPTION GENERAL SPECIFICATIONS	PAS 02/05/04			SHEET 1 OF 1
CLIENT CONTACT PERSON WORK ORDER #				DRAWN BY PAS CHECKED BY
ADDRESS CITY STATE ZIP				DATE FILE CREATED 02/05/04
JOBSITE LOCATION				DWG FILE # 100539
ADDRESS CITY STATE ZIP				

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EF-1

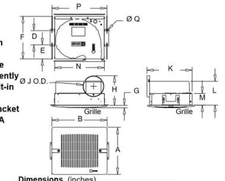
COOK

MARK: 75-CFM-CEILING-ECM-F
PROJECT: STANDARD_FANS
DATE: 05-May-20

GEMINI Vari-Flow®

Ceiling Fans
100 Series

STANDARD CONSTRUCTION FEATURES:
Forward curved injection molded polypropylene fan wheel - Injection molded flame resistant fan housing with round outlet duct - 22 ga. galvanized steel inlet box - Isolation mounted motor, mounted to one piece galvanized stamped steel integral motor mount/inlet - Permanently lubricated electronically commutated variable speed motor with built-in electronic overload protection and disconnect plug - Field wiring compartment with receptable - Adjustable prepunched mounting bracket - White, high impact styrene injection molded grille - Shipped in ISTA certified transit tested packaging



Performance

Qty	Catalog Number	Flow (CFM)	SP (inwc)	Nominal RPM	Input Watts	Speed Control
1	GCVF-100	75	.250	836	7	EC

Altitude (ft): 5000 Temperature (F): 70

Motor Information

Volts/Ph/Hz	Nameplate Amps
115/1/60	.26

Vari-Flow

Sound Data Inlet Sound Power by Octave Band

1	2	3	4	5	6	7	8	LwA	dBA	Sones
46	48	49	54	46	38	31	22	53	41	1.5

Accessories:
WHITE PLASTIC GRILLE
INTEGRAL BD DAMPER
SLOPE ROOF JACK RJR100 - 6" CONNECTOR

Dimensions (inches)

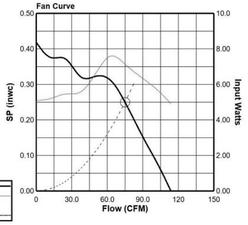
A Plastic	13-1/4	H	8-3/8
B Plastic	15-1/2	J O.D.	5-15/16
A Steel	13-1/2	K	12-3/4
B Steel	15-1/2	L	6-11/16
A Aluminum	13-3/4	M	3-1/4
B Aluminum	15-1/2	N	14
D	4	P	15-1/2
E	4	Q	1/2
F	12		
G	5/8		

NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	33	Unit	30

***Includes fan, motor & accessories.

Fan Curve



Fan Curve Legend
CFM vs SP
CFM vs Watts
Point of Operation
System Curve

v10.0.156.14465

PROJECT NUMBER: 00-000

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PERMIT SET

Issued

No.	Description	Date
1	DESIGN DEVELOPMENT	20 SEPT 2024
2	PERMIT SET	11 OCT 2024
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Revisions

No.	Description	Date

DRAWN BY: TMS

CHECKED BY: TMS

SEAL:

COLORADO LICENSED THOMAS M. SEGERHORST 37190 PROFESSIONAL ENGINEER
10 Oct 2024

HVAC SCHEDULES

DRAWING NUMBER:

H8.10

FC–1

High Wall Heat Pump Ductless System

Indoor Model: 40MAQB36B–3

Carrier — turn to the experts

Submittal Data

Job Data: Location:

Buyer: Buyer P.O. #: Carrier #:

Unit Number: Model Number:

Performance Data Certified By: Date:

Performance SERIES

STANDARD FEATURES
- Modes: Cool, Heat, Dry, Fan, Auto
- Turbo Mode
- Four fan speeds
- Sleep Mode
- Up-Down Louver control (fixed or swing)
- Follow Me (senses temperature at handheld remote)
- Heating Setback (46° F Heating Mode)
- Quiet indoor operation
- Anti-corrosive fin coating

CONTROLS:
- Wireless Remote Controller included with indoor unit
- Wired Remote Controller KSACN0401AAA (7 Day programmable) (Optional)

LIMITED WARRANTY*
- 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years

*For residential applications. See warranty for full details.

System	Size		36
	Indoor Model		40MAQB36B–3
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	208/230-1-60
	Power Supply	Indoor unit powered by outdoor unit	
	MCA	A	0.4
Controls	Wireless Remote Controller (°F/°C Convertible)		Standard
	Wired Remote Controller (°F/°C Convertible)		Optional
Operating Range	Cooling Indoor DB Min -Max	°F(°C)	63–86 (17–30)
	Heating Indoor DB Min -Max	°F(°C)	32–86 (0–30)
Piping	Pipe Connection Size - Liquid	in (mm)	3/8 (9.52)
	Pipe Connection Size - Suction	in (mm)	5/8 (16)

Indoor Coil	Face Area	Sq. Ft.	3.68
	No. Rows		3
	Fins per inch		18
	Circuits		7
Indoor	Unit Width	in (mm)	46.69 (1186)
	Unit Height	in (mm)	13.39 (343)
	Unit Depth	in (mm)	10.16 (258)
	Net Weight	lbs (kg)	40.12 (18.2)
	Number of Fan Speeds		4
	Airflow (lowest to highest)	CFM	520/620/780/870
	Sound Pressure (lowest to highest)	dB(A)	39/45/50
	Air throw Data	ft (m)	36 (11)
	Moisture removal	Pint/h (L/h	11.7 (5.6)
	Field Drain Pipe Size O.D	in (mm)	0.625 (16)

Performance may vary based on the outdoor unit matched to. See compatible outdoor units pages for Performance Data.
For Compatibility See Product Data

Edition Date: 03/2018 Catalog No: SUB40MAQ-36-3-02

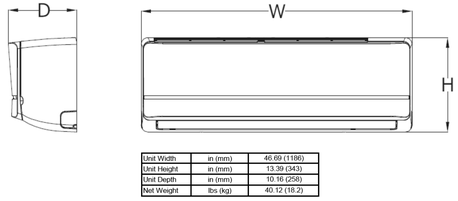
Accessories

53DS-900—118	Condensate Pump (208/230V)
KSACN0101AAA	Wired Remote Control with Timer Function
KSACN0401AAA	Wired Remote Control 7 day Programmable*
KSAIF0301AAA	Wi-Fi™ Kit High Wall Mid-Tier
KSAIC0101230	24V Interface Kit 230V
53DS-900—090	Wireless Remote Control Locking Mount Kit

Note: *KSACN0401AAA Wired Remote Control 7 Day programmable compatible with High Walls Units starting with Serial Number 0216V10001.
**24V Interface compatible with High Walls Units starting with Serial Number 4316V10001.

Construction View

Indoor Model: 40MAQB36B–3



Unit Width	in (mm)	46.69 (1186)
Unit Height	in (mm)	13.39 (343)
Unit Depth	in (mm)	10.16 (258)
Net Weight	lbs (kg)	40.12 (18.2)

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Edition Date: 03/2018 Catalog No: SUB40MAQ-36-3-02

HP–1

Outdoor Unit Single Zone Heat Pump Ductless System

Outdoor Model: 38MAQB36R–3

Submittal Data

Job Data: Location:

Buyer: Buyer P.O. #: Carrier #:

Unit Number: Model Number:

Performance Data Certified By: Date:

STANDARD FEATURES
- Variable Speed (Inverter)
- Factory installed Base Pan Heater
- Factory installed Crankcase Heater
- Low Voltage Controls
- Auto-Restart function
- Condenser High Temp Protection
- Refrigerant Leakage Detection
- Modes: Cool, Heat, Dry, Fan, Auto
- Quiet operation
- Anti-corrosive fin coating

LIMITED WARRANTY*
- 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years

*For residential applications.
See warranty for full details.

NOTE: Images for illustration purposes only. Actual models may be slightly different.

System	Size		36
	Outdoor Model		38MAQB36R–3
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	208/230-1-60
	MCA	A	25
	MOCP - Fuse Rating	A	35
Operating Range	Cooling Outdoor DB Min - Max	°F(°C)	-13–122 (-25–50)
	Heating Outdoor DB Min - Max	°F(°C)	-13–86 (-25–30)
Piping	Total Piping Length	ft (m)	164 (50)
	Piping Lift*	ft (m)	82 (25)
	Pipe Connection Size - Liquid	in (mm)	3/8 (9.52)
	Pipe Connection Size - Suction	in (mm)	5/8 (16)
Refrigerant	Refrigerant Type		R410A
	Metering Device		EEV
	Charge	lbs (kg)	7.50 (3.40)

* Condensing unit above or below indoor unit
For Compatibility See Product Data

Outdoor Coil	Face Area	Sq. Ft.	8.0
	No. Rows		3
	Fins per inch		18
	Circuits		6
Compressor	Type		Rotary Inverter
	Model		ATF250D22UMT
	Oil Type		VG74
	Oil Charge	Fl. Oz.	23.6
	Rated Current	RLA	17.0
Outdoor	Unit Width	in (mm)	37.24 (946)
	Unit Height	in (mm)	31.89 (810)
	Unit Depth	in (mm)	16.14 (410)
	Net Weight	lbs (kg)	147.3 (66.8)
	Airflow	CFM	2,130
	Sound Pressure	dB(A)	60.5

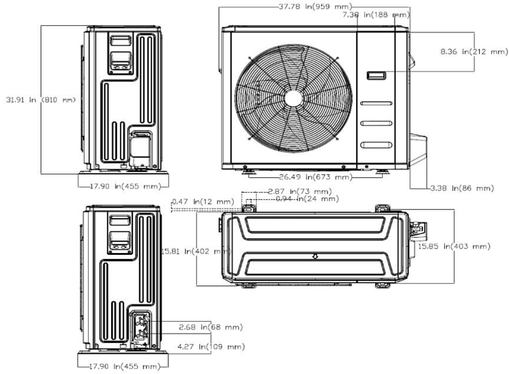
Accessories

RCD# 331831-701	Piping Adaptor Kit, to facilitate piping installation when matched with FMA/FMC/FMU
RCD# 40MD000003	Piping Adaptor Kit, to facilitate piping installation when matched with FV4

Edition Date: 07/2019 Catalog No: 38MAR-36-3-06SB

Construction View

Outdoor Model: 38MAQB36R–3



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Edition Date: 07/2019 Catalog No: 38MAR-36-3-06SB

COMcheck Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Bonchon and Brown
Location: Fort Collins, Colorado
Climate Zone: 5b
Project Type: Addition

Construction Site: Owner/Agent: Designer/Contractor:
THOMAS SEGELHORST
INTEGRATED MEP
320 MAPLE ST #110
FORT COLLINS, Colorado 80521
970-556-0570
FRONT-DESK@INT-MECH.COM

Mechanical Systems List

Quantity System Type & Description

1 MAU-1 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 552 kBtu/h
Proposed Efficiency = 81.00% Et, Required Efficiency: 81.00 % Et
Cooling: 1 each - DX DOAS (Dehumidification), Capacity = 212 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 5.10 ISMRE, Required Efficiency = 4.00 ISMRE
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
Fan System: FAN SYSTEM 1 | MAU-1 -- Compliance (Brake HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Single-Zone VAV, 6075 CFM, 10.0 motor nameplate hp, 5.6 design brake hp (5.6 max. BHP), 1.00 fan energy index

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection:

Thomas Segelhorst - P.E. — Name - Title
Signature
10 Oct 2024 — Date

COLORADO LICENSED — THOMAS M. SEGELHORST — 32190 — PROFESSIONAL ENGINEER
10 Oct 2024

Project Title: Bonchon and Brown Report date: 10/10/24
Data filename: Page 4 of 13

PROJECT NUMBER: 00-000

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DRAWN BY: TMS

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SEAL:

COLORADO LICENSED — THOMAS M. SEGELHORST — 32190 — PROFESSIONAL ENGINEER
10 Oct 2024

HVAC SCHEDULES

DRAWING NUMBER:

H8.11

GENERAL MECHANICAL REQUIREMENTS:

CODES AND PERMITS
WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES, REGULATIONS AND ORDINANCES. PERMITS NECESSARY FOR PERFORMANCE OF WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR.

PRE-BID
FOR EXISTING BUILDINGS, THE BIDDERS SHALL PERFORM A BUILDING AND SPACE SITE VISIT PRIOR TO BID. THE ACT OF SUBMITTING A BID INDICATES THE BIDDER DOES AGREE THEY HAVE A FULL UNDERSTANDING OF THE SCOPE OF WORK INVOLVED WITH THE EXISTING CONDITIONS.

DRAWINGS AND COORDINATION
DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC IN NATURE, AND ARE NOT INTENDED TO BE SCALED FOR EXACT MEASUREMENTS NOR TO SERVE AS SHOP DRAWINGS. CHANGES FROM THE PLANS MADE WITHOUT CONSENT OF THE ENGINEER SHALL RELIEVE THE ENGINEER OF RESPONSIBILITY FOR ALL CONSEQUENCES ARRIVING OUT OF SUCH CHANGES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. WHERE CONDITIONS REQUIRE REASONABLE CHANGES TO THOSE INDICATED ON THE DRAWINGS, MAKE SUCH CHANGES WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE ALL WORK WITH OTHER TRADES.

WARRANTY
WORKMANSHIP, MATERIALS, EQUIPMENT AND PROPER OPERATION SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE FROM THE OWNER. INITIAL ACCEPTANCE OF WORK SHALL NOT WAIVE THIS GUARANTEE. THIS GUARANTEE SHALL NOT INCLUDE NORMAL MAINTENANCE REQUIRED BY THE OWNER AS DESCRIBED IN EQUIPMENT OPERATION AND MAINTENANCE MANUALS.

SUBMITTALS
CONTRACTOR SHALL SUBMIT TO THE ARCHITECT/ENGINEER A PORTABLE DOCUMENT FORMAT "PDF" COPY OF SUBMITTAL BROCHURES FOR REVIEW. PROVIDE INFORMATION ON ALL MAJOR EQUIPMENT AS LISTED ON DRAWING EQUIPMENT SCHEDULES, AS WELL AS VALVES, DUCTWORK ACCESSORIES AND TEMPERATURE CONTROL DIAGRAMS AS APPLICABLE.

OPERATION AND MAINTENANCE MANUALS
CONTRACTOR SHALL FURNISH AT THE COMPLETION OF THE PROJECT A PORTABLE DOCUMENT FORMAT "PDF" COPY OF COMPLETE OPERATION AND MAINTENANCE MANUALS TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO TURNOVER TO OWNER. MANUALS TO BE BOUND AND INCLUDE INSTALLATION INSTRUCTIONS, REPLACEMENT PARTS LISTS AND MAINTENANCE INFORMATION ON ALL EQUIPMENT AS DESCRIBED IN THE SUBMITTALS SECTION. COMPLETED OPERATION AND MAINTENANCE MANUALS ARE TO BE FORWARDED TO THE OWNER WITHIN 90 DAYS AFTER OWNER BUILDING ACCEPTANCE.

PRODUCT SUBSTITUTIONS
MANUFACTURER MODEL NUMBERS LISTED ON THE DRAWINGS AND/OR SPECIFICATIONS ARE TO BE CONSIDERED AS THE BASIS OF DESIGN. WHERE TWO OR MORE ALTERNATE MANUFACTURERS OR MATERIALS ARE LISTED, THE CHOICE OF THESE SHALL BE OPTIONAL WITH THE CONTRACTOR. PRIOR TO THE AWARDING OF THE CONTRACT, CONTRACTOR MAY REQUEST A PROPOSED SUBSTITUTION OF MATERIALS IN WRITING TO THE ARCHITECT/ENGINEER NO LATER THAN SEVEN DAYS PRIOR TO THE RECEIPT OF BIDS. THE COST OF ANY CHANGES REQUIRED BY OTHER TRADES, INCLUDING A/E DESIGN, DUE TO THE USE OF EQUIPMENT AND/OR MATERIALS OTHER THAN THAT OF THE BASIS OF DESIGN SHALL BE PAID BY THE CONTRACTOR.

RECORD DRAWINGS
CONTRACTORS SHALL MAINTAIN A COMPLETE AND ACCURATE SET OF MARKED UP DRAWINGS SHOWING ACTUAL LOCATIONS OF INSTALLED WORK. THESE DRAWINGS ARE TO BE FORWARDED TO THE OWNER AS PART OF THE OPERATION AND MAINTENANCE MANUALS AT THE COMPLETION OF THE PROJECT.

ACCESS DOORS
PROVIDE ALL ACCESS DOORS/PANELS AS REQUIRED FOR ACCESS TO VALVES, DAMPERS, CONTROL DEVICES, FILTERS AND ANY OTHER ITEMS FOR WHICH ACCESS IS REQUIRED FOR EITHER OPERATION OR SERVICING. WHERE ACCESS DOORS ARE TO BE INSTALLED IN ASSEMBLIES REQUIRED TO HAVE A SPECIFIC FIRE RATING, ACCESS DOORS SHALL ALSO BE FIRE RATED.

PIPING AND DUCTWORK SEALANT THROUGH RATED ASSEMBLIES
PENETRATIONS SHALL BE SEALED AS REQUIRED IN ACCORDANCE WITH BUILDING AND MECHANICAL CODES TO RESIST THE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION IN ORDER TO MAINTAIN THE RESISTANCE RATING OF THE CONSTRUCTION BEING PENETRATED.

PROTECTION OF MATERIALS AND EQUIPMENT
CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL WORK, MATERALS, AND EQUIPMENT PROVIDED UNDER THIS SECTION. PIPE OPENINGS SHALL BE CLOSED WITH CAPS OR PLUGS TO PREVENT THE ENTRANCE OF DEBRIS DURING CONSTRUCTION. ALL DUCTWORK OPENINGS SHALL BE SEALED CLOSED DURING CONSTRUCTION.

ALTITUDE
SUPPLIERS SHALL CONFIRM THAT ALL EQUIPMENT BEING FURNISHED IS APPROPRIATE FOR USE AT THE ALTITUDE OF THE SITE.

EQUIPMENT AND PIPING IDENTIFICATION
PROVIDE EQUIPMENT LABELS FOR ALL MAJOR EQUIPMENT, INCLUDING BUT NOT LIMITED TO AIR HANDLING SYSTEMS, FANS, VAV BOXES, CONTROLS, DAMPERS, CONTROL VALVES AND PUMPS. PROVIDE PIPE MARKERS ON CW, HW AND HWC SYSTEMS. LABELS TO BE AT MAXIMUM 8 FEET APART, WITH FLOW DIRECTION INDICATED, AS APPLICABLE. ADDITIONALLY, PROVIDE LABELING ON POTABLE WATER MANIFOLDS INDICATING PLUMBING FIXTURE SERVED BY THE OUTLET, AS APPLICABLE. LABELS SHALL BE AFFIXED OR ADHERED PERMANENTLY TO EQUIPMENT. EQUIPMENT INSTALLED INDOORS TO BE LABELED WITH EMBOSSING TAPE. EQUIPMENT INSTALLED OUTDOORS TO BE LABELED WITH ENGRAVED PLASTIC LAMINATE SIGNS. PIPE MARKERS TO BE SELF-ADHESIVE, MANUFACTURED FOR SUCH PURPOSE.

STARTERS AND DISCONNECTS
EQUIPMENT STARTERS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. EQUIPMENT DISCONNECTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE ON THE DRAWINGS. STARTERS SHALL BE NEMA TYPE, AND SHALL INCLUDE PHASE MONITORING FOR MOTORS 5 HP AND LARGER.

TESTING
TESTING SHALL BE PERFORMED ON THE FOLLOWING SYSTEMS SPECIFIED. ALL SYSTEMS LISTED MAY NOT BE INCLUDED IN PROJECT, REFER TO DRAWINGS FOR APPLICABLE SYSTEMS. SOIL, WASTE AND STORM DRAINAGE PIPING SHALL BE TESTED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL CODES. DOMESTIC WATER PIPING SHALL BE TESTED AND PROVEN WATERTIGHT UNDER A PRESSURE NOT LESS THAN THE WORKING PRESSURE OF THE SYSTEM FOR A 24 HOUR PERIOD. POTABLE WATER PIPING SYSTEM SHALL BE CHLORINATED AND STERILIZED IN ACCORDANCE WITH REQUIREMENTS OF LOCAL JURISDICTION. NATURAL GAS PIPING SHALL BE TESTED WITH AN AIR PRESSURE OF MINIMUM TWO TIMES THE DESIGN SYSTEM PRESSURE, BUT NO LESS THAN 3 PSIG, FOR A PERIOD OF 24 HOURS WITHOUT PRESSURE DROP.

BALANCING
SYSTEM BALANCING SHALL BE PERFORMED BY A CERTIFIED BALANCING CONTRACTOR. BALANCE ALL SYSTEMS INCLUDING AIRFLOW TO AND FROM ALL OPENINGS, AND PUMPED WATER SYSTEMS INCLUDING DOMESTIC WATER RECIRCULATION SYSTEMS AS APPLICABLE. MAKE ANY ADJUSTMENTS NECESSARY TO RESULT IN CONDITIONS INDICATED AND PROVIDE READJUSTMENTS TO ITEMS IN REPORT AS MAY BE REQUESTED BY ARCHITECT/ENGINEER. SUBMIT TWO COPIES OF TEST AND BALANCE REPORT FOR APPROVAL. FAN AND PUMP SYSTEMS TO BE BALANCED WITHIN PLUS OR MINUS 5 PERCENT OF LISTED VALUES. AIR INLETS AND OUTLETS TO BE BALANCED WITHIN PLUS 10 PERCENT OR MINUS 5 PERCENT OF LISTED VALUES. BALANCE REPORT TO INCLUDE:

- UNIT IDENTIFICATION
- MANUFACTURER AND NAMEPLATE DATA
- EQUIPMENT NAMEPLATE AMPERAGE AND ACTUAL AMPERAGE
- RPM (DESIGN AND ACTUAL)
- FAN CFM (DESIGN AND ACTUAL)
- FAN STATIC PRESSURE (DESIGN AND ACTUAL)
- PUMP GPM (DESIGN AND ACTUAL)
- PUMP DISCHARGE AND SUCTION PRESSURE
- REGISTER, GRILLE, DIFFUSER REFERENCE NUMBER AND LOCATION
- INLET/OUTLET CFM (DESIGN AND ACTUAL)
- FLOW DEVICE PRESSURE DROP, CFM OR GPM

A FINAL BALANCING REPORT SHALL BE PROVIDED TO THE OWNER AFTER COMPLETION OF THE PROJECT.

CLEANING
AT THE COMPLETION OF WORK, ALL FIXTURES AND EQUIPMENT SHALL BE THOROUGHLY CLEANED AND DELIVERED IN A CONDITION SATISFACTORY TO THE ARCHITECT. ALL FILTERS SHALL BE REPLACED WITH NEW PRIOR TO OWNER ACCEPTANCE OF THE BUILDING.

OPERATIONS AND MAINTENANCE
AT MECHANICAL TURN OVER, THIS CONTRACTOR SHALL PERFORM A DETAILED OPERATIONAL WALK THROUGH OF ALL SYSTEMS AND EQUIPMENT SHOWN IN THE MECHANICAL DRAWINGS. THE WALK THROUGH SHALL INCLUDE ONE HOUR OF TRAINING AND REQUIRED MAINTENANCE FOR EACH TYPE OF EQUIPMENT AND TWO HOURS FOR THE TEMPERATURE CONTROLS OF THE BUILDING. THE MECHANICAL CONTRACTOR SHALL PROVIDE A SHEET LISTING EACH TYPE OF EQUIPMENT. IT SHALL BE SIGNED, LINE BY LINE, BY THE CLIENT INDICATING THAT THEY HAVE RECEIVED INSTRUCTION ON THE OPERATIONS AND MAINTENANCE OF THE EQUIPMENT. ADDITIONALLY, A CHECK BOX WILL ASK THE CLIENT IF THEY WISH TO HAVE THE MECHANICAL CONTRACTOR PROVIDE A QUOTE FOR MAINTENANCE FOR EACH OF THE ITEMS OR IF THEY WILL TAKE CARE OF IT ON THEIR OWN, WITH THE CLIENT'S INITIALS. A COMPLETED COPY OF THIS FORM SHALL BE INCLUDED IN THE O & M MANUALS AND SUBMITTED TO THE ENGINEER.

GENERAL PLUMBING NOTES

1 THE PLUMBING DESIGN IS BASED ON THE 2021 INTERNATIONAL PLUMBING CODE. PLUMBING WORK SHALL COMPLY WITH ALL APPLICABLE CODES AND LOCAL CODE AMENDMENTS. VERIFY ALL REQUIREMENTS PRIOR TO SUBMITTING BID OR COMMENCING WORK.
2 WASTE AND VENT PIPING BELOW SLAB SHALL BE:
> SCHEDULE 40, DWV, PLASTIC PIPE AND FITTINGS.
3 WASTE AND VENT PIPING ABOVE SLAB (NOT IN RETURN AIR PLENUM) SHALL BE:
> SCHEDULE 40, DWV, PLASTIC PIPE AND FITTINGS.
4 WASTE AND VENT PIPING ABOVE SLAB (IN RETURN AIR PLENUM) SHALL BE SERVICE-WEIGHT, HUB-LESS, CAST IRON. FITTINGS SHALL BE CAST IRON AND CONNECTED USING NO-HUB FASTENERS WITH STAINLESS STEEL WORM CLAMPS.
5 POTABLE WATER PIPING BELOW GRADE SHALL BE TYPE K, SOFT DRAWN, COPPER WITHOUT JOINTS.
6 POTABLE WATER PIPING 2" AND SMALLER SHALL BE PEX-A TUBING MANUFACTURED BY UPONOR/WIRSBO OR APPROVED EQUAL. FITTINGS SHALL BE EXPANSION TYPE WITH SECONDARY EXPANSION RING (NOT CRIMPED). CW SHALL BE RUN IN BLUE PIPE, HW & HWC IN RED, OTHER SYSTEMS CLEAR. PIPING SHALL BE PROPERLY SUPPORTED USING PLENUM RATED GALVANIZED TROUGHS OR CHANNELS HUNG AT MAXIMUM 8' INTERVALS. UNSUPPORTED PEX MAY NOT EXCEED 32".
7 POTABLE WATER PIPING ABOVE GRADE, LARGER THAN 2", SHALL BE TYPE L COPPER WITH SOLDERED COPPER FITTINGS AND NO LEAD SOLDER UNLESS NOTED OTHERWISE.
8 PUSH-TO-CONNECT PLUMBING FITTINGS (I.E. SHARKBITE OR SIMILAR) AND PULLED TEE FITTINGS WILL NOT BE ACCEPTED.
9 POTABLE WATER VALVES SHALL BE FULL PORT, BALL TYPE.
10 GAS PIPE 2" AND SMALLER SHALL BE SCHEDULE 40 BLACK STEEL. FITTINGS SHALL BE MALLEABLE SCREW TYPE. OR COMPRESSION FITTED. VIEGA MEGA PRESS OR APPROVED EQUAL.
11 GAS PIPE 2.5" AND LARGER SHALL BE SCHEDULE 40 BLACK STEEL. FITTINGS SHALL BE EITHER WELDED OR COMPRESSION FITTED. VIEGA MEGA PRESS XL OR APPROVED EQUAL.
12 INSTALL UNION, GAS COCK AND FULL SIZE 6" LONG DIRT LEG FOR ALL GAS FIRED EQUIPMENT.
13 INSTALL FULL SIZE CONDENSATE AND TRAP FOR ALL COOLING COILS. DISCHARGE FULL SIZE DRAIN TO MOP SINK OR LAVATORY P-TRAP TAILPIECE AND TO ROOF FOR ROOFTOP UNITS.
14 FURNISH AND INSTALL WATTS 9DM2 0.75" BACKFLOW PREVENTION DEVICE FOR ICE MACHINES. INSTALL 0.75" DRAIN AND TERMINATE TO FLOOR SINK WITH FULL AIR GAP.
15 FURNISH AND INSTALL WATTS SD-3 LEAD FREE DUAL CHECK BACKFLOW PREVENTION DEVICE WITH AIR GAP FOR CARBONATOR AND SODA SYSTEM.
16 FURNISH AND INSTALL WATTS SD-3 LEAD FREE DUAL CHECK BACKFLOW PREVENTION DEVICE WITH AIR GAP FOR COFFEE URN AND TEA DISPENSERS.
17 REFERENCE KITCHEN DRAWINGS FOR PLUMBING REQUIREMENTS.
18 HANGING, ANCHORING AND SUPPORT OF EQUIPMENT, PIPING AND ACCESSORIES IS DESIGN BUILD BY THE PC. THE SUPPORTS SHALL MEET CODE.
19 ALWAYS INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
20 PRIOR TO BUILDING TURNOVER, THE POTABLE WATER SYSTEM SHALL BE CLEANED AND DISINFECTED PER IPC SECTION 610. THE SYSTEM SHALL BE FLUSHED, CHLORINATED AND PURGED. REPEAT UNTIL THE SYSTEM HAS BEEN PROVEN TO PASS BACTERIAL EXAMINATION. A REPORT SHALL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION.

INSULATION NOTES AND PLUMBING ENERGY CODE

1 THE PLUMBING DESIGN IS BASED ON THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE.
2 COMMERCIAL POTABLE HOT WATER PIPING, ≤ 140 DEG F, SHALL BE INSULATED USING FIBERGLASS INSULATION, WITH ALL SERVICE JACKET, HAVING MAXIMUM 'K' FACTOR OF 0.27. INSULATION THICKNESS SHALL BE:
* 1" FOR 1.5" PIPE AND SMALLER
* 1.5" FOR PIPES LARGER THAN 1.5"
3 COMMERCIAL POTABLE HOT WATER RECIRCULATION PIPING, ≤ 140 DEG F, SHALL BE INSULATED USING FIBERGLASS INSULATION, WITH ALL SERVICE JACKET, HAVING MAXIMUM 'K' FACTOR OF 0.27. INSULATION THICKNESS SHALL BE:
* 1" FOR 1.5" PIPE AND SMALLER
* 1.5" FOR PIPES LARGER THAN 1.5"
4 COMMERCIAL POTABLE COLD WATER PIPING SHALL BE INSULATED USING FIBERGLASS INSULATION WITH ALL SERVICE JACKET HAVING MAXIMUM 'K' FACTOR OF 0.27. INSULATION THICKNESS SHALL BE 0.5". DO NOT REMOVE THIS ITEM FROM THE PROJECT AS IT IS REQUIRED FOR CONDENSATE CONTROL.

PLUMBING LEGEND:

CW	COLD WATER PIPING		BALL VALVE
HW	HOT WATER PIPING		GATE VALVE
HWC	HOT WATER CIRC PIPING		GAS COCK
TW	TEMPERED WATER PIPING		PRESS. RED. VALVE
140	140° WATER PIPING		T & P RELIEF VALVE
180	180° WATER PIPING		SOLENOID VALVE
V	VENT PIPING		BALANCE VALVE
W	WASTE PIPING		CHECK VALVE
GW	GREASE WASTE PIPING		UNION
SOW	SAND/OIL WASTE PIPING		PIPE CAP
RD	ROOF DRAIN PIPING		PIPE CONTINUATION
ORD	OVERFLOW ROOF DRAIN		ROOF DRAIN
CD	CONDENSATE PIPING		FLOOR/GRADE CLEANOUT
G	NATURAL GAS PIPING		FLOOR DRAIN/SINK
F	FIRE PIPING		WALL CLEANOUT
LP	PROPANE PIPING		PIPE ON THIS LEVEL (SOLID)
VAC	VACUUM PIPING		PIPE ABOVE/BELOW THIS LEVEL (DASHED)
CA	COMPRESSED AIR PIPING		PIPE TO BE REMOVED
	PIPE ELBOW DOWN	I.E.	INVERT ELEVATION
	PIPE ELBOW UP	(N)	NEW
	PIPE TEE UP	(E)	EXISTING
	PIPE TEE DOWN	(R)	RELOCATE

PLUMBING DRAWING INDEX

PROJECT NUMBER: 00-000

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
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1	DESIGN DEVELOPMENT	20 SEPT 2024
2	PERMIT SET	11 OCT 2024
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Revisions

No.	Description	Date

DRAWN BY: TMS
CHECKED BY: TMS
SEAL:

COLORADO LICENSED THOMAS M. SEGELHORST 31190 PROFESSIONAL ENGINEER
10 Oct 2024

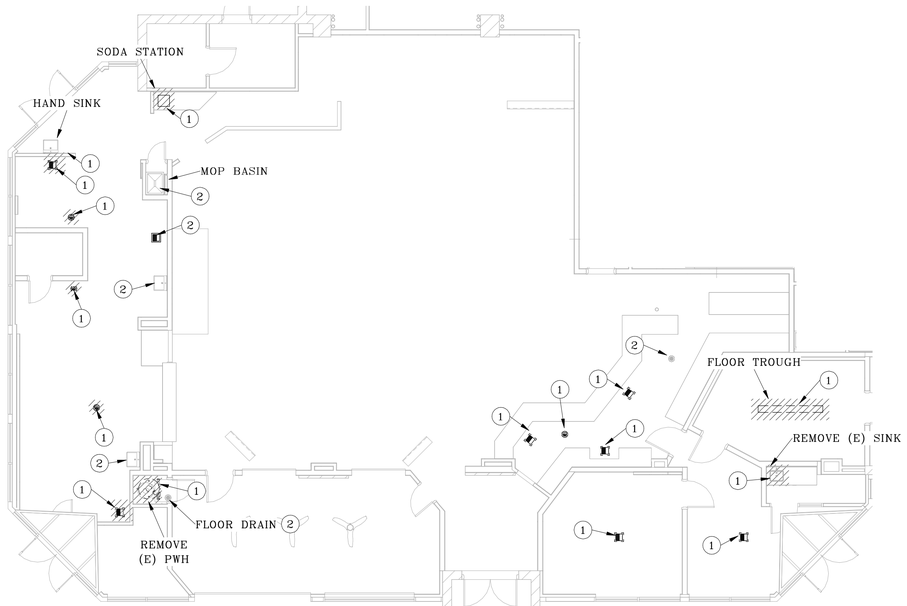
PLUMBING NOTES, LEGEND, INDEX

DRAWING NUMBER:
P0.1

FLAG NOTES:

1 DEMO EXISTING FIXTURE. CAP REMAINING PIPING BELOW FLOOR AND WALL AS NEEDED.

2 EXISTING PLUMBING FIXTURE TO REMAIN.



PLUMBING DEMO PLAN

1/8" = 1'-0"

0" 1" 2"

PROJECT NUMBER: 00-000

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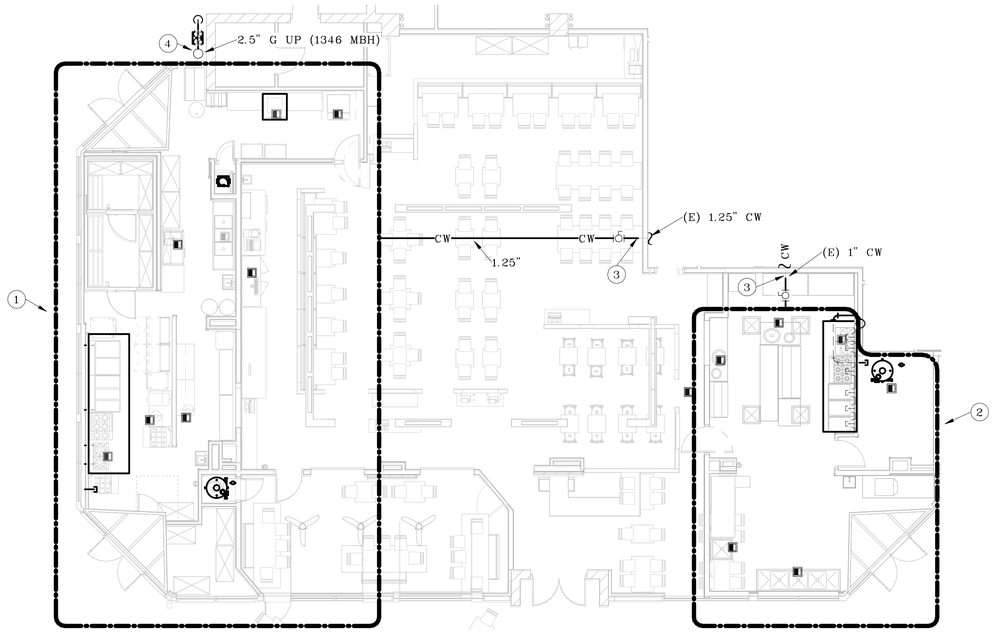
PLUMBING DEMO PLAN

DRAWING NUMBER:

P1.1

THE EXISTING POTABALE WATER PIPING HAS BEEN DAMAGED DURING PREVIOUS REMODELS AND IS CONSIDERED UNRELIABLE. IT ALSO IS NOT SIZED FOR THE NEW EQUIPMENT LAYOUT. DEMO ALL EXISTING POTABLE WATER SYSTEMS AND PROVIDE NEW AS SHOWN.



PLUMBING FLOOR PLAN

1/8" = 1'-0"

0" 1" 2"

FLAG NOTES:

1 SEE "NORTH KITCHEN PLUMBING PLAN" SHEET P3.1.
2 SEE "SOUTH KITCHEN PLUMBING PLAN" SHEET P3.1.
3 CONNECT NEW TO EXISTING.
4 EXISTING GAS PIPING SYSTEMS TO REMAIN. RUN NEW 2.5" G DIRECTLY OFF GAS HEADER.

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THOMAS M. SEGELHORST
32190
PROFESSIONAL ENGINEER

10 Oct 2024

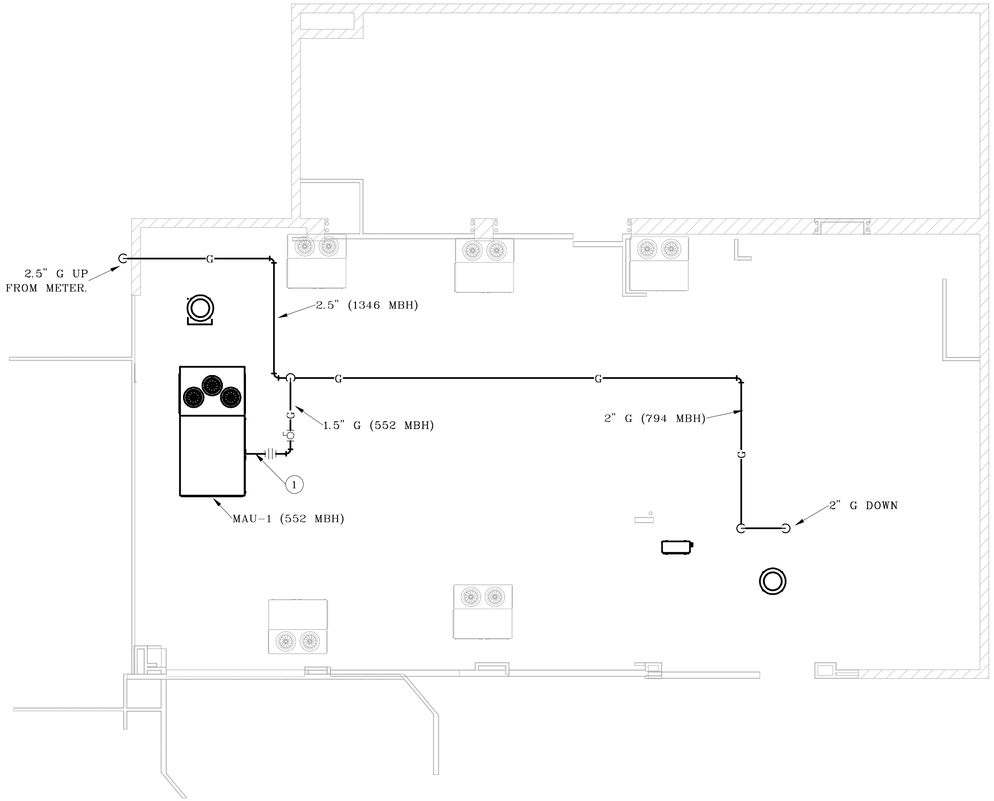
PLUMBING FLOOR PLAN

DRAWING NUMBER:

P2.1

FLAG NOTES:

1 CONNECT TO EQUIPMENT USING GAS VALVE, UNION AND 6" DIRT LEG.



PLUMBING ROOF PLAN

1/8" = 1'-0"

0 1" 2"

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PROJECT NUMBER: 00-000

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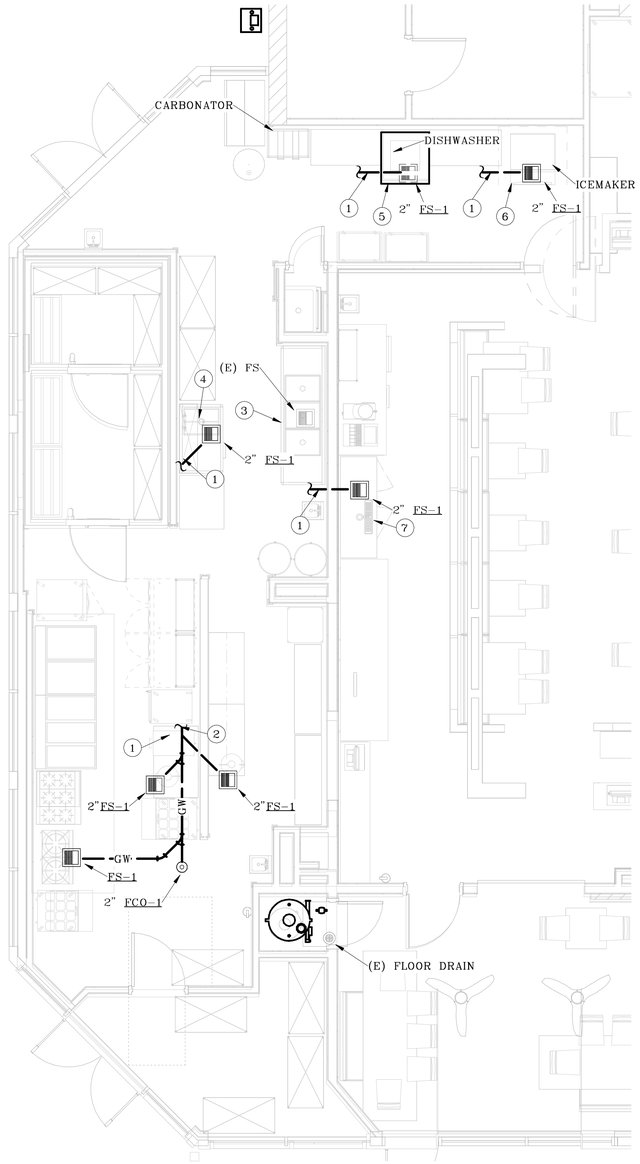
PLUMBING ROOF PLAN

DRAWING NUMBER:

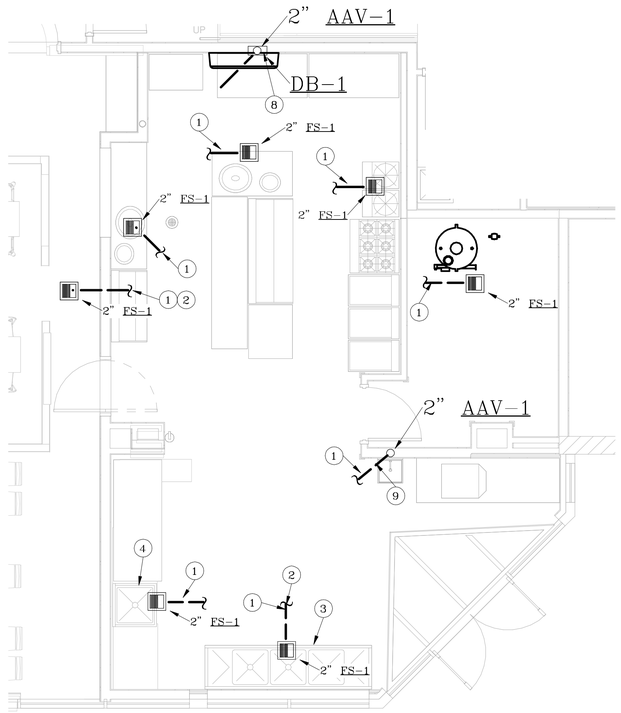
P2.2



NORTH KITCHEN W & V PLAN

1/4" = 1'-0"

0" 1" 2"



SOUTH KITCHEN W & V PLAN

1/4" = 1'-0"

0" 1" 2"

FLAG NOTES:

1 TIE NEW DRAIN INTO THE EXISTING WASTE SYSTEM. VERIFY CONNECTION LOCATION PRIOR TO ANY WORK. FLOOR SAW-CUT AND PATCH BY OTHERS.

2 PRIOR TO ANY NEW WORK THE ENTIRE EXISTING WASTE SYSTEM SHALL TRACED AND VIDEOED FOR DAMAGE AND ROUTING. CONFIRM THE KITCHEN DRAINS CONNECT TO EXISTING GREASE WASTE SYSTEM.

3 SEE "3-COMP SINK PIPING DETAIL", SHEET P7.1.

4 SEE "1-COMP SINK PIPING DETAIL", SHEET P7.1.

5 DISHWASHER SHALL BE LOW TEMPERATURE TYPE. PIPE WASTE DOWN TO FLOOR SINK. DISCHARGE 2" ABOVE SINK RIM. DISHWASHER SHALL NOT DISCHARGE WASTE TEMPERATURES HIGHER THAN 140 DEG F.

6 RUN DRAIN FROM ICEMAKER. PIPE WASTE DOWN TO FLOOR SINK. DISCHARGE 2" ABOVE SINK RIM.

7 RUN DRAIN FROM BAR STATION. PIPE WASTE DOWN TO FLOOR SINK. DISCHARGE 2" ABOVE SINK RIM.

8 RUN 2" W FROM DRAIN BOX WITH P-TRAP. CONTINUE DOWN WALL AND TIE INTO WASTE SYSTEM.

9 RUN 2" W FROM HAND SINK WITH P-TRAP. CONTINUE DOWN WALL AND TIE INTO WASTE SYSTEM.

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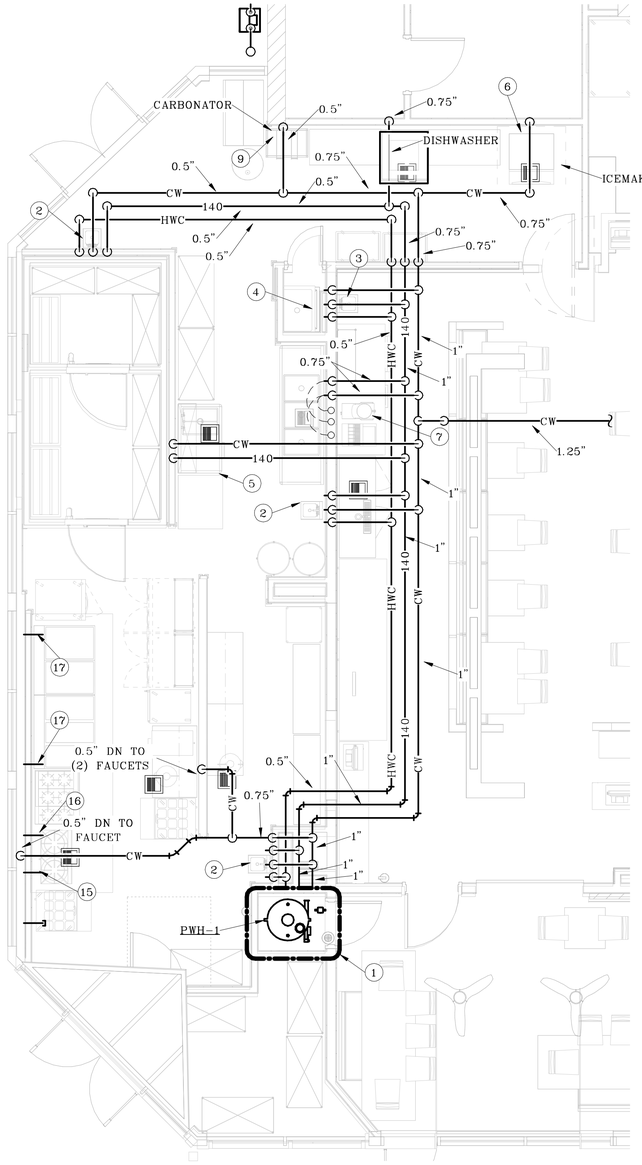
PLUMBING ENLARGED PLANS W & V

DRAWING NUMBER:

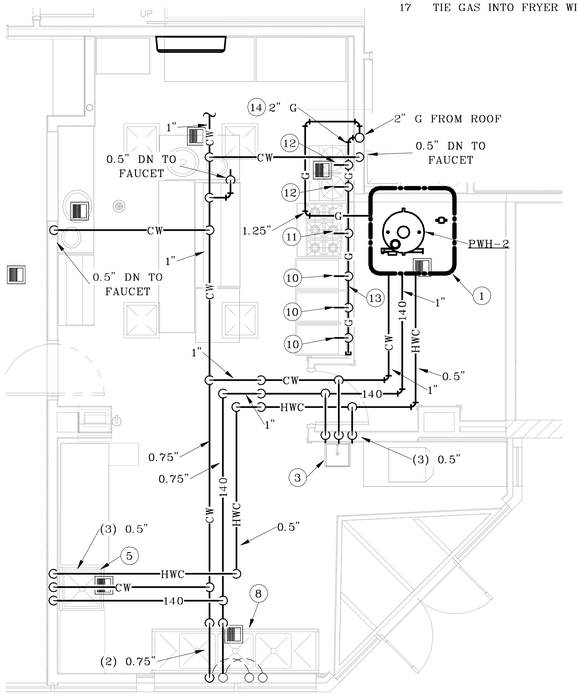
P3.1



NORTH KITCHEN WATER PLAN

1/4" = 1'-0"

0" 1" 2"



SOUTH KITCHEN WATER PLAN

1/4" = 1'-0"

0" 1" 2"

FLAG NOTES:

1 SEE "POTABLE WATER HEATER DETAIL", SHEET P7.1.
2 EXISTING HAND SINK TO BE REUSED, BUT SHALL BE REPIPED. SEE "LAVATORY PIPING DETAIL", SHEET P7.1. PROVIDE WITH NEW TMV-1.
3 NEW HAND SINK PROVIDED BY KITCHEN EQUIPMENT PROVIDER. SEE "LAVATORY PIPING DETAIL", SHEET P7.1. PROVIDE WITH NEW TMV-1.
4 RECONNECT PIPING TO MOP SINK FAUCET.
5 NEW SINK PROVIDED BY KITCHEN EQUIPMENT SUPPLIER.
6 PIPE ICE MAKER WITH BACKFLOW PREVENTOR AS NOTED IN PLUMBING GENERAL NOTES.
7 PIPE COFFEE MAKER WITH BACKFLOW PREVENTOR AS NOTED IN PLUMBING GENERAL NOTES.
8 SEE "3-COMP SINK PIPING DETAIL", SHEET P7.1.
9 PIPE CARBONATOR WITH BACKFLOW PREVENTOR AS NOTED IN PLUMBING GENERAL NOTES.
10 1" G TO FRYER, 90 MBH, WITH GAS VALVE AND FLEX CONNECTOR (NOT SHOWN).
11 1.25" G TO 6 BURNER STOVE, 210 MBH, WITH GAS VALVE AND FLEX CONNECTOR (NOT SHOWN).
12 1" G TO STOCK RANGE, 80 MBH, WITH GAS VALVE AND FLEX CONNECTOR (NOT SHOWN).
13 ALL GAS PIPING AND FITTING SHALL BE CONCEALED WITHIN WALL. ONLY THE BRANCH TO EACH INDIVIDUAL APPLIANCE MAY BE EXPOSED. THE BRANCH SHALL CONTAIN AN INDIVIDUAL SHUT-OFF VALVE. THE ENTIRE HEADER SHALL BE 2" AT 595 MBH.
14 PROVIDE AND INSTALL EMERGENCY GAS SHUT-OFF VALVE ON GAS HEADER (NOT SHOWN).
15 TIE GAS INTO STOCK POT RANGE WITH GAS VALVE, TYP (2).
16 TIE GAS INTO 6 BURNER RANGE WITH GAS VALVE.
17 TIE GAS INTO FRYER WITH GAS VALVE.

PROJECT NUMBER: 00-000

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
FORT COLLINS, CO 80524

VFLA
VAUGHT FRYE LARSON architects

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ph: 970.224.1191 www.vfla.com

IN ASSOCIATION WITH:

INTEGRATED MEP
320 MAPLE ST, SUITE 110
FORT COLLINS, CO 80521
970-556-0570

PERMIT SET

Issued

No.	Description	Date
1	DESIGN DEVELOPMENT	20 SEPT 2024
2	PERMIT SET	11 OCT 2024
3		
4		
5		
6		

Revisions

No.	Description	Date

DRAWN BY: TMS

CHECKED BY: TMS

SEAL:

COLORADO LICENSED THOMAS M. SEGERSTROM 32190 PROFESSIONAL ENGINEER

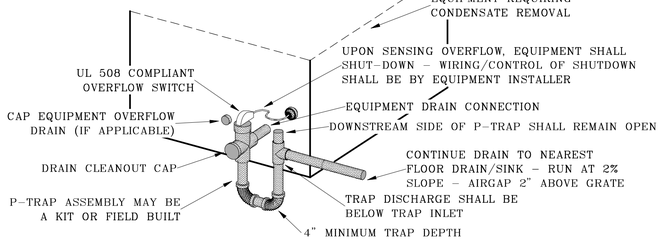
10 Oct 2024

PLUMBING ENLARGED PLANS WATER

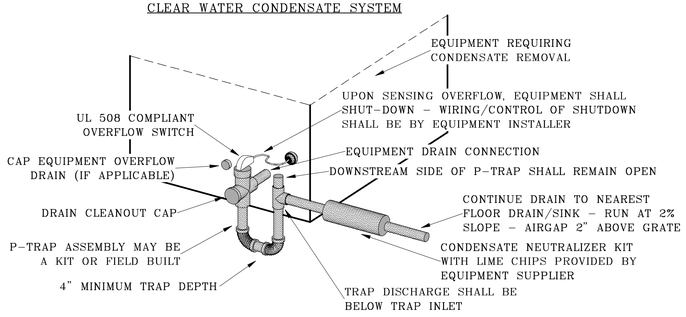
DRAWING NUMBER:

P3.2

NOTE:
- ONLY RIGID PVC OR CPVC DWV IS ACCEPTABLE FOR DRAINAGE PIPING. IF SYSTEM IS WITHIN A PLENUM THEN USE TYPE M COPPER AND FITTINGS.
- FLEXIBLE PIPE IS NOT PERMITTED
- DO NOT ADD ANY ADDITIONAL TRAPS IN THE CONDENSATE LINE OTHER THAN THE ONE INDICATED IN THIS DETAIL



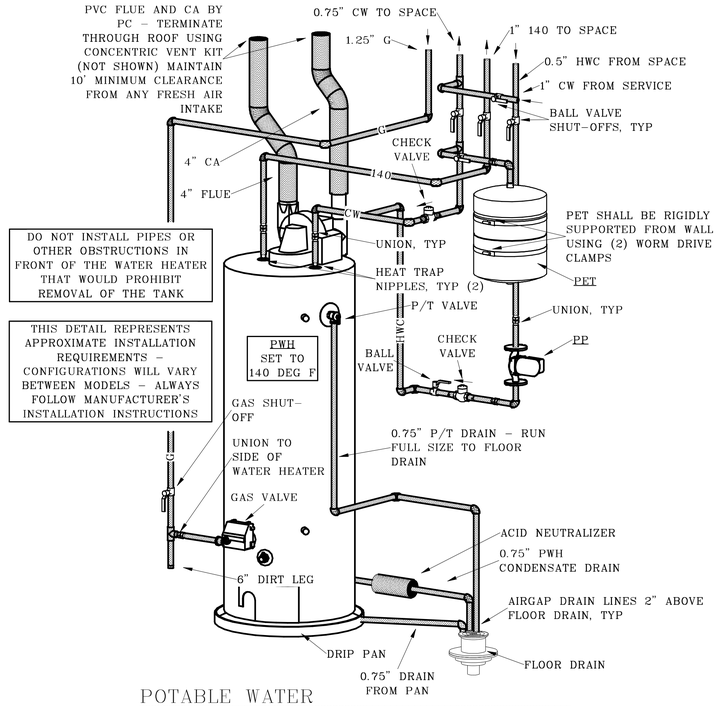
CLEAR WATER CONDENSATE SYSTEM



FLUE GAS CONDENSATE SYSTEM

CONDENSATE DRAIN DETAIL

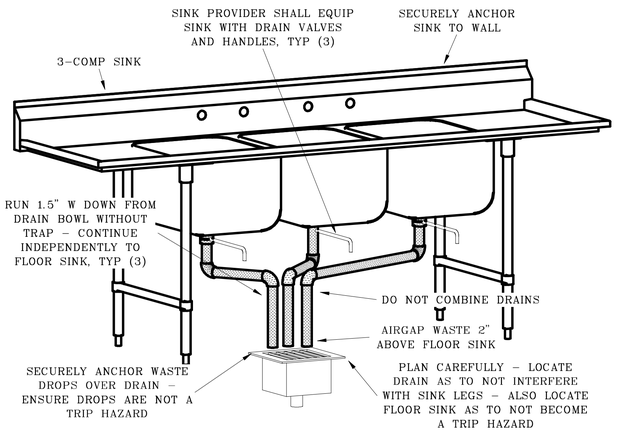
SCALE: N/A



POTABLE WATER HEATER DETAIL

SCALE: N/A

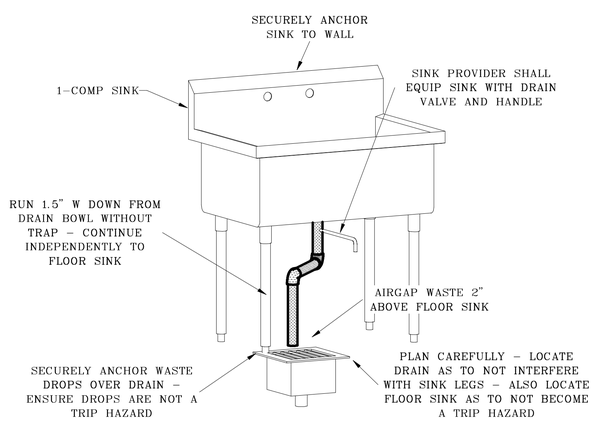
DETAIL REPRESENTS APPROXIMATE REQUIREMENTS – SLIGHT FIELD MODIFICATIONS MAY BE REQUIRED



3-COMP SINK PIPING DETAIL

SCALE: N/A

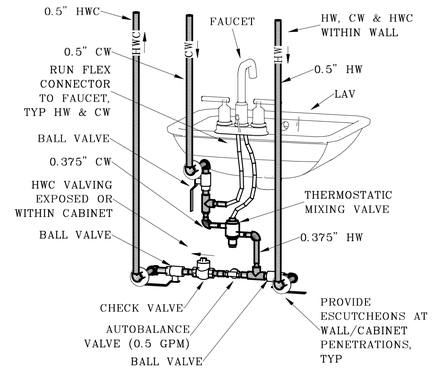
DETAIL REPRESENTS APPROXIMATE REQUIREMENTS – SLIGHT FIELD MODIFICATIONS MAY BE REQUIRED



1-COMP SINK PIPING DETAIL

SCALE: N/A

DETAIL REPRESENTS APPROXIMATE REQUIREMENTS – SLIGHT FIELD MODIFICATIONS MAY BE REQUIRED – LAVATORY/FAUCET TYPE MAY VARY



LAVATORY PIPING DETAIL

SCALE: N/A

PROJECT NUMBER: 00-000

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COLORADO LICENSED THOMAS M. SEGELHORST 37190 PROFESSIONAL ENGINEER

10 Oct 2024

PLUMBING DETAILS

DRAWING NUMBER:

P7.1

PLUMBING FIXTURE SCHEDULE

FIXTURE TAG	FIXTURE SPECIFICATIONS
AAV–1	AIR ADMITTANCE VALVE – STUDOR MINI VENT 20301 ONLY (NO ALTERNATES ALLOWED), PVC, WITH SCREEN, LIFETIME WARRANTY – SEE PLAN FOR PIPE SIZE
DB–1	DRAIN BOX – OATEY MODA DRAIN BOX, 2" DRAIN, NO WATER VALVES, 1.25" TRIMPLATE, 2" AAV SURE–VENT ADAPTER, SOLID FACEPLATE – CONFIRM PIPE MATERIAL CONNECTION TYPE
FCO–1	FLOOR CLEANOUT – ZURN CO–2449, ADJUSTABLE HEIGHT PVC RISER, NICKEL BRONZE FRAME AND COVER, PVC BODY – SEE PLAN FOR SIZE
FD–1	FLOOR DRAIN •DRAIN – ZURN EZ1–PV, PVC DRAIN BODY, MEMBRANE CLAMP/ FLASHING COLLAR, SEEPAGE SLOTS, 5" DIAMETER NICKEL BRONZE STRAINER, ADJUSTABLE HEAD HEIGHT, CONCRETE SHIELD •TRAP SEAL PROSET OR SURE SEAL ELASTOMERIC SELF CLOSING TRAP SEAL – SEE PLAN FOR DRAIN SIZE
FS–1	FLOOR SINK •DRAIN – ZURN FD2375–H, CAST IRON BODY, ACID RESISTING PORCELAIN ENAMELED INTERIOR, SEDIMENT BUCKET, 1/2 GRATE – SEE PLAN FOR PIPE SIZE •TRAP SEAL PROSET OR SURE SEAL ELASTOMERIC SELF CLOSING TRAP SEAL – SEE PLAN FOR DRAIN SIZE
PET–1	POTABLE EXPANSION TANK – WATTS PLT–12, IN LINE, 4.5 GALLON TOTAL, 2.8 GALLON ACCEPTANCE, NSF APPROVED
PP–1	POTABLE PUMP ▯ GRUNDFOS ALPHA1 , 4 GPM 14 FEET HEAD, 45 W, 115/60/1 PHASE, 1.5" CONNECTIONS, STAINLESS STEEL PUMP HOUSING, COMPOSITE IMPELLER, ECM MOTOR, POTABLE USE RATED – CONTROLLED BY INTERNAL PROPORTIONAL PRESSURE CONTROL, CONSTANT PRESSURE CONTROL
TMV–1	THERMOSTATIC MIXING VALVE – LEONARD 170A–LF, 0.375" INLET AND OUTLETS, MIN 0.25 GPM, MAX 4 GPM FLOW AT 20 PSI PRESSURE DROP, BRASS BODY CONSTRUCTION, FIELD TEMPERATURE ADJUSTABILITY, CHECK STOPS, SET FOR 110° F DISCHARGE TEMPERATURE, ASSE 1070
WCO–1	WALL CLEANOUT – ZURN Z–1469 COVER PLATE, POLISHED 304 STAINLESS STEEL, PVC PIPE CLEANOUT – SEE PLAN FOR PIPE SIZE

PIPE SUPPORT SCHEDULE

PIPING MATERIAL	MAX HORIZ SPACING	MAX VERT SPACING
ABS PLASTIC ≤ 2"	4 FEET	5 FEET
ABS PLASTIC > 2"	4 FEET	10 FEET
ALUMINUM COMPRESSED AIR	8 FEET	10 FEET
CAST–IRON < 10 FOOT SEGMENTS	5 FEET	15 FEET
CAST–IRON 10 FOOT SEGMENTS	10 FEET	15 FEET
CPVC ≤ 1"	3 FEET	5 FEET
CPVC > 1" AND ≤ 2"	4 FEET	5 FEET
CPVC > 2"	4 FEET	10 FEET
COPPER ≤ 1.25"	6 FEET	10 FEET
COPPER > 1.25"	10 FEET	10 FEET
PEX ≤ 2"	32 INCHES	5 FEET
PEX > 2"	32 INCHES	10 FEET
PVC ≤ 2"	4 FEET	5 FEET
PVC > 2"	4 FEET	10 FEET
STEEL	12 FEET	15 FEET

A. O. Smith | Commercial Gas Water Heaters

CYCLONE® Mxi MODULATING

MODULATING BURNER ADVANCES THE CYCLONE TO HIGHER LEVELS OF EFFICIENCY

The full line of A. O. Smith Cyclone Mxi condensing water heaters has been designed to provide years of dependable service and feature industry leading technology. Models are available from 120,000 to 500,000 Btu/h and all deliver thermal efficiencies of 95% and higher. The unique helical coil heat exchanger limits weld joints for optimal service life while maximizing heat transfer.

Cyclone is the industry leader in high efficiency commercial water heating. The current Mxi modulating models adjust firing rate to the specific demand further increasing efficiency and money savings.

INTELLIGENT CONTROL SYSTEM WITH TOUCH SCREEN DISPLAY AND ICOMM CONNECTIVETY ONBOARD*

- Exclusive A. O. Smith designed color touch display control system
- Provides detailed water heater status information
- Precise temperature control adjustable from 90 to 180 degrees
- Built-in diagnostics
- Run history information
- *Cyclone Mxi models manufactured March 1, 2018 to present come standard with iCOMM Wi-Fi connectivety onboard. Remotely monitor and adjust the water heater via the A. O. Smith app. No charge connectivety using Wi-Fi or Ethernet connection.
- Intelligent Demand Response (IDR) feature senses large water draws and automatically adjusts the differential setpoint. This feature increases the hot water available when it is needed the most.

SUBMERGED COMBUSTION CHAMBER, WITH HELICAL HEAT EXCHANGER COIL

- Positioned in center of tank, surrounded by water to virtually eliminate radiant heat loss from chamber
- Direct spark ignition
- Spiral heat exchanger keeps hot burner gases swirling, uses centrifugal force to maximize efficiency of heat transfer to water in tank
- Spiral heat exchanger reduces lime scale from forming on water-side surfaces, which maintains energy efficiency over time

POWERED ANODES STANDARD ON ALL MODELS

- Provides long-lasting tank protection in varying water conditions
- Powered anodes are non-sacrificial
- Automatically adjusts output needed to properly protect the tank

PERMAGLAS® ULTRA COAT™ GLASS LINING

- Glass coating is applied using a liquid slush coating technique to ensure uniform coating
- Heat exchanger coil is glassed both externally and internally for optimum protection

MECHANICAL VENTING VERSATILITY

- Conventional power venting or direct venting
- Vents vertically or through a sidewall
- Front located exhaust and condensate connections allow for easy install and access
- Vents with low cost PVC Schedule 40 intake and exhaust pipe. Approved for optional CPVC Schedule 40, Polypropylene and AL29-4C stainless steel vent materials
- Direct-vent intake and exhaust pipe can terminate separately outside building or through single opening, using concentric vent assembly
- Canadian installations require ULC S636 PVC/ CPVC, ULC S636 Polypropylene and AL29-4C stainless steel pipe for intake and exhaust

HIGH EFFICIENCY MODULATING PRE-MIX POWERED BURNER

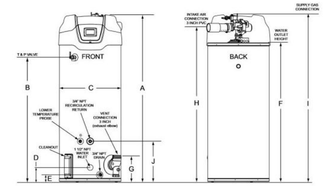
- Down-fired pre-mix burner provides optimum efficiency and quiet operation
- Top-mounted burner position prevents condensation from affecting burner operation

3-YEAR LIMITED TANK / 1-YEAR LIMITED PARTS WARRANTY

- For complete warranty information, consult written warranty or go to hotwater.com

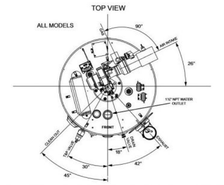
BTH-120(A) THROUGH BTH-500(A) MODEL SHOWN: BTH-199(A) SERIES 300/301

BTH 120-250



VENT REQUIREMENTS FOR BTH

Number of 90° Elbows Installed	4 Inch Pipe Maximum Feet (Meters)
One (1)	115 feet (35 meters)
Two (2)	110 feet (33.5 meters)
Three (3)	105 feet (32 meters)
Four (4)	100 feet (30.5 meters)
Five (5)	95 feet (29 meters)
Six (6)	90 feet (27.4 meters)



* Center line of water outlet on top of the water heaters is approximately 7 inches from the front edge of the water heater

Model Number	Approx. Capacity		Dimensions A	B	C	D	E	F	G	H	I	J	lb/kg	Approx. Shipping Weight Std	Approx. Shipping Weight ASME
BTH-199(A)	Gallons	100	76 1/2	56 3/8	27 3/4	6 5/16	3	64	11 1/4	70	75 1/2	18 1/4	lb	523	553
	Liters	379	194.9	143.2	70.5	16	7.62	162.6	28.6	177.8	191.8	46.36	kg	237	251

Electrical characteristics-120V-60Hz A.C., 5.0 A
"A" in model represents ASME construction
Propane gas models available
Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

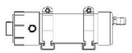
RECOVERY CAPACITY

Model Number	Type of Gas	Input BTU/HR	Input kW	Thermal Efficiency
BTH-199(A)	Natural/Propane	199,900	58	97%

Model Number	Approx. Capacity		U.S. GALLONS/HR AND LITRES/HR AT TEMPERATURE RISE INDICTATED °F	30°F	40°F	50°F	60°F	70°F	80°F	90°F	100°F	110°F	120°F	130°F	140°F
			°C	17°C	22°C	28°C	33°C	39°C	44°C	50°C	56°C	61°C	67°C	72°C	78°C
BTH-199(A)	100 U.S. Gals.	GPH	783	588	470	392	336	294	261	235	214	196	181	168
	379 Litres	LPH	2965	2224	1779	1483	1271	1112	988	890	809	741	684	635

OPTIONAL KITS (REQUIRED)

OPTIONAL CONCENTRIC VENT KITS
- BTH-120 - 250 vent kit p/n 100111100



OPTIONAL CONDENSATE NEUTRALIZATION KITS
- BTH-120-300 kit p/n 100289339

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PLUMBING SCHEDULES

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P8.1

ELECTRICAL LEGEND

OUTLETS

- DUPLEX RECEPTACLE (120 V)
- DUPLEX RECPT. ON EMERG. SYSTEM
- DEDICATED DUPLEX RECEPT. (120V)
- WEATHERPROOF RECEPTACLE
- GROUND FAULT RECEPTACLE
- ISOLATED GROUND RECEPTACLE
- DRINKING FOUNTAIN
- RECEPT. FURNISHED WITH KITCHEN EQUIP. SAFETY-TYPE DUPLEX OUTLET
- SWITCHED RECEPTACLE
- HALF SWITCHED RECEPTACLE
- DOUBLE DUPLEX RECEPTACLE
- FLUSH FLOOR RECEPTACLE, DUPLEX
- SPECIAL EQUIPMENT RECEPTACLE
- LOCKING RECEPTACLE
- RECEPT. FURNISHED WITH KITCHEN EQUIP. TELEPHONE OUTLET
- TELEPHONE OUTLET (W=WALL)
- COM/DATA OUTLET
- FLUSH FLOOR COM/DATA OUTLET
- TELEPOWER POLE (T=telephone, P=power, C=computer)
- JUNCTION BOX
- JUNCTION BOX (FLOOR)
- JUNCTION BOX (CEILING)
- JUNCTION BOX FURNISHED WITH KITCHEN EQUIPMENT
- WALL JUNCTION BOX
- PULL (JUNCTION) BOX
- UNDERFLOOR JUNCTION BOX
- TELEVISION OUTLET

FIRE ALARM-REFER TO FIRE ALARM SYSTEMS

- FACP — FIRE ALARM CONTROL PANEL
- FSA — FIRE SYSTEM ANNUNCTATOR (3-LCDANN)
- FAT — FIRE ALARM TRANSPONDER OR TRANSMITTER
- FAP — FIRE ALARM GRAPHIC PLAQUE
- ESS — ELEVATOR STATUS/RECALL
- FPI — FIRE PUMP STATUS INDICATOR
- FAC — FIRE ALARM COMMUNICATOR
- EGS — EMERGENCY GENERATOR STATUS
- HCP — CONTROL PANEL FOR HVAC- EXHAUST STAIRWELL PRESSURIZATION OR SIMILAR EQUIPMENT
- PULL STATION XXX= DENOTES DETECTORS ADDRESS
- FIRE SERVICE OR EMERGENCY TELEPHONE JACK
- HEAT DETECTOR (THERMAL DETECTOR) R/F=RATE OF RISE AND FIXED TEMPERATURE XXX= DENOTES DETECTORS ADDRESS
- SMOKE DECTOR P/I=COMBINATION PHOTELECTRIC/ IONIZATION XXX= DENOTES DETECTORS ADDRESS
- SOUNDER BASE
- SMOKE DETECTOR W/ RELAY BASE
- SMOKE DUCT DETECTOR/SWITCH XXX= DENOTES DETECTORS ADDRESS
- FLOW DETECTOR SWITCH XXX= DENOTES DETECTORS ADDRESS
- VALVE WITH TAMPER DETECTOR/SWITCH XXX= DENOTES DETECTORS ADDRESS
- SPEAKER ONLY
- STROBE ONLY DEVICE (INTERGRITY SERIES) XX= CANDELA RATING OF STROBE DEVICE
- COMBO. SPEAKER STROBE XX= CANDELA RATING OF STROBE DEVICE
- DOOR HOLDER
- SMOKE DAMPER
- COMBINATION FIRE/SMOKE DAMPER
- FAN (ARROW INDICATED DIRECTION OF FLOW)
- FIRE DEPARTMETN ACCESS POINT
- FIRE DEPARTMENT KEY BOX
- ROOF ACCESS
- FIRE ALARM ANNUNCIATOR PANEL
- FIRE ALARM RESET PANEL
- FIRE ALARM COMMUNICATION PANEL
- SMOKE CONTROL AND PRESSURATION PANEL
- SPRINKLER SYSTEM WATER FLOW BELL
- SMOKE VENT
- ELECTRIC SHUT OFF
- DOMESTIC WATER SHUT OFF
- GAS SHUT OFF
- AIR CONDITIONG EQUIPMENT ROOM
- ELECATOR EQUIPMENT ROOM
- EMERGENCY GENERATOR ROOM
- FIRE PUMP ROOM
- TELEPHONE EQUIPMENT ROOM
- BOILER ROOM
- ELECTRICAL/TRANSFORMER ROOM

CONTROL

- THERMOSTAT (line voltage U.O.N. furnished by DIV. 15 U.O.N.)
- HUMIDISTAT (line voltage U.O.N. furnished by DIV. 15 U.O.N.)
- PHOTOCELL (voltage as required)
- TIME CLOCK (24 hour U.O.N.)
- PUSHBUTTON STATION (number of buttons indicated)
- LIGHTING CONTACTOR
- IRRIGATION CONTROLLER (120 volt 50va connection by /C)

FIXTURES

- SURFACE FLUOR. FIXTURE W/BOX
- RECESSED FLUORCENT FIXTURE
- FLUORECENT STRIP FIXTURE
- WALL/UNDER CABINET FIXTURE
- NIGHT LIGHT (on 24 hours)
- FIXTURE ON EMERGENCY CIRCUIT
- RECESSED DOWNLIGHT
- KEYLESS LAMPHOLDER
- EXIT FIXTURE (arrows indicate directional arrows)
- INCANDESCENT CEILING MOUNTED
- TRACK LIGHT
- TRACK LIGHT FIXTURE
- POLE MTD. FIXTURE
- POLE TOP MTD. FIXTURE
- WALL MTD. FIXTURE
- H.I.D. CEILING FIXTURE
- EMERGENCY EGRESS LIGHT (number of heads shown)

SWITCHES

- EXISTING SINGLE-POLE SWITCH
- EXISTING THREE-WAY SWITCH
- SINGLE-POLE SWITCH
- DOUBLE-POLE SWITCH
- THREE-WAY SWITCH
- FOUR-WAY SWITCH
- SWITCH WITH PILOT LIGHT
- COMB. SWITCH/DUPLEX RECEPTACLE
- LOW-VOLTAGE SWITCH
- LOCKING SWITCH
- DIMMER SWITCH
- KEY SWITCH
- WEATHERPROOF SWITCH
- TIME SWITCH
- OCCUPANCY SENSOR
- LIGHT SENSOR

DESIGNATIONS

- REVISION NOTE
- REFERENCE NOTE
- FEEDER NUMBER
- KITCHEN EQUIPMENT FLAG NOTE
- MEDICAL EQUIPMENT FLAG NOTE
- UON — UNLESS OTHERWISE NOTED
- C — COMPUTER DESIGNATED OUTLET
- WP — DEVICE DESIGNATED WEATHER PROOF
- AC — DEVICE ABOVE COUNTER
- CLG — DEVICE IN CEILING
- FLR — DEVICE IN FLOOR
- AFF — ABOVE FINISHED FLOOR

MECHANICAL

- MOTOR AND CONNECTION, HP SHOWN
- CEILING EXHAUST FAN
- WALL TYPE EXHAUST FAN, HP SHOWN
- PIPE HEAT TRACING
- ELECTRIC UNIT HEATER
- ELECTRIC BASEBOARD HEATER
- ELECTRIC CABINET HEATER
- WATER HEATER
- PADDLE FAN

SERVICE and EQUIPMENT

- DISTRIBUTION TYPE PANELBOARD
- TRANSFORMER, PAD MOUNTED
- TRANSFORMER, DRY (KVA shown)
- DISCONNECT SWITCH (fuse size shown)
- MAGNETIC STARTER (BY DIV. 15 U.O.N.)
- COMB. STARTER (BY DIV. 15 U.O.N.)
- PANELBOARD, SURFACE MOUNTED
- PANELBOARD, FLUSH MOUNTED
- UTILITY METER, AS REQUIRED
- CT — CURRENT TRANSFORMERS (with potential transformers where required)
- GENERATOR, KW SHOWN
- TELEPHONE TERMINAL BOARD
- TELEPHONE TERMINAL CABINET (surface unless otherwise noted)
- GROUND CONNECTION PER N.E.C.
- WIREWAY
- TRANSFER SWITCH
- CIRCUIT BREAKER
- Ssu — FUSTAT, SWITCHED PLUG-FUSE BOX

CIRCUITRY and RACEWAY

- CIRCUIT UP
- CIRCUIT DOWN
- HOME RUN (with circuit numbers)
- END OF RUN, CAP AND STAKE
- "RUN CONTINUES" INDICATION
- WM — WIREMOLD #500 Unless noted
- PM — PLUGMOLD #V20GB612 Unless noted
- HOME RUN (THRU CONTROL DEVICE)

SOUND and SIGNAL

- SPEAKER
- VOLUME CONTROL
- BUZZER
- CHIME
- MICROPHONE OUTLET
- INTERCOM OUTLET

GENERAL NOTES:

1. WHERE ADEQUATE RADIO COVERAGE (AS DEFINED BY THE FIRE CODE OFFICAL) CANNOT BE ESTABLISHED WITHIN THIS BUILDING THEN A NEW PUBLIC SAFETY RADIO AMPLIFICATION SYSTEM SHALL BE INSTALLED. DESIGN-BUILD 'RADIO AMPLIFICATION' SYSTEM IS REQUIRED TO COVER THE ENTIRE BUILDING BOTH NEW & EXISTING. IF REQUIRED AFTER TESTING THE AMPLIFIER SHALL BE LOCATED ADJACENT TO THE NEW FIRE ALARM CONTROL PANEL. NOTE THAT FIRE ALARM CONTROL PANEL TO BE PROVIDED WITH SPARE CONTACTS TO ALLOW FOR CONNECTION OF SYSTEM TO FIRE ALARM UNIT.

DRAWING ELECTRICAL SPECIFICATION

CODES AND REGULATIONS:
COMPLY WITH ALL APPLICABLE STATE AND LOCAL CODES, REGULATIONS AND ORDINANCES.

EXAMINATION OF PREMISES:
EXAMINE THE PREMISES PRIOR TO BIDDING AND BECOME FULLY FAMILIAR WITH EXISTING CONDITIONS.

PERMITS:
SECURE AND PAY FOR ALL PERMITS, FEES, TAXES, LICENSES AND INSPECTIONS IN CONNECTION WITH THE ELECTRICAL WORK.

DRAWINGS AND SPECIFICATIONS:
CONTRACTOR SHALL BE RESPONSIBLE FOR EXACT FITTING OF ALL MATERIALS, EQUIPMENT, ETC. IN BUILDING. ALL DIMENSIONS SHALL BE VERIFIED ON THE JOB. INSTRUCTIONS SUCH AS "PROVIDE. . . ." SHALL MEAN CONTRACTOR SHALL BE RESPONSIBLE FOR THE FURNISHING AND INSTALLING OF. . . ., COMPLETE IN EVERY RESPECT.

GUARANTEE:
GUARANTEE ALL MATERIALS, LABOR, WORKMANSHIP AND THE SUCCESSFUL OPERATION OF ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.

SUBSTITUTIONS:
IT IS THE INTENT OF THE SPECIFICATIONS TO ESTABLISH QUALITY STANDARDS OF MATERIALS AND EQUIPMENT INSTALLED. SPECIFIC ITEMS ARE IDENTIFIED BY MANUFACTURER, TRADE NAME OR CATALOG DESIGNATION. SHOULD CONTRACTOR PROPOSE TO FURNISH MATERIALS AND EQUIPMENT OTHER THAN THOSE SPECIFIED AS PERMITTED BY THE "OR APPROVED EQUAL"CLAUSES, HE SHALL SUBMIT A WRITTEN REQUEST IN DUPLICATE, AT LEAST FIVE CALENDAR DAYS PRIOR TO BIDDING DATE FOR ANY OR ALL SUBSTITUTIONS TO ARCHITECT ALONG WITH A STAMPED SELF ADDRESSED RETURN ENVELOPE. SUCH A REQUEST SHALL BE ACCOMPANIED WITH COMPLETE DESCRIPTIVE AND TECHNICAL DATA AND ALL OTHER INFORMATION DEEMED NECESSARY BY ARCHITECT FOR EVALUATION. SUBSTITUTIONS SUBMITTED FOR APPROVAL SHALL LIST ITEMS AS SPECIFIED WITH THE ALTERNATE SUBSTITUTION. WHERE SUBSTITUTIONS ALTER THE DESIGN, CONDUIT, WIRING OR SPACE REQUIREMENTS INDICATED ON THE DRAWINGS, CONTRACTOR SHALL INCLUDE ITEMS OF COST FOR THE REVISED DESIGN AND CONSTRUCTION.

SHOP DRAWINGS (ELECTRONIC VERISION):
A. FURNISH SHOP DRAWINGS TO ARCHITECT FOR THE FOLLOWING:
   1. LIGHTING EQUIPMENT.
   2. DISTRIBUTION EQUIPMENT.
   3. WIRING DEVICES & COVERPLATES.

COORDINATION:
COORDINATE ALL ELECTRICAL INSTALLATIONS AND ROUGH-IN AS REQUIRED.

DELIVERY AND STORAGE OF MATERIALS COORDINATION:
MAKE PROVISIONS FOR DELIVERY AND SAFE STORAGE OF ALL MATERIALS AND MAKE THE REQUIRED ARRANGEMENTS WITH OTHER CONTRACTORS ON THE JOB FOR THE INTRODUCTION INTO THE BUILDING OF EQUIPMENT TOO LARGE TO PASS THROUGH FINISHED OPENINGS. WHERE MATERIALS ARE INDICATED TO BE FURNISHED BY OTHERS TO CONTRACTOR FOR INSTALLATION, THESE MATERIALS SHALL BE CHECKED AND THEIR DELIVERY PROPERLY RECEIPTED. ASSUME FULL RESPONSIBILITY FOR THE STORAGE AND SAFE KEEPING OF SAID MATERIALS FROM TIME OF DELIVERY UNTIL FINAL ACCEPTANCE.

ACCEPTANCE DEMONSTRATION:
UPON COMPLETION OF THE WORK, AT A TIME TO BE DESIGNATED BY ARCHITECT, CONTRACTOR SHALL DEMONSTRATE TO OWNER THE OPERATION OF THE ENTIRE ELECTRICAL INSTALLATION, INCLUDING ANY AND ALL SPECIAL SYSTEMS PROVIDE UNDER THIS CONTRACT.

CLEAN UP:
REMOVE ALL MATERIALS, SCRAP, ETC., RELATIVE TO THE ELECTRICAL INSTALLATION AND LEAVE THE PREMISES IN A CLEAN, ORDERLY CONDITION. ANY COSTS TO OWNER FOR CLEAN UP OF THE SITE WILL BE CHARGED AGAINST CONTRACTOR. CLEAN ALL ELECTRICAL EQUIPMENT AND MATERIALS OF ALL FOREIGN MATTER. CLEAN ALL LIGHT FIXTURES USING ONLY METHODS AND MATERIALS AS RECOMMENDED BY MANUFACTURER.

TEMPORARY WIRING:
REMOVE ALL TEMPORARY WIRING, OUTLETS, ETC., COMPLETE.

DRAWINGS:
DELIVER "AS-BUILT" DRAWINGS TO OWNER.

TRENCHING:
BE RESPONSIBLE FOR ALL TRENCHING AND BACKFILL FOR ELECTRICAL WORK. BACKFILLING SHALL BE DONE IN ACCORDANCE WITH ARCHITECTURAL SPECIFICATIONS. BE RESPONSIBLE FOR ALL NEW AND EXISTING BURIED UTILITIES.

OUTAGES:
COORDINATE ALL ELECTRICAL SERVICE OUTAGES WITH OWNER AND GENERAL CONTRACTOR. PLAN ALL WORK SO THAT DURATION OF OUTAGE IS KEPT TO AN ABSOLUTE MINIMUM. PROVIDE TEMPORARY WIRING AS NECESSARY AND AS REQUIRED IN ORDER TO MAINTAIN CONTINOUS SERVICE FOR OWNER'S OPERATION WHERE OUTAGE MUST BE ACCOMPLISHED DURING A TIME WHEN POWER IS DEEMED NECESSARY BY OWNER, OR WHEN OUTAGE IS TO BE OF AN EXTENDED DURATION, MAXIMUM 6 HOURS. ALL OUTAGE TIME AND SCHEDULING OF SAME SHALL BE AS APPROVED BY OWNER AND SHALL CONFORM TO OWNER'S SCHEDULES.

BALANCING:
THE COMPLETE SYSTEM SHALL BE LOAD BALANCED TO WITHIN 10-15 PERCENT PER PHASE.

PHASE ROTATION:
ELECTRICAL CONTRACTOR SHALL ASSURE AND BE RESPONSIBLE FOR PROPER PHASE ROTATION OF ALL MOTORS, COMPRESSORS, AND OTHER THREE PHASE EQUIPMENT PRIOR TO ENERGIZING EQUIPMENT. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE AND COORDINATE PROPER PHASE ROTATION CONNECTIONS MADE BY THE SERVING UTILITY COMPANY PRIOR TO ENERGIZING MAIN SERVICE EQUIPMENT.

CONDUITS:
1. CONDUITS, MINIMUM SIZE 1/2", SHALL BE PROVIDED FOR ALL WIRING RUNS AS INDICATED AND SPECIFIED. ALL SIZES SHALL BE PER NEC. USE PVC SCHEDULE 40 FOR ALL UNDERGROUND FEEDERS AND FOR ALL RUNS IN OR UNDER THE GROUND FLOOR SLAB. USE GRC WHERE REQUIRED BY CODE, UTILITY COMPANY, OR FOR MECHANICAL PROTECTION AND AS SHOWN. USE EMT FOR ALL OTHER RUNS. FINAL CONNECTIONS TO MOTORS AND OTHER VIBRATING OR ROTATING EQUIPMENT SHALL BE MADE IN FLEXIBLE CONDUIT.

2. WHERE RACEWAYS CONTAINING UNGROUNDED CONDUCTORS 4 AWG AND LARGER ENTER A CABINET, BOX ENCLOSURE, OR RACEWAY, THE CONDUCTORS SHALL BE PROTECTED BY A SUBSTANTIAL FITTING PROVIDING A SMOOTHLY ROUNDED INSULATING SURFACE.

3. CABLES AND RACEWAYS SHALL NOT BE SUPPORTED BY CEILING GRIDS.

4. WHERE PORTIONS OF A CABLE RACEWAY OR SLEEVE ARE KNOWN TO BE SUBJECTED TO DIFFERENT TEMPERATURES AS IN COLD STORAGE AREAS OF BUILDINGS OR WHERE PASSING FROM THE INTERIOR TO THE EXTERIOR OF THE BUILDING, THE RACEWAY OR SLEEVE SHALL BE SEALED WITH AN APPROVED MATERIAL.

JUNCTION BOXES:
J-BOXES SHALL BE GALVANIZED STEEL OR CAST WATERPROOF TYPE. PROVIDE BOXES OF PROPER SIZE, CONFIGURATION AND TYPE AS IS SUITABLE FOR THE TERMINATION OR DEVICE TO BE INSTALLED.

CONDUCTORS:
GENERAL
1. ALL CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE.
2. CONDUCTORS #10 AWG COPPER AND SMALLER SHALL BE SOLID AND #8 AWG COPPER AND LARGER SHALL BE STRANDED TYPE OF WIRE.
3. TYPE THHN/THWN, 600-VOLT INSULATED.

IDENTIFICATION
1. GROUNDED (NEUTRAL) CONDUCTORS #6 AWG OR SMALLER MUST BE INDENTIED BY A CONTINIOUS WHITE OR GRAY OUTER FINISH. NEUTRAL CONDUCTORS LARGER THAN #6 AWG MUST BE IDENTIFIED BY DISTINCTIVE WHITE MARKING SUCH AS WHITE ELECTRICAL TAPE.
2. EQUIPMENT GROUNDING CONDUCTORS #6 AWG OR SMALLER MUST BE IDENTIFIED BY A CONTINIOUS GREEN OUTTER FINISH. GROUNDING CONDUCTORS LARGER THEN #6 AWG MUST BE IDENTIFIED BY DISTINCTIVE GREEN MARKING SUCH AS GREEN ELECTRICAL TAPE.
3. UNGROUNDED (PHASE) CONDUCTOR SHALL BE IDENTIFIED AS FOLLOWS:

208Y/120 V	
PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE

INSTALLATION
1. DO NOT EVER MIX CONDUCTORS FROM SEPARATE PANELS IN THE SAME RACEWAY OR ENCLOSURE.
2. ALWAYS INSTALL THE GROUNDED (NEUTRAL) CONDUCTOR FROM THE UTILITY TRANSFORMER TO THE MAIN DISCONNECT. THIS WILL MAINTAIN AN EFFECTIVE GROUND-FAULT CURRENT PATH (EFP)

NM (NONMETALLIC-SHEATHED) CABLE:
NOT ALLOWED ON THIS PROJECT.

AC (ARMORED) CABLE: & MC (METAL-CLAD) CABLE:
CONSTRUCTION
1. THE OUTER METAL ARMOR SHEATH SHALL BE IDENTIFIED AS AN ACCEPTABLE GROUNDING RETURN PATH.
2. A INSULATED, COPPER, GROUNDING CONDUCTOR PROPERLY SIZED PER NEC TABLE 250.122 SHALL BE INCLUDED WITH IN THE FACTORY FABRICATED ASSEMBLY.
3. EACH ASSEMBLY HAS NO MORE THAN THREE CURRENT-CARRYING CONDUCTORS (NOT INCLUDING THE NEUTRAL)

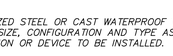
USES PERMITED AT OFFICE AREA (WHERE NOT SUBJECT TO PHYSICAL DAMAGE)
1. IN BOTH EXPOSED AND CONCEALED WORK.
2. IN DRY LOCATIONS
3. AIR VOIDS OF MASONARY BLOCK WHERE NOT SUBJECT TO DAMPNESS.
4. CABLE TRAYS, WHERE THE CABLES ARE IDENTIFIED FOR THE USE.
5. HEALTH CARE FACILITIES
6. PLACES OF ASSEMBLY

USES PERMITED AT ATTIC AREA (WHERE NOT SUBJECT TO PHYSICAL DAMAGE)
1. ONLY ALLOWED FOR LENGTHS 6'-0" OR LESS FOR FINAL CONNECTIONS TO MOTORS AND LIGHT FIXTURES.

USES NOT PERMITTED
1. WET OR DAMP LOCATIONS
2. AS SERVICE-ENTRANCE CABLE.
3. COMMERCIAL GARAGES.
4. MOTION PICTURE STUDIOS
5. BATTERY STORAGE ROOMS
6. IN HOISTWAYS OR ON ELEVATORS OR ESCALATORS.
7. EMBEDDED IN POURED CONCRETE.
8. HAZARDOUS OR CORROSIVE LOCATIONS
9. AS OTHERWISE PROHIBITED BY THE NEC

GROUNDING SYSTEM:
A. GROUND THE ENTIRE ELECTRICAL DISTRIBUTION SYSTEM, INCLUDING ALL RACEWAYS, OUTLETS, FIXTURE, EQUIPMENT, ETC., IN FULL ACCORD WITH NEC TO MAINTAIN AN EFFECTIVE GROUND-FAULT CURRENT PATH.
   1. VERIFY THE LOCAL UTILITY PROPERLY GROUNDS THE SUPPLY SOURCE SO THE SYSTEMS PHASE TO GROUND VOLTAGE IS STABLIZED. (COORDINATE WITH LOCAL UTILITY)

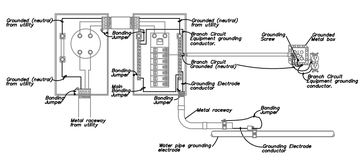
PROPERELY GROUNDED UTILITY POWER (SUPPLY SOURCE)



2. BOND THE GROUNDED (NEUTRAL) SYSTEM AND THE EQUIPMENT GROUNDING SYSTEM AT THE MAIN SERVICE VIA A MAIN BONDING JUMPER.

3. LOCATE AND INSTALL THE APPROPRIATE GROUNDING ELECTRODES ON THE PREMISES AS NOTED IN NEC 250.50 AND PROVIDE A GROUNDING ELECTRODE CONDUCTOR FROM THE ELECTRODE TO THE GROUNDED (NEUTRAL) CONNECTION AT THE MAIN SERVICE.

4. THE FOLLOWING NON-CURRENT CARRYING METAL PARTS OF THE SERVICE EQUIPMENT SHALL BE EFFECTIVELY BONDED TOGETHER:
   SERVICE RACEWAYS, CABLE TRAYS, CABLEBUS FRAMEWORK, AUXILIARY GUTTERS, OR SERVICE CABLE ARMOR OR SHEATH. ALL SERVICE ENCLOSURES CONTAINING SERVICE CONDUCTORS, INCLUDING METER FITTINGS, OR THE LIKE. OR ANY METALLIC RACEWAY ENCLOSING A GROUNDING ELECTRODE CONDUCTOR.



5. WHERE CIRCUIT CONDUCTORS ARE SPLICED WITHIN A BOX, OR TERMINATED ON EQUIPMENT WITHIN OR SUPPORTED BY A BOX, ANY SEPARATE EQUIPMENT GROUNDING CONDUCTORS ASSOCIATED WITH THOSE CIRCUIT CONDUCTORS SHALL BE SPLICED OR JOINED TO THE BOX WITH DEVICE SUITABLE FOR THE USE.
6. PROVIDE SEPARATE GROUNDING CONDUCTOR IN ALL RACEWAYS (NO EXCEPTIONS).
7. NONCONDUCTIVE COATINGS (SUCH AS PAINT) ON EQUIPMENT TO BE GROUNDED SHALL BE REMOVED FROM GROUNDING CONTACT SURFACES TO ENSURE GOOD ELECTRICAL CONTINUITY.
8. ANY SPECIAL SYSTEM (CATV, TELE, DATA, SOUND, ECT) REQUIRED TO BE GROUNDED SHALL BE BONDED TO THE ELECTRICAL EQUIPMENT GROUNDING SYSTEM AT THE MAIN SERVICE, WITH A MIN. #6 AWG CU CONDUCTOR.

ELECTRICAL SERVICE:
NEW ELECTRICAL SERVICE ENTRANCE SHALL BE AS INDICATED. CONSULT LOCAL UTILITY COMPANY AND VERIFY THE CHARACTERISTICS AND POINT OF SERVICE ATTACHMENT. TERMINATE THE SECONDARY ELECTRICAL SERVICE AT POINT AND IN MANNER AS DIRECTED BY THE UTILITY COMPANY. PROVIDE ALL DETAILS AS NECESSARY. INCLUDE ALL CHARGES BY THE UTILITY COMPANY IN THIS CONTRACT.

DISCONNECTS
1. SWITCHES SHALL BE "HEAVY DUTY" RATED.
2. EXTERNALLY OPERATED.
3. HORSE POWER RATED.
4. NEMA 1 OR 3R AS INDICATED OR REQUIRED BY CODE.
5. PROVIDE ENGRAVED SCREW-ON NAMEPLATE ON DISCONNECT COVER INDICATING DESIGNATION, VOLTAGE, PHASE, AMPRAGE, LINE SIDE SOURCE, AND LOAD SIDE SERVED.
6. DISCONNECTING MEANS MUST BE LOCATED WITH-IN SIGHT FROM & READILY ACCESSIBLE FROM AIR CONDITIONING OR REFRIGERATION EQUIPMENT. THE DISCONNECTING MEANS CANNOT BE LOCATED ON PANELS THAT ARE DESIGNED TO ALLOW ACCESS TO THE AIR-CONDITIONING OR REFRIGERATION EQUIPMENT.

DISTRIBUTION EQUIPMENT:
PANELBOARDS
1. FACTORY ASSEMBLED CIRCUIT BREAKER TYPE. (SQUARE 'D' NQOD OR NF AS REQUIRED WITH HINGED TRIM FRONT OR APPROVED EQUAL)
2. PROVIDE TYPE WRITTEN CIRCUIT BOARD DIRECTORY CLEARLY IDENTIFYING EACH CIRCUIT AS TO USE AND LOCATION.
3. ALL CIRCUIT BREAKERS SHALL BE SERIES RATED (SEE ONE-LINE DIAGRAM)
4. PANELBOARDS BUS SHALL BE TIN-PLATED ALUMINUM, PROVIDE COMPLETE WITH COPPER GROUND BUS AND BOLT-ON CIRCUIT BREAKERS
5. PROVIDE ENGRAVED SCREW-ON NAMEPLATE ON PANEL TRIM INDICATING PANEL DESIGNATION, VOLTAGE, PHASE, AMPRAGE, LINE SIDE SOURCE, AND LOAD SIDE SERVED.
6. PROVIDE FIELD MARKINGS TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. (NEC-110.16)
7. NEMA 1 OR 3R AS INDICATED OR REQUIRED BY CODE.
8. CIRCUIT BREAKERS UTILIZED TO SWITCH 120V OR 277V FLUORESCENT AND OR HID LIGHTING CIRCUITS MUST BE LISTED AND MARKED "HID"
9. CIRCUIT BREAKERS UTILIZED IN A 3-PHASE, CORNER-GROUNDED DELTA SYSTEM MUST BE IDENTIFIED FOR USE WITH IN THAT SYSTEM.
10. EACH GROUNDED (NEUTRAL) CONDUCTOR SHALL TERMINATE WITHIN THE PANELBOARD. IN AN INDIVIDUAL TERMINAL THAT IS NOT ALSO USED FOR ANOTHER CONDUCTOR.

FUSES
1. CLASS, TYPE AND SIZE AS LISTED ON DRAWINGS.
2. MANUFACTURED BY BUSSMAN OR APPROVED EQUAL

BRANCH CIRCUITS:
GENERAL
1. WHEN MORE THAN (1) BRANCH CKT SUPPLIES MORE THAN (1) RECEPTACLE ON THE SAME YOKE, SIMUTANEOUSLY ACTIVATED CIRCUIT BREAKERS SHALL FEED THE CKTS.
2. 15 AND 20 AMP, SINGLE PHASE, 125V RECEPTACLES INSTALLED IN BATHROOMS, OUTSIDE, ROOFTOPS, OR KITCHENS SHALL BE PROVIDED WITH GFCI PROTECTION.
3. A 15 OR 20 AMP, SINGLE PHASE, 125V, GFCI RECEPTACLE SHALL BE INSTALLED AT AN ACCESSIBLE LOCATION FOR THE SERVICING OF HEATING, AIR CONDITIONING AND REFRIGERATION EQUIPMENT. (VISIABLE AND WITHIN 25 FT)
4. RECEPTACLES OF ANY KIND ABOVE A SUSPENDED OR DROPPED CEILING ARE NOT ALLOWED.

TELEPHONE SYSTEM:
PROVIDE A COMPLETE SYSTEM OF OUTLETS, CONDUITS, EQUIPMENT SPACE, CABINETS, ETC., FOR TELEPHONE COMPANY USE. SYSTEM SHALL BE AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH ALL REQUIREMENTS OF TELEPHONE COMPANY. PROVIDE ENTRANCE CONDUITS AS INDICATED. MAINTAIN MINIMUM 24" SEPARATION FROM POWER. ANY AND ALL SIGNALING AND OR COMMUNICATIONS INSTALLATIONS SHALL COMPLY WITH NEC CHAPTERS 7 & 8 RESPECTIVELY.

DEVICES AND PLATES:
ALL DEVICES (SWITCHES, OCCUPANCY SWITCHES, RECEPTACLES, SPECIAL SYSTEMS CATV & COM/DATA) TO BE "WHITE" WITH "WHITE" NYLON TYPE COVER PLATES. AT WORK COUNTER AREA ALL DEVICES TO BE "BLACK" WITH "BLACK" NYLON COVER PLATES PER PLANS. NOTE THAT ALL EXISITNG DEVICES AND COVERS TO BE UPGRADED TO "WHITE" FINISHES, COORDINATE ALL DEVICE FINISHES WITH OWNER.

RECEPTACLES SHALL BE COMMERCIAL GRADE, 20-AMP, 125-VOLT A.C.

GROUND FAULT CIRCUIT INTERRUPTER (GFI): SHALL BE CLASS A 4MA TO 6MA TYPE WITH "SMART LOCK" PROTECTION. (LEVITON-SMART LOCK GFCI) WHEN THE GFCI COMPONENT OF THE UNIT FAILS THE ASSOCIATED DEVICE SHALL BE DEENERGIZED BY DEFAULT, IN ADDITION LINE-LOAD REVERSAL FEATURE SHALL RENDER THE UNIT UNUSABLE WHEN ACTIVATED.

SWITCHES SHALL BE COMMERCIAL GRADE, 20-AMP, 125-VOLT A.C. SWITCHES SHALL BE SINGLE POLE, THREE-WAY OR FOUR-WAY AS INDICATED ON THE DRAWINGS.

GENERAL USE DIMMERS SHALL NOT BE ALLOWED TO CONTROL RECEPTACLES OR AND PLUG CONNECTED TABLE AND FLOOR LAMPS.

DEVICE COVERPLATES SHALL BE "NYLON" OR "LEXAN" (EXCEPT WHERE SPECIFIED OTHERWISE) IN FINISH TO MATCH DEVICES.

WEATHER PROOF (WP) IMPLIES A COVER THAT IS RATED A WEATHER PROOF WHETHER OR NOT THE ATTACHMENT PLUG IS INSERTED OR NOT. BOXES TO BE INTERMATIC #WP1000HRC (HORIZONTAL) OR APPROVED EQUAL.

LIGHTING FIXTURES:
GENERAL
1. FIXTURES SHALL BE AS PER THE LIGHTING FIXTURE SCHEDULE AS INDICATED ON THE DRAWINGS.
2. ALL FIXTURES SHALL BE U.L. LABELED FOR THE INTENDED INSTALLATION.

LAMPNG/DRIVERS
1. LED LAMPING SHALL BE 3000 AND OR 3500 DEGREE COLOR TEMPERATURE UNLESS OTHERWISE NOTED, CONFIRM WITH OWNER AND ARCHITECT PRIOR TO SHOP DRAWING SUBMITTAL.

EXIT & EMERGENCY LIGHTING SYSTEM:
PROVIDE A COMPLETE EXIT AND EMERGENCY LIGHTING SYSTEM AS INDICATED ON DRAWINGS. LOCATE ALL EXIT LIGHTS FOR MAXIMUM VISIBILITY. ENTIRE SYSTEM SHALL COMPLY WITH ARTICLE 700 OF NEC.

MECHANICAL EQUIPMENT WIRING SYSTEM:
A. PROVIDE ALL POWER FEEDERS AND FINAL CONNECTIONS TO ALL MOTORS SPECIFIED UNDER MECHANICAL PORTION OF THESE SPECIFICATIONS. MOTORS WILL BE FURNISHED AND SET IN PLACE BY MECHANICAL CONTRACTOR.
B. INSTALL AND WIRE THROUGH ALL DEVICES SUCH AS MAGNETIC STARTERS, SPEED CONTROLLERS, RELAYS, LINE VOLTAGE THERMOSTATS, SWITCHES, ETC., FURNISHED BY OTHERS, WHICH DIRECTLY HANDLE THE FULL LOAD CURRENT OF THE MOTORS. LOCATE ALL DIRECTED BY MECHANICAL CONTRACTOR.
C. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPERATURE CONTROL WIRING FOR THIS PROJECT AND FOR ALL SUCH INTERLOCK AND CONTROL WIRING WHICH DOES NOT DIRECTLY HANDLE THE FULL LOAD CURRENT. THIS ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL WIRING WHICH DOES DIRECTLY HANDLE THE FULL LOAD CURRENT, SUCH AS LINE VOLTAGE THERMOSTATS, LOCAL CONTROL EXHAUST FANS NOT INTERLOCKED WITH OTHER MECHANICAL EQUIPMENT, ETC. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS TO DETERMINE LOCATIONS OF ALL POWER AND CONTROL OUTLETS AND NECESSARY WIRING REQUIRED.

FIRE ALARM AND DETECTION SYSTEM:
A. THIS SYSTEM SHALL BE DESIGN BUILD SYSTEM, COORDINATE WITH OWNER AND GENERAL CONTRACTOR.

ELECTRICAL DEMOLITION NOTES

A: THE CONTRACTOR SHALL COMPLETELY REMOVE ALL ELECTRICAL WIRING CONDUIT, SWITCHES, DISCONNECTS, LIGHTING FIXTURES AND OTHER ASSOCIATED ITEMS AS REQUIRED FOR NEW CONSTRUCTION. REFER TO THE ARCHITECTURAL DEMOLITION PLANS SHEETS FOR THE AREAS OF DEMOLITION. A SITE INVESTIGATION BY THE CONTRACTOR SHOULD BE PERFORMED TO AID IN DETERMINING THE COMPLETE EXTENT OF WORK INVOLVED.

B: THE CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL NECESSARY POWER OUTAGES WITH THE OWNERS REPRESENTATIVE PRIOR TO PROCEEDING WITH SUCH WORK TO INSURE THAT THE OPERATIONS IN AD

ELECTRICAL DEMOLITION NOTES

A: THE CONTRACTOR SHALL COMPLETELY REMOVE ALL ELECTRICAL WIRING CONDUIT, SWITCHES, DISCONNECTS, LIGHTING FIXTURES AND OTHER ASSOCIATED ITEMS AS REQUIRED FOR NEW CONSTRUCTION. REFER TO THE ARCHITECTURAL DEMOLITION PLANS SHEETS FOR THE AREAS OF DEMOLITION. A SITE INVESTIGATION BY THE CONTRACTOR SHOULD BE PERFORMED TO AID IN DETERMINING THE COMPLETE EXTENT OF WORK INVOLVED.

B: THE CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL NECESSARY POWER OUTAGES WITH THE OWNERS REPRESENTATIVE PRIOR TO PROCEEDING WITH SUCH WORK TO INSURE THAT THE OPERATIONS IN ADJACENT OCCUPIED PORTIONS OF THE BUILDING ARE NOT INTERRUPTED OR RESTRICTED WITHOUT PRIOR APPROVAL.

C: ALL EXISTING BRANCH CIRCUITS BEING REMOVED SHALL BE REMOVED AS COMPLETE AS POSSIBLE. EXISTING CONDUCTORS SHALL BE REMOVED COMPLETELY FROM THEIR RACEWAYS, DISPOSED OF AS SCRAP AND NOT REUSED. EXISTING ELECTRICAL RACEWAY AND DEVICE BACKBOXES AND DEVICES SHALL BE COMPLETELY REMOVED WHERE ACCESSIBLE, DISPOSED OF AS SCRAP, REMOVED FROM SITE AND NOT REUSED. EXISTING ELECTRICAL RACEWAYS WHERE STUBBED FROM A CONCRETE FLOOR OR WALL SHALL BE CHISELED 2 INCHES BELOW SURFACE, GROUTED AND SCREED. WHERE AN EXISTING DEVICE IS SHOWN REMOVED FROM AN EXISTING CIRCUIT, NEW WIRING SHALL BE PROVIDED AS REQUIRED TO INSURE CONTINUITY OF EXISTING CIRCUIT.

D: ALL EXISTING LIGHT FIXTURES AND LAMPS SHALL BE REMOVED BY THE ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE. MANY OF THESE FIXTURES ARE TO BE REUSED IN NEW LOCATIONS FOR THE FIXTURES NOT TO BE REUSED THE OWNER SHALL HAVE THE RIGHT OF FIRST REFUSAL FOR ALL LIGHITNG FIXTURES BEFORE REMOVAL FROM THE SITE (CONFIRM).

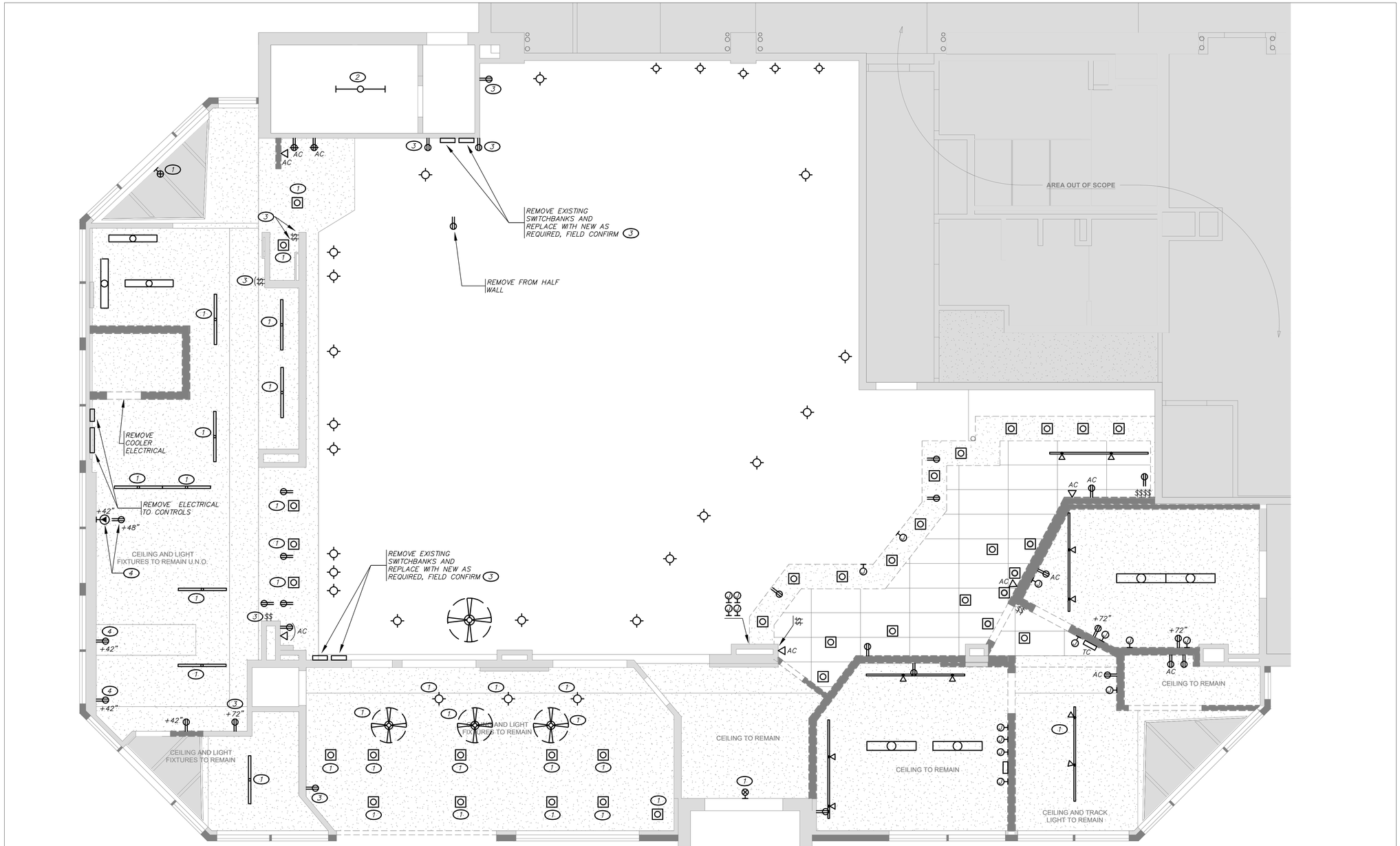
E: ALL EXISTING SURFACE MOUNTED BACKBOXES, CONDUIT, WIREWAY, JUNCTION BOXES, ETC. SHOWN REMOVED SHALL BE REMOVED IN THEIR ENTIRETY. ALL RECESSED BACKBOXES, JUNCTION BOXES SHOWN REMOVED SHALL BE ABANDONED IN PLACE AND COVERED WITH STAINLESS STEEL COVER PLATES. ALL RECESSED CONDUIT SHALL BE ABANDONED IN PLACE AND CAPPED OFF IN A SUITABLE MANNER PER LOCAL INSPECTORS REQUIREMENTS.

F: ALL ELECTRICAL ITEMS TO BE REMOVED AND NOT REUSED AND NOT REUSED THE OWNER SHALL HAVE THE RIGHT OF FIRST REFUSAL (COORDINATE).

G: EXISTING FIRE ALARM DEVICES TO REMAIN IN PLACE AND OPERATIONAL AS REQUIRED. IF LOCATED ON WALL TO BE DEMOED, RELOCATED AS REQUIRED.

REFERENCE NOTES (THIS SHEET ONLY)

1. EXISTING LIGHT TO REMAIN, CLEAN AND RE-LAMP AS REQUIRED FOR FUNCTIONAL LIGHTING.
2. REMOVE AND REPLACE EXISTING STRIPLIGHT WITH NEW LED SURFACE LIGHT IN THE SAME LOCATION.
3. REPLACE EXISTING DEVICE WITH NEW AT SAME LOCATION.
4. RE-USE BACKBOX AND CONDUIT WHERE POSSIBLE FOR NEW KITCHEN EQUIPMENT DEVICES.



ELECTRICAL DEMOLITION PLAN

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

PROJECT NUMBER: APS..616.24

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
FORT COLLINS, CO 80524

VFLA ARCHITECTURE + INTERIORS
419 CANYON AVE STE 200, FORT COLLINS, CO 80521
970.224.1191 | WWW.VFLA.COM
STRENGTH IN DESIGN
STRENGTH IN PARTNERSHIP
STRENGTH IN COMMUNITY

PROJECT TEAM

STRUCTURAL ENGINEER:
LARSEN STRUCTURAL DESIGN

MECHANICAL ENGINEER:
INTEGRATED MECHANICAL, LLC.

PLUMBING ENGINEER:
INTEGRATED MECHANICAL, LLC.

ELECTRICAL ENGINEER:
APS, INC.
ELECTRICAL ENGINEERS
ADONAI
APSINC.BIZ

PERMIT SET

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
PERMIT SET	10-11-2024

SEAL:

COLORADO LICENSED 36172 PROFESSIONAL ENGINEER
October 10, 2024

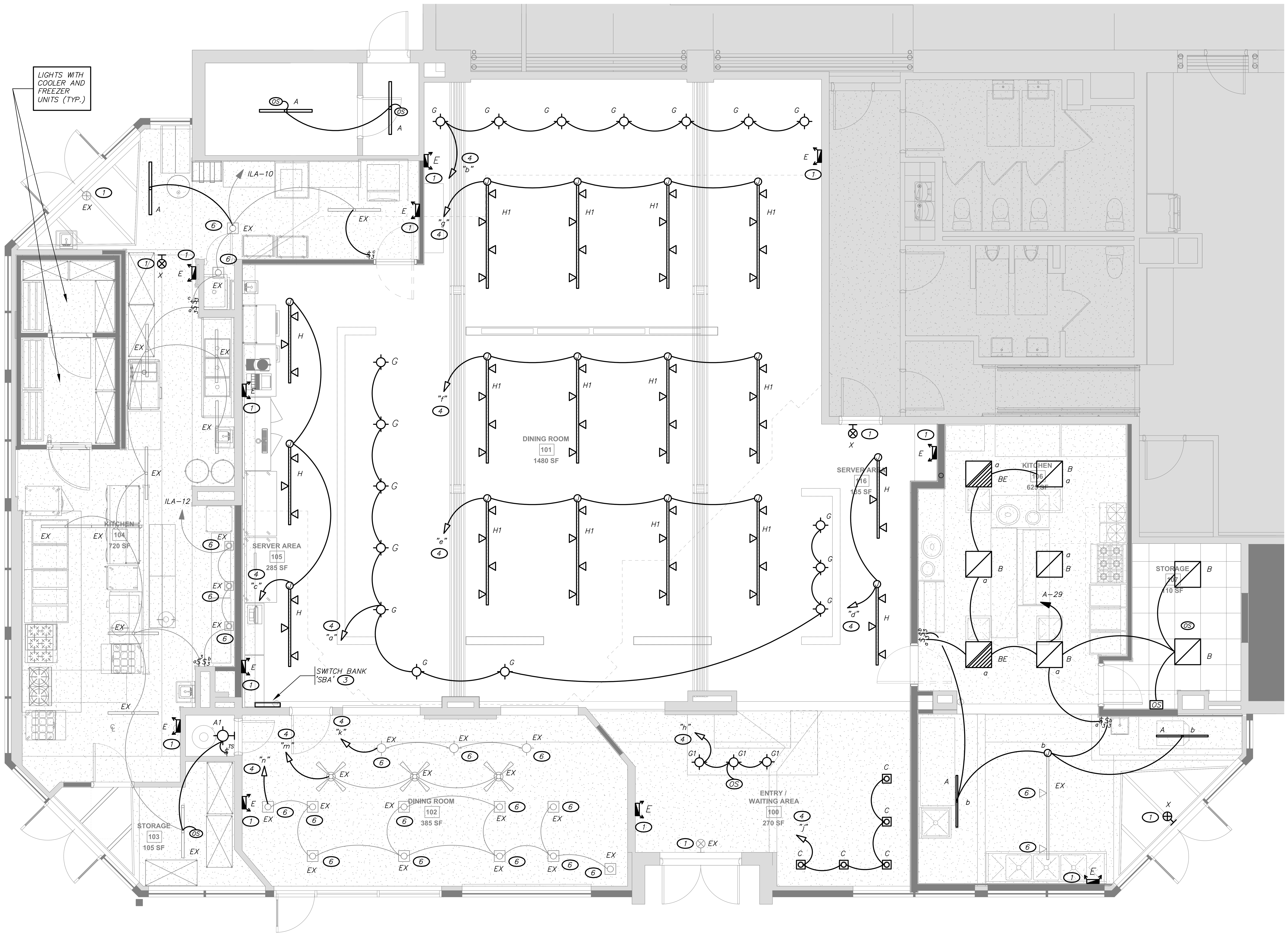
ELECTRICAL DEMOLITION PLAN

DRAWING NUMBER:

ED.1

REFERENCE NOTES (THIS SHEET ONLY)

1. CONNECT TO UNSWITCHED LIGHTING CIRCUIT SERVING THIS AREA, SEE SCHEDULE FOR PANEL 'A' ON SHEET E3.2.
2. REPLACE EXISTING LIGHTS WITH NEW LED TYPE IN SAME LOCATION, CONNECT TO EXISTING CIRCUITING.
3. SWITCHBANK 'SBA', SEE DETAIL THIS SHEET, CONFIRM EXACT LOCATION.
4. ROUTE VIA SWITCHBANK 'SBA', SEE DETAIL THIS SHEET REGARDING CONTROL AND CIRCUITING REQUIRED.
5. PROVIDE LINEAR SLIDE TYPE 'LED' DIMMER SWITCH COMPATIBLE WITH LAMPS TO BE CONTROLLED PER MANUFACTURER'S RECOMMENDED & APPROVED DIMMERS.
6. RE-LAMP WITH NEW SCREW-IN "LED" R30 TYPE IN 30K TEMPERATURE AT APPROXIMATELY 12-WATT RANGE.

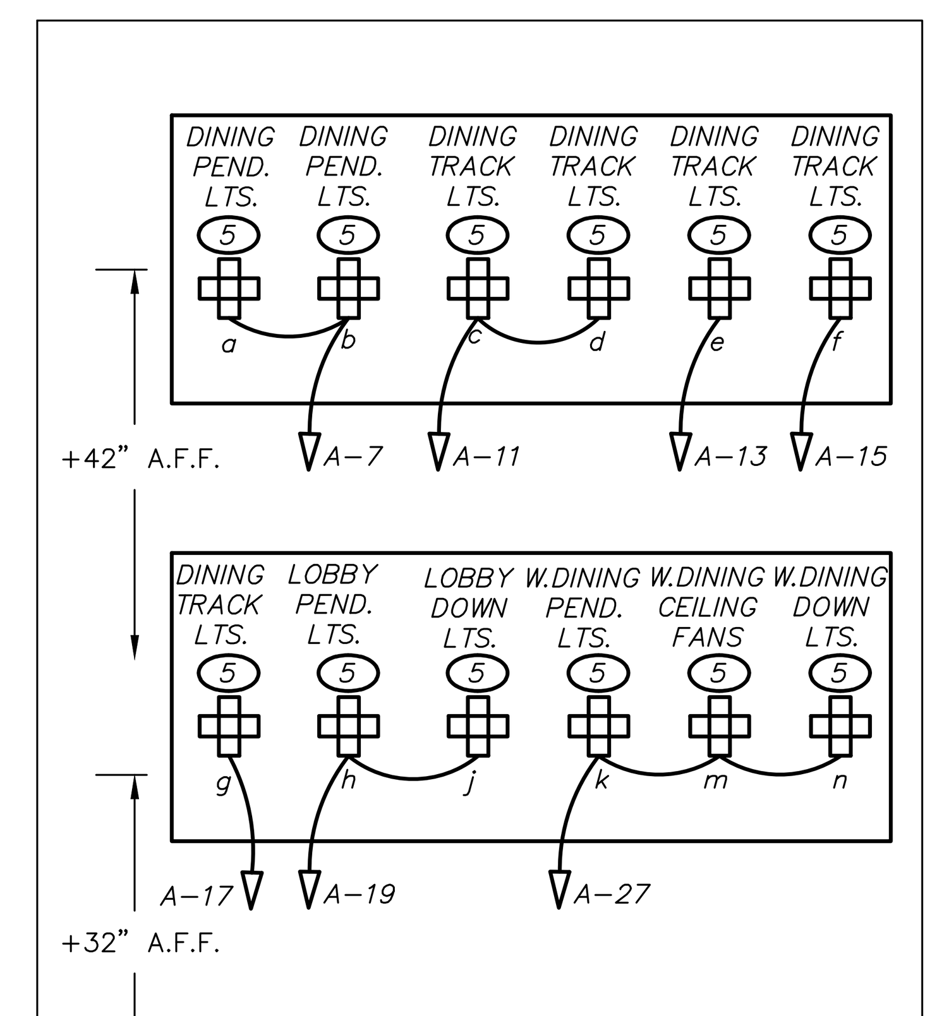


ELECTRICAL LIGHTING PLAN

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

GENERAL NOTES

- OS — OCCUPANCY SENSOR SHALL BE SENSOR SWITCH #WSX-PDT-W FOR STANDARD SWITCHING. REQUIRES NEUTRAL @ SWITCH BOX.
- OS D — OCCUPANCY SENSOR WITH DIMMING FUNCTION SHALL BE SENSOR SWITCH #WSX-PDT-EZ-D-WH
- OS 2 — OCCUPANCY SENSOR SHALL BE SENSOR SWITCH #WSX-PDT-2P-FAN-WH FOR DUAL-LEVEL SWITCHING. REQUIRES NEUTRAL @ SWITCH BOX.
- (OS) — OCCUPANCY SENSOR SHALL BE SENSOR SWITCH #CMR-PDT-10
- $TS — ELECTRONIC TIMER SWITCH 2-5-10-15-30-60 MINUTES. SENSOR SWITCH #PTS60-WH FOR 120-277 VOLT APPLICATIONS.
- PP — POWER PACK SHALL BE SENSOR SWITCH



SWITCH BANK "SBA"

SCALE: NONE

PROJECT NUMBER: APS..616.24

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
FORT COLLINS, CO 80524

VFLA ARCHITECTURE + INTERIORS

419 CANYON AVE STE 200, FORT COLLINS, CO 80521
970.224.1191 | WWW.VFLA.COM

STRENGTH IN DESIGN
STRENGTH IN PARTNERSHIP
STRENGTH IN COMMUNITY

PROJECT TEAM

STRUCTURAL ENGINEER:
LARSEN STRUCTURAL DESIGN

MECHANICAL ENGINEER:
INTEGRATED MECHANICAL, LLC.

PLUMBING ENGINEER:
INTEGRATED MECHANICAL, LLC.

ELECTRICAL ENGINEER:
APS, INC.

ELECTRICAL ENGINEERS ADONAI APSINC.BIZ

PERMIT SET

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
PERMIT SET	10-11-2024

SEAL:

October 10, 2024

ELECTRICAL LIGHTING PLAN

DRAWING NUMBER:

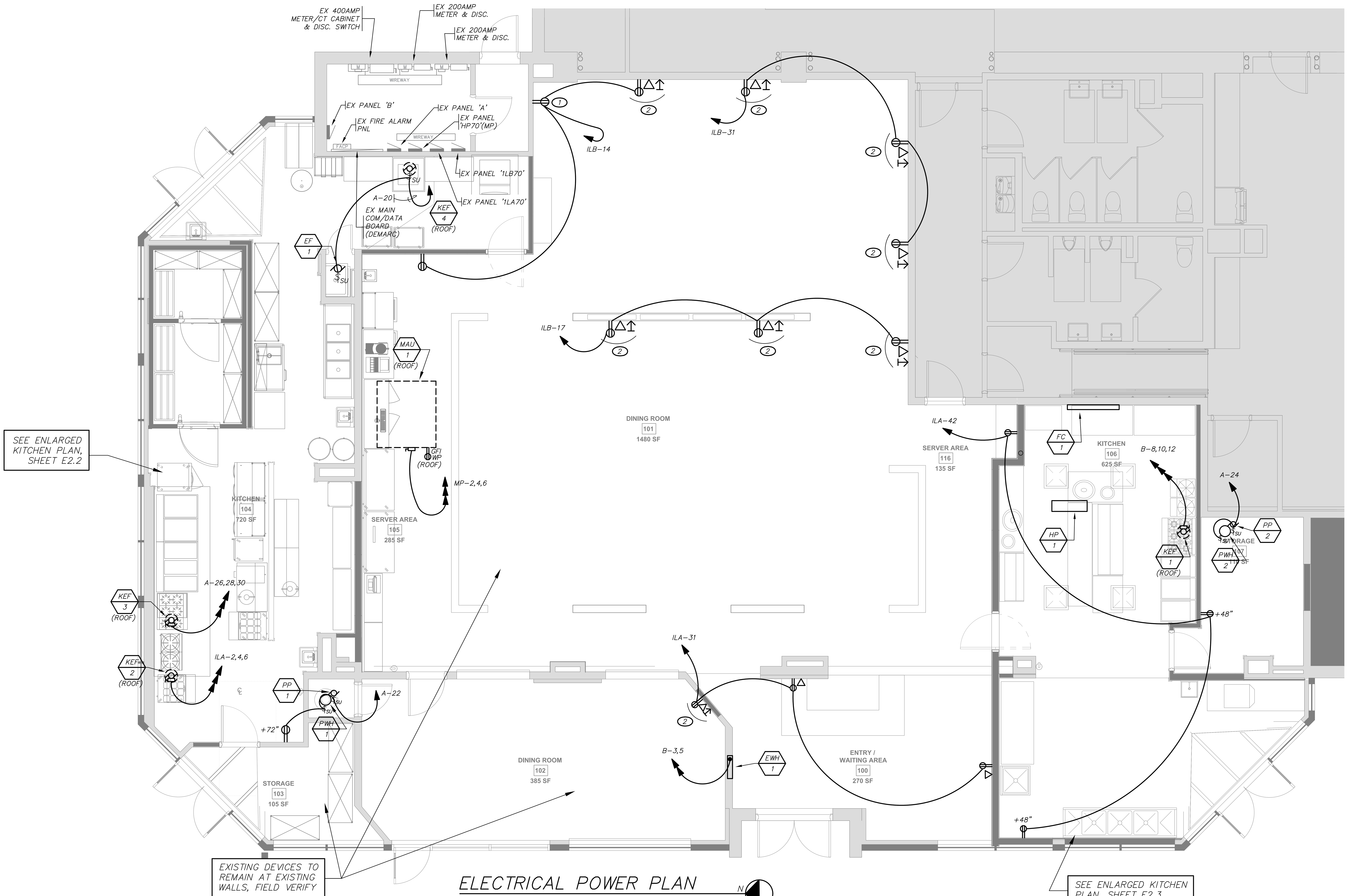
E1.1

GENERAL NOTES:

- PER NEC 210.8 (B) PROVIDE 'GFI' TYPE RECEPTACLES OR CIRCUIT BREAKERS AS REQUIRED.
- ALL DUPLEX RECEPTACLES TO BE 'TAMPER-PROOF' TYPE.
- EXISTING FIRE ALARM DEVICES TO REMAIN WHERE POSSIBLE, PROVIDE NEW AS REQUIRED PER CODE (DESIGN BUILD).

REFERENCE NOTES (THIS SHEET ONLY)

1. NEW DEVICE REPLACING EXISTING, CONFIRM FINISH WITH ARCHITECT.
2. CONFIRM EXACT MOUNTING HEIGHT. PROVIDE IN-WALL DEVICE BOX, ARLINGTON #TVBU505.



ELECTRICAL POWER PLAN

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

N

PROJECT NUMBER: APS..616.24

BONCHON & BROWN DONKATSU

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ELECTRICAL ENGINEERS
ADONAI
APSINC.BIZ

PERMIT SET

SHEET ISSUANCES

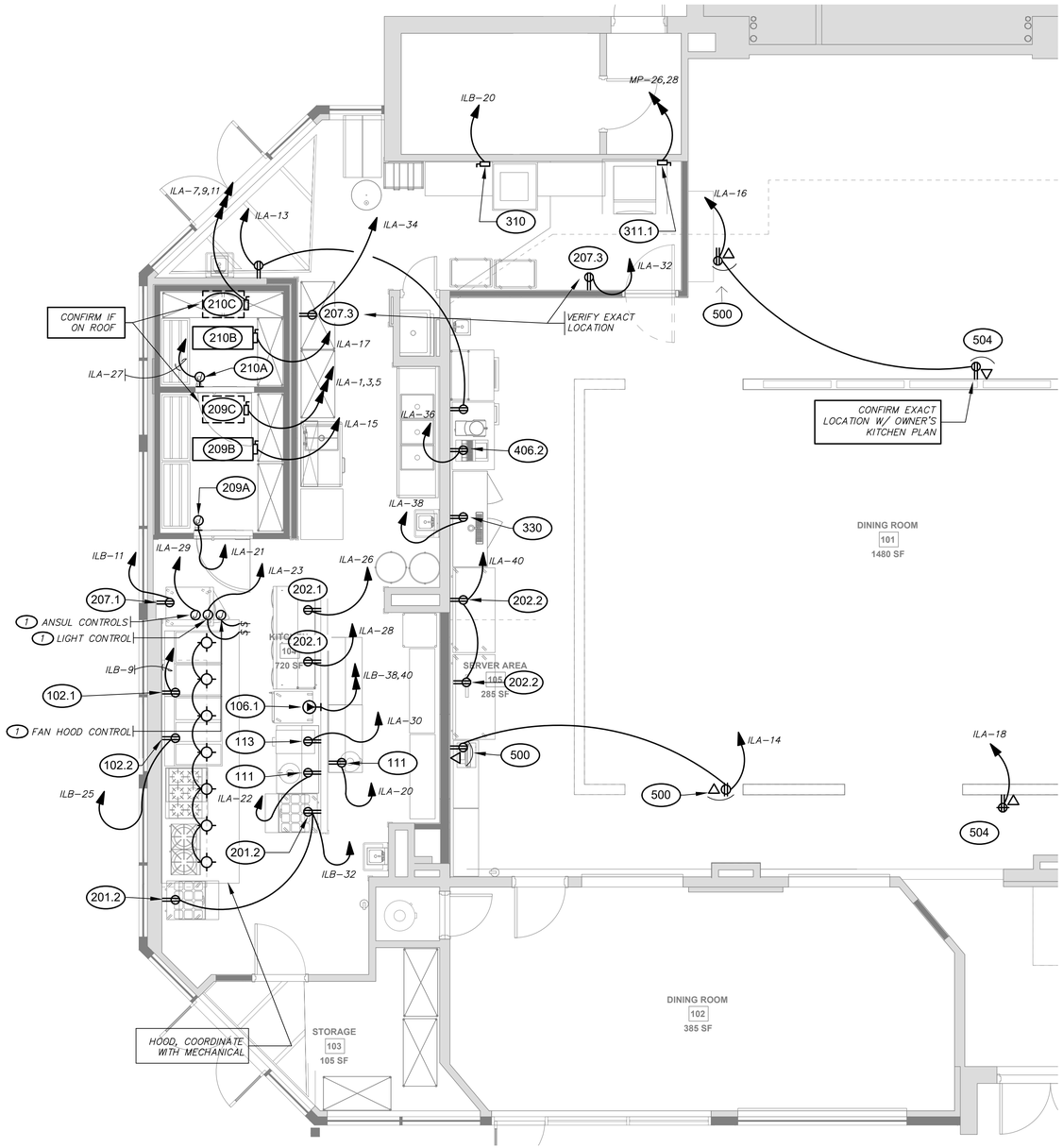
DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
PERMIT SET	10-11-2024

SEAL:

COLORADO LICENSED PROFESSIONAL ENGINEER
CHARLES M. POLSON
36172
October 10, 2024

ELECTRICAL POWER PLAN

DRAWING NUMBER:
E2.1



ELECTRICAL NORTH KITCHEN PLAN

SCALE: 1/4" = 1'–0"

N

GENERAL NOTES:

- PER NEC 210.8 (B) PROVIDE 'GFI' TYPE RECEPTACLES OR CIRCUIT BREAKERS AS REQUIRED.
- ALL DUPLEX RECEPTACLES TO BE 'TAMPER–PROOF' TYPE.
- COORDINATE ALL KITCHEN EQUIPMENT WITH SUPPLIER. EACH EQUIPMENT ITEM SHOWN TO BE ON SEPARATE CIRCUIT TO EXISTING PANELS, SEE SHEET E2.1 FOR PANEL LOCATIONS.

REFERENCE NOTES (THIS SHEET ONLY)

(1) COORDINATE EXACT CONTROLS AND HOOD UNIT SHUTDOWN WITH OWNER'S KITCHEN EQUIPMENT SUPPLIER AND CAPTIVE–AIRE CONSULTANTS.

KITCHEN EQUIPMENT SCHEDULE

KEY	ITEM	LOAD	VOLTAGE/ PHASE	FEEDER	BREAKER	NOTES
102.1	FRYER, GAS WITH LED CONTROLS	12A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE CORD & PLUG & DUPLEX OUTLET
102.2	FRYER, GAS WITH LED CONTROLS	12A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE CORD & PLUG & DUPLEX OUTLET
106.1	LOW TEMP HOT HOLDING CABINET	7A	208/1	2#12, 1#12 GND., 1/2"c.	15/2	PROVIDE NEMA 6–15R OUTLET TO MATCH CORD & PLUG
111	RICE COOKER/ WARMER	13A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET
113	DRAWER WARMERS	5.3A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET
201.2	MEGA TOP UNIT	3.8A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET
202.1	UNDERCOUNTER FREEZER	5.7A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET
202.2	68" WORKTOP REFR.	2.4A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET
207.1	REACH–IN SOLID DOOR FREEZER	6.0A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET
207.3	FREEZER, REACH–IN	6.3A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET
209A	WALK–IN COOLER LIGHTS	EST. 2.0A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	DIRECT CONNECTION
209B	WALK–IN EVAP. UNIT	10A EST.	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 3R DISC. SWITCH 30/1/15/3R
209C	WALK–IN CONDENSER	10A EST.	208/3	3#12, 1#12 GND., 3/4"c.	20/3	PROVIDE NEMA 3R DISC. SWITCH 30/3/20/3R
210A	WALK–IN COOLER LIGHTS	2.0A EST.	120/1	2#12, 1#12 GND., 1/2"c.	20/1	DIRECT CONNECTION
210B	WALK–IN EVAP. UNIT	10A EST.	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 3R DISC. SWITCH 30/1/15/3R
210C	WALK–IN CONDENSER	10A EST.	208/3	3#12, 1#12 GND., 3/4"c.	20/3	PROVIDE NEMA 3R DISC. SWITCH 30/3/20/3R
310	DISH MACHINE	23A	120/1	2#10, 1#10 GND., 3/4"c.	30/1	PROVIDE NEMA 3R DISC. SWITCH 30/1/30/3R
311.1	ICE MACHINE	11.1A	208/1	2#12, 1#12 GND., 1/2"c.	15/2	PROVIDE NEMA 1 DISC. SWITCH 30/2/15/1
330	BACK BAR KEG REFR.	3.5A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET
406.2	SODA DISPENSER	5A (EST.	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET
500	P.O.S. UNIT	5A (EST.	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET ALSO PROVIDE COM/DATA OUTLET
504	KIOSK UNITS (CONFIRM ELECTRICAL)	5A (EST.	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5–15R OUTLET ALSO PROVIDE COM/DATA OUTLET

SEQUENCE OF OPERATION:

NORMAL OPERATING CONDITIONS HOOD UNITS

1. ANSUL SYSTEM MICRO SWITCH IN CLOSED POSITION.
2. COIL ON CONTACTORS "C1", "C2", "C3", "C4", "C5", "C6", "C7","C8", AND "C9" ARE ENERGIZED.
3. UNDER HOOD EQUIPMENT CONTACTS AND MAKE–UP AIR UNIT CONTACTS ARE CLOSED AND FUNCTION UNDER NORMAL CONTROL OPERATION.
4. EXHAUST FAN CONTACTS ARE OPEN AND OPERATE UNDER NORMAL CONTROL OPERATION BY OTHERS.

ACTIVATION OF ANSUL SYSTEM HOOD UNITS

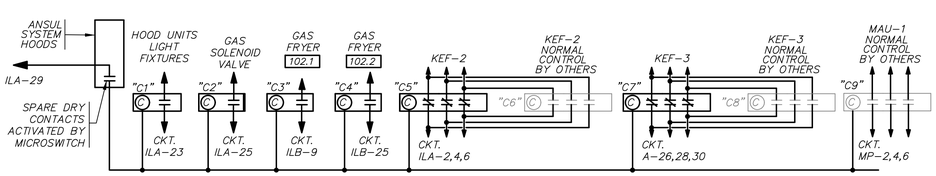
1. ANSUL SYSTEM MICRO SWITCH SWITCHES TO THE OPEN POSITION.
2. COIL ON CONTACTORS "C1", "C2", "C3", "C4", "C5", "C6", "C7", "C8", AND "C9" ARE DE–ENERGIZED.
3. UNDER HOOD EQUIPMENT CONTACTS AND MAKE–UP AIR UNIT CONTACTS ARE OPEN AND WILL NOT FUNCTION UNTIL ANSUL SYSTEM IS RESET.
4. EXHAUST FAN CONTACTS ARE CLOSED AND OPERATE REGARDLESS OF NORMAL CONTROL POSITION. FANS REMAIN IN THE ON POSITION UNTIL ANSUL SYSTEM IS RESET.

NOTES:

- ALL CONTACTORS FOR FANS SHALL BE 30 AMP, ALL OTHERS TO BE 30 AMP ELECTRICALLY HELD. NUMBER OF POLES AS INDICATED.

GENERAL NOTES:

- E.C. TO COORDINATE EXACT REQUIREMENTS WITH HOOD SUPPLIER (CAPTIVE AIRE) DRAWINGS PART OF MECHANICAL SET, AND WITH FIRE SUPPRESSION SYSTEM SUPPLIER.
- E.C. TO CONFIRM ALL KITCHEN EQUIPMENT TO BE LOCATED UNDER HOODS AND WHETHER OR NOT THEY HAVE AN ELECTRICAL CONNECTION OR IF THEY ARE GAS ONLY WITH NO ELECTRICAL CONNECTION.



KITCHEN HOOD UNITS – SHUT DOWN ONE–LINE N.T.S.

PROJECT NUMBER: APS..616.24

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PLUMBING ENGINEER:
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ELECTRICAL ENGINEER:
APS, INC.
ELECTRICAL ENGINEERS
APSINC.BIZ

PERMIT SET

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
PERMIT SET	10-11-2024

SEAL:

COLORADO LICENSED PROFESSIONAL ENGINEER 36172 October 10, 2024

ELECTRICAL NORTH KITCHEN POWER PLAN

DRAWING NUMBER:

E2.2

KITCHEN EQUIPMENT SCHEDULE

KEY	ITEM	LOAD	VOLTAGE/ PHASE	FEEDER	BREAKER	NOTES
B101	36" WORKTOP FREEZER	4.1A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5-15R OUTLET
B102	MEAT SLICER	14A (EST.)	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5-15R OUTLET
B103	REACH-IN REFR.	7.2A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5-15R OUTLET
B104	RICE COOKER	3000W	240/1 (208/1)	2#12, 1#12 GND., 1/2"c.	20/2	PROVIDE NEMA 6-20R OUTLET AND CORD & PLUG TO MATCH
B105	48" SALAD PREP	1/3 HP	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5-15R OUTLET
B106	70" SALAD PREP	7.8A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5-15R OUTLET
B107	SAUCE WARMER	10.4A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5-15R OUTLET
B108	U.C. FREEZER	4.5A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5-15R OUTLET
B109	U.C. REFR.	2.6A	120/1	2#12, 1#12 GND., 1/2"c.	20/1	PROVIDE NEMA 5-15R OUTLET
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SEQUENCE OF OPERATION:

NORMAL OPERATING CONDITIONS HOOD UNITS
1. ANSUL SYSTEM MICRO SWITCH IN CLOSED POSITION.
2. COIL ON CONTACTORS "C1", "C2", "C3", "C4", AND "C5" ARE ENERGIZED.
3. UNDER HOOD EQUIPMENT CONTACTS AND MAKE-UP AIR UNIT CONTACTS ARE CLOSED AND FUNCTION UNDER NORMAL CONTROL OPERATION.
4. EXHAUST FAN CONTACTS ARE OPEN AND OPERATE UNDER NORMAL CONTROL OPERATION BY OTHERS.

ACTIVATION OF ANSUL SYSTEM HOOD UNITS
1. ANSUL SYSTEM MICRO SWITCH SWITCHES TO THE OPEN POSITION.
2. COIL ON CONTACTORS "C1", "C2", "C3", "C4", AND "C5" ARE DE-ENERGIZED.
3. UNDER HOOD EQUIPMENT CONTACTS AND MAKE-UP AIR UNIT CONTACTS ARE OPEN AND WILL NOT FUNCTION UNTIL ANSUL SYSTEM IS RESET.
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NOTES:

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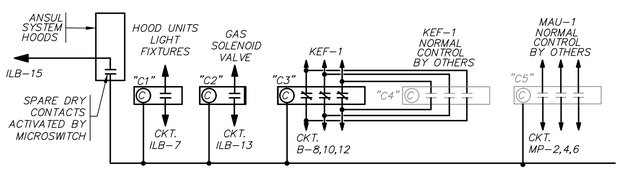
GENERAL NOTES:

- E.C. TO COORDINATE EXACT REQUIREMENTS WITH HOOD SUPPLIER (CAPTIVE AIRE) DRAWINGS PART OF MECHANICAL SET, AND WITH FIRE SUPPRESSION SYSTEM SUPPLIER.
- E.C. TO CONFIRM ALL KITCHEN EQUIPMENT TO BE LOCATED UNDER HOODS AND WHETHER OR NOT THEY HAVE AN ELECTRICAL CONNECTION OR IF THEY ARE GAS ONLY WITH NO ELECTRICAL CONNECTION.



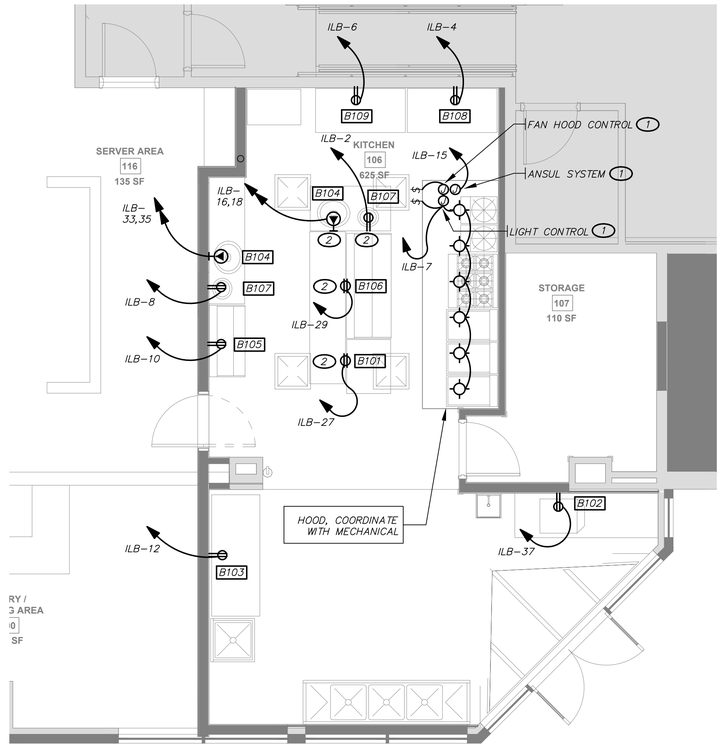
KITCHEN HOOD UNITS – SHUT DOWN ONE-LINE N.T.S.

GENERAL NOTES:

- PER NEC 210.8 (B) PROVIDE 'GFI' TYPE RECEPTACLES OR CIRCUIT BREAKERS AS REQUIRED.
- ALL DUPLEX RECEPTACLES TO BE 'TAMPER-PROOF' TYPE.
- COORDINATE ALL KITCHEN EQUIPMENT WITH SUPPLIER. EACH EQUIPMENT ITEM SHOWN TO BE ON SEPARATE CIRCUIT TO EXISTING PANELS, SEE SHEET E2.1 FOR PANEL LOCATIONS.

REFERENCE NOTES (THIS SHEET ONLY)

1. COORDINATE EXACT CONTROLS AND HOOD UNIT SHUTDOWN WITH OWNER'S KITCHEN EQUIPMENT SUPPLIER AND CAPTIVE-AIRE CONSULTANTS.
2. COORDINATE MOUNTING TYPE FOR OUTLET, FLOOR PEDESTAL OR DROP CORD TYPE WITH KITCHEN EQUIPMENT SUPPLIER.



ELECTRICAL SOUTH KITCHEN PLAN
SCALE: 1/4" = 1'-0"

PROJECT NUMBER: APS..616.24

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ADONAI
APSINC.BIZ

PERMIT SET

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
PERMIT SET	10-11-2024

SEAL:

October 10, 2024

ELECTRICAL SOUTH KITCHEN POWER PLAN

DRAWING NUMBER:

E2.3

COMcheck Software Version COMcheckWeb
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: BONCHON and BROWN DONKATSU
Project Type: New Construction

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)
Credits: 10.0 Required 0.0 Proposed

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Dining: Bar Lounge/Leisure	4891	0.80	3913
		Total Allowed Watts =	3913

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-Dining: Bar Lounge/Leisure				
LED: TYPE A: LED STRIPLIGHT: Other:	1	5	52	260
LED: TYPE A1: LED STRIPLIGHT: Other:	1	1	15	15
LED: TYPE B, BE: LED PANEL LIGHT: Other:	1	8	41	328
LED: TYPE C: LED DOWNLIGHT: Other:	1	5	14	70
LED: TYPE G,G1: LED PENDANT LIGHT: Other:	1	20	17	340
LED: TYPE H,H1: LED TRACK LIGHT HEAD: Other:	1	63	15	945
Track Lighting: EXISTING: EXISTING 8' TRACK: Wattage based on total luminaires	0	0	120	120
Incandescent: EXISTING: EXISTING PENDANT: Incandescent 60W:	1	3	60	180
Incandescent: EXISTING: EXISTING DOWNLIGHTS: Incandescent 60W:	1	60	15	900
Linear Fluorescent: EXISTING: WRAPAROUND: Other: --:	1	10	68	680
		Total Proposed Watts =		3838

Interior Lighting PASSES: Design 2% better than code

Interior Lighting Compliance Statement

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 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Randy Bremmer - Design Consultant — Name - Title
Signature
10.10.24 — Date

MECHANICAL EQUIPMENT SCHEDULE

KEY	DESCRIPTION	HP	VOLT	PHASE	AMPS	KVA	WIRE AND CONDUIT	REMARKS
EF 1	EXHAUST FAN UNIT NO.1	---	120	1	–	7 WATTS	2#12, 1#12 GND., 1/2"c.	PROVIDE 'Ssu', RUNS 24/7
EWH 1	ELECTRIC WALL HEATER UNIT NO. 1	---	208	1	–	3 KW	2#12, 1#12 GND., 1/2"c.	PROVIDED WITH INTEGRAL DISC. MEANS
FC 1	FAN COIL UNIT NO. 1	---	208	1	0.4A	---	2#12, 1#12 GND., 1/2"c.	WIRE THRU HP-1 OUTDOOR UNIT
HP 1	HEAT PUMP UNIT NO. 1	---	208	1	25 MCA 35 MOCP	---	2#8, 1#10 GND., 3/4"c.	PROVIDE NEMA 3R DISC. SWITCH 60/2/35/3R
KEF 1	KITCHEN EXHAUST FAN UNIT NO. 1	3 HP	208	3	–	---	3#12, 1#12 GND., 1/2"c.	PROVIDE NEMA 3R DISC. SWITCH 30/3/17.5/3R
KEF 2,3	KITCHEN EXHAUST FAN UNIT NO. 2,3	2 HP	208	3	–	---	3#12, 1#12 GND., 1/2"c.	PROVIDE NEMA 3R DISC. SWITCH 30/3/10/3R
KEF 4	KITCHEN EXHAUST FAN UNIT NO. 4	1/4 HP	120	1	–	---	2#12, 1#12 GND., 1/2"c.	PROVIDE 'Ssu' WP CONTROL BY MECH., COORDINATE
MAU 1	MAKE-UP AIR UNIT NO. 1	---	208	3	104.3 MCA 125 MOCP	---	3#1, 1#6 GND., 1 1/2"c.	PROVIDE NEMA 3R DISC. SWITCH 200/3/125/3R
PP 1,2	POTABLE PUMP UNIT NO. 1,2	---	120	1	–	45 WATTS	2#12, 1#12 GND., 1/2"c.	PROVIDE 'Ssu'
PWH 1,2	POTABLE WATER HEATER UNIT NO. 1,2	---	120	1	–	400 WATTS	2#12, 1#12 GND., 1/2"c.	PROVIDE 'Ssu'
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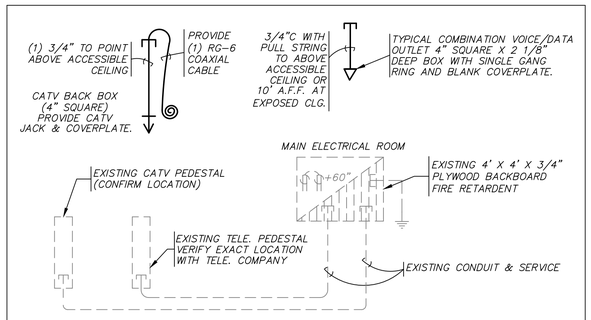


SPECIAL SYSTEMS ONE-LINE DIAGRAM N.T.S.

LIGHTING FIXTURE SCHEDULE

TYPE	LAMPS	DESCRIPTION	FINISH	MOUNTING	MANUFACTURER	CAT. NO.	VOLTS
A	LED FURN W/UNIT	48" LONG LED STRIPLIGHT WITH LENS	WHITE	SURFACE	LITHONIA	ZL1N-LED-L48-7000LM-FST-120-30K-80CRI-WH	120
A1	LED FURN W/UNIT	24" LONG LED STRIPLIGHT WITH LENS	WHITE	SURFACE ABOVE DOOR	LITHONIA	ZL1N-LED-L24-1500LM-FST-120-30K-80CRI-WH	120
B	LED W/ UNIT	2' X 2' LED PANEL LIGHT IN GRID TYPE CEILING	WHITE	RECESSED	LITHONIA	CPANL-2X2-ALO1-SWW7-M4	120
BE	LED W/ UNIT	2' X 2' LED PANEL LIGHT IN GRID TYPE CEILING WITH BATTERY BACKUP	WHITE	RECESSED	LITHONIA	CPANL-2X2-ALO1-SWW7-M4-ILBLP-CP10-HE-SD-A	120
C	LED FURN W/UNIT	6" DIA. LED DOWNLIGHT	WHITE	RECESSED	LITHONIA	WF6-LED-27K30K35K-90CRI-MW	120
E	LED FURN W/UNIT	EMERGENCY BATTERY UNIT WITH TWO ADJUSTABLE HEADS	WHITE	WALL AT +7'-6" A.F.F.	LITHONIA	ELM4L	120
EX	NOTE NO.1	EXISTING LIGHTING FIXTURE TO REMAIN, CLEAN AND RE-LAMP AS REQUIRED	EXISTING	EXISTING, SEE PLANS	EXISTING	EXISTING TO REMAIN	120
G	LED FURN W/UNIT	16" DIA. x 11" H. LED PENDANT LIGHT	BLACK (CONFIRM)	PENDANT (CONFIRM HEIGHT)	G LIGHTING	GL-2350-A-NA-BLK-MO-4-BC CONFIRM HT.	120
G1	LED FURN W/UNIT	6" DIA. x 15" H. LED PENDANT LIGHT	BLACK (CONFIRM)	PENDANT (CONFIRM HEIGHT)	G LIGHTING	GL-6577-A-W-BLK-4-BC CONFIRM HT.	120
H	LED FURN W/UNIT	6'-0" SURFACE TRACK WITH (3) THREE LED ADJUSTABLE TRACK HEADS	BLACK	SURFACE	JUNO	TRACK #T-6FT-BL HEADS (3) #R620L-30K-90CRI-PDIM-VBS-BL	120
H1	LED FURN W/UNIT	8'-0" SURFACE TRACK WITH (4) FOUR LED ADJUSTABLE TRACK HEADS	BLACK	SURFACE	JUNO	TRACK #T-8FT-BL HEADS (3) #R620L-30K-90CRI-PDIM-VBS-BL	120
X,X1	LED W/ UNIT	SINGLE/DOUBLE FACE LED EXIT LIGHT WITH BATTERY BACKUP	WHITE (CONFIRM)	SEE PLANS	LITHONIA	LQM-S-W-3-G-MVOLT-ELN	120

LIGHTING FIXTURE SCHEDULE NOTES:
1. CLEAN FIXTURE, RE-LAMP EXISTING BULB(S) TO MAKE FIXTURES OPERATIONAL IF REQUIRED, FIELD CONFIRM.

EXISTING/NEW FEEDER SCHEDULE

125Y (4 #1 THWN CU & 1#8 CU GRD) 2"C
200Y (4#3/0 THWN CU & 1#6 CU GRD)2-1/2"C
400Y 2-RUNS[(4#3/0 THWN CU & 1#3 CU GRD)2-1/2"C] **OR** 2-RUNS[(4#250 MCM THWN AL & 1 #3 CU GRD)3"C]
SERV. 800Y ESTIMATED AS 3-RUNS[(4#500 MCM THWN AL & 1 #4/0 CU GRD)4"C]
100Y (4 #1 THWN CU & 1#8 CU GRD) 2"C

LOAD SUMMARY ON EXISTING SERVICE

PANEL 'MP' = = 134940 KVA
PANEL '1LA' = = 26830 KVA
PANEL '1LB' = = 53181 KVA
214,951 KVA
KITCHEN EQUIP DIVERSITY PER NEC 220.56 = – 15,835
199,116

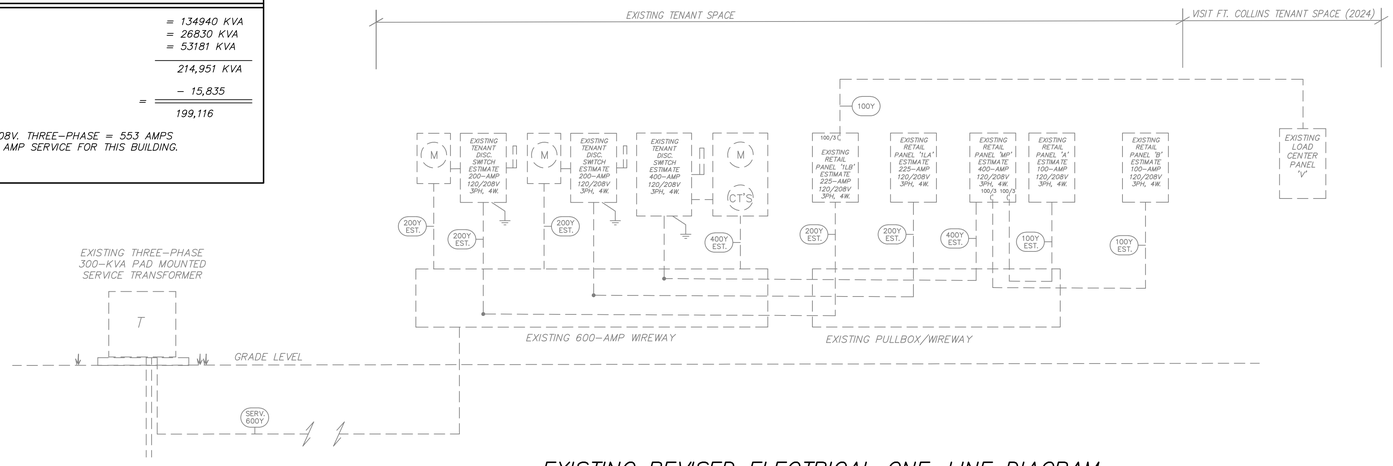
199.116 KVA @ 208V. THREE-PHASE = 553 AMPS
ON EXISTING 600 AMP SERVICE FOR THIS BUILDING.

SERIES RATING SPECIFICATION

Where series rating combinations are shown on the plans, the loadside circuit breakers supplied shall be test and listed as a series combination with the line side feeder fuses per the plans. Panelboards with series rated loadside circuit breakers shall have a manufacturer's label stating the listing for the series combination interrupting rating for the loadside circuit breakers and the lineside fuse combination, in compliance with NEC Section 240-86. This series rating shall be equal to or greater than the available short-circuit current.

Where series rated combinations are utilized, the electrical contractor shall affix field installed labels to the loadside circuit breaker panelboard and feeder switch/panelboard/switchboard, in compliance with NEC Section 110-22. As required in Section 110-22, the loadside panelboard/switchboard label shall be field marked with the short-circuit rating of the series combination, type circuit breaker for replacement, part number for the series rated lineside, feeder fuses and location/name of this fuse switch/panelboard/switchboard. The panel/switch with the lineside fuses shall be field marked with short-circuit rating of the series combination, part number for fuse replacement and the location/name of loadside, series rated panelboard/switchboard.

If the manufacturer/supplier/installer cannot supply tested and listed series rated combinations of the specified loadside circuit breakers with the specified line side fuses, it is their responsibility to provide loadside circuit breakers that have fully rated interrupting ratings equal to or greater than the short-circuit current available at the loadside circuit breakers.



EXISTING REVISED ELECTRICAL ONE-LINE DIAGRAM N.T.S.
SERVICE CHARACTERISTIC: 120/208 VOLT, 3-PHASE, 4-WIRE W/GND

PROJECT NUMBER: APS..616.24

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
FORT COLLINS, CO 80524

VFLA ARCHITECTURE + INTERIORS
419 CANYON AVE STE 200, FORT COLLINS, CO 80521
970.224.1191 | WWW.VFLA.COM
STRENGTH IN DESIGN
STRENGTH IN PARTNERSHIP
STRENGTH IN COMMUNITY

PROJECT TEAM

STRUCTURAL ENGINEER:
LARSEN STRUCTURAL DESIGN

MECHANICAL ENGINEER:
INTEGRATED MECHANICAL, LLC.

PLUMBING ENGINEER:
INTEGRATED MECHANICAL, LLC.

ELECTRICAL ENGINEER:
APS, INC.
ELECTRICAL ENGINEERS
APSINC.BIZ

PERMIT SET

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
PERMIT SET	10-11-2024

SEAL:
COLORADO LICENSED 36172 PROFESSIONAL ENGINEER
October 10, 2024

ELECTRICAL ONE-LINE DIAGRAMS & SCHEDULES

DRAWING NUMBER:
E3.1

EXISTING PANELBOARD "A" SCHEDULE

MAIN BUS: 125A				LOAD–VA					LOAD–VA				LOCATION: ELECTRICAL ROOM			
VOLTAGE: 208Y/120V, 3–PH,4W.													MOUNTING: SURFACE			
PANEL TYPE: LTG. & APPL.													MINIMUM AIC: FIELD VERIFY			
CKT. NO.	AMPS	POLES	LOAD SERVED	LTG.	RECP.	MECH.	SPARE	PHASE	LTG.	RECP.	MECH.	KITCHEN	LOAD SERVED	AMPS	POLES	CKT. NO.
• 1	20	1	RECEPT. WEST EM LTS	–	–	–	–	A	–	–	3900	–	RTU	50		2
• 3	20	1	WALK IN COOLER	–	–	–	–	B	–	–	3900	–	–			4
5	20	1	ROOF TOP GFI RECP.	–	800	–	–	C	–	–	3900	–	–		3	6
7	20	1	DINING LIGHTS	800	–	–	–	A	200	–	–	–	EXIT & EM LIGHTS	20	1	8
9	20	1	FLOW SWITCH	–	–	100	–	B	200	–	–	–	EXIT & EM LIGHTS	20	1	10
11	20	1	DINING TRACK	900	–	–	–	C	–	–	100	–	OLD FIRE PANEL	20	1	12
13	20	1	DINING TRACK	960	–	–	–	A	–	–	100	–	NEW FIRE PANEL	20	1	14
15	20	1	DINING TRACK	960	–	–	–	B	–	–	–	–	RECEPT UNDER HOOD	20	1	16 •
17	20	1	DINING TRACK	960	–	–	–	C	–	–	–	–	RECEPT UNDER PANEL	20	1	18 •
19	20	1	LOBBY LIGHTS	200	–	–	–	A	–	–	770	–	EF–1, KEF–4	20	1	20
• 21	20	1	RECPT, EM LIGHTS	–	–	–	–	B	–	–	445	–	PWH–1, PP–1	20	1	22
• 23	20	1	S. WINDOW RECEPS	–	–	–	–	C	–	–	445	–	PWH–2, PP–2	20	1	24
• 25	20	1	EXHAUST FANS	–	–	–	–	A	–	–	–	936	KEF–3	15		26 *
27	20	1	W. DINING LIGHTS	600	–	150	–	B	–	–	–	936	–			28
29	20	1	S. KITCHEN LIGHTS	740	–	–	–	C	–	–	–	936	–		3	30
			CONN. LOAD	6120	800	250	–		400	–	13560	2808	CONN. LOAD			
			% DF	1.25	NEC	1.0	–		1.25	–	1.0	1.0	% DF			
			EMD	7650	800	250	–		500	–	13560	2808	EMD			
			EMD = 25568 VA / SYS. VOLT 208√3 = 71A						MAIN BREAKER SIZE: – / OR MAIN LUG ONLY (MLO): 125A							

* REPLACE EXISTING BREAKER IN SIZE AS SHOWN.
• VERIFY IF EXISTING CIRCUIT IS STILL ACTIVE, IF YES UPDATE SCHEDULE, IF NO AS SUSPECTED RE–LABEL AS "SPARE" AND DISCONNECT ANY REMAINING WIRING.

EXISTING PANELBOARD "1LA–70" SCHEDULE

MAIN BUS: 225A				LOAD–VA					LOAD–VA				LOCATION: ELECTRICAL ROOM			
VOLTAGE: 208Y/120V, 3–PH,4W.													MOUNTING: SURFACE			
PANEL TYPE: LTG. & APPL.													MINIMUM AIC: FIELD VERIFY			
CKT. NO.	AMPS	POLES	LOAD SERVED	LTG.	RECP.	MECH.	KITCHEN	PHASE	LTG.	RECP.	MECH.	KITCHEN	LOAD SERVED	AMPS	POLES	CKT. NO.
1	20		COOLER COMP.(209C)	–	–	–	1200	A	–	–	–	936	KEF–2	15		2 *
3			–	–	–	–	1200	B	–	–	–	936	–			4
5		3	–	–	–	–	1200	C	–	–	–	936	–		3	6
7	20		COOLER COMP. (210C)	–	–	–	1200	A	–	–	–	–	–	20	1	8
9			–	–	–	–	1200	B	700	–	–	–	KITCHEN LIGHTS	20	1	10
11		3	–	–	–	–	1200	C	100	–	–	–	QUARTZ LIGHTS	20	1	12
13	20	1	GEN. OUTLETS	–	400	–	–	A	–	–	–	600	POS (500)	20	1	14
15	15	1	WARM COOLER FANS	–	–	–	1200	B	–	–	–	600	POS (500)(504)	20	1	16
17	15	1	COLD COOLER FANS	–	–	–	1200	C	–	–	–	600	POS (500)	20	1	18
19	20	1	TEST LAB RECP., SILO Φ	–	600	–	–	A	–	–	–	1550	RICE COOKER (III)	20	1	20
21	20	1	WARM COOLER LIGHTS	200	–	–	–	B	–	–	–	1560	RICE COOKER (III)	20	1	22
23	20	1	HOOD LIGHTS	400	–	–	–	C	–	–	–	–	BAR LIGHTS	20	1	24 •
25	20	1	SOLENDID VALVE	–	–	–	100	A	–	–	–	684	FREEZER (205.1)	20	1	26
27	20	1	COOLER LIGHT	200	–	–	–	B	–	–	–	684	FREEZER (205.1)	20	1	28
29	20	1	ANSUL SYSTEM	–	–	–	100	C	–	–	–	636	DRAWER WARMER (113)	20	1	30
31	20	1	LOBBY OUTLETS	–	600	–	–	A	–	–	–	756	FREEZER (207.3)	20	1	32
• 33	20	1	BATH RECP.	–	–	–	–	B	–	–	–	756	FREEZER (207.3)	20	1	34
• 35	20	1	BATH W.H.	–	–	–	–	C	–	–	–	600	SODA DISC. (406.2)	20	1	36
• 37	20	1	LIGHTS	–	–	–	–	A	–	–	–	420	KEG REFR. (330)	20	1	38
• 39	20	1	LIGHTS	–	–	–	–	B	–	–	–	576	WORKTOP REFR. (202.2)	20	1	40
• 41	20	1	LIGHTS	–	–	–	–	C	–	600	–	–	S. KITCHEN Φ	20	1	42
			CONN. LOAD	800	1600	–	9800		800	600	–	12830	CONN. LOAD			
			% DF	1.25	NEC	–	1.0		1.25	NEC	–	1.0	% DF			
			EMD	1000	1600	–	9800		1000	600	–	12830	EMD			
			EMD = 26830 VA / SYS. VOLT 208√3 = 75A						MAIN BREAKER SIZE: – / OR MAIN LUG ONLY (MLO): 200A							

* REPLACE EXISTING BREAKER IN SIZE AS SHOWN.
• VERIFY IF EXISTING CIRCUIT IS STILL ACTIVE, IF YES UPDATE SCHEDULE, IF NO AS SUSPECTED RE–LABEL AS "SPARE" AND DISCONNECT ANY REMAINING WIRING.

EXISTING PANELBOARD "MP" (HP–70) SCHEDULE

MAIN BUS: 400A				LOAD–VA					LOAD–VA				LOCATION: ELECTRICAL ROOM			
VOLTAGE: 208Y/120V, 3–PH,4W.													MOUNTING: SURFACE			
PANEL TYPE: LTG. & APPL.													MINIMUM AIC: FIELD VERIFY			
CKT. NO.	AMPS	POLES	LOAD SERVED	LTG.	RECP.	MECH.	SPARE	PHASE	LTG.	RECP.	MECH.	KITCHEN	LOAD SERVED	AMPS	POLES	CKT. NO.
• 1	20	1	OUTLETS FOR COOPERS	–	–	–	–	A	–	–	–	12516	MAU–1	125		2 *
• 3	20	1	OUTLETS (WEST WALL)	–	–	–	–	B	–	–	–	12516	–			4
• 5	20	1	OUTLETS FOR COOPERS	–	–	–	–	C	–	–	–	12516	–		3	6
7	30		RTU–2 (VERIFY UNIT)	–	–	2028	–	A	–	–	3900	–	RTU–4(VERIFY LABELING)	50		8
9		2	–	–	–	2028	–	B	–	–	3900	–	–			10
• 11	20	1	UNKNOWN LOAD	–	–	–	–	C	–	–	3900	–	–		3	12
13	50		RTU–3	–	–	3900	–	A	–	–	8523	–	PANEL 'A'	100		14
15			–	–	–	3900	–	B	–	–	8523	–	–			16
17		3	–	–	–	3900	–	C	–	–	8523	–	–		3	18
19	50		RTU FOR BREWERY AREA	–	–	3900	–	A	–	–	6220	–	PANEL 'B'	100		20
21			–	–	–	3900	–	B	–	–	6220	–	–			22
23		3	–	–	–	3900	–	C	–	–	6220	–	–		3	24
25	50		UNKNOWN LOAD	–	–	3900	–	A	–	–	–	1154	ICE MACHINE	15		26 *
27			–	–	–	3900	–	B	–	–	–	1154	–		2	28
29		3	–	–	–	3900	–	C	–	–	–	–	HEAT LAMPS	20	1	30 •
			CONN. LOAD	–	–	39156	–		–	–	55928	39856	CONN. LOAD			
			% DF	–	–	1.0	–		–	–	1.0	1.0	% DF			
			EMD	–	–	39156	–		–	–	55928	39856	EMD			
			EMD = 134940 VA / SYS. VOLT 208√3 = 375A						MAIN BREAKER SIZE: – / OR MAIN LUG ONLY (MLO): 400A							

* REPLACE EXISTING BREAKER IN SIZE AS SHOWN.
• VERIFY IF EXISTING CIRCUIT IS STILL ACTIVE, IF YES UPDATE SCHEDULE, IF NO AS SUSPECTED RE–LABEL AS "SPARE" AND DISCONNECT ANY REMAINING WIRING.

EXISTING PANELBOARD "1LB–70" SCHEDULE

MAIN BUS: –				LOAD–VA					LOAD–VA				LOCATION: ELECTRICAL ROOM			
VOLTAGE: 208Y/120V, 3–PH,4W.													MOUNTING: SURFACE			
PANEL TYPE: LTG. & APPL.													MINIMUM AIC: FIELD VERIFY			
CKT. NO.	AMPS	POLES	LOAD SERVED	LTG.	RECP.	MECH.	KITCHEN	PHASE	LTG.	RECP.	MECH.	KITCHEN	LOAD SERVED	AMPS	POLES	CKT. NO.
1	100		PANEL 'V'	–	–	5898	–	A	–	–	–	1248	WARMER (B107)	20	1	2
3			–	–	–	5898	–	B	–	–	–	540	U.C. FREEZER (B108)	20	1	4
5		3	–	–	–	5898	–	C	–	–	–	312	U.C. REFR. (B109)	20	1	6
7	20	1	HOOD LIGHTS	300	–	–	–	A	–	–	–	1248	WARMER (B107)	20	1	8
9	20	1	GAS FRYER (102.1)	–	–	–	1440	B	–	–	–	864	SALAD PREP (B105)	20	1	10
11	20	1	FREEZER (207.1)	–	–	–	720	C	–	–	–	864	REFR. (B103)	20	1	12
13	20	1	GAS SOLENIOD	–	–	–	100	A	–	600	–	–	DINING OUTLETS	20	1	14
15	20	1	ANSUL SYSTEM	–	–	–	100	B	–	–	–	1500	RICE COOKER (B104)	20		16
17	20	1	DINING OUTLETS	–	600	–	–	C	–	–	–	1500	–		2	18
19	50		RTU	–	–	3900	–	A	–	–	–	2760	DISHWASHER (310)	30	1	20
21			–	–	–	3900	–	B	–	–	–	–	SPACE ONLY			22
23		3	–	–	–	3900	–	C	–	–	–	–	SPARE	30	1	24
25	20	1	GAS FRYER (102.2)	–	–	–	1440	A	–	–	–	–	SPARE	30	1	26
27	20	1	FREEZER (B101)	–	–	–	492	B	–	–	–	–	SPARE	30	1	28
29	20	1	SALAD PREP (B106)	–	–	–	936	C	–	–	–	–	SPACE ONLY			30
31	20	1	DINING OUTLETS	–	600	–	–	A	–	–	–	912	MEGATOP (201.2)	20	1	32
33	20		RICE COOKER (B104)	–	–	–	1500	B	–	–	–	–	N. WALL OUTLET	20	1	34 •
35		2	–	–	–	–	1500	C	–	–	–	–	N. WALL OUTLET	20	1	36 •
37	20	1	MEAT SLICER (B102)	–	–	–	1680	A	–	–	–	728	HOLDING CABINET (106.1)	15		38
39			SPACE ONLY	–	–	–	–	B	–	–	–	728	–		2	40
41			SPACE ONLY	–	–	–	–	C	–	–	–	–	SPACE ONLY			42
			CONN. LOAD	300	1200	27894	9908		–	600	–	13204	CONN. LOAD			
			% DF	1.25	NEC	1.0	1.0		–	NEC	–	1.0	% DF			
			EMD	375	1200	27894	9908		–	600	–	13204	EMD			
			EMD = 53181 VA / SYS. VOLT 208√3 = 148A						MAIN BREAKER SIZE: – / OR MAIN LUG ONLY (MLO): –							

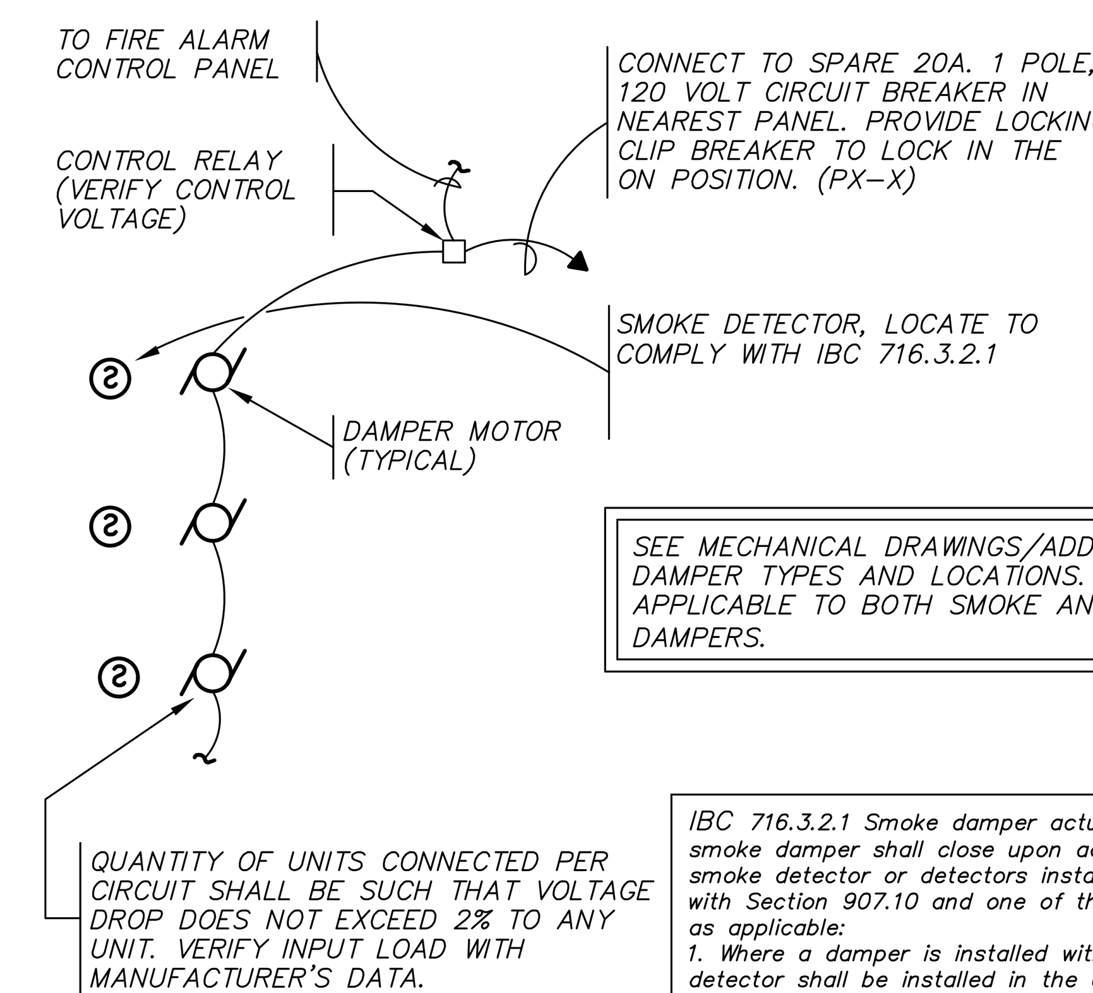
* REPLACE EXISTING BREAKER IN SIZE AS SHOWN.
• VERIFY IF EXISTING CIRCUIT IS STILL ACTIVE, IF YES UPDATE SCHEDULE, IF NO AS SUSPECTED RE–LABEL AS "SPARE" AND DISCONNECT ANY REMAINING WIRING.

EXISTING PANELBOARD "B" SCHEDULE

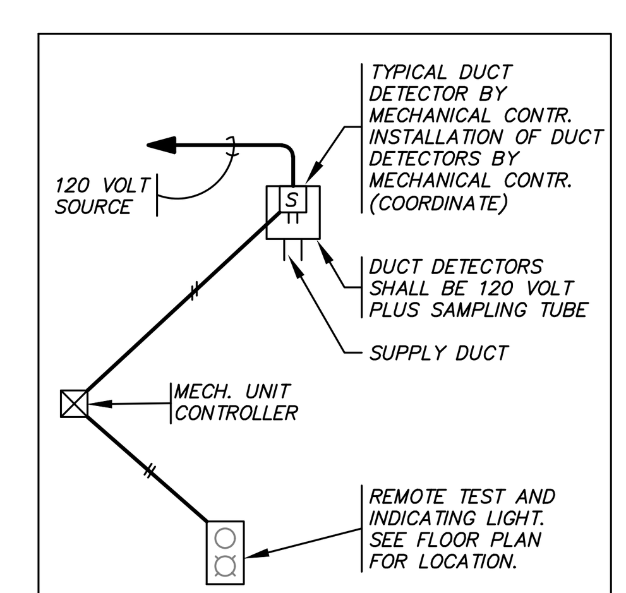
MAIN BUS: 125A				LOAD–VA					LOAD–VA				LOCATION: ELECTRICAL ROOM			
VOLTAGE: 208Y/120V, 3–PH,4W.													MOUNTING: SURFACE			
PANEL TYPE: LTG. & APPL.													MINIMUM AIC: FIELD VERIFY			
CKT. NO.	AMPS	POLES	LOAD SERVED	LTG.	RECP.	MECH.	SPARE	PHASE	LTG.	RECP.	MECH.	KITCHEN	LOAD SERVED	AMPS	POLES	CKT. NO.
• 1A	20	1	EAST EXHAUST FAN	–	–	–	–	A	–	–	–	–	WEST EXHAUST FAN	20	1	2A •
• 1B	20	1	CONVECTION OVEN	–	–	–	–	A	–	–	–	–	UC FRIG & SHEETER	20	1	2B •
* 3	20		EWH–1	–	–	1500	–	B	–	–	–	–	SHEETER & UC FRIG.	20	1	4 •
5		2	–	–	–	1500	–	C	–	–	–	–	COFFEE POT	20	1	6 •
7	50		RTU–5	–	–	3900	–	A	–	–	–	1320	KEF–1	20		8
9			–	–	–	3900	–	B	–	–	–	1320	–			10
11		3	–	–	–	3900	–	C	–	–	–	1320	–		3	12
			CONN. LOAD	–	–	14700	–		–	–	–	3960	CONN. LOAD			
			% DF	–	–	1.0	–		–	–	–	1.0	% DF			
			EMD	–	–	14700	–		–	–	–	3960	EMD			
			EMD = 18660 VA / SYS. VOLT 208√3 = 52A						MAIN BREAKER SIZE: – / OR MAIN LUG ONLY (MLO): 125A							

* REPLACE EXISTING BREAKER IN SIZE AS SHOWN.
• VERIFY IF EXISTING CIRCUIT IS STILL ACTIVE, IF YES UPDATE SCHEDULE, IF NO AS SUSPECTED RE–LABEL AS "SPARE" AND DISCONNECT ANY REMAINING WIRING.

NOTE:
NEW BREAKERS TO BE ADDED TO EXISTING PANELS AS REQUIRED FOR NEW KITCHEN AND NEW MECHANICAL EQUIPMENT, SEE RESPECTIVE SCHEDULES. TYPICAL ALL EXISTING PANELS



SEE MECHANICAL DRAWINGS/ADDENDUMS FOR DAMPER TYPES AND LOCATIONS. THIS DETAIL APPLICABLE TO BOTH SMOKE AND FIRE/SMOKE DAMPERS.



FAN SHUTDOWN DETAIL
N.T.S.

IBC 716.3.2.1 Smoke damper actuation methods. The smoke damper shall close upon actuation of a listed smoke detector or detectors installed in accordance with Section 907.10 and one of the following methods, as applicable:
1. Where a damper is installed within a duct, a smoke detector shall be installed in the duct within 5 feet (1524 mm) of the damper with no air outlets or inlets between the detector and the damper. The detector shall be listed for the air velocity, temperature and humidity anticipated at the point where it is installed. Other than in mechanical smoke control systems, dampers shall be closed upon fan shutdown where local smoke detectors require a minimum velocity to operate.
2. Where a damper is installed above smoke barrier doors in a smoke barrier, a spot–type detector listed for releasing service shall be installed on either side of the smoke barrier door opening.
3. Where a damper is installed within an unducted opening in awall, a spot–type detector listed for releasing service shall be installed within 5 feet (1524 mm) horizontally of the damper.
4. Where a damper is installed in a corridor wall, the damper shall be permitted to be controlled by a smoke detection system installed in the corridor.
5. Where a total–coverage smoke detector system is provided within areas served by a heating, ventilation and air–conditioning (HVAC) system, dampers shall be permitted to be controlled by the smoke detection system.

5 SMOKE DAMPER CONNECTION DETAIL
SCALE: N.T.S.

PROJECT NUMBER: APS..616.24

BONCHON & BROWN DONKATSU

7 OLD TOWN SQUARE
FORT COLLINS, CO 80524

VFLA ARCHITECTURE + INTERIORS
419 CANYON AVE STE 200, FORT COLLINS, CO 80521
970.224.1191 | WWW.VFLA.COM

STRENGTH IN DESIGN
STRENGTH IN PARTNERSHIP
STRENGTH IN COMMUNITY

PROJECT TEAM

STRUCTURAL ENGINEER:
LARSEN STRUCTURAL DESIGN

MECHANICAL ENGINEER:
INTEGRATED MECHANICAL, LLC.

PLUMBING ENGINEER:
INTEGRATED MECHANICAL, LLC.

ELECTRICAL ENGINEER:
APS, INC.
ELECTRICAL ENGINEERS ADONAI
APSINC.BIZ

PERMIT SET

SHEET ISSUANCES

DESCRIPTION	DATE
DESIGN DEVELOPMENT	09-20-2024
PERMIT SET	10-11-2024

SEAL:

October 10, 2024

ELECTRICAL SCHEDULES & DETAILS

DRAWING NUMBER:
E3.2