PROJECT INFORMATION

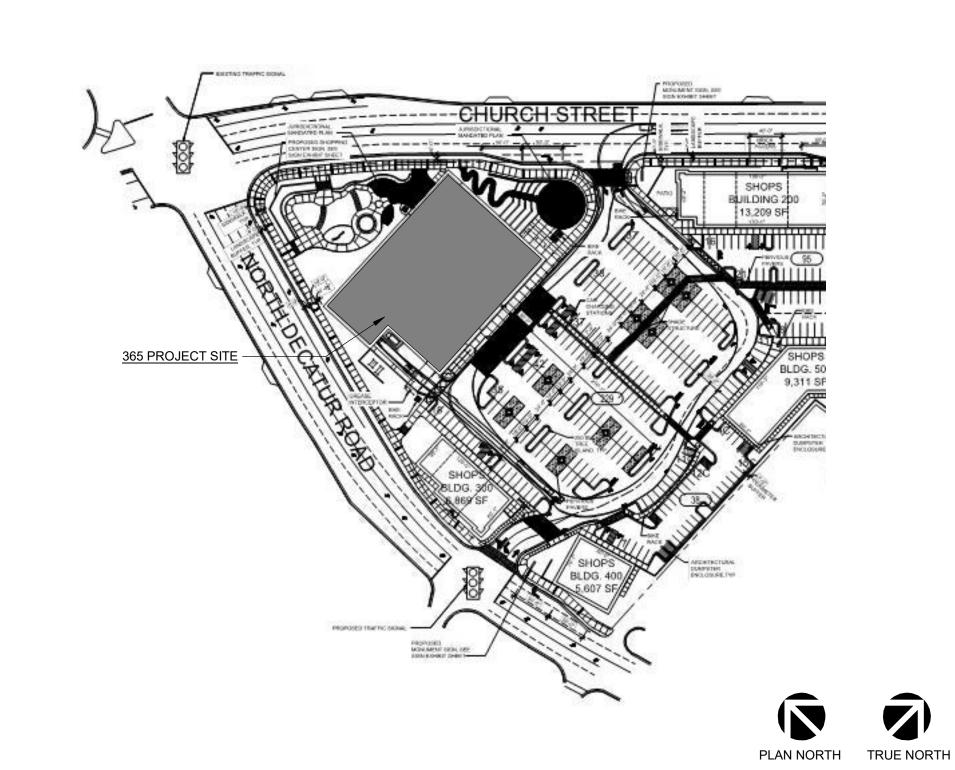
TENANT IMPROVEMENT DECATUR, GA

MARKET

1555 CHURCH STREET, DECATUR, GA 30030

DOCUMENT DATE: 01/29/18

PROJECT SITE



		RE	SI	20	NS	SIE	3IL	ITY MATRIX
		FUF	RNISI BY	HED じ	INS	STALI BY Ö		
CATEGORY SITE WORK	ITEM / SHELL	365	365 / G.0	L.L. / G.0	365	365 / G.(L.L. / G.(COMMENTS
	SITE WORK - SURVEY / AS BUILTS SITE LIGHTING - BUILDING PERIMETER SITE LIGHTING - FRIENDS OUTDOOR SEATING SITE LIGHTING - POLES & BASES			X X X			Х	PER LOCAL CODES AND ORDINANCES PER LOCAL CODES AND ORDINANCES
	BIKE RACKS CONDUIT AND PULL ROPE FOR FUTURE ELECTRICAL			X			Х	CONDUIT STUB INTO 365 SPACE, 2" MIN WITH PULL STRING
	VEHICLE CHARGING SPACES EXTERIOR 365 SIGNAGE	X			X			GC TO COORDINATE INSTALL SCHEDULE WITH 365 VENDOR; PREFERRED 365 VENDOR:
	DOCK PACKAGE			Х			X	Adart L.L. TO PROVIDE: DOCK LEVELER, DOCK DOOR, BUMPERS, DOCK SEALS DOCK LIGHT, BOLLARD, RECEIVING DOOR & DOOR CHIME/BUZZER, BOLLARDS AND DOCK PLATE TO BE PAINTED OSHA YELLOW
	SKYLIGHTS CART CORRAL, CARTS, AND APPROPRIATE SIGNAGE	Х		X		X	X	365 G.C. TO COORDINATE WITH 365 REPRESENTATIVE FOR CORRAL AND ADDITIONAL SIGNAGE INSTALL REQUIREMENTS
	INTERIOR FURRING AT PERIMETER WALL 6" METAL STUD FRAMING AND INSULATION WITH APPROPRIATE VAPOR BARRIER TO UNDERSIDE OF DECK PERIMETER WALL GYP BOARD		X			X		365 G.C. TO OBTAIN 3 BIDS AND L.L. TO REIMBURSE 365 FOR ALL COSTS INCLUDING G.C. MARK UP AND TESTING ASSOCIATED WITH THE FURRING AND INSULATION. SEE EXHIBIT E FOR SPECIFICATIONS GYP BOARD TO BE FINISHED & PAINTED AS INDICATED IN THIS SET
	EXTERIOR STOREFRONT WALLS			Х			Х	365 G.C. TO COORDINATE WITH 365 REPRESENTATIVE FOR COORDINATED CONSTRUCTION LEAVE OUT
	MAIN EXTERIOR ENTRY DOORS AND CONTROLS			Х				L.L. TO FURNISH POWER TO DOORS AND ROUGH-IN, INCLUDING PREPARATION FOR INSTALLATION BY VENDOR; PROTOTYPE MANUFACTURER: TORMAX.
	VESTIBULE / INTERIOR ENTRY DOORS ROOF TOP UNIT			X				L.L. TO FURNISH POWER TO DOORS AND ROUGH-IN, INCLUDING PREPARATION FOR INSTALLATION BY VENDOR; PROTOTYPE MANUFACTURER: TORMAX. L.L. TO PROVIDE ALL POWER, GAS PIPING AND SIEMENS CONTROL BOARD, SCREENING AS REQUIRED BY LOCAL MUNICIPALITY
	REFRIGERATION EQUIPMENT EXHAUST FANS, UNIT HEATERS, AND KITCHEN HOODS	X	X		X	X		G.C. TO USE 365 PREFERRED VENDOR: CaptiveAire
	MAIN ELECTRICAL SWITCH GEAR COMMUNICATIONS CONDUITS			X				(1600) AMP, 277/480 VOLT SERVICE WITH APPROPRIATE SUBPANELS FOR LL PROVIDED BUILDING EQUIPMENT TWO 4" CONDUITS WITH PULL STRINGS TO BE PROVIDED FROM TELEPHONE COMPANY
	FULLY ADRESSABLE FIRE ALARM PANEL AND			X				FACILITIES TO 365'S DESIGNATED DEMARC PER NFPA WITH REQUIRED CONNECTIONS TO HVAC EQUIPMENT AND FIRE SUPPRESSION
	CONNECTION TO LOCAL FIRE PROTECTION AGENCY FIRE SUPPRESSION SYSTEM			X				SYSTEM AT NO MORE THAN 50% CAPACITY L.L. TO PROVIDE GENERAL FIRE SUPPRESSION SYSTEM IN ACCORDANCE TO THE EXHIBIT E
	FIRE SUPPRESSION SYSTEMS MODIFICATIONS FOR		X			X		AND GOVERNING BUILDING CODE 365 G.C. TO DESIGN AND INSTALL MODIFICATIONS TO BASE COVERAGE SYSTEM FOR
	INTERIOR FIT-OUT CONCRETE SLAB		X			X		INTERIOR FIT-OUT. SUB BASE AND SLAB AS SPECIFIED IN THESE DOCUMENTS AND IN ACCORDANCE TO THE GEOTECHNICAL REPORT
	// MILLWORK MILLWORK		X			X		GC TO USE PREFERRED 365 VENDORS AS OUTLINED IN MILLWORK/FINISH SCHEDULE
RYWALL	MILLWORK ELECTRICAL AND DATA CHASE		Х			Х		CHECKSTANDS BY 365
OORS & W			X			Х		
INISHES	INTERIOR STOREFRONT		X			X		
	CONCRETE (POLISHED AND SEALED) EPOXY FLOORING WALL GRAPHICS	X	X		X	X		SEE FINISH PLANS AND LEGEND SEE FINISH PLANS AND LEGEND G.C. TO COORDINATE WITH 365 PREFERRED SIGNAGE VENDOR; PREFERRED 365 VENDOR: DL ENGLIGH
	GLASS VINYL	Х			X			GC TO COORDINATE INSTALL SCHEDULE WITH 365 VENDOR; PREFERRED 365 VENDOR: DL ENGLISH
	EQUIPMENT SCHEDULE & FURNITURE SCHEDULE REFRIGERATION/FREEZER EQUIPMENT INCLUDING ALL DOORS, PASSTHROUGHS AND CONTAINED EQUIPMENT	X			X	X		G.C. TO COORDINATE DELIVERY AND PROVIDE INSTALLATION FOR SINKS AND CHECKSTANDS. G.C. TO COORDINATE WORK PERFORMED BY VENDOR
	JANITORIAL EQUIPMENT AND SUPPLIES	Х			X			G.C. TO COORDINATE INSTALL SCHEDULE WITH 365 VENDOR; PREFERRED 365 VENDOR: SEALEDAIR DIVERSEY
URNISHING	BATHROOM ACCESSORIES SS FURNITURE (TABLES, SEATING, SYSTEMS FURNITURE)	X	X		X	X		G.C. TO PROVIDE AND INSTALL PER TOILET ACCESSORY SCHEDULE GC TO PROVIDE & INSTALL CUSTOMER SEATING COUNTER INCLUDING LEG SUPPORTS; GC TO PROVIDE INTERIOR CUSTOMER SEATING TABLE TOPS & COORDINATE W/ 365 FOR TABLE LEG SUPPORTS
ELECTRICAL	EXTERIOR SIGNAGE ELECTRICAL		Х			Х		G.C. TO COORDINATE WIRING AND CONTROLS WITH 365 REPRESENTATIVE. J-BOX AT SIGN LOCATION BY L.L.
	INTERIOR LIGHT FIXTURE PACKAGE	X				X		GC TO COORDINATE DELIVERY AND PROVIDE INSTALLATION; PREFERRED 365 VENDOR: BORDER STATES
LOW VOLTA	IFS ELECTRICAL GEAR EXIT SIGNAGE GE HARDWARE	X				X		
	P.O.S. SYSTEMS TELEPHONE SYSTEM AND HANDSETS TELECOM: VOICE AND DATA	X			X			G.C. TO COORDINATE INSTALLATION WITH 365 VENDOR: SAMGROUP G.C. TO COORDINATE INSTALLATION WITH 365 VENDOR: INSIGHT
	TELECOM: VOICE AND DATA WIRELESS ACCESS POINT ELECTRONIC SHELVING SYSTEM	X	X			X		G.C. TO COORDINATE WITH 365 VENDOR: INSIGHT G.C. TO COORDINATE WITH 365 VENDOR: TBD G.C. TO COORDINATE WITH 365 VENDOR: PRICER
	ELECTRONIC SHELVING SYSTEM CCTV AND SECURITY SOUND AND PAGING	X X X			X	X		G.C. TO COORDINATE WITH 365 VENDOR: PRICER G.C. TO COORDINATE WITH 365 VENDOR: PROTECTION 1 G.C. TO COORDINATE WITH 365 VENDOR: MOOD MEDIA
	HVAC AND LIGHTING CONTROLS REFRIGERATION CONTROLS	X			^	X		G.C. TO COORDINATE WITH 365 VENDOR: MOOD MEDIA G.C. TO COORDINATE WITH 365 VENDOR: SIEMENS / HILL PHOENIX G.C. TO COORDINATE WITH 365 VENDOR: MICRO THERMO
	REFRIGERANT LEAK DETECTION/POWER MONITORING GE CABLING	X				X		G.C. TO COORDINATE WITH 365 VENDOR: PARASENSE / HILL PHOENIX
	TELECOM: VOICE AND DATA WIRELESS ACCESS POINT		X			X		G.C. TO COORDINATE INSTALLATION WITH 365 VENDOR: INSIGHT G.C. TO COORDINATE INSTALLATION WITH 365 VENDOR: INSIGHT
	ELECTRONIC SHELVING SYSTEM CCTV AND SECURITY		X			X		G.C. TO COORDINATE INSTALLATION WITH 365 VENDOR: INSIGHT G.C. TO COORDINATE INSTALLATION WITH 365 VENDOR: INSIGHT
	SOUND AND PAGING HVAC AND LIGHTING CONTROLS		X			X		G.C. TO COORDINATE INSTALLATION WITH 365 VENDOR: MOOD MEDIA G.C. TO COORDINATE WITH 365 VENDOR: AMS
	REFRIGERATION CONTROLS REFRIGERANT LEAK DETECTION/POWER MONITORING		X			X		G.C. TO COORDINATE WITH 365 VENDOR: AMS G.C. TO COORDINATE WITH 365 VENDOR: AMS
OW VOLTA	GE TERMINATIONS TELECOM: VOICE AND DATA	X			X			G.C. TO COORDINATE TERMINATIONS BY 365 IT SQUAD
	WIRELESS ACCESS POINT ELECTRONIC SHELVING SYSTEM		X			X		G.C. TO COORDINATE TERMINATIONS WITH 365 VENDOR: INSIGHT G.C. TO COORDINATE TERMINATIONS WITH 365 VENDOR: INSIGHT
	CCTV AND SECURITY SOUND AND PAGING	Х	X			X		G.C. TO COORDINATE TERMINATIONS WITH 365 VENDOR: INSIGHT G.C. TO COORDINATE TERMINATIONS WITH 365 VENDOR: MOOD MEDIA
	HVAC AND LIGHTING CONTROLS REFRIGERATION CONTROLS REFRIGERANT LEAK DETECTION/POWER MONITORING Y		X X X			X X X		G.C. TO COORDINATE WITH 365 VENDOR: AMS G.C. TO COORDINATE WITH 365 VENDOR: AMS G.C. TO COORDINATE WITH 365 VENDOR: AMS
	INSPECTION COORDINATION FINAL MUNICIPAL CERTIFICATION		X			X		
	SUBCONTRACTOR PERMITS TESTING AND BALANCING		X			X		G.C. TO COORDINATE WITH SIEMENS
	STARTUP COMMISSIONING	X			X	-		G.C. TO COORDINATE WITH AMS G.C. TO COORDINATE WITH 365, AMS
	VERTICAL CIRCULATION STAIR, ELEVATOR			X			X	
		1	_	X			X	

DRAWING INDEX

ELECTRICAL LIGHTING PLAN

ELECTRICAL LIGHTING PLAN - MEZZANINE

ELECTRICAL POWER ENLARGED PLANS

ELECTRICAL SPECIAL SYSTEMS PLAN

ELECTRONIC SHELF LABEL SYSTEM PLAN

ELECTRICAL POWER SCHEDULES AND DETAILS

ELECTRICAL SPECIAL SYSTEMS PLAN - MEZZANINE

ELECTRICAL REFRIGERATION SCHEDULE & DETAILS

ELECTRICAL REFRIGERATION PANEL SCHEDULES

ELECTRICAL SPECIAL SYSTEMS SCHEDULES AND

LIGHTING SCHEDULES AND DETAILS

ELECTRICAL ROOF POWER PLAN

PUBLIC ADDRESS SYSTEM PLAN

ELECTRICAL ONE-LINE DIAGRAM

ELECTRICAL PANEL SCHEDULES

ELECTRICAL PANEL SCHEDULES

ELECTRICAL REFRIGERATION PLAN

EM000 ENERGY MANAGEMENT NOTES AND SYMBOLS

REFRIGERATION CONTROL PLAN

PARASENSE ONE-LINE DIAGRAM

ENERGY MANAGEMENT SCHEDULES

REFRIGERATION EMS CONTROL DETAILS EMS HVAC & LIGHTING ONE-LINE DIAGRAM

EMS REFRIGERATION ONE-LINE DIAGRAM

ENERGY MANAGEMENT PARASENSE DETAILS

ENERGY MANAGEMENT PARASENSE DETAILS

FIRE PROTECTION SYMBOLS, NOTES & DETAILS

ENERGY MANAGEMENT SIEMENS DETAILS ENERGY MANAGEMENT SIEMENS DETAILS

LIGHTING DIMMING PLAN

ELECTRICAL POWER PLAN

CCTV SYSTEMS PLAN

DETAILS

ENERGY MANAGEMENT

FIRE PROTECTION

REFRIGERATION

FP100 FIRE PROTECTION PLAN

FP101 FIRE PROTECTION PLAN - MEZZANINE

REFRIGERATION ROOF PLAN

REFRIGERATION DETAILS

REFRIGERATION SCHEDULES

REFRIGERATION PLAN

REFRIGERATION SYMBOLS & NOTES

EM100 ENERGY MANAGEMENT PLAN

GENERAL COVER SHEET ELECTRICAL GENERAL INFORMATION **ELECTRICAL SYMBOLS & NOTES**

PARTITION TYPES & DETAILS G004-A FIRST FLOOR LIFE SAFETY PLAN

G004-B MEZZANINE LIFE SAFETY PLAN PARTIAL SITE PLAN (FOR REFERENCE ONLY)

ARCHITECTURAL

FIRST FLOOR FIXTURE PLAN **EQUIPMENT SCHEDULE** FIRST FLOOR PLAN SLAB PLAN COOLER & FREEZER PLAN FIRST FLOOR REFLECTED CEILING PLAN

FIRST FLOOR LIGHTING PLAN **ROOF PLAN**

ENLARGED RESTROOM PLANS & ELEVATIONS WALL SECTIONS

FIRST FLOOR FINISH PLAN FINISH AND MATERIALS KEY INTERIOR ELEVATIONS

DOOR & WINDOW SCHEDULE & DETAILS INTERIOR DETAILS

INTERIOR DETAILS ENLARGED PLANS AND DETAILS

MEZZANINE FIXTURE PLAN MEZZANINE FLOOR PLAN

MEZZANINE REFLECTED CEILING PLAN AND LIGHTING MEZZANINE FINISH PLAN

STRUCTURAL

STRUCTURAL NOTES AND DETAILS

SLAB PLAN S200 DETAILS

MEP

MEP000 MEP EQUIPMENT CONNECTION SCHEDULE

MECHANICAL

M000 MECHANICAL SYMBOLS & NOTES

MECHANICAL PLAN MECHANICAL ROOF PLAN

MECHANICAL SCHEDULES

MECHANICAL DETAILS 1

MECHANICAL DETAILS 2 **MECHANICAL DETAILS 3**

MECHANICAL DETAILS 4

MECHANICAL DETAILS 5

PLUMBING

PLUMBING SYMBOLS, SCHEDULES & NOTES

PLUMBING WASTE & VENT PLAN

PLUMBING DRAIN DIMENSION PLAN PLUMBING WATER & GAS PLAN

PLUMBING MEZZANINE PLAN

PLUMBING ROOF PLAN PLUMBING WASTE & VENT RISER DIAGRAM

PLUMBING WATER AND GAS RISER DIAGRAM

PLUMBING DETAILS

RESPONSIBILITY MATRIX GENERAL NOTES

1. THIS RESPONSIBILITY MATRIX DELINEATES

- 365 FURNISHED ITEMS GC FURNISHED/PROVIDED ITEMS

- LANDLORD FURNISHED/PROVIDED ITEMS - ITEMS TO BE PURCHASED THROUGH DESIGNATED NATIONAL SUPPLIERS

DEFINITIONS: - O = OWNER (365)

- G.C. = GENERAL CONTRACTOR - L.L. = LANDLORD

 FURNISH = SUPPLY AND DELIVER TO PROJECT, FREIGHT ON BOARD TRUCK, UNLESS OTHERWISE DEFINED IN GREATER DETAIL - INSTALL = DESCRIBES OPERATIONS AT PROJECT, FROM INSPECTION TO UNLOADING, TO COMPLETION IN PLACE, READY FOR INTENDED USE.

3. SEE MEP-R DRAWINGS FOR ADDITIONAL INFORMATION

4. G.C. TO CONFIRM AND DETERMINE SCOPE OF WORK DURING PRE-CONSTRUCTION MEETING.

5. G.C. IS RESPONSIBLE FOR UNLOADING OWNER FURNISHED CONSTRUCTION ITEMS. REPORT ANY VISIBLE DAMAGE TO 365 REPRESENTATIVE

6. G.C. TO COORDINATE SCHEDULE AND DELIVERY WITH SUPPLIER, STANDARD SHIPPING PROVIDED BY 365. 7. G.C. IS RESPONSIBLE FOR ANY EXPEDITED SHIPPING COSTS. EXCEPT FOR 365 SUPPLIED ITEMS

8. G.C. REQUIRED TO PURCHASE FROM SUPPLIERS WITH WHOM 365 HAS INVENTORY PRICING AGREEMENT. G.C. RESPONSIBLE FOR PURCHASE AND DELIVERY.

9. COORDINATE WITH MEP-R DRAWINGS

USE GROUPS CONSTRUCTION TYPE CONSTRUCTION TYPE MERCANTILE - RETAIL SALES **FULLY SPRINKLERE** BUSINESS, KITCHEN, COMMERCIAL TRAVEL DISTANCE RECEIVING, STOCK, STORAGE, COOLERS

2014 NEC - GA STATE AMENDMENTS ACCESSORY 2012 IFC - GA STATE AMENDMENTS & THE GEORGIA FIRE SAFETY ASSEMBLY(UNCONCENTRATED), KITCHEN, COMMERCIAL 2010 DEPARTMENT OF JUSTICE ADA REQ. 2009 IEC - GA STATE AMENDMENTS ALLOWABLE AREA:

MAX TRAVEL DISTANCE: ACCESSORY EGRESS WIDTH REF SHEET G004 FOR ADDITIONAL EGRESS INFORMATION 37,500 SF EGRESS WIDTH FACTOR: EXIT WIDTH REQUIRED: ONE STORY (W/ MEZZANINE) EXIT WIDTH PROVIDED:

PROJECT TEAM

STRUCTURAL ENGINEER

(816) 421-4200

FIRE PROTECTION HOURLY FIRE-RESISTANCE RATING REQUIREMENTS PER TABLE 601 PROVIDED ASSEMBLY STRUCTURAL FRAME ROOF CONSTRUCTION 0 HOURS 0 HOURS EXTERIOR NONBEARING WALLS 0 HOURS 0 HOURS EXTERIOR BEARING WALLS: 0 HOURS INTERIOR BEARING WALLS: 0 HOURS 0 HOURS INTERIOR NONBEARING WALLS 0 HOURS 0 HOURS INTERIOR PARTITIONS: 0 HOURS

REQUIRED NUMBER OF EXITS: 1,137 OCCUPANTS: PROVIDED NUMBER OF EXITS:

4 EXITS 5 EXITS

FIRE PROTECTION ENGINEER ELECTRICAL ENGINEER ENERGY SQUARED TEXAS, LLC ENERGY SQUARED TEXAS, LLC

ENERGY SQUARED TEXAS, LLC SAM RODRIGUEZ 7330 SAN PEDRO, SUITE 402

SCOPE OF WORK

- FUTURE RESTAURANT (ZAK THE BAKER) NEW TENANT IMPROVEMENT

- NEW INTERIOR FINISHES **NEW OFFICES AND BREAKROOM** - NEW COOLERS AND FREEZERS

NEW STOCKROOM / BACK OF HOUSE **NEW EQUIPMENT** - NEW DINER AND PREP DEPARTMENTS

METAL STUD FRAMING

NEW TOILET ROOMS

- NEW SEATING AREAS

- NEW MECHANICAL, PLUMBING, ELECTRICAL, AND REFRIGERATION

COVER SHEET

Document date

Template date:

01/29/18

Project No.

brr

ARCHITECT OF RECORD

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architects and engineers. Reproduction of this

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 NO.
 DATE
 DESCRIPTION

 1
 03/06/18
 Addendum #1

2 05/21/18 Addendum #2

BOYD W. RAU 6700 ANTIOCH PLAZA SUITE 300 MERRIAM, KS 66204

www.brrarch.com

Tel: 913-262-9095 Fax: 913-262-9044

Consultants

365 BY WHOLE FOODS 601 N. LAMAR BOULEVARD, SUITE 300 AUSTIN, TX 78703 GLEN MOON (CONSTRUCTION MANAGER) - (413) 268-2184 NICK HANSON (CONSTRUCTION COORDINATOR) - (224) 650-1264

OWNER/TENANT

FUTURE/SEPARATE SUBMITTALS

TI PERMIT FOR FUTURE USE

EXTERIOR BUILDING SIGNAGE

SPRINKLER/FIRE PROTECTION

APPLICABLE CODES

BUILDING CODE:

MECHANICAL CODE:

PLUMBING CODE:

FIRE CODE:

ELECTRICAL CODE

ACCESSIBILITY CODE

ENERGY CODE:

CODE SUMMARY

2012 IBC - GA STATE AMENDMENTS

2012 IMC - GA STATE AMENDMENTS

2012 IPC - GA STATE AMENDMENTS

REF LOCAL CODE AMENDMENTS IN ADDITION TO THE CODES LISTED BELOW:

S.J. COLLINS ENTERPRISES 5 SW BROAD STREET, SUITE B P.O. BOX 214 FAIRBURN, GA 30213

LANDLORD/DEVELOPER

ALLOWABLE HEIGHT

BRR ARCHITECTURE AOR: BOYD RAU 6700 ANTIOCK PLAZA, SUITE 300 MERRIAM, KS 66204 (913) 262-9095

ARCHITECT

JOHNSTON BULKHOLDER ASSOCIATES BART J. HALVERSON 930 CENTRAL KANSAS CITY, MO 64105

CLIFF TILBURY

MECHANICAL AND PLUMBING ENGINEER

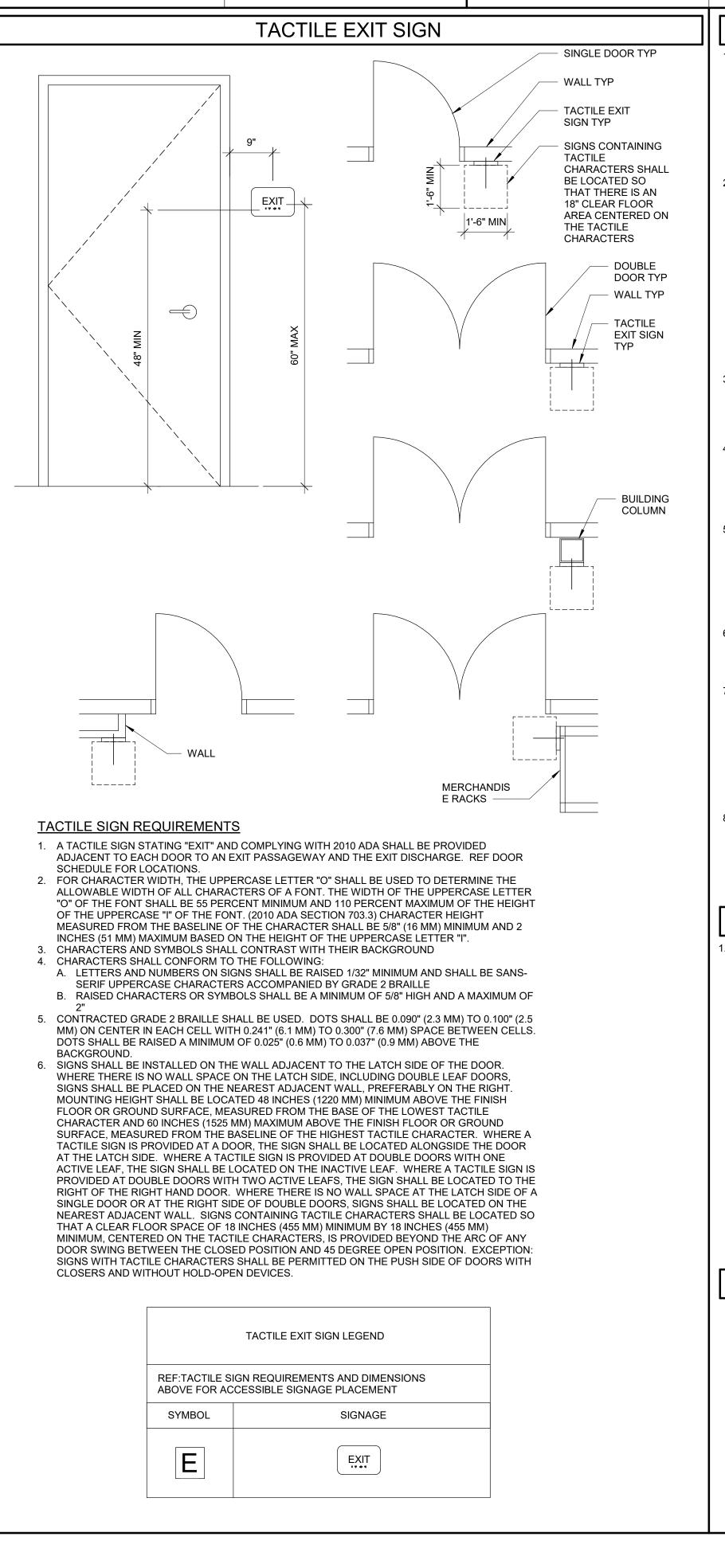
7330 SAN PEDRO, SUITE 402 SAN ANTONIO, TX 78216 (210) 510-2300 x101

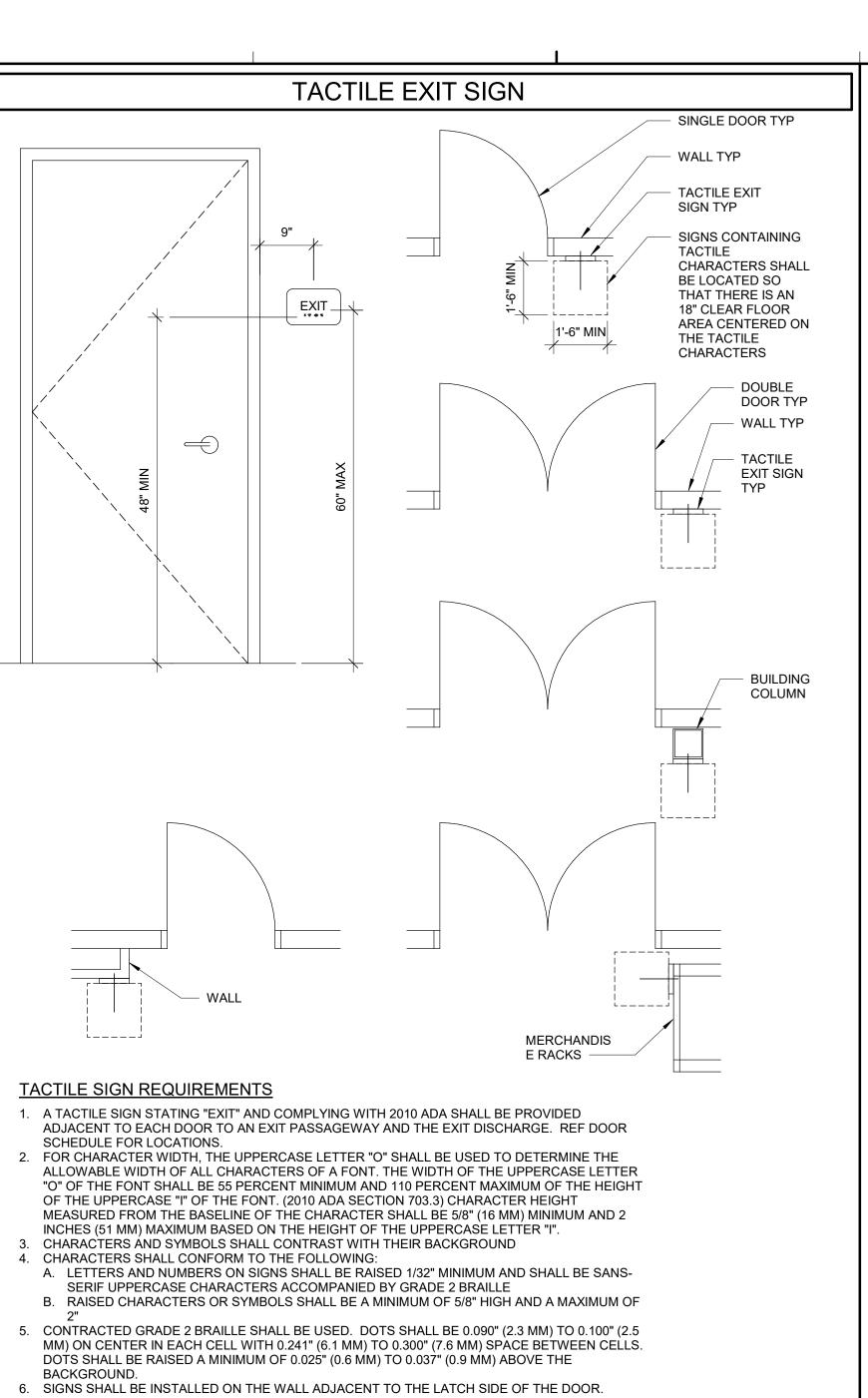
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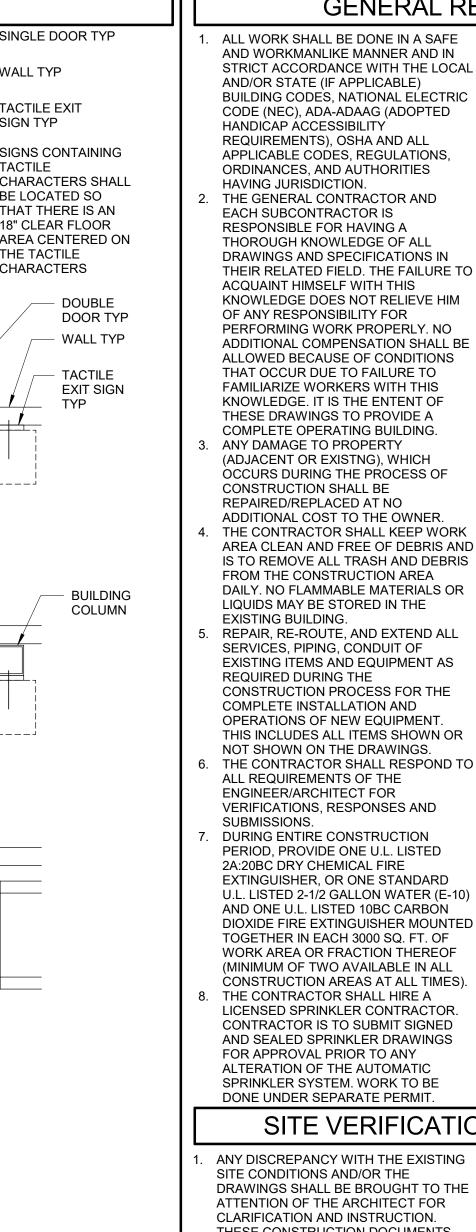
SAN ANTONIO, TX 78216 (210) 510-2300 x101

SAM RODRIGUEZ (210) 510-2300 x101

MOUNTING LOCATIONS - GENERAL







GENERAL REQUIREMENTS . ALL WORK SHALL BE DONE IN A SAFE 9. THE PROJECT SPECIFICATIONS ARE A PART OF THESE CONSTRUCTION AND WORKMANLIKE MANNER AND IN STRICT ACCORDANCE WITH THE LOCAL DOCUMENTS AND MUST BE REFERRED 1 AND/OR STATE (IF APPLICABLE) FOR COMPLETE DOCUMENTATION. BUILDING CODES, NATIONAL ELECTRIC 10. MUD AND DEBRIS TRACKED ONTO OWNER PAVING OR CITY STREETS TO BE CODE (NEC), ADA-ADAAG (ADOPTED HANDICAP ACCESSIBILITY CLEANED IMMEDIATELY. GENERAL CONTRACTOR TO COORDINATE REQUIREMENTS), OSHA AND ALL APPLICABLE CODES, REGULATIONS, CONCRETE WASH DOWN AREA. ORDINANCES, AND AUTHORITIES 11. IT IS IMPERATIVE THAT THE ROOF HAVING JURISDICTION. FRAMING AND ROOFING SYSTEM BE KEPT INTACT TO ELIMINATE POTENTIAL WATER THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR IS DAMAGE OR MOISTURE INFILTRATION. RESPONSIBLE FOR HAVING A THE CONTRACTOR SHALL KEEP THE THOROUGH KNOWLEDGE OF ALL BUILDING WATERTIGHT AT ALL TIMES AND DRAWINGS AND SPECIFICATIONS IN MAKE REPAIRS IMMEDIATELY SHOULD THEIR RELATED FIELD. THE FAILURE TO ANY DAMAGE OCCUR TO THE ROOFING ACQUAINT HIMSELF WITH THIS SYSTEM KNOWLEDGE DOES NOT RELIEVE HIM PER THE WHOLE FOODS LEASE OF ANY RESPONSIBILITY FOR AGREEMENT, GENERAL CONTRACTOR PERFORMING WORK PROPERLY. NO SHALL BE RESPONSIBLE TO CONTRACT ADDITIONAL COMPENSATION SHALL BE WITH LANDLORD'S ROOFING ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO TO COORDINATE ALL SUCH FAMILIARIZE WORKERS WITH THIS

CONTRACTOR. GENERAL CONTRACTOR PENETRATIONS WITH THE LANDLORD. KNOWLEDGE. IT IS THE ENTENT OF 13. DO NOT SCALE DRAWINGS. 14. GENERAL CONTRACTOR WILL PROVIDE FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA 10. AUTHORITY HAVING JURISDICTION WILL APPROVE FINAL FIRE EXTINGUISHER LOCATIONS

(ADJACENT OR EXISTNG), WHICH OCCURS DURING THE PROCESS OF CONSTRUCTION SHALL BE 15. GENERAL CONTRACTOR WILL FURNISH REPAIRED/REPLACED AT NO AND INSTALL ALL EQUIPMENT, MATERIALS, ADDITIONAL COST TO THE OWNER. ETC UNLESS IT IS SPECIFICALLY NOTED THE CONTRACTOR SHALL KEEP WORK AS BEING FURNISHED BY OTHERS. AREA CLEAN AND FREE OF DEBRIS AND GENERAL CONTRACTOR TO NOTIFY THE IS TO REMOVE ALL TRASH AND DEBRIS OWNER OF QUESTIONS OR DISCREPANCIES PRIOR TO BID FROM THE CONSTRUCTION AREA DAILY. NO FLAMMABLE MATERIALS OR SUBMISSIONS 16. GENERAL CONTRACTOR RESPONSIBLE T LIQUIDS MAY BE STORED IN THE ARRANGE PRE CONSTRUCTION MEETING **EXISTING BUILDING**

REPAIR. RE-ROUTE. AND EXTEND ALL WITH ALL TRADES AND THE OWNER. SERVICES, PIPING, CONDUIT OF MEETING SHALL TAKE PLACE PRIOR TO EXISTING ITEMS AND EQUIPMENT AS COMMENCING WORK OR ORDERING MATERIAL S REQUIRED DURING THE CONSTRUCTION PROCESS FOR THE 17. GENERAL CONTRACTOR SHALL PROVIDE COMPLETE INSTALLATION AND COMPLETE EXISTING CONDITIONS OPERATIONS OF NEW EQUIPMENT. DOCUMENTS AT COMPLETION OF THIS INCLUDES ALL ITEMS SHOWN OR 18. ALL WOOD BLOCKING, CLEATS. NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL RESPOND TO GROUNDS, SHEATHING AND OTHER MISC. ALL REQUIREMENTS OF THE CARPENTRY ITEMS SHALL BE FIRE ENGINEER/ARCHITECT FOR RETARDENT TREATED.

DURING ENTIRE CONSTRUCTION PERIOD, PROVIDE ONE U.L. LISTED 2A:20BC DRY CHEMICAL FIRE EXTINGUISHER, OR ONE STANDARD U.L. LISTED 2-1/2 GALLON WATER (E-10) AND ONE U.L. LISTED 10BC CARBON DIOXIDE FIRE EXTINGUISHER MOUNTED TOGETHER IN EACH 3000 SQ. FT. OF WORK AREA OR FRACTION THEREOF (MINIMUM OF TWO AVAILABLE IN ALL CONSTRUCTION AREAS AT ALL TIMES). THE CONTRACTOR SHALL HIRE A LICENSED SPRINKLER CONTRACTOR

SPRINKLER SYSTEM. WORK TO BE DONE UNDER SEPARATE PERMIT SITE VERIFICATION REQUIREMENTS ANY DISCREPANCY WITH THE EXISTING 2. ALL UTILITY LOCATIONS SHOWN ARE

ATTENTION OF THE ARCHITECT FOR CLARIFICATION AND INSTRUCTION. THESE CONSTRUCTION DOCUMENTS HAVE BEEN DESIGNED AND DRAWN ASSUMING EXISTING BUILDING CONDITIONS MATCH THE ORIGINAL DRAWINGS. THE CONTRACTOR, IMMEDIATELY UPON ARRIVAL AT THE SITE, SHALL VERIFY ALL EXISTING STRUCTURAL COLUMN DIMENSIONS, STRUCTURAL BEARING HEIGHTS AND EXISTING DIMENSIONS. IF DISCREPANCIES ARE FOUND BETWEEN WHAT IS SHOWN ON THE DRAWINGS AND EXISTING FIELD CONDITIONS, CONTACT THE CONSTRUCTION MANAGER AND THE ARCHITECT IMMEDIATELY TO DETERMINE WHAT ACTION SHOULD BE TAKEN TO MATCH EXISTING CONDITIONS. THE BEGINNING OF CONSTRUCTION BY THE GENERAL

CONTRACTOR MEANS ACCEPTANCE OF

THE EXISTING CONDITIONS.

CONSTRUCTION MANAGER AND ARCHITECT OF THE DISCOVERY OF EXISTING UTILITIES NOT SHOWN OR NOTED ON DRAWINGS. THE CONTRACTOR SHALL VERIFY THE **EXISTING FINISH FLOOR ELEVATION AT** ALL OPENINGS OF THE BUILDING SHELL PRIOR TO ESTABLISHING THE FINISH FLOOR ELEVATION.

APPROXIMATE. THE CONTRACTOR SHAL

FIELD VERIFY THE EXACT LOCATION OF

COMMENCEMENT OF CONSTRUCTION

THE CONTRACTOR SHALL NOTIFY THE

ALL EXISTING UTILITIES (WHETHER

SHOWN OR NOT) PRIOR TO THE

SUBMISSION OF HIS BID OR THE

REPORT ANY DISCREPANCIES FOUND IN THE FIELD IMMEDIATELY TO THE 365 CONSTRUCTION MANAGER AND THE ARCHITECT PRIOR TO MAKING ANY STRUCTURAL MODIFICATIONS OR ORDERING ANY MATERIALS.

STRIPING CONDITIONS

PER PLAN STRIPING ON FLOOR

STRIPING REQUIREMENTS/NOTES

OCCURS

OCCURS

OCCURS

LOCATIONS FOR TYPICAL SIGNS

REFERENCE 'TACTILE EXIT

FURTHER REQUIREMENTS

SIGN' DIAGRAM (ABOVE) FOR

SIGNAGE

LOCATIONS AT DOOR JAMBS

THERMOSTAT, STROBE, OR OUTLET

STROBE WHERE

T-STAT WHERE

SWITCH(ES) OR

DIMMER(S) GANG

UNDER ONE PLATE

STROBE WHERE

FIRE ALARM PULL

BETWEEN STUDS

SEMI-RECESSED FIRE

PLANS FOR LOCATIONS.

DIMENSIONS IN PLANS ARE

CABINET TO BE INSTALLED

EXTINGUISHER CABINET, REF

APPROXIMATE. INTENT IS FOR

OCCURS

DOOR IN OPEN POSITION

OCCURS

SWITCHES, STROBES, AND THERMOSTATS

<u>_</u> - - - -

+

STROBES AND FIRE ALARM PULLS

DIMENSION LINE FOR LOCATION.

LOCATIONS AT FIRE EXTINGUISHER CABINET

LOCATION OF FIRE EXTINGUISHERS ARE DICTATED BY FIRE MARSHAL

ALL DIMENSIONS ARE TO CENTER LINE OF DEVISE OR BOTTOM, REFER TO

1. 5" WIDE PAINTED STRIPES AT 12" ON CENTER, AT 45 DEGREE ANGLE TO 5" WIDE EXTERIOR BOUNDARY LINES 2. REF FLOOR FINISH PLAN FOR ADDITIONAL STRIPING LOCATIONS.

ACCESSIBILITY NOTES

 FLOOR SURFACES SPECIFIED ARE SLIP-RESISTANT. ABRUPT CHANGES IN LEVEL ALONG ACCESSIBLE ROUTE DO NOT EXCEED 1/2" IN HEIGHT. CHANGES BETWEEN 1/4" AND 1/2" ARE

BEVELED WITH A SLOPE NO STEEPER THAN 1:2. . LATCHING AND LOCKING DOORS ARE SPECIFIED TO BE OPERABLE WITH A SINGLE EFFORT BY HARDWARE THAT DOES NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. DOOR OPENING HARDWARE IS SPECIFIED TO BE MOUNTED BETWEEN 34" 4. CLOSERS FOR FIRE-RATED DOORS ARE SPECIFIED TO BE POWER LEVEL 3 FOR INTERIOR DOORS 38" OR LESS IN WIDTH.

MAXIMUM PULL OR PUSH EFFORT TO OPERATE NON-FIRE-RATED DOORS SHALL NOT EXCEED 8.5 POUNDS FOR EXTERIOR DOORS AND

5 POUNDS FOR INTERIOR DOORS, MEASURED AT RIGHT ANGLES TO HINGED DOORS AND AT CENTER PLANE OF SLIDING OR FOLDING DOORS. SPECIFIED CLOSERS TO BE ADJUSTED TO COMPLY. ALL DOORS ARE SPECIFIED TO BE NOT LESS THAN 3'-0" IN WIDTH AND NOT LESS THAN 6'-8" IN HEIGHT. DOORS ARE CAPABLE OF OPENING AT LEAST 90 DEGREES AND CLEAR WIDTH IS NOT LESS THAN 32".

FLOOR AREAS ON EACH SIDE OF DOORS ARE SPECIFIED TO BE LEVEL AND CLEAR. THE DIMENSIONS OF THE LEVEL AREAS ARE SPECIFIED TO MEET ANSI A117.3 2009, IAC AND ADA CLEARANCE REQUIREMENTS. 8. FLOOR AREAS ON EACH SIDE OF DOORS ARE SPECIFIED TO BE NOT MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" IS SPECIFIED TO BE BEVELED WITH A SLOPE NO STEEPER THAN 1:2. NOT USED. 10 NOT USED

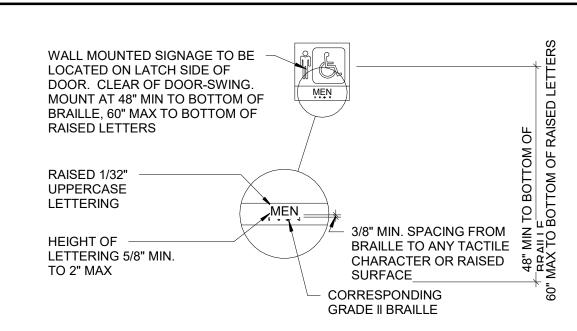
A. BOTTOM OF MIRROR REFLECTIVE SURFACE IS SPECIFIED TO BE NO HIGHER THAN 40" FROM THE FLOOR. B. TOILET TISSUE DISPENSERS ARE MOUNTED BETWEEN 7" AND 9" FROM THE FRONT EDGE OF THE TOILET SEAT C. DISPENSING AND DISPOSAL FIXTURES (TOWEL, SANITARY NAPKINS, WASTE, COIN SLOTS, ETC.) WITH OPERATING PARTS ARE MOUNTED NO HIGHER THAN 48" A.F.F. 12. THE HEIGHT OF THE WATER CLOSET (TOP OF SEAT) IS BETWEEN 17" AND 19".

13. FLUSH CONTROLS ARE MOUNTED NO MORE THAN 44" ABOVE THE FLOOR, ON THE SIDE OF THE TOILET WITH THE GREATEST CLEARANCE FROM ADJACENT WALL, TOILET PARTITION OR OTHER SURFACE. 14. GRAB BARS ARE PROVIDED IN COMPLIANCE WITH ANSI A117.1 2009 A. GRAB BARS TO BE 34" ABOVE AND PARALLEL TO THE FLOOR B. DIAMETER OF GRAB BARS TO BE 1-1/4" TO 1-1/2"

PROVIDE 1-1/2" CLEARANCE BETWEEN GRAB BARS AND WALI). GRAB BARS (INCLUDING CONNECTORS, FASTENERS, SUPPOR BACKING, ETC.) SHALL SUPPORT A 250-POUND LOAD. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS. F. GRAB BARS AND ANY ADJACENT SURFACE SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS. G. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8"

15. CLEAR FLOOR SPACE 30" x 48" IS PROVIDED IN FRONT OF LAVATORY TO PERMIT A FORWARD APPROACH. 16. SINKS AND LAVATORIES ARE MOUNTED TO COMPLY WITH KNEESPACE REQUIREMENTS OF ANSI A117.1 2009. 17. FAUCET CONTROLS AND OPERATING MECHANISMS ARE TO BE OPERABLE WITH ONE HAND AND NOT REQUIRED TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVEATE CONTROLS SHALL NOT BE GREATER THAN 5 POUNDS. SELF CLOSING CONTROLS ARE TO REMAIN OPEN FOR AT LEAST 10 SECONDS. 18. HOT WATER AND DRAIN PIPES UNDER LAVATORIES ARE INSULATED OR OTHERWISE COVERED.

RESTROOM SYMBOLS



SIGNS & IDENTIFICATION

11. TOILET ROOM ACCESSORIES

1. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE THE STANDARD USED TO IDENTIFY FACILITIES THAT ARE ACCESSIBLE TO AND USABLE BY PHYSICALLY DISABLED PERSONS AS SET FORTH IN TITLE III AND AS SPECIFICALLY REQUIRED IN THIS SECTION

THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE BLUE SHALL BE EQUAL TO COLOR NO. 15090 IN FEDERAL STANDARD 599B. PICTOGRAMS AND THEIR FIELDS SHALL HAVE A NON-GLARE FINISH. PICTOGRAMS SHALL CONTRAST THEIR FIELDS, WITH EITHER A LIGHT PICTOGRAM ON A DARK FIELD OR A DARK PICTOGRAM ON A

FOR CHARACTER WIDTH, THE UPPERCASE LETTER "O" SHALL BE USED TO DETERMINE THE ALLOWABLE WIDTH OF ALL CHARACTERS OF A FONT. THE WIDTH OF THE UPPERCASE LETTER "O" OF THE FONT SHALL BE 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I" OF THE FONT. (2010 ADA SECTION 703.2) CHARACTER HEIGHT MEASURED FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8" (16 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I".

MINIMUM CHARACTER HEIGHT SHALL COMPLY WITH 2010 ADA TABLE 703.5.5. VIEWING DISTANCE SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CHARACTER AND AN OBSTRUCTION PREVENTING FURTHER APPROACH TOWARDS THE SIGN. CHARACTER HEIGHT SHALL BE BASED ON THE UPPERCASE LETTER "I".

CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND

19. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.

6. WHEN RAISED CHARACTERS OR SYMBOLS ARE USED, THEY SHALL CONFORM TO THE FOLLOWING: A. LETTERS AND NUMBERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND SHALL BE SANS-SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE B. RAISED CHARACTERS OR SYMBOLS SHALL BE A MINIMUM OF 5/8" HIGH AND 2" MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I"

PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE A MINIMUM OF 6" IN HEIGHT.

CONTRACTED GRADE 2 BRAILLE SHALL BE USED WHEREVER BRAILLE SYMBOLS ARE SPECIFICALLY REQUIRED IN OTHER PORTIONS OF THESE REGULATIONS. DOTS SHALL BE 0.090" (2.3 MM) TO 0.100" (2.5 MM) ON CENTER IN EACH CELL WITH 0.241 (6.1 MM) TO 0.300" (7.6 MM) SPACE BETWEEN CELLS. DOTS SHALL BE RAISED A MINIMUM OF 0.025" (0.6 MM) TO 0.037" (0.9 MM) ABOVE

WHEN PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES. RAISED LETTERS SHALL BE ACCOMPANIED BY BRAILLE. SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT. MOUNTING HEIGHT SHALL BE LOCATED 48 INCHES (1220 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASE OF THE LOWEST TACTILE CHARACTER AND 60 INCHES (1525 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER, WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES (455 MM) MINIMUM BY 18 INCHES (455 MM) MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. EXCEPTION: SIGNS WITH TACTILE CHARACTERS SHALL BE PERMITTED ON THE PUSH SIDE OF DOORS WITH CLOSERS AND WITHOUT HOLD-OPEN DEVICES.

LOCATIONS AT DOOR JAMBS

STROBE WHERE

SWITCH(ES) OR

ONE PLATE

DIMMER(S) GANG UNDER

WALL HUNG TELEPHONE

OUTLET WHERE OCCURS

OCCURS

ABBREVIATION LEGEND LONGITUDINAL LONG

MAXIMUM

MINIMUM

METAL

NUMBER

NEAR SIDE

ON CENTER

FASTENER

PLATE

NOT TO SCALE

FIBERBOARD

MECHANICAL

MEDIUM DENSITY

MANUFACTURER

MISCELLANEOUS

MASONRY OPENING

NOT IN CONTRACT

NON-FIBERGLASS

REINFORCED PLASTIC

ON CENTER HORIZONTALLY

ON CENTER VERTICALLY

OUTSIDE DIAMETER

OPEN TO STRUCTURE

POWDER ACTUATED

PLASTIC LAMINATE

POUNDS PER CUBIC FOOT

POUNDS PER LINEAR FOOT

POUNDS PER SQUARE FOOT

POUNDS PER SQUARE INCH

PRESSURE TREATED

POLYVINYL CHLORIDE

QUANTITY

REFER TO

REQUIRED

REVERSE

REACH-IN

SCHEDULE

SIMILAR

SPACES

REINFORCING

ROUGH OPENING

STEEL DECK INSTITUTE

STEEL JOIST INSTITUTE

SECURITY MESH

SPECIFICATIONS

STAINLESS STEEL

TOP AND BOTTOM

TOP OF CONCRETE

TOP OF GRADE BEAM

UNLESS NOTED OTHERWISE

VENT THROUGH ROOF

TOP OF FOOTING

TOP OF MASONRY

TOP OF PAVING

TRANSVERSE

TYPICAL

VERTICAL

WIDTH

WOOD

STRUCTURAL

THICKNESS

TOP OF

ROOF TOP UNIT

PREMOLDED EXPANSION

OPPOSITE HAND

MAX

MDF

MFR

MIN

MTL

NTS

OCV

OD

OH

OTS

PLAM

PMEJ

PLF

PSF

PSI

PVC

QTY

REF

REQD

REV

RO

RTU

SDI

SIM

SM

SPECS

STRUC

TOC/TC

TOGB

TOS

TYP

VERT

VTR

WD

THK

TO

SCHED

AΒ

ABV

ACI

ASTM

BFF

BLDG

ВО

BOS

BTM

CL

CLR

COL

CONC

CONT

DIA

DM

DS

EIFS

ELEC

EQ

EXT

FDN

FS

FTG

FV

GΑ

GYP BE

HORIZ

HSA

HSS

INFO

J-BOX

ISO

JBE

JST

LB

LLH

LLV

CONST

ANCHOR BOLT

AMERICAN CONCRETE

ABOVE FINISHED FLOOR

AMERICAN INSTITUTE OF

STEEL CONSTRUCTION

AMERICAN SOCIETY FOR

AMERICAN WELDING

TESTING AND MATERIALS

BELOW FINISHED FLOOR

BOTTOM OF STEEL OR

BOTTOM OF STUD

CONTRACTION JOINT

CONCRETE MASONRY UNIT

EXTERIOR INSULATION AND

AIR HANDLING UNIT

ARCHITECTURAL

SOCIETY

BUILDING

BEARING

BOTTOM

CLEAR

COLUMN

CONCRETE

CONTINUOUS

DEMISING WALL

FINISH SYSTEM

EXPANSION JOINT

EQUIPMENT SUPPLIER

EXISTING TO REMAIN

GENERAL CONTRACTOR

HEADED STUD ANCHOR

HOLLOW STRUCTURAL

JOIST BEARING ELEVATION

KIPS PER SQUARE INCH

LONG LEG HORIZONTAL

LONG LEG VERTICAL

DOWNSPOUT

ELEVATION

ELECTRICAL

EACH WAY

EXTERIOR

FAR SIDE

FOOTING

GAUGE

HEIGHT

FOUNDATION

FIELD VERIFY

HORIZONTAL

SECTION

ISOLATION

JOIST

JOINT

LENGTH

POUNDS

INFORMATION

JUNCTION BOX

FINISHED FLOOR

GYPSUM BOARD

FQUAI

DIAMETER

CONSTRUCTION

CENTERLINE

BOTTOM OF

BLOCK LINTEL

BOARD

ABOVE

INSTITUTE

ARCHITECT OF RECORD BOYD W. RAU 6700 ANTIOCH PLAZA SUITE 300 MERRIAM, KS 66204 www.brrarch.com Tel: 913-262-9095 Fax: 913-262-9044

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SOUND BATT INSULATION **Project Name** TOP OF STEEL OR TOP OF

Project Manager Checked By

Document date 01/29/18 Template date:

Project No. 62911019

WINDOW FRAME AT KITCHEN WINDOW POWER OUTLET BUMP BAR IN KITCHEN

EXIT SIGN

OCCURS

STROBE WHERE

OUTLET WHERE

OCCURS

Sheet Title GENERAL INFORMATION

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 STROBE WHERE - T-STAT WHERE OUTLET WHERE

LOCATIONS AT DOOR JAMBS ARD READER, EGRESS BUTTON, OR FIRE ALARM PULL STROBE WHERE OCCURS

8"6"

STROBE WHERE

T-STAT WHERE

OUTLET WHERE

OCCURS

OCCURS

CARD READER, EGRESS

BUTTON OR FIRE ALARM

OCCURS

T-STAT WHERE OCCURS POWER OUTLET OR TELEPHONE OUTLET WHERE OCCURS LOCATIONS AT CORNERS IVI OUTLETS, STROBES, AND THERMOSTATS

+LOCATIONS AT CORNERS

STROBE WHERE OCCURS T-STAT WHERE OCCURS SWITCH(ES) OR DIMMER(S) GANG UNDER ONE PLATE **OUTLET WHERE OCCURS** SWITCHES, OUTLETS, STROBES, AND THERMOSTATS

PRINTER **ENCLOSURE** POWER OUTLETS POWER AND DATA

LOCATIONS AT DOOR JAMBS

SWITCH AND THERMOSTAT

MOUNT OUTLET FOR HORIZONTALLY AGAINST WALL DIRECTLY BELOW PRINTER ENCLOSURE

STROBE WHERE

SWITCH(ES) OR

T-STAT WHERE

OUTLET WHERE

OCCURS

OCCURS

DIMMER(S) GANG

UNDER ONE PLATE

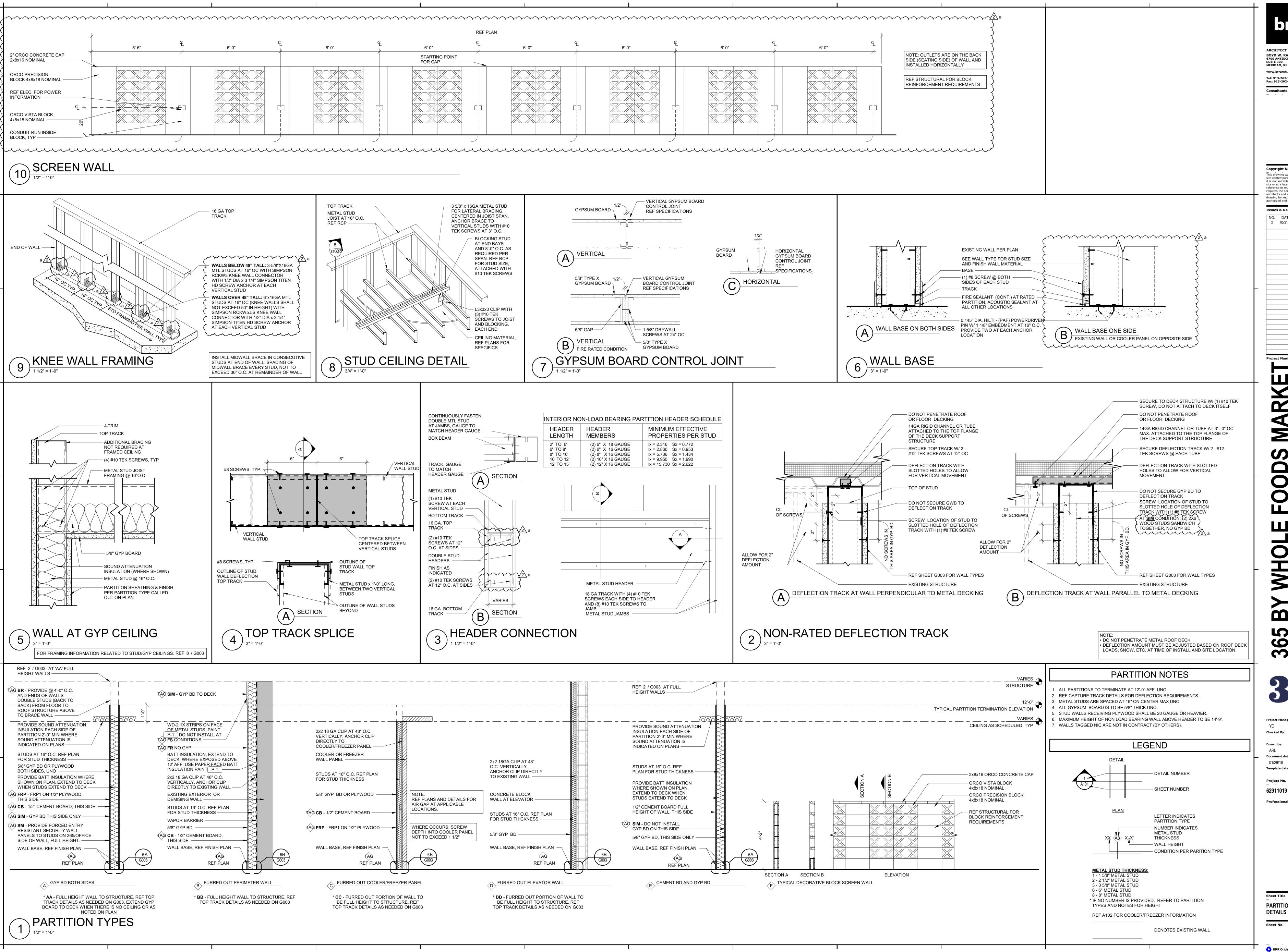
OCCURS

ALOHA ORDERING KIOSKS
OUTLETS PRINTEDS

OUTLETS

LOCATIONS FOR EXIT SIGNS

/ WALL MOUNTED



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Issues & Revisions NO. DATE DESCRIPTION 2 05/21/18 Addendum #2

Project Name

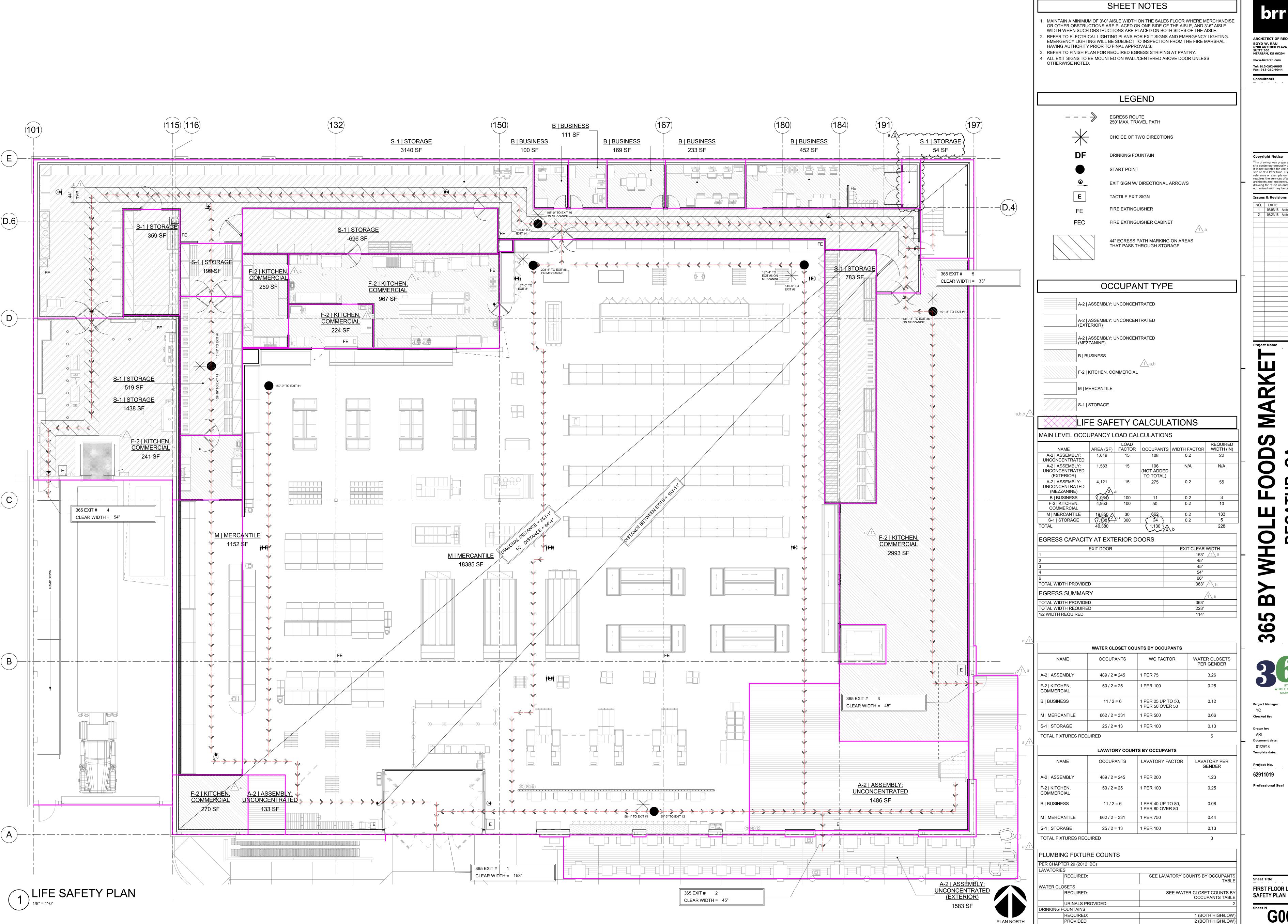
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Document date 01/29/18 Template date:

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PARTITION TYPES & DETAILS

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ARCHITECT OF RECORD: BOYD W. RAU 6700 ANTIOCH PLAZA SUITE 300 MERRIAM, KS 66204

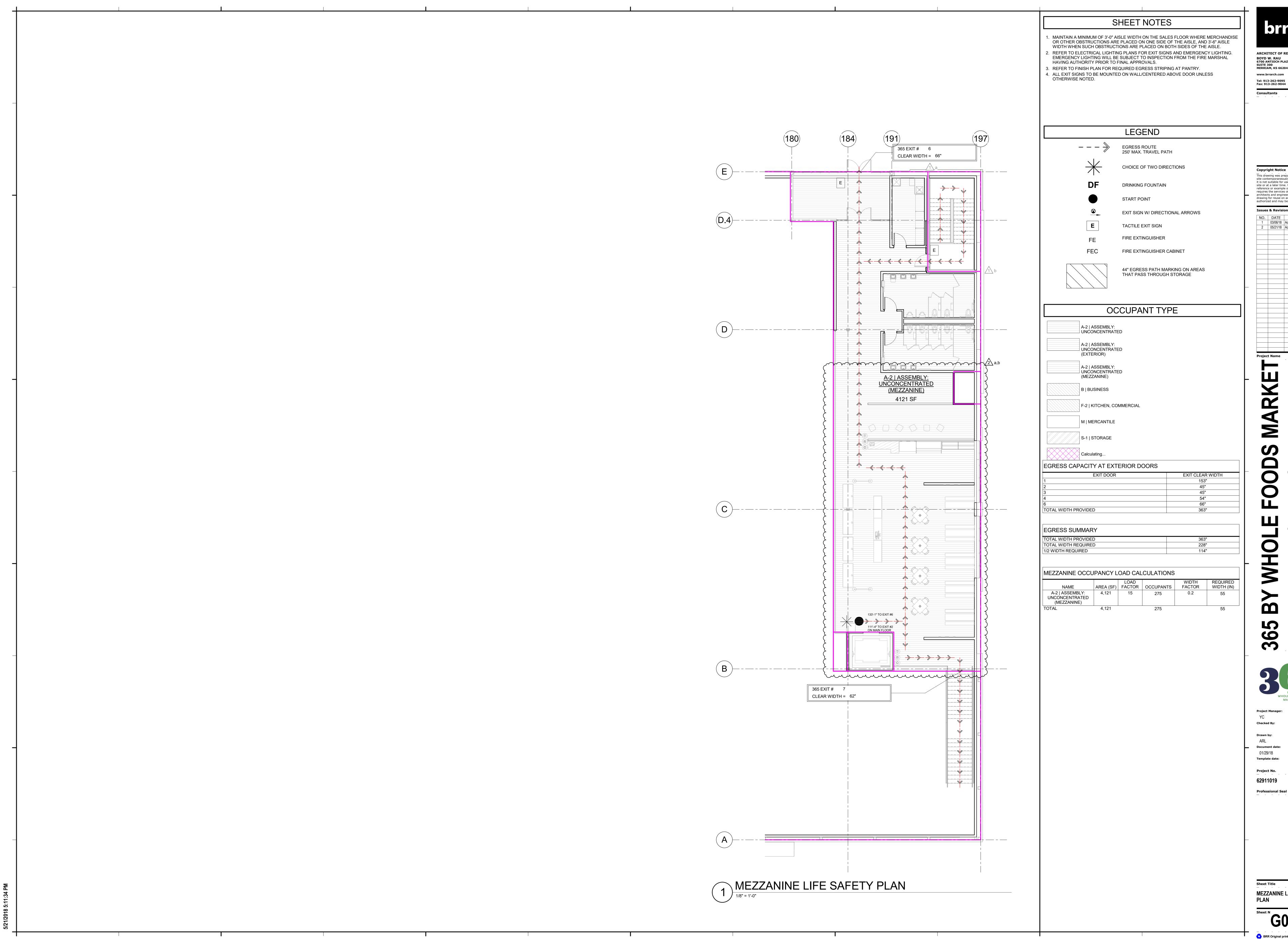
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 NO.
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 1
 03/06/18
 Addendum #1
 2 05/21/18 Addendum #2

FIRST FLOOR LIFE SAFETY PLAN

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Issues & Revisions

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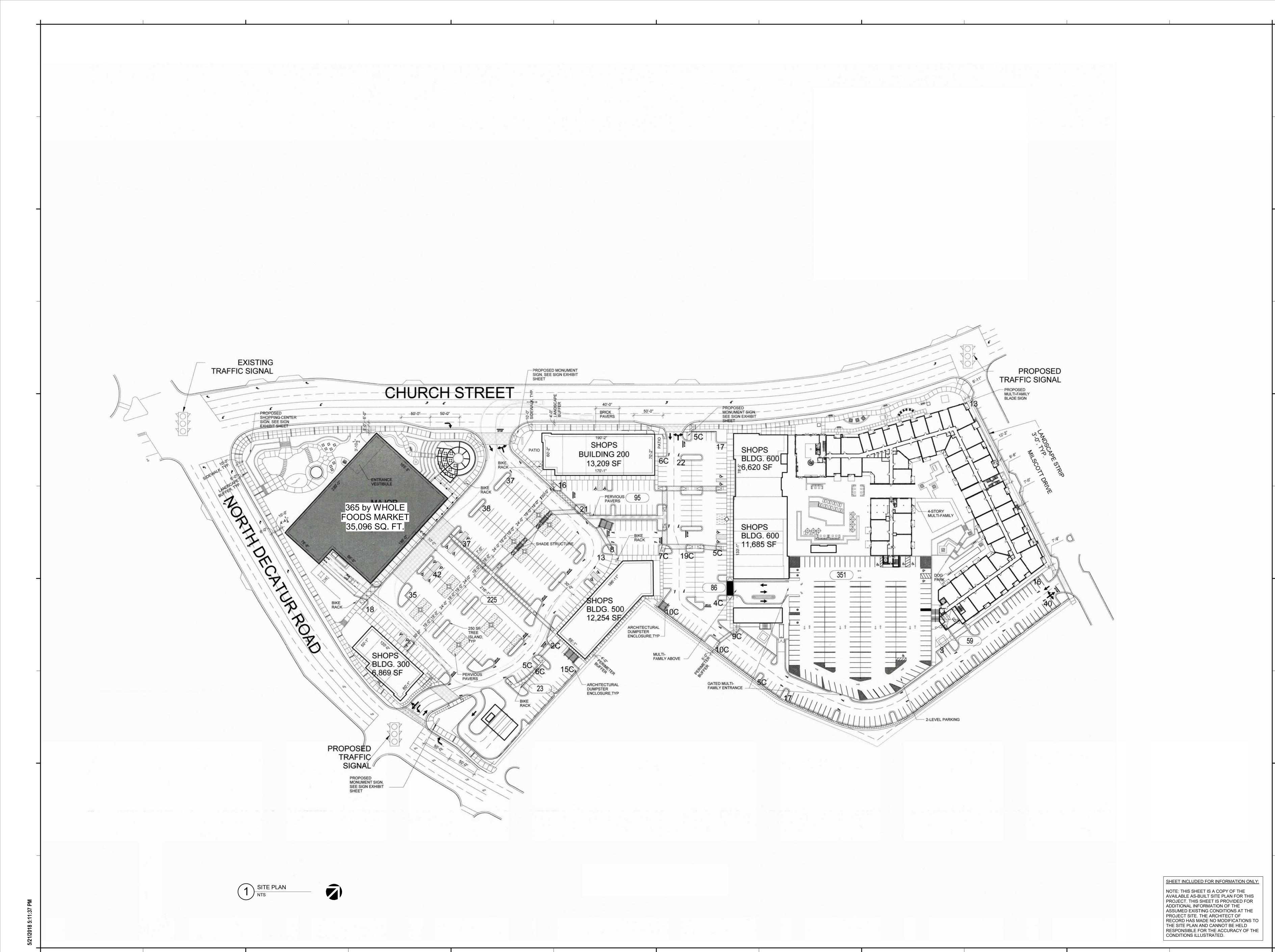


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MEZZANINE LIFE SAFETY PLAN

"G004-B



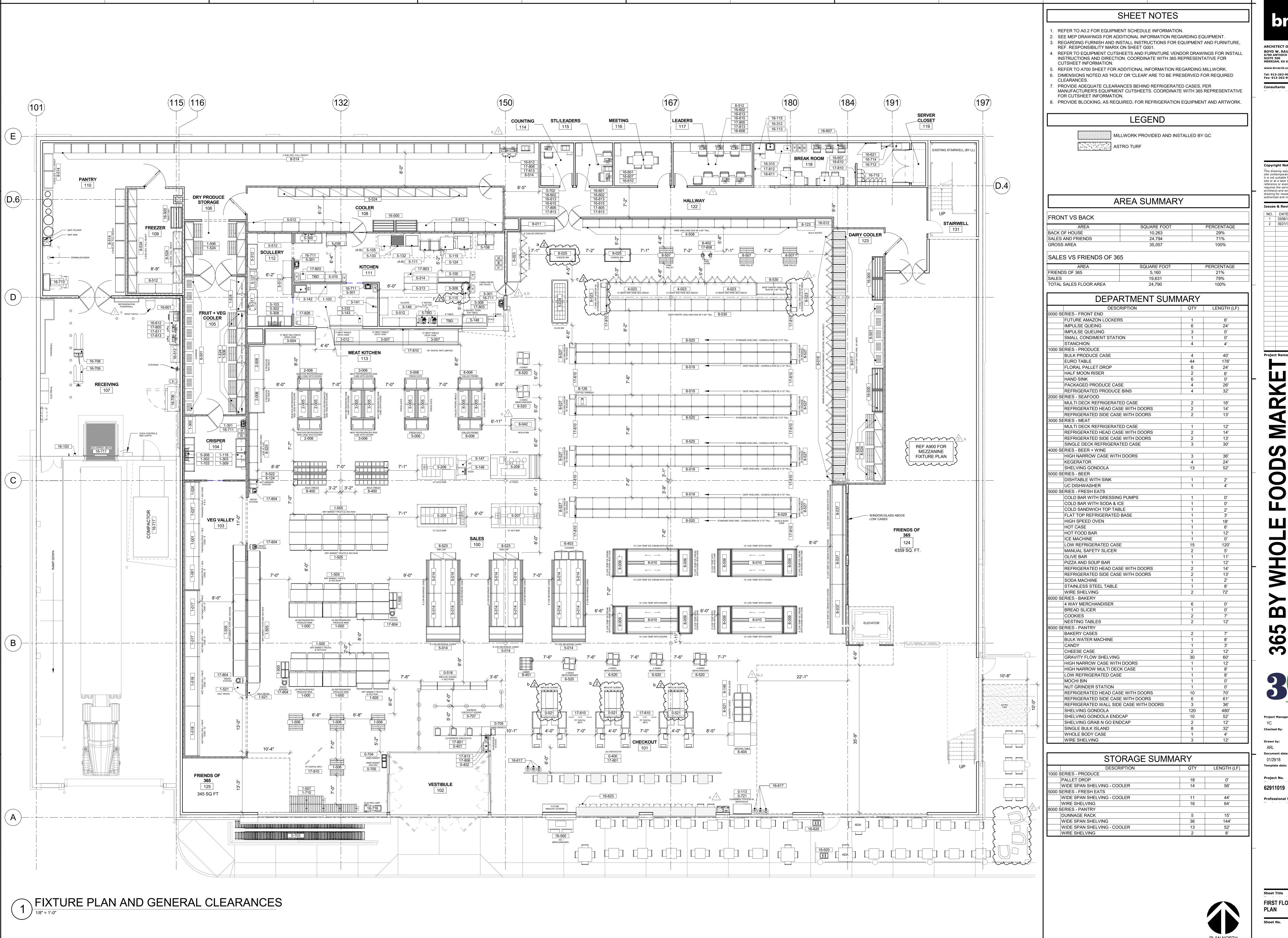
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365

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PARTIAL SITE PLAN (FOR REFERENCE ONLY)

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 NO.
 DATE
 DESCRIPTION

 1
 03/06/18
 Addendum #1

2 05/21/18 Addendum #2

Document date Template date:

ITEM NO			DESCRIPTION	EQUIF MANUFACTURER	PMENT SCHEDULE MODEL	DIMENSION	LOCATION	COMMENTS
0-113	RIES - FR	ONT END	MICROWAVE CASH LANES	PANASONIC KILLION	NE-1064 CHECKOUT	W 20" x D 14" x H 12" W 104-1/2" x D 47-1/4" x H	FRONT END	LEFT MODULE
0-400 0-400	3		CASH LANES CASH LANES	KILLION	CHECKOUT	W 104-1/2" x D 47-1/4" x H 35-1/2" W 104-1/2" x D 47-1/4" x H	CHECKOUT	RIGHT MODULE
0-401	3		EXPRESS CHECKSTAND	LAICOR	EXPRESS 46	35-1/2" W 46-1/4" x D 26-3/8" x H 36"	GENERAL STORE	
0-402 0-518	6	4' - 0"	SUPERVISOR STATION IMPULSE QUEING	LOZIER	SUPERVISOR COUNTER CUSTOM	W 46-1/2" x D 26-1/2" x H 42" W 48" x D 18" x H 48"	GENERAL STORE FRONT END	
0-521 0-701 0-702	3 1 1		IMPULSE QUEUING DROP SAFE SAFE	ONE SOURCE AMERICAN SECURITY AMERICAN SECURITY	TBD DSF 2014 SK2013-016	TBD W 14" x D 14" x H 20" W 36" x D 26" x H 59"	SALES FLOOR FRONT END COUNTING	
0-703 0-704	88		SHOPPING CART HAND BASKET	PRECISION VERSACART	744 M CUSTOM	W 24" x D 40" x H 40" W 19" x D 13" x H 9"	FRONT END	
0-705 0-707	50 15		HAND BASKET CART STANCHION	VERSACART UPDATE INTERNATIONAL	CUSTOM RS-36BK	W 19" x D 13" x H 18" Ø 11" x H 36"	FRONT END FRONT END	
0-721 0-722	2		CONDIMENT STATION SMALL CONDIMENT STATION	LAICOR LAICOR	LARGE CONDIMENT COUNTER CORNER COMPACT CONDIMENT COUNTER	W 53-1/2" x D 27-7/8" x H 34" W 26-3/8" x D 26-3/8" x H 36"	FRONT END FRONT END	WITH MICROWAVE
1000 SEF 1-000	RIES - PR	ODUCE 8' - 0"	REFRIGERATED PRODUCE BINS	JSI	RBS048L-CA38-MET-201L-C	W 98-1/4" x D 46" x H 40-3/4"	PRODUCE	
1-001	2	8' - 0" 8' - 0"	PACKAGED PRODUCE CASE BULK PRODUCE CASE	HILL PHOENIX HUSSMAN	6DMLH-NRG P4X-EP	W 96" x D 42-3/4" x H 88-7/8" W 96" x D 42" x H 81-3/4"	VEG VALLEY VEG VALLEY	
1-018 1-026 1-027	1	12' - 0" 4' - 0" 6' - 0"	PACKAGED PRODUCE CASE PACKAGED PRODUCE CASE	HUSSMAN HILL PHOENIX HILL PHOENIX	P4X-EP 6DMLH 6DMLH	W 144" x D 42" x H 81-3/4" W 48" x D 42-3/4" x H 88-7/8" W 72" x D 42-3/4" x H 88-7/8"	VEG VALLEY VEG VALLEY VEG VALLEY	
1-103 1-118	2		HOSE REEL MISTING SYSTEM	THE SHOPPER INC. PRODEW	HOSE REEL 50' CUSTOM	W 7 3/4" x D 10" x H 8 1/2" N/A	CRISPER CRISPER	
1-300	7	4' - 0"	STAINLESS STEEL TABLE HAND SINK	AMTEKCO AMTEKCO	CUSTOM DH-19D	W 48" x D 30" x H 35" W 17" x D 15-1/4" x H 13-1/4"	CRISPER CRISPER	WITH SHELF BELOW
1-302 1-303 1-309	1	2' - 0"	3 COMP SINK W LR DRAINBOARDS 2 COMP SINK W LR DRAINBOARDS STAINLESS STEEL SHELF	AMTEKCO AMTEKCO AMTEKCO	C-3-1824-24D C-2-1824-24D CUSTOM	W 100" x D 29-3/4" x H 41" W 84" x D 29-3/4" x H 41" W 24" x D 12" x H 8"	CRISPER CRISPER CRISPER	
1-509 1-500 1-505	8 44	2' - 0"	SPILL BOXES EURO TABLE	PACIFIC SOUTHWEST CONTAINE JSI		W 23" x D 12 X H 3 W 23" x D 11" x H 7 3/4" W 48" x D 33" x H 42 3/8"	PRODUCE PRODUCE	4 FINGER
1-506 1-507	18 6	4' - 0"	PALLET DROP FLORAL PALLET DROP	-	-	W 40" x D 48" x H 4 1/2" W 24" x D 48" x H 4 1/2"	PRODUCE PRODUCE	FULL SIZE HALF SIZE
1-521 1-524	14	4' - 0"	HALF MOON RISER WIDE SPAN SHELVING - COOLER	LOZIER	- CUSTOM	W 36" x D 36" x H 12" W 48" x D 24" x H 96" W 13" x D 12" x H 60"	PRODUCE PRODUCE	5 SHELVES, OPEN BASE, WHITE
1-710 2000 SEF	6 RIES - SE	AFOOD	FLORAL SIGN	RAMBO	DOUBLE SIDED ESL HOLDER W/ SIGN	W 12" x D 12" x H 60"	SALES FLOOR	
2-005 2-006	2 2	6' - 8" 7' - 0"	REFRIGERATED SIDE CASE WITH DOORS REFRIGERATED HEAD CASE WITH DOORS	ARNEG ARNEG	URANO SIDE URANO HEAD	W 82" x D 34" x H 34" W 74" x D 34" x H 34"	SEAFOOD SEAFOOD	
2-008 3000 SEF 3-004	2 RIES - ME	8' - 0" AT 12' - 0"	MULTI DECK REFRIGERATED CASE MULTI DECK REFRIGERATED CASE	HILL PHOENIX	O5MH-NRG	W 96" x D 43-3/8" x H 87 5/8" W 144" x D 43-3/8" x H 87 5/8"	SEAFOOD MEAT	
3-004 3-005 3-006	2 2	12' - 0" 6' - 8" 7' - 0"	REFRIGERATED SIDE CASE WITH DOORS REFRIGERATED HEAD CASE WITH DOORS	ARNEG ARNEG	URANO SIDE URANO HEAD	W 144" x D 43-3/8" x H 87 5/8" W 82" x D 34" x H 34" W 74" x D 34" x H 34"	MEAT MEAT	
3-007 3-012	2	12' - 0" 6' - 0"	SINGLE DECK REFRIGERATED CASE SINGLE DECK REFRIGERATED CASE	HILL PHOENIX HILL PHOENIX	OUM-NRG OUM	W 144" x D 43-1/4" x H 43" W 72" x D 43-1/4" x H 43"	MEAT MEAT	
3-141 3-142	1		MEAT SAW MEAT CHOPPER	HOBART BIRO	6614 MINI-32	W 41-1/4" x D 34" x H 68-3/4" W 25" x D 39" x H 57.5"	MEAT PREP	
3-143 3-332 4000 SEF	1 1 RIES - RF	8' - 0" ER + WINE	FAT TESTER STAINLESS STEEL TABLE	HOBART AMTEKCO	F101 CUSTOM	W 6.5" x D 12.5" x H 17.5" W 96" x D 30" x H 35"	MEAT PREP MEAT	WITH BACKSPLASH AND SHELF BELOW
4-023 4-101	3 4	12' - 0"	HIGH NARROW CASE WITH DOORS KEGERATOR	HILL PHOENIX MICRO MATIC	VNRBH MDD68	W 144" x D 37" x H 90" W 69-1/2" x D 30" x H 49-1/4"	BEER + WINE BEER VENUE	
4-508 5000 SEF	13 RIES - BE		SHELVING GONDOLA	LOZIER	CUSTOM	W 48" x D 22" x H 84"	BEER + WINE	STANDARD
5-138 5-327 5000 SEE	1 1 RIFS - FR	4' - 0" 4' - 0" ESH EATS	UC DISHWASHER DISHTABLE WITH SINK	CHAMPION ADVANCE TABCO	UH330B DTU-U60-48L	W 24" x D 26-3/4" x H 33-3/4" W 48" x D 30" x H 39"	BEER VENUE BEER VENUE	
5-005 5-006	2	6' - 8" 7' - 0"	REFRIGERATED SIDE CASE WITH DOORS REFRIGERATED HEAD CASE WITH DOORS	ARNEG ARNEG	URANO SIDE URANO HEAD	W 82" x D 34" x H 34" W 74" x D 34" x H 34"	SALES SALES	
5-014 5-024	15 1	8' - 0" 10' - 6 1/2"	LOW REFRIGERATED CASE OLIVE BAR	ARNEG HILL PHOENIX	SANTIAGO - 105/150-1C SBI-410SC	W 96" x D 42" x H 60 1/2" W 48-1/4" x D 126-1/2" x H	FRESH EATS FRESH EATS	
5-100 5-103	1	8' - 0"	COLD FLIP TOP TABLE HOSE REEL	CONTINENTAL THE SHOPPER INC.	CPA93 HOSE REEL 50'	33-1/2" W 93" x D 36 7/8" x H 39 1/2" W 7 3/4" x D 10" x H 8 1/2"	KITCHEN SCULLERY	
5-105 5-106	2		ROTISSERIE BLAST CHILLER	ALTO SHAAM ALTO SHAAM	AR-7E QC2-20	W 38 1/16" x D 32" x H 36" W 57" x D 36" x H 42"	KITCHEN KITCHEN	
5-108 5-111	2		HOT HOLD CABINET DOUBLE STACK STEAMER	ALTO SHAAM ACCUTEMP	1000-UP N61201E DBL	W 22 5/8" x D 32 3/4" x H 76" W 26 1/2" x D 29" x H 71 1/4"	KITCHEN KITCHEN	
5-115 5-119	1		HIGH SPEED OVEN PIZZA OVEN DOUBLE STACK CONVECTION OVEN	MERRYCHEF BAKER'S PRIDE	EIKON E2S EP-3-8-3836 ZEPHAIRE-100-G-ES	W 14" x D 23.4" x H 24.4" W 55" x D 43" x H 66"	KITCHEN KITCHEN	WITH STAND
5-124 5-127 5-132	1 1		DISHWASHER GAS GRIDDLE	BLODGETT CMA VULCAN	EST-44TALL 936RX	W 38-1/4" x D 36-7/8" x H 70-5/8 W 51" x D 22" x H 78 1/2" W 36" x D 31-1/2" x H 11-1/8"	KITCHEN KITCHEN	LEFT TO RIGHT PATH OF TRAVEL WITH STAND
5-133 5-146	1 1		GAS CHAR-BROILER SODA MACHINE	VULCAN LANCER	VACB36 CED 1500	W 36" x D 31" x H 12" W 19 3/16" x D 24" x H 25 3/8"	KITCHEN KITCHEN	ON STAND
5-147 5-148	1	6' - 0"	ICE MACHINE COLD SANDWICH TOP TABLE	HOSHIZAKI TRAULSEN	DCM-500BAH UST7230	W 26" x D 22 1/2" x H 40" W 72" x D 34 1/2" x H 34 3/8"	KITCHEN KITCHEN	WITH DOORS
5-149 5-205 5-206	1	2' - 6"	MANUAL SAFETY SLICER COLD BAR WITH DRESSING PUMPS COLD BAR WITH SODA & ICE	BIZERBA AMTEKCO AMTEKCO	GSP H SERIES CUSTOM CUSTOM	W 31.74" x D 35.40" x H 23.46" W 144" x D 66" x H 56" W 144" x D 71" x H 51-1/2"	KITCHEN FRESH EATS FRESH EATS	
5-207 5-208	1	12' - 0" 12' - 0"	HOT FOOD BAR PIZZA AND SOUP BAR	AMTEKCO AMTEKCO	CUSTOM CUSTOM AA0213-27	W 144" x D 69 1/2" x H 51-1/2"" W 144" x D 69 1/2" x H 56"	FRESH EATS FRESH EATS	
5-250 5-300	1	5' - 10 1/2"	HOT CASE 2 COMP SINK W LR DRAINBOARDS	PIPER REFLECTIONS AMTEKCO	HOT TOP C-2-1824-24D	W 50" x D 30" x H 36" W 80" x D 29-3/4" x H 45"	BEER VENUE KITCHEN	
5-301 5-302 5-306	3 1 2	4' - 0"	HAND SINK 3 COMP SINK W LR DRAINBOARDS STAINLESS STEEL TABLE	AMTEKCO AMTEKCO AMTEKCO	DH-19D C-3-1824-24D CUSTOM	W 17" x D 15-1/4" x H 13-1/4" W 100" x D 29-3/4" x H 41" W 48" x D 30" x H 30"	SCULLERY SCULLERY KITCHEN	WITH SHELF BELOW
5-308 5-308	1 2	8' - 0"	STAINLESS STEEL TABLE WALL SHELF	AMTEKCO AMTEKCO	CUSTOM 1236	W 96" x D 30" x H 35" 12"D X 36"W	KITCHEN SCULLERY	WITH SHELF BELOW
5-310 5-311	1	4' - 0" 6' - 0"	STAINLESS STEEL TABLE STAINLESS STEEL TABLE WITH DRAIN	AMTEKCO AMTEKCO	CUSTOM CUSTOM	W 48" x D 30" x H 30" W 72" x D 30" x H 35"	KITCHEN SCULLERY	WITH BACKSPLASH AND SHELF BELOW WITH DRAIN AND BACKSPLASH
5-312 5-313 5-314	1 1	6' - 0" 8' - 0" 8' - 0"	STAINLESS STEEL TABLE STAINLESS STEEL TABLE STAINLESS STEEL TABLE	AMTEKCO AMTEKCO AMTEKCO	CUSTOM CUSTOM CUSTOM	W 72" x D 30" x H 37" W 96" x D 30" x H 35" W 96" x D 30" x H 35"	SCULLERY KITCHEN KITCHEN	WITH BACKSPLASH WITH SHELF ABOVE WITH SHELF ABOVE AND SHELF BELOW
5-512	18	8' - 0" 4' - 0"	WIRE SHELVING	CALIFORNIA COOKING INC	METRO		SCULLERY/KITCHEN/COOLER	NEPOXY
5-524 5-TBD	11	4' - 0"	WIDE SPAN SHELVING - COOLER	LOZIER	CUSTOM ST4460N FLAT TOP	W 48" x D 24" x H 96" W 60 13" x D 31 50" x H 36 00"	/COOLER	5 SHELVES, OPEN BASE, WHITE
5-TBD TBD 6000 SEF	1 2 RIES - BA	2' - 6" 6' - 0" KERY	FLAT TOP REFRIGERATED BASE STAINLESS STEEL TABLE	DELFIELD AMTEKCO	CUSTOM	W 60.13" x D 31.50" x H 36.00" W 72" x D 30" x H 35"	KITCHEN KITCHEN	WITH BACKSPLASH AND SHELF BELOW
6-145 6-403	1 2	3' - 6"	BREAD SLICER COOKIES	JAC R&D	450 45483-03	W 17 1/4" x D 12 1/2" x H 5 1/4" W 42" x D 24" x H 66"	SALES BAKERY	SINGLE SIDED
6-404 6-520	2 6 RIES - PA	6' - 0"	NESTING TABLES 4 WAY MERCHANDISER	R&D LOZIER	CUSTOM	W 36" x D 48" x H 34" W 37" x D 37" x H 54"	BAKERY BAKERY	
8000 SEF 8-005 8-006	RIES - PA 2 2	NTRY 6' - 8" 7' - 0"	REFRIGERATED SIDE CASE WITH DOORS REFRIGERATED HEAD CASE WITH DOORS	ARNEG ARNEG	URANO SIDE URANO HEAD	W 82" x D 34" x H 34" W 74" x D 34" x H 34"	SALES SALES	
8-009 8-010	8	7' - 0" 12' - 0"	REFRIGERATED HEAD CASE WITH DOORS REFRIGERATED SIDE CASE WITH DOORS	ARNEG ARNEG	TORONTO HEAD TORONTO SIDE	W 77-1/8" x D 40-5/8" x H 36-7/8 W 148" x D 77" x H 36-7/8"	FROZEN FROZEN	
8-011 8-016	30	8' - 0"	HIGH NARROW MULTI DECK CASE GLASS DOORS CRAVITY ELOW SHELVING	HILL PHOENIX ANTHONY	ON5DMH VISTA ELITE	W 96" x D 36" x H 87 5/8" N/A W 24" x D 36" x H 72"	PANTRY DAIRY COOLER	
8-017 8-023 8-025	30 1 (2)	2' - 0" 12' - 0" 6' - 0"	GRAVITY FLOW SHELVING HIGH NARROW CASE WITH DOORS CHEESE CASE	ANTHONY HILL PHOENIX STRUCTURAL CONCEPTS	GFS VNRBH MI36R	W 24" x D 36" x H 72" W 144" x D 37" x H 90" W 74-1/8" x D 36-3/8" x H 37"	DAIRY COOLER PANTRY DAIRY	CONFIRM FINAL LOCATION OF CHEESE
	متر							BINS WITH 365 PRIOR TO ELECTRICAL INSTALLATION
8-029 8-037	3	4' - 0" 12' - 0"	WHOLE BODY CASE REFRIGERATED WALL SIDE CASE WITH DOORS	ARNEG ARNEG	SWAN H180 SC ARKA	W 38-1/2" x D 27" x H 73" W 147-5/8" x D 44" x H 36-7/8"	SALES FLOOR FROZEN	
8-041 8-042	1	8' - 0"	LOW REFRIGERATED CASE MOCHI BIN	ARNEG AHT	SANTIAGO - 105/150-1C IBIZA-145	W 96" x D 42" x H 60 1/2" W 72 7/8" x D 33 11/16" x H 32	BEER VENUE FROZEN	
8-123 8-124	1	8' - 0"	BULK WATER MACHINE	Aqua 9+	#AQ9-2000 NG2004	13/16" 52"L X 34"W X 78"H W 9" x D 1' 7-1/2" x H 2' 1-3/4"	SALES FLOOR	
8-124 8-126 8-400	1 2	4' - 0"	NUT BUTTER GRINDER COFFEE GRINDER SINGLE BULK ISLAND	RHINO BUNN K&J WOODWORKS	NG2004 G3 CUSTOM	W 9" x D 1' 7-1/2" x H 2' 1-3/4" W 7 1/2" x D 16" x H 27 1/4" W 48" x D 35" x H 50 1/4"	PANTRY PANTRY PANTRY	WITH BAGGING STATION
8-400 8-401	6	4' - 0" 3' - 0"	SINGLE BULK ISLAND CANDY	K&J WOODWORKS ABC FABRICATION	CUSTOM CUSTOM	W 48" x D 35" x H 50 1/4" W 36" x D 36" x H 31 1/2"	PANTRY PANTRY	WITHOUT BAGGING STATION
8-402 8-501	1 16	3' - 0"	WINE KIOSK DUNNAGE RACK	HILL PHOENIX MASONWAYS	CWC-2D DUN 2436	W 24" x D 24" x H 33 1/2" W 36" x D 24" x H 12"	BEER + WINE DAIRY COOLER	
8-507 8-512	3	4' - 0"	PALLET DROP WIRE SHELVING	- CALIFORNIA COOKING INC	- METRO	W 40" x D 48" x H 4 1/2"	DAIRY COOLER/PANTRY BOH/FREEZER	FULL SIZE EPOXY
8-514	(6) (36)	4' - 0"	WIDE SPAN SHELVING	LOZIER	CUSTOM	W 48" x D 24" x H 94"	BOH/FREEZER/DAIR Y COOLER	4 SHELVES, FULL HEIGHT
8-519 8-520	52 51	4' - 0" 4' - 0"	SHELVING GONDOLA SHELVING GONDOLA	LOZIER LOZIER	CUSTOM CUSTOM	W 48" x D 36" x H 72" W 48" x D 22" x H 72"	PANTRY PANTRY	DEEP STANDARD
8-521 8-522 8-523	1 2	3' - 6" 6' - 0"	BAKERY CASES NUT GRINDER STATION SHELVING GONDOLA ENDCAP	R&D LOZIER LOZIER	45483-01 CUSTOM CUSTOM	W 42" x D 48" x H 66" W 26" x D 22" x H 84" W 72" x D 16" x H 72"	PANTRY PANTRY PANTRY	DOUBLE SIDED NO SIGNAGE
8-523 8-523	2 9	6' - 0" 6' - 0" 4' - 0"	SHELVING GONDOLA ENDCAP SHELVING GRAB N GO ENDCAP WIDE SPAN SHELVING - COOLER	LOZIER LOZIER LOZIER	CUSTOM CUSTOM	W 72" x D 16" x H 72" W 72" x D 19" x H 72" W 48" x D 24" x H 96"	PANTRY PANTRY BOH/FREEZER/DAIR	NO SIGNAGE
8-524	ı -				i		Y COOLER	1

					EQUIP	MENT SCHEDULE			
ITE	M NO.	QTY.	LENGTH	DESCRIPTION	MANUFACTURER	MODEL	DIMENSION	LOCATION	COMMENTS
8-52	25	4	4' - 0"	SHELVING GONDOLA	LOZIER	CUSTOM	W 48" x D 22" x H 84"	PANTRY	STANDARD
8-52	27	8	5' - 0"	SHELVING GONDOLA ENDCAP	LOZIER	CUSTOM	W 60" x D 16" x H 72"	PANTRY	WITH LEFT SIGNAGE
8-53	30	13	4' - 0"	SHELVING GONDOLA	LOZIER	CUSTOM	W 48" x D 36" x H 84"	PANTRY	DEEP
160	00 SEF	RIES - GE	NERAL STOF	RE	1			!	
16-1	103	1		HOSE REEL	THE SHOPPER INC.	HOSE REEL 50'	W 7 3/4" x D 10" x H 8 1/2"	RECEIVING	
16-1	113	1		MICROWAVE	PANASONIC	NE-1064	W 20" x D 14" x H 12"	BREAKROOM	
16-1	115	1		REFRIGERATOR	FRIGIDAIRE	FFHS2322MS	W 33" x D 32" x H 69 7/8"	BREAKROOM	
16-3	310	1	4' - 0"	STAINLESS STEEL TABLE	AMTEKCO	CUSTOM	W 48" x D 30" x H 35"	BREAKROOM	WITH BACKSPLASH AND SHELF BELOW
16-3	312	1		HAND SINK	AMTEKCO	DH-30	W 24 3/4" x D 21 7/8" x H 18"	BREAKROOM	
16-	500	1	6' - 1"	ICE MERCHANDISER	LEER	60 SLANT			
16-5	500	7	5' - 3"	MARC CART	NEW AGE INDUSTRIAL	CUSTOM	W 63" x D 27" x H 71"		
16-5		2	4' - 0"	WIRE SHELVING	CALIFORNIA COOKING INC	METRO		RECEIVING	EPOXY
16-6		3		TALL FILE CABINET	HON	H584	W 36" x D 19 1/4" x H 53 1/4"	OFFICES	
16-6		9		FILE CABINET	HON	H15923R	W 15" x D 23" x H 22"	OFFICES	
16-6		4		TABLE	EMU	JOLLY #855	W 28" x D 28" x H 29 1/2"	CAFE	INTERIOR + EXTERIOR
I —		30		32" CAFE TABLE	EMUAMERICAS	JOLLY #855	32" x 32" x 29 1/2"H	CAFE	
16-6		16		STACKING CHAIR	HON	H4031	W 21" x D 21 1/2" x H 31"	BOH	
16-6		1		PRINTER TABLE	MOORECO	27666	W 27" x D 25" x H 35 1/2"	LEADERS	
16-6		5		TABLE	HON	HMVR-3030-FX-N-B9-C-G	30" X 30" SQUARE	MEETING	
16-6		1		TABLE	HON	HMVR-4040-FX-N-B9-C-G	40" X 40" SQUARE	ROOM/LEADERS MEETING	
		1						ROOM/LEADERS	
16-6		4		ADJUSTABLE STOOL	INTERION	ERGONOMIC STOOL	Ø 24" x H 48 1/2"	RECEIVING	
16-6		10		DESK	HON	HMVR-2448-FX-G-B9-C-G	2'-0" x 4'-0"	LEADERS	
16-6		10		ROLLING CHAIR	HON	HVL511	W 26" x D 26" x H 40 1/2"	OFFICES	
16-6		12		TRASH/RECYCLING/COMPOST BINS	WITT INDUSTRIES	15RT-1H	Ø 15" x H 32"	SALES FLOOR	2 SETS OF 3 BINS - COLORS: BLACK, BLUE, GREEN
16-6	620	2		EXTERIOR TRASH/RECYCLING/COMPOST BINS	CLEANRIVER	TIM36-3	23.75"W x 18"D x 37.5"/48.75"H	EXTERIOR	GRAY
16-6	321	1		FLIP 8 HOOK RACK	UMBRA	318858-660	W 33 1/4" x D 1 1/2" x H 2 3/4"	BREAKROOM	
16-6	623	11		STOOLS	SMITHHANES/SCHWUNGHOME	DOT	21" X 21-1/2" X 31" H	CAFE	
16-6		88		CAFE CHAIRS	SMITHHANES/SCHWUNGHOME	DOT	-	INDOOR SEATING	
16-6		16		CHAIRS	SCHWUNG	DOT	W 16 1/2" x D 20 1/2" x H 32"	SEATING	
16-7	706	1		BALER	PTR	2300HD	W 78" x D 41" x H 152"	RECEIVING	
16-7	708	1		ELECTRIC POWER JACK	CROWN	WP 3045	W 27 7/8" x D 70" x H 47 1/2"	RECEIVING	
16-7	709	1		MANUAL PALLET JACK	CROWN	PTH 50	W 27" x D 62" x H 47"	RECEIVING	
16-7	711	5		BUG ZAPPER	GILBERT	2002 GT	W 24 3/4" x D 19 1/2" x H 11 1/2"	ВОН	
16-7	712	1		GARMENT BIN	ARAMARK	CE-0096	W 16 1/2" x D 16" x H 77 1/2"	ВОН	
16-7	713	1		FLOOR SCRUBBER	TENNANT	5400	W 33" x D 53" x H 40"	ВОН	
16-7		1		GARMENT RACK	ARAMARK	CE-0169	W 36" x D 18" x H 48"	ВОН	
16-7	715	3		LOCKERS	INFINITY	16128KD	W 36" x D 12" x H 60"	ВОН	
16-7		1		ELECTRIC SHOPPING CART	AMIGO	VALUESHOPPER34	W 24-1/4" x L 54" x H 34-1/2"	FRONT END	
16-7	717	1		COMPACTOR	MARATHON	RJ-250 SC	W 101 1/4" x D 245" x H 104"	EXTERIOR	30 YD
170	00 SEF	RIES - IT							
17-8	301	9		REGISTER AND HUB HARDWARE PACKAGE	NCR	N/A	N/A	SALES	
17-8	303	3		SCALE	BIZERBA	KH100	W 15" x D 17" x H 7"	KITCHEN	
17-8	304	5		WEIGH STATION	BIZERBA	MC 500	W 15" x D 22" x H 48"	SALES	
17-8	305	3		PRINTER	HP	LASERJET PRO	W 16 1/4" x D 25 1/2" x H 13 1/2"	ВОН	
17-8	306	3		STANDARD PRINTER	HP	LASERJET PRO M402dn	W 16 1/4" x D 25 1/2" x H 13 1/2"	COUNTING & EXPRESS	
17-8	308	2		DELECTABLE TABLET KIOSKS	LILITAB	FLOOR PRO	W 12 1/2" x D 9""	CHECKOUT BEER + WINE	COUNTER MOUNTED
17-8		27		DIGITAL INFO SCREEN	SAMSUNG		-		
17-8		4		DVO ORDERING GUN	ZEBRA	WORKABOUT PRO4	N/A	RECEIVING	
17-8		1		TIME CLOCK	KRONOS	4500	N/A	BREAKROOM	
17-8		17		DESKTOP	DELL	OPTIPLEX 9030	N/A	BOH	
17-6		1		WRAPPER AND LABELER	BIZERBA	CUSTOM	W 52" x D 26" x H 53"	MEAT PREP	
17-0	JZU	11		MINUL FILVING FUREFFIL	טובבועטת	O O O I O IVI	AA OK VD KO VIIOO	INITY I LIVEL	

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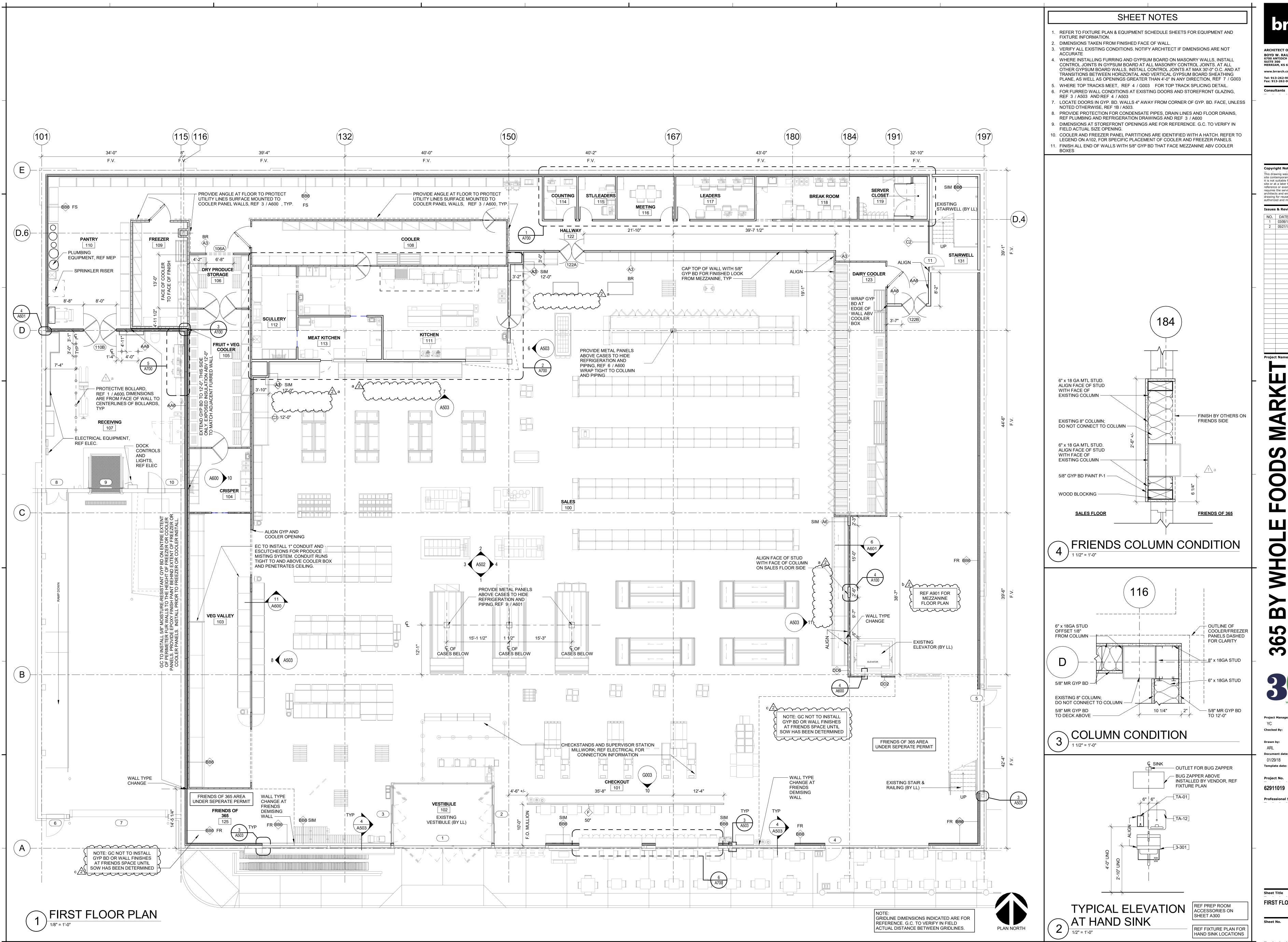
 1
 03/06/18
 Addendum #1

 2
 05/21/18
 Addendum #2

Project Name

365 BY WHOLE FOODS MARK DECATUR, GA
1555 CHURCH STREET, DECATUR, GA 30030

EQUIPMENT SCHEDULE



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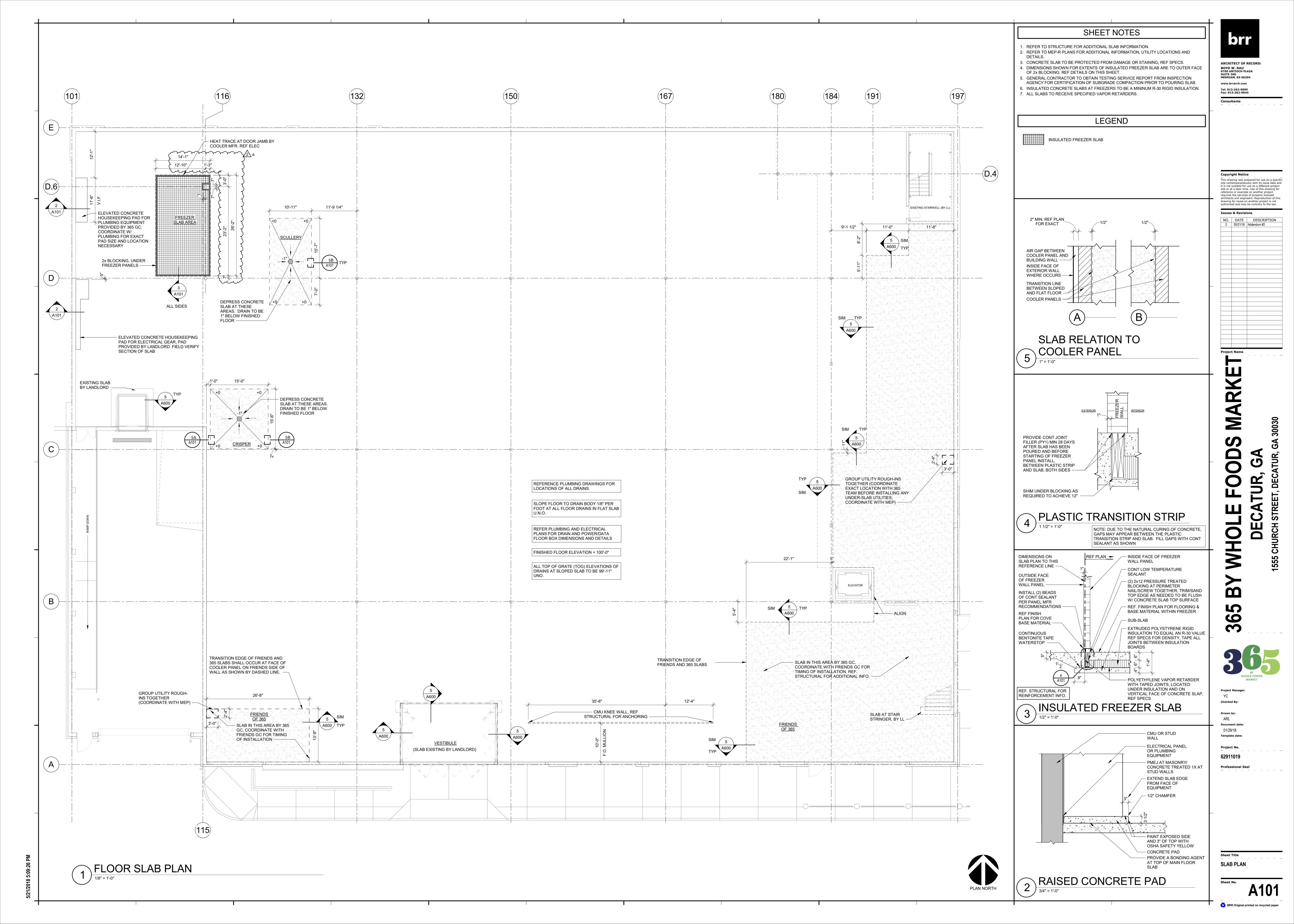
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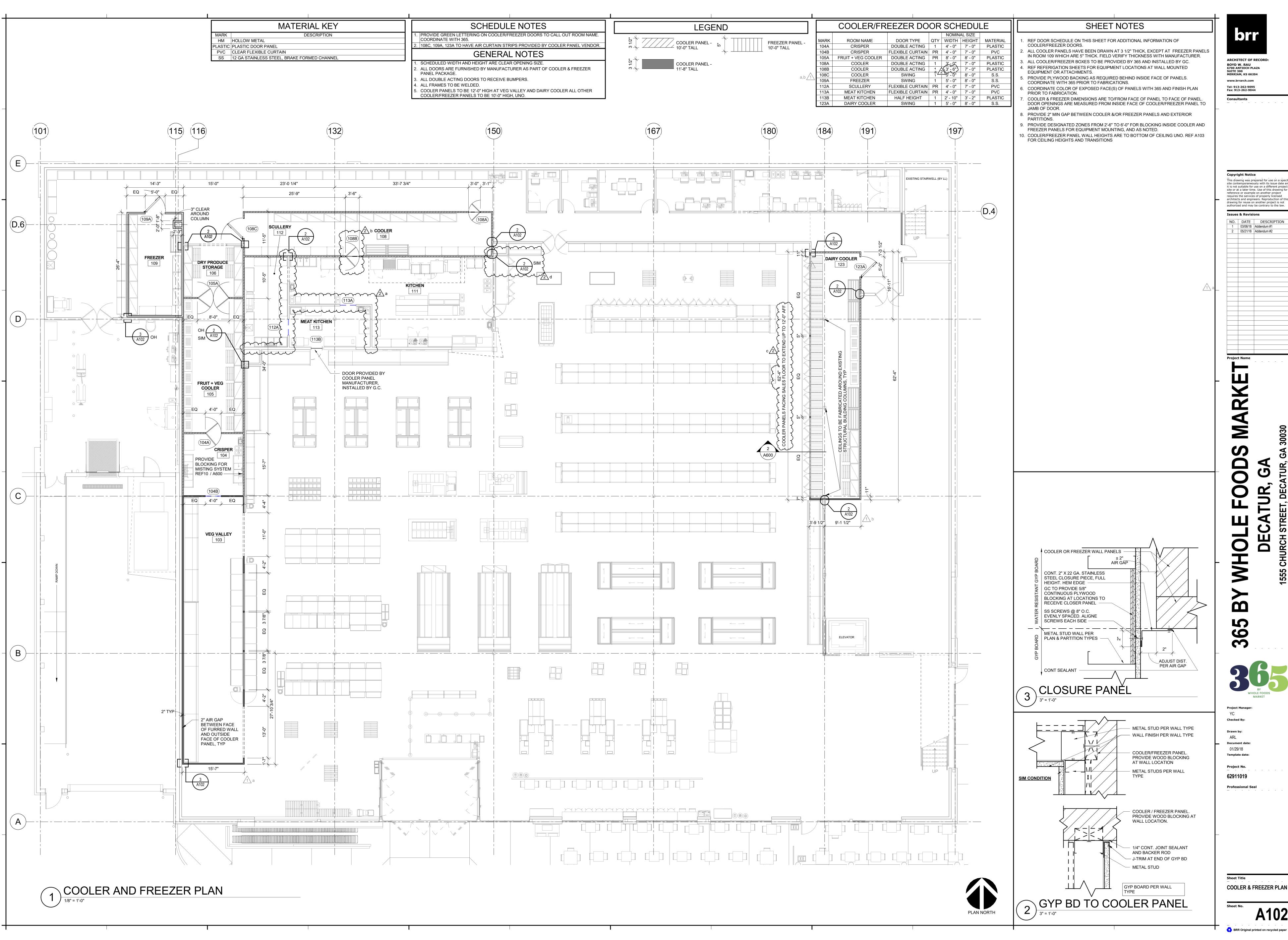
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FIRST FLOOR PLAN

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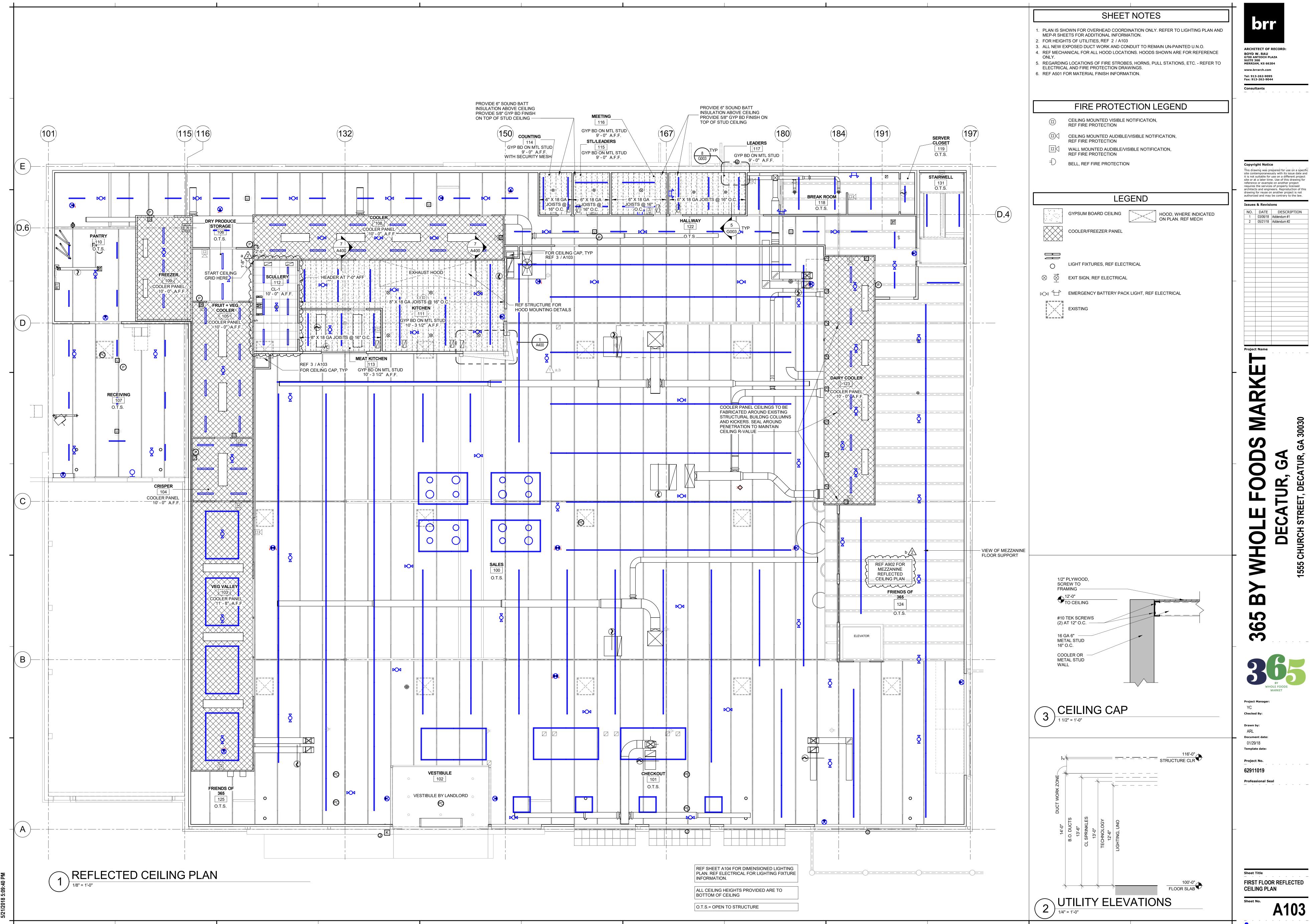
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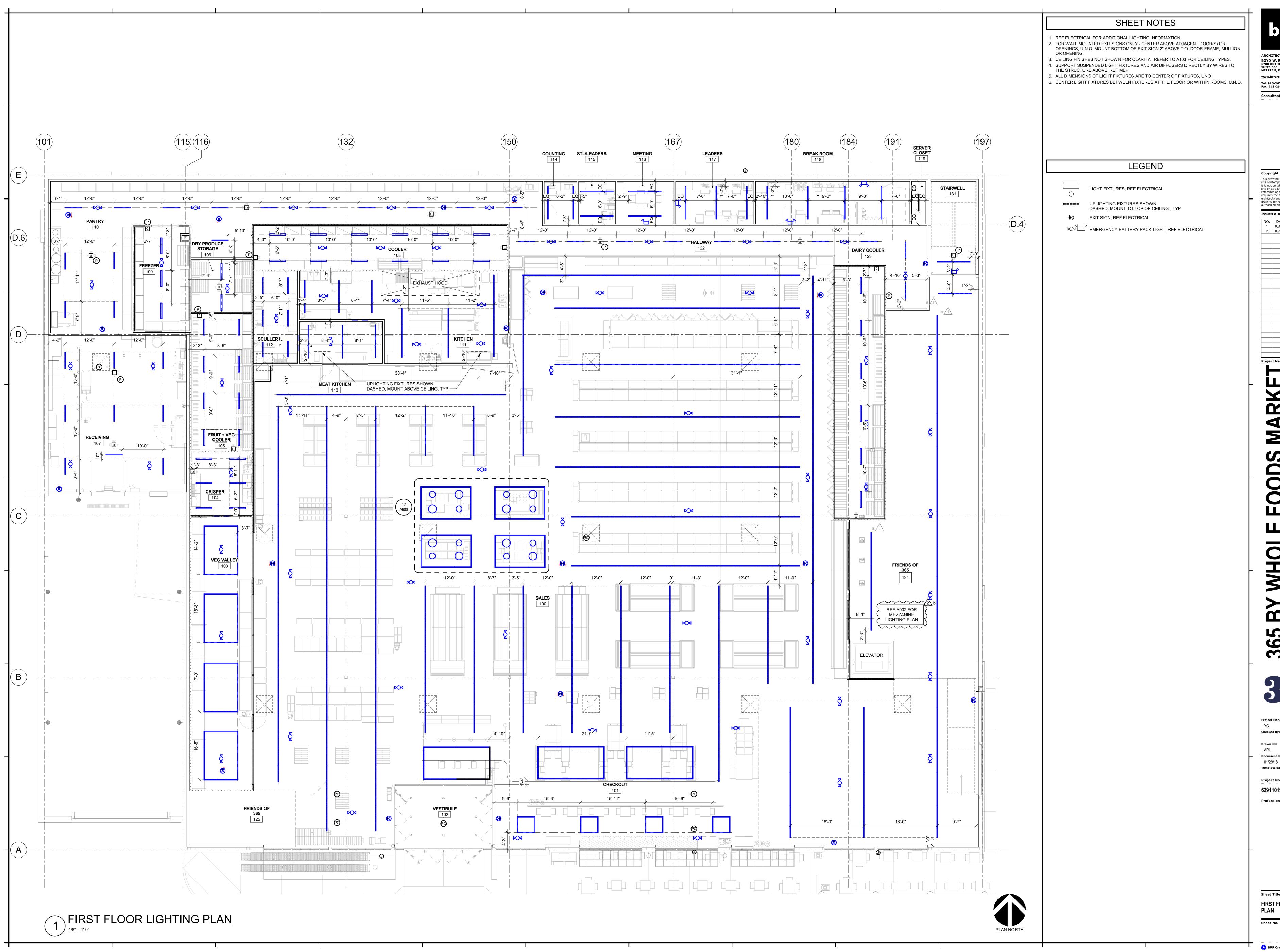
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 Addendum #1
 2 05/21/18 Addendum #2

Document date:

COOLER & FREEZER PLAN



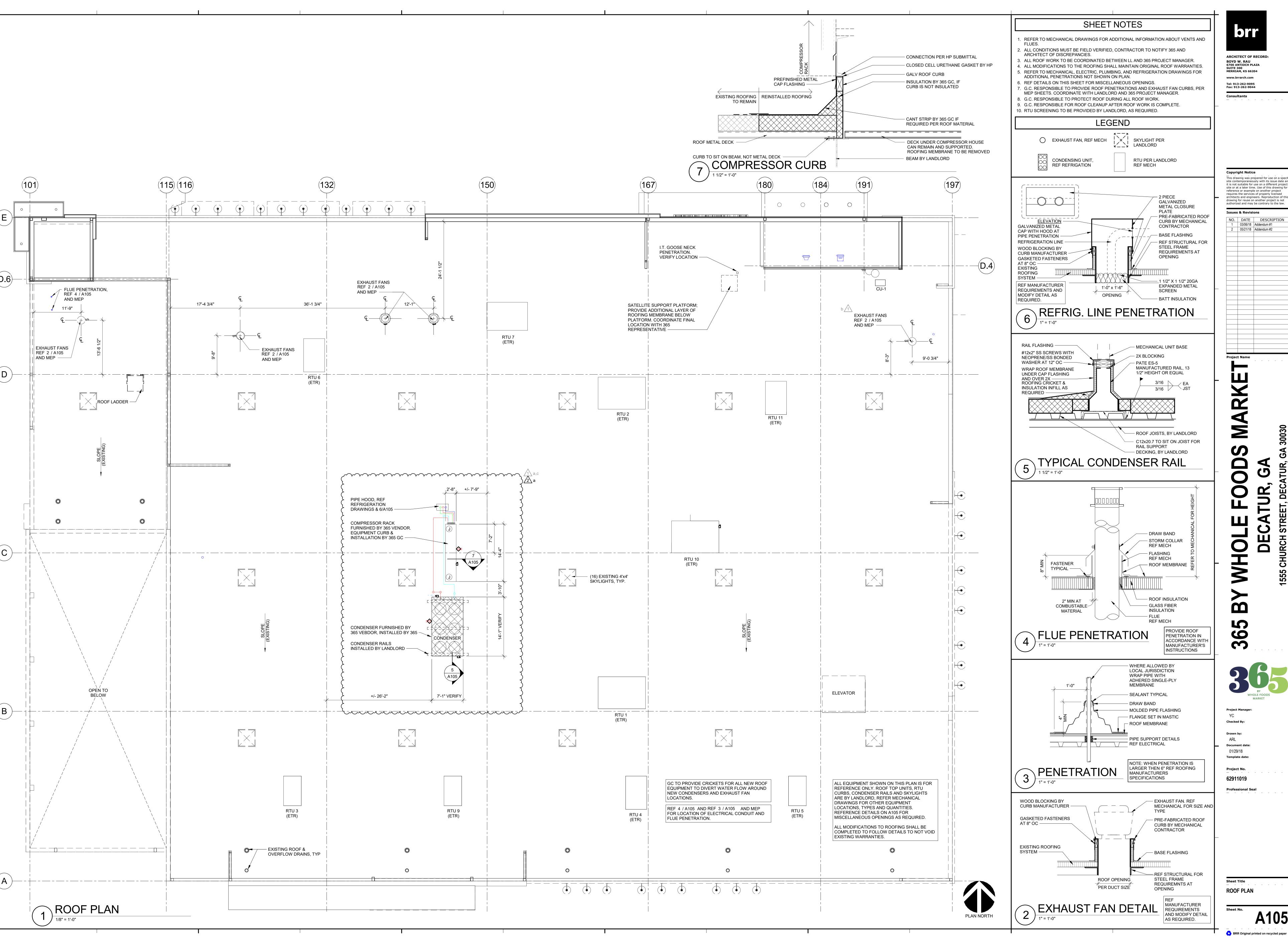
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 2 05/21/18 Addendum #2



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 NO.
 DATE
 DESCRIPTION

 1
 03/06/18
 Addendum #1

Project Name

RESTROOM ACCESSORIES RESPONSIBILITY MANUFACTURER MODEL SOAP DISPENSER DIVERSEY 5374651 SURFACE-MOUNTED FURNISHED BY 365 / GC INSTALLED CHANGING STATION KB200-GREY SURFACE-MOUNTED G.C. FURNISH AND INSTALL KOALA KARE HORIZONTAL STEP STOOL STEP 'N WASH SNW-SS 975 STAINLESS STEEL FLOOR MOUNTED C. FURNISH AND INSTALL SURFACE-MOUNTED SANITARY NAPKIN DISPOSAL BOBRICK WASHROOM B-270 SATIN FINISH G.C. FURNISH AND INSTAL EQUIPMENT, INC. HAND DRYER W/ RECESS KIT XLERATOR XL-SB, 40502 G.C. FURNISH AND INSTALL STAINLESS STEEL RECESSED STAINLESS STEEL HORIZONTAL ORDER ENTIRE RESTROOM PACKAGE OF MATERIALS FROM THE VENDOR LISTED IN THE 42" GRAB BAR, 1-1/4" DIAMETER BOBRICK B-5806-42 G.C. FURNISH AND INSTALL 18" GRAB BAR, 1-1/4" DIAMETER STAINLESS STEEL VERTICAL BOBRICK B-5806-18 S.C. FURNISH AND INSTALL STAINLESS STEEL SATIN STAINLESS 36" GRAB BAR, 1-1/4" DIAMETER BOBRICK G.C. FURNISH AND INSTALL B-5806 - 36 STEEL, HORIZONTAL JUMBO BATH TISSUE DISPENSER, DOUBLE ROLL TANDEM C-233-DIBT D-JRT FURNISHED BY 365 / GC BLACK BLACK INSTALLED G.C. FURNISH AND INSTALL BOBRICK B-165 1836 STAINLESS STEEL | STAINLESS STEEL STAINLESS STEEL RECESSED RECESSED FRAME/ WASTE RECEPTACLE & PAPER BOBRICK B-3942 G.C. FURNISH AND INSTALL TOWEL DISPENSER PAPER TOWEL DISPENSER - FOOD PREP TANDEM C-223-DIHT SURFACE MOUNTED, G.C. FURNISH AND INSTALL BLACK NO-TOUCH PROVIDE AT ALL DEPARTMENTS, SEE FIXTURE PLAN

SHEET NOTES

- 1. INTERIOR PLAN DIMENSIONS ARE TO FACE OF FINISH UNO. 2. REF FINISH PLANS FOR TILE AND PAINT INFORMATION.
- 3. REF FIXTURE HEIGHTS AND CLEARANCES. 4. PROVIDE A CONTINUOUS BEAD OF SEALANT IN THE FOLLOWING LOCATIONS: - PERIMETER OF ALL TOILETS AND URINALS TO WALLS AND FLOORS
- PERIMETER OF SINK TO WALL - PERIMETER OF MIRRORS TO WALL
- PERIMETER OF DIAPER CHANGING TABLE TO WALL
- SPECIFICATIONS. 6. PROVIDE 2X BLOCKING BETWEEN STUDS TO SUPPORT ALL WALL MOUNTED ITEMS. 7. REF PLUMBING SHEETS FOR FIXTURE SCHEDULE
- 8. RESTROOM ELEVATIONS ARE REPRESENTATIVE OF TYPICAL FIXTURE MOUNTING HEIGHTS AND CLEARANCES. REFER TO PLAN FOR FIXTURES TO BE INSTALLED

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SUITE 300 MERRIAM, KS 66204

www.brrarch.com

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Consultants

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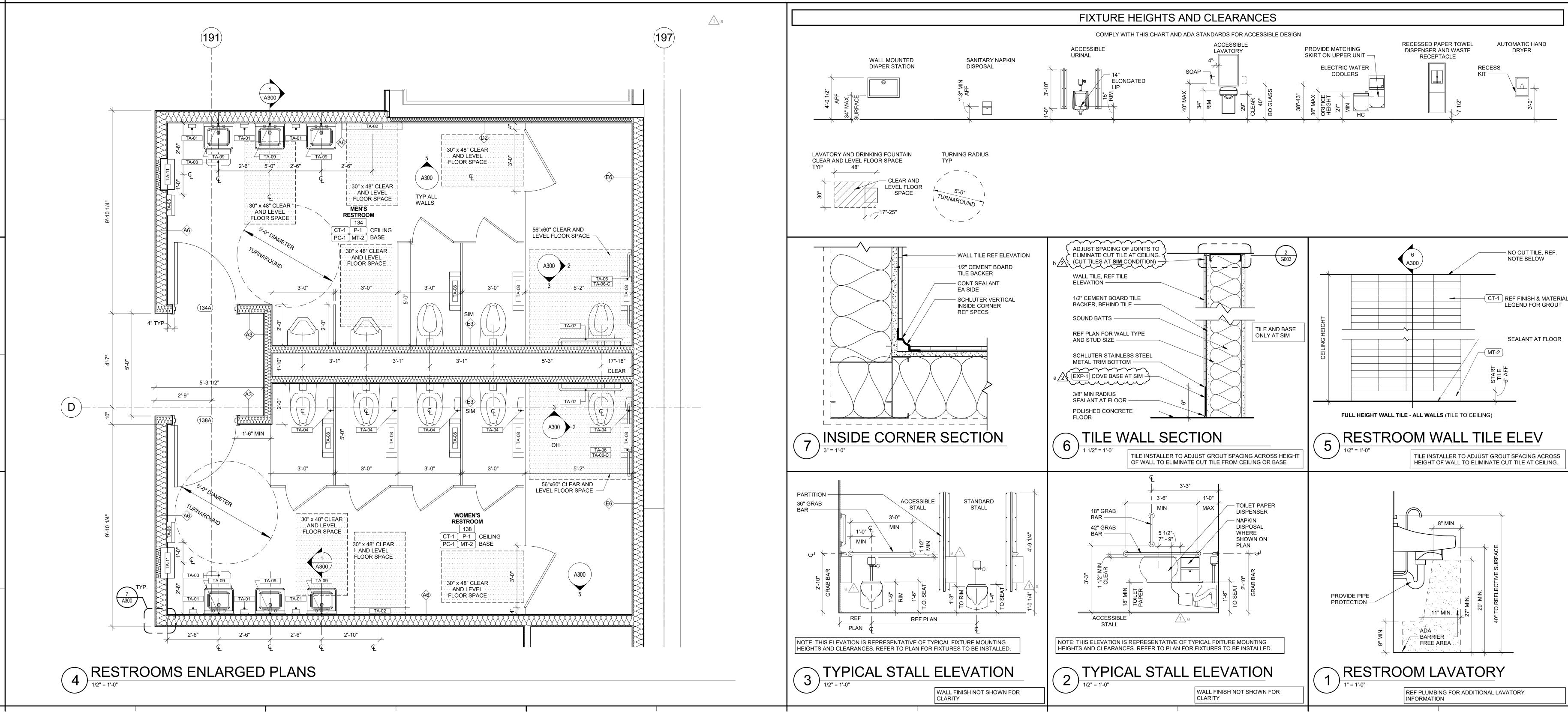
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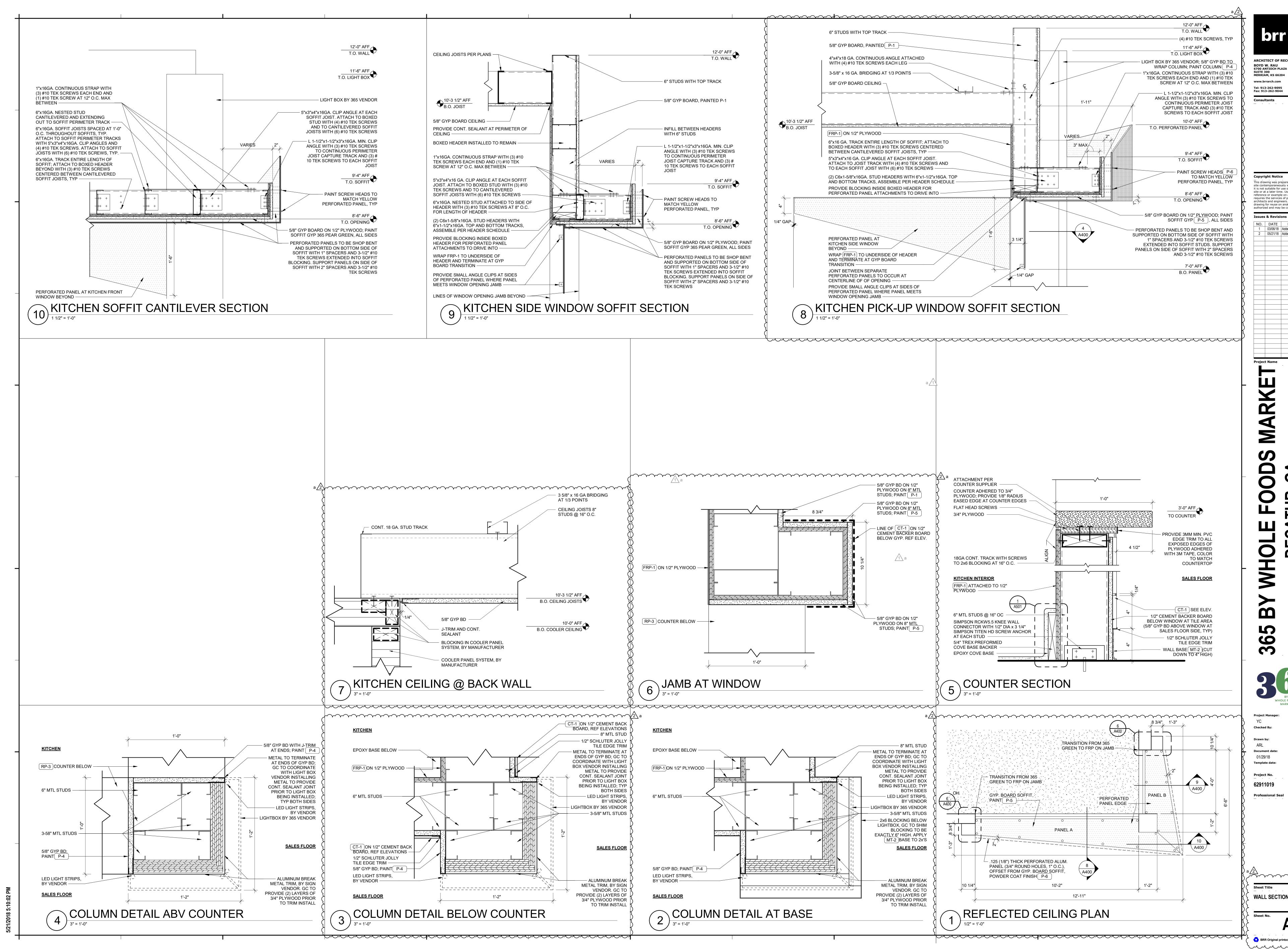
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ENLARGED RESTROOM PLANS & ELEVATIONS A300

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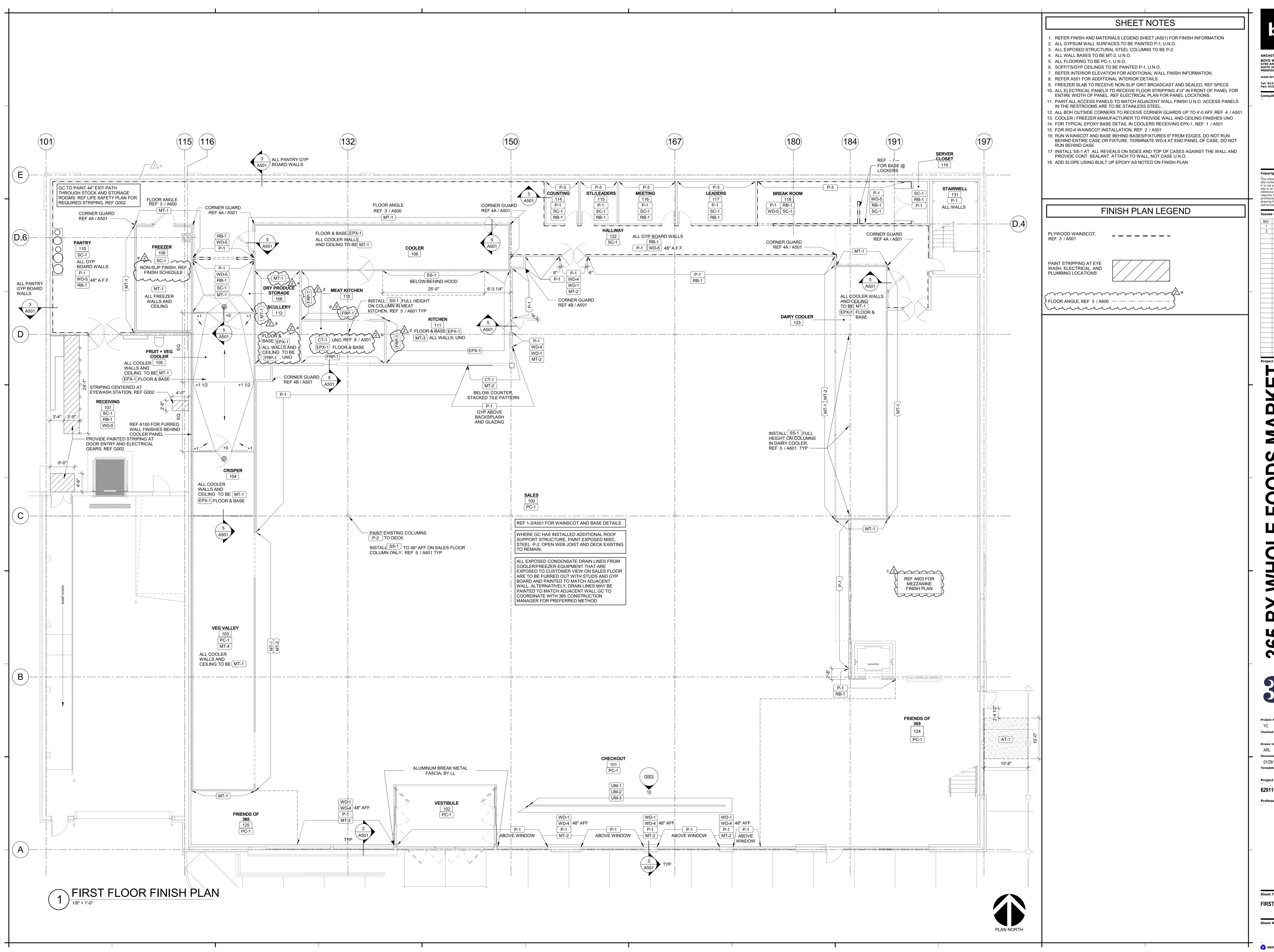
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a/2\ **WALL SECTIONS**



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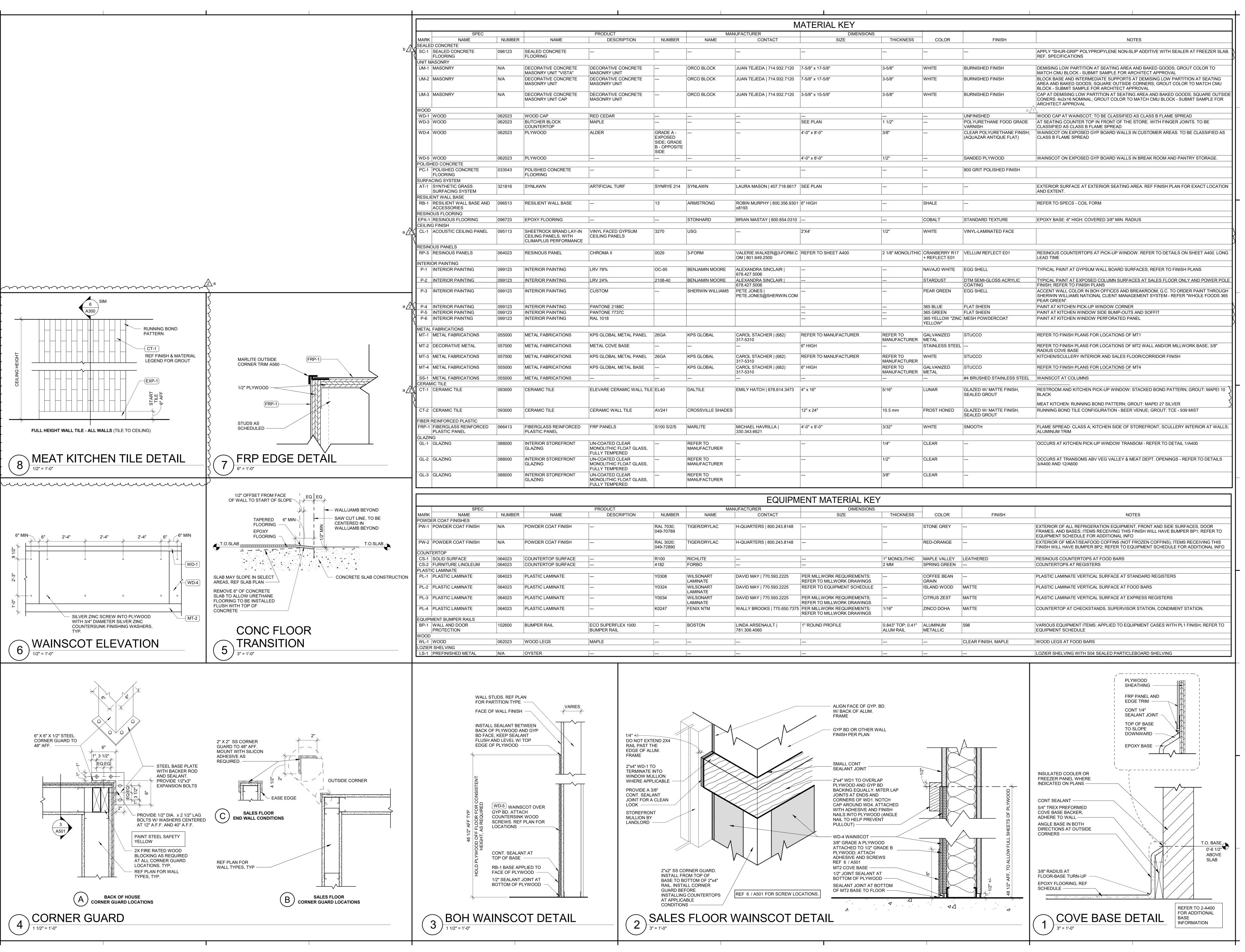
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FIRST FLOOR FINISH PLAN



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6

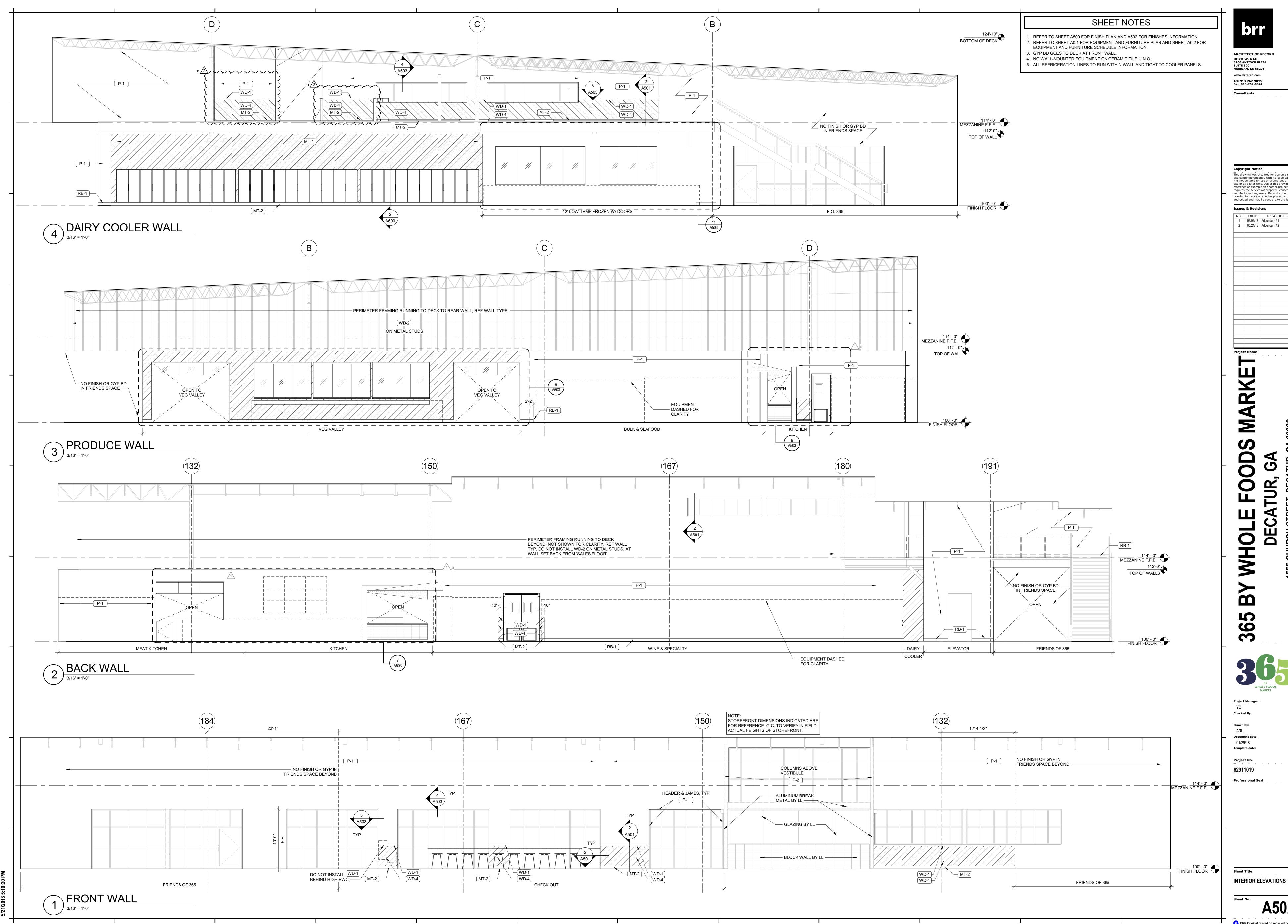
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FINISH AND MATERIALS

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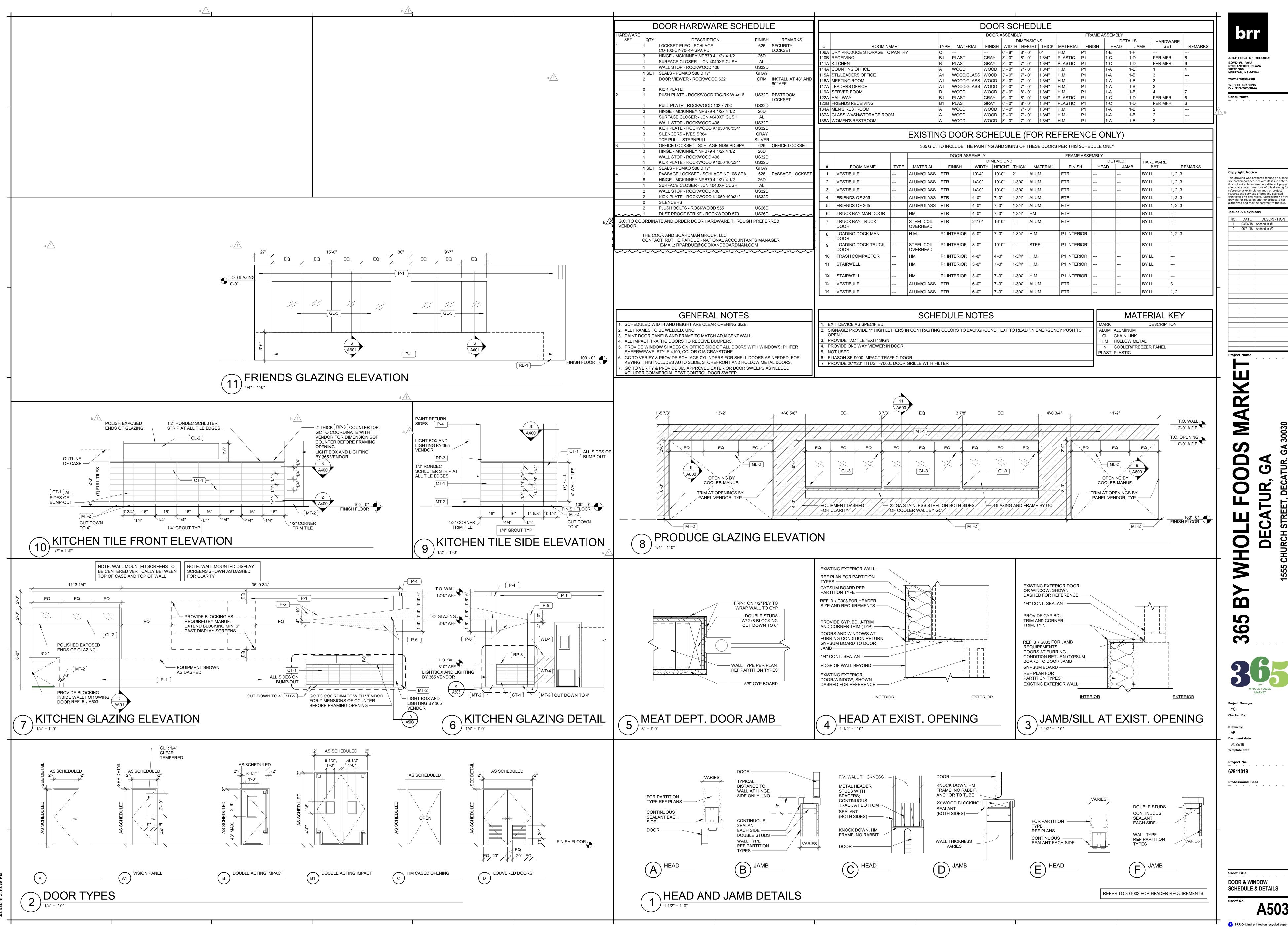
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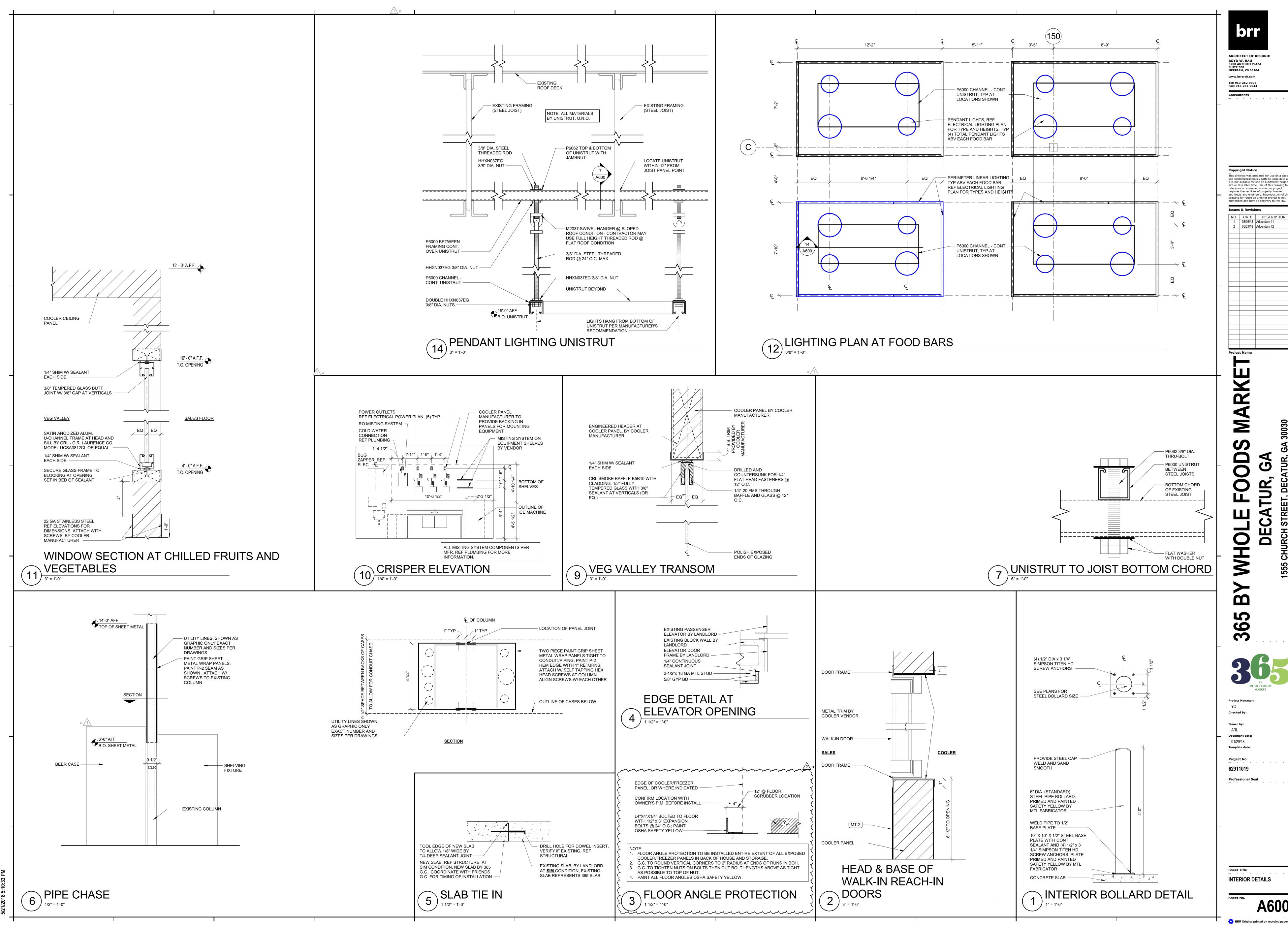
9

Project Manager:

Document date

Template date: 62911019

DOOR & WINDOW SCHEDULE & DETAILS



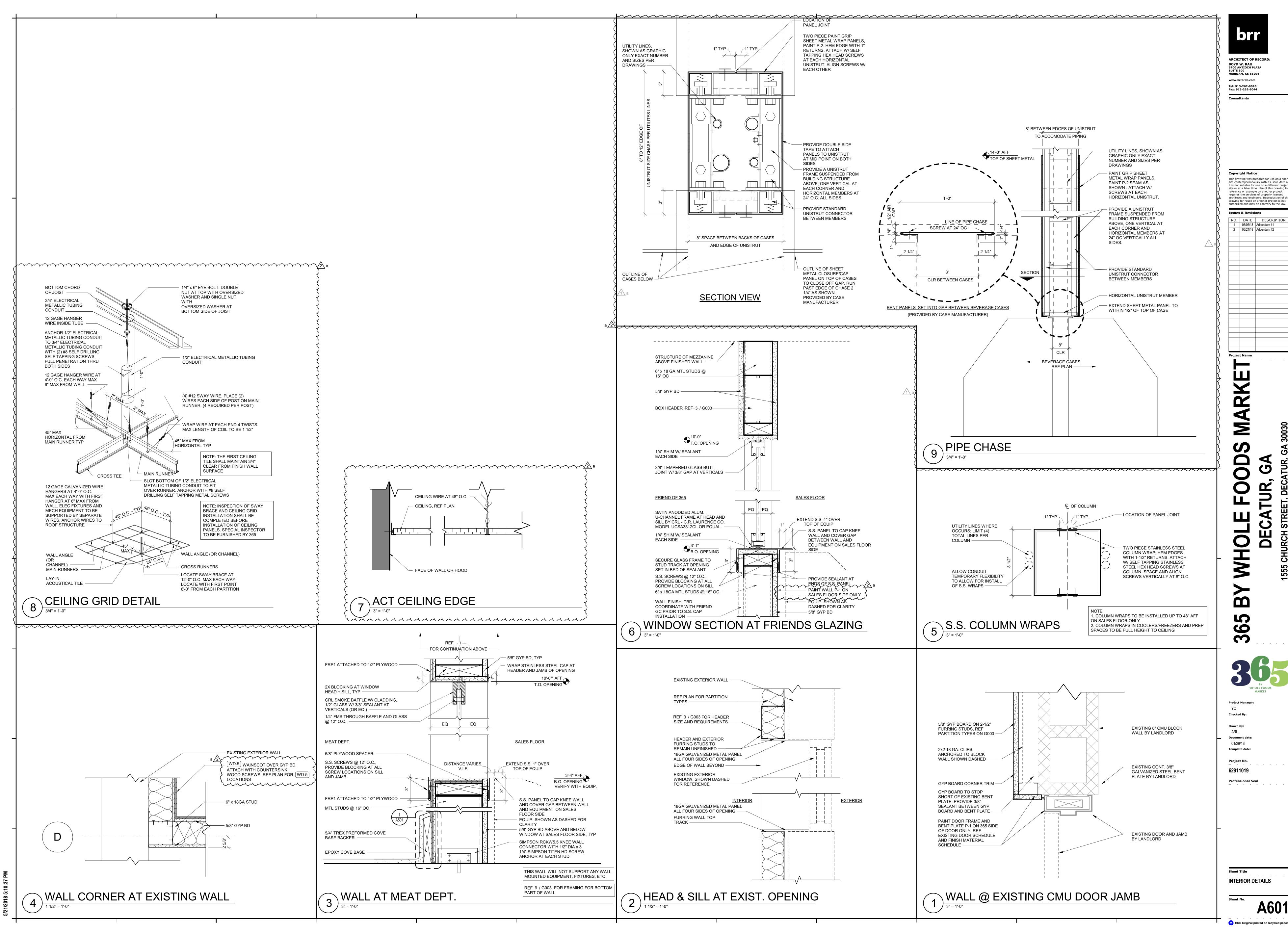
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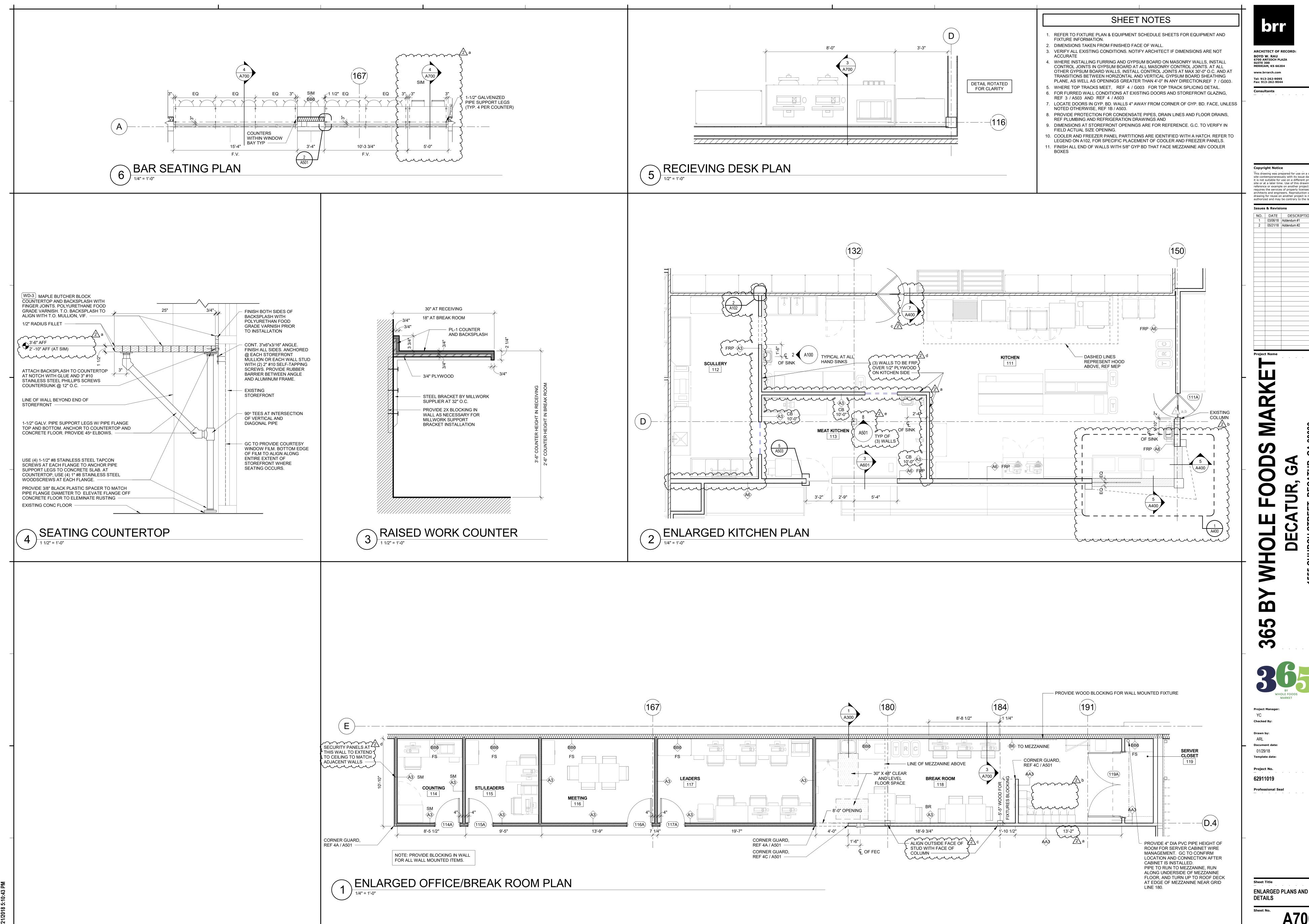
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INTERIOR DETAILS



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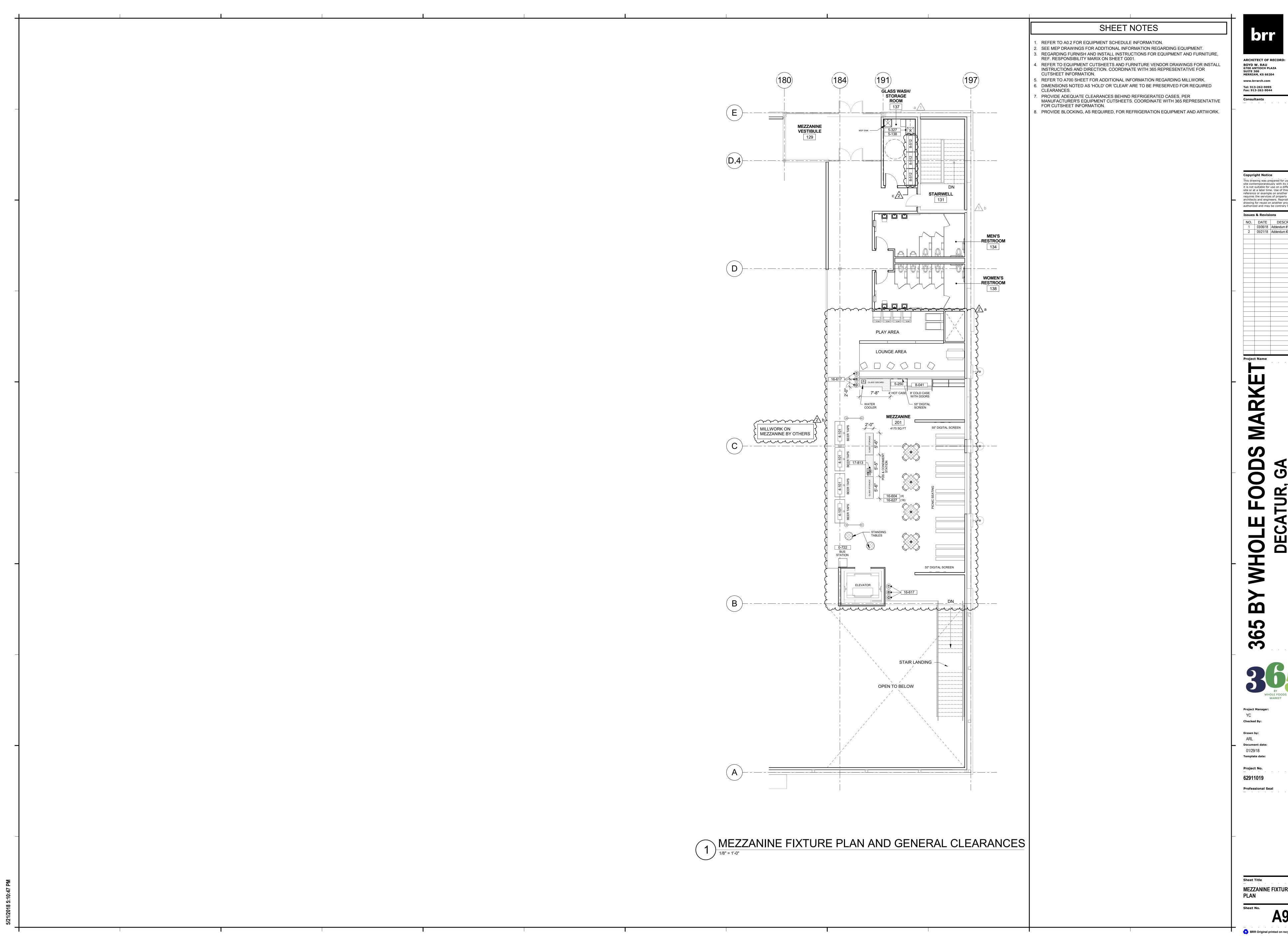
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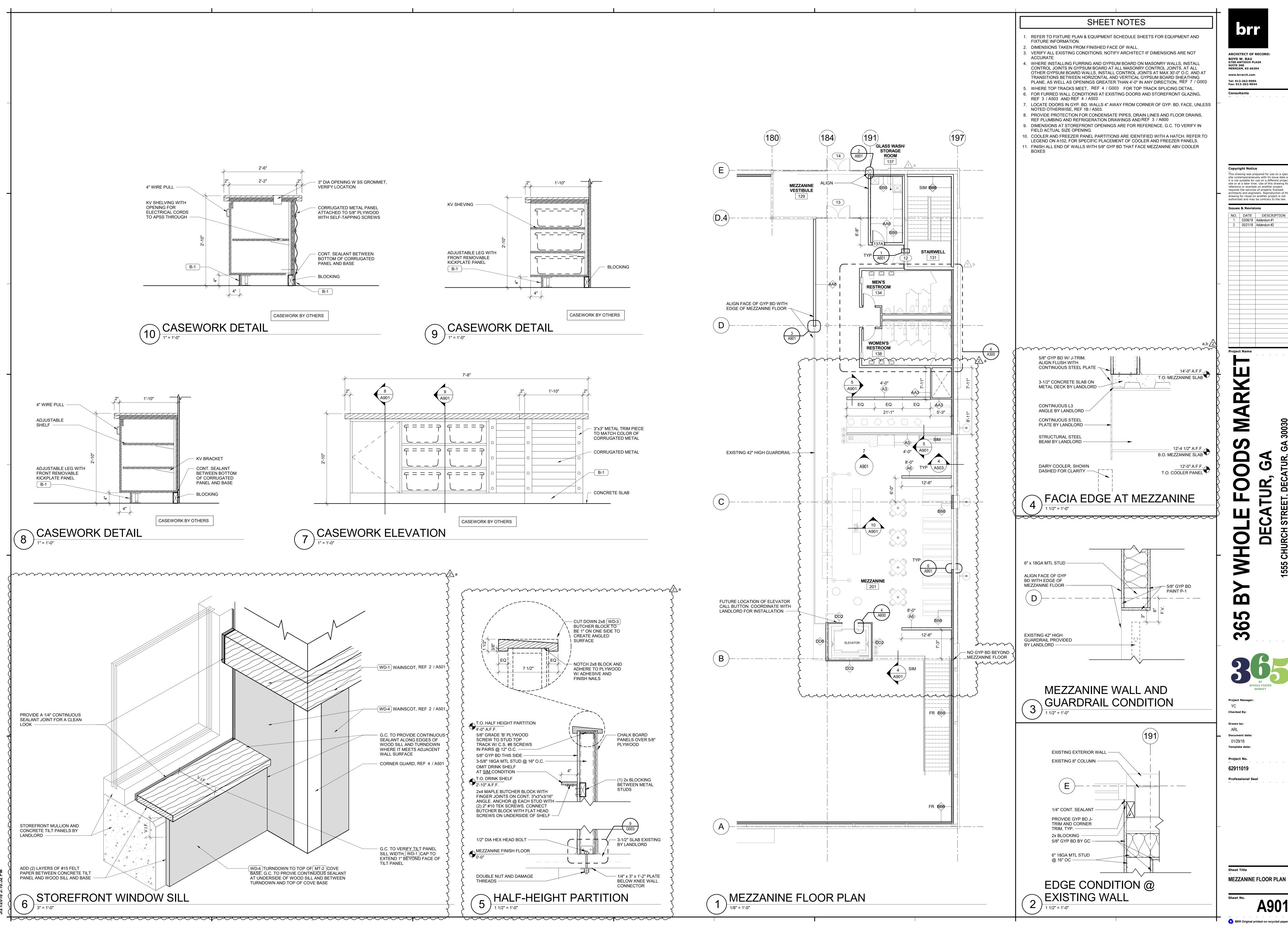
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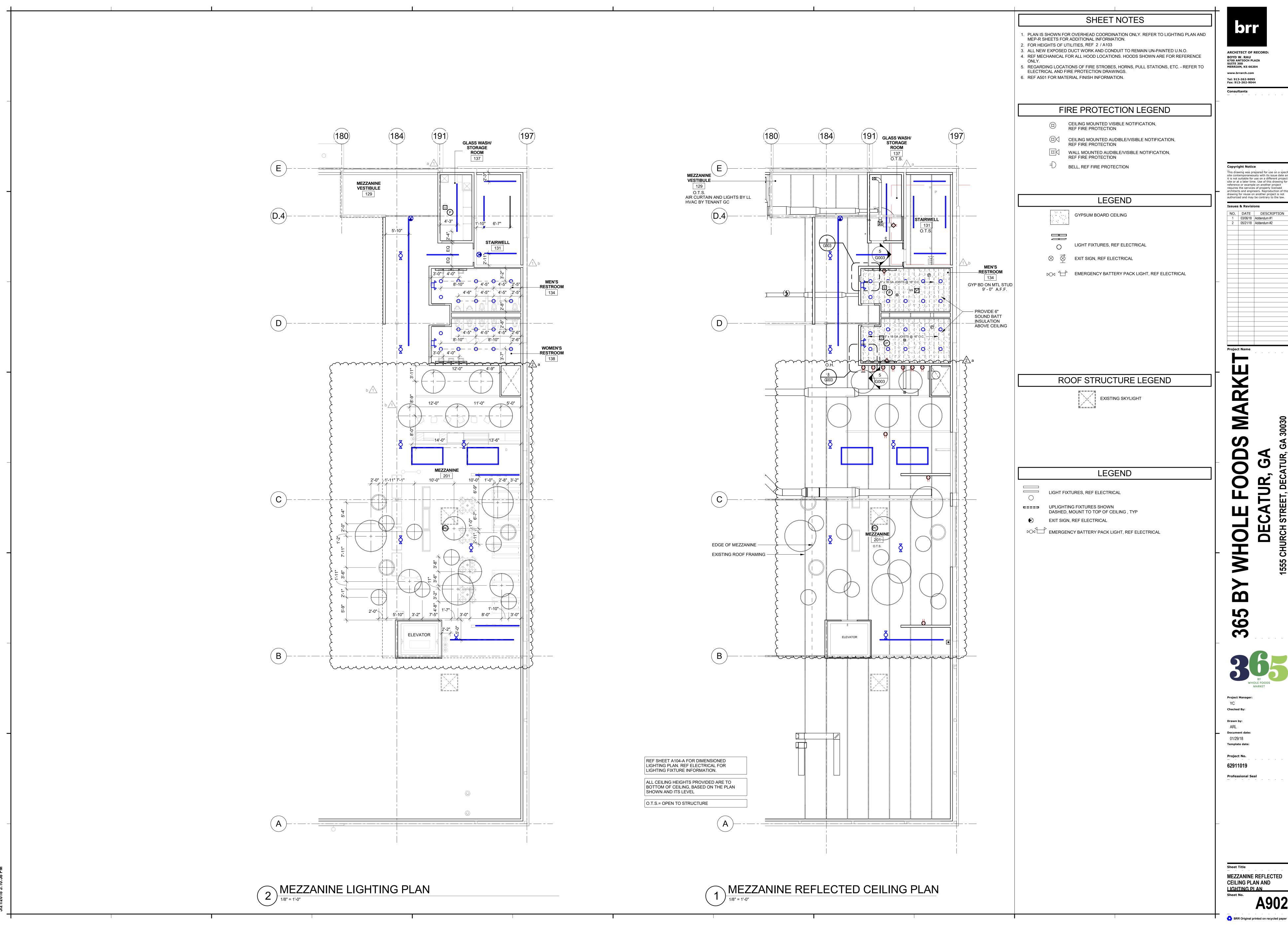
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MEZZANINE FLOOR PLAN

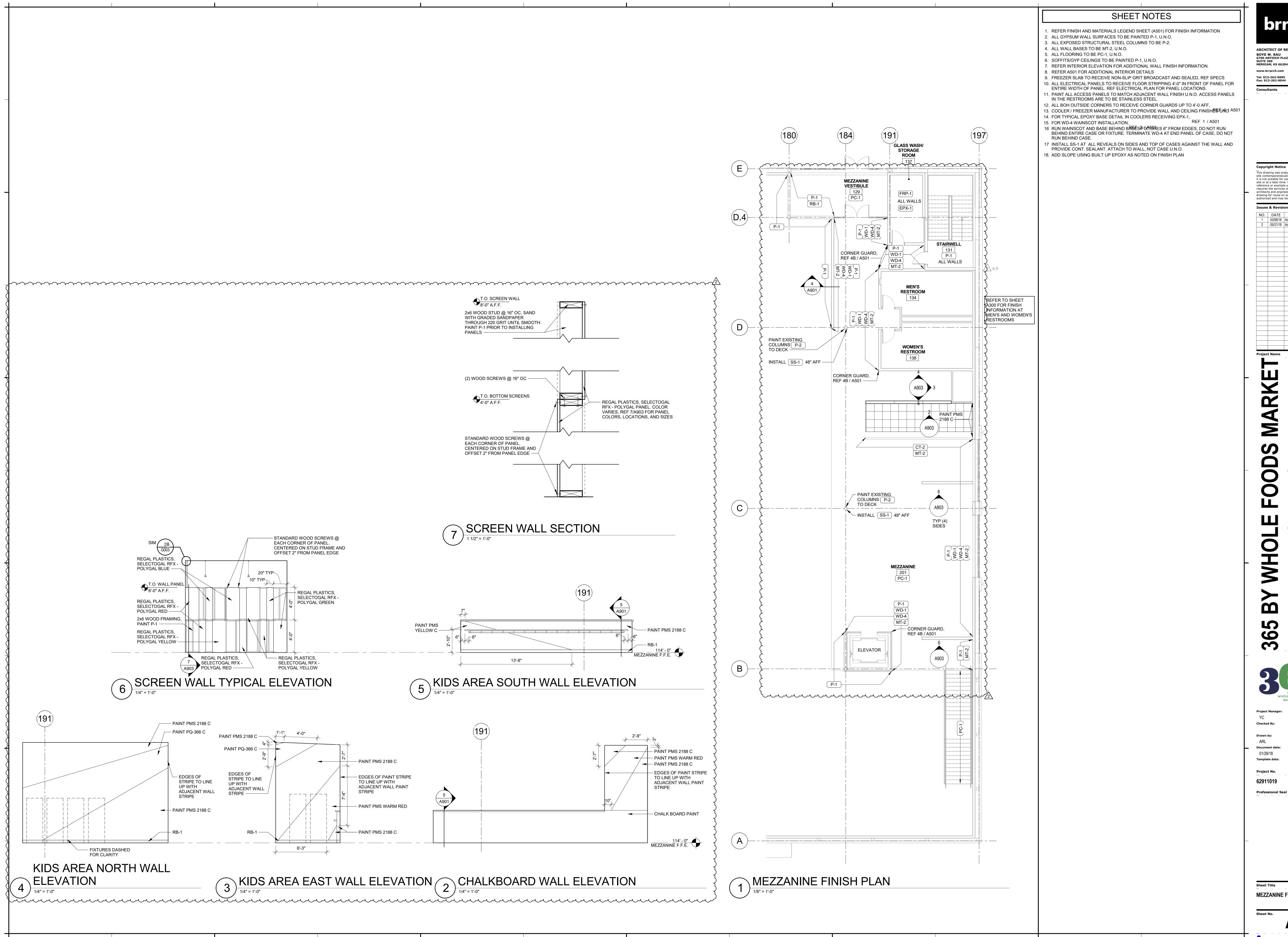


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MEZZANINE REFLECTED CEILING PLAN AND LIGHTING PLAN



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MEZZANINE FINISH PLAN

AND DETAILS

S001

Sheet No.

STRUCTURAL NOTES

Project Manager

BWN

BJH

Drawn by

BWN

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62911019

Sheet Title

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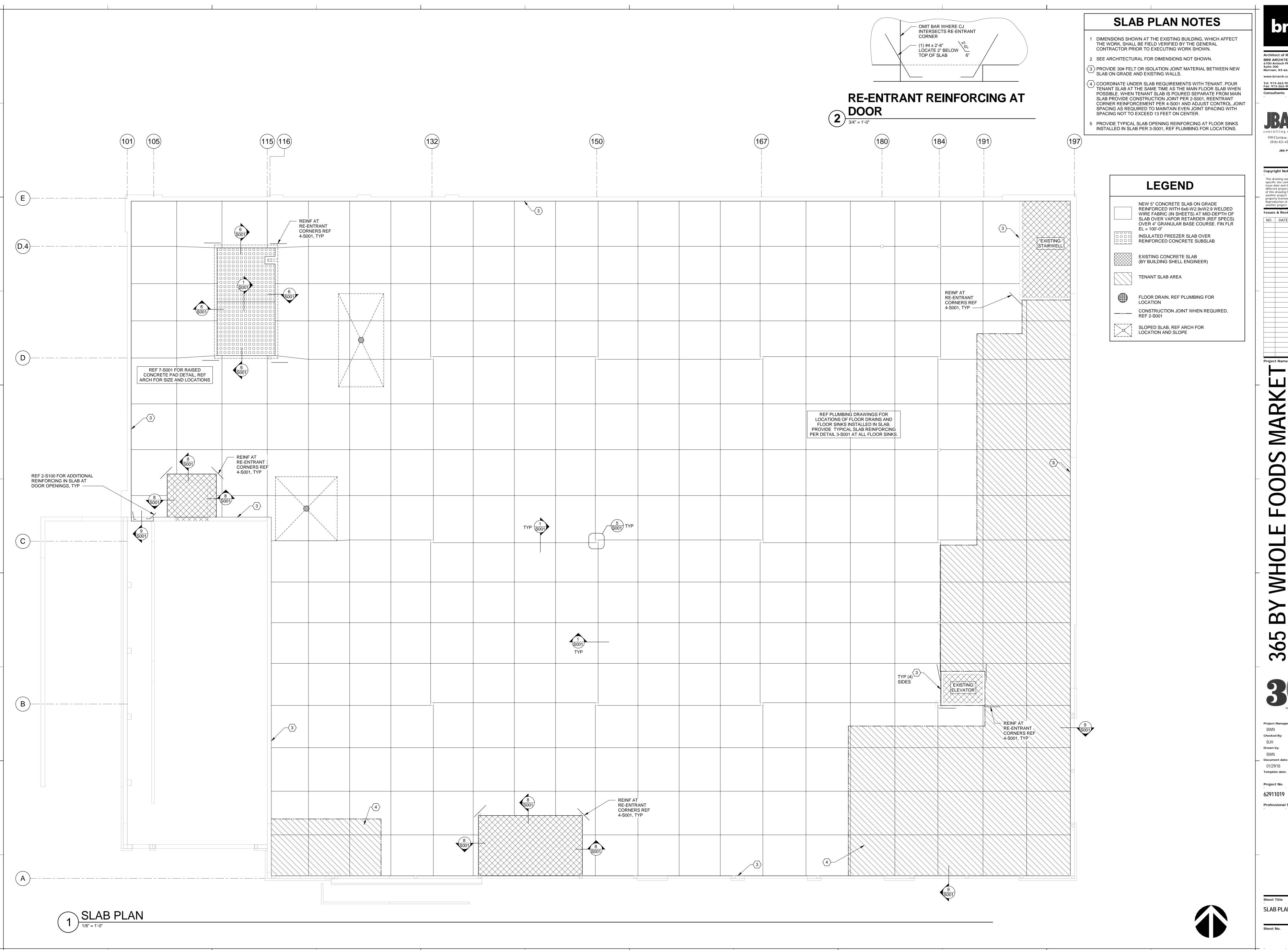
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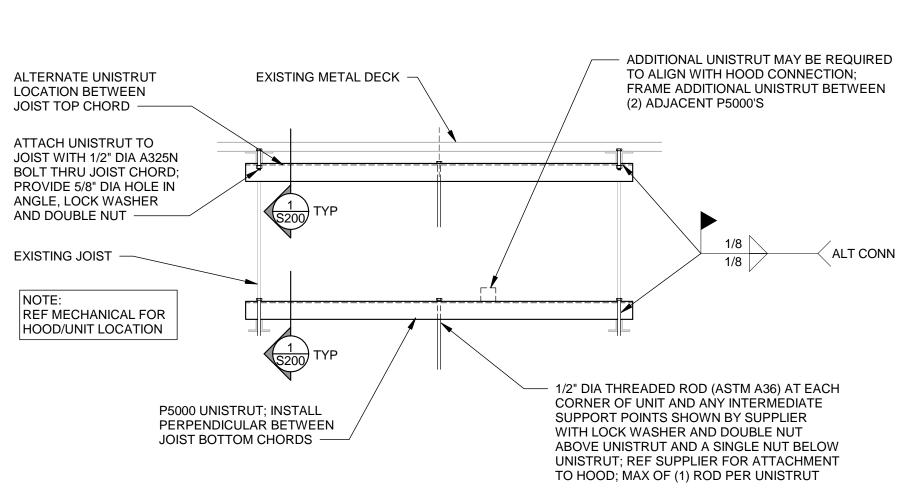
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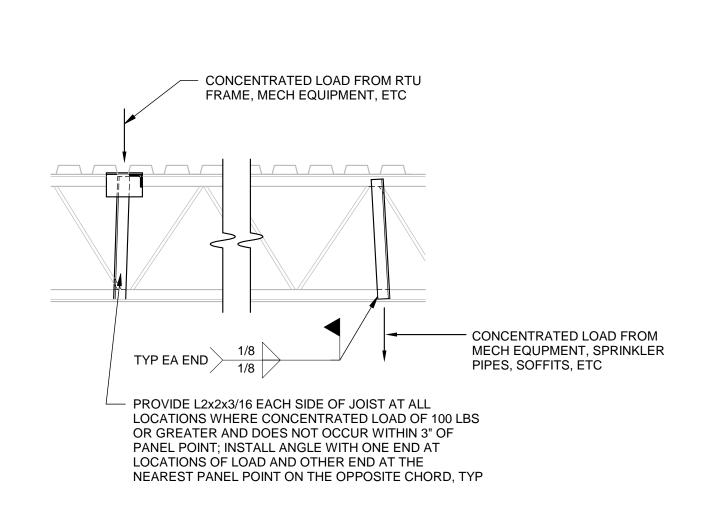
S100

NOTE: REF MECHANICAL FOR UNIT AND EXHAUST FAN LOCATION **REF MECH** - ATTACH EXISTING METAL FOR CURB — DECK TO ANGLE WITH #12 ATTACH EXISTING **REF MECH** TEK SCREWS AT 6" OC METAL DECK TO FOR CURB -ANGLE WITH #12 TEK ATTACH CURB TO EXISTINGROOF DECK ANGLES WITH #12 TEK SCREWS AT 12" OC — SCREWS AT 6" OC ATTACH CURB TO ANGLES WITH #12 TEK SCREWS AT 12" OC — EXISTINGROOF DECK - CL OF JOIST - L5x3x5/16 (LLH), TYP L5x3x5/16 (LLH), TYP 3B-S200 **PLAN VIEW** 3A-S200

OPENINGS LARGER THAN 10"x10" IN EXISTING ROOF

3/4" = 1'-0"





TYP JOIST REINF AT CONCENTRATED LOADS

3/4" = 1'-0"

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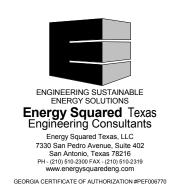
S200

HOOD/MECHANICAL UNIT SUPPORT

365 MEP EQUIPMENT CONNECTION SCHEDULE

PLUMBING

ELECTRICAL



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DECATUR, GA

365 BY WHOLE FOODS

Project Manage EG Checked By: Drawn by:

Drawn by:
KJG
Document date:
01/26/18
Template date:

Project No. 62911019

62911019
Professional Seal

05/21/2018

Sheet Title

MEP EQUIPMENT

CONNECTION SCHEDULE

Shee MEPOOO

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17-814

17-815

17-821

17-824

DIGITAL INFO SCREEN

TRAINING TABLET CHARGER

LAPTOP

TRAINING TABLET

MANUAL WRAPPING/LABELING SYSTEM

LG

TRIPP-LITE

DELL

DELL

BIZERBA

43LX341C

CS16USB

LATITUDE E7250

VENUE 8 PRO 3000

BIZ WRAPPING SYSTEM 120/1

300W

2.4A

350W

6.5A

180W

120/1

120/1

120/1

120/1

VARIES - REFER TO SHEEET E200

NEMA 5-20R AT 6" ABOVE COUNTER

NEMA 5-20R AT 6" ABOVE COUNTER

NEMA 5-20R AT 6" ABOVE COUNTER

6' CORD WITH NEMA 5-20P AND GFI 5-20R AT 36" AFF

			C	OUTSIDE AIR REC	QUIREMENTS	, ASHRAE 62.1 (IP)							
Ventilation Zone	Associated	ASHRAE Space Use Category	People Outdoor	Default Occupanct	Default Zone	Actual Population	Zone	Area Outdoor	Zone Floor	Breathing Zone	Zone Air Distribution	People-Based Zone OA	Area-Based Zone OA	Zone Outdoor
	System		Air Rate [Rp]	Density	Population	Override	Population [Pz]	Air Rate[Ra]	Area [Az]	Outdoor Airflow [Vbz]	Effectiveness [Ez]	Required (Rp*Pz)/Ez	Required (Ra*Az)/Ez	Airflow [Voz]
			(CFM/Person)	(#/1000 ft2)	(people)	(people)	(people)	(cfm/ft2)	(ft2)	(CFM)			(CFM)	(CFM)
SALES	RTU-1/2	Supermarket	7.5	8	129		129	0.06	16186.00	1942.3	0.8	1214	1214	2428
FRIENDS 2	RTU-3	Sales (except as below)	7.5	15	28		28	0.12	1890.00	439.4	0.8	266	283.5	549
SEATING/CHECKOUT	RTU-4	Restaurant dining rooms	7.5	70	70	53	53	0.18	1003.00	578.0	0.8	497	225.675	723
VESTIBULE	RTU-9	Not regularly occupied	0	0	0		0	0	356.00	0.0	0.8	0	0	0
FRIENDS 1	RTU-5	Sales (except as below)	7.5	15	5		5	0.12	338.00	78.6	0.8	48	50.7	98
KITCHEN/SCULLERY	RTU-6	Kitchen (cooking)	7.5	20	24		24	0.12	1220.00	329.4	0.8	229	183	412
ВОН	RTU-7	Shipping/receiving	10	2	5		5	0.12	2371.00	331.9	0.8	59	355.65	415
RECEIVING	RTU-7	Shipping/receiving	10	2	3		3	0.12	1294.00	181.2	0.8	32	194.1	226
MEETING	RTU-8	Conference/meeting	5	50	7	6	6	0.06	145.00	38.7	0.8	38	10.875	48
LEADERS	RTU-8	Office space	5	5	1	6	6	0.06	199.00	41.9	0.8	38	14.925	52
STL LEADERS	RTU-8	Office space	5	5	0	1	1	0.06	93.00	10.6	0.8	6	6.975	13
COUNTING	RTU8	Office space	5	5	0	1	1	0.06	83.00	10.0	0.8	6	6.225	12
BREAK	RTU-8	Office space	5	5	2	11	11	0.06	377.00	77.6	0.8	69	28.275	97
MEZZANINE	RTU-10	Sales (except as below)	7.5	8	25		25	0.06	3157.00	378.8	0.8	237	236.775	474
RESTROOMS	RTU-10	Not regularly occupied	0	0	0		0	0	337	0.0	0.8	0	0	0

1. SALES FLOOR, SEATING, AND CHECKOUT ARE ALL OPEN TO EACH OTHER, OUTSIDE AIR IS PROVIDED AT RTU-1 AND RTU-2 FOR THESE SPACES.

DUCTWORK MATERIAL
CARBON STEEL, MINIMUN 16-GAUGE
STAINLESS STEEL, MINIMUM 18-GAUGE
GALV. SHEET STEEL PER SMACNA TABLES 1-3 THROUGH 1-19, MIN. 26-GAUGE
GALVANIZED STEEL SMACNA TABLE 3-2, MINIMUM 26-GAUGE
GALVANIZED STEEL, SPIROSAFE SYSTEM BY LINDAB OR APPROVED EQUAL

1. REFER TO SPECIFICATIONS FOR JOINTS, SEAMS, FITTINGS, INSTALLATION REQUIREMENTS AND FURTHER INFORMATION. 2. SEAMS, JOINTS, PENETRATIONS, AND DUCT-TO-HOOD COLLAR CONNECTIONS SHALL HAVE LIQUID-TIGHT CONTINUOUS EXTERNAL WELD PER UMC 510.5.2. GENERAL MECHANICAL NOTES:

- 1 PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR 365 OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- 2. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE, COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC.
- 3. AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN FOR NEW INSTALLATION DURING WORK. REPAIR DAMAGE CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO 365.
- 4. ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
- 5. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
- 6. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASES AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.
- 7. COORDINATE LOCATION OF ROOF MOUNTED HVAC EQUIPMENT AND ROOF PENETRATIONS WITH REFRIGERATION EQUIPMENT AND WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 8. INSTALL DUCTWORK AND PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
- 9. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF.
- 10. COORDINATE LOCATION OF EQUIPMENT SUPPORTS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR
- 11. SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF PENETRATIONS THROUGH
- 12. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL AND
- 13. ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES AS REQUIRED
- 15. COORDINATE THE LOCATION AND ELEVATION OF WALL-MOUNTED DEVICES WITH
- 17. PROVIDE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND QUADRANT FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL
- 18. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE
- RECOMMENDATIONS AND EQUIPMENT SPECIFICATIONS. KEEP PENETRATIONS
- 25. PROVIDE A NEW SET OF AIR FILTERS IN UNITS PRIOR TO TESTING, ADJUSTING AND BALANCING. AND BEFORE TURNING SYSTEM(S) OVER TO OWNER.

MECHANICAL SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ABBREVIATIONS,

NOTE: ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE INSIDE DIMENSIONS. SEE SECTION 15250 OF THE SPECIFICATION FOR DUCTWORK TO RECEIVE INSULATION OR LINER.

INSULATED FLEXIBLE DUCT (MAX. 5'-0" LONG) FITTING AND MANUAL VOLUME DAMPER

ELBOW WITH TURNING VANES BRANCH DUCT WITH BELL-MOUTH FITTING & MANUAL

RETURN AIR DUCT DOWN SUPPLY OR OUTSIDE AIR DUCT UP

EXHAUST AIR DUCT DOWN

NECK SIZE CSD-1

NECK SIZE FILTER REPLACEMENT. CEG-1

FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.

DUCT INSTALLATION REQUIREMENTS.

TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.

- 14. EMS CONTRACTOR SHALL SET THERMOSTATS AND HUMIDISTATS AT LOCATIONS SHOWN ON PLANS. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. INSTALL DEVICES 48" AFF TO MEET ADA REQUIREMENTS UNLESS CONTROL WIRING.
- WALL-MOUNTED DEVICES CAUSED BY A LACK OF COORDINATION.
- 16. PROVIDE A MANUAL BALANCING DAMPER IN EACH BRANCH DUCT TAKEOFF FROM MAIN SUPPLY, RETURN, OUTDOOR AND EXHAUST AIR DUCTS.
- THROUGH ROOF A MINIMUM OF 10'-0" FROM HVAC EQUIPMENT FRESH AIR INLETS
- 23. PROVIDE TYPE I GREASE HOOD EXHAUST DUCTWORK WITH ACCESS PANELS FOR GREASE CLEANING AS REQUIRED BY NFPA 96 AND LOCAL CODES. SLOPE DUCT BACK TOWARDS HOOD AT MINIMUM OF 1/4" PER LINEAL FOOT MAINTAINING 18" CLEARANCE TO COMBUSTIBLE MATERIALS. IF APPROVED BY LOCAL CODES, PROVIDE AN APPROVED WRAP SYSTEM. DUCT WRAP SYSTEM SHALL MEET UL
- FRAME TO MATCH WALL CONSTRUCTION. COORDINATE WITH ARCHITECTURAL DRAWINGS.
- 26. INSPECT AND FULLY CHARGE ALL HVAC EQUIPMENT PRIOR TO RELEASE OF
- DELIVERED) DUCTWORK AND HVAC UNITS FROM EXPOSURE TO DUST, DIRT, PAINT AND MOISTURE. REPLACE INSULATION THAT HAS GOTTEN WET AT ANY TIME DURING CONSTRUCTION, DRYING THE INSULATION IS NOT ACCEPTABLE. SEAL ANY TEARS OR JOINTS OF INTERNAL FIBERGLASS INSULATION. REMOVE DEBRIS FROM CEILING/RETURN AIR PLENUM INCLUDING DUST. AN INDEPENDENT, PROFESSIONAL DUCT CLEANING COMPANY SHALL VACUUM CLEAN ANY DUCTWORK CONNECTED TO HVAC UNITS THAT WERE OPERATED DURING THE CONSTRUCTION PERIOD AFTER NEW FILTERS ARE INSTALLED AND PRIOR TO TURNING SYSTEM OVER TO 365. THE INTERNAL SURFACES AND ASSOCIATED COILS OF ANY HVAC UNITS THAT

WERE OPERATED SHALL ALSO BE CLEANED.

NOTE: I HIS IS A WASTER LEGERS AND THE DRAWINGS.

HVAC EQUIPMENT & DUCTWORK LINEAR SLOT DIFFUSER

CO CARBON MONOXIDE SENSOR

CO2 CARBON DIOXIDE SENSOR

FS FLOW SWITCH

PS PULL STATION

MIN MINIMUM

OA OUTSIDE AIR

SA SUPPLY AIR

TYP TYPICAL

W/O WITHOUT

(AFF, AFG, UNLESS NOTED OTHERWISE)

HS HUMIDITY SENSOR

SP STATIC PRESSURE PORT

TS TEMPERATURE SENSOR

NC NOISE CRITERIA

RA RETURN AIR

TFA TO FLOOR ABOVE

TFB TO FLOOR BELOW

SD SMOKE DUCT DETECTOR

Architect of Record: BOYD W. RAU 6700 Antioch Plaza Merriam, KS 66204

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BRANCH DUCT WITH 45° RECTANGLE-ROUND BRANCH

VOLUME CONTROL DAMPER RETURN AIR DUCT UP

SUPPLY OR OUTSIDE AIR DUCT DOWN EXHAUST AIR DUCT UP

EQUIPMENT WITH FLEXIBLE DUCT CONNECTION

CFM OF SUPPLY DIFFUSER OR REGISTER

3-WAY AIR DEVICE

CFM OF EXHAUST GRILLE MANUAL VOLUME DAMPER

FIRE DAMPER

SMOKE DAMPER

(VD) VOLUME DAMPER

(MD) MOTORIZED DAMPER

(BD) BACKDRAFT DAMPER

(H) HUMIDISTAT

T THERMOSTAT

AFF ABOVE FINISHED FLOOR

CFM CUBIC FEET PER MINUTE

DDC DIRECT DIGITAL CONTROL

BD BACKDRAFT DAMPER

DX DIRECT EXPANSION

FFA FROM FLOOR ABOVE

FFB FROM FLOOR BELOW

MBH 1000 BTU PER HOUR

CONTROLS (TOP OF DEVICE)

GPM GALLONS PER MINUTE

IN WC INCHES OF WATER COLUMN

EA EXHAUST AIR

MAX MAXIMUM

MECHANICAL

MOUNTING HEIGHTS

BAS BUILDING AUTOMATION SYSTEM

ABBREVIATIONS

FIRE SMOKE DAMPER

SQUARE TO ROUND TRANSITION DUCT MOUNTED SMOKE DETECTOR (SD=SUPPLY/RD=RETURN) RISER DESIGNATION

NOTED OTHERWISE ON PLANS. PROVIDE INSULATED BACKING FOR THERMOSTATS MOUNTED ON EXTERIOR BUILDING WALLS. EMS CONTRACTOR SHALL PROVIDE ALL

PRESENTATION BOARDS, DISPLAY CABINETS, SHELVES OR OTHER COMPONENTS SHOWN ON THE ARCHITECTURAL DRAWINGS THAT ARE TO BE INSTALLED UNDER OTHER DIVISIONS. CONTRACTOR WILL NOT BE REIMBURSED FOR RELOCATION OF

BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING DIFFUSERS, REGISTERS AND GRILLES.

UNLESS OTHERWISE NOTED.

19. REFER TO SPECIFICATIONS FOR DUCTWORK AND PIPING INSULATION REQUIREMENTS. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS, INCREASE SHEET METAL SIZES ACCORDINGLY TO ACCOUNT FOR THICKNESS OF DUCT LINER.

20. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

21. RIGIDLY SUSPEND UNIT HEATER FROM STRUCTURE WITH SUPPORTING ANGLES AND ALL-THREAD HANGING RODS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

22. PROVIDE EQUIPMENT VENTS AND FLUES PER EQUIPMENT MANUFACTURERS AND 3'-0" FROM ROOF PARAPETS.

REQUIREMENTS FOR GREASE DUCT ENCLOSURES.

24. PROVIDE WALL MOUNTED LOUVERS AND DAMPERS WITH SUITABLE MOUNTING

27. INDOOR AIR QUALITY MEASURES: PROTECT INSIDE OF (INSTALLED AND

ANNOTATION MECHANICAL OR FIRE PROTECTION PLAN CALLOUT PLUMBING PLAN NOTE CALLOUT 1 ELECTRICAL PLAN NOTE CALLOUT

THERMOSTATS (USER ADJUSTABLE)(TOP OF DEVICE)

TEMPERATURE SENSORS (PUBLIC AREAS)

TEMPERATURE SENSORS (NON-PUBLIC SPACES)

(1) TECHNOLOGY PLAN CALLOUT PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR 1 FURNISHED AND INSTALLED). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES

EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED) MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR

FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE) CONNECTION POINT OF NEW WORK TO EXISTING

DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER

1 SECTION CUT DESIGNATION

DIVISION 23: SHALL BE RESPONSIBLE FOR RECEIVING FURNISHED EQUIPMENT AT THE JOB SITE, UNLOADING, STORING, AND INSTALLATION DURING CONSTRUCTION OF PROJECT. CONTACT 365 IF EQUIPMENT ARRIVES TO THE SITE DAMAGED.

DIVISION 23: SHALL PROVIDE THE SERVICES OF A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO START-UP ALL HEATING, VENTILATING, AND AIR CONDITIONING EQUIPMENT UNITS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN START-UP INSTRUCTIONS. DO NOT OPERATE UNITS WITHOUT FILTERS INSTALLED. TEST CONTROLS AND DEMONSTRATE COMPLIANCE WITH REQUIREMENTS. REPLACE DAMAGED OR MALFUNCTIONING CONTROLS AND EQUIPMENT.

DIVISION 23: SHALL BE RESPONSIBLE FOR TEST AND BALANCE SCOPE OF

Issues & Revisions NO. DATE DESCRIPTION **Project Name** DPDIFFERENTIAL PRESSURE SENSOR MC MECHANICAL CONTRACTOR UNO UNLESS NOTED OTHERWISE

Project Manager:

Document date: 01/26/18 Template date: Project No. 62911019

Professional Seal

SGP Checked By:

Drawn by:

SGP

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Issues & Revisions NO. DATE DESCRIPTION 2 05/21/18 Addendum #2

Project Name

SGP

Document date Template date:

05/21/2018 **MECHANICAL PLAN**

KEYNOTES:

- 1 ROOFTOP UNIT PROVIDED BY LANDLORD AS PART OF THE BUILDING SHELL PACKAGE. CONNECT TO FULL SIZE SUPPLY AND RETURN DROPS OFF ROOFTOP UNIT AND MODIFY EXISTING DROPS AS NECESSARY TO INSTALL DUCTWORK AS SHOWN.
- 2 ROUTE DUCTWORK LEVEL, TIGHT TO STRUCTURE, AND ABOVE LIGHTS. COORDINATE WITH STRUCTURAL AND ELECTRICAL.
- PROVIDE FULL SIZE RETURN DUCT DOWN AND OFFSET 36" HORIZONTAL FROM UNIT TIGHT TO STRUCTURE WITH 1" ACOUSTICAL LINER AND 3/4" WIRE MESH SCREEN ON
- 4 DO NOT ROUTE DUCTWORK OR PIPING UNDER SKYLIGHTS. 5 ROUTE DUCTWORK FROM RETURN GRILLE UP THROUGH CEILING SUPPORT STRUCTURE
- ABOVE BEFORE TURNING HORIZONTALLY. SEE DETAIL FOR RETURN GRILLE BOOT.

6 MOUNT GRILLE ABOVE JANITOR SINK AT 9'-0".

PROVIDE DUCTWORK LINER FOR ALL DUCTWORK

WHERE DUCTWORK IS LOCATED ABOVE A CEILING, ROUTE DUCTWORK DOWN FROM ROOF TO TIGHT ABOVE CEILING STRUCTURE

EXCEPT GREASE EXHAUST AND SCULLERY EXHAUST **Issues & Revisions**

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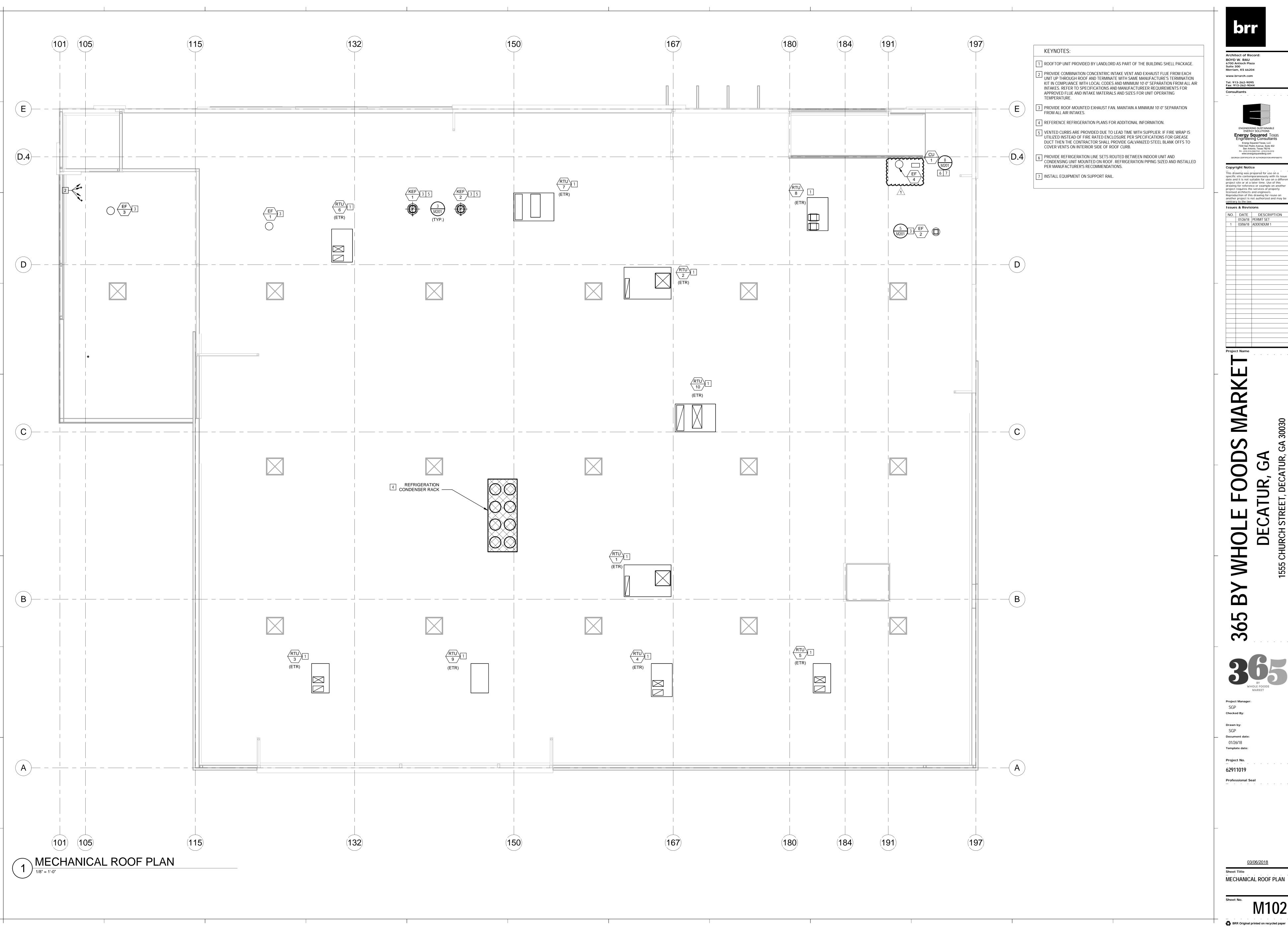
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 NO.
 DATE
 DESCRIPTION

 1
 03/06/18
 Addendum #1

 2
 05/21/18
 Addendum #2



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 1
 03/06/18
 ADDENDUM 1

MECHANICAL ROOF PLAN

M102

EQUIPMENT FURNISHED AND INSTALLED BY DIVISION 23.

PROVIDE ALL STEEL CONSTRUCTION WITH ENAMEL WHITE FINISH. FRAM TYPE TO MATCH CEILING CONSTRUCTION, COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLAN.

REFERENCE PLANS FOR NOMINAL REGISTER OR GRILLE FACE SIZE. PROVIDE REGISTER WITH DAMPER AND DOUBLE DEFLECTION BLADES PARALLEL TO LONG DIMENSION.

PROVIDE DUCT COLLAR EQUAL TO BRANCH DUCT SIZE INDICATED ON PLANS. PROVIDE OPPOSED BLADE DAMPER ADJUSTABLE FROM FACE OF DEVICE.

PROVIDE ALL ALUMINUM CONSTRUCTION TO MATCH EXPOSED DUCTWORK. PROVIDE ALL ALUMINUM CONSTRUCTION WITH ENAMEL WHITE FINISH. PROVIDE 48" LONG, (4) 1" SLOT LINEAR DIFFUSER WITH PRICE MODEL SDB INSULATED PLENUM AND DUCT CONNECTION.

PROVIDE AIR DEVICE FOR 3-WAY THROW (WHERE INDICATED ON THE DRAWINGS) CONTRACTOR SHALL PROVIDE REMOTE CABLE-OPERATED VOLUME DAMPER BY METROPOLITAN AIR TECHNOLOGIES MODEL RT-50 WITH EXTERNAL WORM GEAR OPERATOR OR EQUIVALENT YOUNG REGULATOR BUTTERFLY DAMPER WITH 270-275 CONTROLLER. OPERATOR SHALL HAVE A SQUARE DRIVE FOR 1/4" NUT DRIVER, DAMPER ASSEMBLY SHALL INCLUDE GALVANIZED STEEL DUCT WITH ROLLED BEAD STIFFENERS, REINFORCED BLADE, SELF LUBRICATING BEARING AND WORM GEAR MOUNTING PLATE. DAMPER SHALL

BE INSTALLED IN BRANCH DUCT NOT INLET OF PLENUM DIFFUSER. (RE: M201) PROVIDE DIFFUSER WITH SECTORIZING BAFFLE (SB) IN NECK OF DIFFUSER TO DISCHARGE AIR AWAY FROM KITCHEN HOODS.

_														
	EXISTING AIR CURTAIN SCHEDULE (ELECTRIC HEAT)													
								FAN			ELECTRI	C HEATE	₽R	
					LENGTH	MAX	FAN	MOTOR			HEATING			
	MARK	AREA SERVED	MANUFACTURER	MODEL	(IN)	AIRFLOW	QUANTITY		VOLTS	PH	CAPACITY	VOLTS	PH	NOTES
					` ,						(KW)			
	AC-1	VESTIBULE	MARS	PH12120-E2-PW	120"	5515	2	1.00	208	1	24.0	480	3	A-E
_												•		

EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY DIVISION 23.

REFER TO ADDITIONAL MECHANICAL SYSTEMS CONTROLS FOR UNIT CONTROLS. PROVIDE MANUAL TOGGLE OVERRISE SWITCH ON UNIT AND REMOTE DISCONNECT SWITCH FOR INSTALLATION BY DIVISION 26.

MOUNT UNIT PER MANUFACTURERS RECOMMENDATIONS CONCEALED IN CEILING. FURNISH WITH MANUFACTURER'S THERMOSTAT FOR INSTALLATION BY DIVISION 26. DIVISION 26 SHALL INTERLOCK FAN WITH THERMOSTAT. EQUIPMENT SUPPLIED AND INSTALLED BY LANDLORD.

			AIR CURTAIN SC	CHEDULE (N	O HEAT)					
MARK	AREA SERVED	MANUFACTURER	MODEL	LENGTH (IN)	MAX AIRFLOW	FAN QUANTITY	MOTOR HP	ELECTI VOLTS		NOTES
AC-2	RECEIVING DOOR	MARS	STD260-2U-OB	60"	2700	2	0.50	208	1	A-E

EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY DIVISION 23.

REFER TO ADDITIONAL MECHANICAL SYSTEMS CONTROLS FOR UNIT CONTROLS. SUSPEND UNIT FROM STRUCTURE PER MANUFACTURER'S RECOMMENDATIONS.

PROVIDE MANUAL TOGGLE OVERRISE SWITCH ON UNIT AND REMOTE DISCONNECT SWITCH FOR INSTALLATION BY DIVISION 26. PROVIDE AIR CURTAIN WITH NORMALLY CLOSED DOOR LIMIT SWITCH FOR INSTALLATION ON DOOR. THE AIR CURTAIN SHALL ENERGIZE WHEN DOOR OPENS.

ADDITIONAL MECHANICAL SYSTEMS CONTROL:

GENERAL PROVISIONS BY DIVISION 23

- ENERGY MANAGEMENT PANEL TO CONTROL ROOFTOP UNITS AND OTHER HVAC EQUIPMENT AS NOTED ON PLANS BY REMOTE TEMPERATURE AND HUMIDITY SENSORS. REFER TO EMS DRAWINGS EM000 FOR LOCATIONS AND MOUNTING HEIGHTS INFORMATION.
- EMS CONTROL PANEL LOCATED IN MAIN ELECTRICAL ROOM.
- EMS CONTRACTOR TO INSTALL ALL CONTROLS FURNISHED BY 365. COORDINATE WITH JUAN CEBRERA WTH SIEMENS juancabrera@siemens.com.

4. REFER TO DIVISION 23 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

- VESTIBULE AIR CURTAIN FANS ARE STARTED BY EMS BASED UPON DOOR
- ELECTRIC HEAT IN AIR CURTAIN IS CONTROLLER BY WALL TEMPERATURE SENSOR. HEAT TO ONLY OPERATE DURING FAN OPERATION TO MAINTAIN 65 DEGREES F (ADJUSTABLE).
- RECEIVING DOCK AIR CURTAIN FANS STARTED BY DOOR LIMIT SWITCH.
- ADJUST MULTI-SPEED FAN AND DISCHARGE LOUVER BLADES PER MANUFACTURER

CONTROL INTERIOR FAN COIL UNIT WITH INTEGRAL THERMOSTAT INTERLOCKED

SERVER ROOM SPLIT SYSTEM:

WHEN THE SEPARATE ROOM TEMPERATURE SENSOR REACHES SETPOINT (80 DEGREES F, ADJUSTABLE), IT SHALL ACTIVATE THE TOWER LIGHT ALARM.

THERMOSTAT SETPOINT (75 DEGREES F COOLING, ADJUSTABLE).

WITH EXTERIOR CONDENSING UNIT. CYCLE COOLING TO MAINTAIN ROOM

KITCHEN EXHAUST HOOD AND EXHAUST FAN:

- EXHAUST HOOD FAN OR DIRECT EQUIPMENT EXHAUST FANS ARE CONTROLLED BY A TOGGLE SWITCH MOUNTED ON HOOD OR DIRECT INTERCONNECTION WITH EQUIPMENT.
- EXHAUST HOOD FANS (KEF-1 & KEF-2) SHALL ENERGIZE IF TEMPERATURE PROBES MEASURE 95 DEGREES F OR HIGHER (ADJUSTABLE) EVEN IF MANUAL HOOD SWITCH IS OFF TO COMPLY WITH 2012 IMC 507.2.1.1 OR EQUIVALENT LOCAL CODE. CAPTIVE AIRE PROVIDE TEMPERATURE PROBE SENSOR.
- UPON ACTIVATION OF HOOD FIRE SUPPRESSION SYSTEM, EXHAUST HOOD SHALL BE WIRED TO SHUT DOWN RTU-1, RTU-2, AND RTU-6 ROOFTOP UNIT SUPPLY FANS AND HOOD EXHAUST FAN SHAL REMAIN RUNNING PER NFPA 96.
- INTERLOCK EXHAUST HOOD AND FAN SO THAT ROOFTOP UNITS RTU-1 AND RTU-2 ARE ENERGIZED WITH THE OUTSIDE AIR DAMPERS OPEN WHEN KITCHEN EXHAUST

HOOD FANS ARE ENERGIZED. **SCULLERY DISHWASHER EXHAUST FAN:**

- EXHAUST FAN IS CONTROLLED BY TIME DELAY AND DIRECT INTERCONNECTION WITH
- EXHAUST FAN SHALL ENERGIZE IF DISHWASHER ENERGIZES AND SHALL REMAIN RUNNING FOR 30 MINUTES AFTER DISHWASHER CYCLE COMPLETES.
- EXHAUST FAN LOCAL OVERRISE SWITCH SHALL ENERGIZE EXHAUST FAN ON AND BYPASS TIMER AND DISHWASHER AUTOMATIC CONTROL.

RESTROOM/JANITOR EXHAUST FAN:

EXHAUST FAN STARTED BY EMS FOR OCCUPIED/UNOCCUPIED HOURS OF OPERATION.

			BUILDING AIR BALANCE S	SCHEDULE			
	EXHAUST	SERVES				EXHAUST	TOTALS
	EVUADOI	SERVES				(CFM)	(CFM)
	KEF 1	H 1	KITCHEN			3300	. 4
	KEF 2	H 2	KITCHEN			2580 /	<u> </u>
	EF 1		SCULLERY			800	
	EF 2		RESTROOMS			750	1
~	~~~	~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~	~~~~	~~~	\mathbf{K}
}	EF 4		GLASS WASH/STORAGE ROOM			200	
C	~~~~	·······	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	·····	······	······	
	TOTAL EXHAL	JST		•			7,830
	MAKEUP AIR	SUPPLY AIR	SERVES	DESIGN	PERCENT		
	WAKEUP AIK	(CFM)	SERVES	OA (CFM)	OA/SA		
	RTU 1	5500	SALES FLOOR	3000	58%		
	RTU 2	5500	SALES FLOOR	3000	58%		
	RTU 3	2000	FRIENDS	250	12.5%		
	RTU 4	3000	SEATING	0	0%		
	RTU 5	2000	FRIENDS	250	12.5%		
	RTU 6	3000	KITCHEN / SCULLERY	375	12.5%		
	RTU 7	6000	RECEIVING	650	10.8%		
	RTU 8	1600	OFFICES	225	14%		
	RTU 9	2000	VESTIBULE	0	0%		
	RTU 10	4500	MEZZANINE	550	12%		
	TOTAL OUTSIE	DE AIR		8,300		· 	8.300
				TOTAL PO	SITIVE AIR I	LOW	470
							5%
				DEDCENIT			

EXISTING ROOFTOP UNIT SCHEDULE (NATURAL GAS HEAT) COOLING COIL SUPPLY FAN ESP MIN MIN OUTPUT NOM INPUT MIN EFF MIN NO HTG MIN. O/A TONS | CFM | (IN) | HP | REFR TYPE | (MBH) | (MBH) | DB (°F) | WB (°F) | DB (°F) | WB (°F) | (MBH) | (%) | STAGES | LAT | CFM | EER/SEER | VOLTS | PH | MCA | MOCP | (LBS) | NOTES MARK SERVICE (MBH) RTU 1 SALES FLOOR R410A 384.80 174.10 78.8 69.63 65.0 50.9 MUNTERS HCUc6030 480.0 123 3000 RTU 2 SALES FLOOR MUNTERS 1 7.5 R410A 384.80 174.10 78.8 69.63 65.0 50.9 480.0 600.0 80 HCUc6030 R410A 50.95 43.98 78.2 64.1 55.7 54.3 RTU 3 FRIENDS TRANE 60.0 49.8 RTU 4 TRANE 150.0 SEATING R410A 80.11 64.19 79.2 64.3 57.0 53.9 120.0 R410A 50.95 43.98 78.2 64.1 55.7 54.3 104.0 130.0 RTU 5 **FRIENDS** TRANE 1 3.75 R410A 80.11 64.19 79.2 64.3 57.0 53.9 96.0 120.0 80 RTU 6 TRANE KITCHEN YHC092 250.0 80 RTU 7 RECEIVING TRANE R410A 162.43 116.03 77.7 66.7 57.1 56.0 203.0 8.5 3200 1 3 R410A 103.00 84.00 79.4 67.6 59.5 57.9 97.2 120.0 80 RTU 8 OFFICES TRANE 60.0 80 1 5 2000 1 1 R410A 50.95 43.98 78.2 64.1 55.7 54.3 49.8 90 0 12 480 3 13.8 20 770 A-F, H, J RTU 9 VESTIBULE TRANE YHC060 RTU 10 MEZZANINE TRANE 2 90 550 12.1 480 3 30.0 40 2207 A-F, H, J

EQUIPMENT FURNISHED AND INSTALLED BY LANDLORD.

EXISTING UNIT SHALL BE BALANCED TO CFM AS SCHEDULED. MODIFY EXISTING ROOFTOP UNIT DDC TO COMPLY WITH THE ROOFTOP UNIT MATRIX AND ADDITIONAL MECHANICAL SYSTEMS CONTROL. PROVIDE NEW COMPONENTS AS REQUIRED. REFER TO ROOFTOP UNIT CONTROL MATRIX ON THIS SHEET FOR CONTROL FEATURES, MODULES, AND ACCESSORIES THAT SHALL BE PROVIDED WITH THE EQUIPMENT.

REPLACE FILTERS PRIOR TO TEST AND BALANCE AT COMPLETION OF TENANT FINISH. DIVISION 28 TO CONFIRM EXISTING SMOKE DETECTORS AND PROVIDE IF NOT EXISTING. SMOKE DETECTORS SHALL SHUT DOWN UNIT UPON DETECTION OF SMOKE.

TEMPERATURE AND HUMIDITY SENSORS AS SHOWN ON PLANS PROVIDED BY EMS CONTRACTOR. PROVIDE SIEMENS TEMPERATURE SENSOR. INSTALLED BY EMS CONTRACTOR.

ECONOMIZER PROVIDED WITH UNIT TO MODULATE OUTSIDE AIR. DISABLE ECONOMIZER FUNCTION. UNIT SERVES SPACE WITH REFRIGERATED CASES

MANUFACTURER CONTACT INFORMATION: MUNTERS: TODD SMITH, (770) 943-3002, TODD.SMITH@MUNTERS.COM TRANE: ETHAN KINSEY, (469) 758-3102, ETHAN.KINSEY@TRANE.COM

			1		I	1		1			1	T	
CONTROL FEATURE	UNITS	RTU-1	RTU-2	RTU-3	RTU-4	RTU-5	RTU-6	RTU-7	RTU-8	RTU-9	RTU-10	POINT TYPE	NOTE
		OR Y/NO	OR Y/NO	OR Y/NO	OR Y/NO	OR Y/NO	OR Y/NO	OR Y/NO	OR Y/NO	OR Y/NO	SETPOINT OR Y/NO	INTERFACE WITH DDC (READ/WRITE)	
ENERGY MANAGEMENT SYSTEM (EMS)		011 1/110	1011 17110	01(1/1(0	011 1/110	101111110	7 011 17110	101117110	OR III	011 1/110	OIC IIIC		
EMS MONITORING AND MANAGEMENT INTERFACE		Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	BACNET	А
SETPOINTS						1							
COOLING - OCCUPIED SETPOINT	°F	72	72	72	72	72	72	72	72	72	72	READ/WRITE	
COOLING - UNOCCUPIED SETPOINT	°F	74	74	74	74	74	74	74	74	74	74	READ/WRITE	
DEAD BAND - MINIMUM HEATING AND COOLING TEMPERATURE SETPOINT DIFFERENCE	°F	4	4	4	4	4	4	4	4	4	4		
HEATING - OCCUPIED SETPOINT	°F	68	68	68	68	68	67	67	70	67	68	READ/WRITE	
HEATING - UNOCCUPIED SETPOINT	°F	66	66	66	66	66	66	66	66	66	66	READ/WRITE	
DEHUMIDIFICATION SETPOINT (OCCUPIED/UNOCCUPIED) - HUMIDITY SENSOR FEEDBACK	DP (°F)	47	47	N	N	N	N	N	N	N	N	READ/WRITE	В
PROGRAMMED CONTROL FEATURES		•	•			•	•	•	•				
HVAC SYSTEM OCCUPIED/UNOCCUPIED MODE - PROGRAMMABLE THERMOSTAT		N	N	N	N	N	N	N	N	N	N	READ	В
REMOTE TEMPERATURE SENSOR		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	READ	В
EQUIPMENT ACCESSORIES AND CONTROL MODULES		•	•		•	•	•	•	•	•	•	-	
OUTSIDE AIR DAMPER - MOTOR OPERATED (2-POSITION)		Y	Y	Υ	Υ	Y	N	N	N	N	N	READ STATUS	G
OUTSIDE AIR DAMPER - MOTOR OPERATED (MODULATED)		N	N	N	N	N	Y	Y	Y	Υ	Υ	READ POSITION	G
INTEGRATED ECONOMIZER - DIFFERENTIAL ENTHALPY ENABLE (OA ENTHALPY < RA ENTHALPY)	BTU/LB	N	N	N	N	N	Y	Y	Y	Υ	Υ	READ	D
ECONOMIZER FAULT DETECTION AND DIAGNOSTICS (FDD) SYSTEM		N	N	N	N	N	Y	Y	Y	Υ	Υ	READ	E, F
RELIEF - BAROMETRIC DAMPER		N	N	N	N	N	Υ	Y	Y	Υ	Υ		
COOLING COIL (DX - STAGED)		Y	Υ	Υ	Y	Y	Y	Y	Y	Υ	Υ	READ STATUS	Н
DEHUMIDIFICATION - HOT GAS REHEAT		N	N	N	N	N	N	N	N	N	N	READ STATUS	J
DEHUMIDIFICATION DESICCANT WHEEL		Y	Y	N	N	N	N	N	N	N	N		J
HEATING COIL (NATURAL GAS)		Y	Y	Υ	Υ	Y	Y	Y	Y	Υ	Υ	READ STATUS	Н
SUPPLY FAN CONTROL METHOD		!	•		ļ.				!		-		-
ON DURING OCCUPIED HOURS		Υ	Υ	Υ	Υ	Y	Y	Y	Υ	Υ	Υ		
CYCLE WITH LOADS DURING UNOCCUPIED HOURS		Y	Y	Υ	Υ	Y	Y	Y	Υ	Υ	Υ		
OPTIMUM START SEQUENCE		Υ	Y	Υ	Υ	Y	Υ	Υ	Υ	Υ	Y		
CONSTANT VOLUME FAN CONTROL		N	N	Y	Y	Y	Y	Y	Υ	Y	Υ	READ STATUS	
VARIABLE VOLUME - MODULATE FAN SPEED FOR PRESSUR BALANCE PURPOSE		Y	Y	N	N	N	N	N	N	N	N	READ STATUS	H, K
SAFETIES, INTERLOCKS, AND ALARMS		-	1			1	-	-	-		1		-
GAS VALVE SAFETY		Υ	Υ	Y	Υ	Υ	Y	Υ	Υ	Υ	Y	READ	Е
SUPPLY AIR SMOKE DETECTOR - SAFETY SHUTDOWN		N	N	N	N	N	N	N	N	N	N	READ	Е
RETURN AIR SMOKE DETECTOR - SAFETY SHUTDOWN		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	READ	Е
FIRE ALARM CONTROL PANEL - SAFETY SHUTDOWN INTERLOCK		Y	Y	Y	Υ	Y	Y	Υ	Υ	Y	Y	READ	С
KITCHEN EXHAUST SYSTEM INTERLOCK		Y	Y	N	N	N	Y	N	N	N	N	READ	L

DIV. 23 CONTRACTOR SHALL COORDINATE WITH 365 CONTROL RESPONSIBILITIES MATRIX ON EM200 FOR CONTROL PANEL(S), WIRING, THERMOSTAT(S), TEMPERATURE SENSOR(S), HUMIDISTAT(S), AND/OR CO2 SENSOR(S) WHERE SHOWN ON THE DRAWINGS AND AS REQUIRED TO FACILITATE THE SCHEDULED CONTROL MODULES AND SEQUENCES OF OPERATION. EACH UNIT SHALL CONTROL BASED ON ITS OWN INTERNAL SAFETIES, TIME DELAYS, AND SEQUENCES UNLESS NOTED OTHERWISE. COORDINATE WITH OWNER FINAL INTERNAL SAFETIES, TIME DELAYS, AND SEQUENCES UNLESS NOTED OTHERWISE. COORDINATE WITH OWNER FINAL BUILDING AND EQUIPMENT SCHEDULES DURING STARTUP.

A. PROVIDE UNIT WITH TERMINAL STRIP TO RECEIVE CONTROL INPUT(S) COMMUNICATED FROM A CENTRAL DDC CONTROLLER. EMS SHALL PROVIDE REMOTE SETPOINT ADJUSTMENT, SCHEDULING, AND MONITORING OF THE POINTS LISTED IN THE SCHEDULE FOR EACH UNIT.

MUNTERS HUMIDITY AND TEMPERATURE SENSORS ARE PROVIDED BY MANUFACTURE. OTHER RTUS TEMPERATURE SENSORS ARE POVIDED BY SIEMENS. REFER TO SPECIFICATIONS FOR DEVICE REQUIREMENTS.

DIVISION 28 CONTRACTOR SHALL PROVIDE DEVICE, REFERENCE SPECIFICATIONS FOR SENSOR REQUIREMENTS. THE FOLLOWING SENSORS SHALL DETERMINE ECONOMIZER ON POINT. REFERENCE SPECIFICATIONS FOR DEVICE REQUIREMENTS:

OUTSIDE AIR TEMPERATURE: DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE. RETURN AIR TEMPERATURE; DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE. OUTSIDE AIR HUMIDITY; DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE.

RETURN AIR HUMIDITY; DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE. DEVICE SHALL BE FACTORY MOUNTED AND PRE-WIRED FOR OPERATION SUBJECT TO THE ONBOARD CONTROLLER. PROVIDE UNIT WITH AN FDD SYSTEM CONSISTING OF PERMANENTLY INSTALLED OUTSIDE AIR, SUPPLY AIR, AND RETURN AIR TEMPERATURE SENSORS. THE UNIT CONTROLLER SHALL AT A MINIMUM BE CAPABLE OF PROVIDING SYSTEM STATUS ECONOMIZER, COMPRESSOR, HEATING, MIXED AIR LOW LIMIT ALARM, AND SENSOR VALUES. EACH OPERATING MODULE SHALL BE CAPABLE OF INDEPENDENTLY OPERATING FOR TESTING. THE SYSTEM SHALL REPORT FAULTS TO AN APPLICATION ACCESSIBLE BY SERVICE

DETERMINE MINIMUM DAMPER POSITION IN FIELD DURING BALANCING TO PROVIDE SCHEDULED OUTDOOR AIRFLOW DURING OCCUPIED HOURS. DAMPER SHALL BE CLOSED DURING UNOCCUPIED HOURS. UNITARY CONTROLLER SHALL MODULATE AND/OR CYCLE SUPPLY FAN SPEED SETTING AND COIL CAPACITY STAGES SUBJECT TO THE INTERNAL SAFETIES AND SEQUENCES TO

MAINTAIN SCHEDULED SETPOINTS. PROGRAM DEHUMIDIFICATION SEQUENCE BASED ON ZONE AIR DEWPOINT.

PROVIDE MODULATING FAN CONTROL WITH MINIMUM SPEED LESS THAN 50% OF FULL SPEED. AT MINIMUM SPEED THE FAN SHALL DRAW NO MORE THAN 30% OF FULL SPEED

RESPECTIVELY, DAMPER NOT MODULATING, AND EXCESS OUTSIDE AIR.

POWER. OA DAMPERS SHALL MAINTAIN SCHEDULED VALUES. INTERLOCK RTU WITH KITCHEN EXHAUST HOOD SYSTEM(S) TO SHUT DOWN UPON SIGNAL FROM HOOD FIRE EXTINGUISHING SYSTEM. INTERLOCK RTU WITH KITCHEN EXHAUST FAN TO ENERGIZE WHEN HOOD SYSTEM IS ENERGIZED FOR PRESSURIZATION.

				FAN SCHEDULE				1	7			
							DRIVE	MIN	ELECTRI	CAL	WEIGHT	
MARK	SERVICE	MANUFACTURER	MODEL	MOUNTING / TYPE	CFM	ESP (IN)	(BELT/DIRECT)	HP	VOLTS	PH	(LBS)	NOTES
EF 1	SCULLERY	GREENHECK	CUE-121	ROOF / UPBLAST	800	0.40	DIRECT	0.25	120	1	54	A-D
EF 2	RESTROOMS	GREENHECK	G-099	ROOF / DOWNBLAST	750	0.35	DIRECT	0.25	120	1	52	A-C, E
ᡝᢘᠮ᠗ ᠬ	~~~JAMFORGGHNK~~~		᠈ ᄼᄼᡠᢐᠯᡑᠰᡠᠬᠬ	~ROOF~POWNDLAGT~	~~200~~	~ 0.86 ~	~~BIRE EŦ~~	1017	~~ 12 0~~	~	~~5 6~~~	ᢇᠰ ᢒᠨ᠌ᡓᢇ
EF 4	GLASS WASH/STORAGE	GREENHECK	G-070-VG	ROOF / DOWNBLAST	200	0.30	DIRECT	0.17	120	1	50	A-C, E

EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY DIVISION 23.

PROVIDE WITH MINIMUM 12" HIGH ROOF CURB, BIRDSCREEN AND BACKDRAFT DAMPER. DIVISION 26 SHALL FURNISH AND INSTALL DISCONNECT SWITCH.

DIVISION 26 SHALL INTERLOCK EXHAUST FAN WITH TIMBER TO REMAIN RUNNING 30 MINUTES AFTER WASH CYCLE. DIVISION 26 SHALL PROVIDE POWER SWITCHING BREAKER VIA EMS TO RUN DURING OCCUPIED HOURS.

SPLIT SYSTEM FAN UNIT SCHEDULE												
	MANUFACTURER	MODEL	UNIT TYPE	REFR TYPE	CFM (MAX)	COOLING (MBH)	VOLTS	РН	NOTES			
SET	DAIKIN	FTKN24NMVJU	COOLING ONLY	R410A	713	22.0	208	1	A-F			

EQUIPMENT FURNISHED AND INSTALLED BY DIVISION 23.

MARK LOCATION

FC-1 NETWORK CLOS

DIVISION 26 CONTRACTOR TO PROVIDE DISCONNECT SWITCH FOR EVAPORATOR SECTION AND CONDENSING SECTION. PROVIDE WALL MOUNTING BRACKET FOR UNIT CONTROLLER WHERE INDICATED ON PLANS. UNIT SHALL HAVE INTEGRAL

TEMPERATURE SENSOR. PROVIDE WALL MOUNTING BRACKET AND INSTALL PER MANUFACTURER'S REQUIREMENTS ON WALL.

CONTRACTOR SHALL VERIFY WITH EQUIPMENT SUPPLIER EXACT ROUTING AND SIZE OF INSULATED REFRIGERANT PIPING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

INDOOR UNIT IS ELECTRICALLY POWERED THROUGH THE OUTDOOR UNIT.

		SPLI	T SYSTEM COND	DENSING	UNI	 Г			
MARK	SERVICE	MANUFACTURER		VOLTS		I	МОСР	WEIGHT (LBS)	NOTES
CU 1	FC 1	DAIKIN	RKN24NMVJU	208	1	18.3	20	20	A-E

A. EQUIPMENT FURNISHED AND INSTALLED BY DIVISION 23. DIVISION 26 CONTRACTOR TO PROVIDE DISCONNECT SWITCH FOR EVAPORATOR SECTION

AND CONDENSING SECTION. CONDENSING UNIT AND FAN UNIT SHALL BE WIRED TOGETHER PER MANUFACTURER'S

INSTALLATION INSTRUCTIONS.

EQUIPMENT SIZED FOR 105°F AMBIENT TEMPERATURE. CONTRACTOR SHALL VERIFY WITH EQUIPMENT SUPPLIER EXACT ROUTING AND SIZE OF INSULATED REFRIGERANT PIPING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

GAS FIRED UNIT HEATER SCHEDULE																
MARK	AREA SERVED	MANUFACTURER	MODEL	INPUT MBH	OUTPUT MBH	TOTAL CFM	HP	VOLTS	OTOR PH		МОСР	VENT DIA.(IN.)	INTERLOCK WITH	WEIGHT LBS	NOTES	ACCESSORIES
GUH-1	RECEIVING	REZNOR	UDAP-200	200	166	2562	1/4	115	1	4.5	15	5	EMS	187	1 THRU 7	1 THRU 5

OUTPUT RATINGS ARE FOR UP TO 2000 FT. UNIT SHALL BE INSTALLED SO THAT REQUIRED CLEARANCES ARE MAINTAINED. MOTOR SHALL HAVE OVERLOAD PROTECTION.

UNIT SHALL BE COMPLETE WITH FACTORY INSTALLED 24-VOLT CONTROL TRANSFORMER. UNIT SHALL BE PROVIDED WITH ELECTRONIC IGNITION. HEAT EXCHANGERS SHALL BE TYPE 409 STAINLESS STEEL. BURNERS SHALL BE ALUMINIZED STEEL.

ACCESSORIES: ELECTRONIC IGNITION. SINGLE STAGE COMBINATION GAS VALVE. FAN GUARD 4-POINT SUSPENSION SYSTEM. 30 DEGREE DOWNTURN NOZZLE.

KITCHEN EXHAUST HOODS (H-1 & H-2) AND FANS

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE

AND MODEL NUMBERS ONLY, REVIEW THE COMPLETE

THE MANUFACTURERS LISTED ARE THE BASIS FOR THE

AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER

DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE

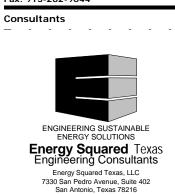
THE EXACT MATERIAL AND ACCESSORITES TO BE ORDERED.

(KEF-1 & KEF-2) SHALL BE FURNISHED AND INSTALLED BY DIVISION 23. REFER TO SHEETS

M300, M302, M303, AND M304.

DESIGN.

Architect of Record: BOYD W. RAU 6700 Antioch Plaza Merriam, KS 66204 www.brrarch.com Tel: 913-262-9095



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Issues & Revisions NO. DATE DESCRIPTION 01/26/18 PERMIT SET 1 03/06/18 ADDENDUM 1

Project Name

SGP Checked By: SGP Document date: 01/26/18

Template date: Project No. 62911019 **Professional Seal**

MECHANICAL SCHEDULES

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- EQUIPMENT SUPPORT LEG

NEOPRENE WASHER

BASE FLASHING

ROOF INSULATION -

ROOF STRUCTURE, SEE ARCHITECTURAL PLANS

- INSTALL CONCENTRIC INTAKE

TERMINAL FURNISHED BY

HEATER MANUFACTURER

PROVIDE ROOF PENETRATION SEALING PER SEPARATE

IF ALLOWED BY CONDITIONS

AND LOCAL AUTHORITIES,

PROVIDE SCHEDULE 40 PVC PIPE AND FITTINGS WITH

SOLVENT WELD JOINTS, PER SPECIFICATIONS, 3" OR 4"

SIZE AS SHOWN ON PLANS.

REFER TO SPECIFICATIONS

INSTALLATION MATERIALS - CONDENSING WATER HEATER

PER SPECIFICATIONS AND

FLOOR WITH CEILING
FLANGE, ALL-THREAD ROD,
AND SPLIT RING PIPE

- SECURELY ATTACH TO

SEPARATE DETAIL ON PLUMBING

ABOVE LOCAL MAXIMUM SNOW DEPTH

AND EXHAUST VENT

ANCHOR EQUIPMENT

WITH LAG SCREWS

COUNTER FLASHING -

ROOF EQUIPMENT

8 SUPPORT RAIL DETAIL

1/8" = 1'-0"

DETAIL SHOWS GENERAL SCHEMATIC REQUIREMENTS. ADJUST TO SUIT FIELD CONDITIONS.

MANUFACTURER'S INSTALLATION MANUAL FOR MORE INFORMATION: MAINTAIN PROPER DISTANCES FROM EACH OTHER, AND FROM OTHER CONSTRUCTION FEATURES; VERIFY PIPE

SIZE FOR MAXIMUM LENGTH OF RUN AND QUANTITY OF FITTINGS. DO NOT INSTALL BARE PVC PIPE IN AIR PATH PLENUMS: WRAP PIPE WITH FIRE-BARRIER INSULATION IF ALLOWED

BY LOCAL AUTHORITIES, OR PROVIDE STAINLESS STEEL VENT PIPE, PER SPECIFICATIONS.

INSTALL THROUGH ROOF OR THROUGH WALL AS SHOWN ON PLANS. REFER TO

SEALED COMBUSTION

WATER HEATER VENTS

1/8" = 1'-0"

BASE PLATE OF

BASE PLATE TO CURB

EQUIPMENT SUPPORT LEG

INSTALL VENTS THROUGH

CONVENIENT OR AS SHOWN

PROVIDE 3/4" FABRICATED PVC P-TRAP WITH MINIMUM 1" TRAP SEAL AND 4" LONG

TAILPIECE FROM ELBOW

FURNISHED WITH WATER

ROOF OR THROUGH

EXTERIOR WALL AS

ON FLOOR PLAN

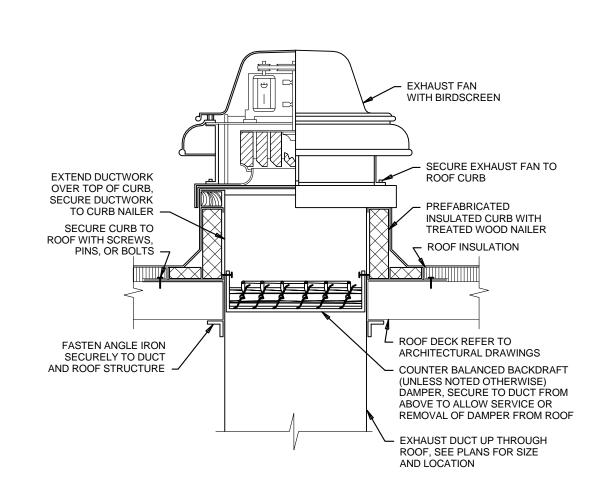
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MECHANICAL DETAILS 1

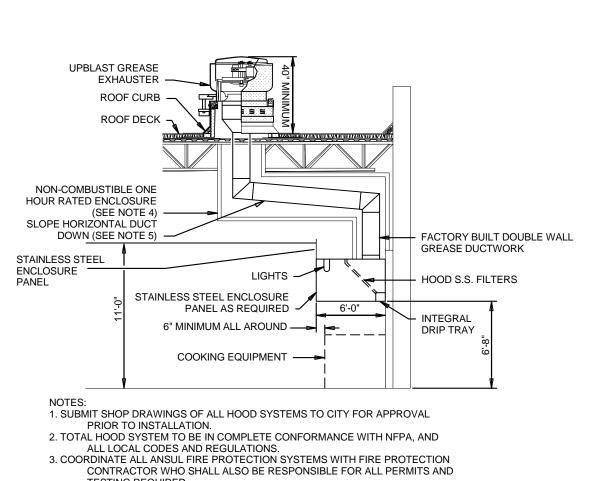
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EXHAUST DUCT —— ALUMINUM TRANSITION 4"x16", SEE NOTE 3 — —— ALUMINUM SEE NOTE 2 VENT HOOD — DISHWASHER, SEE NOTE 1 FRONT VIEW SIDE VIEW 1. VENT HOOD AND DAMPER CONTROL PROVIDED WITH DISHWASHER. CONNECT ALUMINUM EXHAUST DUCT AND BALANCE ENTRANCE END TO 200 CFM PER MANUFACTURER'S REQUIREMENTS. 2. VENT HOOD AND DAMPER CONTROL PROVIDED WITH DISHWASHER. CONNECT ALUMINUM EXHAUST DUCT AND BALANCE DISCHARGE END TO 400 CFM PER MANUFACTURER'S REQUIREMENTS.

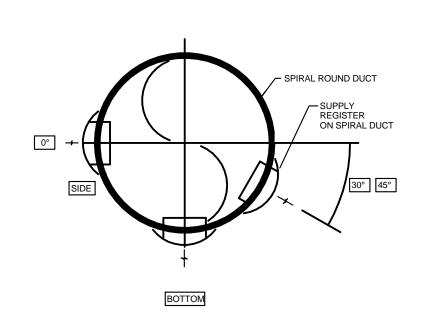
9 DISHWASHER EXHAUST DUCT DETAIL



5 DOWNBLAST EXHAUST FAN DETAIL

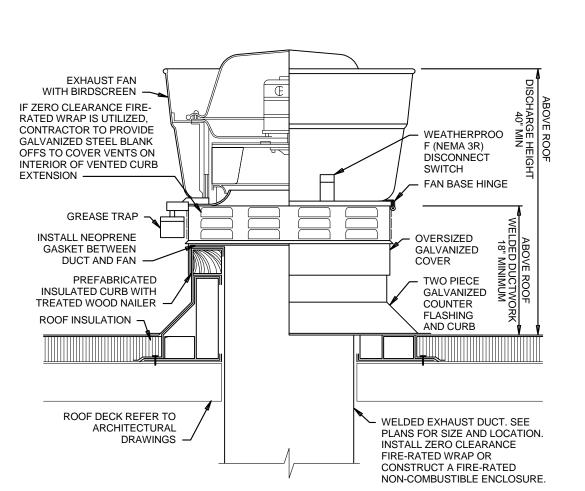


TYPICAL GREASE EXHAUST SYSTEM DETAIL

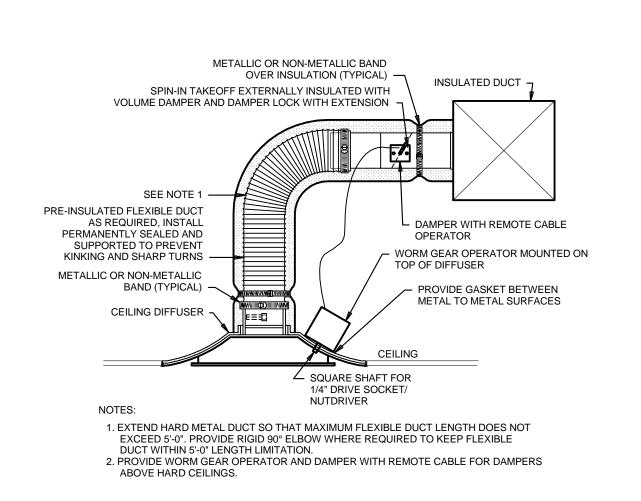


WSR MOUNTING TO 7 SPIRAL DUCTWORK

1/8" = 1'-0"



3 UPBLAST GREASE EXHAUST FAN DETAIL



TYPICAL CEILING RETURN

GRILLE, SEE PLANS FOR

6 CEILING RETURN GRILLE BOOT DETAIL

1. REFER TO FLOOR PLAN FOR OUTLET DEPTH. WHEN NO DEPTH IS SHOWN, MINIMUM DEPTH SHALL BE 0.5 D OR AS REQUIRED TO LIMIT AIR VELOCITY TO 1,000 FPM OR LESS.

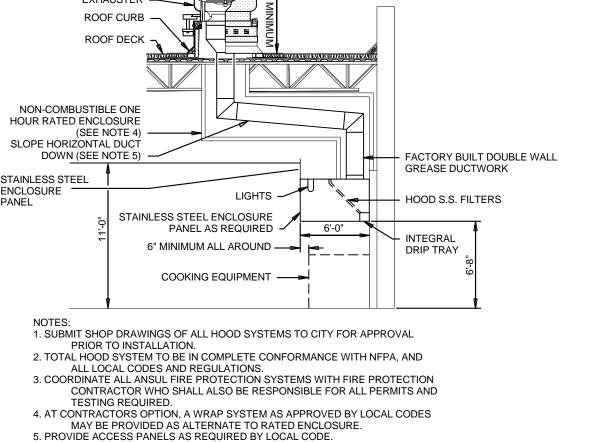
RIGID DUCT WITH 1"

SEE SPECIFICATIONS -

MIN ACOUSTICAL LINER,

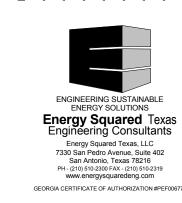
HARD CEILING DIFFUSER DETAIL

1/8" = 1'-0"





Architect of Record: BOYD W. RAU 6700 Antioch Plaza Suite 300 Merriam, KS 66204 www.brrarch.com Tel: 913-262-9095 Consultants



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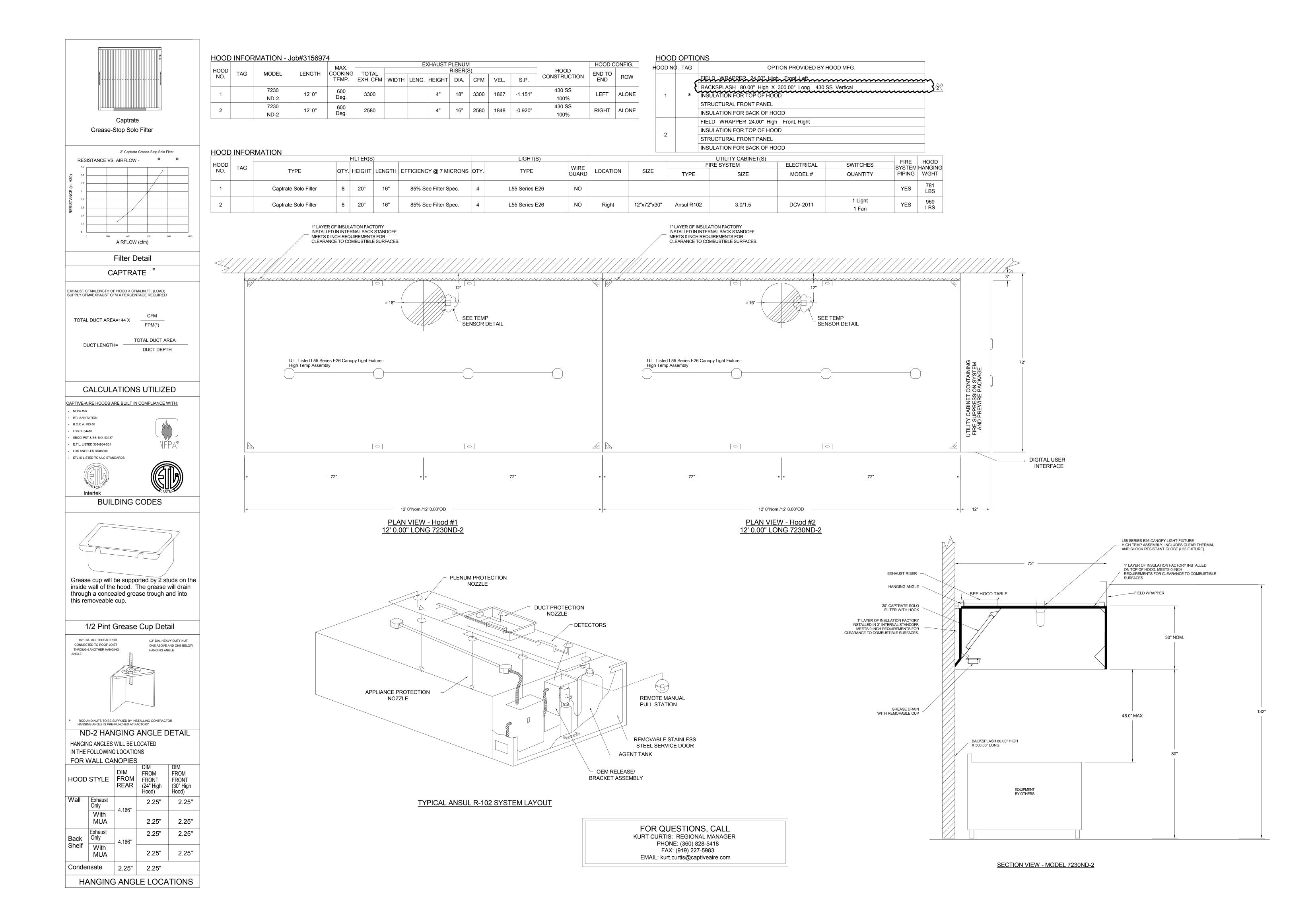
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05/21/2018 **MECHANICAL DETAILS 2**



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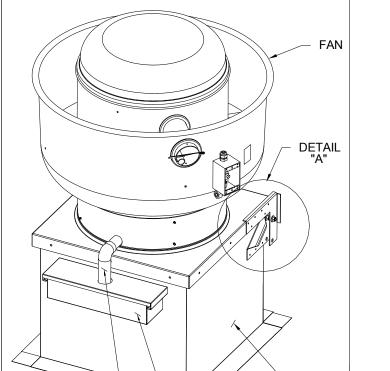
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MECHANICAL DETAILS 3

HINGE KIT DETAIL

:	EXHA	AUST FAN	INFORMATION -											
	JEAN# UNIT NO.	81,56974 TAG	FAN UNIT MODEL#	CFM	ESP.	RPM	H.P.	B.H.P.		VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	so
	1	KEF-1	DU180HFA	3300	1.850	1452	3.000	1.6350	3	208	9.5	762 FPM	186	2
	2	KEF-2	DU180HFA	2580	1.750	1304	2.000	1.1620	3	208	6.1	596 FPM	161	1

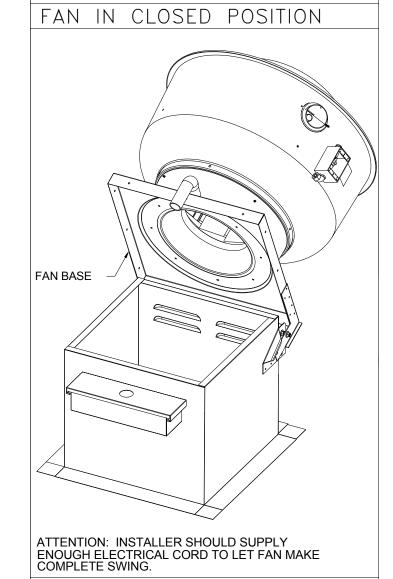


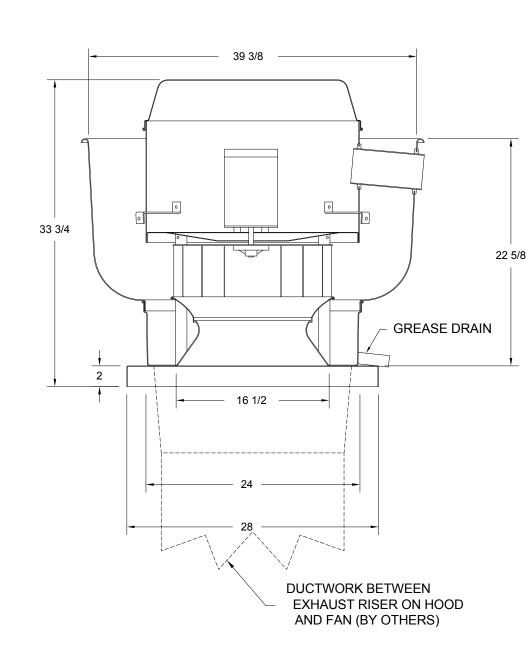
JFANT UNIT NO.	ONS TAG	OPTION (Qty Descr.)					
		1 - Grease Box					
1	KEF-1	1 - 3 Year Extended Motor Warranty					
		1 - Fan Base Ceramic Seal - Ship Loose - For Grease Ducts					
		1 - Grease Box					
2	KEF-2	1 - 3 Year Extended Motor Warranty					
		1 - Fan Base Ceramic Seal - Ship Loose - For Grease Ducts					

<u>CUI</u>	RB			
ANO.	EØNB.	L^{IES} weight	ITEM	SIZE
1	# 1	41 LBS	Curb	26.500"W x 26.500"L x 20.000"H Vented Hinged
2	# 2	41 LBS	Curb	26.500"W x 26.500"L x 20.000"H Vented Hinged
	•			

ASS NO.	EØNBA FAN	LIES weight	ITEM	SIZE
1	# 1	41 LBS	Curb	26.500"W x 26.500"L x 20.000"H Vented Hinged
2	# 2	41 LBS	Curb	26.500"W x 26.500"L x 20.000"H Vented Hinged

FANS #1 (KEF-1), #2 (KEF-2) - DU180HFA EXHAUST FAN





FEATURES:

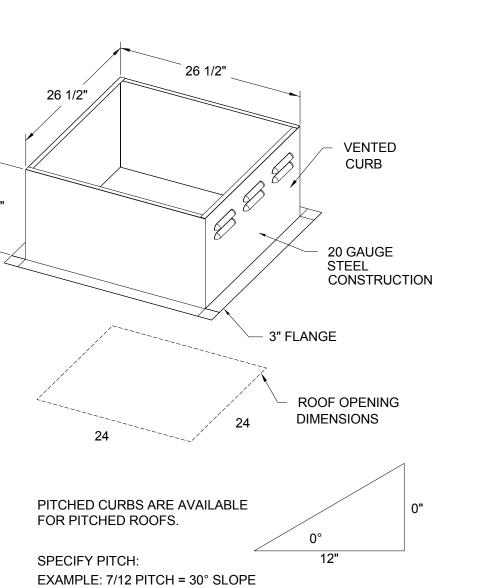
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS) - ROOF MOUNTED FANS - RESTAURANT MODEL - UL705 AND UL762 - VARIABLE SPEED CONTROL - INTERNAL WIRING - WEATHERPROOF DISCONNECT - THERMAL OVERLOAD PROTECTION (SINGLE PHASE) - HIGH HEAT OPERATION 300°F (149°C) - GREASE CLASSIFICATION TESTING

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

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.

WOULD CAUSE UNSAFE OPERATION.

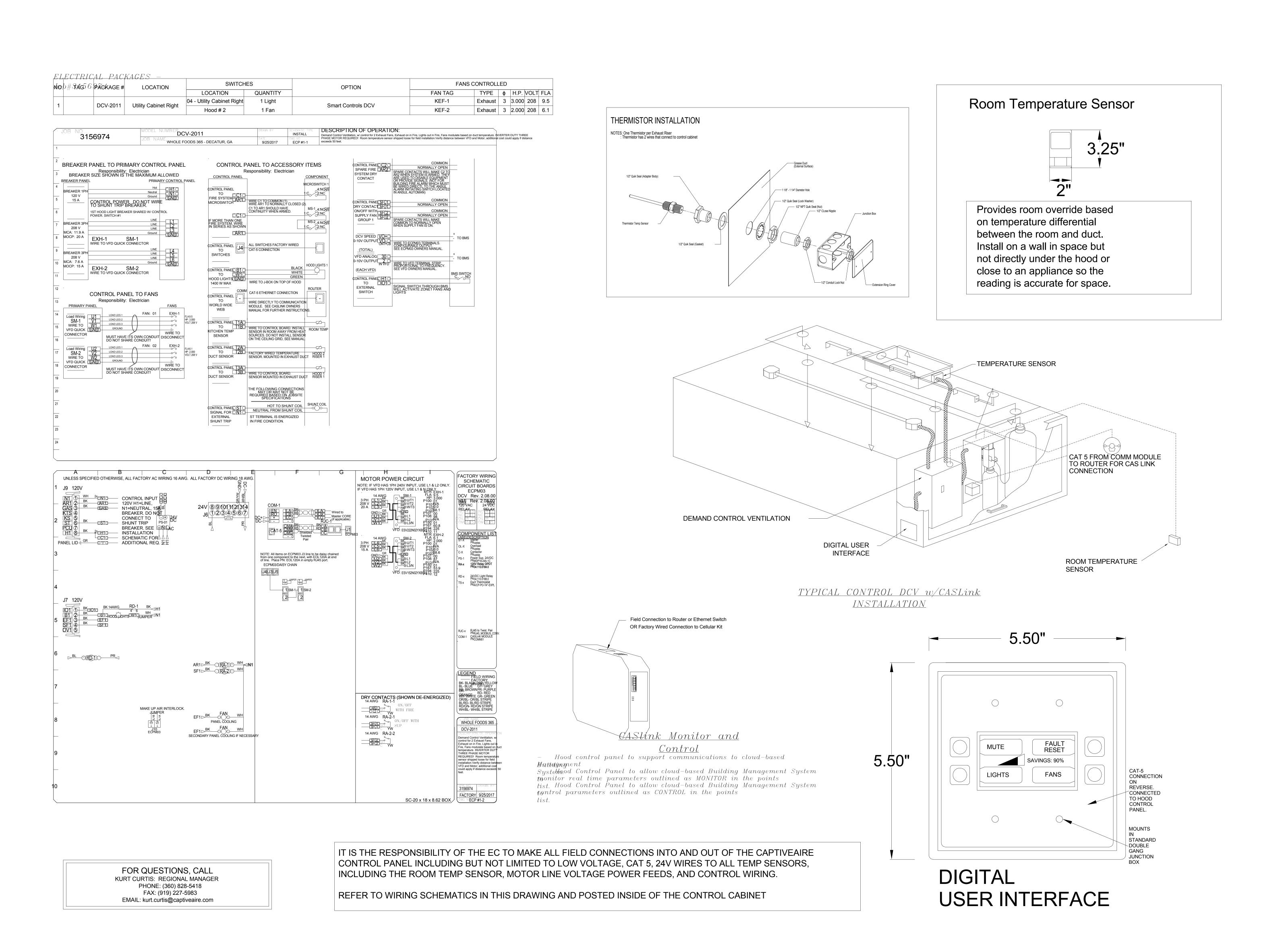
<u>OPTIONS</u> GREASE BOX 3 YEAR EXTENDED MOTOR WARRANTY FAN BASE CERAMIC SEAL - FOR GREASE DUCTS



FOR QUESTIONS, CALL
KURT CURTIS: REGIONAL MANAGER
PHONE: (360) 828-5418
FAX: (919) 227-5983
EMAIL: kurt.curtis@captiveaire.com

FAN IN OPEN POSITION SEPARATOR — GREASE BOX -ATTACH GREASE BOX COVER TO THE CURB 3" BELOW TOP EDGE OF CURB. USING (3) LONG (3/4" LG.) SCREWS AS SHOWN. INSTALL GREASE PIPE AS SHOWN.

GREASE BOX INSTALLATION



brr

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MECHANICAL DETAILS 4

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M303

FURNISH DOUBLE WALL, FACTORY BUILT GREASE DUCT FOR USE WITH TYPE I KITCHEN HOODS, WHICH CONFORMS TO THE REQUIREMENTS OF NFPA-96. PRODUCTS SHALL BE ETL LISTED TO UL-1978 AND UL-2221 FOR VENTING AIR AND GREASE VAPORS FROM COMMERCIALCOOKING OPERATION. TESTING HAS BEEN EXTENDED TO RECONGNIZE ASTM E2336 AND AC101 DUE TO SIMILAR TESTING CRITERIA. MODELS DW-2R, 3R AND 3Z ARE USED FOR GREASE DUCT APPLICATIONS WHEN INSTALLED IN ACCORDANCE WITH THESE INSTRUCTIONS AND NFPA 96; STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS. DOUBLE WALL GREASE DUCTS ARE LISTED FOR A CONTINUOUS INTERNAL TEMPERATURE OF 500 DEGREES F AND INTERMITTENT TEMPERATURES OF 2000 DEGREES F. THE DUCT SECTIONS SHALL BE CONSTRUCTED OF AN INNER DUCT WALL AND AN OUTER WALL WITH INSULATION IN BETWEEN. THE INNER DUCT WALL SHALL BE CONSTRUCTED OF .036 INCH THINK, 430 TYPE STAINLESS STEEL AND BE AVAILABLE IN DIAMETERS 8" THROUGH 24". THE OUTER WALL SHALL BE CONSTRUCTED OF STAINLESS STEEL AT A MINIMUM OF .024 INCH THICKNESS. THE DUCT. BASED ON MODEL NUMBER, SHALL INCLUDE LAYERS OF SUPER WOOL 607 PLUS INSULATION BETWEEN THE INNER AND OUTER WALL. GREASE DUCT JOINTS SHALL BE HELD TOGETHER BY MEANS OF FORMED V CLAMPS AND SEALED WITH 3M FIRE BARRIER 2000+. THE DUCT WALL ASSEMBLY SHALL BE TESTED AT 3/4" OR ZERO INCH CLEARANCE, ACCORDING TO CLASSIFICATIONS.

CLASSIFICATIONS AND CLEARANCES

UL 2221: STANDARD FOR FIRE RESISTIVE GREASE DUCT ENCLOSURE ASSEMBLIES. CHAPTER 7 OF THIS STANDARD REFERENCES A TEST LABELED INTERNAL FIRE TEST. SECTION 7.1.1 REFERENCES TWO INSTALLATION CONDITIONS, CONDITION A AND CONDITION B. CONDITION A REPRESENTS ALL INSTALLATION CONDITION EXCEPT FOR INSTALLATION WITHIN NON-VENTILATED COMBUSTIBLE ENCLOSURES. CONDITION B REPRESENTS INSTALLATION WITHIN A NON-VENTILATED COMBUSTIBLE ENCLOSURE.

MODEL DW-2R IS CLASSIFIED UNDER UL2221 AS AN ALTERNATE TO 2-HR FIRE RESISTIVE SHAFT ENCLOSURES WITH A REDUCED CLEARANCE TO COMBUSTIBLES (SIZES 8" TO 16" DIAMETER). MODEL 2R IS LISTED IN ACCORDANCE WITH THE REQUIREMENTS FOR DUCT ENCLOSURE CONDITION B.

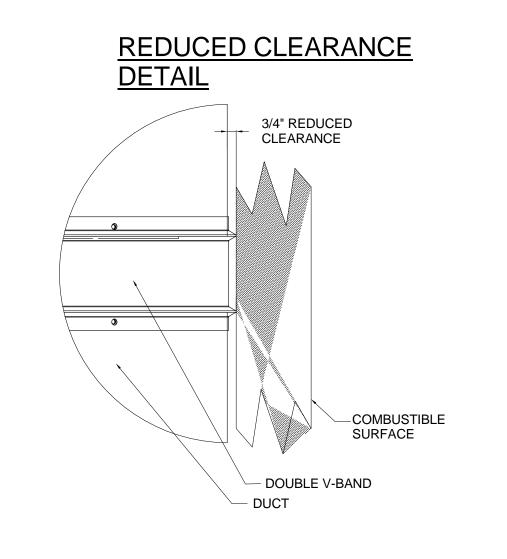
MODEL DW-2R: 3/4" CLEARANCE TO COMBUSTIBLES FROM THE SURFACE OF THE DUCT OUTER SHELL; ZERO INCH CLEARANCE FROM COMBUSTIBLES FROM THE TIP OF THE OUTER V BAND.

DOUBLE WALL GREASE DUCT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S "INSTALLATION, OPERATION AND MAINTENANCE MANUAL," ETL LISTING, STATE AND LOCAL CODES. FANS SHALL BE SUPPORTED INDEPENDENTLY FROM THE GREASE DUCT SECTIONS. PROTECT GREASE DUCT FROM TWISTING OR MOVEMENT CAUSED BY FAN TORQUE OR VIBRATION.

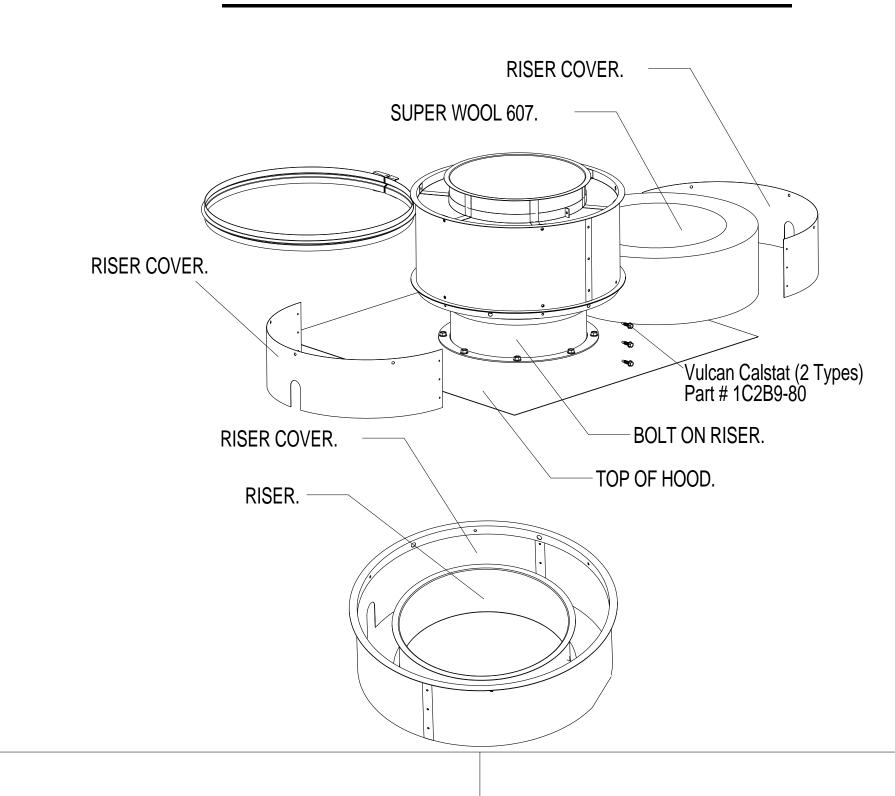
CERTIFICATIONS:

THE DW-2R SERIES HAS BEEN CERTIFIED BY ITS. THIS CERTIFICATION MARK INDICATES THAT THE PRODUCT HAS BEEN TESTED TO AND HAS MET THE MINIUM REQUIREMENTS OF A WIDELY RECOGNIZED (CONSENSUS) U.S. AND CANADIAN PRODUCTS SAFETY STANDARD, THAT THE MANUFACTURING SITE HAS BEEN AUDITED, AND THAT THE APPLICANT HAS AGRRED TO A PROGRAM OF PERIODIC FACTORY FOLLOW-UP INSPECTIONS TO VERIFY CONTINUED PERFORMANCE.

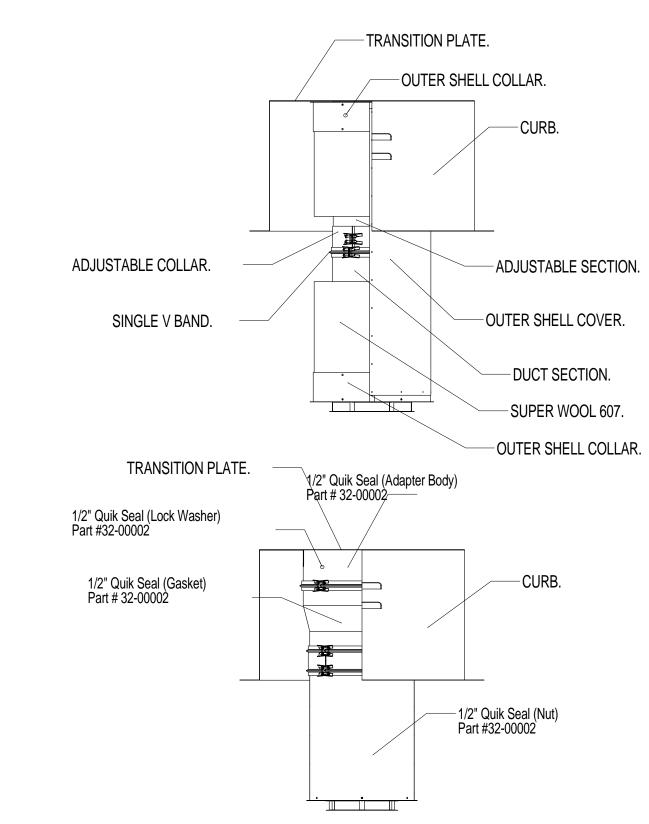
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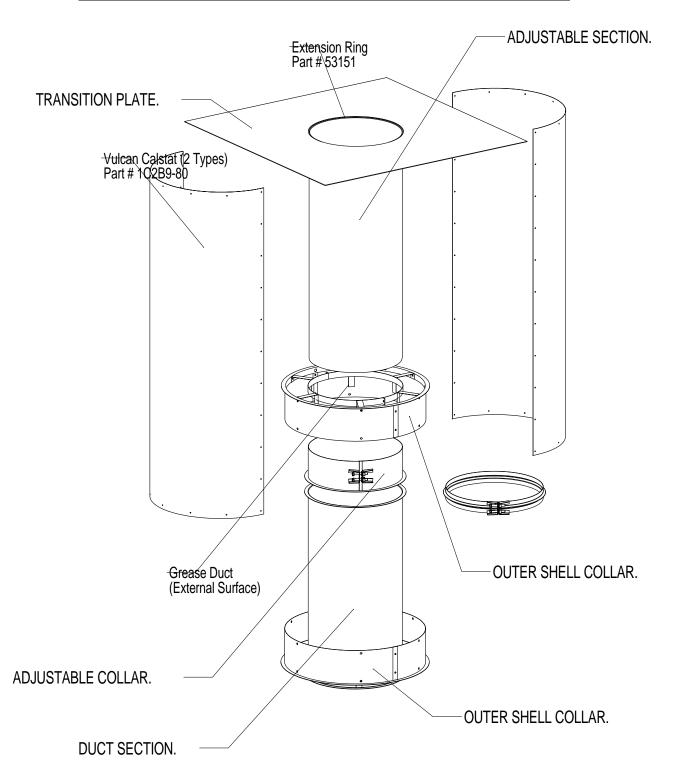
DOUBLE WALL DUCT RISER COVER



DOUBLE WALL DUCT TRANSITION PLATE

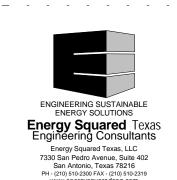


DOUBLE WALL DUCT ADJUSTABLE SECTION



brr

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MECHANICAL DETAILS 5

W304

REDUCED PRESSURE ZONE BACKFLOW PREVENTER: WATTS # LF009QT, MEETING ASSE 1013, LEAD FREE CAST BRONZE BODY, QUARTER TURN TEST COCKS, QUARTER TURN BALL VALVES, BRONZE STRAINER AND # 909AG AIR GAP

REDUCED PRESSURE ZONE BACKFLOW PREVENTER: WATTS # 009QT, MEETING ASSE 1013, CAST BRONZE BODY, QUARTER TURN TEST COCKS, QUARTER TURN BALL VALVES, BRONZE STRAINER AND # 909AG AIR GAP FITTING.

DOUBLE CHECK VALVE BACKFLOW PREVENTER; WATTS # LF719QT, MEETING ASSE 1015, LEAD FREE CAST BRONZE BODY, QUARTER TURN TEST COCKS, STRAINER AND QUARTER TURN BALL VALVES.

WALL-MOUNTED EMERGENCY EYE / FACE WASH: GUARDIAN # G1724-T, 11-1/2" DIAMETER STAINLESS STEEL BOWL AND STAY-OPEN BALL VALVE, EPOXY COATED ALUMINUM FLAG HANDLE, CAST ALUMINUM WALL BRACKET, FOUR FILTERED SPRAY HEADS WITH SELF REGULATING FLOW CONTROL AND DUST COVERS, 1-1/2" CHROME PLATED BRASS TAIL PIECE AND McGUIRE # B8912CF 1-1/2" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP WITH BRASS CLEANOUT AND ESCUTCHEON., AND 1/2" INLET.

EMERGENCY MIXING VALVE: POWERS # ES150-AF05012, BRONZE BODY WITH ROUGH BRONZE FINISH, MEETING ASSE 1071, CORROSION RESISTANT INTERNAL PARTS, CHECK STOPS WITH REMOVABLE STRAINERS, DUAL INTERNAL COLD WATER BYPASS, PARAFFIN FILLED TEMPERATURE ELEMENT, DIAL THERMOMETER ON OUTLET, CAPABLE OF 4 GPM WITH A 5 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 1.0 GPM, AND STAINLESS STEEL WALL-MOUNTED CABINET. MAXIMUM TEMPERATURE STOP SET FOR 90°F.

ELECTRIC WATER COOLER (ADA ACCESSIBLE): ELKAY # LVRCGRNT8WSK WALL-MOUNTED. STAINLESS STEEL. DUAL HEIGHT, FRONT PUSH ACTUATOR BARS, ANTI-MICROBIAL SURFACE, FILTERED COOLER AND BOTTLE FILLING STATION FILTER, CHILLER WITH CAPACITY OF 8 GALLONS PER HOUR, 50°F DRINKING WATER AT 80°F INLET TEMPERATURES 90°F ROOM TEMPERATURE WITH ELECTRONIC SENSOR FOR NO TOUCH ACTIVATION AND 30 SECOND SHUT-OFF AT FILLING UNIT. INSTALL BOTTLE FILLING STATION ON LOW SIDE OF COOLER FOR ADA ACCESS. TRIM: McGUIRE # 2165CC COMPRESSION ANGLE STOP VALVE WITH RISER AND ESCUTCHEON, McGUIRE # B8872CF 1-1/4" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, AND SUITABLE CARRIER WITH STANCHIONS TO FLOOR. ELECTRICAL REQUIREMENTS: EQUIPPED WITH ELECTRIC CORDS AND THREE PRONG MOLDED RUBBER PLUGS FOR USE WITH 15 AMP MINIMUM DUAL RECEPTACLE RATED AT 115V, 60HZ, SINGLE PHASE.

FAUCET: T&S BRASS #B-2342 8" WALL MOUNTED FAUCET WITH 10" SWING SPOUT, COMPRESSION CARTRIDGES, LEVER HANDLES AND 2.2 GPM AERATOR. TRIM: McGUIRE # LF2165CC LEAD FREE BRASS WHEEL HANDLE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS.

FAUCET: T&S BRASS #B-2187-01 8" WALL MOUNTED FAUCET WITH 14" SWING SPOUT WITH HAND SPRAYER, COMPRESSION CARTRIDGES, LEVER HANDLES AND 2.2 GPM AERATOR. TRIM: McGUIRE # LF2165CC LEAD FREE BRASS WHEEL HANDLE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS.

FAUCET: T&S BRASS #B-0133-B 8" WALL MOUNTED FAUCET WITH HAND SPRAYER, COMPRESSION CARTRIDGES, LEVER HANDLES AND 1.42 GPM AERATOR. TRIM: McGUIRE # LF2165CC LEAD FREE BRASS WHEEL HANDLE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS.

FLOOR CLEANOUT: JAY R. SMITH, CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, NICKEL BRONZE, TOP. # 4031L (-F-C), SCORIATED TOP FOR EXPOSED, FLUSH WITH FINISHED FLOOR, APPLICATION(S), # 4031L (-F-C-Y), , 1/8" RECESS FOR INSTALLATION IN TILED FLOOR AREA(S), # 4191 (-F-C), 1/2" RECESS FOR INSTALLATION IN TERRAZZO AND SIMILAR POURED FLOOR AREA(S). REFER TO SPECIFICATIONS FOR INSTALLATION.

FCOH FLOOR CLEANOUT – HEAVY DUTY: JAY R. SMITH # 4111L CAST IRON BODY. FLASHING FLANGE WITH CLAMPING COLLAR. ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, HEAVY DUTY SCORIATED NICKEL BRONZE TOP. REFER TO SPECIFICATIONS FOR INSTALLATION.

FLOW CONTROL VALVE: FLOWDESIGN # ICSS "AUTOFLOW", SERIES 300, STAINLESS UNION BODY WITH NICKEL PLATED UNION NUT. STAINLESS STEEL PRESSURE COMPENSATING CARTRIDGE, MEETING NSF 61 ANNEX G. NAMEPLATE AND 1/2" VALVE BODY AND STRAINER SIZE UNLESS SHOWN OTHERWISE ON PLANS. PROVIDE 0.5 GPM FLOW RATE CARTRIDGE UNLESS SHOWN OTHERWISE ON PLANS.

FLOOR DRAIN: JAY R .SMITH # 2005L (-A), CAST IRON BODY AND CLAMPING COLLAR, ADJUSTABLE 6" ROUND NICKEL BRONZE STRAINER. PROVIDE TRAP PRIMER PORT IF TRAP PRIMER IS PROVIDED ON THE DRAWINGS. USE PUSH- ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.

FUNNEL FLOOR DRAIN: JAY R. SMITH # 3510L (-B), CAST IRON BODY, ADJUSTABLE, SIX INCH ROUND, NICKEL BRONZE STRAINER WITH 4" HIGH FUNNEL, SEDIMENT BUCKET, BOTTOM OUTLET, SEEPAGE PAN, AND MEMBRANE FLASHING CLAMP. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.

EQUIPMENT FLOOR DRAIN: JAY R. SMITH # 2233L (-M), CAST IRON BODY, 12" ROUND. LOOSE. HEAVY DUTY. DUCTILE IRON GRATE. SEDIMENT BUCKET. BOTTOM OUTLET. SEEPAGE PAN. AND MEMBRANE FLASHING CLAMP. PROVIDE TRAP PRIMER PORT IF TRAP PRIMER IS PROVIDED ON THE DRAWINGS. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON

EQUIPMENT FLOOR DRAIN: JAY R. SMITH # 2131L (-B), 5"DEEP CAST IRON BODY, 12" ROUND, LOOSE, MEDIUM DUTY, CAST IRON GRATE, SEDIMENT BUCKET, BOTTOM OUTLET, SEEPAGE PAN, AND MEMBRANE FLASHING CLAMP. PROVIDE TRAP PRIMER PORT IF TRAP PRIMER IS PROVIDED ON THE DRAWINGS. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.

FLOOR DRAIN: JAY R. SMITH # 2141L (-B-M), 5"DEEP CAST IRON BODY, 12" ROUND, LOOSE, HEAVY DUTY, DUCTILE IRON

PRIMER PORT IF TRAP PRIMER IS PROVIDED IN DRAWINGS. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON FLOOR SINK: JAY R. SMITH # 320-Y03 (12" SQUARE BODY LESS FLANGE), 6" DEEP CAST IRON BODY WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH SEEPAGE HOLES, CLAMP COLLAR, ALUMINUM SEDIMENT

BUCKET, AND 8-1/2" SQUARE PORCELAIN ENAMEL, ACID RESISTANT, COATED RIM AND HALF GRATE. USE PUSH-ON

JOINT OF OUTLET SIZE AS SHOWN ON PLANS.

& MODEL NUMBER

MAXITROL 325-5L-48

MAXITROL 325-7A210D

MAXITROL 325-9L210E

DROOP = 1" WATER COLUMN MAXIMUM

MANUFACTURER

& MODEL NUMBER

RHEEM #GHE 100ES-200

RHEEM #GHE 100ES-200

& MODEL NUMBER

AMTROL ST-25V

GPR2

GPR3

NOTES:

NOTES

ET

NOTES:

GRATE, SEDIMENT BUCKET, BOTTOM OUTLET, SEEPAGE PAN, AND MEMBRANE FLASHING CLAMP, PROVIDE TRAP

FLOOR SINK: JAY R. SMITH # 330-Y03 (12" SQUARE SQUARE BODY LESS FLANGE). 8" DEEP CAST IRON BODY WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH SEEPAGE HOLES, CLAMP COLLAR, ALUMINUM SEDIMENT BUCKET, AND 12" SQUARE PORCELAIN ENAMEL, ACID RESISTANT, COATED RIM AND HALF GRATE. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.

HOSE BIBB: PRIER PRODUCTS # C-255CP.75, POLISHED CHROME PLATED BRASS 3/4" FEMALE INLET, 3/4" THREADED HOSE CONNECTION, LOOSE KEY HANDLE, AND ASSE 1011 INTEGRAL VACUUM BREAKER.

VALVE | VALVE BODY

C = SELF CONTAINED "DIRECT ACTING" DIAPHRAGM TYPE WITH INTERNAL VENT LIMITER

LISTED TO MEET ANSI Z21.80 / CSA 6.22 WITH CSA LISTING STAMP ON REGULATOR BODY

SERVED

GROCERY

FURNISH WITH RHEEM 3" CONCENTRIC COMBUSTION AIR INTAKE AND EXHAUST KIT.

(GALLONS)

10.3

CHARGE TANK WITH AIR TO IDENTICAL PRESSURE AS STATIC DOMESTIC WATER PRESSURE

5 PSI MAXIMUM INI ET PRESSURE & 1 PSI MINIMUM INI ET PRESSURE.

8. PROVIDE WITH SEPARATE OVERPRESSURE PROTECTION DEVICE (OPD)

100° TEMPERATURE RISE WITH 140° (F) OPERATING TEMPERATURE.

65# ALUMINUM BODY, SCREWED CONNECTIONS AND OVERPRESSURE PROTECTION TO 25#

GAS PRESSURE REGULATOR INLET PRESSURE - OPERATING PRESSURE - DESIGN FRICTION LOSS

TYPE | SIZE (INCHES)

1/2"

1-1/4"

1-1/2"

GAS PRESSURE REGULATOR SCHEDULES FOR 5 PSI SYSTEMS

MAXIMUM FLOW RATE SCHEDULED, MATCH BODY SIZE AND MAXIMUM FLOW RATE TO EQUIPMENT FLOW RATE. REFER TO EQUIPMENT SHOP DRAWINGS.

(GALLONS)

RATE (CFH)

1,250

2,250

WATER HEATER SCHEDULE

SOURCE

EXPANSION TANK SCHEDULE

VOLUME (GALLONS)

GROCERY NATURAL GAS

MAX. FLOW | INLET PRESSURE

(PSI)

1.5

1.5

1.5

GROCERY

OUTLET PRESSURE

INCHES WATER COLUMN

7"

7"

NOTES

1,2

1,2

NOTES

1

NOTES

1 ~ 8

1 ~ 8

1 ~ 8

WASTE PIPE HEAT TAPE: RAYCHEM # 5XL1-CR. 5 WATTS PER FOOT WITH POLYOLEFIN OUTER JACKET, REFER TO SPECIFICATIONS FOR MORE INFORMATION. ELECTRICAL REQUIREMENTS: XXX WATT TOTAL CONNECTED LOAD AT 120V SINGLE PHASE.

ICE MAKER BOX: GUY GRAY MODEL # BIM875, 20 GAUGE GALVANIZED STEEL BOX, 18 GAUGE STEEL FACEPLATE, BOTTOM INLET WATER SUPPLY WITH LEAD FREE 1/2" x 1/4" COMPRESSION ANGLE STOP VALVE. TRIM: LOOP 4 FEET OF 1/4" TYPE "K" SOFT COPPER TUBING AND PROVIDE EQUIPMENT CONNECTION.

JANITOR'S SINK: FIAT # MSB-2424, 24" x 24" x 10" HIGH MOLDED STONE BASIN WITH FACTORY INSTALLED STAINLESS STEEL DOME STRAINER AND SEDIMENT BASKET. FAUCET: CHICAGO FAUCET # 897-CP FAUCET WITH WALL BRACE, INTEGRAL VACUUM BREAKER, PAIL HOOK, AND 3/4" MALE HOSE THREADED OUTLET. SECURE FAUCET IN WALL WITH BACKBOARD. TRIM: # BP TYPE 304, 20 GAUGE, STAINLESS STEEL WALL SURROUNDS, # T-35 THREE FOOT LONG REINFORCED HOSE WITH 3/4" CHROME COUPLING AND WALL HOOK, # V-70 EXTRUDED VINYL BUMPER GUARD, AND # T-40 24" STAINLESS STEEL MOP HANGER.

WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): AMERICAN STANDARD # 0355.012 "LUCERNE" 20-1/2" X 18-1/4" RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW. FAUCET: PROVIDE WITH SLOAN # EAF-275, CHROME-PLATED. SOLAR POWERED WITH BATTERY BACKUP SENSOR OPERATED FAUCET MAGNETIC SOLENOID VALVE, 0.5 GPM AERATOR AND ETF-312-A TRIM PLATE. TRIM: McGUIRE # 155A GRID DRAIN WITH TAILPIECE, McGUIRE # LF2165CCLK LEAD FREE BRASS LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, McGUIRE # B8872CF 1-1/4" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, PLUMBEREX "PRO-EXTREME" # X-4222 INSULATION KIT FOR WATER AND WASTE

NON-FREEZE WALL HYDRANT: PRIER PRODUCTS # C-634NBX1, SATIN NICKEL PLATED BRASS 1" MALE INLET BY 3/4" FEMALE INLET. 3/4" THREADED HOSE CONNECTION, LOOSE KEY HANDLE, HYDRANT LENGTH AS REQUIRED FOR INSTALLED WALL THICKNESS, ADJUSTABLE WALL CLAMP, BRASS BOX WITH SATIN NICKEL PLATED FINISH AND INTEGRAL ASSE 1052 DOUBLE CHECK VACUUM BREAKER.

ROOF NON-FREEZE POST HYDRANT: MAPA PRODUCTS # MPH-24FP FREEZE PROOF POST HYDRANT MEETING ASSE #1057 WITH BLACK POWDER COATED CAST ALUMINUM WEATHER-GUARD DOME HANDLE, STAINLESS STEEL SHROUD WITH WELDED STAINLESS STEEL FLANGE, UNDER DECK CLAMP, BRONZE GLOBE ANGLE VALVE, 3/4" HOSE CONNECTION. QUICK DISCONNECT WITH BUILT-IN VACUUM BREAKER, STAINLESS STEEL RESERVOIR.

T-1 THERMOSTAT: RAYCHEM # AMC-F5 LINE TEMPERATURE SENSING THERMOSTAT AND NEMA 4X ENCLOSURE FOR ON-OFF CONTROL OF HEAT TAPE CIRCUIT. FACTORY SET TO TURN ON AT 40°F. CAPILLARY AND SENSIN

THERMOSTATIC MIXING VALVE: POWERS # LFG480, SOLID LEAD FREE BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.35 GPM. SET TEMPERATURE TO 110F FOR DUAL TEMPERATURE LAVATORIES AND HAND SINKS. 100F FOR SINGLE TEMPERATURE LAVATORIES AND HAND SINKS AND 120F FOR SINKS. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLAN(S).

TRAP PRIMER: PRECISION PLUMBING PRODUCTS # PR-500 "PRIME RITE", CORROSION RESISTANT BRASS BODY, "O" RING SEALS, 1/2" INLET AND OUTLET, AND INTEGRAL VACUUM BREAKER. INSTALL THE VALVE AT A MINIMUM OF 12" ABOVE FINISHED FLOOR.

TRAP SEAL: ProSet SYSTEMS "TRAP GUARD" INSERT FOR ACTUAL FLOOR DRAIN MODEL AND SIZE PROVIDED, FLEXIBLE ELASTOMERIC PVC MATERIAL MOLDED INTO SHAPE OF DUCK'S BILL, OPEN ON TOP WITH CURL CLOSURE AT BOTTOM. ALLOWS WASTEWATER TO OPEN AND ADEQUATELY DISCHARGE FLOOR DRAIN THROUGH ITS INTERIOR. CLOSES AND RETURNS TO ORIGINAL MOLDED SHAPE AFTER WASTEWATER DISCHARGE IS COMPLETE.

TIME SWITCH: INTERMATIC #ET1705CSPST, 7 DAY, ONE CIRCUIT-SINGLE POLE SINGLE RATED (1 H.P. @ 120 VOLT, SINGLE PHASE), MINIMUM OF 20 SET POINTS (14 ON/OFF CYCLES AND BATTERY BACK UP. COORDINATE WITH DIVISION 26 FOR INSTALLATION AND INTERLOCK OF TIME SWITCH IN SERIES WITH THE AQUASTAT AND RECIRCULATION PUMP.

URINAL (ADA ACCESSIBLE): AMERICAN STANDARD # 6590.001 "WASHBROOK" WHITE VITREOUS CHINA FIXTURE WITH FLUSHING RIM, 3/4" TOP SPUD, AND WASHOUT FLUSH ACTION. VALVE: SLOAN "SOLIS" # 8186-0.125 EXPOSED, CHROME-PLATED, SOLAR POWERED WITH BATTERY BACK-UP, WITH OVERRIDE BUTTON, SENSOR OPERATED, DIAPHRAGM TYPE, FLUSH VALVE WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, OSCILLATING HANDLE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP WITH VANDAL RESISTANT CAP, VACUUM BREAKER AND 3/4" FLUSH TUBE, AND SWEAT ADAPTER KIT. TRIM: SUITABLE CARRIER WITH STANCHIONS TO FLOOR.

WALL-MOUNTED WATER CLOSET (ADA ACCESSIBLE): AMERICAN STANDARD # 2257.001 "AFWALL" WHITE VITREOUS CHINA FIXTURE WITH ELONGATED UNIVERSAL BOWL AND DIRECT-FED SIPHON JET ACTION. VALVE: SLOAN "SOLIS" # 8111 1.6/1.1 GALLON PER FLUSH, EXPOSED, CHROME-PLATED, SOLAR POWERED WITH BATTERY BACKUP, SENSOR OPERATED. DIAPHRAGM TYPE, FLUSH VALVE WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, MANUAL OVERRIDE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP. VACUUM BREAKER, AND SWEAT ADAPTER KIT, INSTALL FLUSH VALVE HANDLE ON THE WIDE SIDE OF THE STALL. TRIM: CHURCH # 9500SSC WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY DUTY, SEAT LESS COVER WITH SELF-SUSTAINING CHECK HINGES AND STAINLESS STEEL BOLTS. PROVIDE SUITABLE FIXTURE CARRIER.

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WALL CLEANOUT: JAY R. SMITH # 4530S, CAST IRON CLEANOUT TEE, COUNTER SUNK PLUG, STAINLESS STEEL ROUND COVER AND SCREW, AND IRON PLUG WITH GASKET SEAL. REFER TO SPECIFICATIONS FOR INSTALLATION

KITCHEN GENERAL NOTES

- 1. REFERENCE THE KITCHEN EQUIPMENT PLUMBING CONNECTION SCHEDULEFOR ITEMS TO BE FURNISHED AND / OR INSTALLED AS REQUIRED TO COMPLETE THE INSTALLATION OF PLUMBING SYSTEMS FOR KITCHEN EQUIPMENT. COORDINATE WITH THE ARCHITECT FOR THE EXACT LOCATION OF EQUIPMENT AND ROUGH-IN. REFERENCE THE KITCHEN EQUIPMENT SHOP DRAWINGS AND COORDINATE WITH 365 FOR EXACT REQUIREMENTS PRIOR TO THE START OF INSTALLATION.
- 2. PROVIDE ITEMS AND WORK AS REQUIRED FOR A COMPLETE AND WORKING PLUMBING INSTALLATION FOR EACH PIECE OF KITCHEN EQUIPMENT. PROVIDE ROUGH-INS AND CONNECT TO THE KITCHEN EQUIPMENT WITH TRAPS, SUPPLIES, SHUTOFF VALVES, PIPES TO THE WALL, ESCUTCHEONS, ETC AS SHOWN, SPECIFIED AND REQUIRED.
- 3. WHERE "FLEX" TUBING IS CALLED FOR, PROVIDE A FOUR FOOT COILED LENGTH OF TYPE "K" SOFT COPPER TUBING FROM WATER SHUT-OFF VALVE TO THE EQUIPMENT CONNECTION OF SAME SIZE AS CONNECTION TO KITCHEN EQUIPMENT WITH 1/4" BEING MINIMUM SIZE. PROVIDE CONNECTORS AND ADAPTERS AS REQUIRED.
- 4. VERIFY GAS LOADS AND GAS ROUGH-IN OF KITCHEN EQUIPMENT WITH THE KITCHEN EQUIPMENT SHOP DRAWINGS PRIOR TO INSTALLING GAS PIPING. PROVIDE GAS COCKS, UNIONS, ETC. AS SPECIFIED AND REQUIRED. INSTALL
- GAS QUICK DISCONNECTS WHERE FURNISHED WITH THE KITCHEN EQUIPMENT. 5. PROVIDE INDIRECT WASTE LINES OF SAME SIZE AS CONNECTION TO EQUIPMENT WITH 3/4" BEING MINIMUM SIZE. ROUTE FROM EQUIPMENT CONNECTION POINTS INDICATED TO FLOOR DRAIN OR FLOOR SINK. PROVIDE
- AIR GAP OF TWO PIPE DIAMETERS MINIMUM PER CODE. 6. COMPLY WITH HEALTH DEPARTMENT REGULATIONS. PROVIDE CLEARANCE FOR CLEANING BEHIND AND UNDER EXPOSED PIPING AS REQUIRED BY HEALTH DEPARTMENT. CONFORM TO HEALTH DEPARTMENT REQUIREMENTS FOR
- 7. NO PLUMBING ROOF PENETRATIONS SHALL BE INSTALLED THROUGH GREASE FILTER PANS ON THE ROOF. REFER TO MECHANICAL DRAWINGS PRIOR TO START OF INSTALLATION.
- 8. PROVIDE AIRTIGHT SEAL AROUND PIPING PENETRATIONS THROUGH WALK-IN COOLER OR FREEZER WALLS OR CEILINGS.
- 9. DO NOT INSTALL PIPING IN COOLER OR FREEZER WALLS. INSTALL EXPOSED PIPING IN A NEAT APPEARING MANNER.
- 10. INSTALL RIM OF FLOOR DRAINS AND FLOOR SINKS BELOW FINISHED FLOOR LEVEL. SLOPE FLOOR TO DRAINS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
- 11. COORDINATE LOCATION OF VENT, WATER, AND GAS PIPING TO AVOID CONFLICT WITH OTHER TRADES.
- 12. CLEAN INSTALLED PLUMBING FIXTURES AND EQUIPMENT.

LOCATIONS OF FLOOR SINKS.

- 13. PROVIDE WALL BACKING OR SPECIFIED CARRIERS FOR THE PROPER SUPPORT OF INSTALLED WALL HUNG FIXTURES AND EQUIPMENT.
- 14. PROVIDE VERTICAL LIFT SPRING LOADED CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR 3-COMPARTMENT SINKS, PRE-RINSE UNITS, JANITOR SINKS, MIXING HOSE BIBBS & MIXING WALL HYDRANTS DOWNSTREAM OF SHUTOFF VALVES.
- 15. SEAL AROUND INSTALLED FIXTURES AND KITCHEN EQUIPMENT WITH CAULK. 16. PROVIDE APPROPRIATE BACKFLOW PREVENTION DEVICES FOR KITCHEN EQUIPMENT REQUIRING THEM PER LOCAL AUTHORITIES REQUIREMENTS. INSTALL BACKFLOW PREVENTION DEVICES FURNISHED WITH KITCHEN **EQUIPMENT**

TOTAL CONNECTED NATURAL GAS LOAD

DEVELOPER INSTALLED GAS SERVICE TO ACCOMODATE UP TO 7,000 MBH AT 2 PSI AND A DEVELOPED LENGTH OF 550'-0". TOTAL USAGE 3,041. EXISITNG GAS SESRVICE WILL ACCOMODATE NEW LOAD.

<u>KITCHEN EQUIPMENT</u>

EQUIPMENT DESIGNATION	QUANTITY	DESCRIPTION	CFH (EACH)	TOTAL CFH
5-111	2	DOUBLE STACK STEAMER	60	120
5-124	1	DOUBLE STACK CONVECTION OVEN	90	90
5-132	1	GRIDDLE	81	81
5-133	1	CHAR-BROILER	102	102
			TOTAL =	393
MECHANICAL EQUIPMENT				
EQUIPMENT DESIGNATION	QUANTITY	DESCRIPTION	CFH (EACH)	TOTAL CFH
WH	2	WATER HEATER	199	398
			TOTAL =	398
MISC. LOAD :				
FUTURE FRIENDS OF 365	1		1500	1500
FUTURE FRIENDS OF 365	1		750	750
		ТОТА	L CONNECTED LOAD =	3041

FIXTURE BRANCH CONNECTION SCHEDULE

COLD WATER	HOT WATER	WASTE	VENT
1-1/4"		4"	2"
1"		2"	2"
1/2"	1/2"	2"	1-1/2"
1/2		2"	1-1/2"
1/2"	1/2"	3"	2"
		3"	2"
1/2"	1/2"	2"	2"
	1-1/4" 1" 1/2" 1/2 1/2"	1-1/4" 1" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2"	1-1/4" 4" 1" 2" 1/2" 1/2" 2" 1/2 2" 1/2" 3" 3"

RECIRCULATION PLIMP SCHEDULE

•	TEOHTOOLTHOIT OWN CONEDUL												
MARK	MANUFACTURER & MODEL NUMBER	GPM	HEAD (FT.)	CONNECTION SIZE	IMPELLER SIZE (IN.)	ELECTF	RICAL DA	TA	NOTES				
	& MODEL NOMBER		(1 1.)	SIZL	(114.)	VOLTS	PHASE	HP					
RP	BELL & GOSSETT # NBF-36	2.5	19	3/4"	N/A	120	1	1/6	1,2,3				

ALL LEAD FREE CAST BRONZE BOOSTER PROVIDE WITH STRAINER UPSTREAM OF PUMP

1. PIPE SIZES SHOWN ARE MINIMUM.

PROVIDE ADJUSTABLE, SURFACE MOUNTED AQUASTAT - HONEYWELL L6006C

GENERAL NOTES

- 2. 1. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- 2. FURNISH A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS PREPARED BY THE ENGINEER-OF-RECORD AFTER FINAL INSPECTION OF INSTALLED PLUMBING
- 3. FURNISH TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS. INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF
- 4. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
- 5. UTILITY INSTALLATIONS SHALL COMPLY WITH ALL LEGALLY CONSTITUTED UTILITY COMPANIES SERVICE REQUIREMENTS HAVING JURISDICTION.
- 6. VERIFY LOCATION AND DEPTH OF UTILITIES AT ALL POINTS OF CONNECTION INDICATED ON DRAWINGS BEFORE START OF PROJECT.
- 7. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
- 8. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE
- 9. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.

AUTHORITIES HAVING JURISDICTION.

- 10. PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO
- 11. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS. COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, REFRIGERATION PIT AND TUNNEL SYSTEMS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT. STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED. REFRIGERATION PIT AND TUNNEL SYSTEM INSTALLED BY GENERAL CONTRACTOR. PIPING INVERTS AND SLOPE SHALL BE CLOSELY COORDINATED TO AVOID CONFLICTS WITH ALL OTHER TRADES BELOW SLAB WORK.
- 12. CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
- 13. PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
- 14. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT ROUTE PIPING OVER ELECTRICAL PANELS.
- 15. COORDINATE THE PAINTING OF ALL EXPOSED GAS AND WATER PIPING WITH A RUST INHIBITOR PAINT PER THE ARCHITECT'S SPECIFICATIONS.
- 16. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10' MINIMUM CLEARANCE FROM ALL ROOF TOP AIR INTAKES AND ROOF EDGES AND/OR PARAPETS. MAINTAIN 2' CLEARANCE FROM ALL OTHER ROOF TOP
- 17. INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.
- 18. COORDINATE AND INSTALL ALL FLOOR AND WALL CLEANOUTS IN FREE AND ACCESSIBLE LOCATIONS FOR MAINTENANCE PER ARCHITECTURAL DRAWINGS. CLEANOUTS INSTALLED BENEATH OR BEHIND EQUIPMENT OR CASES SHALL BE RELOCATED AT CONTRACTOR'S EXPENSE WITH NO EXTRA COST TO 365.
- 19. COORDINATE AND INSTALL ALL FLOOR DRAINS, TRENCH DRAINS, AND FLOOR CLEANOUTS TO BE SET AND PLUMB FLUSH WITH FINISH FLOOR ELEVATIONS INDICATED ON ARCHITECTURAL DRAWINGS. NO CRACKS, RISE OR FALLS IN FINISH FLOOR AROUND DRAINS TOPS SHALL BE PERMITTED. CORRECTIONS SHALL BE AT CONTRACTOR'S EXPENSE WITH NO EXTRA COST TO 365.
- 20. ALL FLOOR DRAINS SHALL HAVE DEEP SEAL TRAPS INSTALLED TO PREVENT EVAPORATION BREAKING THE COMBINATION WASTE AND VENT SYSTEM.
- 21. INSTALL FLOOR DRAINS AS INDICATED ON DRAWINGS. IF CONFLICTS ARE FOUND. NOTIFY ARCHITECT AS SOON AS POSSIBLE TO RESOLVE ISSUE SO NOT TO DELAY WORK SCHEDULE. DRAINS NOT INSTALL AS INDICATED OR DAMAGE TO DRAIN BODIES OR GRATES DUE TO REMOVAL OF DRAIN PROTECTIVE COVERINGS DURING CONSTRUCTION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE WITH NO EXTRA COST TO 365.
- 22. COORDINATE AND VERIFY ALL REFRIGERATION CASE DRAIN LOCATIONS WITH THE ARCHITECT AND THE REFRIGERATION CONTRACTOR PRIOR TO ROUGH-IN AND FINAL INSTALLATIONS. PIPING SHALL TERMINATE ABOVE DRAIN'S FLOOD RIM WITH CODE REQUIRED AIR GAP. CASE DRAINS SHALL BE ALIGNED AND INSTALLED IN A PROFESSIONAL MANOR TO BE STRAIGHT. PARALLEL AND EQUALLY SPACE ON THE FRONT FACE OF THE CASE KICKPLATES. ANY CASE DRAINS NOT MEETING ABOVE REQUIREMENTS UPON FINAL INSPECTION SHALL BE CORRECTED AT THE PLUMBING CONTRACTOR'S EXPENSE WITH NO EXTRA COST
- 23. BELOW SLAB PLUMBING SYSTEMS ARE PROHIBITED BENEATH FREEZER UNITS. PLUMBING SYSTEMS INSTALLED NEAR FREEZER UNITS SHALL BE WRAPPED WITH 3/4" ARMAFLEX PIPE INSULATION.
- 24. NO PIPING SHALL BE INSTALL WITHIN REFRIGERATED PANEL WALLS OF FREEZER/COOLER UNITS. ANY PIPING INSTALLED ON EXTERIOR FACE OF REFRIGERATED PANEL WALLS SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL WORKMAN LIKE MANNER, PIPING SHALL BE PROPERLY SUPPORTED.
- 25. ALL PLUMBING FIXTURE SHUT-OFF AND/OR BALANCING VALVES INSTALLED IN PIPE CHASES SHALL BE ACCESSIBLE FROM JUST ABOVE THE CEILING LINE OR ACCESS DOORS PROVIDED LOW IN CHASE WALL.
- 26. PROVIDE PROPER FREE STANDING INTERNAL WALL SUPPORTS FOR ALL PLUMBING WALL HUNG FIXTURES TO PREVENT PULLOUT FROM WALL.
- 27. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL FINAL CLEANING AND GUARANTEE PROPER WORKING OPERATIONS OF INSTALLED FIXTURES FURNISHED BY CONTRACTOR AND/OR 365. CAULK ALL PLUMBING FIXTURES TO WALLS AND FLOORS WITHIN FOOD PREP AREAS IN ACCORDANCE WITH LOCAL HEALTH DEPARTMENT CODES AND REGULATIONS.
- 28. FURNISH AND INSTALL ESCUTCHEONS AT ALL PIPE PENETRATIONS THROUGH
- 29. PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT SPECIFIED IN PLUMBING FIXTURE SCHEDULE AND 365 FURNISHED EQUIPMENT SCHEDULE IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. INSTALL OR PROVIDE ALL REQUIRED SHUT-OFFS, BACKFLOW PREVENTERS, PRESSURE REGULATORS, FILTERS, AND CONDENSATE DRAINS AS INDICATED ON THE SCHEDULES AND/OR ASREQUIRED BY ALL STATE OR LOCAL CODES AND REGULATIONS. REFERENCE EQUIPMENT CUT-SHEETS FOR ADDITIONAL FINAL CONNECTION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS.
- 30. INSTALL ENTIRE GAS PIPING SYSTEM ON BUILDING ROOF AS INDICATED ON DRAWINGS. MINIMIZE GAS PIPING INSTALLED INSIDE THE BUILDING SHELL SERVING INTERIOR EQUIPMENT. PROVIDE ALL REQUIRED REGULATORS, GAS COCK SHUT-OFFS, AND SUPPORTS AS REQUIRED FOR A COMPLETE WORKING
- 31. REFRIGERATION CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDENSATE DRAINAGE PIPING FROM REFRIGERATION SYSTEM FREEZER AND COOLER EVAPORATOR UNITS TO FLOOR DRAINS WHERE INDICATED ON DRAWINGS. PROVIDE CLEANOUTS AT ALL MAJOR CHANGE OF DIRECTION IN PIPING SYSTEMS. PIPE HANGERS, AND FITTINGS AS REQUIRED FOR A COMPLETE DRAIN SYSTEM INSTALLATION. MINIMUM SIZE OF PIPING SHALL BE 3/4" COPPER TUBING. CONNECTIONS MADE AT EVAPORATOR UNIT SHALL BE INCREASED AS MULTIPLE EVAPORATORS ARE ADDED TO CONDENSATE MAIN. INSTALL ALL DRAINAGE PIPING HIGH AS POSSIBLE, WHILE MAINTAINING A PROPER FALL OF 1/8" PER 1'-0" MINIMUM. INSTALL DRAIN PIPING DOWN EXTERIOR FACE OF FREEZER OR COOLER BOX WALL TO CONDENSATE DRAIN WITH FUNNEL. TERMINATE PIPING OVER FLOOR RIM OF FUNNEL WITH CODE APPROVED AIR GAP. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL HEAT TRACE ON ALL INTERIOR FREEZER STORAGE CONDENSATE PIPING. ALL FREEZER/COOLER CASE CONDENSATION PIPING SHALL HAVE PIPING INSULATION INSTALLED BY REFRIGERATION CONTRACTOR. ALL PIPE PENETRATIONS THROUGH REFRIGERATED PANEL WALLS SHALL BE SEALED AIRTIGHT. ANY EVAPORATO DRAIN SYSTEM NOT MEETING THESE REQUIREMENTS UPON FINAL INSPECTION. SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE WITH NO EXTRA COST

32. PLUMBING CONTRACTOR SHALL PROVIDE TRENCHING AND BACKFILLING FOR REFRIGERATION

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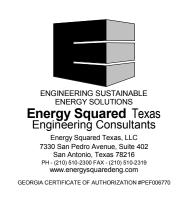
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PLUMBING SYMBOLS.

SCHEDULES & NOTES

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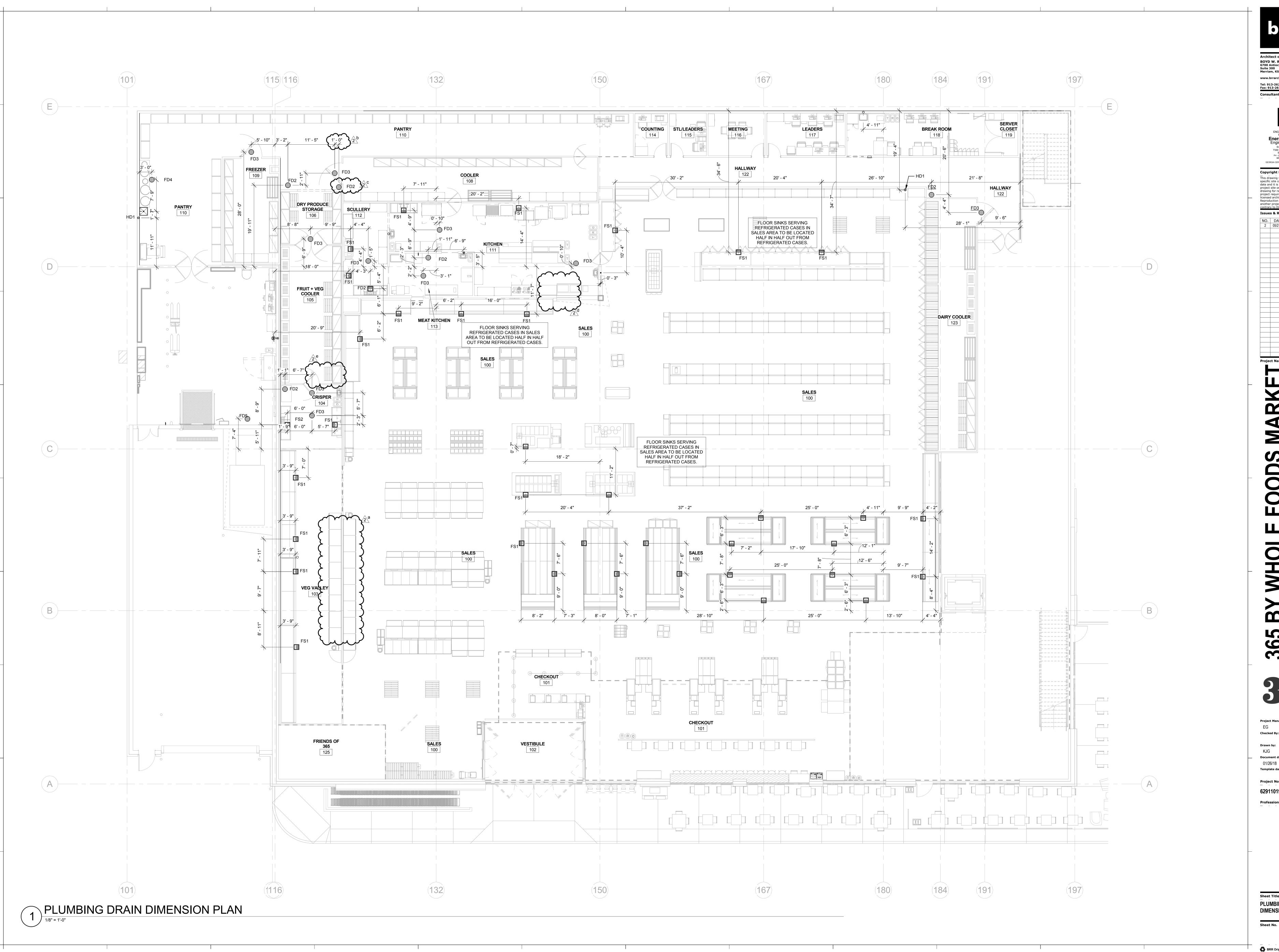
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PLUMBING DRAIN DIMENSION PLAN

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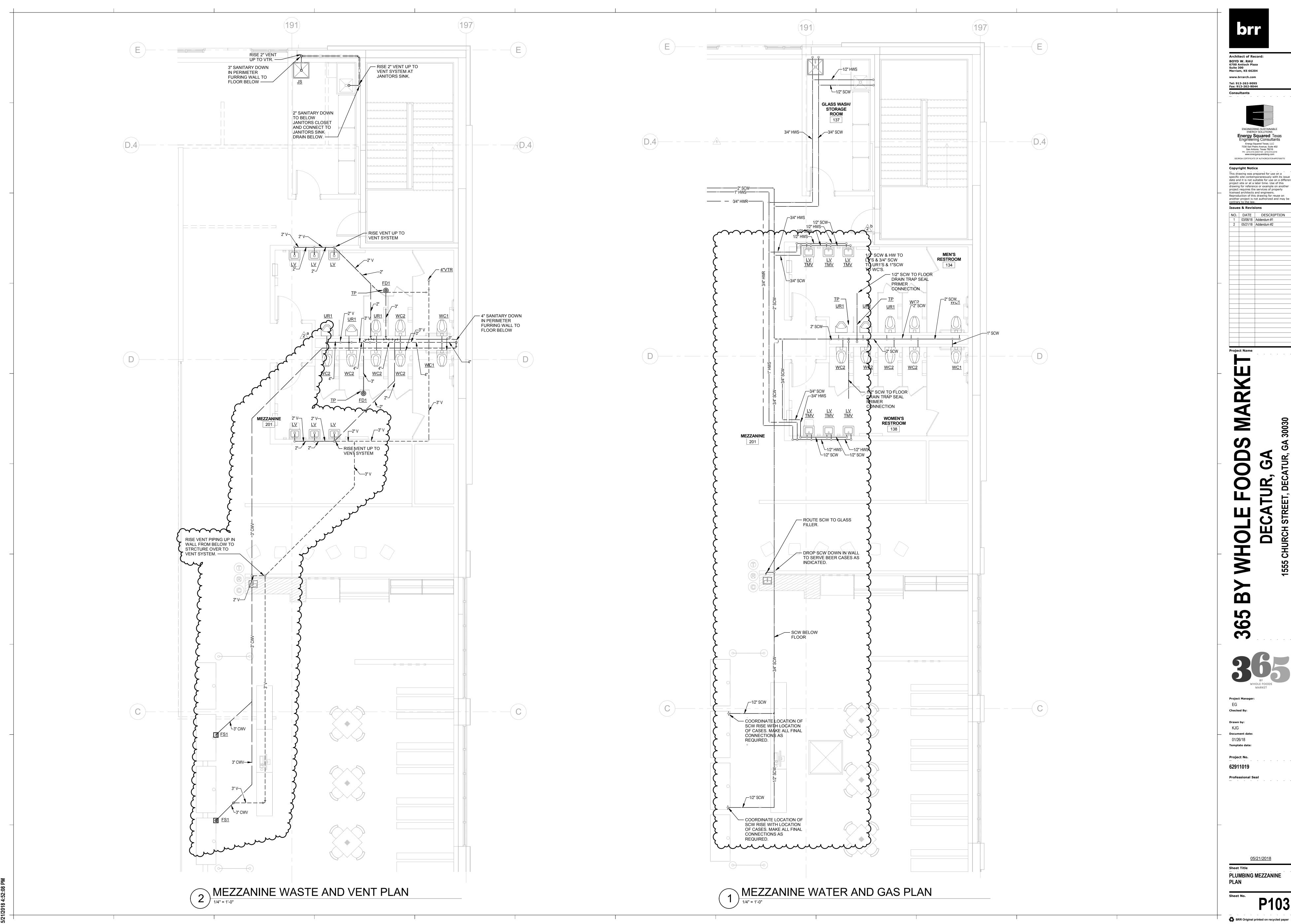


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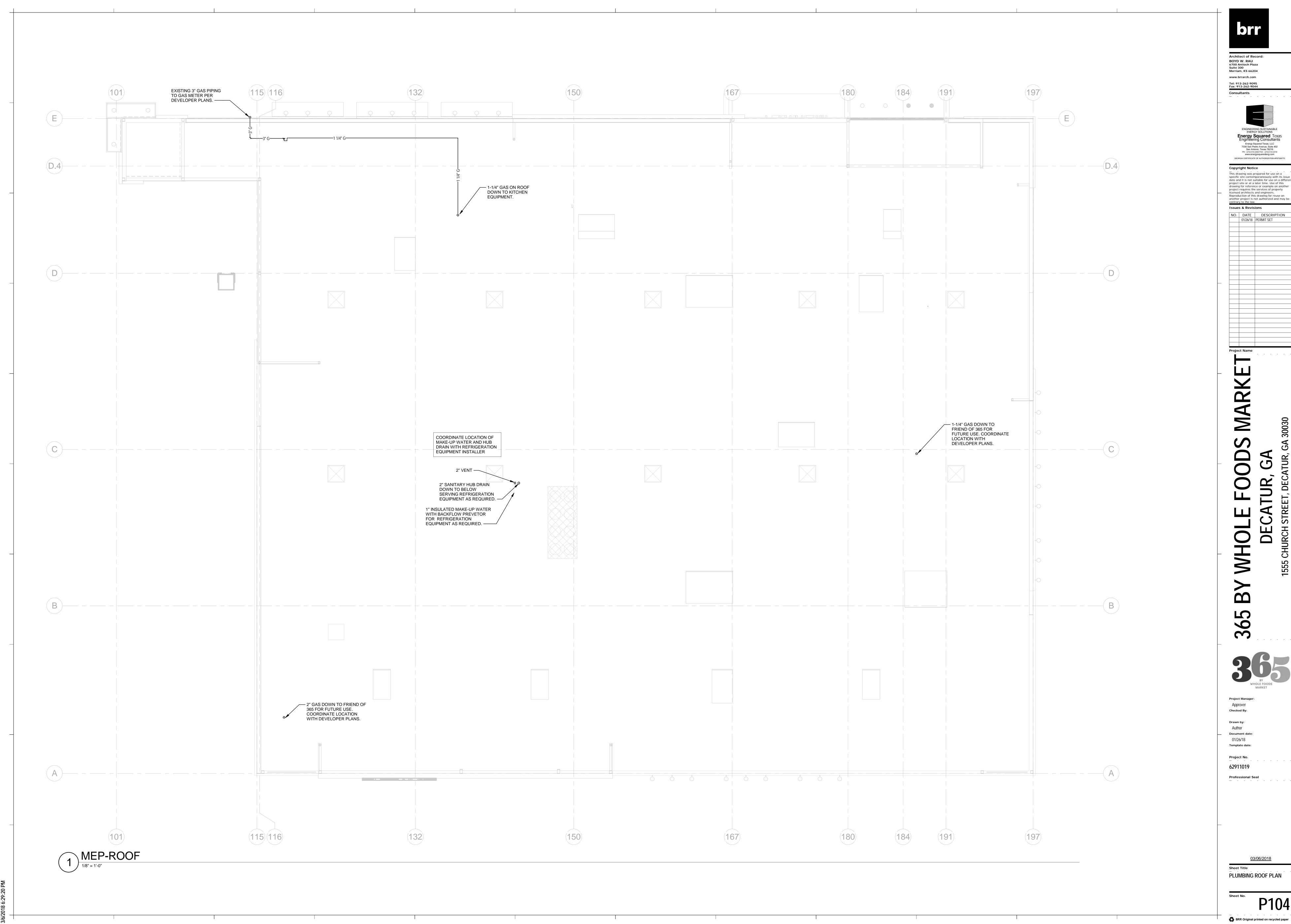
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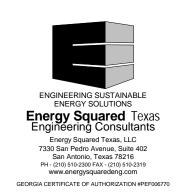
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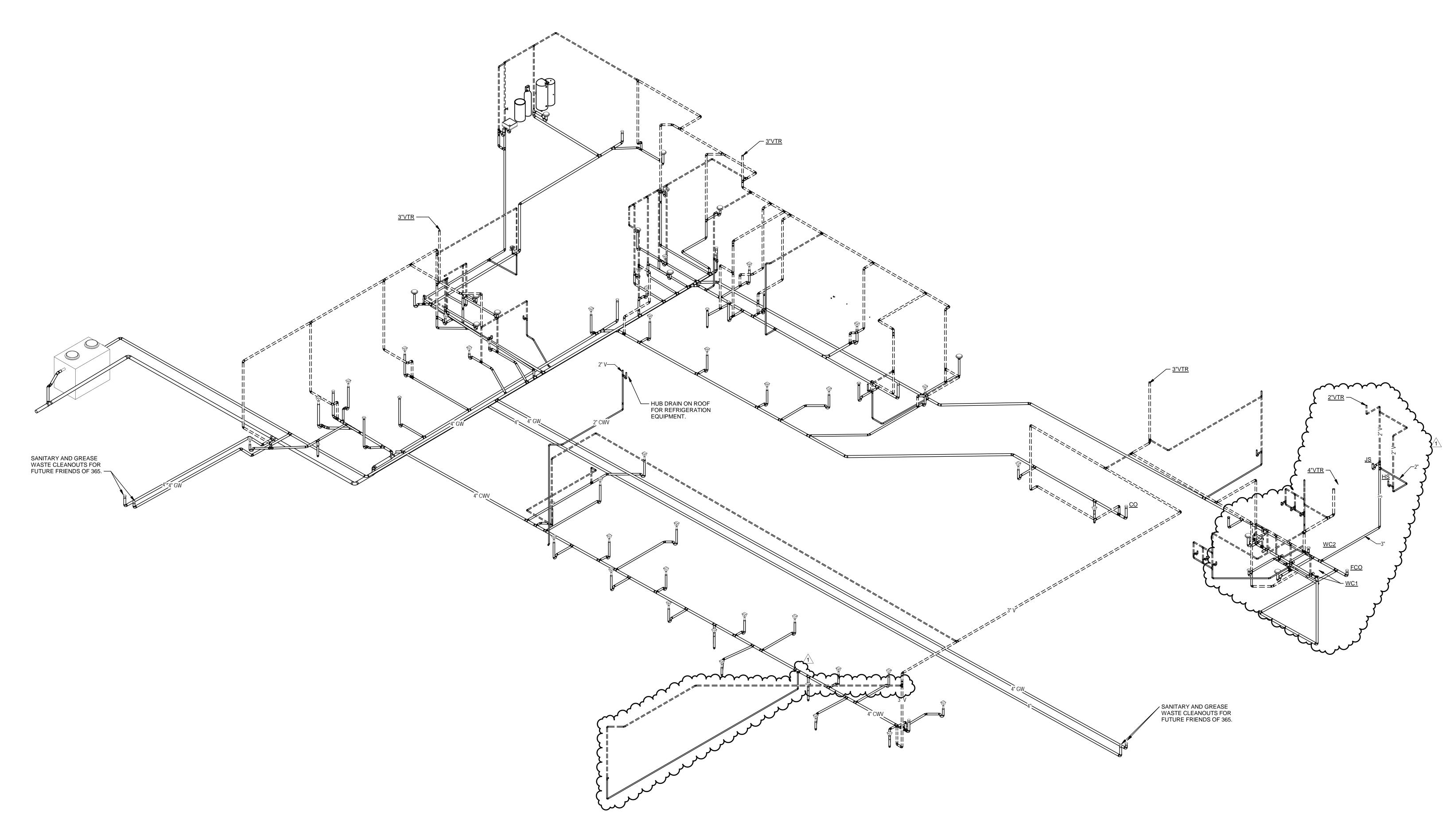
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01/26/18 Template date:

62911019

PLUMBING WASTE & VENT RISER DIAGRAM



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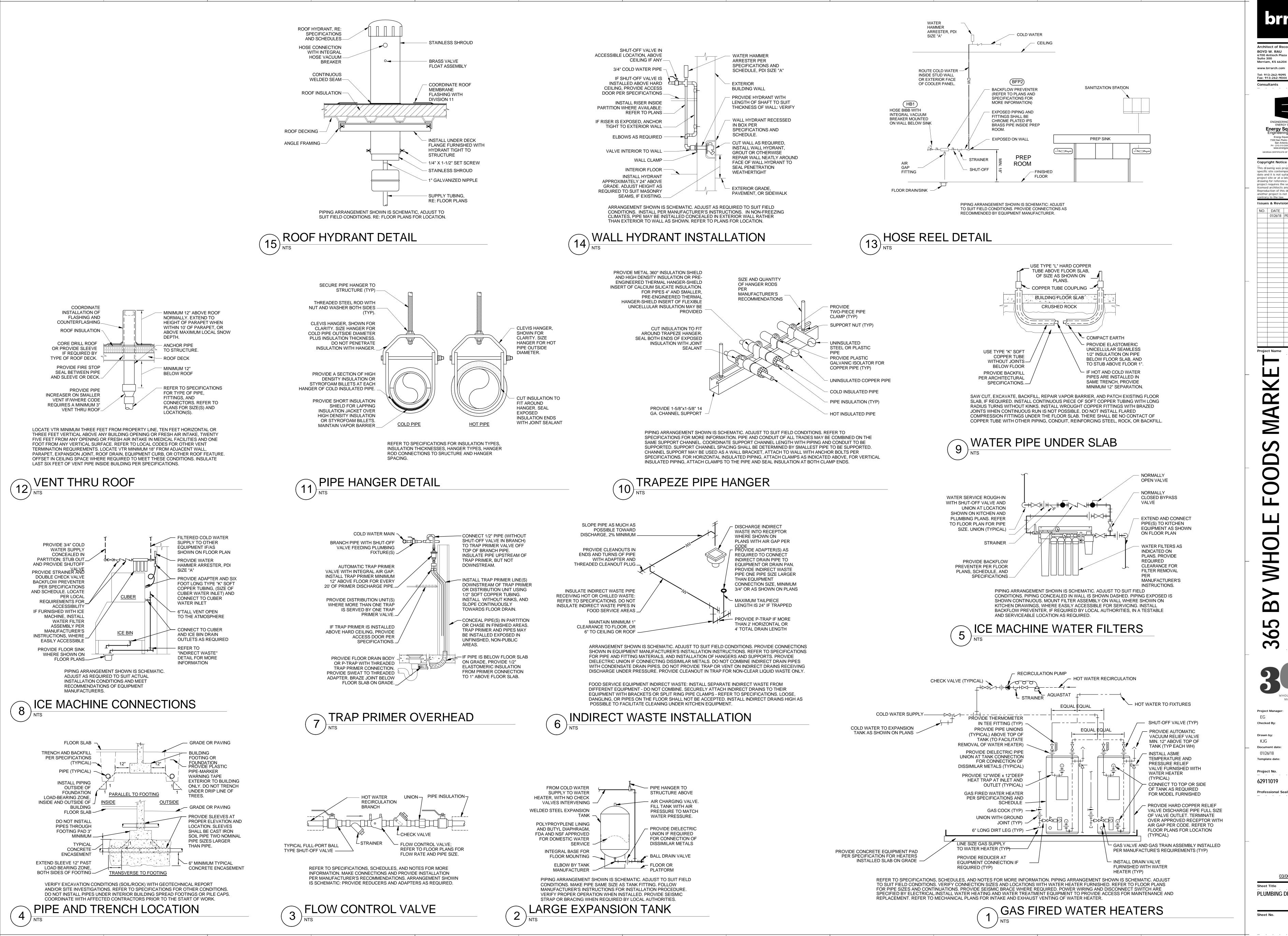
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Project Name

KJG Document date: 01/26/18 Template date:

> Project No. 62911019

PLUMBING WATER AND GAS RISER DIAGRAM



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PLUMBING DETAILS

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DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT. 20. ALL DEDICATED CIRCUITS (CIRCUITS SERVING A SINGLE DEVICE) SHALL HAVE A SEPARATE NEUTRAL AND GROUND WIRES. 1. PROVIDE 3/4" CONDUIT AND PULL STRING FROM EACH WALL MOUNTED TELEPHONE/DATA/TELEVISION AND OTHER LOW VOLTAGE OUTLETS UNLESS OTHERWISE NOTED. ROUTE TO 4" ABOVE SUSPENDED CEILINGS OR TO STRUCTURE.

23. ALL NEW ELECTRTICAL PANELBOARDS AND TRANSFORMERS SHALL HAVE PERMANENT ENGRAVED LABELS ON COVER

24. ALL CIRCUITS FEEDING ITEMS UNDER KITCHEN HOOD SHALL BE

CIRCUITS BETWEEN THE PHASES ARE PROPERLY BALANCECD AFTER ANY REVISION TO CIRCUITRY.

26 LIGHT FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURAL VIA ALL THREAD AND UNI-STRUT AND NOT SUPPORTED BY CEILING SYSTEM. 27. THE LOCATION OF OUTLETS AND EQUIPMENT SHOWN ON THE

DRAWINGS ARE APPROXIMATE AND THE ARCHITECT/TENANT

SHALL HAVE THE RIGHT TO RELOCATE ANY OUTLETS OR

ADDITIONAL COST. 28. ELECTRICAL CONTRACTOR SHALL RECORD ALL FIELD CHANGES IN THE WORK AS THE JOB PROGRESSES AND TURN THIS "AS BUILT" INFORMATION OVER TO THE OWNER AT THE COMPLETION OF THE PROJECT.

FIXTURES BEFORE THEY ARE INSTALLED WITHOUT

ALL CONDUIT ABOVE GRADE SHALL BE STEEL.

30. UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. MINIMUM SIZE TO BE 1" UNLESS NOTED OTHERWISE.

31. ALL CONDUITS PENETRATING SLAB IN EXPOSED LOCATIONS SHALL BE RIGID STEEL

32. USE OF MC CABLE IS ALLOWABLE AS PERMITTED BY THE PROJECT SPECIFICATIONS. INSTALLATION OF MC CABLE SHALL BE OF NEAT WORKMANSHIP AND SHALL RUN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE.

33. LABEL ALL RECETPACLE COVERPLATES WITH PANEL # AND CIRCUIT # USING TYPED PRINTED STICK-ON TAPE. 34. LABEL ALL JUNCTION BOX COVERPLATES WITH PANEL # AND

CIRCUIT #. USING TYPED PRINTED STICK ON TAPE. 35. ALL ELECTRICAL WORK SHALL BE LAID OUT WITH DUE CONSIDERATION FOR THE WORK OF OTHER TRADES. ANY CONFLICTS WHICH OCCUR DUE TO LACK OF COOPERATION OF THE ELECTRICAL CONTRACTOR WITH THE OTHER TRADES SHALL BE CORRECTED BY THE ELECTRICAL CONTRACTOR WITH ABSOLUTELY NO EXPENSE TO THE OWNER.

LIGHTING FIXTURES AND LAMPS SHALL BE FURNISHED BY 365. RECEIVED AND INSTALLED BY CONTRACTOR AS SCHEDULED ON THE LIGHTING FIXTURE SCHEDULE.

37. ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY SERVICE AS REQUIRED TO FACILITATE APPLICABLE TEMPORARY NEEDS. ANY TEMPORARY WIRING, FUSES, ETC SHALL BE REMOVED UPON COMPLETION OF THE PROJECT. PROVIDE GROUND FAULT PROTECTION AS REQUIRED BY NEC AND LOCAL CODES.

8. ALL CONDUIT RUNS IN WALLS SHALL BE RAN VERTICALLY, MINIMUM SIZE IS 3/4".

39. ELECTRICAL CONTRACTOR SHALL PROTECT ALL FIXTURES/EQUIPMENT AGAINST DAMAGE FROM LEAKS, ABUSE, ETC., AND PAY COST OF REPAIR OR REPLACEMENT OF FIXTURES OR EQUIPMENT MADE NECESSARY BY FAILURE TO PROVIDE SUITABLE SAFEGUARDS OR PROTECTION.

40. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM. AFTER ALL EQUIPMENT HAS BEEN INSPECTED AND APPROVED. THOROUGHLY CLEAN ALL EQUIPMENT PROVIDED UNDER THIS WORK JUST PRIOR TO COMPLETION OF PROJECT.

41. THE ELECTRICAL CONTRACTOR, AS FAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP THE PREMISES IN A NEAT AND ORDERLY CONDITION AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY ANY DEBRIS AND EXCESS MATERIAL.

42. ALL ELECTRICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS CHANNELS, RODS, ETC. NECESSARY FOR THE INSTALLATION OF WORK AND SHALL BE FASTENED TO BUILDING STEEL, CONCRETE OR MASONRY, BUT NOT PIPING OR DUCTWORK. ALL CONDUIT AND MC CABLES SHALL BE CONCEALED WHEREVER POSSIBLE. ROUTE CONDUITS ALONG EXTERIOR WALLS, DIRECTLY ABOVE CEILINGS, OR IN PLENUM SPACES TO BE OUT OF VIEW FROM SALES FLOOR SIGHT LINES. EXPOSED CONDUITS AND MC CABLES SHALL BE IN STRAIGHT LINES PARALLEL OR PERPENDICULAR TO COLUMN LINES OR BEAMS AND SEPARATED AT LEAST 3 INCHES FROM WATER LINES WHEREVER THEY RUN ALONG SIDE OR ACROSS SUCH LINES. ALL CONDUCTORS SHALL BE IN CONDUIT OR OTHER CODE APPROVED RACEWAYS.

43. ALL 120V RECEPTACLES 50A OR LESS, 208V AND 240V RECEPTACLES 100A OR LESS, SHALL BE GFCI PROTECTED IN LOCATIONS REQUIRED BY CODE: THIS INCLUDES BATHROOMS. KITCHENS/FOOD PREP AREAS, EXTERIOR LOCATIONS AND RECEPTACLES WITHIN 6' OF A SINK. GFCI RECEPTACLES SHALL BE READILY ACCESSIBLE AND SHALL NOT BE LOCATED BEHIND STATIONARY EQUIPMENT. GFCI PROTECTION MAY BE VIA A GFCI CIRCUIT BREAKER OR GFCI RECEPTACLE, UNO. WHERE NECESSARY, GFCI PROTECTION MAY BE ACHIEVED VIA A BLANK FACE GFCI DEVICE LOCATED IN A READILY ACCESSIBLE LOCATION NEAR RECEPTACLE BEING PROTECTED. FOR DOWNSTREAM WIRING DEVICES LOCATED ON THE SAME BRANCH CIRCUIT, THE GFCI PROTECTION MAY BE PROVIDED FOR BY A SINGLE UPSTREAM DEVICE IF ALL PROTECTED DEVICES ARE LABELED PER CODE.

ALL CODE REQUIRED LOCATIONS. INCLUDING THOSE ACCESSIBLE BY CHILDREN/CUSTOMERS/PUBLIC MOUNTED LESS THAN 5'-6" AFF, UNO.

STANDARD MOUNTING HEIGHTS

ABOVE FINISHED FLOOR (AFF) OR ABOVE FINISHED GRADE (AFG) TO CENTER OF OUTLET BOX. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA REQUIREMENTS. CONTROLS (TOP OF DEVICE) EXIT SIGNS (WALL MOUNTED) INTERCOMS (TOP OF DEVICE) RECEPTACLES RECEPTACLES (EXTERIOR) RECEPTACLES (ABOVE COUNTER) RECEPTACLES (BELOW COLINTER) 8" BELOW COUNTER REMOTE INDICATING LIGHT (FINISHED AREAS) SAFETY SWITCHES (TOP OF DEVICE) STARTERS (TOP OF DEVICE) SWITCHES TELEPHONE. DATA OUTLETS

POWER EQUIPMENT & DEVICES **ELECTRICAL SERVICE PANELBOARD** (SURFACE OR FLUSH MOUNT) TERMINAL CABINET (SURFACE OR FLUSH MOUNT), TYPE AS NOTED PLYWOOD TERMINAL BOARD FOR TELEPHONE SYSTEM, UNO. SIZE AS NOTED.

ELECTRICAL DISTRIBUTION PANELBOARD SWITCHBOARD OR MOTOR CONTROL CENTER ON HOUSEKEEPING PAD

TELEPHONE TERMINAL BOARD (BOTTOM)

200/3/150/3R DISCONNECT SWITCH - "200/3/150/3R" DENOTES AMPERES/POLE/FUSE/NEMA ENCL RATING NF= NON-FUSED, CB= CIRCUIT BREAKER (200/3/CB), NO VALUE (200/3/150) FOR NEMA ENCL RATING MEANS STANDARD NEMA 1 ENCL RATING.

COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR 30/3/15/1/3R STARTER "30/3/15/1/3R" DENOTES AMPERES/POLE/FUSE/NEMA STARTER SIZE/NEMA ENCL RATING. NF= NON-FUSED, CB= CIRCUIT BREAKER (30/3/CB/1), NO VALUE (200/3/150/1) FOR NEMA ENCL RATING MEANS STANDARD NEMA 1 ENCL RATING. MAGNETIC MOTOR STARTER, NEMA SIZE AS NOTED. 3-POLE, UNO.

HAND-OFF-AUTO PUSH BUTTON CONTROL STATION

MUSHROOM-TYPE PUSH BUTTON

OVERHEAD PADDLE FAN

B SIGNALING BELL

B SIGNALING BUZZER

LV TRANSFORMER

MOTOR STARTING SWITCH FRACTIONAL HORSEPOWER MANUAL CONTROLLER INTEGRAL HORSEPOWER MANUAL CONTROLLER VFD VARIABLE FREQUENCY DRIVE.

INDICATING LIGHT

RELAY OR CONTACTOR (IN SCHEMATICS) MAGNETIC CONTACTOR, SIZE, COIL VOLTAGE NUMBER OF POLES AS INDICATED TIME SWITCH

PHOTOCELL PUSH BUTTON •• STOP-START PUSH BUTTON CONTROL STATION

SIGNALING

44. PROVIDE TAMPER-RESISTANT, (TR), TYPE RECEPTACLES AT

25. ELECTRICAL CONTRACTOR TO ENSURE PANELBOARD BRANCH | ELECTRICAL SYMBOLS

UNLESS NOTED OTHERWISE, MOUNTING HEIGHTS LISTED BELOW ARE MECHANICAL OR FIRE PROTECTION PLAN CALLOUT PLUMBING PLAN NOTE CALLOUT ELECTRICAL PLAN NOTE CALLOUT **TECHNOLOGY PLAN CALLOUT** PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES EQUIPMENT DESIGNATION (OWNER FURNISHED. CONTRACTOR INSTALLED) 6" ABOVE COUNTER MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE) CONNECTION POINT OF NEW WORK TO EXISTING DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER

ANNOTATION

ELECTRICAL ONE-LINE & RISER 3P RATING AS SHOWN 200AS FUSED SWITCH 3P RATING, POLES AND 200AF FUSE TYPE AS SHOWN 225A CIRCUIT BREAKER RATINGS AS SHOWN

PANELBOARD

SCHEDULES)

PANELBOARD W/

(SEE SCHEDULES)

TYPE AND RATINGS

SWITCH. RATINGS AS

SEPARATELY

 ot RATINGS AS

SWITCHBOARD ELEC ROOM

480Y/277V, 3Ø, 4W

VM AM COMBINATION DIGITAL VOLT METER/AMMETER

CIRCUIT IDENTIFICATION - SEE CIRCUIT SCHEDULE

AMMETER, RANGE AS SPECIFIED OR REQUIRED

| UTILITY | M | UTILITY METER (AS REQUIRED BY UTILITY)

VOLTMETER, RANGE AS SPECIFIED OR REQUIRED

D WATT-HOUR METER, "D" DENOTES DEMAND REGISTER,

WH/15 "15" DENOTES MINUTES OF DEMAND INTERVAL

CURRENT TRANSFORMER RATING AS

POTENTIAL TRANSFORMER RATING AS

*F# FAULT POINT REFERENCED IN SHORT CIRCUIT

CURRENT AND VOLTAGE DROP SPREADSHEET

TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR

• (I) GROUND CONNECTION WITH TEST WELL

SHOWN

DERIVED SOURCE ???A

¬TX# TRANSFORMER

AS SHOWN

AUTOMATIC

° 200A TRANSFER

480Y/277V, 3Ø, 4W GENERATOR.

GFR GROUND FAULT RELAY

PFR PHASE FAULT RELAY

KK3 KIRK-KEY INTERLOCK

SHUNT TRIP

(AS) AMMETER SWITCH

GROUND CONNECTION

→ ⊶ | LIGHTNING ARRESTER

 $\equiv \neq$ CONTACT (OPEN OR CLOSED)

BLOCK LOAD KW OR KVA

• GROUND ROD

- CAPACITOR

-\\\\ HEATER

(HP)/ MOTOR

VOLTMETER SWITCH

SPECIFIED OR REQUIRED

SPECIFIED OR REQUIRED

500KW GENERATOR

SECTION CUT DESIGNATION

FRS STARTER SIZE NEMA 1 225A COMBINATION CIRCUIT NEMA 1 BREAKER/STARTER AND STARTER SIZE MULTI-SECTION PANELBOARD (SEE SCHEDULES) INTEGRAL TRANSFORMER TX# SHIELDED

TRANSFORMER

AS SHOWN

TYPE AND RATINGS

AUTOMATIC TRANSFER

SWITCH WITH BYPASS.

RATINGS AS SHOWN

M/G | NON-SEPARATELY

SHOWN

SWITCHGEAR, SWITCHBOARD

PANELBOARD, TYPE, RATING.

DEVICES AND ACCESSORIES

AND/OR DISTRIBUTION

RATINGS AS

DERIVED SOURCE.

DRAWOUT CIRCUIT

AS SHOWN

BREAKER, RATINGS

COMBINATION FUSED

SWITCH/STARTER

☆ 400A

200AS

200AF

(W/BYPASS

500KW GENERATOR

AS SHOWN.

480Y/277V, 3Ø, 4W GENERATOR

LIGHTING

LIGHT FIXTURE

•••• MIRROR LIGHTS

CIRCUITING & WIRING

SITE LIGHTING FIXTURE

a = SWITCHED BY SWITCH "a"

= ARROW INDICATES AIMING DIRECTION

EMERGENCY LIGHT FIXTURE WITH EMERGENCY LIGHTING

BATTERY PACK OR CONNECTED TO EMERGENCY SOURCE

NIGHT LIGHT/EMERGENCY LIGHT FIXTURE WITH EMERGENCY

LIGHT FIXTURE WITH DUAL BALLASTS CIRCUITED SEPARATELY.

BATTERY PACK OR CONNECTED TO EMERGENCY SOURCE

EXIT SIGN - CEILING / WALL MOUNTED, ARROWS AS INDICATED.

EMERGENCY BATTERY PACK LIGHT FIXTURE - CEILING/WALL

AFEA (AREA FOR EVACUATION ASSISTANCE) SIGN -

CEILING/WALL MOUNTED, ARROWS AS INDICATED.

REFER TO BRANCH CIRCUIT CONDUCTOR TABLE FOR REQUIRE

ALL PLANS, NOTES, WIRING AND CONTROL DIAGRAMS FOR

QUANTITIES OF CONDUCTORS IN BRANCH CIRCUITRY. REFER TO

(SHADING IMPLIES EMERGENCY LIGHT FIXTURE)

 $^{
abla
abla
abla}$ LIGHTING TRACK WITH LIGHT FIXTURE TYPES AS INDICATED

A = LIGHT FIXTURE TYPE "A"

NL = NIGHT LIGHT

= WALL MOUNT

LIGHT FIXTURE WITH NIGHT LIGHT

SEE LIGHT FIXTURE SCHEDULE

ADDITIONAL CIRCUITING REQUIREMENTS. HOMERUN TO PANELBOARD INFORMATION AT ARROWS ARE CIRCUIT NUMBERS AND PANELBOARD FOR TERMINATION. REFER TO PANELBOARD SCHEDULES FOR BRANCH CIRCUIT CONDUCTOR SIZES. WHERE TICK MARKS ARE SHOWN, THE FOLLOWING SHALL GOVERN: SWITCHED HOT (PHASE) CONDUCTORS (SHOWN TRAILING NFLITRAL) NEUTRAL (GROUNDED) CONDUCTOR UNSWITCHED HOT (PHASE) CONDUCTORS (SHOWN LEADING

NEUTRAL) HASH MARKS INDICATE QUANTITY OF CONDUCTORS. EQUIPMENT GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION OR BARE) ISOLATED GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION WITH YELLOW TRACER)

CONDUIT CONCEALED CONDUIT IN/UNDER FLOOR/GROUND CONSTRUCTION --- EXPOSED CONDUIT

FLEXIBLE CONDUIT LOW VOLTAGE CABLE (NOT ROUTED IN CONDUIT) CONDUIT TURNING DOWN CONDUIT TURNING UP

CONNECTION POINT OR EQUIPMENT TERMINATION ■ EQUIPMENT TERMINATION

1P

3P

INDICATED.

BRANCH CIRCUIT CONDUCTOR TABLE HOT NEUTRAL

GROUNDING*** (PHASE)* (GROUNDED)** (1)U.N.O. (1)U.N.O.

(1)U.N.O.

* PROVIDE ADDITIONAL CONDUCTORS THROUGH ENTIRE CIRCUIT (SWITCHED, UNSWITCHED/EM, ETC.) AS INDICATED THROUGHOUT CONSTRUCTION DOCUMENTS AND AS REQUIRED FOR A COMPLETE AND WORKING SYSTEM REFER TO SPECIFICATIONS FOR LIMITATIONS ON SHARING NEUTRAL (GROUNDED) CONDUCTORS. * PROVIDE ADDITIONAL ISOLATED GROUNDING CONDUCTORS WHERE

FEB FROM FLOOR BELOW **AMPERES** AIR (COMPRESSED) FHC FIRE HOSE CABINET AIR CONDITIONING AIR COOLED CHILLER FLA FULL LOAD AMPS ACCU AIR COOLED CONDENSING UNIT FLR FLOOR ADA ADA AMERICANS WITH DISABILITIES ACT FVNR FULL-VOLTAGE. AMPERE FUSE ABOVE FINISHED CEILING AFCI ARC FAULT CIRCUIT INTERRUPTER GC GENERAL CONTRACTOR

AFEA AREA FOR EVACTUATION ASSISTANCE ABOVE FINISHED FLOOR ABOVE FINISHED GRADE AUTHORITY HAVING JURISDICTION AHU AIR HANDLING UNIT

ATS

BKR

BO

ANALOG INPUT

ANALOG OUTPUT

ACCESS PANEL

ACCESS POINT

AUDIO VISUAL

BOILER

SYSTEM

BOARD

BACKBONE

BLOWDOWN

AWG AMERICAN WIRE GAUGE

BUILDING AUTOMATION

BACKDRAFT DAMPER

BUILDING DISTRIBUTOR

BELOW FINISHED FLOOR

BELOW FINISHED GRADE

BOILER FEED PUMP

BINARY INPUT

BINARY OUTPUT

BOS BOTTOM OF STRUCTURE

BOS BOTTOM OF STEEL/STUD

CATV CABLE TELEVISION SYSTEM

BTU BRITISH THERMAL UNIT

CD CAMPUS DISTRIBUTOR

CT CURRENT TRANSFORMER

CFM CUBIC FEET PER MINUTE

CMP COMMUNICATIONS PLENUM

CMR COMMUNICATIONS RISER

CCTV CLOSED CIRCUIT TELEVISION

BOTTOM OF

BOD BOTTOM OF DUCT

BOP BOTTOM OF PIPE

C CONDUIT

CAT CATEGORY

CD CANDELA

CH CHILLER

CKT CIRCUIT

CABLE

CABLE

CP CONDENSATE PUMP

TRANSFORMER

CRAC COMPUTER ROOM AIR

CRU COMPUTER ROOM UNIT

CWP COOLING TOWER PUMP

CHP CHILLED WATER PUMP

DDC DIRECT DIGITAL CONTROL

DPI DIFFERENTIAL PRESSURE

DPST DOUBLE-POLE, SINGLE-THROW

EAT ENTERING AIR TEMPERATURE

EER ENERGY EFFICIENCY RATIO

ELECTRIFIED LOCK OR

EMT ELECTRICAL METALLIC TUBING

EIA ELECTRONIC INDUSTRIES

ASSOCATIONS

EMI ELECTROMAGNETIC

INTEFERENCE

EMS ENERGY MANAGEMENT

EPO EMERGENCY POWER OFF

ESFR EARLY SUPPRESSION FAST

EWC ELECTRIC WATER COOLER

FACP FIRE ALARM CONTROL PANEL

FBO FURNISHED BY OTHERS/OWNER

INDICATOR

DFU DRAINAGE FIXTURE UNIT

CPVC CHLORINATED POLYVINYL

CONDITIONING UNIT

CVD CUMULATIVE VOLTAGE DROP

CPT CONTROL POWER

CHLORIDE

CT COOLING TOWER

CU CONDENSING UNIT

CU COPPER

DB DECIBELS

DI DIGITAL INPUT

DI DUCTILE IRON

DS DOWNSPOUT

(E) EXISTING

EA EXHAUST AIR

EF EXHAUST FAN

LATCH

EL ELEVATION

EM EMERGENCY

SYSTEM

ER EQUIPMENT ROOM

RESPONSE

EWT ENTERING WATER

ETR EXISTING TO REMAIN

EWB ENTERING WET BULB

TEMPERATURE

FCA FAULT CURRENT AMPS

FD FLOOR DISTRIBUTOR

FFA FROM FLOOR ABOVE

FCU FAN COIL UNIT

FD FLOOR DRAIN

DS DUCT SILENCER

DX DIRECT EXPANSION

EDB ENTERING DRY BULB

DN DOWN

BREAKER

BUILDING DISTRIBUTION FRAME

ACROSS-THE-LINE

AUTOMATIC TRANSFER SWITCH

CURRENT

ALUMINUM

AMPERE INTERRUPTING

SIMPLEX RECEPTACLE - NEMA 5-20R, UNO DUPLEX RECEPTACLE - NEMA 5-20R, UNO DOUBLE DUPLEX RECEPTACLE - NEMA 5-20R, UNO SPECIAL RECEPTACLE - NEMA TYPE AS NOTED TWIST-LOCK TYPE RECEPTACLE

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ABBREVIATIONS

SWITCH LETTER DESIGNATIONS AS FOLLOWS:

SINGLE POLE WALL SWITCH (NO LETTER DESIGNATION)

ETC. ARE NECESSARILY USED ON THE DRAWINGS.

BOXES, LIGHTING CONTROL AND WIRING DEVICES

F = FAN SPEED CONTROL

P = SPST PILOT LIGHT

WP = WEATHER PROOF

ALC AUTOMATIC LOAD CONTROL RELAY

REFER TO LIGHTING CONTROL DEVICE

BTS BRANCH CIRCUIT TRANSFER SWITCH

SCHEDULE FOR ADDITIONAL DEVICE SYMBOLS

AND DEFINITIONS SPECIFIC TO THIS PROJECT

= TWO POLF

B = THREE-WAY

4 = FOUR-WAY

D = DIMMER

K = KEYED

OR GFCI TYPE RECEPTACLE* ISOLATED GROUND TYPE RECEPTACLE OR DEMERGENCY RECEPTACLE* RECEPTACLE INSTALLED ABOVE COUNTER OR BACKSPLASH*

RECEPTACLE INSTALLED IN CEILING* RECEPTACLE INSTALLED IN FLOOR* RECEPTACLE INSTALLED VIA DROP CORD* RECEPTACLE LETTER DESIGNATIONS AS FOLLOWS WP = WEATHER PROOF COVER

C = CONTROLLED CH = CLOCK HANGER TYPE WR = WEATHER RESISTANT = DEMOLISHED E/EX = EXISTING EM = EMERGENCY POWER H = HORIZONTALLY MOUNTED IG = ISOLATED GROUND R = RELOCATEDS = SWITCHED

TR = TAMPER RESISTANT TV = TELEVISION USB = USB/DUPLEX ····· MULTI-OUTLET ASSEMBLY FLOOR WALL

▼ MULTI-SERVICE OUTLET; TELEPHONE AND DATA ABOVE COUNTER

▼ TELEPHONE OUTLET DATA OUTLET

MULTI-SERVICE OUTLET; TELEPHONE AND DATA MULTI-SERVICE POWER POLE WITH TELEPHONE, DATA AND POWER OUTLETS A = TYPE, SEE PLANS, SCHEDULES OR SPECIFICATIONS MULTI-SERVICE FLOOR BOX WITH TELEPHONE, DATA AND

POWEROUTLETS A = TYPE, SEE PLANS, SCHEDULES OR SPECIFICATIONS A POKE THROUGH, A = TYPE, SEE PLANS, SCHEDULES OR SPECIFICATIONS (T) THERMOSTAT

*SYMBOL DEMONSTRATED WITH DUPLEX RECEPTACLE, WHEN USED IN

COMBINATION WITH OTHER DEVICES MEANING IS SIMILAR FOR THOSE

J JUNCTION BOX/OUTLET BOX BLANK FACE GFCI FEED THROUGH DEVICE

FINISHED FLOOR

NON-REVERSING

GFCI GROUND FAULT CIRCUIT

INTERRUPTER

GROUND

GYPBD GYPSUM BOARD

HEAD

HD HUB DRAIN

HTG HEATING

HTR HEATER

HZ HERTZ

GND GROUND

GFR GROUND FAULT RELAY

GPM GALLONS PER MINUTE

HOA HAND-OFF-AUTOMATIC

HWP HEATING WATER PUMP

INTERMEDIATE

IMC INTERMEDIATE METAL

CONDUIT

CROSS-CONNECT

INVERT ELEVATION

ISOLATED GROUND

IN WC INCHES OF WATER COLUMN

INTERNET PROTOCOL

ISC SHORT CIRCUIT CURRENT

DIGITAL NETWORK

ISP INTERNET SERVICE PROVIDER

ISDN INTEGRATED SERVICES

ISP INSIDE PLANT CABLE

kcmil 1000 CIRCULAR MILS

kVAR KILOVOLT-AMPS REACTIVE

JB JUNCTION BOX

J-BOX JUNCTION BOX

kVA KILOVOLT-AMPS

kWH KILOWATT-HOUR

LENGTH

LOUVER

LAN LOCAL AREA NETWORK

LED LIGHT-EMITTING DIODE

LOW PRESSURE

LRA LOCKED ROTOR AMPS

TEMPERATURE

MAN METROPOLITAN AREA

TELEVISION SYSTEM

MCA MINIMUM CIRCUIT AMPACITY

MCB MAIN CIRCUIT BREAKER

MCC MOTOR CONTROL CENTER

MDF MAIN DISTRIBUTION FRAME

MDF MEDIUM DENSITY FIBERBOARD

MC MAIN CROSS-CONNECT NETWORK TR

NETWORK

MATV MASTER ANTENNA

MAU MAKE-UP AIR UNIT

MBH 1000 BTU PER HOUR

MD MOTORIZED DAMPER

MG MOTOR GENERATOR

MOCP MAXIMUM OVERCURRENT

MPOE MAIN POINT OF ENTRANCE

MPOP MAIN POINT OF PRESENCE

MS/TP MASTER SLAVE/TOKEN PASSING -

COMMUNICATION TRUNK

NEC NATIONAL ELECTRICAL CODE

NFPA NATIONAL FIRE PROTECTION

ASSOCIATION, INC.

MH MAINTENANCE HOLE

PROTECTION

MSB MAIN SWITCHBOARD

MSWB MAIN SWITCHBOARD

MFR MANUFACTURER

MLO MAIN LUGS ONLY

MH MANHOLE

MIN MINIMUM

MTD MOUNTED

N/A NOT APPLICABLE

N/C NORMALLY CLOSED

NIGHT LIGHT

N/O NORMALLY OPEN

NC NOISE CRITERIA

NF NON-FUSED

NIC IN CONTRACT

METER

OA OUTSIDE AIR

OC ON CENTER

OSP OUTSIDE PLANT

RETURN

PCR PUMPED CONDENSATE

P POLE

NM

MU MAKE-UP

LEAVING WET BULB

LDB LEAVING DRY BULB

LINEAR FEET

LWT LEAVING WATER

M-M MULTIMODE

MAX MAXIMUM

DPDT DOUBLE-POLE, DOUBLE-THROW | MDP | MAIN DISTRIBUTION PANEL

LEAVING AIR TEMPERATURE

LCC LIMITED COMBUSTIBLE CABLE

LEC LOCAL EXCHANGE CARRIER

KK KIRK KEY

kV KILOVOLT

kW KILOWATT

GRS GALVANIZED RIGID STEEL

HC HORIZONTAL CROSS-CONNECT

HVU HEATING AND VENTILATING UNIT

GROUNDING EQUALIZER

FLOW LINE

FURNACE

NECESSARILY USED ON THE DRAWINGS.) PDI PLUMBING DRAINAGE INSTITUTE PDU POWER DISTRIBUTION UNIT PHASE PHASE POST INDICATOR VALVE PANEL PNLBD PANELBOARD POE POWER OVER ETHERNET

PTP

PTZ

RD

REV

REV

RF

SD

SS

TFA

(ALL ABBREVIATIONS SHOWN ARE NOT

6700 Antioch Plaza Merriam, KS 66204 www.brrarch.com Tel: 913-262-9095 POTS STANDARD ANALOG Consultants TELEPHONE LINE POTS PLAIN OLD TELEPHONE SERVICE PROVIDE FURNISH AND INSTALL PRV PRESSURE REDUCING VALVE PSTN PUBLIC SWITCHED TELELPHONE NETWORK POTENTIAL TRANSFORMER

PRESSURE THREAD

POINT-TO-POINT

PAN, TILT, ZOOM

PVC POLYVINYL CHLORIDE

RETURN AIR

ROOF DRAIN

REVISION

REVERSE

RTU ROOFTOP UNIT

RACK UNIT

SUPPLY AIR

NETWORK

SUPPLY DUCT

SQUARE FEET

DOUBLE-THROW

SINGLE-THROW

SLIMP PLIMP

SOIL STACK

SHUNT TRIP

SWBD SWITCHBOARD

STM STEAM

STEAM TRAP

SPACES

STATIC PRESSURE

STAINLESS STEEL

SANITARY SEWER

STC SOUND TRANSMISSION CLASS

SUPPLY FAN

SPDT SINGLE-POLE.

SPST SINGLE-POLE.

EFFICIENCY RATIO

SEER SEASONAL ENERGY

SATV SYNCHRONOUS OPTICAL

SMOKE DUCT DETECTOR

RETURN DUCT

RETURN FAN

ROOF HOOD

RHG REFRIGERANT HOT GAS

RLA RUNNING LOAD AMPS

RMC RIGID METAL CONDUIT

RELATIVE HUMIDITY

RCPT RECEPTACLE

ROOM CRITERIA

RCP REINFORCED CONCRETE

QTY QUANTITY

ENGINEERING SUSTAINAI ENERGY SOLUTIONS Energy Squared Tex Engineering Consultants Energy Squared Texas, LLC GEORGIA CERTIFICATE OF AUTHORIZATION #PEF00677 Copyright Notice This drawing was prepared for use on a

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RPM REVOLUTIONS PER MINUTE STEAM CONDENSATE PUMP

Project Name

 \triangleleft

TBB TELECOMMUNICATIONS BONDING BACKBONE TO BE DETERMINED TC/C TEMPERATURE CONTROLS CONTRACTOR TOTAL DYNAMIC HEAD TO FLOOR ABOVE TO FLOOR BELOW TGB TELECOMMUNICATIONS GROUND BUS BAR TELECOMMUNICATIONS INDUSTRY ASSOCIATION TWISTLOCK TMGB TELECOMMUNICATIONS MAIN GROUND BUS BAR TAMPER RESISTANT TELECOMMUNICATIONS ROOM TEMPERATURE TRANSMITTER TWU THROUGH WALL AIR CONDITIONING UNIT

TRANSFORMER TYPICAL UNDERFLOOR U/G UNDERGROUND UNDERSLAB UNIT HEATER **UNDERWRITERS** LABORATORIES, INC. UNLESS NOTED OTHERWISE UPS UNINTERRUPTIBLE POWER UTP UNSHIELDED TWISTED PAIR

VOLT(S) VAC VOLTS ALTERNATING CURRENT VOLTAGE DROP VOLTS DIRECT CURRENT VARIABLE AIR VOLUME VCP VITRIFIED CLAY PIPE VARIABLE FREQUENCY DRIVE VFD VENT STACK

VTR VENT THROUGH ROOF W WIREWIRE W WIDTH WITH W/ W/O WITHOUT WAN WIDE AREA NETWORK WAP WIRELESS ACCESS POINT WB WET BULB WATER COLUMN WATER GONG WATER PRESSURE DROP WEATHER PROOF COVER WR WEATHER RESISTANT WASTE STACK

OVERFLOW ROOF DRAIN OS OCCUPANCY SENSOR OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION WSFU WATER SUPPLY FIXTURE UNIT WT WATERTIGHT WT WEIGHT PBX PRIVATE BRANCH EXHANGE

EXPLOSION-PROOF

Project No. 62911019 **Professional Seal**

Project Manager:

Checked By:

Drawn by:

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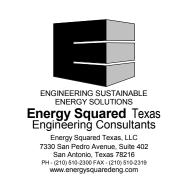
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Project Name

INDICATED ON THIS SHEET AND WITH ANY OTHER TRADES. 11. ALL INTERIOR LIGHTING FIXTURES AND LAMPS SHALL BE PROVIDED BY 365.THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING, INSPECTING, STORING AND INSTALLING ALL LIGHTING FIXTURES. THE CONTRACTOR SHALL CONTACT 365 IF

RESPONSIBLE FOR ANY CONFLICTS WITH LIGHTING POSITIONS AS

12. PROVIDE A MINIMUM OF 1'-0" SLACK CONDUCTORS AT EACH JUNCTION BOX CONNECTING POWER TO LIGHT FIXTURES.

GENERAL LIGHTING NOTES:

EXCEED CODE REQUIREMENTS.

IN ALL RACEWAYS.

STRUCTURE OR MILLWORK.

INFORMATION.

PRIOR TO ROUGH-IN.

DA(RY COOLER

SERVER

CLOSET

1. DRAWINGS AND SPECIFICATIONS GOVERN, WHERE THEY

2. VERIFY ROUGH-IN REQUIREMENTS, LOCATIONS, MOUNTING

LIGHTING EQUIPMENT BEFORE PROVIDING ROUGH-IN.

HEIGHTS, VOLTAGE, PHASE, AMPS, HP, KW, ETC. FOR ALL

4. TYPE MC CABLE MAY BE USED WITHIN PARTITION WALLS FOR

RUN IN CEILING SPACE IN LENGTHS EXCEEDING SIX FEET.

FIXTURES TO MEET SPECIFIED MOUNTING HEIGHTS.

6. ALL JUNCTION BOXES SHALL BE RIGIDLY ATTACHED TO

7. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET E110 FOR

8. REFER TO LIGHTING CONTROL DEVICE SCHEDULE ON SHEET E110 FOR OCCUPANCY SENSOR TYPE AND CONTROL

9. ROUTE ALL EXPOSED, RIGID CONDUIT TIGHT TO STRUCTURE,

10. CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT

PARALLEL TO BUILDING LINES WHERE POSSIBLE. COORDINATE

CONDUIT ROUTING AND INSTALLATION WITH OTHER TRADES

COORDINATION AND CONFLICT ISSUES BE RESOLVED BY 365 CONSTRUCTION MANAGER PRIOR TO INSTALLATION OF LIGHT FIXTURES. CONTRACTOR SHALL BE HELD FINANCIALLY

5. PROVIDE ALL MOUNTING AND SUPPORT HARDWARE FOR LIGHT

INFORMATION ON LIGHT FIXTURE TYPES AND RESPONSIBILITIES.

3. PROVIDE EQUIPMENT GROUNDING CONDUCTOR PER NEC 250.122

BRANCH CIRCUIT DROPS TO FIXTURES. USE CONDUIT AND WIRE FOR ALL BRANCH CIRCUIT HOMERUNS. MC CABLE SHALL NOT BE

13. THROUGH WIRING OF RECESSED LIGHT FIXTURES, IN SUSPENDED CEILINGS, IS NOT PERMITTED. CONNECT EACH LIGHT FIXTURE BY A WHIP TO A JUNCTION BOX. PROVIDE CABLE WHIPS OF SUFFICIENT LENGTHS TO ALLOW FOR RELOCATING EACH LIGHT FIXTURE WITHIN A 5-FOOT RADIUS OF ITS INSTALLED LOCATION, BUT NOT EXCEEDING 6 FEET IN UNSUPPORTED

ANY FIXTURES ARE DAMAGED BEFORE INSTALLATION.

14. ALL LIGHT FIXTURES OVER OPEN FOOD AREAS, COFFIN CASES AND FOOD PREP AREAS SHALL BE PROVIDED WITH PROTECT-A-LAMP COVERS OR EQUIVALENT SHIELDED OR SHATTERPROOF LAMPS. CONTRACTOR SHALL VERIFY THAT ALL AREAS ARE PROPERLY PROTECTED AFTER STORE SETUP IS COMPLETED.

15. WALL MOUNTED EXIT SIGNS SHALL BE MOUNTED 12" ABOVE DOOR FRAME WHEREVER PRACTICAL. CEILING/PENDANT MOUNTED EXIT SIGNS SHALL BE SUSPENDED TO 12'-6" ON SALES FLOOR IN AREAS OPEN TO STRUCTURE, AT BOTTOM OF BAR JOISTS IN BACKROOM AREAS AND ON FINISHED CEILING IN PREP AREAS, UNLESS NOTED OTHERWISE. DO NOT DIRECTLY MOUNT FIXTURES TO ANY SOFFITS.

SUPPLIER. COORDINATE ELECTRICAL REQUIREMENTS WITH THE EXHAUST HOOD SUPPLIER AND MECHANICAL CONTRACTOR.

16. LIGHTING UNDERNEATH THE EXHAUST HOODS IS BY HOOD

17. COORDINATE ALL FIXTURE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN.

18. COORDINATE ALL FIXTURE MOUNTING HEIGHTS WITH LIGHT FIXTURE SCHEDULE.

19. ALIGN ROWS OF LIGHTS ON SALES FLOOR TO AVOID CONFLICTS WITH STRUCTURAL BRIDGING AND DUCTWORK TO MAINTAIN CONTINUITY AND ALIGNMENT OF ENTIRE ROW WHEREVER PRACTICAL, ALL LIGHTING SHALL BE INSTALLED IN A STRAIGHT. PLUMB AND WORKMANLIKE MANNER UTILIZING APPROPRIATE MEANS AND METHODS.

20. VERIFY CEILING CONSTRUCTION WITH ARCHITECT IN ALL AREAS CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING FIXTURES WITH CORRECT TRIMS, FLANGES, MOUNTING HARDWARE, ETC. TO ASSURE COMPATIBILITY WITH CEILING STRUCTURE. COORDINATE PROCUREMENT OF DIFFERENT MOUNTING ACCESSORIES WITH 365 CONSTRUCTION MANAGER.

21. KEEP PENETRATIONS THROUGH COOLER AND FREEZER BOXES TO A MINIMUM. ROUTE ALL CONDUITS SERVING FREEZERS AND COOLERS DIRECTLY OUT OF THE BOX. PROVIDE A PENETRATION AT EACH LIGHT FIXTURE THROUGH CEILING. AVOID ROUTING CONDUIT INSIDE OF THE BOX.IF POSSIBLE, ROUTE DIRECTLY OUT THE REAR OF THE BOX IN AN ORDERLY MANNER. SEAL ALL PENETRATIONS THROUGH BOX WITH SILICONE SEALANT AND FILL CONDUIT FITTINGS/SEAL OFFS WITH EXPANDING FOAM SEALANT.

22. OCCUPANCY SENSORS SHALL NOT BE INSTALLED DIRECTLY TO LIGHT FIXTURE BODY. PROVIDE WEATHERPROOF JUNCTION BOX AT ALL OCCUPANCY SENSOR LOCATIONS INSIDE COOLER AND FREEZER BOXES.

23. PROVIDE GRAY SWITCHES, RECEPTACLES AND OUTLETS WITH STAINLESS STEEL COVER PLATES IN KITCHEN AND WET LOCATIONS. PROVIDE GRAY SWITCHES, RECEPTACLES AND OUTLETS WITH GRAY COVER PLATES IN ALL OTHER LOCATIONS.

ELECTRICAL LIGHTING PLAN NOTES

PROVIDE BACKBOX AND CONDUIT ROUTED TO ACCESSIBLE LOCATION FOR LIGHTING OVERRIDE SWITCH INSTALLED BY EMS CONTRACTOR. REFER TO LIGHTING CONTROL SCHEDULE ON E110 AND EM300 FOR ADDITIONAL INFORMATION. REFER TO SHEET E200 FOR CIRCUITING OF RECEPTACLE FOR DOCK LIGHT.

PROVIDE SWITCHES WITH A WEATHER PROOF COVER. 4 STEM MOUNT EMERGENCY LIGHTS IN AREAS WITH NO CEILING. REFER TO DETAIL 7 SHEET E210. 5 LIGHTING FIXTURE TO BE MOUNTED DIRECTLY ABOVE

CEILING/COOLER AND AIMED UP AT THE STRUCTURE. 6 NORMAL AND EMERGENCY EGRESS LIGHTING OUTSIDE OF TENANT LEASE SPACE IS THE RESPONSIBILITY OF THE LANDLORD. REMOTE BATTERY PACK FOR EMERGENCY FIXTURE IN COOLER/FREEZER. CONNECT TO LOCAL LIGHTING CIRCUIT AHEAD OF ANY SWITCHING. MOUNT BATTERY PACK HIGH ON WALL. ROUTE LOW VOLTAGE CABLE TO Y4 FIXTURE. SEAL PENETRATIONS

COOLER/FREEZER AS REQUIRED. 8 STEM MOUNT EXIT SIGNS IN AREAS WITH NO CEILING. REFER TO DETAIL 8 SHEET E210.

9 FIXTURES ARE ALIGNED WITH AND CONNECTED TO ADJACENT FIXTURE, BUT POWERED SEPARATELY. 10 LIGHT FIXTURES FURNISHED WITH EXHAUST HOOD EQUIPMENT.

EQUIPMENT MANUFACTURER SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT ILLUMINATION TO COMPLY WITH LOCAL REQUIREMENTS. CONTRACTOR SHALL PROVIDE DEVICES AND RELATED CIRCUITRY FOR LIGHT FIXTURES PER MANUFACTURER'S RECOMMENDATIONS.

11 FOOD BAR DECORATIVE PEDANTS. REFER TO DETAIL 11 ON SHEET E210 FOR MORE INFORMATION. 12 SUSPEND LIGHT FIXTURE EVEN WITH SINGLE ENTRY FIXTURE THAT SHALL BE SURFACE MOUNTED.

BUILDING CODE COMPLIANCE
EXTERIOR LIGHTING IS PROVIDED AND INSTALLED BY LANDLORD UNDER BUILDING SHELL PERMIT AND IS CONNECTED TO 365 ELECTRICAL SERVICE. LANDLORD IS RESPONSIBLE FOR PROVIDING ADEQUATE EXTERIOR EMERGENCY PATH OF EGRESS LIGHTING IN ACCORDANCE WITH BUILDING CODE.

FROM SALES FLOOR. 1 ELECTRICAL LIGHTING PLAN

1/8" = 1'-0"

(180)

(191)

(197)

LP1-18

(115) (116)

(101)

(115) (116)

STORAGE

RECEIVING

107

FRUIT + VEG

⟨COOLER

VEG VALLEY

FRIENDS OF

CRISPER

MEAT KITCHEN

(150)

LP1-6

(167)

VESTIBULE

STL/LEADERS

___115___

COMBINE AND ROUTE ALL CONDUITS ALONG EXTERIOR WALLS, DIRECTLY ABOVE CEILINGS, OR IN PLENUMS TO MINIMIZE VISIBILITY

ELECTRICAL LIGHTING

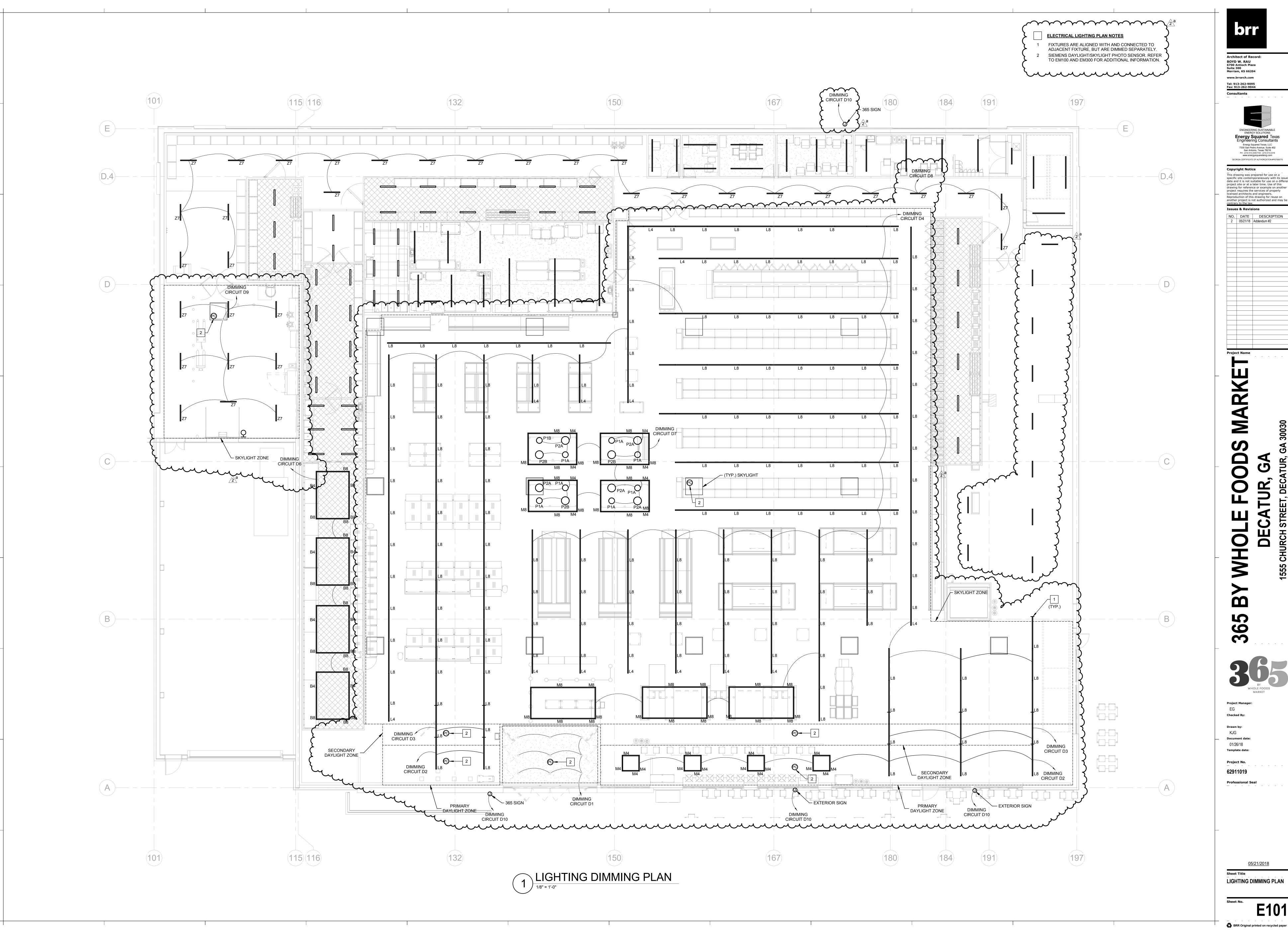
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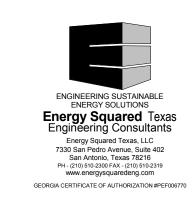


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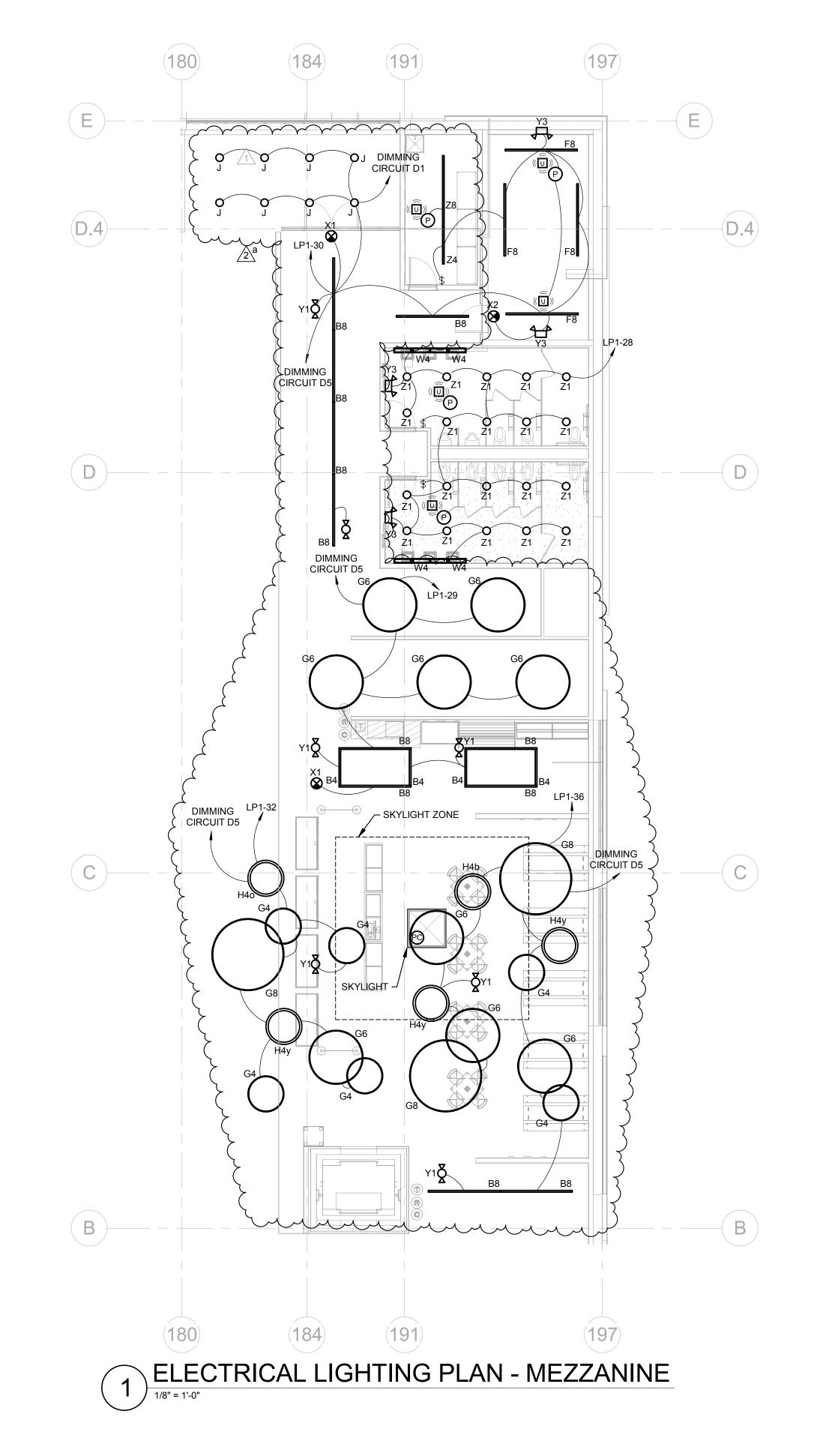
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 03/06/18
 Addendum #1

 2
 05/21/18
 Addendum #2

Project Name

365

ELECTRICAL LIGHTING PLAN - MEZZANINE



MOUNTING NOTES

SUSPEND

SUSPEND

9'-0" A.F.F.

SURFACE

4'-0" A.F.F.

SURFACE

9'-0" A.F.F.

05/21/2018

LIGHTING SCHEDULES AND DETAILS

BRR Original printed on recycled paper

		SMAR ³	T BREAKER C	ONTROL SCH	EDULE	
CONTROL SCHEME #	LOAD DESCRIPTION	"ON" CONTROL	"ON" SETTING	"OFF" CONTROL	"OFF" SETTING	CONTROL SCHEME DESCRIPTION
L1	SALES LIGHTING	TIMED	6:00 AM	TIMED	12:00AM	
L2	FOOD BAR PENDANT LIGHTING	TIMED	6:00 AM	TIMED	12:00AM	
L3	BACK OF HOUSE LIGHTING	TIMED	6:00 AM	TIMED	12:00AM	
L4	FUIT & VEG LIGHTING	TIMED	6:00 AM	TIMED	12:00AM	
L5	PANTRY LIGHTING	TIMED	6:00 AM	TIMED	12:00AM	
L6	EXTERIOR SIGNS	TIMED	6:00 AM	TIMED	12:00AM	
L7	EXTERIOR SAFETY LIGHTING	PHOTOCELL	PHOTOCELL ON	PHOTOCELL	PHOTOCELL OFF	
L8	EXHAUST FANS	TIMED	8:00 AM	TIMED	10:00 PM	
L9	DE-STRATIFICATION FANS	TEMP	BELOW 55 DEGREES	TEMP	ABOVE 55 DEGREES	OPPERATE BASED ON OUTDOOR AIR TEMPERATURE SET-POINT OF LESS THAN 55 DEGREES
L10	AIR CURTAIN	TIMED	8:00 AM	TIMED	10:00 PM	

DIMMING	CIRCUIT DESCRIPTION	OCCUPIED DIMMING	STOCKING DIMMING	NON-OCCUPIED	CONTROL SCHEME DESCRIPTION
CIRCUIT#		SETTINGS	SETTINGS	DIMMING SETTINGS	
D1	VESTIBULE DIMMING	6:00 AM FIX DIM TO 90%	11:00 PM FIX DIM TO 40%	12:00 AM FIX DIM TO 40%	DIM PER PHOTOCELL DURING OOCCUPIED HOURS TO MAINTAIN 100FC AT FLOOR; MINIMUM DIMMING TO BE SET AT 60%
D2	SALES PRIMARY DIMMING	6:00 AM FIX DIM TO 90%	11:00 PM FIX DIM TO 40%	12:00 AM OFF VIA POWER SWITCHING BREAKER	DIM PER PHOTOCELL DURING OOCCUPIED HOURS TO MAINTAIN 100FC AT FLOOR; MINIMUM DIMMING TO BE SET AT 60%
D3	SALES SECONDARY DIMMING	6:00 AM FIX DIM TO 90%	11:00 PM FIX DIM TO 40%	12:00 AM OFF VIA POWER SWITCHING BREAKER	DIM PER PHOTOCELL DURING OOCCUPIED HOURS TO MAINTAIN 100FC AT FLOOR; MINIMUM DIMMING TO BE SET AT 60%
D4	SALES SKYLIGHT DIMMING	6:00 AM FIX DIM TO 90%	11:00 PM FIX DIM TO 40%	12:00 AM OFF VIA POWER SWITCHING BREAKER	DIM PER PHOTOCELL DURING OOCCUPIED HOURS TO MAINTAIN 100FC AT FLOOR; MINIMUM DIMMING TO BE SET AT 60%
D5	MEZZANINE SKYLIGHT DIMMING	6:00 AM FIX DIM TO 90%	11:00 PM FIX DIM TO 40%	12:00 AM OFF VIA POWER SWITCHING BREAKER	NO PHOTOCELL CONTROL
D6	FRUIT & VEG DIMMING	6:00 AM FIX DIM TO 90%	11:00 PM FIX DIM TO 40%	12:00 AM OFF VIA POWER SWITCHING BREAKER	NO PHOTOCELL CONTROL
D7	FOOD BAR DIMMING	6:00 AM FIX DIM TO 90%	11:00 PM FIX DIM TO 40%	12:00 AM OFF VIA POWER SWITCHING BREAKER	NO PHOTOCELL CONTROL
D8	PANTRY DIMMING	6:00 AM FIX DIM TO 90%	11:00 PM FIX DIM TO 40%	12:00 AM OFF VIA POWER SWITCHING BREAKER	NO PHOTOCELL CONTROL
D9	RECEIVING DIMMING	6:00 AM FIX DIM TO 90%	11:00 PM FIX DIM TO 40%	CONTROLLED VIA OCCUPANCY SENSOR	DIM PER PHOTOCELL DURING OOCCUPIED HOURS TO MAINTAIN 100FC AT FLOOR; MINIMUM DIMMING TO BE SET AT 60%
D10	EXTERIOR SIGNS	DIM PER PHOTOCEL	LDIM PER PHOTOCELI	12:00 AM OFF VIA POWER SWITCHING BREAKER	DIM PER EXTERIOR PHOTOCELL DUI OCCUPIED HOURS

GENERAL NOTES:

A DIRCUIT BREAKERS NO DOMER-SWITCHING RAVELBOARDS SHALL PROMDE LOADS WITCHING AT UNDICATED CONTROLS OF ELECTRICAL CONTRACTOR

WITH DESIGN INTENET 365 DECLIREMENTS LOCAL ENERGY CODES AND SHALL PROVIDE COMPLETELY FUNCTIONING SYSTEM IN ACCORDANCE WITH DESIGN INTENT, 365 REQUIREMENTS, LOCAL ENERGY CODES AND

EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. B. COORDINATE ALL CONTROL SCHEMES AND TIME SETTINGS WITH 365 AND EMS CONTRACTOR AND PROVIDE INSTRUCTIONS TO OPERATIONS TEAM

PERTAINING TO REPROGRAMMING OR ALTERING CONTROL SCHEMES. C. PHOTOCELL IS FURNISHED BY 365 AND INSTALLED BY EMS CONTRACTOR.

		LIGHTING CON	TROL DEVICE SCHEDUL	E	,		
SYMBOL TYPE	MANUFACTURER MODEL/SERIES		COVERAGE (WXD)	VOLTAGE	ON MODE	TIME DELAY	NOTES
WALL SWI	TCH OCCUPANCY						
\$ ^{OS1}	WATTSTOPPER DW-100	SINGLE RELAY DUAL-TECHNOLOGY DETECTION WALL SWITCH WITH MANUAL OVERRIDE SWITCH	PIR MAJOR 30' x 35' PIR MINOR 15' x 20' ULT MAJOR 20' x 20' ULT MINOR 15' x 15'	120V	MANUAL	15 MIN	1,3
, OS2 \$	WATTSTOPPER DW-200	DUAL RELAY DUAL-TECHNOLOGY DETECTION WALL SWITCH WITH MANUAL OVERRIDE SWITCHES	PIR MAJOR 30' x 35' PIR MINOR 15' x 20' ULT MAJOR 20' x 20' ULT MINOR 15' x 15'	120V	1: MANUAL 2: MANUAL	1: 15 MIN 2: 15 MIN	1
CEILING M	OUNTED OCCUPA	NCY SENSORS					
$((\widehat{\widehat{\mathbb{U}}}))$	WATTSTOPPER DT-300	CEILING MOUNT DUAL TECHNOLOGY OCCUPANCY SENSOR. 360° COVERAGE LOW VOLTAGE. ISOLATED RELAY.	PIR MAJOR 44' Ø PIR MINOR 25' Ø ULT MAJOR 40' X 40' ULT MINOR 30' X 30'	24V	AUTO	30 MIN	2
((H))	WATTSTOPPER WT-2250	CEILING MOUNT ULTRASONIC OCCUPANCY SENSOR. 180° COVERAGE LOW VOLTAGE. ISOLATED RELAY.	MAJOR 90LF	24V	AUTO	10 MIN	
OVERRIDE	SWITCH						
OR \$	WATTSTOPPER LVSW-101	WALL MOUNT LOW VOLTAGE OVERRIDE SWITCH FOR USE WITH 24V OCCUPANCY SENSOR ONE BUTTON	-	24V	-	-	
EXTERIOR	RAND LOW TEMPE	RATURE SENSORS					
(C))	EW-205-24-W	EXTERIOR WEATHERPROOF, LOW/HIGH TEMP PASSIVE INFRARED OCCUPANCY SENSOR. 270° COVERAGE WITH ADJUSTABLE LIGHT LEVEL SETTINGS, LOW VOLTAGE	MAJOR 50' RADIUS MINOR 25' RADIUS	24V	AUTO	15 MIN	
POWER PA	ACK	POWER PACK FOR LOW VOLTAGE					
P	WATTSTOPPER BZ-150	SENSORS WITH 20A LOAD RELAY AND INTEGRAL TRANSFORMER MANUAL- AND AUTO-ON MODES, HOLD-ON AND HOLD-OFF INPUTS		120/277V	-	-	

GENERAL NOTES: A. SENSOR LAYOUT BASED ON WATT-STOPPER COVERAGE PATTERNS. ADJUST QUANTITIES AND LOCATIONS FOR ALTERNATE MANUFACTURERS LISTED BELOW

PER MANUFACTURER SPECIFIC SPACING CRITERIA

B. COOPER-GREENGATE, HUBBELL BUILDING AUTOMATION, AND LEVITON ARE CONSIDERED EQUIVALENT MANUFACTURERS FOR SUBMISSION AS AN APPROVED ALTERNATE. DURING SHOP DRAWINGS, PROVIDE LIGHTING PLANS SHOWING LOCATION, MOUNTING HEIGHT, ORIENTATION AND COVERAGE AREAS FOR EACH

OCCUPANCY SENSOR FOR REVIEW AND APPROVAL BY ENGINEER. ALSO INCLUDE ON PLANS OTHER CEILING MOUNTED SYSTEMS, SHOWING COORDINATION WITH CEILING DEVICES INCLUDING BUT NOT LIMITED TO HVAC SUPPLY AND RETURN GRILLES, SPRINKLERS, AND LIGHT FIXTURES.

C. PROVIDE ALL SENSORS BY THE SAME MANUFACTURER.

D. VERIFY COLOR(S) FOR WALL SWITCH SENSORS WITH THE ARCHITECT. E. PROVIDE COPIES OF SENSOR AND POWER SUPPLY OPERATION INSTRUCTIONS TO OWNER.

F. ALL WALL SWITCH AND CEILING SENSORS SHALL HAVE AN ADJUSTABLE TIME DELAY RANGE OF 0-30 MIN, UNO.

G. DO NOT INSTALL LINE VOLTAGE SENSORS ON GFCI PROTECTED CIRCUITS. H. ADJUST SENSOR LOCATION TO AVOID SHELVING AND OTHER OBSTRUCTIONS TO PROVIDE PROPER OPERATION. I. ADJUST SENSOR SENSITIVITY TO PROVIDE PROPER OPERATION.

SCHEDULED NOTES:

1. WALL SWITCH SENSOR REQUIRES A NEUTRAL CONDUCTOR FOR OPERATION.

2. SET DIP SWITCHES TO PROVIDE INITIAL AND MAINTAIN SETTING BY EITHER PIR OR ULTRASONIC.

3. SET DIP SWITCHES TO PROVIDE INITIAL OCCUPANCY TO TURN ON BY ONLY PIR DETECTION.

UM LIGHTING 2-CD-4'-30K-LO-UNV-1D-PCS(POWDER COAT ER)-SW-50-SW-PSS-TBD UM LIGHTING 2-CD-6'-30K-LO-UNV-1D-PCS(POWDER COAT ER)-SW-50-SW-PSS-TBD UM LIGHTING 2-CD-4'-30K-LO-UNV-1D-PCS(POWDER COAT ER)-SW-50-SW-PSS-TBD UM LIGHTING 2-CD-4'-30K-LO-UNV-1D-CP(CUSTOM POWDER T)-SW-50-SW-PSS-TBD TECH 6-6-30K-MVD-P-M-PL-S CSK36-S PAR (MATALUX) 39535-4-SKBLED-R-LD1-5-W-UNV-L830-CD1-PL1WG-U VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M PER (METALUX) 39352-8SKBLED-R-LD1-10-W-UNV-L830-CD1-PL1WG-U VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M	- (INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 10000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 10000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 10000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING SOUD LUMENS INTEGRAL LED 0-10V DIMMING DIMMING DIMMING DIMMING DIMMING DIMMING 5000 LUMENS INTEGRAL LED 3000 LUMENS INTEGRAL LED 3000 LUMENS INTEGRAL LED 3000 LUMENS INTEGRAL LED 3000 LUMENS	120/277 120/277 120/277 120/277 120/277	75 W	79 VA 119 VA 159 VA 79 VA 79 VA	4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, SILVER POWDERCOAT FINISH 6' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, SILVER POWDERCOAT FINISH 8' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, SILVER POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, BLUE POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, YELLOW POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, YELLOW POWDERCOAT FINISH	SUSPEND 11'-6" TO 12'-6" A.F.F.
2-CD-6'-30K-LO-UNV-1D-PCS(POWDER COAT ER)-SW-50-SW-PSS-TBD UM LIGHTING 2-CD-4'-30K-LO-UNV-1D-PCS(POWDER COAT ER)-SW-50-SW-PSS-TBD UM LIGHTING 2-CD-4'-30K-LO-UNV-1D-CP(CUSTOM POWDER T)-SW-50-SW-PSS-TBD TECH 6-6-30K-MVD-P-M-PL-S CSK36-S PAR (MATAHAX) DANT SYSTEMS #MGR-SE-1-4-20-EXT-M PER (METALUX) 69352-8SKBLED-R-LD1-10-W-UNV-L830-CD1-PL1WG-U VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M PER (METALUX) 69352-8SKBLED-R-LD1-10-W-UNV-L830-CD1-PL1WG-U VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M	- () - () - () - () - ()	0-10V DIMMING DIMMING 10000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 10000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING S000 LUMENS INTEGRAL LED 3000 LUMENS	120/277 120/277 120/277 120/277	151 W 75 W 75 W	119 VA 159 VA 79 VA 79 VA	LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, SILVER POWDERCOAT FINISH 8' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, SILVER POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, BLUE POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, YELLOW POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, ORANGE	11'-6" TO 12'-6" A.F.F. SUSPEND 11'-6" TO 12'-6" A.F.F. SUSPEND 11'-6" TO 12'-6" A.F.F. SUSPEND 11'-6" TO 12'-6" A.F.F.
2-CD-4'-30K-LO-UNV-1D-PCS(POWDER COAT ER)-SW-50-SW-PSS-TBD UM LIGHTING 2-CD-4'-30K-LO-UNV-1D-CP(CUSTOM POWDER T)-SW-50-SW-PSS-TBD TECH 1-6-6-30K-MVD-P-M-PL-S CSK36-S PAR (MATALLA) 39535-4SKBLED-R-LD1-5-W-UNV-L830-CD1-PL1WG-UVQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M PER (METALUX) 39352-8SKBLED-R-LD1-10-W-UNV-L830-CD1-PL1WG-UVQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M	- (0-10V DIMMING DIMMING 10000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING DIMMING S000 LUMENS INTEGRAL LED 3000 LUMENS	120/277 120/277 120/277	75 W 75 W	159 VA 79 VA 79 VA	LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, SILVER POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, BLUE POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, YELLOW POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, ORANGE	11'-6" TO 12'-6" A.F.F. SUSPEND 11'-6" TO 12'-6" A.F.F. SUSPEND 11'-6" TO 12'-6" A.F.F.
2-CD-4'-30K-LO-UNV-1D-CP(CUSTOM POWDER T)-SW-50-SW-PSS-TBD UM LIGHTING 2-CD-4'-30K-LO-UNV-1D-CP(CUSTOM POWDER T)-SW-50-SW-PSS-TBD UM LIGHTING 2-CD-4'-30K-LO-UNV-1D-CP(CUSTOM POWDER T)-SW-50-SW-PSS-TBD TECH 6-6-30K-MVD-P-M-PL-S CSK36-S PAR (MATALLY) 59535-4SKBLED-R-LD1-5-W-UNV-L830-CD1-PL1WG-UVQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M PER (METALUX) 69352-8SKBLED-R-LD1-10-W-UNV-L830-CD1-PL1WG-UVQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M	- (- (0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 3000 LUMENS INTEGRAL LED 3000 LUMENS INTEGRAL LED 3000 LUMENS INTEGRAL LED 3000 LUMENS INTEGRAL LED 5000 LUMENS	120/277 120/277 120/277	75 W	79 VA 79 VA	LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, BLUE POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, YELLOW POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, ORANGE	11'-6" TO 12'-6" A.F.F. SUSPEND 11'-6" TO 12'-6" A.F.F. SUSPEND 11'-6" TO
2-CD-4'-30K-LO-UNV-1D-CP(CUSTOM POWDER T)-SW-50-SW-PSS-TBD UM LIGHTING 2-CD-4'-30K-LO-UNV-1D-CP(CUSTOM POWDER T)-SW-50-SW-PSS-TBD TECH 6-6-30K-MVD-P-M-PL-S CSK36-S PAR (MATALLA) 59535-4SKBLED-R-LD1-5-W-UNV-L830-CD1-PL1WG-U VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M PER (METALUX) 69352-8SKBLED-R-LD1-10-W-UNV-L830-CD1-PL1WG-U VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M	- (- (0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 3000 LUMENS INTEGRAL LED 3000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS	120/277	75 W	79 VA	LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, YELLOW POWDERCOAT FINISH 4' DIAMETER PENDANT MOUNTED RING, DIRECT, 3000K, 0-10V 1% DIM, LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, ORANGE	11'-6" TO 12'-6" A.F.F. SUSPEND 11'-6" TO
2-CD-4'-30K-LO-UNV-1D-CP(CUSTOM POWDER T)-SW-50-SW-PSS-TBD TECH .6-6-30K-MVD-P-M-PL-S CSK36-S PAR (MATALLA) .69535-4SKBLED-R-LD1-5-W-UNV-L830-CD1-PL1WG-U VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M PER (METALUX) .69352-8SKBLED-R-LD1-10-W-UNV-L830-CD1-PL1WG-U VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M	- (0-10V DIMMING DIMMING 5000 LUMENS INTEGRAL LED 3000 LUMENS INTEGRAL LED 0-10V DIMMING DIMMING 5000 LUMENS	120/277		79 VA	LOW OUTPUT, FROSTED LENS, 5" POWERFEED CANOPY, ORANGE	11'-6" TO
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VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M PER (METALUX) 69352-8SKBLED-R-LD1-10-W-UNV-L830-CD1-PL1WG-U VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M	-	0-10V DIMMING DIMMING 5000 LUMENS			45 VA	6" DIAMETER PENDANT CYLINDER, 3000K, 36" STEM KIT, MEDIUM BEAM DISTRIBUTION, SILVER FINISH	PENDANT 17'-6" A.F.F.
69352-8SKBLED-R-LD1-10-W-UNV-L830-CD1-PL1WG-U VQUICKCONN / Y-TOGGLE-30 DANT SYSTEMS #MGR-SE-1-4-20-EXT-M			120/277	46 W	48 VA	41-UNEARLED RENDANT MATURAL ALAMINUM FINISH PROVIDE WITH 196" AIRCRAFT SUSPENSION CABLE. FIXTURES FAILS TO 100% BRIGHTNESS ON DIMMING FAILURE OR LOSS OF POWER. CONTRACTOR TO FURNISH CORD.	SUSPEND 12'-6" A.F.F.
IAMS		INTEGRAL LED 0-10V DIMMING DIMMING 10000 LUMENS	120/277	65 W	68 VA	8' LINEAR LED PENDANT. NATURAL ALUMINUM FINISH. PROVIDE WITH 196" AIRCRAFT SUSPENSION CABLE. FIXTURES FAILS TO 100% BRIGHTNESS ON DIMMING FAILURE OR LOSS OF POWER. CONTRACTOR TO FURNISH CORD.	SUSPEND 12'-6" A.F.F.
L50-830	-	INTEGRAL LED 0-10V DIMMING DIMMING 5500 LUMENS	120/277	40 W	42 VA	4' LED STANDARD STRIP	SUSPEND 11'-6" A.F.F.
IAMS L50-830	-	INTEGRAL LED 0-10V DIMMING DIMMING 11000 LUMENS	120/277	75 W	79 VA	8' LED STANDARD STRIP	SUSPEND 11'-6" A.F.F.
DANT MINI	1	12W LED E12 BASE	120	12 W	13 VA	20" CUSTOMIZABLE DECORATIVE PENDANT SILVER FINISH	SUSPEND 8'-6" A.F.F.
DANT MINI	1	12W LED E12 BASE	120	12 W	12 1/4	20" CUSTOMIZABLE DECORATIVE PENDANT	SUSPEND 8'-6" A.F.F.
DANT	1	12W LED E26 BASE	120	12 W			SUSPEND 9'-6" A.F.F.
DANT	1	12W LED	120	12 W	12.\/A	33" CUSTOMIZABLE DECORATIVE PENDANT	SUSPEND 9'-6" A.F.F.
LIGHTING		INTEGRAL LED	120	30 W			7'-0" A.F.F.
RALITE U-X-RM-W-EM		INTEGRAL LED	120/277	3 W	3 VA	CONFIGURATION AND CHEVRONS PER PLANS. RED LIGHT ON MIRROR SURFACE.	VARIES
RALITE -R-W-EM	-	INTEGRAL LED	120/277	3 W	3 VA	MOUNTING CONFIGURATION AND CHEVRONS PER PLANS. RED LIGHT ON	VARIES
ONIA _T-W-LP06VS-LTP	2	INTEGRAL LED	120/277	5 W			SUSPEND 12'-6" A.F.F.
ONIA _T-W-LP06VS-LTP	2	INTEGRAL LED	120/277	5 W			SURFACE
ONIA _T-W-LP06VS-LTP	2	INTEGRAL LED	120/277	5 W	5 \/A	THERMOPLASTIC ADJUSTABLE LED EMERGENCY LIGHT WITH INTEGRAL	WALL 8'-0" A.F.F.
RALITE H-W-60-6 / REM-1-2H-6	2	6W INC	120/277	6 W	6 VA	OR FREEZER. MOUNT REMOTE BATTERY PACK OUTSIDE COOLER OR	SURFACE
	~~~	3000 LUMENS	120/277	<b>√</b> 28₩ <b>√</b>	29VA	RECESSED LED BOWHIGHT	REGESSED
ONIA N-L48-7000LM-FST-MVOLT-35K-80CRI-GALV-ZACVH RAFT CABLE SUSPENSION KIT			120/277	52 W			SUSPEND 10'-0" A.F.F.
Dape 35	**	660FŁUNZKS			TO THE		
	-	INTEGRAL LED	120/277	104 W	109 VA	8' LED STANDARD STRIP	SUSPEND
	ANT MINI  ANT  LIGHTING GIAR648CS-LED830-120  ALITE -X-RM-W-EM  ALITE R-W-EM  NIA F-W-LP06VS-LTP  NIA F-W-LP06VS-LTP  NIA F-W-LP06VS-LTP  ALITE -W-60-6 / REM-1-2H-6 N-PORTFOLIO DD010E06B60508030/6L6WH  NIA -L48-7000LM-FST-MVOLT-35K-80CRI-GALV-ZACVH RAFT CABLE SUSPENSION KIT  MIS D=635  NIA -L96-14000LM-FST-MVOLT-35K-80CRI-GALV-ZACVH	ANT MINI  ANT  ANT  ANT  LIGHTING GIAR648CS-LED830-120  ALITE -X-RM-W-EM  ALITE R-W-EM  NIA T-W-LP06VS-LTP  NIA T-W-LP06VS-LTP  NIA T-W-LP06VS-LTP  ALITE -W-60-6 / REM-1-2H-6  N-PORTFOLIO DD010/E06B00508030/6DBWH  NIA -L48-7000LM-FST-MVOLT-35K-80CRI-GALV-ZACVH LAFT CABLE SUSPENSION KIT  NIA -L96-14000LM-FST-MVOLT-35K-80CRI-GALV-ZACVH	ANT MINI  1	ANT MINI  1	ANT MINI  ANT MINI  ANT MINI  ANT  ANT  ANT  ANT  ANT  ANT  ANT	ANT MINI  1	ANT MINI 1 12W LED 120 12W 13 VA 20° CUSTOMIZABLE DECORATIVE PENDANT SILVER FINISH 14 12W LED 120 12W 13 VA 20° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 21 12W LED 12W 13 VA 20° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 21 2W LED 20° BASE 120 12W 13 VA 20° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 21 2W LED 20° BASE 120 12W 13 VA 33° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 21 2W 13 VA 33° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 21 2W 13 VA 33° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 21 2W 13 VA 32° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 21 2W 13 VA 32° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 220° BASE 120 12W 13 VA 32° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 220° BASE 120 12W 13 VA 32° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 220° BASE 120° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 220° BASE 120° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 220° BASE 120° CUSTOMIZABLE DECORATIVE PENDANT CHARTREUSE FINISH 220° CUSTOMIZABLE LED EXTESSE FINISH 220° CUSTOMIZABLE LED EMERGENCY LIGHT WITH INTEGRAL BASE SUBREVIOLE A20° CUSTOMIZABLE LED EMERGENCY LIGHT WITH INTEGRAL BASE SUBREVIOLE A20° CUSTOMIZABLE LED EMERGENCY LIGHT WITH INTEGRAL BASE SUBREVIOLE BATTERY FINISH 220° CUSTOMIZABLE LED EMERGENCY LIGHT WITH INTEGRAL BAST CHARTREUSE FINISH 220° CUSTOMIZABLE LED EMERGENCY LIGHT WITH INTEGRAL BAST CHARTREUSE FINISH 220° CUSTOMIZABLE LED EMERGENCY LIGHT WITH INTEGRAL BAST CHARTREUSE FINISH 220° CUSTOMIZABLE LED EMERGENCY LIGHT WITH INTEGRAL BAST CHARTREUSE FINISH 220° CUSTOMIZABLE LED EMERGENCY LIGHT WIT

PRESET RANGES VIA LIGHT LEVEL SENSOR. 0-10V CONTROL OF DRIVERS.

LIGHT FIXTURE SCHEDULE

TYPE

INTEGRAL LED

0-10V DIMMING DIMMING

5500 LUMENS

INTEGRAL LED

0-10V DIMMING

DIMMING 11000 LUMENS

INTEGRAL LED

6000 LUMENS

LIGHTING SCIENCE

24W PAR38 LED

INTEGRAL LED

0-10V DIMMING

DIMMING

5500 LUMENS

COU | TYPE | MANUFACTURER/MODEL#

12 B4 WILLIAMS 75-4-L50-830

5 F4 WILLIAMS 75-4-L50-830

43 CL4 COLUMBIA LIGHTING LXEM4-35HL-RFA-EU

1 DL DL-INC-LH W/ DL-42-ARM

VOLT INPUT VA DESCRIPTION

120/277 | 40 W | 42 VA | 4' LED STANDARD STRIP

120/277 | 40 W | 42 VA | 4' LED STANDARD STRIP

DFN38 WW V2 NL 120 | 120 | 24 W | 25 VA | 32" FLEXIBLE LED DOCK LIGHT. PROVIDE 3' CORD WITH NEMA 5-15P.

120/277 | 55 W | 59 VA | 4' LED ENCLOSED AND GASKETED WET LOCATION LISTED FIXTURE

			INDIVIDU	AL SPACE (	CONTROL	SCHEDULE - ASHRA	E 2013 COMI	PLIANT
TYPICAL SPACE	CONTROL DEVICE	"ON"	"OFF"	"OFF"	MANUAL	LIGHTING	ADDITIONAL	CONTROL DESCRIPTION
		CONTROL	CONTROL	SETTING	CONTROL	REDUCTION	CONTROLS	
RESTROOMS	OCCUPANCY SENSOR	AUTO ON - 100%	TIMED	REFER TO		NOT REQUIRED	FULL AUTO	AUTOMATICALLY TURN ON ALL FIXTURES TO 100% LIGHTING LEVEL WITH OCCUPANCY SENSOR.
				OCC SENSOR		RESTROOM		
				SCHEDULE				
OFFICES	OCCUPANCY SENSOR	MANUAL ON	TIMED	REFER TO	"ON"	YES	MANUAL ON	TURN ON ALL FIXTURES TO 100% LIGHTING LEVEL WITH MANUAL BUTTON ON OCCUPANCY SENSOR.
				OCC SENSOR			OCC SENSOR	
				SCHEDULE			BI LEVEL	
BREAKROOM/	OCCUPANCY SENSOR	MANUAL ON	TIMED	REFER TO	"ON"	YES	MANUAL ON	TURN ON ALL FIXTURES TO 100% LIGHTING LEVEL WITH MANUAL BUTTON ON OCCUPANCY SENSOR.
MEETING ROOM				OCC SENSOR			OCC SENSOR	
				SCHEDULE			BI LEVEL	
COOLER AND FREEZER	OCCUPANCY SENSOR	<b>AUTO ON - 100%</b>	TIMED	REFER TO		NOT REQUIRED	OCC SENSOR	AUTOMATICALLY TURN ON ALL FIXTURES TO 100% LIGHTING LEVEL WITH OCCUPANCY SENSOR.
				OCC SENSOR		STORAGE RM		
				SCHEDULE				
BOH CORRIDOR/	OCCUPANCY SENSOR	AUTO ON - 100 %	TIMED	REFER TO	"OFF"	NOT REQUIRED	OCC SENSOR	AUTOMATICALLY TURN ON ALL FIXTURES TO 100% LIGHTING LEVEL WITH OCCUPANCY SENSOR.
RECEIVING				OCC SENSOR		CORRIDOR		100% ON - PER STORAGE ROOM EXEMPTION FROM LIGHTING REDUCTION
				SCHEDULE				
KITCHEN	AUTOMATIC TIME SWITCH	TIMED	TIMED	REFER TO	"OFF"	MULTI-LEVEL SWTICHING	TIME SWITCH	CONTROLLED BY TIME OF DAY, WITH LOCAL OVERRIDE "OFF" SWITCH
				LIGHTING				
				CONTROL				
SALES FLOOR	AUTOMATIC TIME SWITCH	TIMED	TIMED	REFER TO	"OFF" VIA	DIMMING	DIMMING	DIMMING SET VIA TIME SCHEDULE WITH
CENEDAL LICHTING				LICHTING	CENTERAL			DDESET DANCES VIA LICHT LEVEL SENSOD A 10V CONTDOL OF DDIVEDS

LIGHTING CENTRAL CONTROL OVERRIDE

GENERAL LIGHTING

**GENERAL ELECTRICAL POWER NOTES** ROUTE ALL EXPOSED, RIGID CONDUIT TIGHT TO STRUCTURE NEAR TOP CHORD OF BAR JOISTS, PARALLEL TO BUILDING LINES WHERE POSSIBLE COORDINATE CONDUIT ROUTING AND INSTALLATION WITH OTHER TRADES PRIOR TO ROUGH- IN. SUPPORT CONDUIT FROM STRUCTURE NOT ROOF DECK. MAINTAIN 2" MIN SPACING FROM BOTTOM OF ROOF DECK TO PREVENT ROOFING SCREWS FROM PENETRATING CONDUITS. AVOID ROUTING CONDUIT THROUGH SKYLIGHTS.

MC CABLE IS ALLOWED TO BE USED. MC CABLE NOT ALLOWED FOR HOMERUNS OR WHERE SPECIFICALLY DISALLOWED BY AHJ. REFER TO SPECIFICATIONS

3. ALL EMPTY CONDUITS SHALL BE INSTALLED WITH PULL WIRES

4. AT THE CONTRACTORS OPTION, ALL POWER AND COMMUNICATION/DATA CONDUITS MAY BE ROUTED BELOW SLAB. COORDINATE ROUTING WITH ALL OTHER TRADES PRIOR TO ROUGH-IN.

PRIOR TO ROUGH-IN OF COMMUNICATION AND ELECTRICAL OUTLETS, COORDINATE WITH 365 AND/OR ARCHITECT FOR FINAL LOCATIONS.

6. PROVIDE GROUND FAULT PROTECTION FOR PERSONAL FOR ALL 120V, 15 AMP AND 20 AMP CIRCUITS IN SCULLERY AND MEAT PREP KITCHEN PER NEC 210.8 (B). PROVIDE GFI RECEPTACLES, GFCI FEED-THRU DEVICES OR GFCI

PROVIDE RED-DOT CK SERIES WEATHERPROOF IN-USE COVERS FOR ALL RECEPTACLES UNDER THE KITCHEN HOOD. PROVIDE ADEQUATE INTERNAL DEPTH TO ALLOW FOR COVER TO BE COMPLETELY SHUT WITH DEVICE

8. PROVIDE GRAY SWITCHES, RECEPTACLES AND OUTLETS WITH STAINLESS STEEL COVER PLATES IN KITCHEN AND WET LOCATIONS. PROVIDE GRAY SWITCHES, RECEPTACLES AND OUTLETS WITH GRAY COVER PLATES IN ALL

OTHER LOCATIONS. 9. ALL BRANCH CIRCUITS SHALL INCLUDE AN INSULATED EQUIPMENT GROUNDING

10. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS

REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES. 11. VERIFY EXACT ELECTRICAL REQUIREMENTS FOR ALL TENANT FURNISHED

EQUIPMENT PRIOR TO ROUGH-IN AND ADJUST ELECTRICAL PROVISIONS AS NECESSARY INCLUDING, BUT NOT LIMITED TO: CONDUIT, CONDUCTOR(S), DISCONNECT, RECEPTACLE, CIRCUIT BREAKER AND TERMINATION. SUBMIT ALL VARIANCES FROM PLAN TO ENGINEER FOR VERIFICATION. ALL EXTERIOR AND INTERIOR WP COVERS, WHEREVER PRACTICAL, SHALL BE METALLIC IN-USE TYPE. LARGE BUBBLE COVERS SHALL NOT BE USED ON THE EXTERIOR OF THE BUILDING OR BEHIND EQUIPMENT IN ORDER TO PREVENT DAMAGE TO THE COVER AND TO ALLOW THE EQUIPMENT TO BE LOCATED CLOSE TO THE WALL. REFER TO SPECIFICATIONS FOR ADDITONAL INFORMATION.

12. ALL EXTERIOR AND INTERIOR WP COVERS, WHEREVER PRACTICAL, SHALL BE METALLIC IN-USE TYPE. LARGE BUBBLE COVERS SHALL NOT BE USED ON THE EXTERIOR OF THE BUIDLING OR BEHIND EQUIPMENT IN ORDER TO PREVENT DAMAGE TO THE COVER AND TO ALLOW THE EAUIPMENT TO BE LOCATED CLOSE TO THE WALL. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

13. CONTRACTOR TO PROVIDE UPDATED AND FINAL ELECTRICAL PANEL SCHEDULES FOR ALL PANELBOARDS UPON COMPLETEION OF THE PROJECT.

14. REFER TO FIRE ALARM PLANS FOR ADDITIONAL BACKBOX AND CONDUIT REQUIREMENTS FOR FIRE ALARM SYSTEM. PROVIDE ALL NECESSARY BACKBOXES AND CONDUITS FOR FIRE ALARM SYSTEM. CONFIRM WITH FIRE ALARM CONTRACTOR.

15. REFER TO MEP EQUIPMENT CONNECTION SCHEDULE FOR ALL OWNER PROVIDED EQUIPMENT CONNECTIONS.

16. ALL EQUIPMENT UNDER KITCHEN HOOD SHALL BE CONNECTED TO SHUNT- TRIP CIRCUIT BREAKERS TO OPEN CIRCUIT BY HOOD FIRE SUPRESSION SYSTEM.

17. SURFACE MOUNT BACKBOXES TO FREEZER AND COOLER WALLS. REFER TO ARCHITECTURAL PLANS FOR COOLER WALL LOCATIONS. UTILIZE DIE-CAST (METALLIC) WEATHERPROOF BACKBOXES SURFACE MOUNTED BOXES WITH THREADED HUBS (EQUAL TO HUBBELL "BELL" BOX. ALL EXPOSED POWER AND CONTROLS WIRING SHALL BE INSTALLED IN CONDUIT.

18. COORDINATE MOUNTING, INSTALLING AND WIRING OF ALL COMPONENTS IN WALK-IN COOLER WITH EQUIPMENT SUPPLIER AND INSTALLATION CONTRACTOR. PROVIDE INTERNAL AND EXTERNAL SEALS (BY LINKSEAL OR APPROVED EQUAL) AT CONDUIT PENETRATIONS THROUGH COOLER CEILING AND/OR WALLS. INSTALL CONDUIT PER MANUFACTURE'S SPECIFICATIONS.

19. INSTALL ALL CONDUIT, WIRING, AND CONTROL CABLING TIGHT TO BOTTOM OF ALL ELEVATED CASES (CASES ON LEGS) TO CONCEAL FROM SIGHT.

20. ALL DESK RECEPTACLES IN OFFICES AND BREAKROOM SHALL BE MOUNTED 8" ABOVE DESK SURFACE. COORDINAT EXACT HEIGHT WITH PROVIDED

**ELECTRICAL POWER PLAN NOTES** 

1 CONNECT TO FACTORY INSTALLED INTEGRAL LOADCENTER. ROUTE CONDUIT UNDERGROUND AND UP TO NEAREST COLUMN OR WALL, OR DIRECTLY TO PANELBOARD INDICATED.

3 MOUNT RECEPTACLE WITHIN CASEWORK. REFER TO ARCHITECTURAL DETAILS FOR MORE INFORMATION.

4 DELIVERY BUZZER SYSTEM. PROVIDE EDWARDS 55 SERIES DOORBELL, TRANSFORMER, AND EDWARDS 1786-B WEATHERPROOF PUSHBUTTON, OR EQUAL 5 RECEPTACLE FOR MOTORIZED PALLET JACK CHARGING STATION. PROVIDE KH INDUSTRIES RTBB3LW-1DD520-J12F WITH 25' OF 12/3 BLACK SO CABLE RATED AT 120V. PROVIDE WITH END TO MATCH EQUIPMENT. PROVIDE WITH BALL STOP

TO KEEP OUTLET WITHIN EASY REACH FROM RECEIVING FLOOR. 7 PROVIDE RECEPTACLE AT SHELVING DISPLAY. DROP CONDUIT DOWN FROM STRUCTURE TO A JUNCTION BOX ON TOP OF GONDOLA. SURFACE MOUNT

BACKBOX TO SPINE OF GONDOLA. NOTCH SHELVES AS REQUIRED. 8 RECEPTACLE FOR BUG ZAPPER. CONFIRM LOCATION AND MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS AND MANUFACTURER RECOMMENDATIONS PRIOR

9 SURFACE MOUNT BACKBOX AND CONDUIT ON COOLER WALL. COORDINATE CONDUIT ROUTING IN FIELD. SEAL ALL PENETRATIONS AS REQUIRED BY COOLER MANUFACTURER.

10 MOUNT RECEPTACLES WITHIN CHECK STAND MILLWORK. DEVICE WITH "POS" DESIGNATION IS DEDICATED FOR CASH REGISTER. QUAD RECEPTACLE IS FOR UTILITY POWER. ROUTE CIRCUITING DOWN THROUGH POWER/TELECOM POLE. COORDINATE INSTALLATION WITH CASH REGISTER MILLWORK.

11 PROVIDE DUPLEX RECEPTACLE FOR DIGITAL DISPLAY AT GONDOLA ENDCAP. DROP CONDUIT DOWN FROM STRUCTURE TO A JUNCTION BOX ON TOP OF GONDOLA. SURFACE MOUNT BACKBOX TO BACK OF SHELVES OF ENDCAP. NOTCH SHELVES IN GONDOLA AS REQUIRED. COORDINATE INSTALLATION WITH DIGITAL DISPLAY

12 DUPLEX RECEPTACLES FOR MISTING SYSTEM. REFER TO ARCHITECTURAL

13 RECEPTACLE FOR DIGITAL DISPLAY SCREEN. CONFIRM LOCATION IN FIELD PRIOR TO ROUGH-IN. 17 ROUTE FLOOR BOX CONDUITS UNDERSLAB AND UP NEARBY WALL TO ABOVE

CEILING OR TRUSS SPACE ABOVE. PROVIDE (1) 1" CONDUIT WITH PULL STRING REFRIGERATION CONTROL WIRING. REFER TO SHEET EM101 FOR ADDITIONAL `NHFORMATIOM. COORDINATIF-CONDUIT ROUTING IN-FIELD: //// 18 PROVIDE KH INDUSTRIES RTBB3LW-1DD520-J12F WITH 25' OF 12/3 BLACK SO CABLE RATED AT 120V. PROVIDE WITH END TO MATCH EQUIPMENT. PROVIDE WITH BALL STOP TO KEEP OUTLET WITHIN EASY REACH FROM SALES FLOOR. VERIFY FINAL

LOCATION WITH 365. Ý PROVIDE WIREMOLD #RFBY-CH/WITH FLOORPORT SÉRIES COVER #FYBTAL. PROVIDE (2) #CIHT-D INTERNAL DUPLEX RECEPTACLE BRACKETS AND (2) DUPLEX RECEPTACLES FOR POWER. PROVIDE (2) #CIH/LT-B INTERNAL BLANK BRACKETS FOR USE BY EMS CONTRACTOR AND REFRIGERATION CONTROLS NETWORK WIRING. PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE FINISHED ASSEMBLY. ENSURE FLOOR BOX IS ADJUSTED PROPERLY AND IS FLUSH WITH THE

FINISHED FLOOR. 21 COMBINATION POWER AND TELECOM POLE WITH TWO COMPARTMENTS FOR POWER AND DATA CONNECTIONS TO CASH REGISTERS. ROUTE POWER AND DATA CABLES THROUGH POLE, PROVIDE WIREMOLD #25DTC-415 OR EQUIVALENT POWER POLÉ TO BE PRÉ-PRIMED AND PAINTABLE BY GENERAL CONTRACTOR!

MATCH EQUIPMENT RECEPTACLE. VERIFY FINAL LOCATION WITH 365. 25 PROVIDE (2) 4" CONDUIT SLEEVES THROUGH CEHUNG ROB CABLING, ROUTE ALON 28 ROUTE (1) 2" CONDUIT OVERHEAD FROM MAIN BREAKER IN POWER WALL FOR

ABOVE FRIENDS SPACE AND PROVIDE PULLSTRING IN CONDUIT 29 ROUTE (1) 4" CONDUIT OVERHEAD FROM MAIN BREAKER IN POWER WALL FOR FRIEND'S SPACE. TERMINATE CONDUIT IN JUNCTION BOX, LOCATED IN STRUCTURE ABOVE FRIENDS SPACE AND PROVIDE PULLSTRING IN CONDUIT. 30 SURPACE MOUNT CONDUIT AND PLECEPTACLE BACKBOX TO COOLER PANEL WALL. ROUTE ALL CONDUITS ON THE INTERIOR OF THE COOLER PANEL WALL. DROP CONDUITS FROM STRUCTURE AND MINIMIZE VISIBILITY OF ALL CONDUIT

ROUTING FROM SALES FLOOR. COORDINATE CONDUIT ROUTING IN FIELD. 31 PROVIDE RECEPTACLE FOR DIGITAL DISPLAY SCREEN AT SAME ELEVATION AS MOUNTING BRACKET. COORDINATE INSTALLATION WITH DISPLAY MONITOR

35 PROVIDE CONNECTION TO ASSOCIATED CONDENSING UNIT ON ROOF. REFER TO MECHANICAL SCHEDULE FOR ADDITIONAL INFORMATION. 36 PROVIDE SPECIAL RECEPTACLE HUBBELL #USB20XGY. DUPLEX RECEPTACLE WITH (2) USB CHARGING RECEPTACLES. CONFIRM EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN. 38 PROVIDE DEVICE AND CIRCUITRY FOR FUTURE CASE LOCATIONS.

DEVICE TO MATCH EQUIPMENT. PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE FINISHED ASSEMBLY. ENSURE FLOOR BOX IS ADJUSTED PROPERLY AND IS FLUSH WITH THE FINISHED FLOOR. PROVIDE WITH BRUSHED ALUMINUM EINISH ROUTE ROWER CONDUIT BELOW SLAB, UP WEARBY WALL TO TRUSS SPACE.

COORDINATE CONDUIT ROUTING IN FIELD.

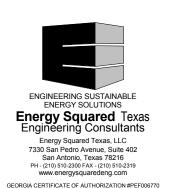
40 SIEMENS "RIO" PANEL FOR FRIENDS OF 365. COORDNIATE FINAL LOCATION WITH FRIENDS OF 365 PRIOR TO ROUGH-IN. REFER TO EM300. munumunumun

**Architect of Record:** BOYD W. RAU 6700 Antioch Plaza Merriam, KS 66204

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Consultants



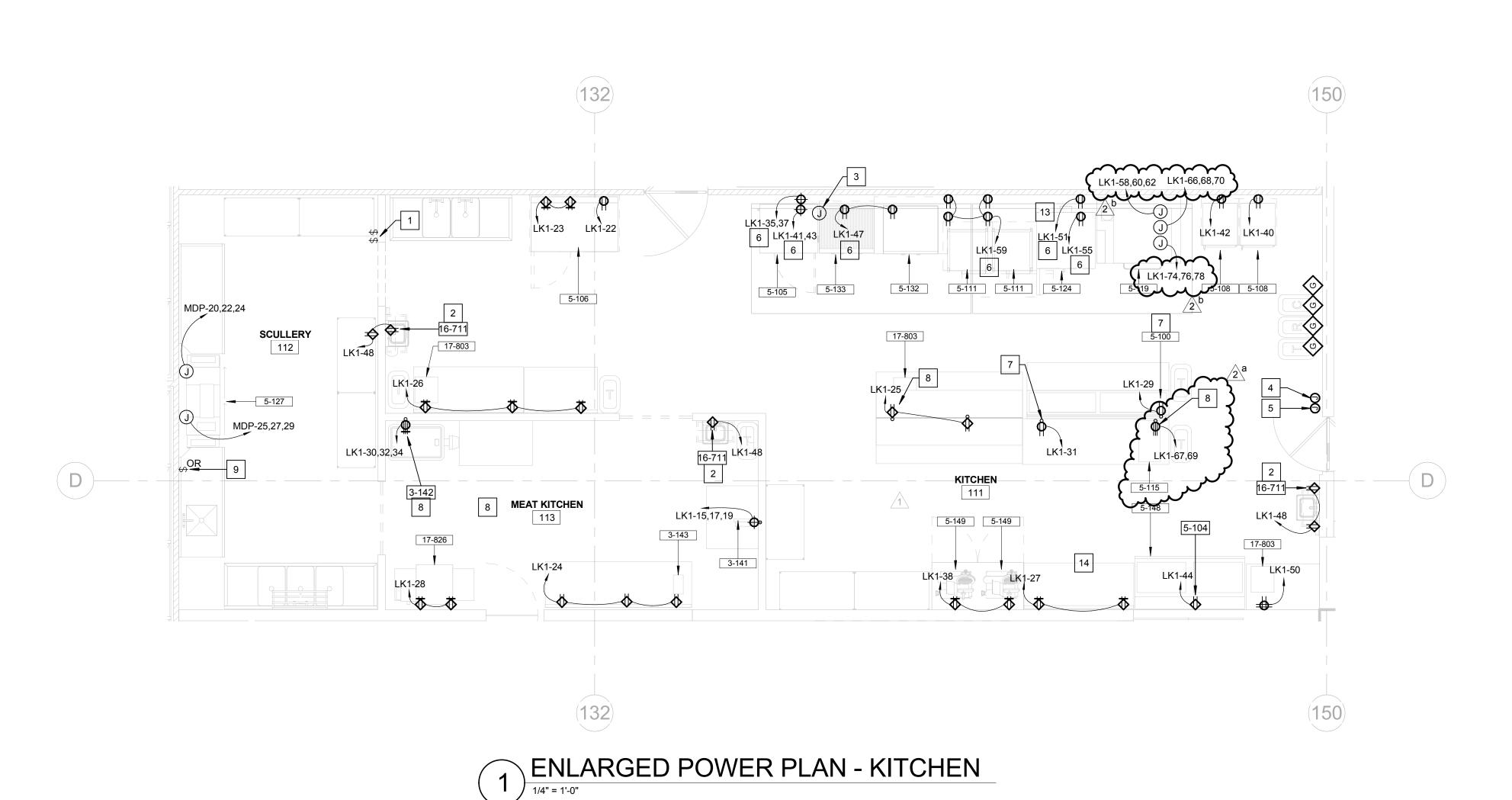
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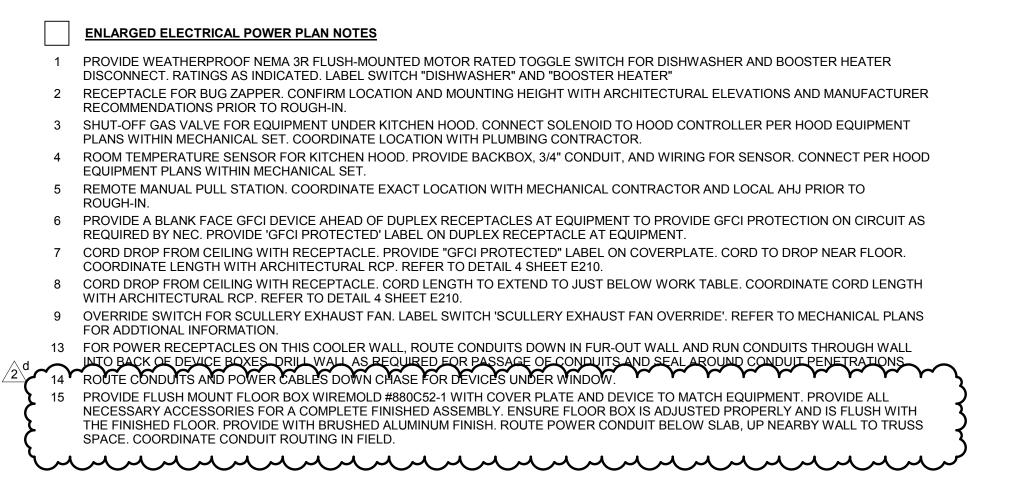
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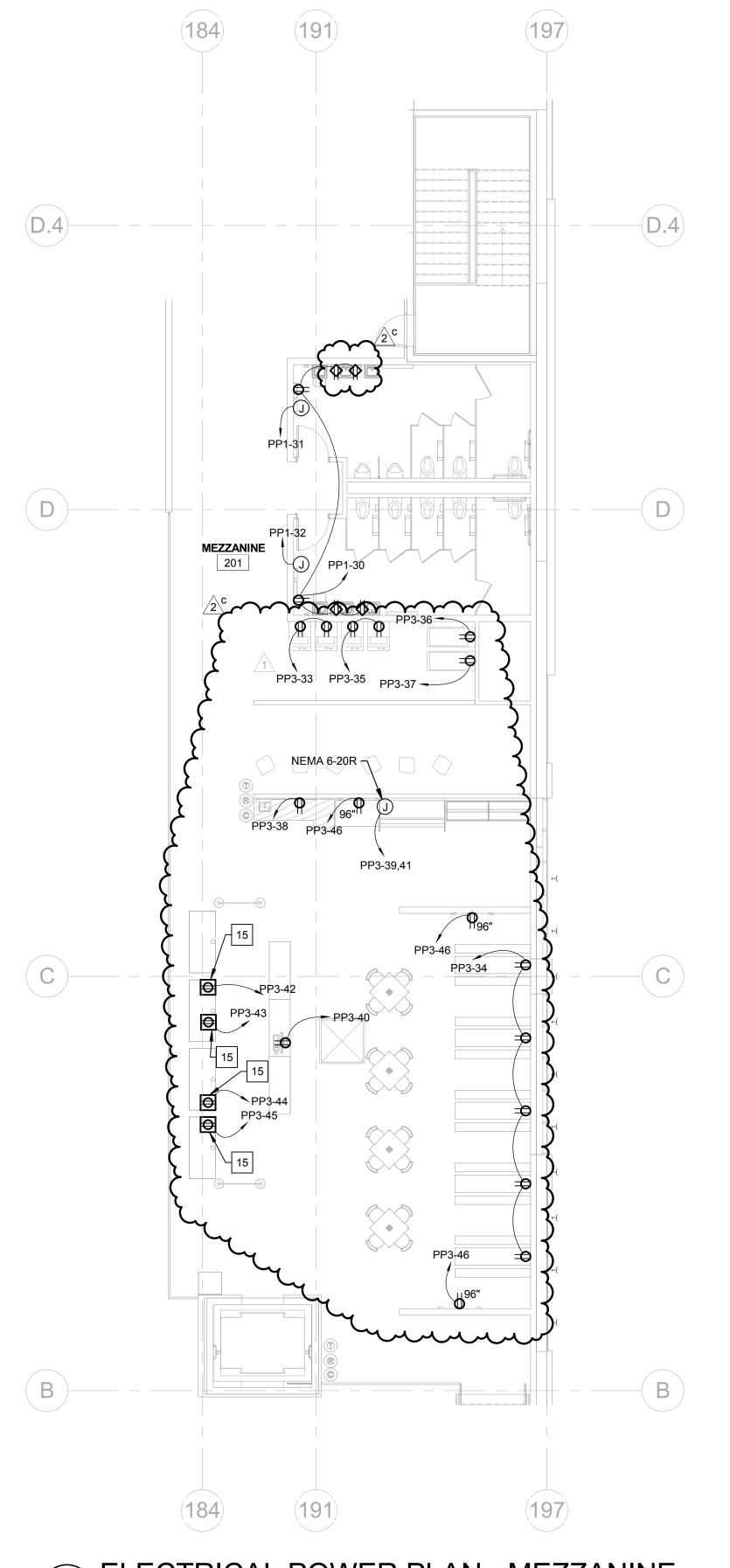
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Document date:

**ELECTRICAL POWER** PLAN



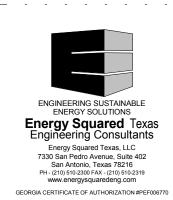




2 ELECTRICAL POWER PLAN - MEZZANINE

COMBINE AND ROUTE ALL CONDUITS ALONG EXTERIOR WALLS, DIRECTLY ABOVE CEILINGS, OR IN PLENUMS TO MINIMIZE VISIBILITY FROM SALES FLOOR.

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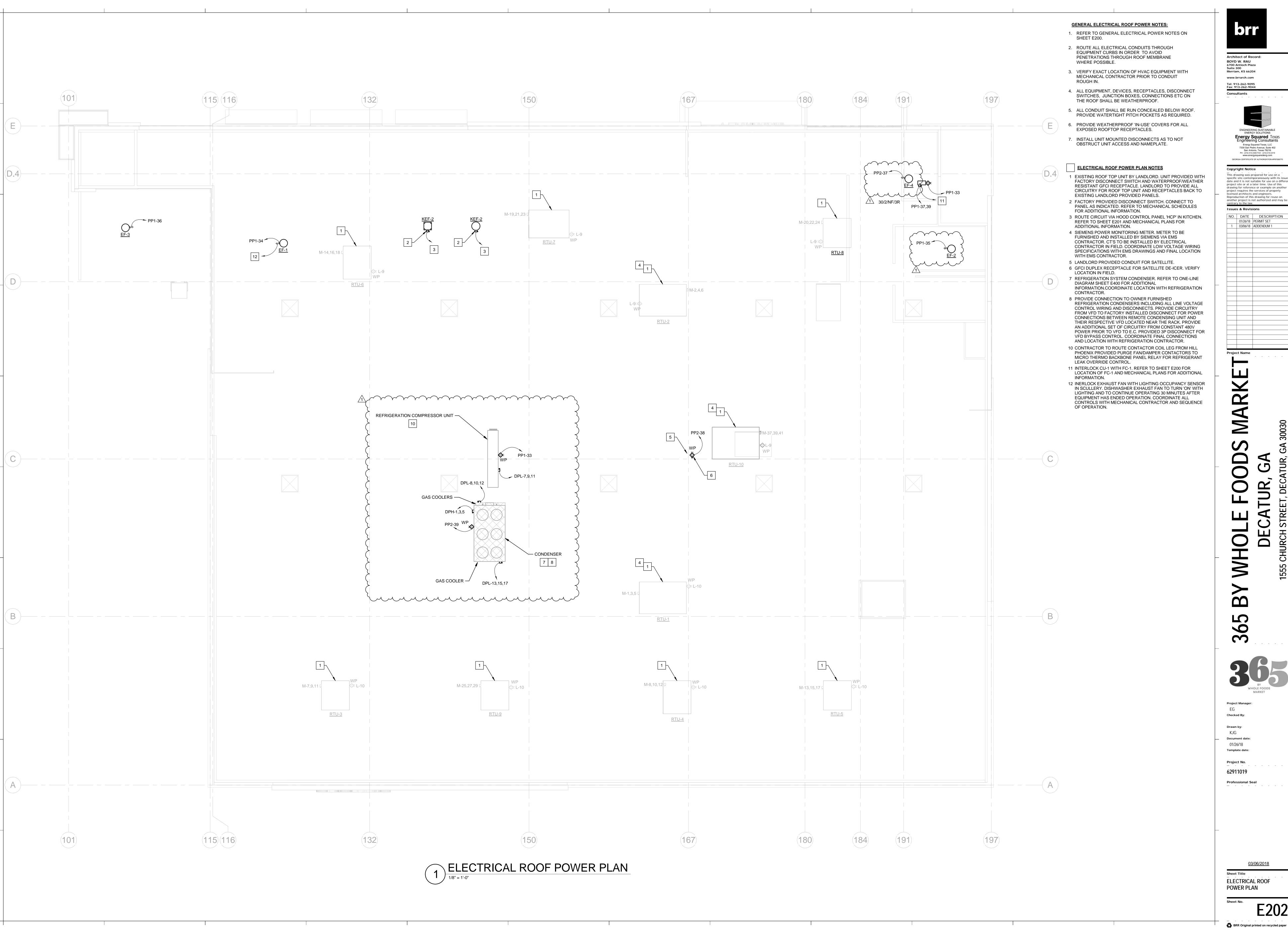
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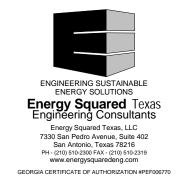
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05/21/2018 **ELECTRICAL POWER** ENLARGED PLANS



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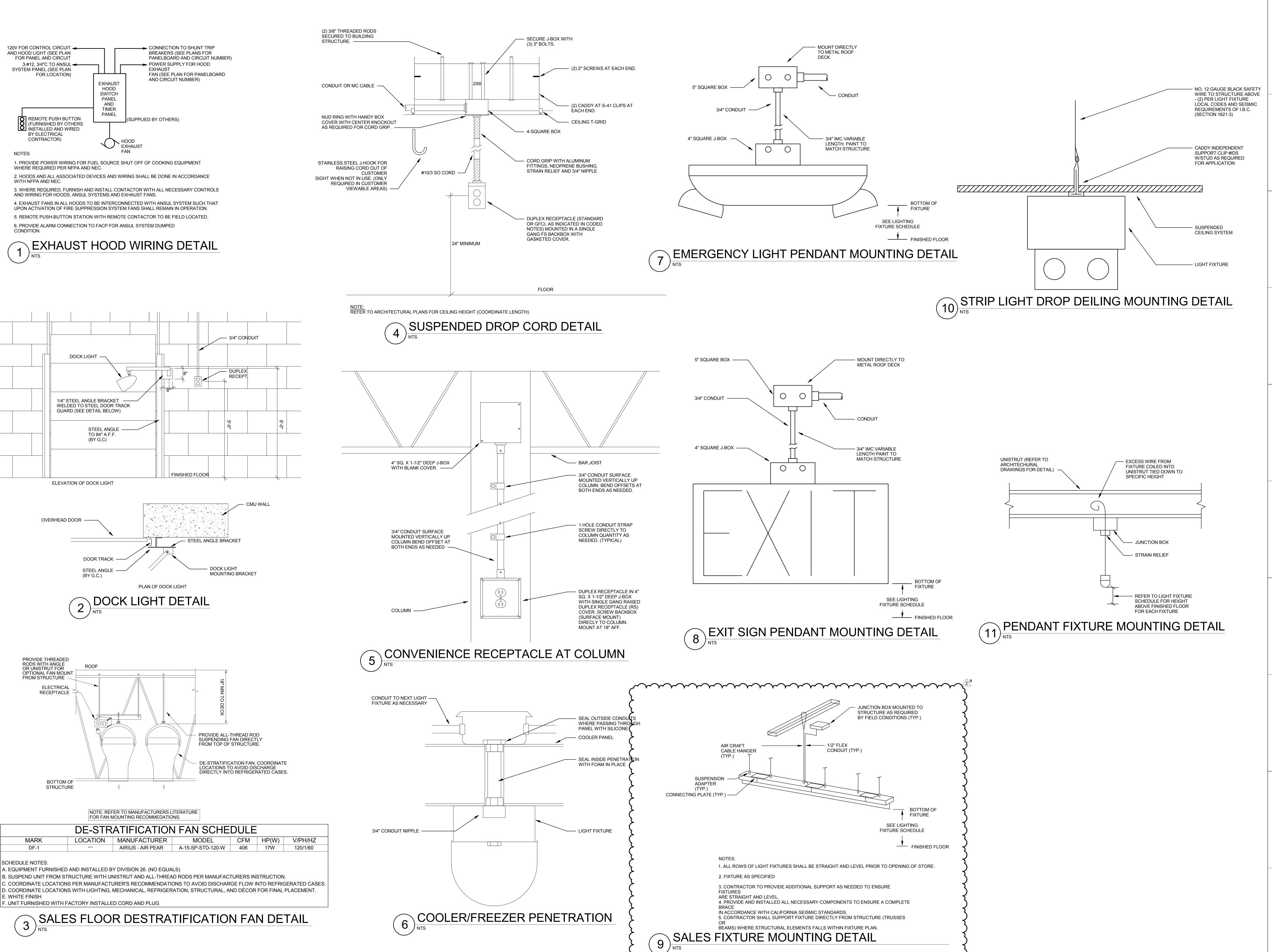
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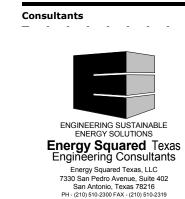
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ELECTRICAL ROOF POWER PLAN



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**ELECTRICAL POWER SCHEDULES AND DETAILS** 

**GENERAL ENERGY MANAGEMENT NOTES:** 

1. WORK SHOWN ON THIS SHEET IS SEPARATE FROM ENERGY MANGEMENT SCOPE OF WORK. REFER TO "EM" SERIES SHEETS FOR ADDITIONAL INFORMATION.

**GENERAL SPECIAL SYSTEMS NOTES:** 

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED DEVICES SHOWN ON

2. ELECTRICAL CONTRACTOR TO COORDINATE WITH ARCHITECTURAL, FIRE PROTECTION, PLUMBING & HVAC PLANS PRIOR TO ROUGH-IN TO AVOID ANY CONFLICTS OF ROUTING OR

3. SEE SYMBOLS LEGEND ON SHEET E000.

4. SEE TECHNOLOGY FACEPLATE DETAILS AND SCHEDULE ON

5. ALL TECHNOLOGY CABLING AND DEVICES SHALL BE INSTALLED IN A MANNER THAT CONFORMS WITH ALL CODES AND STANDARDS AS SET FORTH BY BICSI, NEC, TIA AND OTHER WIRING

6. CLOSELY COORDINATE AND CONFIRM INSTALLATION OF ALL VOICE/DATA AND OTHER TECHNOLOGY EQUIPMENT WITH OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO COMMENCING WORK. THIS INCLUDES LAYOUT OF NETWORK

7. ALL CAT6 CABLES INSTALLED BY OTHER TRADES MUST BE OF DIFFERENT COLORS FROM THE CABLES SPECIFIED HERE AND ON SHEET E310.

8. LABEL EACH CABLE WITHIN 12" OF TERMINATION AT FACEPLATE AND AT PATCH PANEL. REFER TO SHEET E310 FOR LABELING

9. COORDINATE WITH ARCHITECT TO PROVIDE PLYWOOD WALL BACKBOARD IN NETWORK CLOSET WHERE SHOWN ON DRAWINGS. BACKBOARD SHALL BE PAINTED AS REQUIRED PRIOR TO INSTALLATION ON WALL. PROVIDE 4-SCREW D-RINGS ON THE

10. APPROPRIATELY SIZED J-HOOKS PER MANUFACTURER MINIMUM FOR ALL NEW CABLING AND PATHWAYS. DO NOT SHARE J-HOOK PATHWAYS FOR TECHNOLOGY HORIZONTAL CABLING VOICE/DATA, BACKBONE AND COAXIAL CABLES WITH OTHER LOW VOLTAGE SYSTEMS.

11. WIRELESS ACCESS POINTS (WAP) ARE TENANT FURNISHED AND CONTRACTOR INSTALLED. CONFIRM FINAL LOCATIONS AND REQUIREMENTS WITH WAP VENDOR PRIOR TO INSTALLATION. WAP VENDOR CONTACT: TBDCOORDINATE THE LOCATION OF THE VOLUME CONTROLS WITH 365 PROJECT MANAGER TO ELIMINATE CONFLICTS.

12. ALL DEVICES IN OFFICES AND BREAKROOM SHALL BE MOUNTED 8" ABOVE DESK SURFACE. FIELD COORDINATE WITH PROVIDED

**ELECTRICAL SPECIAL SYSTEMS PLAN NOTES** 

1 DATA DEVICE LOCATION FOR TIME CLOCK.

2 MOUNT DATA DEVICE WITHIN POS CASEWORK. 3 LEAVE A 15 FOOT SERVICE LOOP IN CABLING FOR WAP'S FOR ADJUSTMENTS AND TUNING. NEATLY COIL LOOPS AT WAP'S. PENDANT MOUNT WAP IN AREAS WITH OPEN CEILINGS AT 15'-0" AFF. MOUNT FROM 3/4" RIGID CONDUIT STEM SECURED TO BUILDING STRUCTURE BY A 4" SQUARE JUNCTION BOX WITH 34" BALL

> ADJACENT TO JUNCTION BOX. LEAVE A 15 FOOT SERVICE LOOP IN CABLING FOR WAP'S FOR ADJUSTMENTS AND TUNING. NEATLY COIL LOOPS AT WAP'S. PENDANT MOUNT WAP IN AREAS WITH OPEN CEILINGS AT 15'-0" AFF. MOUNT FROM 3/4" RIGID CONDUIT STEM SECURED TO BUILDING STRUCTURE BY A 4" SQUARE JUNCTION BOX WITH 3/4" BALL SWIVEL COVER RATED FOR LOAD OF DEVICE. MOUNT DATA OUTLET ADJACENT TO JUNCTION BOX.

4 WEATHERIZED MERAKU MR72. MOUNT ACCESS POINT ON COOLER INTERIOR WALL. DRY FIT WITH ANTENNAS CONNECTED IN VERTICAL ORIENTATION AND TERMINATE TIGHT TO CEILING.

5 PROVIDE DATA OUTLET FOR DIGITAL DISPLAY SCREEN AT SAME ELEVATION AS MOUNTING BRACKET. COORDINATE INSTALLATION WITH DIGITAL DISPLAY SCREEN MOUNTING BRACKETS.

8 PROVIDE (1) CAT6 CABLE FROM KITCHEN HOOD CONTROL PANEL TO DATA NETWORKING RACK FOR NETWORK CONNECTION. 10 DATA OUTLET FOR SIEMENS CONTROLS (LOCATED IN POWERWALL)

11 DATA OUTLET TO BE MOUNTED HORIZONTALLY DIRECTLY BELOW PRINTER ENCLOSURE WITH TOP OF BOX AT 2'-3" AFF. 12 DATA OUTLET FOR DIGITAL DISPLAY SCREEN. CONFIRM LOCATION

PRIOR TO ROUGH-IN. 13 365 LV CONTRACTOR TO PROVIDE (2) CAT6 CABLES FROM FRIENDS SPACE TO DEMARC LOCATION AND TERMINATE IN A SURFACE

MOUNTED BOX (BISCUIT JACK). TERMINATION ON FRIENDS SIDE AND ALL ADDITIONAL CABLING BY FRIENDS GC.

14 DATA OUTLET FOR SECURITY ALARM PANEL. CONFIRM LOCATION WITH VENDOR PRIOR TO INSTALLATION.

15 WEATHERIZED MERAKU MR72. MOUNT ACCESS POINT ON BUILDING EXTERIOR WALL.TERMINATE TIGHT TO UNDERSIDE OF AWNING. 16 EXISTING FIRE ALARM CONTROL PANEL LOCATION. ALL REQUIRED

FIRE ALARM ACCESS PHONE LINES EXISTING TO REMAIN BY 17 VOICE/NETWORK EQUIPMENT RACK. SEE DETAILS ON SHEET E310. 18 PLYWOOD BACKBOARD. MOUNT QUAD RCEPTACLES FOR

TELECOMMUNICATIONS EQUIPMENT TO BACKBOARD. REFER TO SYSTEMS PLANS AND ELEVATIONS FOR MORE INFORMATION.

COORDINATE STUB-OUT POINTS WITH DATA CONTRACTOR.

KJG Document date: 01/26/18 Template date:

62911019

**ELECTRICAL SPECIAL** SYSTEMS PLAN

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ENGINEERING SUSTAINABLE ENERGY SOLUTIONS

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03/06/2018 **ELECTRONIC SHELF** LABEL SYSTEM PLAN

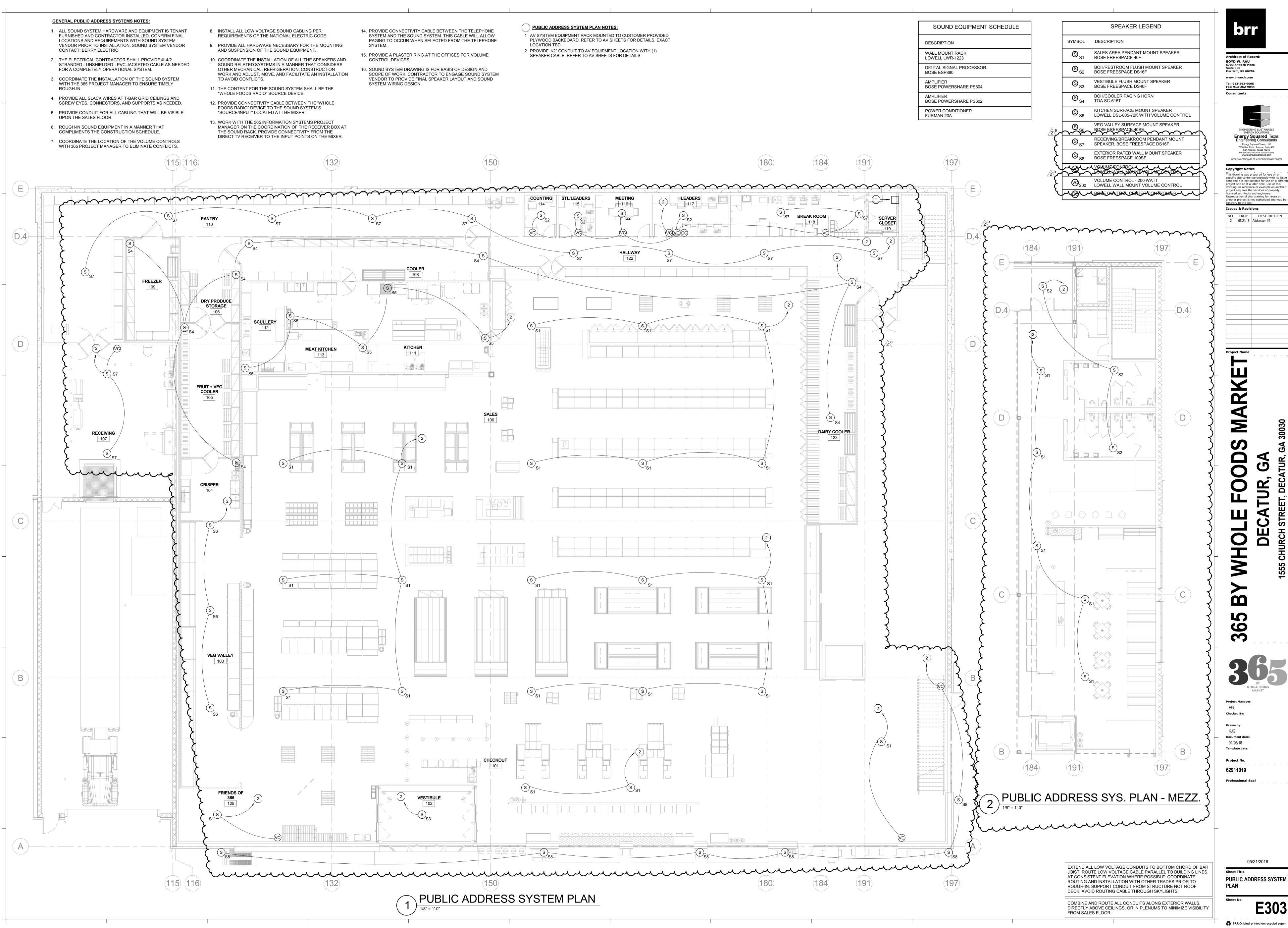
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**Issues & Revisions** NO. DATE DESCRIPTION 2 05/21/18 Addendum #2

05/21/2018

PUBLIC ADDRESS SYSTEM

E303

1 ELECTRICAL SPECIAL SYSTEMS PLAN - MEZZANINE

1 1/8" = 1'-0"

ELECTRICAL SPECIAL SYSTEMS PLAN NOTES

1 LEAVE A 15 FOOT SERVICE LOOP IN CABLING FOR WAP'S FOR ADJUSTMENTS AND TUNING. NEATLY COIL LOOPS AT WAP'S. PENDANT MOUNT WAP IN AREAS WITH OPEN CEILINGS AT 15'-0" AFF.

MOUNT FROM 3/4" RIGID CONDUIT STEM SECURED TO

brr

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| NO. | DATE | DESCRIPTION | 1 | 03/06/18 | Addendum #1 | 2 | 05/21/18 | Addendum #2 |

1 03/06/18 Addendum#1
2 05/21/18 Addendum#2

Project Name

WINCLET LOUDS IMARK
DECATUR, GA

365
BY
WHOLE FOODS
MARKET

Project Manager:
Approver
Checked By:

Drawn by:
Author
Document date
01/26/18
Template date:

Project No. 62911019

05/21/2018 heet Title

ELECTRICAL SPECIAL SYSTEMS PLAN - MEZZANINE
Sheet No.

E304

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**Project Name** 

**GENERAL TECHNOLOGY NOTES:** A. LOCATE WALL TELEPHONE OUTLETS IN A MANNER THAT DOES NOT CONFLICT WITH SWITCHES, ETC. B. COORDINATE SOUND SYSTEM COMPONENTS TO ELIMINATE POSSIBLE CONFLICTS (TYPICAL). C. THE DATA CABLING, AS WELL AS THE TELEPHONE CABLING TERMINATE AT THE NETWORK RACK ON THE DATA RACK. D. 365 MARKETS WILL UTILIZE A TELEPHONE SYSTEM CALLED VOIP. THIS VOICE OVER INTERNET PROTOCOL SYSTEM WILL UTILIZE CAT6 CABLING. THE ACTUAL TELEPHONE CABLING SYSTEM SHALL UTILIZE A DIFFERENT COLOR JACK FROM THE DATA SYSTEM. E. LABLING IS CRITICAL TO THE ENTIRE SYSTEM AND IS REQUIRED TO BE FOLLOWED PER 365'S IT DEPARTMENT DRAWING. F. 365 MARKET WILL DETERMINE AND ORDER ALL NECESSARY TELEPHONE SERVICES. G. COORDINATION WITH THE TELEPHONE UTILITY SHALL BE THE RESPONSIBILITY OF 365 MARKETS INFORMATION TECHNOLOGY PROJECT MANAGER. ELECTRICAL CONTRACTOR SHALL PARTICIPATE, SUPPORT, AND COMMUNICATE ANY AND ALL INFORMATION TO THE WFM PROJECT MANAGER THAT IS OBTAINED FROM TELEPHONE UTILITYS' FIELD PERSONNEL. ALL INFORMATION REGARDING STATUS GROUNDING, DATES OF FIELD VISITS, EQUIPMENT DELIVERY AND INSTALLATION. ACCOMPLISHMENTS OF THE UTILITY'S PERSONNEL SHALL BE FORWARDED TO 365.

H. 365 MARKET WILL PROVIDE A 14" WIDE BY 14" TALL BY 4" DEEP STAINLESS STEEL NICHE TYPE STRUCTURE. THIS WALL PHONE HOLDER'S INSTALLATION SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND THE PROJECT MANAGER TO INSURE COMPATIBILITY WITH THE FRAMING AND WALL FINISHES. I. THE TELEPHONE HAND SET'S CABLING SHALL EXTEND THRU THE

BACK OF THE STAINLESS STEEL NICHE AND CONNECT TO THE VOIP DATA JACK. J. ELECTRICAL CONTRACTOR SHALL PHYSICALLY MOUNT THE VOIP

TELEPHONE MECHANISM ONTO THE STAINLESS STEEL NICHE, FOR A COMPLETE INSTALLATION. K. CABLING CONTRACTOR SHALL FURNISH / INSTALL CAT6 CABLING FOR THE CAMERA SYSTEM. SEE SHEET EC1.01 FOR CAMERA LOCATIONS.

IT SHALL UTILIZE A POWER OVER ETHERNET (POE) CABLING

METHODOLOGY.

FOR A COMPLETE INSTALLATION.

L. 365 WILL PROVIDE A 16" WIDE BY 18" TALL BY 4" DEEP STAINLESS STEEL NICHE TYPE TIMECLOCK STRUCTURE. THIS WALL-MOUNTED TIMECLOCK HOLDER'S INSTALLATION SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND THE PROJECT MANAGER TO INSURE COMPATABILITY WITH THE FRAMING AND WALL FINISHES. M. THE TIMECLOCK'S CABLING AND 120 VOLT POWER SHALL EXTEND THRU THE BACK OF THE STAINLESS STEEL NICHE AND CONNECT IN A MANNER THAT IS COMPATIBLE WITH THE KRONOS TIME CLOCK. N. ELECTRICAL CONTRACTOR SHALL PHYSICALLY MOUNT THE KRONOS EMPLOYEE TIMECLOCK DEVICE ONTO THE STAINLESS STEEL NICHE

ALL CONTROLS CABLING, TERMINATION, AND HARDWARE INSTALL SCOPE IS THE RESPONSIBILITY OF GC. THIS SCOPE IS TO BE BID BY QUALIFIED LV CONTROLS CONTRACTOR. GC TO COORDINATE TERMINATIONS BETWEEN HVAC/REFRIGERATION/LV CONTRACTORS.

- 4'x8'x3/4" PLYWOOD BACKER BOARD WITH (2) COATS OF FIRE-RETARDANT  $\overline{\phantom{a}}$ MAXIMUM DEPTH FOR EQUIPMENT MOUNTED TO PLYWOOD SECTIONS A AND B - NETWORKING PLAN VIEW CLEARANCE AT -EQUIPMENT **EQUIPMENT** RACK (PIVOTING, FLOOR MOUNTED) QUAD RECEPTACLES MOUNTED ABOVE UPS (TYPICAL)

RESERVATION FOR TELCO SECTION A CAT6 CABLING FOR PRICER ESL SYSTEM. NEATLY PASS CABLING THROUGH CABLE SUPPORT RINGS ATTACHED TO THE BAR (TGB)¬ BACK BOARD — 2'X8' EQUIPMENT I CLEARANCE RACK (SWING | FOR SWING OUT FLOOR PRICER OUT RACK. MOUNTED). LEAVE ELECTRONIC SHELF SEE RACK | ||CONT||| PS ELEVATION, SPACE LABELS SYSTEM THIS SHEET. CLEAR. BASE CONTROLLER AND POWER WFM) SUPPLY. **TERMINATE CAT6** CABLES ONTO BASE CONTROLLER PER VENDOR'S -REQUIREMENTS RESERVATION 8 FOR 365 **EQUIPMENT** DUPLEX RECEPTACLE, EACH ON DEDICATED CIRCUIT, INSTALLED QUAD RECEPTACLES IN ENCLOSURE BACKPAN AT MOUNTED ABOVE UPS _ LOWEST POSITION

**ELEVATION VIEW** PLYWOOD BACKER BOARD ELEVATION

NTS

**ELEVATION VIEW** 

Reserved Space for 365 Gear

PP#1

365 SW1

PP#2

PP#3

365 SW2

PP#4

PP#5

365 SW3

PP#6

PP#7

365 SW4

PP#8

Reserved Space for 365 Gear

Reserved Space for Security System

1. CONTRACTOR TO PROVIDE NETWORK RACK. RACK TO BE MIDDLE ATLANTIC (MA) #SR-40-32 PIVOTING RACK ENCLOSURE WITH 40U MOUNTING SPACE AND BACK PLATE. RACK TO BE PROVIDED WITH VENTED DOOR MA #LVFD-40, REAR RACK RAILS MA #DWR- RR440, MINIMUM CLEARANCE LATCH MA #DWRSR-ZL AND SUBPLATE MOUNTING

KIT MA #	SR-SUM.	
	RACK E	LEVATION EQUIPMENT SCHEDULE
TAG	RACK UNITS (RU)	DESCRIPTION
1	-	SPACE ALLOWANCE FOR EQUIPMENT (OWNER FUNISHED/INSTALLED)
2	1U	SPACE FOR 24-PORT PATCH PANEL (CONTRACTOR FURNISHED/INSTALLED)
3	1U	SPACE FOR 48-PORT SWITCH (OWNER FURNISHED/INSTALLED)
4	4U	SPACE FOR SECURITY NVR (OWNER FURNISHED/INSTALLED)



_	4" SQ., 2-1/8"D BOX WITH	PROVIDE SINGLE-GANG FACEPLATE WITH A FOUR (4) PORT JACK	RED: DATA	PLATE / ADAPTER	PER SPECIFICATIONS
$A \bigvee$	SINGLE-GANG PLASTER RING. 1" CONDUIT TO ABOVE CEILING OR TO	MODULE CAPACITY CONTAINING ONE (1) CAT6 JACK MODULE FOR DATA AND ONE (1) CAT6 JACK MODULE FOR VOICE. PROVIDE	BLUE: PHONE	JACKS	PER SPECIFICATIONS
	ROOF STRUCTURE.	TWO (2) CAT6 CABLES TO PATCH PANEL IN NETWORK RACK.	(WORKSTATION / VOIP / PHONE)	BLANKS	PER SPECIFICATIONS
	4" SQ., 2-1/8"D BOX WITH	PROVIDE SINGLE-GANG FACEPLATE WITH A FOUR (4) PORT		PLATE / ADAPTER	PER SPECIFICATIONS
В	SINGLE-GANG PLASTER RING. 1" CONDUIT TO ABOVE CEILING OR TO	JACK MODULE CAPACITY CONTAINING ONE (1) CAT6 JACK MODULE FOR DATA. PROVIDE ONE (1) CAT6 CABLE TO PATCH	RED (WORKSTATION / VOIP / PHONE)	JACKS	PER SPECIFICATIONS
	ROOF STRUCTURE.	PANEL IN NETWORK RACK.	(WORKSTATION / VOII / THONE)	BLANKS	PER SPECIFICATIONS
	4" SQ., 2-1/8"D BOX WITH	PROVIDE SINGLE-GANG FACEPLATE WITH A FOUR (4) PORT		PLATE / ADAPTER	PER SPECIFICATIONS
c∑	SINGLE-GANG PLASTER RING. 1" CONDUIT TO ABOVE CEILING OR TO	JACK MODULE CAPACITY CONTAINING TWO (2) CAT6 JACK MODULES FOR DATA. PROVIDE TWO (2) CAT6 CABLES TO PATCH	RED (WORKSTATION / VOIP / PHONE)	JACKS	PER SPECIFICATIONS
	ROOF STRUCTURE.	PANEL IN NETWORK RACK.	(WORKOTATION / VOII / THONE)	BLANKS	PER SPECIFICATIONS
	4" SQ., 2-1/8"D BOX WITH	PROVIDE SINGLE-GANG FACEPLATE WITH A FOUR (4) PORT		PLATE / ADAPTER	PER SPECIFICATIONS
D	SINGLE-GANG PLASTER RING. 1" CONDUIT TO ABOVE CEILING OR TO	JACK MODULE CAPACITY CONTAINING ONE (1) CAT6 JACK MODULE FOR DATA. PROVIDE ONE (1) CAT6 CABLE TO PATCH	GREEN (POS REGISTERS / HOSPITALITY DATA)	JACKS	PER SPECIFICATIONS
	ROOF STRUCTURE.	PANEL IN NETWORK RACK.	(I de Resievene / Hoor Hitelia Briting	BLANKS	PER SPECIFICATIONS
	4" SQ., 2-1/8"D BOX WITH	PROVIDE SINGLE-GANG FACEPLATE WITH A FOUR (4) PORT JACK		PLATE / ADAPTER	PER SPECIFICATIONS
E₩	SINGLE-GANG PLASTER RING. 1" CONDUIT TO ABOVE CEILING OR TO	MODULE CAPACITY CONTAINING ONE (1) CAT6 JACK MODULE FOR DATA AND ONE (1) CAT6 JACK MODULE FOR VOICE. PROVIDE	GREEN  (POS REGISTERS / HOSPITALITY DATA)	JACKS	PER SPECIFICATIONS
	ROOF STRUCTURE.	TWO (2) CAT6 CABLES TO PATCH PANEL IN NETWORK RACK.	(1 00 KEGIOTEKO / 11001 11 AEITT BATA)	BLANKS	PER SPECIFICATIONS
	4" SQ., 2-1/8"D BOX WITH	PROVIDE SINGLE-GANG FACEPLATE WITH A FOUR (4) PORT		PLATE / ADAPTER	PER SPECIFICATIONS
F√	SINGLE-GANG PLASTER RING. 1" CONDUIT TO ABOVE CEILING OR TO	JACK MODULE CAPACITY CONTAINING FOUR (4) CAT6 JACK MODULES FOR DATA. PROVIDE FOUR (4) CAT6 CABLES TO	GREEN (POS REGISTERS / HOSPITALITY DATA)	JACKS	PER SPECIFICATIONS
	ROOF STRUCTURE.	PATCH PANEL IN NETWORK RACK.	(1 03 KEGISTEKS/11031 HAEHT BATA)	BLANKS	PER SPECIFICATIONS
	4" SQ., 2-1/8"D BOX WITH	PROVIDE SINGLE-GANG FACEPLATE WITH A FOUR (4) PORT		PLATE / ADAPTER	PER SPECIFICATIONS
POS√	SINGLE-GANG PLASTER RING. 1" CONDUIT TO ABOVE CEILING OR TO	JACK MODULE CAPACITY CONTAINING TWO (2) CAT6 JACK MODULES FOR DATA. PROVIDE TWO (2) CAT6 CABLES TO PATCH	GREEN (POS REGISTERS / HOSPITALITY DATA)	JACKS	PER SPECIFICATIONS
	ROOF STRUCTURE.	PANEL IN NETWORK RACK.	(1 03 KEGISTEKS/11031 ITALITT DATA)	BLANKS	PER SPECIFICATIONS
	4" SQ., 2-1/8"D BOX WITH	PROVIDE PHONE PLATE WITH ONE (1) PORT FOR ONE (1)		PLATE / ADAPTER	PER SPECIFICATIONS
w	SINGLE-GANG PLASTER RING. 1" CONDUIT TO ABOVE CEILING OR TO	JACK MODULE. PROVIDE ONE (1) CAT6 JACK MODULE FOR VOICE. PROVIDE ONE (1) CAT6 CABLE TO PATCH PANEL IN	BLUE (WORKSTATION / VOIP / PHONE)	JACKS	PER SPECIFICATIONS
	ROOF STRUCTURE.	NETWORK RACK.	(WORKSTATION / VOII / THONE)	BLANKS	PER SPECIFICATIONS
		PROVIDE SURFACE-MOUNTED FACEPLATE BOX WITH A TWO		PLATE / ADAPTER	PER SPECIFICATIONS
WAP	SURFACE MOUNTED FACEPLATE AT STRUCTURE OR ON WALL	(2) PORT JACK MODULE CAPACITY. PROVIDE ONE (1) CAT6 JACK MODULE FOR DATA. PROVIDE ONE (1) CAT6 CABLE TO	ORANGE (WAP DATA)	JACKS	PER SPECIFICATIONS
l	AT STRUCTURE OR ON WALL	PATCH PANEL IN NETWORK RACK.		BLANKS	PER SPECIFICATIONS
	SURFACE MOUNTED FACEPLATE AT	PROVIDE SURFACE-MOUNTED FACEPLATE BOX WITH A TWO		PLATE / ADAPTER	PER SPECIFICATIONS
	STRUCTURE OR ON WALL (MOUNTED AT 15'-0" AFF). SEE SHEET E3.02 FOR	(2) PORT JACK MODULE CAPACITY. PROVIDE ONE (1) CAT6 JACK MODULE FOR DATA. PROVIDE ONE (1) CAT6 CABLE TO	WHITE (CAMERA DATA)	JACKS	PER SPECIFICATIONS
	LOCATION OF OUTLET	PATCH PANEL IN NETWORK RACK.		BLANKS	PER SPECIFICATIONS
GENERAL NOTE			1	L.	'

TECHNOLOGY OUTLET SCHEDULE

JACK INSERT COLOR

MODEL#

DESCRIPTION

PROVIDE BLANK INSERTS, MATCHING FACEPLATE OR MODULE FRAME COLOR, FOR ALL UNUSED PORTS. FACEPLATE COLOR AS SELECTED BY OWNER'S IT DEPARTMENT.
ALL HORIZONTAL CABLING SHALL BE PLENUM RATED IN PLENUM AREAS. CABLES IN NON-PLENUM AREAS MAY BE NON-PLENUM RATED. ALL CABLING FOR VOICE AND DATA SHALL BE CAT6 UNLESS

NOTED OTHERWISE. C VOICE / DATA CABLES ARE TO TERMINATE ON PATCH PANELS IN IDF.

**BACKBOX AND CONDUIT** 

D FOR ANY LOCATIONS WITHIN MODULAR FURNITURE, USE APPROPRIATE FURNITURE PLATE ADAPTER UNLESS OPENINGS ARE UNAVAILABLE THEN USE MODULAR SURFACE MOUNTED BOXES. (RED FOR DATA, BLUE FOR PHONE, ORANGE PROVIDE JACK MODULES AT BOTH ENDS OF CABLES (NETWORK RACK PATCH PANEL AND FACEPLATE). COLOR AS SELECTED BY OWNER'S IT DEPARTMENT. INSTALL PER OWNER'S STANDARDS. FOR WAP, GREEN FOR POS, GREEN FOR ALOHA/HOSPITALITY, AND WHITE FOR CAMERA).

F PHONE SYSTEM IS VOICE OVER INTERNET (VOIP). THIS VOIP SYSTEM SHALL UTILIZE CAT6 CABLING.

**GROUNDING GENERAL NOTES:** 

OUTLET TYPE

A. ALL GROUNDING CONDUCTORS SHALL BE TAGGED AT THE TELECOMMUNICATION BUSBAR.

B. USE PAINT PIERCING HARDWARE ON ALL RACKS, CABLE TRAY, AND MOUNTING RAILS.

C. ALL CONNECTORS SHALL BE TWO-HOLE, COMPRESSION STYLE

D. BUSBARS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY.

ACTUAL SIZE IS DETERMINED BY THE SPECIFICATIONS AND INDIVIDUAL PROJECT REQUIREMENTS.

E. ALL MATERIALS AND TERMINATIONS FROM THE

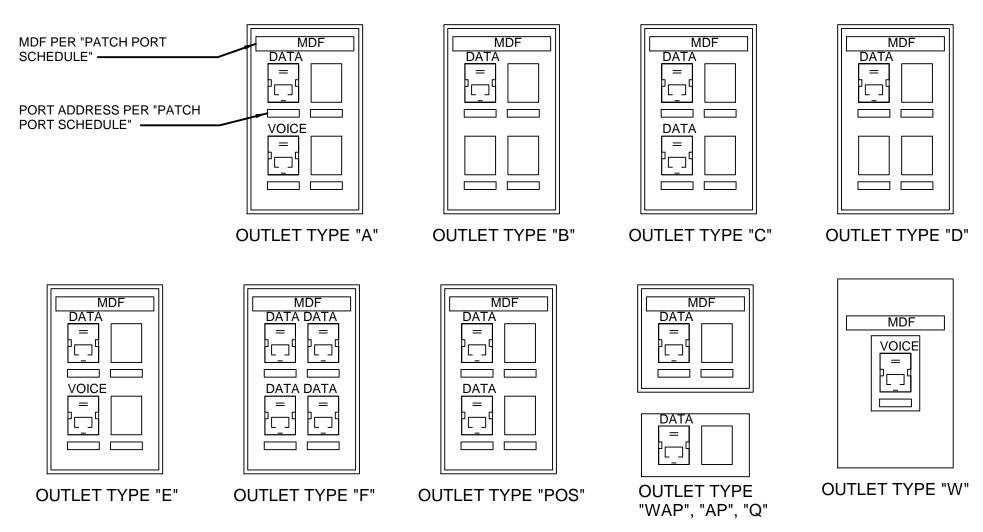
TELECOMMUNICATION GROUNDING BUSBARS TO THE DEVICES WITHIN THE TECHNOLOGY ROOM ARE THE RESPONSIBILITY OF THE INDIVIDUAL

SYSTEMS CONTRACTOR. F. ALL GROUNDING BUSBARS AND TELECOMMUNICATIONS BACKBONE

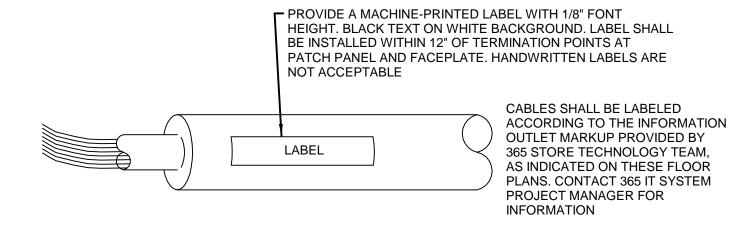
CABLING SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL _ #6 AWG BONDED ON EACH END WITH A TWO-HOLE LONG BARREL CRIMP CONNECTOR TGB (ON EACH CABINET/RACK) **6** 0 **6** 0 0 0 0 0 TO CABLE TRAY RACK-MOUNTED EQUIPMENT, CHASSIS, ETC. BUSBAR (TGB) ELECTRICAL GROUNDING

GROUNDING BAR DETAIL

											PATCH	PUKI,	SCHED	JLE										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PP#1																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
P#2	A01	A08	A15	P201-A	P204-B	P208-A	H111-01	D101-01	D102-02	D108-02	D1119-01	D115-04	D117-06	V111-01	C01	C08	C15	C22	C29	C36	C43			
	Orange	Orange	Orange	Green	Green	Green	Green	Red	Red	Red	Red	Red	Red	Blue	White									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2
P#3	A02	A09		P201-B	P205-A	P208-B	H111-02	D101-02	D107-01	D108-03	D113-01	D116-01	D118-01		C02	C09	C16	C23	C30	C37	C44			
	Orange	Orange		Green	Green	Green	Green	Red	Red	Red	Red	Red	Red		White									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2
PP#4	A03	A10		P202-A	P205-B	P276-A	H111-03	D101-03	D107-02	D111-01	D114-01	D117-01	D118-02		C03	C10	C17	C24	C31	C38	C45			
	Orange	Orange		Green	Green	Green	Green	Red	Red	Red	Red	Red	Red		White									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2
P#5	A04	A11		P202-B	P206-A	P276-B	H111-04	D101-04	D107-03	D111-02	D114-02	D117-02	D118-03		C04	C11	C18	C25	C32	C39				
	Orange	Orange		Green	Green	Green	Green	Red	Red	Red	Red	Red	Red		White	White	White	White	White	White				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2
PP#6	A05	A12		P203-A	P206-B	P631-A	H117-01	D101-05	D107-04	D111-03	D115-01	D117-03	D118-04		C05	C12	C19	C26	C33	C40				
	Orange	Orange		Green	Green	Green	Green	Red	Red	Red	Red	Red	Red		White	White	White	White	White	White				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2
PP#7	A06	A13		P203-B	P207-A	P631-B		D101-06	D107-05	D111-04	D115-02	D117-04	D118-05		C06	C13	C20	C27	C34	C41				
	Orange	Orange		Green	Green	Green		Red	Red	Red	Red	Red	Red		White	White	White	White	White	White				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2
P#8	A07	A14		P204-A	P207-B	P631-C		D102-01	D108-01	D111-05	D115-03	D117-05	D118-06		C07	C14	C21	C28	C35	C42				
	Orange	Orange		Green	Green	Green		Red	Red	Red	Red	Red	Red		White	White	White	White	White	White				



TECHNOLOGY FACEPLATE DETAILS



1 CABLE LABELING DETAIL

Project Manager:

Checked By:

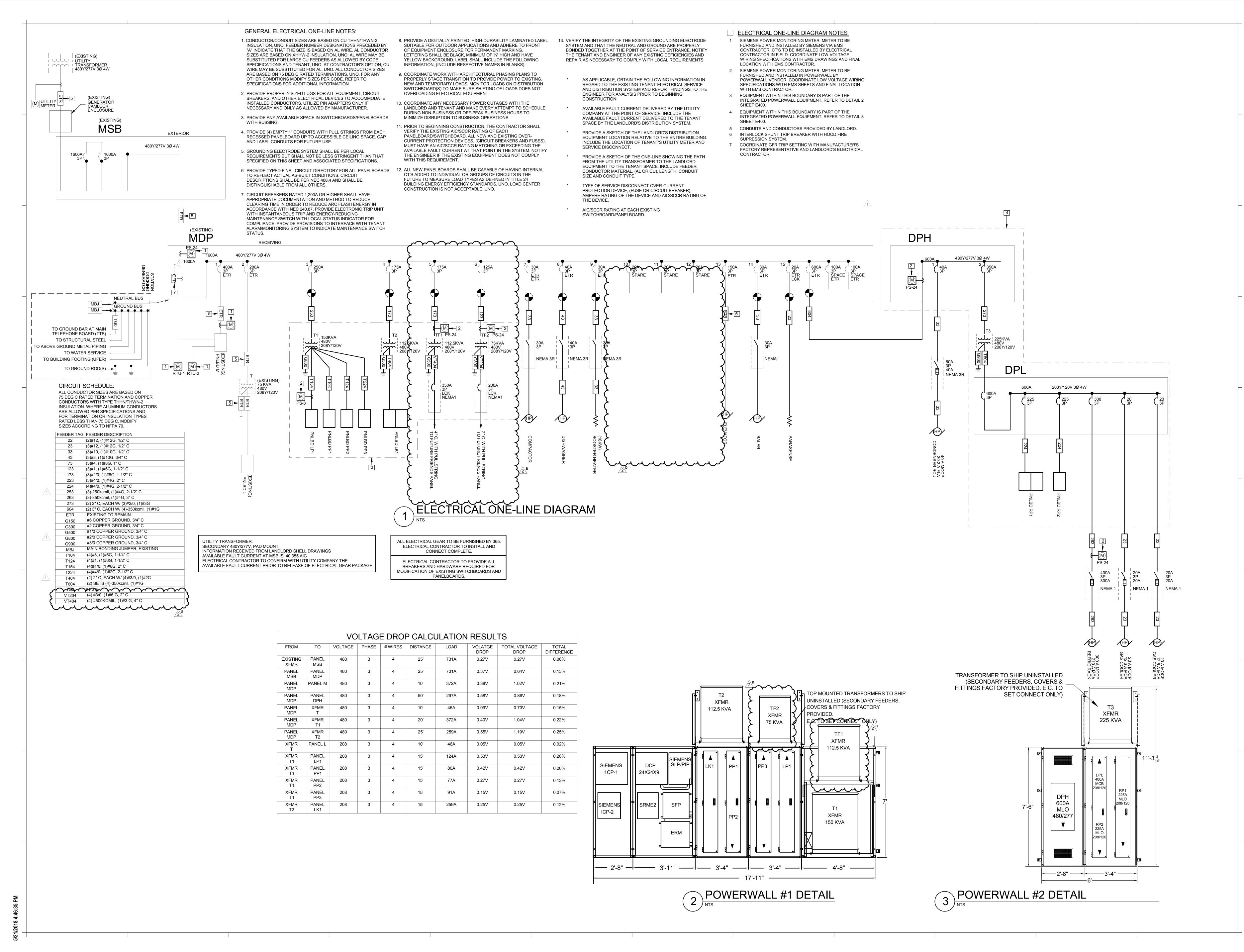
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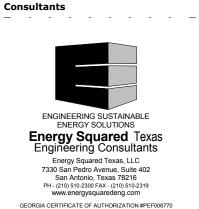
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Professional Seal

**ELECTRICAL SPECIAL** SYSTEMS SCHEDULES AND DETAILS



Architect of Record: BOYD W. RAU 6700 Antioch Plaza Suite 300 Merriam, KS 66204 www.brrarch.com Tel: 913-262-9095



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03/06/18 Addendum #1 2 05/21/18 Addendum #2

Project Manager: Checked By:

KJG Document date: 01/26/18 Template date:

Project No. 62911019

ELECTRICAL ONE-LINE DIAGRAM

E400

POWER-SWITCHING PANELBOARD NOTES:

POWER-SWITCHING PANELBOARDS ON THIS SHEET ARE INTENDED TO BE REMOTELY CONTROLLED BY SIEMENS CONTROLLER. CONTROL METHOD TO BE BY BACNET IP FROM SIEMENS CONTROLLER. CONFIRM INTEGRATION BETWEEN SIEMENS AND POWER-SWITCHING BREAKER CONTROLLER. REFER TO "EM" SERIES DRAWINGS FOR ADDITIONAL INFORMATION.

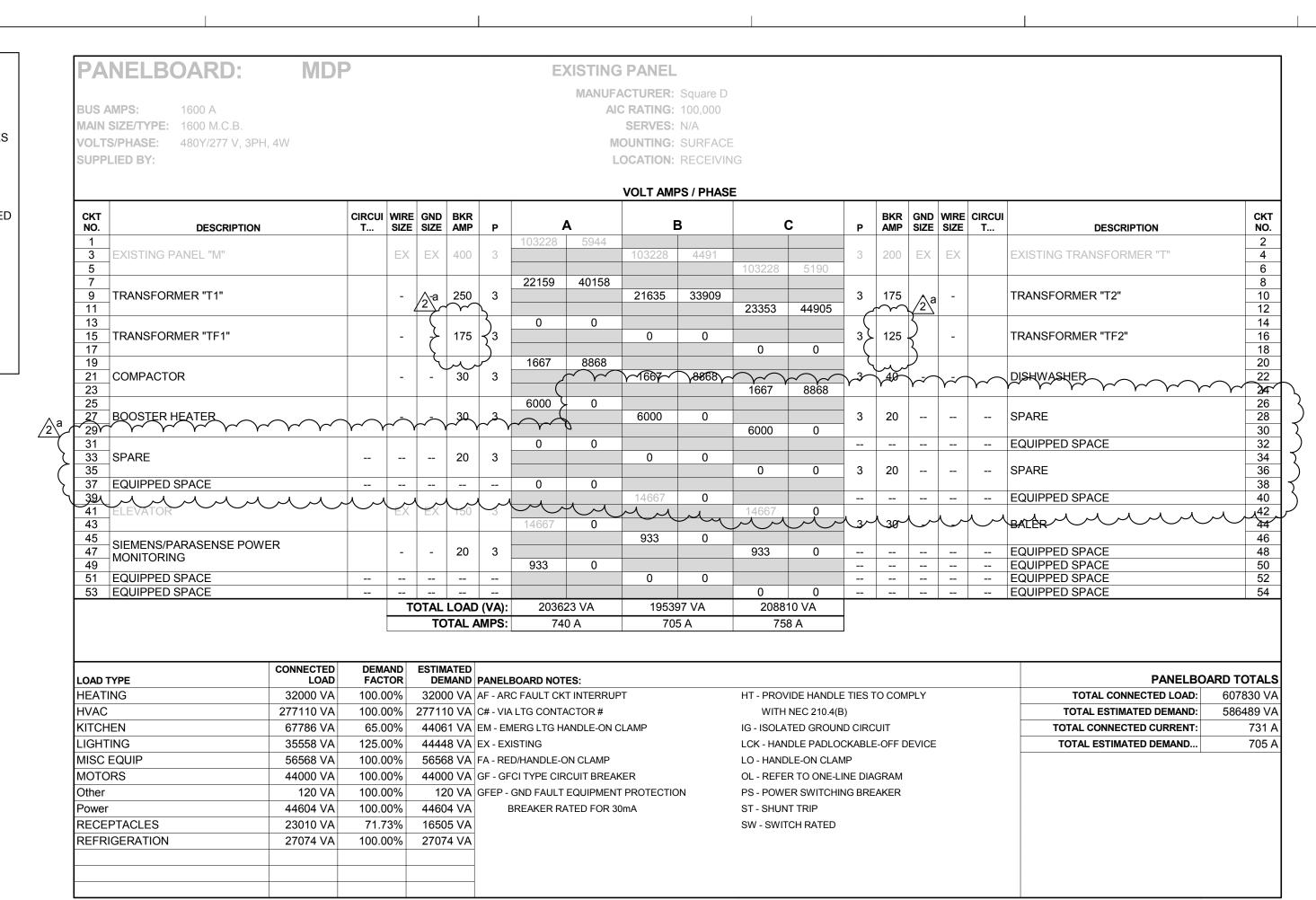
NOTE: POWER-SWITCHING PANELBOARD CONTROLLER TO BE FACTORY PROGRAMMED TO FAIL TO LIGHTS ON.

NOE: POWER-SWITCHING BREAKERS TO BE FACTORY PROGRAMMED PER DETAILS ON SHEET E110.

NOTE: CONTRACTOR TO INCLUDE FACTORY STARTUP IF CONTRACTOR HAS NOT PREVIOUSLY PROGRAMMED POWERSWITCHING PANELBOARDS.

EATON CUTLER HAMMER NOTES:
• MINIMUM OF POW-R-COMMAND 2000E SERIES

SQUARE D NOTES:
• MINIMUM OF POWER LINK G3000 SERIES



									VOLT AMI	PS / PHASI	<u> </u>								
KT IO.	DESCRIPTION	CIRCUI T	WIRE SIZE	GND SIZE	BKR AMP	P		A	ı	В		C	P	BKR AMP		WIRE SIZE	CIRCUI T	DESCRIPTION	0
1							22974	22974											
3 5	RTU-1 (EXISTING)		EX	EX	90	3			22974	22974	22974	22974	3	90	EX	EX		RTU-2 (EXISTING)	-
7							3824	5737			22974	22974							
9	RTU-3 (EXISTING)		EX	EX	20	3			3824	5737			3	25	EX	EX		RTU-4 (EXISTING)	
11											3824	5737							
13	DTU 5 (EVICTING)		EX	EX	20	0	3824	5737	2024	F707			_	4.5	-V	EV			
15 17	RTU-5 (EXISTING)		EX	EX	20	3			3824	5737	3824	5737	3	15	EX	EX		RTU-6 (EXISTING)	
19							9699	3547			0024	0101							
21	RTU-7 (EXISTING)		EX	EX	45	3			9699	3547			3	25	EX	EX		RTU-8 (EXISTING)	
23							0004	2222			9699	3547							
25 27	RTU-9 (EXISTING)		EX	EX	20	3	3824	8000	3824	8000			3	20	EX	EX		AIR CURTAIN HEATER	
29	K10-9 (EXISTING)		LA		20	3			3024	8000	3824	8000		20				AIR CORTAINTILATER	
31							2667	2107											
33	AIR CURTAIN HEATER		EX	EX	20	3			2667	2107			3	20	EX	EX		BP-1	
35							0044				2667	2107						EQUIPPED OPAGE	
37 39	RTU-10 (EXISTING)				40	3	8314	0	8314	0								EQUIPPED SPACE EQUIPPED SPACE	
11	INTO-TO (EXISTING)				40	5			0314	U	8314	0						EQUIPPED SPACE	

**EXISTING PANEL** 

MANUFACTURER: Square D

SERVES: N/A

AIC RATING: 42,000 SERIES RATED

LOAD TYPE	CONNECTED	DEMAND FACTOR		PANELBOARD NOTES:		PANELBO	ARD TOTALS
HEATING	32000 VA	100.00%	32000 VA	AF - ARC FAULT CKT INTERRUPT	HT - PROVIDE HANDLE TIES TO COMPLY	TOTAL CONNECTED LOAD:	309683 VA
HVAC	271362 VA	100.00%	271362 VA	C# - VIA LTG CONTACTOR #	WITH NEC 210.4(B)	TOTAL ESTIMATED DEMAND:	309683 VA
MISC EQUIP	6321 VA	100.00%	6321 VA	EM - EMERG LTG HANDLE-ON CLAMP	IG - ISOLATED GROUND CIRCUIT	TOTAL CONNECTED CURRENT:	372 A
				EX - EXISTING	LCK - HANDLE PADLOCKABLE-OFF DEVICE	TOTAL ESTIMATED DEMAND	372 A
				FA - RED/HANDLE-ON CLAMP	LO - HANDLE-ON CLAMP		
				GF - GFCI TYPE CIRCUIT BREAKER	OL - REFER TO ONE-LINE DIAGRAM		
				GFEP - GND FAULT EQUIPMENT PROTECTION	PS - POWER SWITCHING BREAKER		
				BREAKER RATED FOR 30mA	ST - SHUNT TRIP		
					SW - SWITCH RATED		

PANELBOARD: L

PANELBOARD:

BUS AMPS: 400 A

MAIN SIZE/TYPE: MLO

 BUS AMPS:
 225 A

 MAIN SIZE/TYPE:
 225A M.C.B.

 VOLTS/PHASE:
 208Y/120 V...

 SUPPLIED BY:
 T

EXISTING...

MANUFACTURER: Square D
AIC RATING: 10,000
SERVES: N/A
MOUNTING: SURFACE
LOCATION: RECEIVING

								VOL	I AIVIPS / F	MASE	_							
CKT NO.	DESCRIPTION	CIRCUI	WIRE SIZE					A		В		С	P	BKR AMP	GND SIZE	WIRE CIRCUI	DESCRIPTION	CK NO
1	TELEPHONE BOARD		EX	EX	20	1	380	200					1	20	EX	EX	TIME CLOCK	2
3	FACP		EX	EX	20	1			200	915			2	20	EX	EX	AIR CURTAIN FAN	4
5	- AIR CURTAIN FAN		EX	EX	20	2					915	915	_	20			AIR CORTAIN FAIN	6
7	AIR CORTAIN FAIN				20	_	915	949					1	20	EX	EX	EXTERIOR LIGHTING	8
9	ROOF RECEPTACLES		EX	EX	20	1			900	900			1	20	EX	EX	RECEPTACLES	10
11	OUTER DOCK DOOR		EX	EX	20	1					500	500	1	20	EX	EX	INNER DOCK DOOR	12
13	DOCK LEVELER		EX	EX	20	1	500	500					1	20	EX	EX	AUXILIARY ELEVATOR POWER	14
15	SP-1		EX	EX	20	1			500	396			1	20	EX	EX	EXTERIOR LIGHTING	16
17	ELEVATOR PIT OUTLET		EX	EX	20	1					180	500	1	20	EX	EX	VESTIBULE LIGHTING	18
19	AUTOMATIC DOORS		EX	EX	20	1	1500	500					1	20	EX	EX	ADDITIONAL VESTIBULE LIGHTING	20
21	VESTIBULE OUTLET		EX	EX	20	1			180	500			1	20	EX	EX	VESTIBULE LIGHTING	22
23	AUTOMATIC DOORS		EX	EX	20	1					1500	180	1	20	EX	EX	VESTIBULE OUTLET	24
25	ADDITIONAL VESTIBULE LIGHTING		EX	EX	20	1	500	0					1	20			SPARE	26
27	SPARE				20	1			0	0			1	20			SPARE	28
29	SPARE				20	1					0	0	1	20			SPARE	30
31	SPARE				20	1	0	0					1	20			SPARE	32
33	SPARE				20	1			0	0			1	20			SPARE	34
35	SPARE				20	1					0	0	1	20			SPARE	36
37	EQUIPPED SPACE						0	0									EQUIPPED SPACE	38
39	EQUIPPED SPACE								0	0							EQUIPPED SPACE	40
41	EQUIPPED SPACE										0	0					EQUIPPED SPACE	42
			T	OTAL	LOAD	(VA):	594	4 VA	449	1 VA	519	0 VA						
					TAL A			0 A	3.	7 A	4	4 A	1					
1													J					

LIGHTING         3345 VA         125.           RECEPTACLES         2340 VA         100.	125.00% 4181 VA 100.00% 2340 VA 100.00% 6280 VA	AF - ARC FAULT CKT INTERRUPT C# - VIA LTG CONTACTOR # EM - EMERG LTG HANDLE-ON CLAMP EX - EXISTING FA - RED/HANDLE-ON CLAMP	HT - PROVIDE HANDLE TIES TO COMPLY WITH NEC 210.4(B) IG - ISOLATED GROUND CIRCUIT LCK - HANDLE PADLOCKABLE-OFF DEVICE	TOTAL CONNECTED LOAD: TOTAL ESTIMATED DEMAND: TOTAL CONNECTED CURRENT: TOTAL ESTIMATED DEMAND	15625 VA 16461 VA 43 A
RECEPTACLES 2340 VA 100.	100.00% 2340 VA 100.00% 6280 VA	EM - EMERG LTG HANDLE-ON CLAMP EX - EXISTING	IG - ISOLATED GROUND CIRCUIT	TOTAL CONNECTED CURRENT:	43 A
	100.00% 6280 VA	EX - EXISTING			
MISC EQUIP 6280 VA 100.			LCK - HANDLE PADLOCKABLE-OFF DEVICE	TOTAL ESTIMATED DEMAND	46.7
		EA DED/HANDLE ON CLAMB			46 A
		FA - RED/HANDLE-ON CLAWF	LO - HANDLE-ON CLAMP		
		GF - GFCI TYPE CIRCUIT BREAKER	OL - REFER TO ONE-LINE DIAGRAM		
		GFEP - GND FAULT EQUIPMENT PROTECTION	PS - POWER SWITCHING BREAKER		
		BREAKER RATED FOR 30mA	ST - SHUNT TRIP		
			SW - SWITCH RATED		

US AMPS: 225 A IAIN SIZE/TYPE: 150 A MCB OLTS/PHASE: 208Y/120 V, 3PH, 4W UPPLIED BY: T1			. Δ <b>ε</b>	a				AI M	ACTURER: C RATING: SERVES: OUNTING: OCATION:	10,000 N/A SURFACE								_ ⁄2a	
		$\sim$	$\frac{\sqrt{2}}{\sqrt{2}}$		1		Г		VOLT AM	PS / PHAS	E		I				~~~	7=1	
CKT NO. DESCRIPTION	ا ح	CIRCUI T	WIRE SIZE	GND SIZE	BKR AMP	P		A		В			P	BKR AMP	GND SIZE	WIRE SIZE	CIRCU T	DESCRIPTION	CKT NO.
1 DESTRAT FANS 1	7	C2,L9	1)0	10	20	1	470	350					1	20	10	19		DESTRAT FANS 2	2
3 DESTRAT FANS 3	$\succ$	C2,L9	√10	10	20	1			350	1200			1	20	10	6	L6	EXTERIOR SIGNAGE 1	4
5 EXTERIOR SIGNAGE 2	7	L6	Ø	10	20	1					1200	1438	1	20	12	12	L1	SÉATING LIGHTING	6
7 SALES FLOOR LIGHTING	<u> </u>	L1	<b>⊰</b> 12	12	20	1	814	889					1	20	12	13	L1	CHECKSTAND/SEATING LIGHTING	8
9 SALES FLOOR LIGHTING		L1	42	12	20	1			1214	1808			1	20	12	1(2	L2	FOOD BAR LIGHTING	10
11 SALES FLOOR LIGHTING		L1	₹2	12	20	1					1033	713	1	20	12	12	L1	SALES FLOOR LIGHTING	12
13 SALES FLOOR LIGHTING	$( \ \ )$	L1	12	12	20	1	1289	885	4.50	40.10			1	20	12	12	L1	SALES FLOOR LIGHTING	14
15 SALES FLOOR LIGHTING	}	L1	10	10	20	1			1452	1010	4050	4400	1	20	12	18	L1	SALES FLOOR LIGHTING	16
17 SALES FLOOR LIGHTING	(-+	L1	712	12	20	1	507	065			1058	1129	1	20	12	12	L1	SALES FLOOR LIGHTING	18
19 RECEIVING LIGHTING 21 VEG VALLEY LIGHTING 1	}	L4	1)2	12	20	1	527	865	810	808			1	20	12 12	12	L5 L4	PANTRY LIGHTING 1 VEG VALLEY LIGHTING 2	20
23 OFFICE AND BREAKROOM LIGHTING	$\leftarrow$	L4	√12 12	12 12	20	1			010	000	1187	1457	1	20	12	12 <u>.</u> 12	L4	COOLER AND FREEZER LIGHTING	24
25 CRISPER LIGHTING	1	LJ	-1/2 -2/2	12	20	1	354	372			1107	1401	1	20	12	12		DAIRY COOLER LIGHTING	26
27 PANTRY LIGHTING 2		L5	12	12	20	1	004	012	563	718			1	20	12	12		LIGHTING	28
29 LIGHTING - MEZZANINE	7		10	10	20	1					1092	1256	1	20	12	12		MBZZANINE/STAIRWELL LIGHTING	30
31 KITCHEN LIGHTING	$\nearrow$	L3	712	12	20	1	749	757					1	20		>		LtGHTING	32
33 SCULLERY/MEAT KITCHEN LIGHTING	7		1)2	12	20	1			638	1200			1	20	12	12	L6	EXTERIOR SIGNAGE 3	34
35 EXTERIOR SIGNAGE 4	$\geq$	L6	<b>1</b> 2	12	20	1					1200	1238	1	20		\		ЦеНТING	36
37 FRIENDS LIGHTING 1	\	L1	1/2	12	20	1	585	0					1	20				SRARE	38
39 FRIENDS LIGHTING 2	$\succ$	L1	₹2	12	20	1			905	0			1	20		}		SPARE	40
41 EQUIPPED SPACE	$\Box$		\ <del>\</del> -								0	0	1	20		<del>[                                    </del>		SPARE	42
CONNEC	- 1	DEMA	AND	TO	MATED	MPS:	74	6 VA 4 A		76 VA 0 A	1400							PANELBOA	DD TOTAL S
	DAD	FAC1					BOARD NOT				UT DOC	IDE LIANS:	- TIE		DI M				
IGHTING 32013		125.0						T INTERRUF	1			IDE HANDLE		IO COM	PLY			TOTAL CONNECTED LOAD:	35583 VA
IISC EQUIP 2400		100.0					LTG CONT					NEC 210.4(E	•					TOTAL ESTIMATED DEMAND:	43586 VA
ther 120		100.0						ANDLE-ON C	CLAMP		IG - ISOLA	TED GROUN	D CIRC	UIT				TOTAL CONNECTED CURRENT:	99 A
ECEPTACLES 1050	VA	100.0	0%	10	50 VA	EX - EX	ISTING				LCK - HAN	DLE PADLO	CKABLE	E-OFF D	EVICE			TOTAL ESTIMATED DEMAND	121 A
						FA - RE	D/HANDLE-0	ON CLAMP			LO - HAND	LE-ON CLAN	1P						
						GF - GF	CI TYPE CIF	RCUIT BREAK	KER		OL - REFE	R TO ONE-L	NE DIA	GRAM					
						GFEP -	GND FAULT	EQUIPMEN	T PROTECTIO	ON	PS - POWE	R SWITCHI	NG BRE	AKER					
						Е	BREAKER R	ATED FOR 30	0mA		ST - SHUN	T TRIP							
											SW - SWIT	CH RATED							

BUS AMPS: 400 A MAIN SIZE/TYPE: 400A M.C.B. VOLTS/PHASE: 208Y/120 V, 3PH SUPPLIED BY: T2	I, 4W						AI0 M	C RATING: SERVES: OUNTING:	•								
								VOLT AM	PS / PHAS	E		<u> </u>				T	
CKT NO. DESCRIPTION	CIRC T.	CUI WIRI	E GND SIZE		Р		Δ.		В	(	3		KR GI	ND W	/IRE CIRCUI	DESCRIPTION	CK NC
1 REFRIG. PRODUCE BINS 1 (	FUTURE)	10	10	20	2	1331	1331	1331	1331			2	20 1	0 /	10	REFRIG. PRODUCE BINS 2 (FUTURE)	2
5 REFRIG. PRODUCE BINS 3		10	10	20	2	1331	1331			1331	1331	2	20 1	0 -	10	REFRIG. PRODUCE BINS 4	6 8
REFRIG. PRODUCE BINS 5	~~~	70	10,	20,	2~		7001	1331	1331			~~	20 1	0	10	REPRIC. PRODUCE BINS 6	10
11 SPARE			Y	20	1	0	323	γ · γ ·	γ · γ	<b>Y3</b> 31 Y	1331	, , ,		-	<u> </u>	COLD BAR (2 HOTS + 1 NEUTRAL)	Υ Ψ <u>2</u>
15 MEAT SAW		کبر 10	10	20	3	M		1117	323	1117	1383				10	,	10
19						1117	1383				1000				10	COLD BAR (2 HOTS + 1 NEUTRAL)	20
21 SPARE 23 KITCHEN SCALE		 12	12	20	1			Line Land	1920	420	960	1	20 1 20 4	0 (	10	BLAST CHILLER FAT TESTER/RCPTS	2 ² 2
25 PREP TABLE 2		12	12	20	1	420	600			120	000	1	20 1	2	12	KITCHEN COUNTER RCPTS	2
27 PREP TABLE 3		12		20	1			360	800	4700	1000	1 :	20 1	2 ′	12	MEAT WRAP/LABEL SYSTEM	2
29 COLD FLIP TOP TABLE 1 31 COLD FLIP TABLE 2		10		20	1	1728	1033			1728	1033	3_	20. 1	2 .	12	MEAT CHOPPER	3
33 SPARE				20	1	0		0	1033		$\sim$		$\sim$	$\frown$			<b>√</b> 3
35 37 ROTISSERIE 1		6	8	50	2	5944	720			5944	0			- 2	 12.	SPARE SLIPERS	3
39 SHUNT TRIP SPACE						59 <del>44</del>	720	0	1920						10	HOT HOLD CABINET 1	4
41 ROTISSERIE 2		6	8	50	2					5944	1920		20 1	0 ′	10	HOT HOLD CABINET 2	4
43 SHUNT TRIP SPACE						5944	900	0	0						12	COLD TABLE PREP SPARE	4
47 GRIDDLE/BROILER		12		20	1					360	900	1		2	12	KITCHEN BUG ZAPPER	
49 SHUNT TRIP SPACE		-				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	360	~~~	777		~ ~~	$\gamma_1$	20 1	2	12	SCALE VY VY VY VY	~\frac{4}{5}
51 CONVENTION OVEN 1 53 SHUNT TRIP SPACE		10	10	20	1			960	2402	0	2402	3	80 4	4	2	HOT BAR (3 HOTS + 1 NEUTRAL)	5: 5:
55 CONVENTION OVEN 2		10		20	4	960	2402				2402			<b>'</b>		THE BANK (GITOTO : TIVE GITOTE)	50
57 SHUNT TRIP SPACE					<u></u>			0	2667	700	2007		20 4	_	0	DIZZA OVENIA	5
59 DOUBLE STACK STEAMER 617 SHUNT TRIP SPACE	$\overline{}$	~ <del>\</del> _ <del>\</del>	- <del></del> 12	20	<u></u>	0	2667			720	2667	3   1	30   1	0	8	PIZZA OVEN 1	6
63 PIZZA SOUP BAR (2 HOTS +	1 NEUTRAL)	6	10	50	2			6750	0					-		SHUNT TRIP SPACE	6
67	,					3000	2667			6750	2667	3	30 1	0	8	PIZZA OVEN 2	6
69 HIGH SPEED OVEN		8	10	30	2			3000	2667								7
73 EQUIPPED SPACE		تىلت	ىتىپ	بتها	7	0	2667			0	0		-	-		SHUNT TRIP SPACE	7:
75 EQUIPPED SPACE			<u></u>			U	2007	0	2667			3	30   1	0	8	PIZZA OVEN 3	7
77 EQUIPPED SPACE					+					0	2667						7
<ul><li>79 EQUIPPED SPACE</li><li>81 EQUIPPED SPACE</li></ul>		_							M				<del></del>		ستبات	SHUNT TRIP SPACE	8
83 EQUIPPED SPACE										0	0					EQUIPPED SPACE	8
	·		ΓΟΤΑL	LOAD	(VA):		8 VA	3390	09 VA	4490	5 VA				·		
			TO	OTAL A	AMPS:	34	3 A	28	33 A	382	2 A						
		EMAND		MATED						-:							<b></b> -
LOAD TYPE KITCHEN		55.00%				SOARD NOT	<b>ES:</b> T INTERRUF	)T		UT DDO	IDE HANDLE	TIESTS	COMPLY	,		TOTAL CONNECTED LOAD: 1	<b>D TOTA</b> 118971
MISC EQUIP		00.00%				LTG CONTA		· 1			NEC 210.4(E		COIVIPL	ı			95246
RECEPTACLES		00.00%					ANDLE-ON C	CLAMP			TED GROUN	,	Γ			TOTAL CONNECTED CURRENT:	33240
REFRIGERATION		00.00%		48 VA			0 0	**			DLE PADLO			ICE		TOTAL ESTIMATED DEMAND	264
						D/HANDLE-C	ON CLAMP			LO - HAND	LE-ON CLAN	<b>I</b> P					
					GF - GF	CI TYPE CIR	CUIT BREAK	KER		OL - REFE	R TO ONE-LI	NE DIAGR	AM				
								F PROTECTION	ON		ER SWITCHI	NG BREAK	ER				
	+																
					E	BREAKER RA	ATED FOR 30	0mA		ST - SHUN							
					E	BREAKER RA	ATED FOR 30	0mA		ST - SHUN SW - SWIT							
					E	BREAKER RA	ATED FOR 30	0mA									

EM -EMERG LTG HANDLE-ON CLAMP
EX -EXISTING BY LANDLORD
F -FUTURE CONNECTION
FA -RED/HANDLE-ON CLAMP
GF -GFCI TYPE CIRCUIT BREAKER
L# -LIGHTING CONTROL SCHEME, REF SHEET E110
LCK-HANDLE PADLOCKABLE-OFF DEVICE
LO -HANDLE-ON CLAMP
OL -REFER TO ONE-LINE DIAGRAM
PS -POWER SWITCHING BREAKER
PSE-POWER SWITCHING EMERGENCY BREAKER

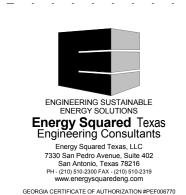
PANEL NOTES LEGEND:

ST -SHUNT TRIP

ALL ELECTRICAL GEAR TO BE FURNISHED BY 365. ELECTRICAL CONTRACTOR TO INSTALL AND CONNECT COMPLETE. brr

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www.brrarch.com
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Consultants



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Issues & Revisions

NO. DATE DESCRIPTION
1 03/06/18 Addendum #1
2 05/21/18 Addendum #2

ect Name

BY WHOLE FOODS MAR DECATUR, GA

365
BY
WHOLE FOODS
MARKET

Project Manager:
EG
Checked By:

Drawn by:
KJG
Document date:

KJG

Document date:
01/26/18

Template date:

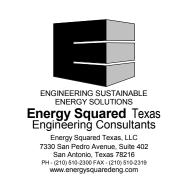
Project No.
62911019
Professional Seal

Professional Seal

05/21/2018
Sheet Title
ELECTRICAL PANEL

Sheet No.

Architect of Record: BOYD W. RAU 6700 Antioch Plaza Suite 300 Merriam, KS 66204 www.brrarch.com Tel: 913-262-9095 Consultants



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**Issues & Revisions** NO. DATE DESCRIPTION 1 03/06/18 Addendum #1 2 05/21/18 Addendum #2

**Project Name** 

KJG Document date 01/26/18

Template date: Project No. 62911019

05/21/2018

**ELECTRICAL PANEL SCHEDULES** 

BRR Original printed on recycled paper

ALL ELECTRICAL GEAR TO BE FURNISHED BY 365. ELECTRICAL CONTRACTOR TO INSTALL AND CONNECT COMPLETE.

L# -LIGHTING CONTROL SCHEME, REF SHEET E110

PSE-POWER SWITCHING EMERGENCY BREAKER

**PANEL NOTES LEGEND:** 

EX -EXISTING BY LANDLORD

F -FUTURE CONNECTION FA -RED/HANDLE-ON CLAMP

LO -HANDLE-ON CLAMP

ST -SHUNT TRIP

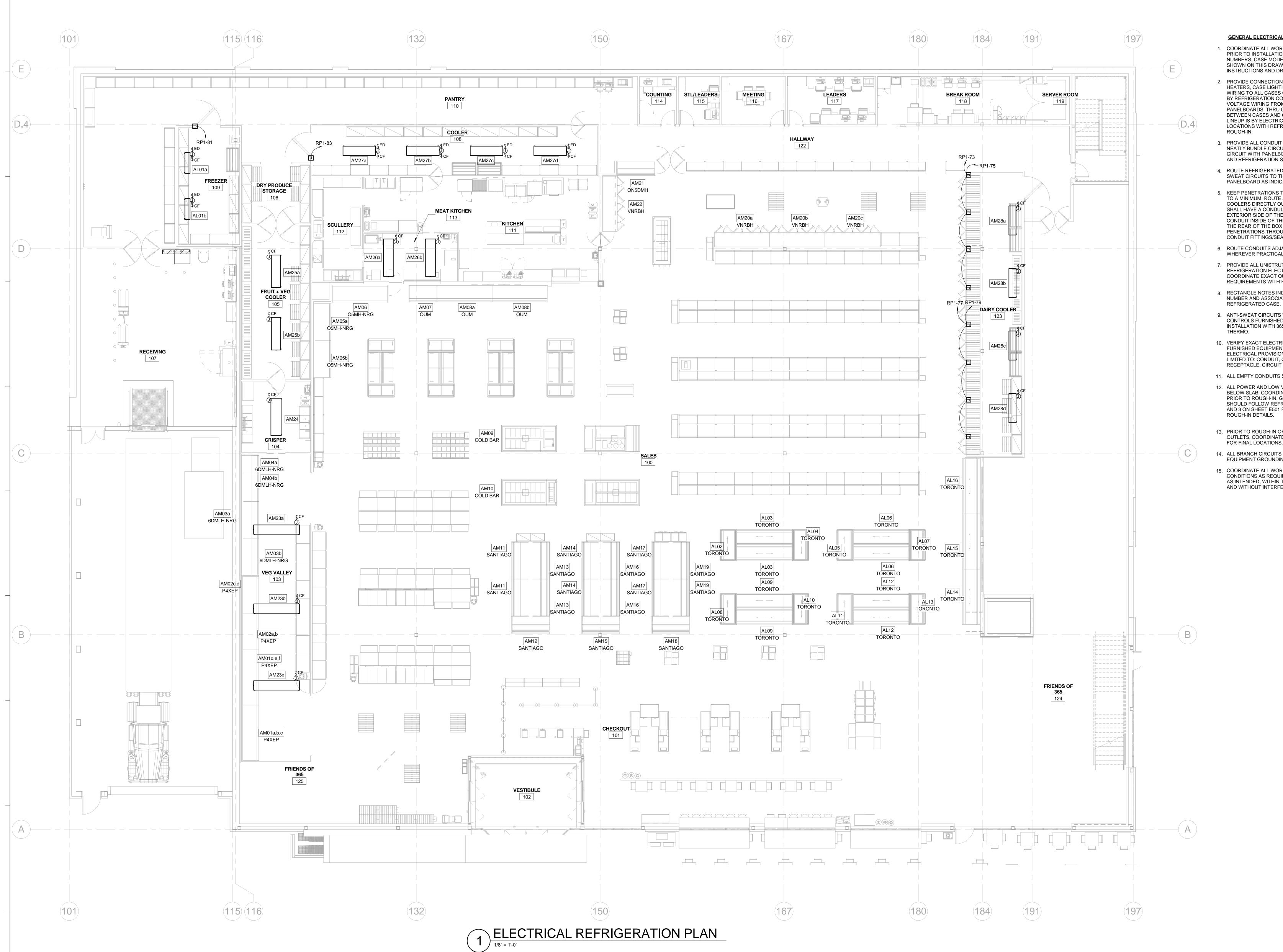
EM -EMERG LTG HANDLE-ON CLAMP

GF -GFCI TYPE CIRCUIT BREAKER

OL -REFER TO ONE-LINE DIAGRAM

PS -POWER SWITCHING BREAKER

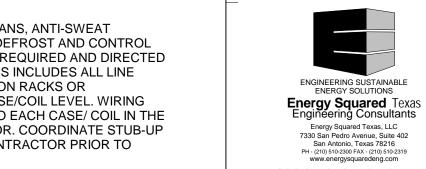
LCK-HANDLE PADLOCKABLE-OFF DEVICE



- 1. COORDINATE ALL WORK WITH REFRIGERATION CONTRACTOR
- 2. PROVIDE CONNECTION OF ALL CASE FANS, ANTI-SWEAT HEATERS, CASE LIGHTING, ELECTRIC DEFROST AND CONTROL WIRING TO ALL CASES ON SYSTEM AS REQUIRED AND DIRECTED BY REFRIGERATION CONTRACTOR. THIS INCLUDES ALL LINE VOLTAGE WIRING FROM REFRIGERATION RACKS OR PANELBOARDS, THRU CONDUIT TO CASE/COIL LEVEL. WIRING BETWEEN CASES AND CONNECTION TO EACH CASE/ COIL IN THE LINEUP IS BY ELECTRICAL CONTRACTOR. COORDINATE STUB-UP LOCATIONS WITH REFRIGERATION CONTRACTOR PRIOR TO
- 3. PROVIDE ALL CONDUIT AND WIRE AS INDICATED ON DRAWING. NEATLY BUNDLE CIRCUITS AND CLEARLY TAG AND LABEL EACH CIRCUIT WITH PANELBOARD AND BRANCH CIRCUIT DESIGNATION AND REFRIGERATION SYSTEM NUMBER.
- 4. ROUTE REFRIGERATED CASE AND COIL FANS, LIGHTS, AND ANTI-SWEAT CIRCUITS TO THEIR RESPECTIVE REFRIGERATION PANELBOARD AS INDICATED.
- 5. KEEP PENETRATIONS THROUGH COOLER AND FREEZER BOXES TO A MINIMUM. ROUTE ALL CONDUITS SERVING FREEZERS AND COOLERS DIRECTLY OUT OF THE BOX. CONDUIT PENETRATIONS SHALL HAVE A CONDULET AS CLOSE AS POSSIBLE ON THE EXTERIOR SIDE OF THE COOLER OR FREEZER. AVOID ROUTING CONDUIT INSIDE OF THE BOX. IF POSSIBLE, ROUTE DIRECTLY OUT THE REAR OF THE BOX IN AN ORDERLY MANNER. SEAL ALL PENETRATIONS THROUGH BOX WITH SILICON SEALANT AND FILL CONDUIT FITTINGS/SEAL OFFS WITH EXPANDING FOAM SEALANT.
- 6. ROUTE CONDUITS ADJACENT TO REFRIGERATION PIPING WHEREVER PRACTICAL, UNLESS NOTED OTHERWISE.
- 7. PROVIDE ALL UNISTRUT SUPPORTS FOR OVERHEAD REFRIGERATION ELECTRICAL CONDUIT WHERE REQUIRED. COORDINATE EXACT QUANTITIES, LOCATIONS AND
- 8. RECTANGLE NOTES INDICATE THE REFRIGERATED CIRCUIT NUMBER AND ASSOCIATED REFRIGERATION UNIT FOR THE
- 9. ANTI-SWEAT CIRCUITS WILL BE CONTROLLED AT THE CASE BY CONTROLS FURNISHED BY MICRO THERMO. COORDINATE INSTALLATION WITH 365 CONSTRUCTION MANAGER AND MICRO
- 10. VERIFY EXACT ELECTRICAL REQUIREMENTS FOR ALL OWNER FURNISHED EQUIPMENT PRIOR TO ROUGH-IN AND ADJUST ELECTRICAL PROVISIONS AS NECESSARY INCLUDING, BUT NOT LIMITED TO: CONDUIT, CONDUCTOR(S), DISCONNECT,
- 11. ALL EMPTY CONDUITS SHALL BE INSTALLED WITH PULL WIRES.
- 12. ALL POWER AND LOW VOLTAGE CONDUITS MAY BE ROUTED BELOW SLAB. COORDINATE ROUTING WITH ALL OTHER TRADES PRIOR TO ROUGH-IN. GENERALLY THE CONDUIT ROUTING SHOULD FOLLOW REFRIGERATION PIPING. REFER TO DETAILS 2 AND 3 ON SHEET E501 FOR ADDITIONAL INFORMATION ON ROUGH-IN DETAILS.
- 13. PRIOR TO ROUGH-IN OF COMMUNICATION AND ELECTRICAL OUTLETS, COORDINATE WITH WHOLE FOODS AND/OR ARCHITECT FOR FINAL LOCATIONS.
- 14. ALL BRANCH CIRCUITS SHALL INCLUDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
- 15. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES.

**GENERAL ELECTRICAL REGFRIGERATION NOTES:** 

PRIOR TO INSTALLATION. VERIFY ALL REFRIGERATION SYSTEM NUMBERS, CASE MODEL NUMBERS, AND STUB UPLOCATIONS SHOWN ON THIS DRAWING WITH REFRIGERATION INSTALLATION INSTRUCTIONS AND DRAWINGS.



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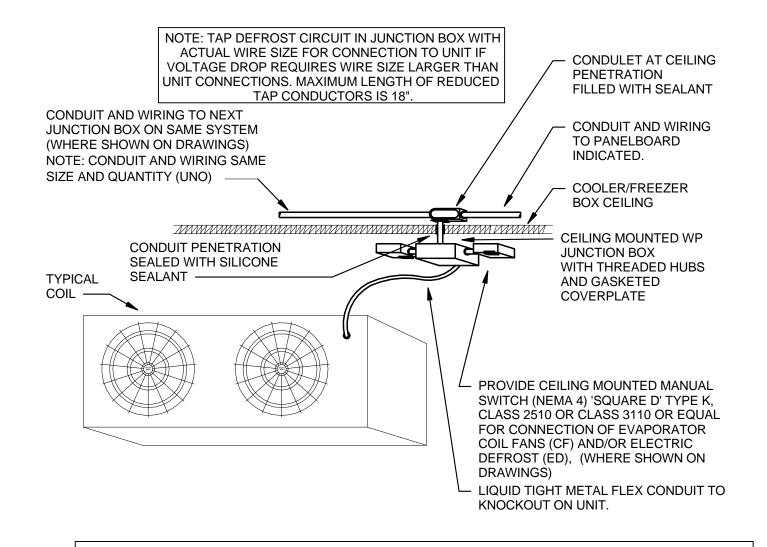
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ELECTRICAL REFRIGERATION PLAN

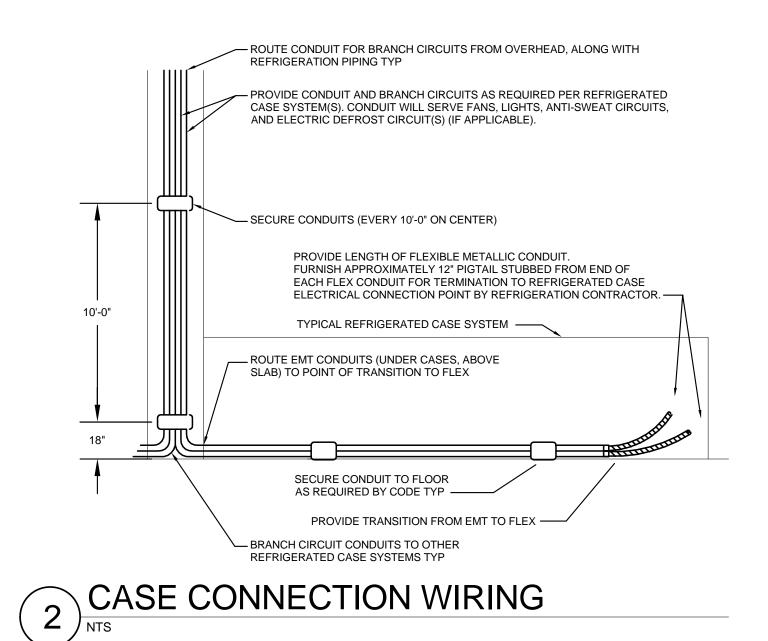
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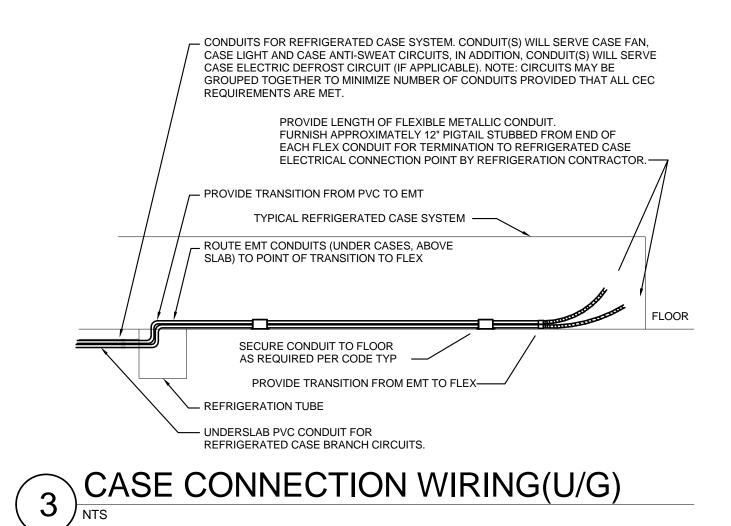
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# **EVAPORATOR COIL CONNECTION DETAIL**

NOTE: DO NOT LOCATE WP JUNCTION BOX DIRECTLY IN FRONT OF EVAPORATOR COIL, OFFSET TO SIDE.





	ION CASE/COIL INFO	I		<u> </u>			CASE/COIL FAN		ASE CONTROLLER TO	_	T					DEFROST (ELECTRIC)
	DESCRIPTION FREEZER	MFR RUSSELL	MODEL# AE54-180B	SIZE	FT/DRS	0.00	0.00	0.00	O.00	0 VOLTS	PH 0	<b>VA</b>	<b>VA/PH</b> 0	WIRE 10	PNLBD-CKT#	CKT (FT) AMPS VOLTS PH VA VA/PH WIRE PNLBD-CKT#
				SYSTEM PO	WER FEED				19.60	208	1	4077	2038	10	RP1-2,4	
b	FREEZER	RUSSELL	AE54-180B	-    SYSTEM PO	- WER FEED	0.00	0.00	0.00	0.00 19.60	208	0	0 4077	2038	10 10	- RP1-6,8	19.60   208   1   4077   2038   -   -
	FROZEN BUNKER	ARNEG	TORONTO	6	FT	0.10	0.60	1.20	1.90	120	1	228	228	12	-	5.61 208 1 1167 583 12 RP1-10,12
	FROZEN BUNKER	ARNEG	TORONTO	SYSTEM PO 12	FT FEED	0.50	1.80	2.70	1.90 5.00	120 120	1	228 600	228 600	12 12	RP1-5	23.58 208 1 4905 2452 10 RP1-14,16
	EDOZENI BUNUED	ADMIC		SYSTEM PO		0.10	0.60	1.20	5.00	120	1	600	600	12	RP1-7	5 61 200 1 1167 502 12 BB1 10 20
	FROZEN BUNKER	ARNEG	TORONTO	6 SYSTEM PO	FT WER FEED	0.10	0.60	1.20	1.90 1.90	120 120	1	228 228	228 228	12 12	RP1-9	5.61 208 1 1167 583 12 RP1-18,20
	FROZEN BUNKER	ARNEG	TORONTO	6 SYSTEM PO	FT WED EEED	0.10	0.60	1.20	1.90 1.90	120 120	1	228 228	228 228	12 12	- RP1-11	5.61 208 1 1167 583 12 RP1-22,24
	FROZEN BUNKER	ARNEG	TORONTO	12	FT	0.50	1.80	2.70	5.00	120	1	600	600	12	-	23.58 208 1 4905 2452 10 RP1-26,28
	FROZEN BUNKER	ARNEG	TORONTO	SYSTEM PO	WER FEED FT	0.10	0.60	1.20	5.00 1.90	120 120	1	600 228	600 228	12 12	RP1-13	5.61 208 1 1167 583 12 RP1-30,32
	EDOZEN BUNIVER	ADMIC		SYSTEM PO		0.10	0.50	1.20	1.90	120	1	228	228	12	RP1-15	5.51 200 4 4167 502 42 BB1 24.25
	FROZEN BUNKER	ARNEG	TORONTO	6 SYSTEM PO	FT WER FEED	0.10	0.60	1.20	1.90 1.90	120 120	1	228 228	228 228	12 12	RP1-17	5.61 208 1 1167 583 12 RP1-34,36
	FROZEN BUNKER	ARNEG	TORONTO	12 SYSTEM PO	FT WED EEED	0.50	1.80	2.70	5.00 5.00	120 120	1	600 600	600 600	12	- RP1-19	23.58 208 1 4905 2452 10 RP1-38,40
	FROZEN BUNKER	ARNEG	TORONTO	6	FT	0.10	0.60	1.20	1.90	120	1	228	228	12	- KP1-19	5.61 208 1 1167 583 12 RP1-44,46
	FROZEN BUNKER	ARNEG	TORONTO	SYSTEM PO	WER FEED FT	0.10	0.60	1.20	1.90 1.90	120 120	1	228 228	228 228	12 12	RP1-21	5.61 208 1 1167 583 12 RP1-48,50
				уутем ро	WER FEED				1.90	120	1	228	228	12	RP1-23	
	FROZEN BUNKER	ARNEG	TORONTO	12 SYSTEM PO	FT WER FEED	0.50	1.80	2.70	5.00 5.00	120 120	1	600 600	600 600	12 12	- RP1-25	23.58 208 1 4905 2452 10 RP1-52,54
	FROZEN BUNKER	ARNEG	TORONTO	6	FT	0.10	0.60	1.20	1.90	120	1	228	228	12	-	5.61 208 1 1167 583 12 RP1-56,58
1	FROZEN BUNKER	ARNEG	TORONTO	SYSTEM PO 12	WER FEED FT	0.50	1.80	2.70	1.90 5.00	120 120	1	228 600	228 600	12 12	RP1-27	23.58 208 1 4905 2452 10 RP1-60,62
			9	уутем ро	WER FEED				5.00	120	1	600	600	12	RP1-29	
	FROZEN BUNKER	ARNEG	TORONTO	12 SYSTEM PO	FT WER FEED	0.50	1.80	2.70	5.00 5.00	120 120	1	600 600	600 600	12 12	RP1-31	23.58 208 1 4905 2452 10 RP1-64,66
	FROZEN BUNKER	ARNEG	TORONTO	12 SYSTEM PO	FT WER FEED	0.50	1.80	2.70	5.00 5.00	120 120	1	600 600	600 600	12 12	- RP1-33	23.58 208 1 4905 2452 10 RP1-68,70
	PRODUCE CASES	HUSSMANN	P4X-EP	12	FT	0.70	1.80	0.00	2.50	120	1	300	300	12	- IVE 1-33	
1d,e,f	PRODUCE CASES	HUSSMANN	P4X-EP	12 SYSTEM PO	FT WER FEED	0.70	1.80	0.00	2.50 5.00	120 120	1	300 600	300 600	12 12	- RP2-2	
	PRODUCE CASES	HUSSMANN	P4X-EP	8	FT	0.45	1.20	0.00	1.65	120	1	198	198	12	-	
)2d,e,f	PRODUCE CASES	HUSSMANN	P4X-EP	8 SYSTEM PO	FT WER FEED	0.45	1.20	0.00	1.65 3.30	120 120	1	198 396	198 396	12 12	- RP2-4	
	PRODUCE CASES	HILL PHOENIX	6DMLH-NRG	8	FT	0.45	0.90	0.00	1.35	120	1	162	162	12	-	
03b	PRODUCE CASES	HILL PHOENIX	6DMLH-NRG	8   SYSTEM PO	FT WER FEED	0.45	0.90	0.00	1.35 2.70	120 120	1	162 324	162 324	12	- RP2-5	
	PRODUCE CASES	HILL PHOENIX	6DMLH-NRG	4	FT	0.20	0.44	0.00	0.64	120	1	77	77	12	-	
)4b	PRODUCE CASES	HILL PHOENIX	6DMLH-NRG	6 SYSTEM PO	FT WER FEED	0.30	0.66	0.00	0.96 1.60	120 120	1	115 192	115 192	12 12	- RP2-6	
	SEAFOOD CASES SEAFOOD CASES	HILL PHOENIX HILL PHOENIX	O5MH-NRG O5MH-NRG	8	FT FT	0.35 0.35	0.95 0.95	0.00	1.30 1.30	120 120	1	156 156	156 156	12 12	-	
			9	уутем ро	WER FEED				2.60	120	1	312	312	12	RP2-7	
16	MEAT CASES	HILL PHOENIX	O5MH-NRG	12 SYSTEM PO	FT WER FEED	0.50	1.40	0.00	1.90 1.90	120 120	1	228 228	228 228	12 12	- RP2-8	
)7	MEAT CASES	HILL PHOENIX	оим	6	FT	0.30	0.20	0.20	0.70	120	1	84	84	12	-	
08a	MEAT CASES	HILL PHOENIX	OUM	SYSTEM PO 12	WER FEED FT	0.55	0.30	0.40	0.70 1.25	120 120	1	84 150	84 150	12 12	RP2-9	
	MEAT CASES	HILL PHOENIX	ОИМ	12	FT WER EEED	0.55	0.30	0.40	1.25 2.50	120	1	150	150	12	- PD2-10	
)9	COLD BAR	HILL PHOENIX	SBI-512R	SYSTEM PO 12	FT	0.50	1.20	0.00	1.70	120 120	1	300 204	300 204	12 12	RP2-10	
10	COLD BAR	HILL PHOENIX	SBI-512R	SYSTEM PO	WER FEED	0.70	2.20	0.00	1.70 2.90	120 120	1	204 348	204 348	12 12	RP2-11	
			9	уутем ро	WER FEED				2.90	120	1	348	348	12	RP2-12	
1	BEVERAGE	ARNEG	SANTIAGO	16 SYSTEM PO		1.00	0.70	0.00	1.70 1.70	120 120	1	204 204	204 204	12 12	- RP2-13	
12	BEVERAGE	ARNEG	SANTIAGO	8	FT	0.50	0.30	0.00	0.80	120	1	96	96	12	-	
L3	BEVERAGE	ARNEG	SANTIAGO	SYSTEM PO 16		1.00	0.70	0.00	0.80 1.70	120 120	1	96 204	96 204	12 12	RP2-14	
				SYSTEM PO	WER FEED				1.70	120	1	204	204 204	12	RP2-15	
	BEVERAGE	ARNEG		16 SYSTEM PO		1.00	0.70	0.00	1.70 1.70	120 120	1	204 204	204	12 12	RP2-16	
15	BEVERAGE	ARNEG	SANTIAGO	8 SYSTEM PO		0.50	0.30	0.00	0.80 0.80	120 120	1	96 96	96 96	12 12	- RP2-17	
.6	BEVERAGE	ARNEG	SANTIAGO	16	FT	1.00	0.70	0.00	1.70	120	1	204	204	12	-	
.7	BEVERAGE	ARNEG	SANTIAGO	SYSTEM PO 16		1.00	0.70	0.00	1.70 1.70	120 120	1	204 204	204 204	12 12	RP2-18	
				SYSTEM PO	WER FEED				1.70	120	1	204	204	12	RP2-19	
8	BEVERAGE	ARNEG	SANTIAGO	8   SYSTEM PO	FT WER FEED	0.50	0.30	0.00	0.80 0.80	120 120	1	96 96	96 96	12 12	- RP2-20	
.9	BEVERAGE	ARNEG	SANTIAGO	16	FT	1.00	0.70	0.00	1.70	120	1	204	204	12	-	
.0a	BEER AND WINE	HILL PHOENIX	VNRBH	SYSTEM PO	DR DR	0.60	0.67	2.07	1.70 3.33	120 120	1	204 400	204 400	12 12	RP2-21	
20b	BEER AND WINE	HILL PHOENIX	VNRBH	6	DR	0.60	0.67	2.07	3.33	120	1	400	400	12	-	
20c	BEER AND WINE	HILL PHOENIX	VNRBH	6 SYSTEM PO	DR WER FEED	0.60	0.67	2.07	3.33 10.00	120 120	1	400 1200	400 1200	12 12	- RP2-22	
21	CHILLED SPECIALTY	HILL PHOENIX	ON5DMH	8 SVSTEM DO	FT WED EEED	4.20	0.90	0.00	5.10	120	1	612	612	12	- PD2-22	
2	CHILLED SPECIALTY	HILL PHOENIX	VNRBH	6 6	DR DR	0.60	0.70	2.10	5.10 3.40	120 120	1	612 408	612 408	12 12	RP2-23	
3a	VEG VALLEY	RUSSELL	RWF340	SYSTEM PO	WER FEED	0.00	3.60	0.00	3.40 3.60	120 120	1	408 432	408 432	12 12	RP2-24	
	VEG VALLEY	RUSSELL	RWF340	-	-	0.00	3.60	0.00	3.60	120	1	432	432	12	-	
	VEG VALLEY	RUSSELL	RWF340			0.00	3.60	0.00	3.60			432	432			

GENERAL NOTES:

A. "PNLBD-CKT#" REFERS TO BRANCH CIRCUIT POWER SOURCE. SOURCE MAY BE VIA PANELBOARD OR A BUSSBAR TERMINATION CABINET AT THE REFRIGERATION EQUIPMENT. THE CIRCUIT NUMBERS SHOWN HERE ARE PRELIMINARY AND

MAY BE SUBJECT TO CHANGE. COORDINATE THE EXACT CIRCUIT TERMINATION LOCATION WITH THE EQUIPMENT SUPPLIER AND OTHER TRADES PRIOR TO INSTALLATION. B. BRANCH CIRCUIT LENGTHS ARE SHOWN FOR CALCULATION PURPOSES ONLY AND SHALL NOT BE USED FOR CONTRACTOR TAKEOFFS OR BIDDING. NOTIFY ENGINEER IF ACTUAL INSTALLED LENGTH DIFFERS SIGNIFICANTLY FROM THAT SHOWN.

SYSTEM POWER FEE

SYSTEM POWER FEE

SYSTEM POWER FE

SYSTEM POWER FEI

RUSSELL

RUSSELL

RUSSELL

RUSSELL

RUSSELL

RUSSELL

RUSSELL

RWF130

ITA36-240

ITA36-240

ITA36-240

FRUIT AND VEGETABLE COOLER RUSSELL

AM26 OPEN MEAT KITCHEN

GROCERY COOLER

GROCERY COOLER

GROCERY COOLER

DAIRY COOLER

DAIRY COOLER

DAIRY COOLER

FRUIT AND VEGETABLE COOLER RUSSELL

C. REFER TO THE GENERAL NOTES, PLAN NOTES AND SPECIFICATIONS FOR MORE INFO. D. THE CIRCUIT LENGTH FOR THE CASE/COIL IS ONLY THE DISTANCE FROM THE LOCAL JB/CONTROLLER TO THE NEARBY CASE. THE DISTANCE SHOWN FOR THE MAIN POWER FEED IS FROM THE SOURCE PANELBOARD/BUSSBAR TO THE JB/CONTROLLER NEAR THE CASE/COIL.

0.00

0.00

E. FOR CASES/COILS WITH SHARED BRANCH CIRCUITS: RUN THE LARGEST WIRE SIZE INDICATED FROM THE PANELBOARD/BUSSBAR TO THE NEAREST CASE/COIL. SMALLER WIRE SIZE MAY THEN BE RUN TO ADJACENT EQUIPMENT AS INDICATED; #12 MINIMUM.

0.00 2.40 0.00

0.00 4.80 0.00

0.00

0.00

3.60

3.60

F. SIZE CONDUITS AS REQUIRED PER CODE FOR CONDUIT TYPE AND NUMBER OF CONDUCTORS, 1/2" MINIMUM. IF ALLOWED BY TENANT, CONDUCTORS MAY BE COMBINED INTO A SINGLE CONDUIT, BUT CONTRACTOR MUST DERATE CONDUCTOR AMPACITY AND ADJUST WIRE SIZE PER CODE. G. CONDUITS SHALL BE ROUTED WITH REFRIGERATION PIPING WHEREVER PRACTICABLE IN ACCORDANCE WITH TENANT REQUIREMENTS. UNLESS NOTED OTHERWISE, CONDUITS/RACEWAY SHALL BE CONCEALED FROM CUSTOMER VIEW WHEREVER PRACTICABLE.

H. ALL CONDUCTOR SIZES ARE BASED ON 75 DEG C RATED TERMINATION AND COPPER CONDUCTORS WITH TYPE THHN/THWN-2 INSULATION; FOR TERMINATION OR INSULATION TYPES RATED LESS THAN 75 DEG C, MODIFY SIZES PER CODE.

I. SELECT CIRCUIT WIRE SIZES HAVE BEEN UPSIZED IN ORDER TO MAINTAIN VOLTAGE DROP TO LESS THAN 3%. J. IN SOME INSTANCES, SUPPLMENTARY HTR LOADS MAY BE ON THE SAME CIRCUIT AS THE FANS OR A/S HTRS. CIRCUIT LOADS ARE EITHER NON-COINCIDENT (MAX) OR SIMULTANEOUS (TOTAL). INFO SHOWN IS BASED ON MFR INFO AVAILABLE DURING THE DESIGN PHASE AND MAY BE SUBJECT TO CHANGE.

K. REFRIGERATED CASES MUST HAVE CODE REQUIRED APPLIANCE DISCONECTING MEANS EITHER VIA A LOCAL DISCONNECT OR LOCK-OFF STYLE CIRCUIT BREAKER/SWITCH.

0.00

L. EACH REFRIGERATED CASE/COIL CIRCUIT SHALL HAVE AN UPSTREAM OVER-CURRENT PROTECTION DEVICE SIZED TO PROPERLY PROTECT THE INTERNAL EQUIPMENT MFR. CONTRACTOR SHALL PROVIDE LOCAL FUSE PROTECTION AT THE CASE IF REQUIRED FOR CIRCUITS CONNECTED TO MULTIPLE CASES WITH AN UPSTREAM OCPD SIZE GREATER THAN 20A: PROVIDE FUSES INSTALLED AT EACH CASE WIRING. COORDINATE FUSE SIZE WITH MANUFACTURER'S RECOMMENDED MAXIMUM OVER-CURRENT PROTECTION (MOCP) DEVICE SIZE. M. FOR EACH EVAPORATOR COIL, PROVIDE WP CEILING MOUNTED JB AND MANUAL SWITCH(ES) (NEMA 4) FOR CONNECTION OF EVAPORATOR COIL FANS (CF) AND/OR ELECTRIC DEFROST THAT EXCEED 30 AMPS

 10.80
 120
 1
 1296
 1296
 12
 RP2-25

 2.40
 120
 1
 288
 288
 12

2.40 | 120 | 1 | 288 | 288 | 12 | 2.40 | 120 | 1 | 288 | 288 | 12

4.80 | 120 | 1 | 576 | 576 | 12

0.00 | 120 | 1 | 0 | 0

120 1 0

120 1 432 432

3.60 120 1 432 432

3.60 120 1 432 432

3.60 120 1 432 432

0.00

3.60

120 1 288 288 12 RP2-26

120 1 576 576 12 RP2-28

120 1 1728 1728 10 RP2-30

8653 4326 6 RP2-29,31

PROVIDE CONDUIT AND WIRING BETWEEN JB, SWITCH(ES) AND COIL. DO NOT LOCATE WP JB OR SWITCHES DIRECTLY IN FRONT OF EVAPORATOR COIL. REFER TO DETAIL ?/E-? FOR MORE INFORMATION. N. IN SOME INSTANCES, 208/1 CASE DEFROST MAY BE FIELD CONNECTED TO 208/3 CIRCUIT. COORDINATE THE EXACT CIRCUITING REQUIREMENTS WITH TENANT AND OTHER TRADES PRIOR TO INSTALLATION. REFER TO DETAIL ?/E-? FOR FIELD WIRING INFORMATION.

O. THIS SCHEDULE IS INTENDED FOR USE WHEN THE REFRIGERATED CASES/COILS ARE POWERED VIA A NEARBY CASE CONTROLLER THAT HAS A SINGLE LARGE FEED SERVING ONE OR MORE CASES/COILS. THE CONTROLLER THAT HAS A SINGLE LARGE FEED SERVING ONE OR MORE CASES/COILS. OVER-CURRENT PROTECTION FOR EACH CASE BRANCH CIRCUIT. THIS TOOL/SCHEDULE IS USED TO SUM UP THE TOTAL LOAD PER CASE TO THE ASSOCIATED CONTROLLER.

1. THE ELECTRICAL REQUIREMENTS FOR THIS CASE/COIL ARE SUBJECT TO CHANGE. COORDINATE THE EXACT REQUIREMENTS WITH TENANT AND EQUIPMENT NAMEPLATE PRIOR TO INSTALLATION AND ADJUST ELECTRICAL PROVISIONS AS NEEDED.

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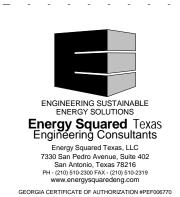
ELECTRICAL REFRIGERATION SCHEDULE & DETAILS

VOLTS	MPS: 600 A  SIZE/TYPE: 600A M.C.B.  S/PHASE: 208Y/120 V, 3PH  LIED BY: T3	I, 4W							AIC M	ACTURER: C RATING: SERVES: OUNTING: OCATION:	SURFACE									
СКТ			CIRCUI	WIRE	GND	BKR			^	VOLT AMI	PS/PHAS				BKR	GND	WIRE	CIRCUI		
NO.	DESCRIPTION		Т	SIZE	SIZE	AMP	Р	24730	<b>A</b> 8209			,	<i>,</i>	Р	AMP	SIZE	SIZE	Т	DESCRIPTION	
	PANEL "RP1"			4/0	4	225	3	24730	0209	23225	3924			3	225	4	4/0		PANEL "RP2"	
5	TARLE IN I			4/0	7	220				ZOZZO	0024	16023	8816	-	220	_	4/0			
7								26299	1513			10020	0010							
9	COMPRESSOR RACK			350	4	300	3			26299	1513			3	20	12	12		GAS COOLER	
11	-											26299	1513		-					
13								1513	0										EQUIPPED SPACE	
	GAS COOLER			12	12	20	3			1513	0								EQUIPPED SPACE	
17												1513	0						EQUIPPED SPACE	
	EQUIPPED SPACE							0	0										EQUIPPED SPACE	
	EQUIPPED SPACE									0	0								EQUIPPED SPACE	
	EQUIPPED SPACE											0	0						EQUIPPED SPACE	
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	EQUIPPED SPACE									-	U	0	0						EQUIPPED SPACE	
71	EQUITED OF NOE						(VA):	6226	64 VA	5647	'4 VA	5416							LWOII I ED OI NOL	
				- ''			MPS:		2 A		4 A	45		+						
_OAD T	<b>ҮРЕ</b>	CONNECTED LOAD	DEMA FACT			IATED MAND	PANEL	BOARD NOT	ES:			_							PANELBO	ARD TOT
MISC I	EQUIP	5696 VA	100.0	0%	569	96 VA							IDE HANDLI	E TIES T	O COM	PLY			TOTAL CONNECTED LOAD:	17290
RECE	PTACLES	720 VA	100.0	0%	72	20 VA	C# - VIA	LTG CONT	ACTOR #			WITH	NEC 210.4(E	3)					TOTAL ESTIMATED DEMAND:	17290
REFRI	GERATION	166486 VA	100.0	0%	16648	36 VA						IG - ISOLA	TED GROUN	ND CIRC	UIT	TOTAL CONNECTED CURRENT:	4			
		EX - EXISTING						LCK - HAN	DLE PADLO	CKABLE	-OFF D	EVICE		TOTAL ESTIMATED DEMAND	4					
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			_							N. I	-									
								ENT PROTECTION PS - POWER SWITCHING BREAKER												
							I	BREAKER RA	ATED FOR 30	0mA		ST - SHUN								
												SW - SWIT	CH RATED							

CKT NO.									OCATION:	SURFACE									
		CIRCUI	WIRE	GND	BKR					PS / PHASE				BKR	GND	WIRE	CIRCUI		СК
1	DESCRIPTION	T	SIZE		AMP	Р	180	2039	E	B 	(	3	Р	AMP	SIZE	SIZE	Т	DESCRIPTION	NC 2
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	FANS/AS/LTG FANS/AS/LTG	LCK LCK	RS RS		20	1	600	2039			228	2039	2	25		RS	LCK	AL01b COIL FANS/DEFROST	8
9 AL04 CASE	FANS/AS/LTG	LCK	RS		20	1			228	584			2	20		RS	I CK	AL02 CASE DEFROST	1
	FANS/AS/LTG	LCK	RS		20	1	000	0.450			228	584		20		11.0	LOIN	ALUZ CAGE DEI NOGT	1
	FANS/AS/LTG FANS/AS/LTG	LCK LCK	RS RS		20	1	600	2453	228	2453			2	30		RS	LCK	AL03 CASE DEFROST	1
	FANS/AS/LTG	LCK	RS		20	1			220	2400	228	588		00		D0	1.01/	ALOA OAOE DEEDOOT	1
	FANS/AS/LTG	LCK	RS		20	1	636	588					2	20		RS	LCK	AL04 CASE DEFROST	2
	FANS/AS/LTG	LCK	RS		20	1			228	588	000	500	2	20		RS	LCK	AL05 CASE DEFROST	22
	FANS/AS/LTG FANS/AS/LTG	LCK LCK	RS RS		20	1	600	2453			228	588							2
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33 AL16 CASE 35 EQUIPPED	FANS/AS/LTG SPACE	LCK	RS 		20	1			600	588	0	588	2	20		RS	LCK	AL08 CASE DEFROST	3
37 EQUIPPED							0	2453			U	300		00		D0	1.01/	ALOO CAOE DEEDOOT	3
39 EQUIPPED	SPACE								0	2453			2	30		RS		AL09 CASE DEFROST	4
41 EQUIPPED							0	500			0	0						EQUIPPED SPACE	4
43 EQUIPPED 45 EQUIPPED							0	588	0	588			2	20		RS	LCK	AL10 CASE DEFROST	4
47 SPARE	OI AOL				20	1			0	300	0	584				- DO	1.014	AL44 0405 DEEDOOT	4
49 SPARE					20	1	0	584					2	20		RS	LCK	AL11 CASE DEFROST	50
51 SPARE					20	1			0	2453		- 1	2	30		RS	LCK	AL12 CASE DEFROST	52
53 SPARE 55 SPARE					20	1	0	584			0	2453							5 ₀
57 SPARE					20	1	U	304	0	584			2	20		RS	LCK	AL13 CASE DEFROST	5
59 SPARE					20	1					0	2453	2	30		RS	I CK	AL14 CASE DEFROST	6
61 SPARE					20	1	0	2453	0	0.450				00				ALT ONGE BET NOOT	6
63 SPARE 65 SPARE					20	1			0	2453	0	2453	2	30		RS	LCK	AL15 CASE DEFROST	66
67 SPARE					20	1	0	2453				2100		20		DC	1.01/	AL40 CACE DEEDOCT	6
69 SPARE					20	1			0	2453			2	30		RS		AL16 CASE DEFROST	7
71 SPARE	NED A C 4				20	1	1000				0	0	1	20				SPARE SPARE	7:
73 DAIRY COC 75 DAIRY COC		LCK LCK	10		20	1	1000	0	1248	0			<u> </u>	20 20				SPARE	7
77 DAIRY COC		LCK	10		20	1			12.10		1000	0	1	20				SPARE	78
79 DAIRY COC		LCK	10		20	1	1248	0										EQUIPPED SPACE	8
81 FREEZER H		LCK	10		20	1			600	0	600	0						EQUIPPED SPACE	8:
83 COOLER H	EATTAPE	LCK	10 T	ΟΤΔΙ	20 (	•	2473	0 \/Δ	2322	25 VA	600 1602	3 VΔ						EQUIPPED SPACE	8
					TAL AN		215			3 A	134								
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MISC EQUIP	5696 VA	100.0	00%	569	6 VA AF	F - ARC	FAULT CK	INTERRUP	Т		HT - PROV	IDE HANDLE	TIES T	ОСОМ	PLY			TOTAL CONNECTED LOAD:	63977 \
RECEPTACLES	360 VA	100.0	00%		_		TG CONTA				WITH	NEC 210.4(B)						TOTAL ESTIMATED DEMAND:	63977
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						X - EXIS						DLE PADLOC		-OFF D	EVICE			TOTAL ESTIMATED DEMAND	178
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CKT NO.  2  4  6  8  10  12  14  16  18  20  22	DESCRIPTION  AM01 CASE FANS/LTG  AM02 CASE FANS/LTG  AM04 CASE FANS/LTG  AM06 CASE FANS/LTG  AM08 CASE FANS/LTG  AM10 CASE FANS/LTG  AM12 CASE FANS/LTG  AM14 CASE FANS/LTG  AM14 CASE FANS/LTG	AMC AMC	LCK LCK	E L	WIRE SIZE RS RS	IZE		MP :		AM	Р	P	Р	P						E	PS/PHAS	_T AMF	VOL															
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20	AM16 CASE FANS/LTG	AM1	LCK	; L	RS			:0	20	20	1	1	1	1	1						204	204	2					1	20			RS	(	LCK		SE FANS/LTG	M13 CASE	5
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22	AM18 CASE FANS/LTG				RS				20		1	1	1	1	1									96		204		1	20			RS		LCK		SE FANS/LTG	M17 CASE	9
	AM20 CASE FANS/AS/LTG				RS			:0	20	20	1	1	1	1	1						1200	204	2					1	20			RS		LCK		SE FANS/LTG		
24	AM22 CASE FANSAS//LTG				RS				20		1	1	1	1	1		8	408	612									1	20			RS		LCK		SE FANS/LTG		
26	AM24 COIL FANS				RS				20		1	1	1	1	1									288		1296		1	20			RS		LCK			AM23 COIL	
28	AM26 COIL FANS				RS			_	20		1	1	1	1	1						576	576	5					1	20	_		RS	(	LCK		L FANS	M25 COIL	
30	AM28 COIL FANS				RS			:0	20	20	1		1	1	1		28	1728	700									2	60			RS		LCK		L FANS/DEFROST	M27 COIL	9
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OAD: 20949 VA	TOTAL CONNECTED LOAD:		HT - PROVIDE HANDLE TIES TO COMPLY									Н			PT	INTERRU	KTI	AULT C	RC F	AF - AF	VA	360	ECEPTACLES 360 VA 100.00%															
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Architect of Record: BOYD W. RAU 6700 Antioch Plaza Suite 300 Merriam, KS 66204 www.brrarch.com Tel: 913-262-9095 Fax: 913-262-9044 Consultants



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ELECTRICAL
REFRIGERATION PANEL
SCHEDULES
Sheet No.

#### **DISCIPLINE - ELECTRICAL**

THE FOLLOWING CONNECTIONS;

### FOR THE ATTENTION OF INSTALLING ELECTRICAL CONTRACTORS

SCOPE OF WORK: STORE FUSION PLATFORM (SFP), DEMAND LIMITING, ENERGY RESOURCE MANAGER (ERM2) AND INDOOR AND OUTDOOR ENVIRONMENTAL SENSORS THIS LOCATION SHALL HAVE ONE STORE FUSION PLATFORM (SFP) WHICH SHOULD BE LOCATED NEAR THE MAIN DISTRIBUTION PANEL. THE INSTALLATION WILL COMPRISE OF

THE SFP REQUIRES A 3 PHASE SUPPLY ON THE SAME POTENTIAL AS THE STORES MAIN FEED, FED FROM THE EMERGENCY PANEL.

THE INSTALLATION OF A NEW WAN CONNECTION FROM THE STORE'S NETWORK NEEDS TO BE INSTALLED AND CONNECTED TO THE LABELED PC WAN PORT LOCATED ON THE INSIDE OF THE SFPS DOOR. PARASENSE MUST BE CONTACTED WHEN THE SFP IS POWERED AND CONNECTED TO ENSURE REMOTE COMMUNICATIONS ARE ESTABLISHED.

PATCH CABLES WILL NEED TO BE RUN FROM THE HUB IN THE SFP TO ALL PARASENSE RM EQUIPMENT ONSITE.

A NEW RS485 NETWORK FOR THE INTERNAL & EXTERNAL SENSORS WILL NEED TO BE INSTALLED. THIS NETWORK CAN BE RUN AS ONE CONTINUOUS NETWORK FROM 1 SENSOR TO THE NEXT. OR WIRED WITH INDIVIDUAL HOME RUNS CONNECTED TO THE SRME2 PCB WITHIN SFP. THE MOST EFFICIENT ROUTE SHOULD BE UTILIZED DEPENDENT ON THE LOCATION OF ALL THE EQUIPMENT WITHIN THE STORE. PLEASE REFER TO ATTACHED CABLE SPEC DOCUMENTATION FOR FURTHER INFORMATION.

THE SENSORS SHOULD BE INSTALLED IN THE OPTIMAL LOCATIONS WITHIN THE STORE. INTERNAL: COLUMN OVER FROZEN FOODS CASES 6.5 TO 8FT FROM FLOOR LEVEL AND ACCESSIBLE IN THE FUTURE IF REQUIRED. EXTERNAL: SHIELDED FROM DIRECT SUN ON NORTH FACING SURFACE, 6 FT. ABOVE ROOF SURFACE. NEITHER SENSOR SHOULD BE LOCATED NEAR AN ARTIFICIAL HEAT SOURCE, I.E. HVAC VENT, EXHAUST STACK.

THE MAIN FEED ENERGY MONITORING SART CABLING WILL NEED TO BE RUN FROM THE MAIN FEED SARTS TO THE TERMINALS ON THE SRME2 PCB WITHIN THE SFP. CARE MUST BE TAKEN TO ENSURE THE ORIENTATION AND ROTATION OF THE PHASES. PLEASE REFER TO ATTACHED CABLE SPEC DOCUMENTATION FOR FURTHER INFORMATION. TECHNICIAN ONSITE MUST CONTACT PARASENSE INFORMATION CENTER TO CONFIRM THAT THE DATA IS VISIBLE ON THE SFP AND THEREFORE THE ORIENTATION AND ROTATIONS OF THE PHASES ARE CORRECT. IF THIS IS NOT THE CASE ALL DATA FOR THE CLIENT WILL BE UNUSABLE.

THE ERM2 ENERGY MONITOR SHOULD BE MOUNTED IN THE VICINITY OF THE LOADS TO BE MONITORED AND REQUIRES A THREE PHASE SUPPLY ON THE SAME POTENTIAL AS THE CIRCUITS TO BE MONITORED, FED FROM THE EMERGENCY PANEL. THE ERM2 ENERGY MONITOR IS AVAILABLE AS EITHER A 12 OR 6 CIRCUIT MONITORING DEVICE. IF CIRCUITS ON DIFFERING POTENTIALS ARE TO BE MONITORED. PARASENSE WILL SUPPLY ERM2 TO MONITOR BOTH VOLTAGES. THE INSTALLATION WILL COMPRISE OF THE FOLLOWING CONNECTIONS:

UP TO 12#, 3-PHASE ENERGY MONITORING CIRCUITS WILL BE IDENTIFIED AND COVER MEASUREMENT OF EACH RACK / REFRIGERATION SYSTEM INDIVIDUALLY, STORE MAIN LIGHTING CIRCUITS AND MAIN HVAC UNIT(S) ONLY. REFER TO THE T0007 DOCUMENT FOR THE ENERGY CONFIGURATION SUPPLIED WITH THE MONITOR FOR NUMBER OF CIRCUITS TO BE MEASURED.

THE DEMAND LIMITING MANAGEMENT FEATURE OF THE SFP WILL MODIFY THE LOAD WHEN DEMAND IS HIGH BY SWITCHING OFF THE AGREED STRATEGIC LOADS FOR A SPECIFIED PERIOD IN CONJUNCTION WITH A SET OF RULES. FOR THE DEMAND MANAGEMENT TO OPERATE A PARASENSE SFP IS REQUIRED WITH COMMUNICATIONS TO THE ONSITE BUILDING CONTROL SYSTEM (BMS / FMS), SUCH AS EMERSON, DANFOSS, MICRO THERMO, ETC.

A. EC TO RUN AND CONNECT 8# TWISTED PAIR 18AWG - BELDEN 8461 CONTROL WIRING FROM THE 8 RELAYS IN THE SFP TO 8 INPUTS ON THE BMS / FMS CONTROL SYSTEM TO CONTROL ALL MODIFICATIONS.

B COMMISSIONING AGENT / REFRIGERATION CONTRACTOR TO PROGRAM ALTERNATIVE CONTROL STRATEGY FOR LOAD MODIFICATION AS PER PARASENSE AND CUSTOMER AGREED STRATEGY. THE DEMAND MANAGEMENT WILL MODIFY THE LOAD ON AN AS REQUIRED BASIS BY MODIFYING UP TO A MAXIMUM OF EIGHT STRATEGIC LOADS, WHICH WILL BE SELECTED BASED ON STORE SPECIFICS.

11. UP TO 4# DIGITAL PULSE INPUTS WILL BE INDENTIFIED AND COVER MEASUREMENT OF WATER METERS. GAS METERS OR OTHER SYSTEMS. REFER TO THE T0007 DOCUMENT FOR THE ENERGY CONFIGURATION SUPPLIED WITH THE MONITOR FOR SPECIFIC SYSTEMS

12. ACCESS INTEGRATION FOR 3RD PARTY IP CONTROLLERS VIA REAL TIME ON PARASENSE DASHBOARD PER WHOLE FOODS MARKET SPECIFICATION **GENERAL REQUIREMENTS:** 

TO COORDINATE ALL WORK WITH PARASENSE AND STORE MANAGEMENT. WHERE APPLICABLE INSTALLATION OF EQUIPMENT MUST NOT INTERFERE WITH STORE OPERATIONS. IN THE EVENT OF A SYSTEM FAILURE, CONTACT THE PROJECT MANAGER. REMAIN ON SITE AND FOLLOW THE PROJECT MANAGERS DIRECTIONS. ADDITIONALLY, CONTACT PARASENSE AND LEAVE STATUS REPORTS OF THE INCIDENT.

TO COORDINATE PARASENSE OEM COMMISSIONING WITH INSTALLATION TEAM AVAILABLE ON SITE AT THE SAME TIME TO MAKE GOOD ANY DEFICIENCIES FOUND DURING OEM COMMISSIONING. CONTACT PARASENSE TECHNICAL SUPPORT ON TEL. 540-948-9919 FOR INSTALLATION RELATED QUESTIONS AND TO SCHEDULE OEM COMMISSIONING AT THE COMPLETION OF THE INSTALLATION.

ALL WIRING IS TO BE INSTALLED PER NEC, STATE AND LOCAL REQUIREMENTS AND THE CLIENTS BEST PRACTICE SPECIFICATIONS. ALL POWER CONNECTIONS SHALL BE INSTALLED IN EMT CONDUIT. ALL CONNECTIONS TO PARASENSE EQUIPMENT SHALL BE WATER TIGHT AND ENTER INTO THE BASE OF THE MONITOR. INSTALLATION INSTRUCTIONS ARE CONTAINED WITHIN THE ATTACHED DOCUMENTATION TO ASSIST IN THE INSTALLATION PROCESS. ALL CABLING IS TO BE INSTALLED ACCORDING TO CABLE MANUFACTURERS SPECIFICATIONS.

REFER TO THE ATTACHED DOCUMENTATION FOR ALL POWER AND CABLE SPEC REQUIREMENTS. **NO CABLE SUBSTITUTIONS ARE APPROVED.** 

AGREED WITH THE STORE MANAGER IN ADVANCE, AS NIGHT WORK MAY BE REQUIRED. 6. COMPLETED INSTALLATION CHECKLIST TO BE PROVIDED AT TIME OF OEM COMMISSIONING TO ONSITE PARASENSE TECHNICIAN.

ANY WORK ON THE SALES FLOOR REQUIRING A LIFT MUST BE COORDINATED AND

### PARASENSE INSTALLATION SCOPE OF WORK:

FMS / EMS INTEGRATION & LIQUID LINE SHUTDOWN

GENERAL GUIDELINES FOR THE GRM2 REFRIGERANT MONITOR CONTINUED

2# RELAYS OUTPUTS WILL BE INSTALLED FROM THE GRM2 TO DEDICATED INPUTS ON THE FMS/EMS SYSTEM. THESE WILL BE WIRED FROM THE DUAL PILOT RELAY LOCATED AT THE BOTTOM LEFT HAND CORNER OF THE REFRIGERANT MONITOR ABOVE THE POWER INPUT MODULE. FOR OPTIONAL ADC-104 MONITOR FMS/EMS CONNECTIONS WILL NEED TO BE LANDED IN THE REMOTE TERMINAL CONNECTION ENCLOSURE - DUAL PILOT RELAY NOT AVAILABLE IN ADC-104 MONITOR CONFIGURATION.

RELAY #1 (ALARM) - TO BE CONFIGURED ON THE FMS/EMS SYSTEM TO APPEAR AS A REFRIGERANT LEAK.

RELAY #2 (CRITICAL) - TO BE CONFIGURED ON THE FMS/EMS SYSTEM TO APPEAR AS A REFRIGERANT LEAK - CRITICAL ALARM: SHOULD ACTIVATE REMOTE BEACON AND SOUNDER(S), PLUS ANY VENTILATION SYSTEMS WITHIN THE MACHINE ROOM IF APPLICABLE.

4. FOR THE IMPLEMENTATION OF LIQUID LINE SHUTDOWN WITH THE ADC-104 MONITOR. CABLING WILL NEED TO BE RUN FROM THE REMOTE TERMINAL CONNECTION ENCLOSURE TO AVAILABLE DIGITAL INPUTS ON THE FMS/EMS CONTROLS AND PROGRAMMED TO CLOSE THE LL SOLENOID. NOTE - OUTPUT FROM THE GRM2 WILL BE 24V DC, IF THE FMS/EMS CONTROLS ARE UNABLE TO ACCEPT A 24V DC INPUT, AN ISOLATION ICE CUBE RELAY WILL NEED TO BE INSTALLED TO PROVIDE A DRY CONTACT.

ACCESS INTEGRATION TO FMS VIA REAL TIME ON PARASENSE DASHBOARD PER WHOLE FOODS MARKET SPECIFICATION FREEWAY RUNS - PIPEWORK

THE FREEWAY IS TO BE RUN FROM THE GRM2 MONITOR TO THE SITE SPECIFIC LOCATIONS DETAILED ON THE MONITOR CONFIGURATION.

THE END OF THE FREEWAY WILL BE INSERTED INTO THE MANIFOLD SUPPLIED WITH THE SPUR KIT. THE MANIFOLD SHOULD BE LOCATED IN A POSITION WHERE IT CAN BE ACCESSED FOR FUTURE VERIFICATION OF PIPEWORK INTEGRITY. WHERE MULTIPLE AREAS ARE BEING COVERED ON ONE CHANNEL, THE FREEWAY MANIFOLD IS TO BE POSITIONED CENTRALLY BETWEEN THE MULTIPLE LOCATIONS.

3. CARE MUST BE TAKEN DURING THE INSTALLATION PHASE TO ENSURE THE FREEWAY IN NOT FLATTENED OR KINKED AS THIS WILL RESULT IN REDUCED AIRFLOW WHICH MAY RESULT IN A FAULT ON THE SYSTEM, OR DISCOVERED AT THE COMMISSIONING STAGE.

PARASENSE INSTALLATION SCOPE OF WORK:

**DISCIPLINE - REFRIGERATION** 

FOR THE ATTENTION OF INSTALLING REFRIGERATION CONTRACTORS SCOPE OF WORK: REFRIGERANT LEAK DETECTION (GRM2)

THE SCOPE OF WORK WILL BE FOR THE INSTALLATION OF A COMPLETELY NEW 16 CHANNEL MONITOR, PIPEWORK AND FINAL COMMISSIONING. THE PARASENSE MATERIAL WILL BE PROVIDED TO YOU FOR INSTALL ONLY. PROCUREMENT WILL NOT BE NECESSARY. CABLING, WIRING AND ROUTINE INSTALLATION MATERIAL WILL NEED TO BE PROVIDED BY THE INSTALLING CONTRACTOR.

THIS STORE SHALL HAVE ONE TWELVE CHANNEL GRM2 REFRIGERANT MONITOR, AND ASSOCIATED PIPEWORK AND LOCAL CONNECTION(S) TO EXISTING EMS/FMS CONTROL SYSTEM FOR IN-STORE NOTIFICATION OF A LEAK EVENT AND ACTIVATION OF VENTILATION IN MECHANICAL ROOM. PARASENSE WILL PROVIDE THE CONFIGURATION WITH THE EQUIPMENT AND THE CONTRACTOR WILL BE RESPONSIBLE FOR HIGHLIGHTING ANY REQUIRED CONFIGURATION CHANGES FOR APPROVAL AND IMPLEMENTING THE APPROVED CHANGES TO STORE CONFIGURATION. INSTALLER WILL NEED TO HAVE LOCAL CONNECTIVITY TO THE EMS/FMS CONTROL SYSTEM FOR COMMISSIONING AND VERIFICATION OF INSTALLATION COMPLETION.

### SPECIFIC REQUIREMENTS:

TO INSTALL AND COMMISSION THE GRM2 REFRIGERANT MONITOR WITH THE SCREEN AT APPROXIMATELY 5FT ABOVE FLOOR LEVEL, TYPICALLY IN THE MACHINE ROOM, ALONG WITH THE OPTIONAL ADC-104 EXPAGNSION PANEL. THIS INSTALLATION INCLUDES ALL 6MM PIPEWORK, SPUR KITS, BEACON SOUNDERS (OPTIONAL), RELAY CONNECTION, CONDUIT RUNS AND POWER FEED. THE MONITOR WILL REQUIRE ONE FUSED 5 AMP SINGLE PHASE 120 VOLT INPUT THAT IS ALWAYS LIVE, WITH A DEDICATED 20A CIRCUIT BREAKER. ALL WIRING IS TO BE INSTALLED PER NEC, STATE AND LOCAL REQUIREMENTS AND THE CLIENTS BEST PRACTICE SPECIFICATIONS.

TO IMPLEMENT LOCAL ALARMING CAPABILITY FOR A LEAK EVENT(S) TO THE ONSITE EMS/FMS SYSTEM VIA DIGITAL INPUT SIGNAL FROM, THE PILOT RELAYS WITH THE GRM2. WIRE TERMINATIONS ON THE RELAY FROM "C" TO "NC" AS PER THE SCHEMATIC AND SHOULD BE CONFIGURED WITH THE EMS/FMS CONTROL EQUIPMENT AS NOTED ON THE T0010 CONFIGURATION SUPPLIED WITH THE MONITOR.

WHERE APPLICABLE. TO IMPLEMENT VENTILATION OVERRIDE FOR THE COMPRESSOR ROOMS VIA DIGITAL INPUT TO THE VENTILATION CONTROL SYSTEM OR BY INSTALLING THE PARASENSE PILOT RELAY AS A BYPASS CIRCUIT AROUND THE VENTILATION THERMOSTAT. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE METHOD REQUIRED TO DRIVE THE VENTILATION OVERRIDE AND PARASENSE IS TO BE NOTIFIED.

SPUR KITS WILL BE UTILIZED AT ALL LOCATIONS TO ENHANCE THE COVERAGE AREA. THE SAMPLE POINT LOCATIONS WILL BE SELECTED BY PARASENSE AND NOTED IN THE SUPPLIED T0010 CONFIGURATION. SPUR KIT NUMBER WILL BE BASED ON NUMBER OF EVAPORATORS AND AREAS OF COVERAGE.

CONTRACTOR IS RESPONSIBLE FOR INSTALLING EQUIPMENT IN ACCORDANCE WITH SYSTEM CONFIGURATION. HOWEVER SHOULD CHANGES BE REQUIRED PARASENSE TECHNICAL SUPPORT SHOULD BE CONTACTED PRIOR TO PROCEEDING AND ANY SUBSEQUENT APPROVED CHANGES DOCUMENTED ON THE "INSTALLATION CHECKLIST" FOR RECORD - TEL. 540-948-9919 / EMAIL. TECHSUPPORT@PARASENSE.COM

UPON COMPLETION OF THE INSTALLATION. THE INSTALLATION CHECKLIST WILL NEED TO BE COMPLETED AND TURNED IN TO THE PARASENSE OFFICE IN VIRGINIA. A PARASENSE TECHNICIAN WILL CARRY OUT ON-SITE COMMISSIONING OF THE SYSTEM AND PROVIDE A CERTIFICATE OF COMPLIANCE.

SPECIFIC RELEVANT GUIDE LINES FROM THE PARASENSE INSTALLATION MANUAL WILL NEED TO BE FOLLOWED FOR ALL ASPECTS OF THE INSTALLATION.

#### GENERAL REQUIREMENTS:

TO COORDINATE ALL WORK WITH PARASENSE AND STORE MANAGEMENT. WHERE APPLICABLE INSTALLATION OF EQUIPMENT MUST NO INTERFERE WITH STORE OPERATIONS. IN THE EVENT OF A SYSTEM FAILURE, CONTACT THE PROJECT MANAGER. REMAIN ON SITE AND FOLLOW THE PROJECT MANAGER'S DIRECTIONS. ADDITIONALLY, CONTACT PARASENSE AND LEAVE STATUS REPORTS OF THE INCIDENT.

TO COORDINATE PARASENSE OEM COMMISSIONING WITH INSTALLATION TEAM AVAILABLE ON SITE AT THE SAME TIME TO MAKE GOOD ANY DEFICIENCIES FOUND DURING OEM COMMISSIONING. CONTACT PARASENSE TECHNICAL SUPPORT ON TEL. 540-948-9919 FOR INSTALLATION RELATED QUESTIONS AND TO SCHEDULE OEM COMMISSIONING AT THE COMPLETION OF THE INSTALLATION.

ALL WIRING IS TO BE INSTALLED PER NEC, STATE AND LOCAL REQUIREMENTS AND THE CLIENTS BEST PRACTICE SPECIFICATIONS. ALL POWER CONNECTIONS SHALL BE INSTALLED IN EMT CONDUIT. ALL CONNECTIONS TO PARASENSE EQUIPMENT SHALL BE WATER TIGHT AND ENTER INTO THE BASE OF THE MONITOR. INSTALLATION INSTRUCTIONS ARE CONTAINED WITHIN THE ATTACHED DOCUMENTATION TO ASSIST IN THE INSTALLATION PROCESS. ALL CABLING IS TO BE INSTALLED ACCORDING TO CABLE MANUFACTURES SPECIFICATIONS.

REFER TO THE ATTACHED DOCUMENTATION FOR ALL POWER AND CABLE SPEC REQUIREMENTS. NO CABLE SUBSTITUTIONS ARE APPROVED.

ANY WORK ON THE SALES FLOOR REQUIRING A LIFT MUST BE COORDINATED AND AGREED WITH THE STORE ANAGER IN ADVANCE, AS NIGHT WORK MAY BE REQUIRED.

COMPLETED INSTALLATION CHECKLIST TO BE PROVIDED AT TIME OF OEM COMMISSIONING TO ONSITE PARASENSE TECHNICIAN. GENERAL GUIDELINES FOR THE GRM2 REFRIGERANT MONITOR AND ACCESSORIES INSTALLATION:

THE GRM2 MONITOR TO BE MOUNTED IN THE COMPRESSOR OR ELECTRICAL ROOM TO A SOLID VERTICAL SURFACE CAPABLE OF SUPPORTING THE LOAD AND WHERE THE MONITOR CANNOT BE DAMAGED BY PASSING TRAFFIC. GRM2 REFRIGERANT MONITOR MUST BE ACCESSIBLE AND AT EYE LEVEL FOR THE REFRIGERATION CONTRACTOR TO INTERROGATE IT.

ALL POWER, COMMUNICATIONS AND FMS/EMS SIGNAL WIRING TO BE INSTALLED TO CODE AND CUSTOMERS BEST PRACTICE; PLUS NEATLY RUN IN CONDUIT AND INSTALLED INTO THE BASE OF THE REFRIGERANT MONITOR. PENETRATIONS INTO THE SIDE OR TOP OF THE MONITOR ARE NOT APPROVED AND MAY VOID MONITOR WARRANTY.

### PARASENSE INSTALLATION SCOPE OF WORK:

GENERAL GUIDELINES FOR THE GRM2 REFRIGERANT MONITOR CONTINUED

4. DO NOT RUN THE FREEWAY FROM WARM AREAS THROUGH

REFRIGERATED SPACES AS THIS WILL CAUSE MOISTURE TO BUILD UP IN THE

THE SUPPLIED 5300-P FREEWAY IDENTIFICATION MARKERS SHOULD BE FITTED TO BOTH ENDS OF THE FREEWAY, ADJACENT TO THE SPUR MANIFOLD AND THE CONNECTORS AT THE BASE OF THE MONITOR.

SPUR KIT INSTALLATION - PIPEWORK

SPUR KITS ARE FACTORY SUPPLIED AT EITHER 15FT OR 25FT LENGTHS AND COME IN 1, 2, 3 OR 4 WAY SPUR KIT VERSIONS. THE SPECIFIC SPUR KIT REQUIRED FOR A LOCATION WILL BE SPECIFIED ON THE CONFIGURATION DEPENDENT ON THE APPLICATION. THE SPUR KIT SAMPLE POINTS SHOULD ALWAYS BE LOCATED AS CLOSE AS

POSSIBLE TO THE HIGH PROBABLE LEAK POINTS IN THE LOCATIONS SPECIFIED. EXAMPLE OF WHICH ARE OUTLINE BELOW. THE INDIVIDUAL SPUR KIT RUNS SHOULD BE NEATLY RUN FROM THE MANIFOLD INSTALLED ONTO THE FREEWAY TO THE DESIRED LOCATION FOLLOWING EXISTING CABLE RUNS OR FRAMEWORK AND SECURED EVERY 12-

SHOULD BE NEATLY COILED (8" DIAMETER) AT THE SAMPLE LOCATION WITH THE SAMPLE POINT SECURED POINTING DIRECTLY DOWNWARDS. DO NOT SECURE THE FREEWAY TO A SURFACE THAT IS EITHER TOO HOT

18". THE SPURS SHOULD NEVER BE CUT. ALL EXCESS SPUR KIT PIPEWORK

TO TOUCH OR WHERE THERE IS A PROBABILITY OF ICE BUILDUP. SPURS MUST ALWAYS BE SECURED IN A LOCATION WHERE THEY WILL NOT COOLER. BE ABLE TO DRAW LIQUID INTO THE SYSTEM.

6. SPURS SHOULD NOT MAKE LARGE JUMPS UNSUPPORTED AS IT LEAVES THE PIPING VULNERABLE TO DAMAGE. INDIVIDUAL SPUR LOCATIONS - PIPEWORK

MULTI-POINT TECHNIQUE EVENLY SPREAD TO TARGET MOST LIKELY SOURCE OF LEAKAGE AND IN ORDER OF PRIORITY:

RACKS AND HEADERS - (4-WAY SPUR KIT) LOCATE ALL THE SHUT OFF VALVES, SCHRAEDERS, PRESSURE REGULATORS, SOLENOID VALVES, FLARE AND JOINT AND AREAS OF HIGH VIBRATION, PRESSURE AND TEMPERATURE CHANGES. DISTRIBUTE THE SAMPLE POINTS EVENLY AMONGST THE EQUIPMENT IN DOWNWARD POINTING POSITION AND NEATLY TIE. THE SPUR KIT SAMPLE POINTS SHOULD NOT BE LOCATED AT FLOOR LEVEL ON ALL CORNERS OF THE RACK.

PARASENSE INSTALLATION SCOPE OF WORK:

**DISCIPLINE - REFRIGERATION** 

FOR THE ATTENTION OF INSTALLING REFRIGERATION CONTRACTORS

FREEWAY (THE PARASENSE SUPPLIED 6MM TUBING) SHOULD BE RUN IN CONDUIT VERTICALLY DOWN THE WALL ADJACENT TO THE GRM2 AND THEN RUN HORIZONTALLY 12" BELOW THE BASE OF THE GRM2. THE FREEWAY SHOULD THEN BE NEATLY LOOPED INTO THE RESPECTIVE CHANNEL FITTING. CARE SHOULD BE TAKEN NOT TO CUT THE FREEWAY TOO SHORT, THE FREEWAY SHOULD ENTER INTO THE CHANNEL FITTING AT 90° TO ENSURE AN AIR TIGHT SEAL.

4. THE CUTTING OF THE FREEWAY IS ONLY TO BE CARRIED OUT USING THE SUPPLIED CUTTING TOOL, TO ENSURE A STRAIGHT CLEAN CUT.

VISUAL AND AUDIBLE INDICATION - REMOTE BEACON AND SOUNDERS (OPTIONAL)

LOCAL AND STATE CODE DICTATES THE NEED FOR ADDITIONAL VISUAL AND AUDIBLE INDICATION OF REFRIGERANT CONCENTRATION IN AIR AND CONTROL OF REFRIGERANT FLOW TO CONFINED SPACES. IN THE EVENT MULTIPLE REMOTE BEACON AND SOUNDERS ARE REQUIRED PARASENSE WILL INCLUDE AN ADDITIONAL TERMINAL CONNECTION ENCLOSURE (ADC-104) FOR THE PURPOSE OF INTEGRATING ON-SITE FMS/EMS WITH REFRIGERANT DETECTION AND THE ANNUNCIATION OF SPACE SPECIFIC REMOTE BEACON AND SOUNDERS.

1. THE SUPPLIED OPTIONAL ADC-104 TERMINAL CONNECTION ENCLOSURE IS TO BE MOUNTED ADJACENT TO THE GRM2 WHERE THE SUPPLY WIRING LOOM CAN BE DIRECTLY WIRED TO THE ENCLOSURE. DO NOT POWER GRM2 OR ADC-104 UNTIL THE CONNECTIONS HAVE BEEN TERMINATED.

THE ADC-104 WILL REQUIRE ONE FUSED 5 AMP SINGLE PHASE 120 VOLT INPUT THAT IS ALWAYS LIVE WITH A DEDICATED 20 AMP CIRCUIT BREAKER. ALL WIRING IS TO BE INSTALLED PER NEC, STATE AND LOCAL REQUIREMENTS AND THE CLIENTS BEST PRACTICE SPECIFICATIONS

3. TO IMPLEMENT LOCAL ALARMING CAPABILITY FOR A LEAK EVENT(S) TO THE ONSITE EMS/FMS SYSTEM VIA GRM2 RELAYS OR OPTIONAL ADC-104 TERMINAL CONNECTION ENCLOSURE. WIRE TERMINATIONS IN THE SUPPLIED ENCLOSURE SHOULD BE AS PER THE SCHEMATIC SUPPLIED AND SHOULD BE CONFIGURED. WITH THE EMS/FMS CONTROL EQUIPMENT AS NOTED ON THE T0010 CONFIGURATION SUPPLIED WITH THE MONITOR.

TO INSTALL BEACON SOUNDERS NEXT TO ENTRANCES OF MONITORED SPACES AS DETAILED IN CONFIGURATION. ALL CONNECTIONS TO BE RUN BACK TO EITHER THE GRM2 RELAYS OR OPTIONAL ADC-104 TERMINAL CONNECTION ENCLOSURE AND TERMINATED AS INDICATED.

SIEMENS ENERGY MONITORING SCOPE OF WORK:

TRANSFORMERS, UNLESS NOTED OTHERWISE

GENERAL GUIDELINES FOR THE ENERGY MONITORING PLATFORM AND ACCESSORIES INSTALLATION:

THE DENT POWERSCOUT (ENERGY MONITOR) TO BE MOUNTED IN THE POWERWALL TO A SOLID VERTICAL SURFACE CAPABLE OF SUPPORTING THE LOAD AND WHERE THE MONITOR CANNOT BE DAMAGED BY PASSING TRAFFIC. ERM2 ENERGY MONITOR MUST BE ACCESSIBLE AND AT EYE LEVEL FOR THE CONTRACTOR TO INTERROGATE IT. ALL POWER. COMMUNICATIONS AND EMS SIGNAL WIRING TO BE NEATLY RUN AND INSTALLED INTO THE BASE OF THE MONITORS. PENETRATIONS INTO THE SIDE OR TOP OF THE MONITOR ARE NOT APPROVED AND MAY VOID MONITOR WARRANTY. VERIFY ALL LOADS TO BE MONITORED WITH SCHEDULE ON SHEET EM200. ALL LOADS TO BE MONITORED VIA SIEMENS (DENT) SUPPLIED CURRENT

MAIN BUILDING ELECTRICAL SERVICE: THE INCOMING FEED FROM THE UTILITY COMPANY WILL BE MONITORED FOR

2. COORDINATE WITH ELECTRICAL CONTRACTOR THE INSTALLATION OF ART/SART AUTO RANGING CURRENT TRANSFORMERS. IF APPLICABLE, COORDINATE WITH PARASENSE FIELD TECHNICIAN IF MAIN SERVICE ENTRY HAS EXISTING FACTORY INSTALLED ENERGY MONITOR WITH OUTPUTS TO PARASENSE.

3. MAIN STORE ENERGY WILL BE CONNECTED TO STORE FUSION PLATORM, RATHER THAN ERM2.

REFRIGERATION:

1. ENERGY USAGE WILL BE MONITORED FOR THE COMPRESSORS AND CONDENSERS OF THE REFRIGERATION RACK.

2. CASE LIGHTING, FANS, DEFROST, AND ANTI-SWEATS WILL NOT NEED TO BE MONITORED.

1. ENERGY USAGE WILL BE MONITORED FOR EACH OF THE TWO MAIN ROOFTOP UNITS. 2. ENERGY USAGE FOR AUXILIARY HVAC UNITS MAY BE MONITORED IF MAJORITY OF HVAC EQUIPMENT IS FEED FROM A SINGLE POINT. REFER TO POWER MONITORING SCHEDULE ON SHEET EM200 FOR ADDITIONAL INFORMATION.

1. ENERGY USAGE WILL BE MONITORED FOR THE GENERAL SALES LIGHTING. 2. TRACK LIGHTING AND OTHER ADDITIONAL LIGHTING NOT REQUIRED TO BE MONITORED UNLESS IT IS FEED FROM THE PANELBOARD FEEDING GENERAL

PARASENSE INSTALLATION SCOPE OF WORK:

GENERAL GUIDELINES FOR THE GRM2 REFRIGERANT MONITOR CONTINUED REMOTE HEADERS- (4-WAY SPUR KIT) HEADERS WILL USUALLY BE MONITORED WITH THE COOLER/FREEZER THEY ARE MOUNTED ON (UNLESS FLOOR MOUNTED), WITH 2 SPUR KIT SAMPLE POINTS BEING LOCATED AT THE CONTROL SOLENOIDS AND THE OTHER 2 SPUR KIT SAMPLE POINTS DEDICATED TO THE EVAPORATOR(S) WITHIN THE WALK-IN.

WALK-IN FREEZERS - (TYPICALLY 1 - 3 -WAY SPUR KIT) AS PER WALK-IN COOLERS, EXISTING PENETRATIONS SHOULD BE UTILIZED WHERE AVAILABLE. WHERE AN EXISTING PENETRATION IS NOT AVAILABLE, THE IDEAL LOCATION FOR THE SAMPLE POINT IS BEHIND THE EVAPORATOR MIDWAY BETWEEN THE BACK WALL, SECURED 8" DOWN FROM THE CEILING PANEL IN THE AIR FLOW, AND PROPERLY SEALED ON BOTH SIDES OF THE CEILING PANEL. ALL SAMPLE POINTS MUST BE MOUNTED IN THE DOWNWARD POSITION CLEAR OF STANDING WATER AND DEBRIS WITH EXCESS SPUR KIT PIPEWORK TO BE COILED ABOVE THE FREEZER.

WALK-IN COOLERS - (TYPICALLY 1 - 4 -WAY SPUR KIT) SPUR KITS WILL GENERALLY BE SUPPLIED ALLOWING 1 SPUR KIT SAMPLE POINT PER EVAPORATOR WITHIN THE COOLER AND 1 SPUR KIT SAMPLE POINT TO BE POSITIONED ON TOP OF THE COOLER. THE SPUR KIT SAMPLE POINT LOCATED ON TOP SHOULD BE POSITIONED NEAR ANY CONTROL VALVES OR SOLENOIDS. WHERE AVAILABLE, EXISTING PENETRATIONS INTO THE COOLER SHOULD BE UTILIZED WITH THE SAMPLE POINT BEING SECURED POINTING DIRECTLY DOWNWARDS IN THE AIRFLOW BEHIND THE EVAPORATOR. WHERE AN EXISTING PENETRATION IS NOT AVAILABLE, THE IDEAL LOCATION FOR THE SAMPLE POINT IS 3FT IN FRONT OF THE EVAPORATOR SECURED 8" DOWN FROM THE CEILING PANEL IN THE AIR FLOW, AND PROPERLY SEALED ON BOTH SIDES OF THE CEILING PANEL. ALL SAMPLE POINTS MUST BE MOUNTED IN THE DOWNWARD POSITION CLEAR OF STANDING WATER AND DEBRIS WITH EXCESS SPUR KIT PIPEWORK TO BE COILED ABOVE THE

SALES FLOOR CASE RUNS:- (2 OR 4-WAY SPUR KIT) 25FT SPUR KITS WILL BE SUPPLIED FOR THESE LOCATIONS. THE FREEWAY SHOULD BE RUN TO THE CENTER OF THE CASE RUN AND THE SUPPLIED MANIFOLD FITTED, THEN 2 SPURS SHOULD THEN RUN AS FAR AS POSSIBLE TOWARDS EITHER END. THE OTHER 2 SPURS SHOULD BE POSITIONED MIDWAY BETWEEN THESE POINTS WITH THE EXCESS COILED AT THE SAMPLE POINT END. ALL SAMPLE POINTS MUST BE SECURED SO THAT THEY ARE NOT IN CONTACT WITH THE FLOOR WHERE THE INGRESS OF LIQUID MAY OCCUR. WHERE TXVS ARE UTILIZED, THE SAMPLE POINTS SHOULD BE INSTALLED AT THESE LOCATIONS.

GENERAL ENERGY MANAGEMENT SYSTEM (EMS) NOTES:

1. ENERGY MANAGEMENT CONTRACTOR (E.M.C.) IS RESPONSIBLE FOR PROCURING AND INSTALLATION OF A FULLY FUNCTIONAL REFRIGERATION, LIGHTING, AND HVAC ENERGY MANAGEMENT SYSTEM REFER TO MECHANICAL PLANS FOR EXTENT OF STAND-ALONE HVAC EQUIPMENT TO BE INSTALLED, WIRED, AND FUNCTIONAL BY MECHANICAL CONTRACTOR.

2. COORDINATE ALL WORK WITH CORRESPONDING CONTRACTORS INCLUDING BUT NOT LIMITED TO GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR, DATA/TELEPHONE CONTACTOR, PLUMBING CONTRACTOR, REFRIGERATION CONTRACTOR, MECHANICAL CONTRACTOR AND 365.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT ALL COORDINATION AND CONFLICT ISSUES BE RESOLVED BY 365 PROJECT MANAGER PRIOR TO INSTALLATION.

INSTALLED BY E.M.C. SIEMENS CONTACT FOR HVAC EQUIPMENT IS AARON MOORE, 512-421-6298.

5. ALL REFRIGERATION MICRO THERMO EQUIPMENT IS FURNISHED BY REFRIGERATION RACK VENDOR FOR INSTALLATION BY E.M.C. COORDINATE ANY MISSING, DAMAGED, OR UN-FUNCTIONAL EQUIPMENT TO REFRIGERATION CONTACTOR AND 365 FOR RESOLUTION.

6. ALL PARASENSE EQUIPMENT IS FURNISHED BY 365 AND INSTALLED BY E.M.C. PARASENSE CONTACT IS MICHELLE COLLIER (p)1-540-948-9919.

8. E.M.C. IS RESPONSIBLE FOR: * INSTALLATION OF ANY REFRIGERATION CASE TEMPERATURE SENSORS. DEFROST TERMINATION SENSORS. EVAPORATOR COIL TEMPERATURE SENSORS, AND ANY OTHER FIELD REQUIRED SENSORS SUPPLIED BY REFRIGERATION RACK VENDOR. * INSTALLATION OF ALL HVAC TEMPERATURE SENSORS, HUMIDITY

EQUIPMENT INCLUDING BUT NOT LIMITED TO INPUT/OUTPUT (I/O) BOARDS, MAIN CONTROLLERS, ANCILLARY CONTROLLERS, AND OVERRIDE SWITCHES. * INSTALLATION OF 365 FURNISHED PARASENSE EQUIPMENT INCLUDING BUT NOT LIMITED TO MAIN CONTROLLERS, AND REFRIGERATION LEAK DETECTION EQUIPMENT * PROVIDING ALL RELAYS AND TRANSFORMERS NOT FURNISHED BY 365

COORDINATE ALL LINE VOLTAGE REQUIREMENTS WITH ELECTRICAL CONTRACTOR. ALL ADDITIONAL LINE VOLTAGE CIRCUITRY. DEVICES. CONDUIT, AND CONDUCTORS IN EXCESS OF E.C. SUPPLIED POWER IS

10. LOW VOLTAGE WIRING IS ALLOWED TO BE RAN OUTSIDE OF CONDUIT IF ALLOWED BY AHJ AND NOT UNDERGROUND. PROVIDE CONDUIT IF NOT ALREADY INDICATED ON ELECTRICAL DRAWINGS AS REQUIRED. SIZE CONDUIT RACEWAYS PER MANUFACTURER'S RECOMMENDATIONS AND NOT TO EXCEED A 40% FILL RATIO.

11. AVOID RUNNING CABLE NEXT TO NOISE-GENERATING DEVICES, SUCH AS MOTOR STARTERS, CONTACTORS, INVERTERS, FLUORESCENT LIGHT BALLASTS, ARC WELDERS, ETC. IF POSSIBLE, KEEP CABLE MORE THAN 1 FOOT AWAY FROM NOISE-GENERATING DEVICES (IDEALLY, MORE THAN 5

LOW VOLTAGE CABLE A MINIMUM OF 3 INCHES AWAY FROM HIGH-VOLTAGE WIRING (IDEALLY, AT LEAST 12 INCHES), IF NETWORK MUST CROSS PATHS WITH HIGH-VOLTAGE WIRING, CROSS THEM PERPENDICULAR - RUNNING LOW VOLTAGE AND HIGH-VOLTAGE WIRE IN PARALLEL INCREASES THE AMOUNT OF NOISE INDUCED ON THE NETWORK.

13. ENSURE GROUNDING AT EACH INPUT DEVICE'S 0V POWER TERMINAL TO A SEPARATE EARTH GROUND.

TAPS FOR INDIVIDUAL EQUIPMENT. PROVIDE WIRING BETWEEN EQUIPMENT WITH PROPER VOLTAGES.

15. COORDINATE PROGRAMMING WITH FACTORY PRE-PROGRAMMED SUPPLIER. PROVIDE REPROGRAMMING AND PROPER SETUP AS NECESSARY TO OBTAIN FINAL CONTROL POINT SETTINGS. CONTACT MICRO THERMO AT EVAN.ASCHOW@PARKER.COM.

TEMPERATURE AND CO2 SENSOR MOUNTING: INSTALL EMS CABLE FROM SENSOR TO I/O BOARD. MOUNT SENSOR ON BOX.SENSORS ON SALES FLOOR SHALL BE MOUNTED ON THE FRONT OF THE COLUMN. DO NOT INSTALL SENSORS IN HVAC SUPPLY AIR PATH OR IN DIRECT SUNLIGHT. -GYPSUM BOARD WALLS: PROVIDE A 2"X4" RECESSED BOX WITH A SINGLE GANG PLASTER RING -BLOCK WALLS AND COLUMNS: PROVIDE A 2"x4" BOX SURFACE MOUNTED VERTICALLY. INSULATE BEHIND SENSORS MOUNTED ON EXTERIOR WALL WITH 1/2" POLYSTYRENE SPACER.

17. E.M.C. SHALL PROVIDE ASSISTANCE TO THE ELECTRICIAN ON PERFORMING EQUIPMENT TESTS ON POWER SWITCHING PANELS

AS NECESSARY.

19. E.M.C. TO PROVIDE ALL NECESSARY LOW VOLTAGE CABLING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND

WIRING SCHEDULES. SPUR KITS FROM PARASENSE FOR LEAK DETECTION EQUIPMENT. E.M.C TO INSTALL ALL FREEWAY PIPING IN ACCORDANCE WITH PARASENSE STANDARDS. COORDINATE SPUR KITS AND SAMPLING PORTS WITH PARASENSE FIELD TECHNICIAN. GENERAL GUIDELINES PROVIDED UNDER PARASENSE REFRIGERATION LEAK DETECTION SCOPE OF WORK.

SUPPLIED LOOSE FROM PARASENSE FOR INSTALLATION. TURN OVER FOR INSTALLATION.

22. ALL EXPOSED EMS WIRING TO BE INSTALLED AT TOP CHORD OF

4. ALL LOOSE HVAC SIEMENS EQUIPMENT IS FURNISHED BY 365 AND

7. COMPLY WITH ALL BUILDING CODES IN ACCORDANCE WITH

LOCAL AUTHORITY HAVING JURISDICTION (AHJ).

SENSORS, INTERLOCKS, AND LIGHTING SENSORS * INSTALLATION AND PROCUREMENT OF LOOSE MICRO THERMO

FOR PROPER OPERATION OF EQUIPMENT. THE RESPONSIBILITY OF E.M.C.

12. DO NOT RUN LOW VOLTAGE CABLING IN THE SAME CONDUIT AS

14. COORDINATE TRANSFORMERS WITH MICRO THERMO FOR PROPER EQUIPMENT TO SHARE TRANSFORMERS IF POSSIBLE FOR GROUPED

CONTROLLERS FROM MICRO THERMO AND REFRIGERATION EQUIPMENT

18. E.M.C. SHALL CALIBRATE ALL CO2 SENSORS PER THE SENSOR MANUFACTURER'S INSTRUCTIONS IMMEDIATELY PRIOR TO LEAVING THE

20. COORDINATE PROCUREMENT OF REFRIGERATION "FREEWAY" PIPING AND

COORDINATE INSTALLATION OF REFRIGERATION PRESSURE TRANSDUCERS WITH REFRIGERATION CONTRACTOR. PRESSURE TRANSDUCERS ARE

SYMBOLS LEGEND

CIRCUITING & WIRING

P1 HOMERUN TO MAIN EQUIPMENT. CONDUIT CONCEALED CONDUIT IN/UNDER FLOOR/GROUND CONSTRUCTION ——— EXPOSED CONDUIT AFC ABOVE FINISHED CEILING FLEXIBLE CONDUIT AFCI ARC FAULT CIRCUIT LOW VOLTAGE CABLE (NOT ROUTED IN CONDUIT) AFEA AREA FOR EVACUATION ———— CONDUIT TURNING DOWN AFF ABOVE FINISHED FLOOR

———O CONDUIT TURNING UP _____ CONNECTION POINT OR EQUIPMENT TERMINATION EQUIPMENT TERMINATION ANNOTATION

MECHANICAL OR FIRE PROTECTION PLAN CALLOUT PLUMBING PLAN NOTE CALLOUT ELECTRICAL PLAN NOTE CALLOUT TECHNOLOGY PLAN CALLOUT PLUMBING EQUIPMENT DESIGNATION.

O PLUMBING FIXTURE OR EQUIPMENT SCHEDULES. EQUIPMENT DESIGNATION (365 FURNISHED, CONTRACTOR INSTALLED) MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE) | BB

(CONTRACTOR FURNISHED AND INSTALLED). REFER

DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL M1 NUMBER LOWER NUMBER INDICATES SHEET NUMBER

**ENERGY MANAGEMENT** 

REFRIGERATION CIRCUIT MTCP MICRO THERMO CONTROL PANEL

LIGHTING RELAY RETURN AIR TEMP SENSOR **TEMP SENSOR** 

PRESSURE SENSOR DEFROST TERMINATION MICRO THERMO HORN STROBE HIGH-VOLTAGE WIRING. SUCH AS 120VAC OR 208VAC POWER WIRING. KEEF

> EEV FFV VAI VE SLSV SUCTION LINE SOLENOID VALVE

DOOR SWITCH DTS DUAL-TEMP SWITCH REMOTE BEACON SOUNDER

LLS LIGHT LEVEL SENSOR MT500 MICRO THERMO 8UI BOARD MT504 MICRO THERMO 8UI / 4RO BOARD MICRO THERMO 8UI / 8RO / 4DI BOARD

MT512 MICRO THERMO 8UI / 12RO / 8DI BOARD

DT-EEPR MICRO THERMO 6 EEPR

MT716

HUMIDISTA7 THERMOSTAT

MECHANICAL

THERMOSTATS (TOP OF DEVICE)

TEMPERATURE SENSORS (PUBLIC AREAS)

TEMPERATURE SENSORS (NON-PUBLIC SPACES)

CONTROLS (TOP OF DEVICE)

FLOW LINE FLA FULL LOAD AMPS FIR FLOOR AIR (COMPRESSED) AIR CONDITIONING FU FURNACE PNLBD ACC AIR COOLED CHILLER FVNR FULL-VOLTAGE, NON-REVERSING POE ACCU AIR COOLED COND UNIT ADA AMERICANS WITH DISABILITIES AMPERE FUSE GC GENERAL CONTRACTOR

PROVIDE FURNISH AND INSTALL GE GROUNDING EQUALIZER PRESSURE REDUCING VALVE PSTN GFCI GROUND FAULT CIRCUIT PUBLIC SWITCHED INTERRUPTER TELELPHONE NETWORK GFR GROUND FAULT RELAY POTENTIAL TRANSFORMER GROUND POINT-TO-POINT GND GROUND PAN, TILT, ZOOM GPM GALLONS PER MINUTE POLYVINYL CHLORIDE GRS GALVANIZED RIGID STEEL GYP GYPSUM BOARD QUANTITY

(ALL ABBREVIATIONS SHOWN ARE NOT

NECESSARILY USED ON THE DRAWINGS.)

PHASE (Ø)

PANELBOARD

RETURN AIR

RECEPTACLE

ROOF DRAIN

REVISION

RETURN DUCT

RETURN FAN

ROOF HOOD

**ROOFTOP UNIT** 

**RACK UNIT** 

SUPPLY AIR

**NETWORK** 

RELATIVE HUMIDITY

REFRIGERANT HOT GAS

RUNNING LOAD AMPS

RIGID METAL CONDUIT

REVOLUTIONS PER MINUTE

SYNCHRONOUS OPTICAL

STEAM CONDENSATE PUMP

RCPT

ROOM CRITERIA

REINFORCED CONCRETE PIPE

PHASE POST INDICATOR VALVE

PLAIN OLD TELEPHONE SERVICI

POWER OVER ETHERNET

STANDARD ANALOG

TELEPHONE LINE

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2 05/21/18 Addendum #2

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**Project Name** 

Consultants

AMPERE INTERRUPTING HORIZONTAL CROSS-CONNECT HD HEAD HUB DRAIN HOA HAND-OFF-AUTOMATIC HTG HEATING HTR HEATER HVU HEATING AND VENTILATING UNIT HWP HEATING WATER PUMP AUTOMATIC TRANSFER SWITCH HZ HERTZ

I AV AUDIO VISUAL AWG AMERICAN WIRE GAUGE INTERMEDIATE CROSS-CONNECT INVERT ELEVATION ISOLATED GROUND BAS BUILDING AUTOMATION SYSTEM IMC INTERMEDIATE METAL CONDUIT BACKBONE IN WC INCHES OF WATER COLUMN BACKDRAFT DAMPER INTERNET PROTOCOL BI OWDOWN ISC SHORT CIRCUIT CURRENT BUILDING DISTRIBUTOR ISDN INTEGRATED SERVICES DIGITAL BDF BUILDING DISTRIBUTION FRAME NFTWORK BFF BELOW FINISHED FLOOR

ISP INTERNET SERVICE PROVIDER BFG BELOW FINISHED GRADE ISP INSIDE PLANT CABLE BFP BOILER FEED PUMP BINARY INPUT I BKR BREAKER BINARY OUTPUT IB JUNCTION BOX BOD BOTTOM OF DUCT J-BOX JUNCTION BOX BOP BOTTOM OF PIPE BOS BOTTOM OF STRUCTURE BTU BRITISH THERMAL UNIT

KK KIRK KFY kV KILOVOLT CC CONDUIT CAT CATEGORY kVA KILOVOLT-AMPS CATV CABLE TELEVISION SYSTEM CD CANDELA kW KII OWATT CAMPUS DISTRIBUTOR KWh KILOWATT-HOUR CURRENT TRANSFORMER CCTV CLOSED CIRCUIT TELEVISION I CH CHILLER CFM CUBIC FEET PER MINUTE LOUVER LCKT CIRCUIT CMP COMMUNICATIONS

PLENUM CABLE CMR COMMUNICATIONS RISER CABLE CP CONDENSATE PUMP CPT CONTROL POWER CPVC CHLORINATED POLYVINYL CHI ORIDE CRAC COMPUTER ROOM AIR CONDITIONING UNIT

**ABBREVIATIONS** 

**AMPERES** 

INTERRUPTER

ASSISTANCE

AFG ABOVE FINISHED GRADE

JURISDICTION

AHU AIR HANDLING UNIT

ALUMINUM

ANALOG INPUT

ANALOG OUTPUT

ACROSS-THE-LINE

ACCESS PANEL

ACCESS POINT

AUTHORITY HAVING

CU CONDENSING UNIT CVD CUMULATIVE VOLTAGE CHP CHILLED WATER PUMP I DB DECIBELS DDC DIRECT DIGITAL CONTROL

DIRECT EXPANSION

EER ENERGY EFFICIENCY RATIO

EIA ELECTRONIC INDUSTRIES

INTERFERENCE

EPO EMERGENCY POWER OFF

RESPONSE

EWC ELECTRIC WATER

EWT ENTERING WATER

TEMPERATURE

FCA FAULT CURRENT AMPS

FLOOR DRAIN

FFB FROM FLOOR BELOW

FHC FIRE HOSE CABINET

FACP FIRE ALARM CONTROL PANEL

FLOOR DISTRIBUTOR

FROM FLOOR ABOVE

FINISHED FLOOR

COOL FR

FCU FAN COIL UNIT

ETR EXISTING TO REMAIN EWB ENTERING WET BULB

EQUIPMENT ROOM

ESFR EARLY SUPPRESSION FAST

ENTERING AIR TEMPERATURE

ELECTRIFIED LOCK OR LATCH MU MAKE-UP

EMS ENERGY MANAGEMENT SYSTEM N/A NOT APPLICABLE

EMT ELECTRICAL METALLIC TUBING N/C NORMALLY CLOSED

FBO FURNISHED BY OTHERS/OWNER | ORD OVERFLOW ROOF DRAIN

FXISTING

EXHAUST AIR

EDB ENTERING DRY BULB

EXHAUST FAN

DIGITAL INPUT DUCTILE IRON MICRO THERMO 2UI POWER FOR MT716 MICRO THERMO 16UI

**HUMIDITY SENSOR** CARBON DIOXIDE SENSOR TEMPERATURE SENSOR

STANDARD MOUNTING HEIGHTS (AFF, AFG, UNLESS NOTED OTHERWISE) | EMI | ELECTROMAGNETIC

SMOKE DUCT DETECTOR SUPPLY DUCT SEASONAL ENERGY EFFICIENCY RATIO SQUARE FEET kcmil 1000 CIRCULAR MILS SUPPLY FAN SINGLE-POLE, DOUBLE-THROW SINGLE-POLE, SINGLE-THROW STATIC PRESSURE **KVAR KILOVOLT-AMPS REACTIVE** SUMP PUMP STAINLESS STEEL SANITARY SEWER SOIL STACK SHUNT TRIP STEAM TRAP SOUND TRANSMISSION CLASS LAN LOCAL AREA NETWORK STEAM STM LAT LEAVING AIR TEMPERATURE SWBD SWITCHBOARD LCC LIMITED COMBUSTIBLE CABLE LDB LEAVING DRY BULB LEC LOCAL EXCHANGE CARRIER LED LIGHT-EMITTING DIODE TELECOMMUNICATIONS LINEAR FEET BONDING BACKBONE LOW PRESSURE TO BE DETERMINED LRA LOCKED ROTOR AMPS TEMPERATURE CONTROLS LWB LEAVING WET BULB CONTRACTOR LWT LEAVING WATER TEMPERATURE TOTAL DYNAMIC HEAD CRU COMPUTER ROOM UNIT TO FLOOR ABOVE CT COOLING TOWER TO FLOOR BELOW CWP COOLING TOWER PUMP **TELECOMMUNICATIONS** LCU COPPER M-M MULTIMODE MAN MAN METROPOLITAN AREA NETWORK MATV MASTER ANTENNA TELEVISION MAU MAKE-UP AIR UNIT MAX MAXIMUM MBH 1000 BTU PER HOUR MC MAIN CROSS-CONNECT NETWORK | TR MCA MINIMUM CIRCUIT AMPACITY DFU DRAINAGE FIXTURE UNIT MCB MAIN CIRCUIT BREAKER MCC MOTOR CONTROL CENTER MD MOTORIZED DAMPER MDF MAIN DISTRIBUTION FRAME DPDT DOUBLE-POLE, DOUBLE-THROW | MDP MAIN DISTRIBUTION PANEL DPI DIFFERENTIAL PRESSURE MER MANUFACTURER MG MOTOR GENERATOR DPST DOUBLE-POLE, SINGLE-THROW MH MAINTENANCE HOLE DOWNSPOUT MH MANHOLF DUCT SILENCER MIN MINIMUM

PROTECTION

MSB MAIN SWITCHBOARD

MSWB MAIN SWITCHBOARD

MTD MOUNTED

N/O NORMALLY OPEN

NF NON-FUSED

NL NIGHT LIGHT

NM NANO METER

OA OUTSIDE AIR

OSP OUTSIDE PLANT

OS OCCUPANCY SENSOR

OSHA OCCUPATIONAL SAFETY AND

PBX PRIVATE BRANCH EXCHANGE

PDI PLUMBING DRAINAGE INSTITUTE

PDU POWER DISTRIBUTION UNIT

PCR PUMPED CONDENSATE

HEALTH ADMINISTRATION

LOC ON CENTER

NOISE CRITERIA

NEC NATIONAL ELECTRICAL CODE

NFPA NATIONAL FIRE PROTECTION

ASSOCIATION, INC

NIC NOT IN CONTRACT

MS/TP MASTER SLAVE/TOKEN

GROUND BUS BAR **TELECOMMUNICATIONS** INDUSTRY ASSOCIATION TWISTI OCK **TELECOMMUNICATIONS** MAIN GROUND BUS BAR TAMPER RESISTANT TELECOMMUNICATIONS ROOM TEMPERATURE TRANSMITTER THROUGH WALL AIR CONDITIONING UNIT TRANSFORMER TYPICAL MLO MAIN LUGS ONLY

UNDERFLOOR UNDERGROUND UNDERSLAB UNIT HEATER | MOCP MAXIMUM OVERCURRENT UNDERWRITERS LABORATORIES, INC. MPOE MAIN POINT OF ENTRANCE **UNLESS NOTED OTHERWISE** MPOP MAIN POINT OF PRESENCE UNINTERRUPTIBLE POWER **UNSHIELDED TWISTED PAIR** PASSING - COMMUNICATION

VOLTS ALTERNATING CURRENT VOLTAGE DROP **VOLTS DIRECT CURRENT** VARIABLE AIR VOLUME VITRIFIED CLAY PIPE VARIABLE FREQUENCY DRIVE VENT STACK VENT THROUGH ROOF

WITH WITHOUT WIDE AREA NETWORK WIRELESS ACCESS POINT WET BULB WATER COLUMN WATER GONG WATER PRESSURE DROP WEATHER PROOF COVER WEATHER RESISTANT WASTE STACK

WATERTIGH.

EXPLOSION-PROOF

WEIGHT

WSFU

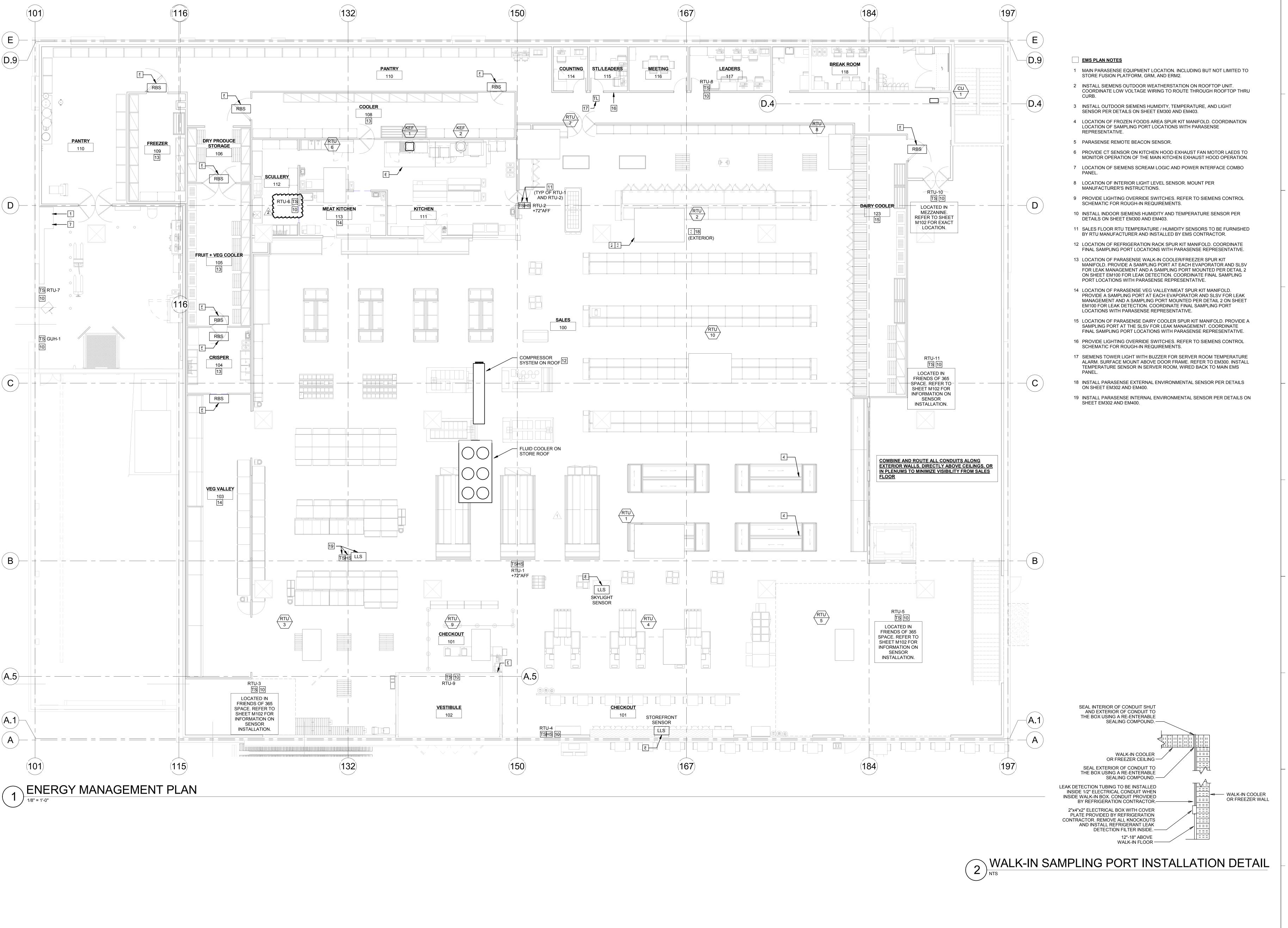
WATER SUPPLY FIXTURE JCS Checked By:

> 05/21/18 Template date:

Document date

BRR Original printed on recycled paper

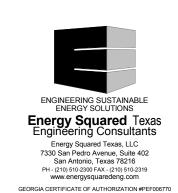
**ENERGY MANAGEMENT** NOTES AND SYMBOLS



brr

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Les & Revisions

D. DATE DESCRIPTION

03/06/18 Addendum#1

2 05/21/18 Addendum#2

NO. DATE DESCRIPTION

1 03/06/18 Addendum#1

2 05/21/18 Addendum#2

Project Name

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DECATUR, GA

BY WHOLE FOODS MARKET

Project Manager:

JCS
Checked By:

Drawn by:

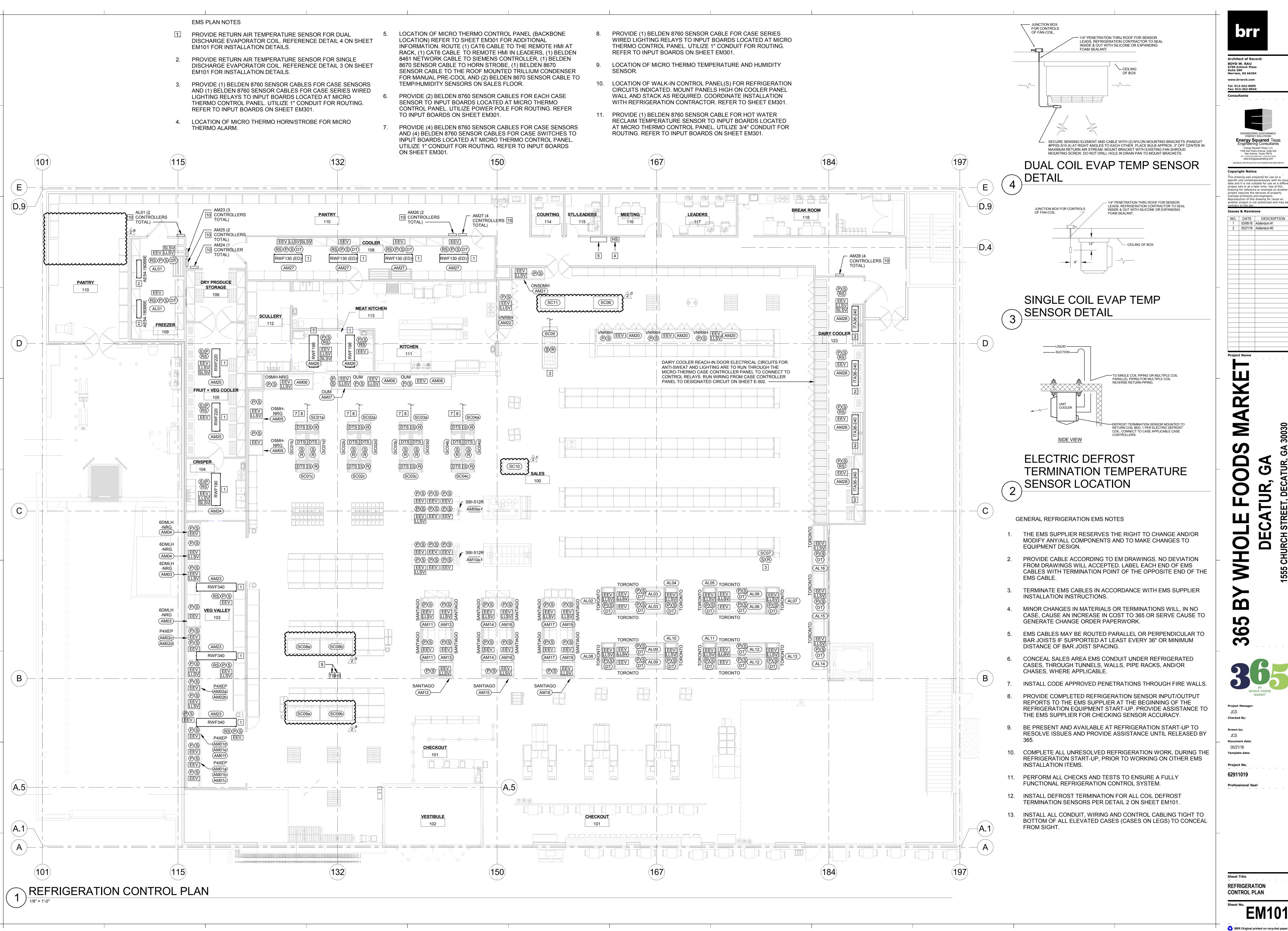
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Document date:

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Document date:
05/21/18
Template date:

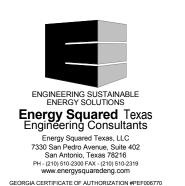
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Professional Seal

Sheet Title
ENERGY MANAGEMENT
PLAN
Sheet No.



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 1
 03/06/18
 Addendum #1
 2 05/21/18 Addendum #2

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**Document dat** 

**REFRIGERATION** 

	Funcials ad Du	In atalla d Dv	Minima Pro	Final Compactions Du
	Furnished By	Installed By	Wiring By	Final Connections By
	RT	U'S - MUNTERS		
Supply Air Temp Sensor	365 - via Munters	EMS Contractor	EMS Contractor	EMS Contractor
Space Temp Sensor	365 - via Munters	EMS Contractor	EMS Contractor	EMS Contractor
Space Humidity Sensor	365 - via Munters	EMS Contractor	EMS Contractor	EMS Contractor
Controller	Landlord	Landlord	EMS Contractor	EMS Contractor
Smoke/Emergency Shutdown	Fire Alarm	Fire Alarm	Fire Alarm	Fire Alarm
	RTU'S - SALES FLO	OR UNITS W/ HOT GAS	REHEAT	
Supply Air Temp Sensor	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Return Air Temp Sensor	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Space Temp Sensor	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Space Humidity Sensor	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Controller	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Smoke/Emergency Shutdown	Fire Alarm	Fire Alarm	Fire Alarm	Fire Alarm
	RTU'S -	NON-SALES FLOOR		
Supply Air Temp Sensor	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Return Air Temp Sensor	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Space Temp Sensor	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Space Humidity Sensor	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Controller	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Smoke/Emergency Shutdown	Fire Alarm	Fire Alarm	Fire Alarm	Fire Alarm
	GAS	UNIT HEATERS		
Space Temp Sensor	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
Jnit Controls	365 - via Siemens	EMS Contractor	EMS Contractor	EMS Contractor
	AIR CURTA	IN - CUSTOMER ENTR	Y	
Thermostat	Mech Contr via Manuf.	Mech. Contractor	Mech Contr.	Mech Contr.
Unit Controls	Mech Contr via Manuf.	Mech. Contractor	Mech Contr.	Mech Contr.
	AIR CU	RTAIN - RECEIVING	- 1	'
Jnit Controls	Mech Contr via Manuf.	Mech. Contractor	Mech Contr.	Mech Contr.
	SF	PLIT SYSTEM		
hermostat	Mech Contr via Manuf.	Mech. Contractor	Mech Contr.	Mech Contr.
Unit Controls	Mech Contr via Manuf.	Mech. Contractor	Mech Contr.	Mech Contr.

		LEAK ALARN	/ SCHEDU	JLE AND CO	ONTRO	L SEQUEN	CE OF (	OPERAT	IONS		
SYSTEM			REFRIGERANT		SAFETY	SYSTEM	ALAF	RM LEVELS IN	N PPM	PARASENSE	MICRO
DESIGNATION	REFRIGERATION CIRC. NUMBER	APPLICATION	LEAK ZONE	REFRIGERANT	GROUP	HIGH/LOW PROBABILITY	ALERT	ALARM	CRITICAL	RELAY	THERMO FUNCTION
					_						
A	-	RACK LEAK DETECTION	ZONE 1	CO2	-	-	1000	2500	5000	1	GLOBAL SIGNAL ONLY
-	AL01	GROCERY / ICE CREAM FREEZER	ZONE 2	CO2	A1	HIGH	1000	2500	5000	2	CRITICAL EEV(S) CLOSE
	AM23	VEG VALLEY	ZONE 3	CO2	A1	HIGH	1000	2500	5000	3	CRITICAL EEV(S) CLOSE
-	AM24	CRISPER	ZONE 4	CO2	A1	HIGH	1000	2500	5000	4	CRITICAL EEV(S) CLOSE
-	AM25	FRUIT & VEGETABLE COOLER	ZONE 5	CO2	A1	HIGH	1000	2500	5000	5	CRITICAL EEV(S) CLOSE
-	AM26	OPEN MEAT KITCHEN	ZONE 6	CO2	A1	HIGH	1000	2500	5000	6	CRITICAL EEV(S) CLOSE
-	AM27	GROCERY COOLER	ZONE 7	CO2	A1	HIGH	1000	2500	5000	7	CRITICAL EEV(S) CLOSE
-	AM28	DAIRY COOLER W/ DOORS	ZONE 8	CO2	A1	HIGH	1000	2500	5000	8	CRITICAL EEV(S) CLOSE
-	AL02-AL06	FROZEN COFFIN 1	ZONE 10	CO2	A1	HIGH	1000	2500	5000	9	GLOBAL SIGNAL ONLY
-	AL07-AL11	FROZEN COFFIN 2	ZONE 10	CO2	A1	HIGH	1000	2500	5000	10	GLOBAL SIGNAL ONLY
-	-	SPARE	ZONE 11	-	-	-	-	-	-	11	-
-	-	SPARE	ZONE 12	-	-	-	-	-	-	12	-

REFRIGERANT LEAK CONTROL SEQUENCE OF OPERATION:

THE AIR-SAMPLING SENSOR WILL TAKE AN AIR-SAMPLE FROM THE APPLICATION SITES, WHERE IT IS ANALYZED AT LEAK DETECTION MONITORING STATION. THE SAMPLING MODULES, WHICH ARE LOCATED IN AT LEAK DETECTION MONITORING STATION, UPON REGISTERING A CONCENTRATION THAT EXCEEDS A PRESET LEVEL (ALERT, ALARM OR CRITICAL) WILL PREFORM A FUNCTION AS BELOW:

ALERT LEVEL - PARASENSE MONITORING STATION.

GLOBAL SIGNAL

ALARM LEVEL - THE MONITORING STATION WILL SEND OUT A SIGNAL VIA RELAY TO MICRO THERMO INDICATING AN ALARM LEVEL OF REFRIGERANT LEAK. CRITICAL LEVEL - THE MONITORING STATION WILL SEND OUT A SIGNAL VIA RELAY TO MICRO THERMO INDICATING A CRITICAL LEVEL OF REFRIGERANT LEAK.

MICRO THERMO CONTROL

CRITICAL LEVEL - WHERE THE MAXIMUM ALLOWABLE REFRIGERANT AMOUNT PER CODE FOR ANY PARTICULAR VOLUME OF REFRIGERATED ROOM SPACE HAS EXCEEDED THE CRITICAL LEVEL THE FOLLOWING SEQUENCE SHALL COMMENCE.

- A BEACON/SOUNDER ALARM LOCATED AT THE ENTRANCE TO THE THE REFRIGERATED ROOM SHALL ALARM INDICATING AN UNSAFE ENVIROMENT IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL AND FIRE CODES. ADDITIONAL BEACON/SOUNDER LOCATED ADJACENT TO MONITORING STATION WILL ALARM. - THE MONITORING STATION WILL SEND OUT A SIGNAL VIA RELAY TO MICRO THERMO INDICATING A CRITICAL LEVEL OF REFRIGERANT LEAK. - THE EEV AT THE ROOM THAT HAS DETECTED THE REFRIGERANT LEAK WILL AUTOMATICALLY CLOSE. THIS WILL ISOLATE THE CIRCUIT IN ALARM. REFRIGERANT FLOW IN THE ROOM.

HORN MUST BE AT LEAST 15 DBA (SPL) ABOVE OPERATION AMBIENT NOISE.

COORDINATE PROGRAMMING OF LEAK DETECTION MONITORING STATION FOR RELAY TO OUTPUT 24V DC UPON CRITICIAL ALARM TO OPERATE BEACON/SOUNDER AND CONNECTION TO MICRO THERMO INPUT BOARD VIA ADDITIONAL RELAY. IS TO BE SET IN THE POSITION FOR SHUTTING DOWN POWER TO THE EEV AND ACTIVATING THE REFRIGERANT LEAK ALARM.

CIRCUIT SHUTDOWN OUTPUT CONTROLS TO BE PROGRAMMED IN MICRO THERMO PANEL WITH THE ASSOCIATED LEAK DETECTION SENSOR INPUT.

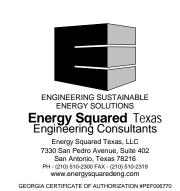
REFER TO INPUT/OUTPUT SCHEDULES FOR POINT LOCATIONS.

LEGEND

PPM: PARTS PER MILLION SPL: SOUND PRESSURE LEVEL

			POWER MONITORING	SCHEDULE				
CONTROLLER TERMINAL	ART / SART LOCATION	LOAD NAME	DESCRIPTION	BREAKER AMPERAGE	VOLTAGE	PHASE	WIRE SIZE AND QUANTITY PER PHASE	NOTES
SFP	MDP	WHOLE HOUSE	BUILDING POWER	2000A	480V	3	5 SETS OF 400 KCMIL	-
1	DPH	RACK "A"	REFRIGERATION POWER	600A	480V	3	4 SETS OF 350 KCMIL	-
2	SPARE	-	-	-	-	-	-	-
3	MDP	PNLBD M	HVAC POWER	400A	480V	3	2 SETS OF #3/0	-
4	M	RTU-1	MAIN STORE HVAC UNIT	110A	480V	3	#6	-
5	M	RTU-2	MAIN STORE HVAC UNIT	110A	480V	3	#6	-
6	TRANSFORMER TF1	PNLBD LF1	FRIENDS SPACE #1	225A	208V	3	2 SETS OF #3/0	-
7	TRANSFORMER TF2	PNLBD LP2	FRIENDS SPACE #2	225A	208V	3	4 SETS OF 300 KCMIL	-
8	SPARE	-	-	-	-	-	-	-
9	SPARE	-	-	-	-	-	-	-
10	SPARE	-	-	-	-	-	-	-
11	SPARE	-	-	-	-	-	-	-
12	SPARE	-	-	-	-	-	-	-
1	POWERWALL	PNLBD LP1	GENERAL LIGHTING	150A	208V	3	#1/0	-
2	SPARE	-	-	-	-	-	-	-
3	SPARE	-	-	-	-	-	-	-
4	SPARE	-	-	-	-	-	-	-

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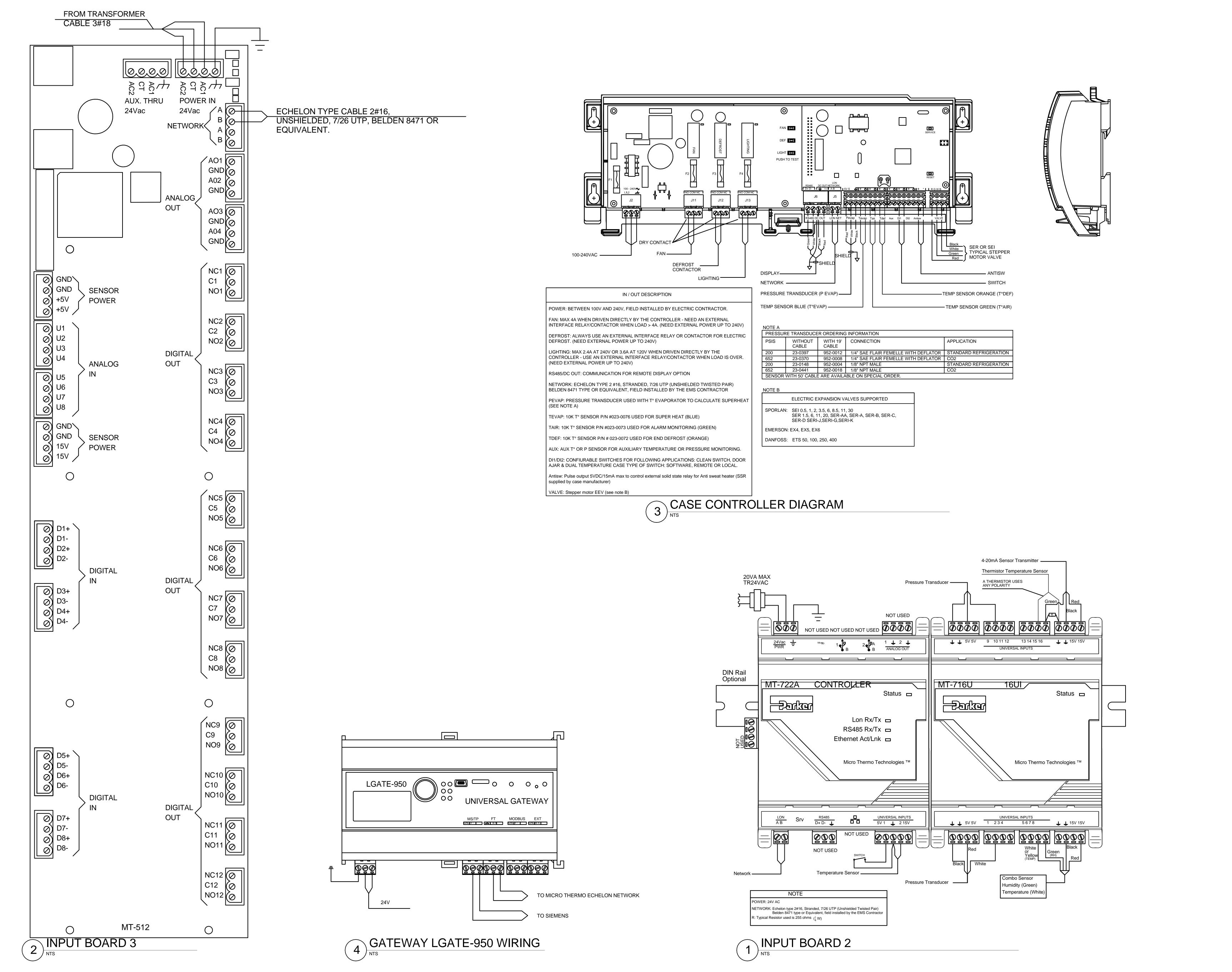
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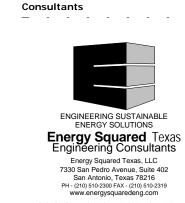
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Project Name

ENERGY MANAGEMENT SCHEDULES



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Project Manager: JCS JCS Document date:

Template date: Project No. 62911019

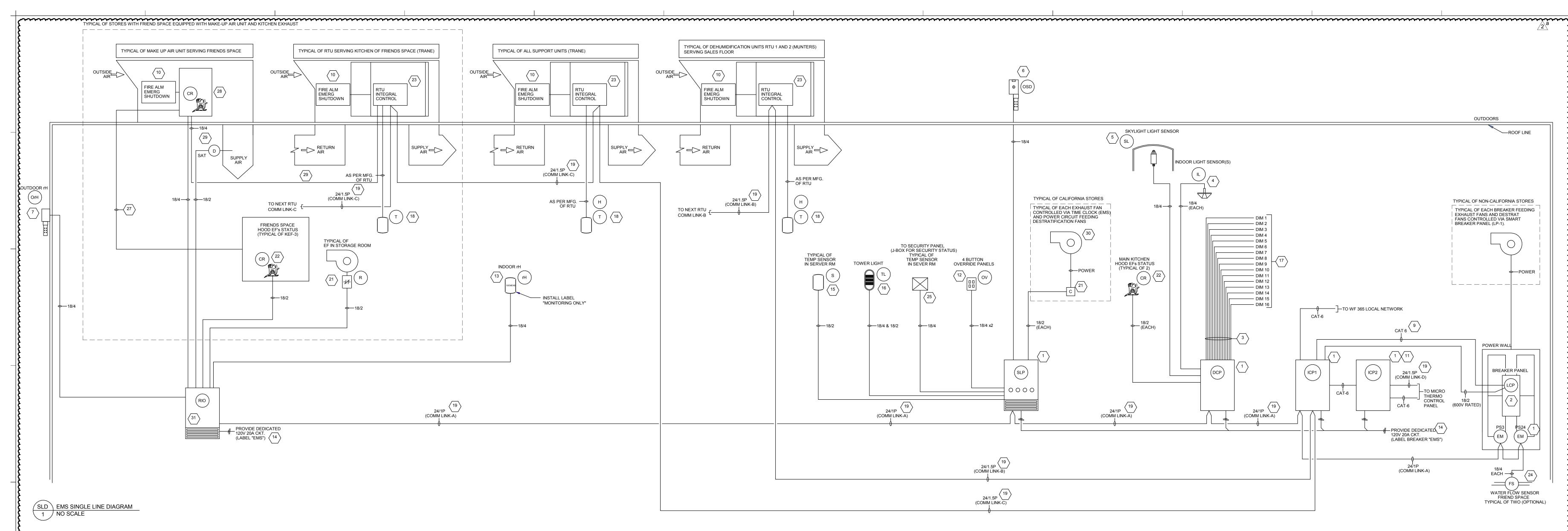
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03/06/2018 REFRIGERATION EMS CONTROL DETAILS

**EM201** 

**EMS HVAC & LIGHTING** 

**ONE-LINE DIAGRAM** 



		ND CONSTRUCTION INSTALLATION RESP			BOX/RACEWAYS/	CONTROL CABLE	\
/IBOL	DEVICE	QUANTITY SUPPLIED BY SIEMENS	DEVICE CABLE TYPE	INSTALLATION	PLUMBING	TERMINATION	NOTES
CR	CURRENT RELAY SWITCH	2 KITCHEN EXHAUST HOOD LINE-UP AND 2 OPTIONAL (FRIENDS SPACE)	18/2	E.C. / CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	
D)	DUCT TEMP SENSOR	1 OPTIONAL (FRIENDS SPACE - MAU)	18/2	CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	
СР	DIMMING CTRL PANEL	1	PER CONNECTED DEVICES	FACTORY INSTALLED ON POWER WALL	E.C.	E.C. / CTRL CONTRACTOR	
EM)	ENERGY METER	2 (1 PS24, 1 PS3)	24/1P	FACTORY INSTALLED ON POWER WALL	E.C.	MFG POWER WALL	
FS	WATER FLOW SENSOR (OPTIONAL)	2 (WATER TO FRIEND SPACES)	18/4	INSTALLATION MECHANICAL CONTRACTOR	E.C.	CTRL CONTRACTOR	
H	HUMIDITY SENS OR HUMIDISTAT	AS INDICATED ON MECHANICAL SCHEDULE - BY MFG. OF HVAC	AS REQUIRED BY MFG. OF HVAC	M.C.	E.C.	M.C.	5
ICP	INTEGRATION CTRL PANEL	2	VARIES PER CONNECTED DEVICE	FACTORY INSTALLED ON POWER WALL	E.C.	E.C. / CTRL CONTRACTOR	
IL	INDOOR LIGHT SENSOR	1 (FOR EACH SECTION OF THE STORE WHERE DAYLIGHT HARVESTING IS REQUIRED - REFER TO "EM100" DRAWING FOR QUANTITY AND LOCATION)	18/4	CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	
.CP	LIGHTING CTRL PANEL	SMART BREAKER PANEL IN POWER WALL	CAT-6 & 18/2	MFG OF POWER WALL	E.C.	E.C. / CTRL CONTRACTOR	3
RH	OUTSIDE RELATIVE HUMIDITY SENSOR	1	18/4	CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	
SD	OUTSIDE SENSING DEVICE	1	18/4	CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	2
OV)	4 BUTTONS OVERRIDE PANEL	1 (LEADER'S OFICE)	18/4 X2	CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	
R	24VAC CTRL RELAY	1 CASE LIGHTS AND 2 OPTIONAL (FRIENDS SPACE MAU AND EF)	18/2	E.C.	E.C.	CTRL CONTRACTOR	
RIO	REMOTE IO PANEL	1 FRONT OF THE STORE (FRIENDS SPACE)	18/4	CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	
RH	INDOOR RELATIVE HUMIDITY SENSOR	1 CENTRALLY LOCATED IN SALES FLOOR	18/4	CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	1
s	ZONE TEMP SENSOR	1 IN SERVER ROOM	18/2	CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	1
SL	SKYLIGHT SENSOR	1 (TYPICAL OF STORES WITH SKYLIGHTS)	18/4	CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	
SLP	SCREAM LOGIC PANEL	1	VARIES PER CONNECTED DEVICE	FACTORY INSTALLED ON POWER WALL	E.C.	CTRL CONTRACTOR	
T	TEMP SENSOR OR THERMOSTAT	1 FOR EACH RTU	AS REQUIRED BY MFG. OF HVAC	M.C.	E.C.	M.C.	5
TL)	TOWER LIGHT	1	18/4 & 18/2	CTRL CONTRACTOR	E.C.	CTRL CONTRACTOR	

NOTES - EMS DEVICES SCHEDULE
NOTES - ENS DEVICES SCHEDULE

1. EC SHALL INSTALL ELECTRICAL BOXES AND 1/2 EMT STUB-UPS WITH PULL STRING TO ABOVE CEILING GRID FOR INSTALLATION OF WALL MOUNTED EMS CONTROL DEVICES.

 $\mid$  2. MOUNT SENSOR 5' ABOVE ROOF LEVEL ON A 1/2 RIGID CONDUIT OR EMT CONDUIT WITH RAIN TIGHT FITTINGS.

 $\mid$  3. LIGHTING CONTROL CONTACTORS ARE FACTORY INSTALLED IN THE CD CONTROLS POWER WALL

5. SENSOR SUPPLIED BY OTHERS (UNIT MANUFACTURER OR MECHAICAL CONTRACTOR). SENSORS ARE NOT PART OF THE SIEMENS EMS CONTROL PACKAGE.

### EMS EQUIPMENT DELIVERY NOTES

### EQUIPMENT DELIVERY

1.1 CD CONTROLS SHALL BE RESPONSIBLE FOR CONTACTING SIEMENS TO SCHEDULE EQUIPMENT DELIVERY.

1.2 A VALID EQUIPMENT DELIVERY REQUEST SHALL CONSIST OF THE FOLLOWING.

I - NAME AND PHONE NUMBER OF PERSON RESPONSIBLE FOR RECEIVING THE EMS EQUIPMENT AND PROJECT NUMBER.

II - A VALID SHIPPING ADDRESS (VERIFIABLE BY THE DELIVERY AGENT).

1.3 UPON RECEIVING A VALID EQUIPMENT DELIVERY REQUEST, SIEMENS WILL PROCEED TO SHIP EQUIPMENT AS FOLLOW:

I - FIRST SHIPMENT: DIRECT TO CD CONTROLS, SHIPPED AT THEIR REQUEST WITHIN 5 BUSINESS DAYS (GIVEN STOCK IS AVAILABLE). THIS SHIPMENT INCLUDES CONTROL PANELS (SLP, ICP-1, ICP-2 AND DCP) II - SECOND SHIPMENT: SHIPPED TO THE SITE WITHIN 5 BUSINESS DAYS OF REQUEST (THE SITE MUST BE READY TO RECEIVE EQUIPMENT). THIS SHIPMENT INCLUDES ALL OTHER EMS COMPONENTS ON THE BILL OF MATERIALS.

2. EQUIPMENT INSTALLATION

2.1 HILLPHOENIX SHALL BE RESPONSIBLE FOR DESIGNATING AN INSTALLATION CONTRACTOR FOR THE PROJECT AND COORDINATING THE INSTALLATION OF THE EMS.

2.2 THE INSTALLATION CONTRACTORS MUST BE RESPONSIBLE FOR THE INSTALLATION OF THE EMS IN FULL COMPLIANCE WITH LOCAL AND NATIONAL CODES AS WELL AS GUIDELINES PROVIDED BY SIEMENS ON EMS DRAWINGS. 2.3 THE INSTALLATION CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING SIEMENS TO SCHEDULE COMMISSIONING OF THE EMS NO LESS THAN TWO WEEKS PRIOR TO THE STARTUP OF THIS SYSTEM.

. CONTACT INFORMATION

3.1 PLEASE DIRECT ALL SHIPPING REQUEST TO THE SIEMENS PROJECT MANAGEMENT DEPARTMENT @ (512) 306-9400.

CABI	LE SCHEDULE	
CABLE	SIZE	

	LL OOI ILDOLL	•	
CABLE	SIZE	TYPE	MANUFACTURER / PART#
18 /2	18AWG / 2 CONDUCTORS	SHIELDED, STRANDED, PLENUM	BELDEN / 6300FE NON-PAIRED
			COMTRAN / 3644
			TAPPAN / 1880AB2M-CMP
18 /4	18AWG / 4CONDUCTORS	SHIELDED, STRANDED, PLENUM	BELDEN / 6302FE NON-PAIRED
			LAKE CABLE / P1810C-WIN
			TAPPAN / 1880AB4M-CMP
18 /10	18AWG / 10 CONDUCTORS	UNSHIELDED, STRANDED, PLENUM	BELDEN / 6308UE NON-PAIRED
			LAKE CABLE / P1810C-WIN
			TAPPAN / 1880AB10-CMP
24 /1P	24AWG / 1-TWISTED PAIR	SHIELDED, STRANDED, PLENUM, TWISTED PAIR, WHITE	BELDEN / 82841 PAIRED
			LAKE CABLE / PF242CS
24 /1.5P	24AWG / 1.5-TWISTED PAIR	SHIELDED, STRANDED, PLENUM, TWISTED PAIR, ORANGE	WINDY CITY WIRE / 04210029-S
CAT 6	23AWG / 4-UTP	PLENUM RATED, SOLID CORE, TWISTED PAIR	BELDEN / 2413
			+

OR SIMILAR

GENERAL NOTES - CONSTRUCTION

1. LIFE SAFETY AND FIRE ALARM SYSTEMS:

1.1 LIFE SAFETY AND FIRE ALARM SYSTEMS ARE NOT PART OF THE EMS AND SHALL BE FURNISHED AND INSTALLED AS SPECIFIED ON ELECTRICAL AND MECHANICAL CONSTRUCTION DRAWINGS.

1.2 MECHANICAL EQUIPMENT SHUTDOWN SHALL BE WIRED AS TO NOT AFFECT THE OPERATION OF THE EMS.

2. SIEMENS IS NOT RESPONSIBLE FOR SUPPLYING, INSTALLING, STARTING OR COMMISSIONING DEVICES THAT

HAVE NOT BEEN LISTED ON THE INSTALLATION RESPONSIBILITIES SCHEDULE CONTAINED ON THIS DOCUMENT.

3. CONTROL CONTRACTORS ARE RESPONSIBLE FOR PROVIDING:

3.1 A FULLY OPERATIONAL SYSTEM IN FULL COMPLIANCE WITH NATIONAL AND LOCAL ELECTRICAL AND BUILDING CODES. 3.2 CONSULTING SIEMENS ENGINEERING DEPARTMENT ABOUT POTENTIAL DEVIATIONS FROM ORIGINAL

CONTROL DRAWING OR THE USE OF ALTERNATIVES PARTS, MATERIALS OR SYSTEM COMPONENTS. 3.3 SELECTION AND INSTALLATION OF CONTROL AND COMMUNICATION CABLES IN FULL COMPLIANCE WITH SPECIFICATIONS PROVIDED BY SIEMENS ON THE "CABLE SCHEDULE" SECTION OF THIS DOCUMENT.

> THE CONSTRUCTION DOCUMENTATION CONTAINED ON THIS SHEET WAS NOT PREPARED BY ENERGY SQUARED, LLC AND IS INCLUDED WITHIN THIS SET FOR REFERENCE ONLY. ENERGY SQUARED, LLC DID REVIEW THIS CONSTRUCTION DOCUMENTATION ON THIS SHEET FOR GENERAL COMPLIANCE WITH DESIGN INTENT. SUPPLIER IS RESPONSIBLE THAT ALL FURNISHED EQUIPMENT ON THIS SHEET COMPLIES WITH APPLICABLE LOCAL, STATE OR FEDERAL LAWS, AND CODES OR REGULATIONS.

## **KEYED NOTES**

SLP, DCP, ICP1, ICP2 & EM (DENT POWERSCOUT) FACTORY INSTALLED IN CD CONTROLS POWER WALL.  LIGHTING CONTROLS PROVIDED VIA CONTACTORS BUILT IN POWER WALL.  DIMMING CONTROL WIRING AS SPECIFIED BY THE MANUFACTURER OF THE LIGHTING FIXTURES. DAISY CHAIN CONTROL SIGNAL TO ALL LIGHTING FIXTURES MEMBERS OF THE SAME DIMMING CONTROL GROUP.  INDOOR LIGHT SENSOR INSTALLED IN PRIMARY DAYLIGHT ZONE. MOUNT SENSOR NO LESS THAN 2 INCHES BELOW THE LEVEL OF THE LIGHTING FIXTURES. REFER TO "EM100" DRAWING FOR LOCATION.  SKYLIGHT SENSOR. TYPICAL OF ONE SENSOR PER STORE. MOUNT SENSOR INSIDE SKYLIGHT WELL. REFER TO "EM100" DRAWING FOR LOCATION.  MOUNT OUTSIDE SENSING DEVICE FIVE FEET ABOVE ROOF LEVEL, AT RTU-2, WITH THE OPTICAL SENSOR FACING NORTH. AVOID MOUNTING SENSOR NEXT TO BUILDING STRUCTURES OR EQUIPMENT THAT MAY AFFECT THE OPERATION OF THE OPTICAL SENSOR (OBSTRUCTION TO DAYLIGHT) OR THE OUTSIDE AIR TEMPERATURE SENSOR (ARTIFICIAL SOURCES OF HEAT).		L		
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TENIL ENTITIE DENOON (AINTH TOTAL GOONGES OF TILAT).			6	FACING NORTH. AVOID MOUNTING SENSOR NEXT TO BUILDING STRUCTURES OR EQUIPMENT THAT MAY AFFECT THE OPERATION OF THE OPTICAL SENSOR (OBSTRUCTION TO DAYLIGHT) OR THE OUTSIDE AIR
	'			TENI ENTITIE DENOCITY WITH TOTAL OCCITOES OF THEM!

ETHERNET CABLE TO SMART BREAKER CONTROLLER FOR INTEGRATION VIA BACNET IP PROTOCOL. INSULATION OF ETHERNET AND CONTROL CABLES MUST BE PROPERLY RATED FOR MAXIMUM PHASE TO PHASE VOLTAGE IN POWER WALL (600V RECOMMENDED).

MOUNT OUTSIDE HUMIDITY STATION AT RTU-2, NO LESS THAN 10 FEET ABOVE GRADE LEVEL. AVOID MOUNTING SENSOR NEXT TO VENTILATION LOUVERS, HVAC OR ELECTRICAL EQUIPMENT (ARTIFICIAL SOURCES OF HEAT AND MOISTURE). PROVIDE WATER TIGHT LECTRIC FITTINGS AND SEAL OPENINGS ON

FIRE ALARM OR SMOKE DETECTOR SHUTDOWN INTERLOCK - BY OTHERS.

NEMA 4 ENCLOSURE TO AVOID WATER DAMAGE TO ELECTRONICS.

| INTEGRATION CONTROL PANEL ICP-2. INTEGRATION WITH THE REFRIGERATION SYSTEM (MICRO THERMO) VIA BACnet MS/TP PROTOCOL.

FOUR BUTTONS REMOTE OVERRIDE PANEL. REFER TO DRAWING "EM100" FOR LOCATION. INDOOR HUMIDITY STATION CENTRALLY LOCATED IN THE SALES FLOOR. AVOID INSTALLATION OF THE HUMIDITY STATION NEXT TO ARTIFICIAL SOURCES OF HEAT OR MOISTURE. INSTALL LABEL ON THE FACE OF THE SENSOR INDICATING "FOR MONITORING ONLY".

(14) EMS PANELS MUST BE FED FROM A DEDICATED 120VAC @ 20AMPS POWER CIRCUIT.

 $\langle 15 \rangle$  | MOUNT SENSOR IN SERVER ROOM NEXT TO WALL-MOUNTED THERMOSTAT FOR CONTROL OF HVAC. (16) | MOUNT TOWER LIGHT RIGHT BELOW CEILING LINE. REFER TO CONSTRUCTION DRAWING EM100 FOR LOCATION.

0-10VDC CONTROL SIGNAL TO DIMMING LIGHTING FIXTURES. REFER TO "LIGHTING CONTROL SCHEDULE" ON

ELECTRICAL DRAWINGS "E110" FOR ADDITIONAL INFORMATION ON "DIMMING CONTROL SCHEMES" CAUTION!!! MAXIMUM LOAD PER DIMMING CHANNEL MUST NOT EXCEED 80mA. FIELD INSTALLED TEMPERATURE AND HUMIDITY SENSORS SUPPLIED BY THE MANUFACTURER OF THE HVAC. REFER TO "HVAC SCHEDULE" AND "MECHANICAL FLOOR PLANS" IN CONSTRUCTION DRAWINGS FOR NUMBER

AND LOCATION. REFER TO MANUFACTURER'S DOCUMENTATION FOR CONTROL WIRING REQUIREMENTS. COMMUNICATION TRUNKS: A- COMMUNICATION LOOP BETWEEN ICP-1, SLP, AND RIO PANEL. B- COMMUNICATION LOOP BETWEEN ICP-1, RTU-1 AND RTU-2 (SALES UNITS - MUNTERS).

C- COMMUNICATION LOOP BETWEEN ICP-1 AND TRANE BACnet RTUS. D- COMMUNICATION LOOP BETWEEN ICP-2 AND REFRIGERATION CONTROL PANEL (MICRO THERMO).

MOTOR STARTER OR CONTACTOR SUPPLIED AND INSTALLED BY OTHERS. LOW VOLTAGE CONTROL RELAY

PROVIDED BY SIEMENS.

INSTALL CURRENT RELAY (CR) ON POWER FEED TO EXHAUST FAN MOTORS ON KITCHEN EXHAUST HOOD LINE-UP EMS SUPERVISORY CONTROL FOR MUNTERS DEHUMIDIFICATION AND TRANE RTU'S PROVIDED VIA BACNET MS/TP INTEGRATION. BACnet COMMUNICATION MODULES ON RTUS MUST BE INSTALLED AND CONFIGURED BY OTHERS MAC ADDRESS OF THE RTU MUST BE SET TO MATCH THE NUMBER OF THE RTU AS INDICATED ON THE MECHANICAL SCHEDULE (e.g. RTU-1 -> MAC ADD = 1). SET COMMUNICATION BAUD RATE TO 19.2K.

WATER FLOW SENSOR, TYPICAL OF TWO. WATER SUPPLY TO FRIENDS SPACES. REFER TO MECHANICAL DRAWINGS FOR LOCATION. JUNCTION BOX PROVIDED BY SIEMENS. TERMINATIONS ON SECURITY PANEL BY ALARM CONTRACTOR.

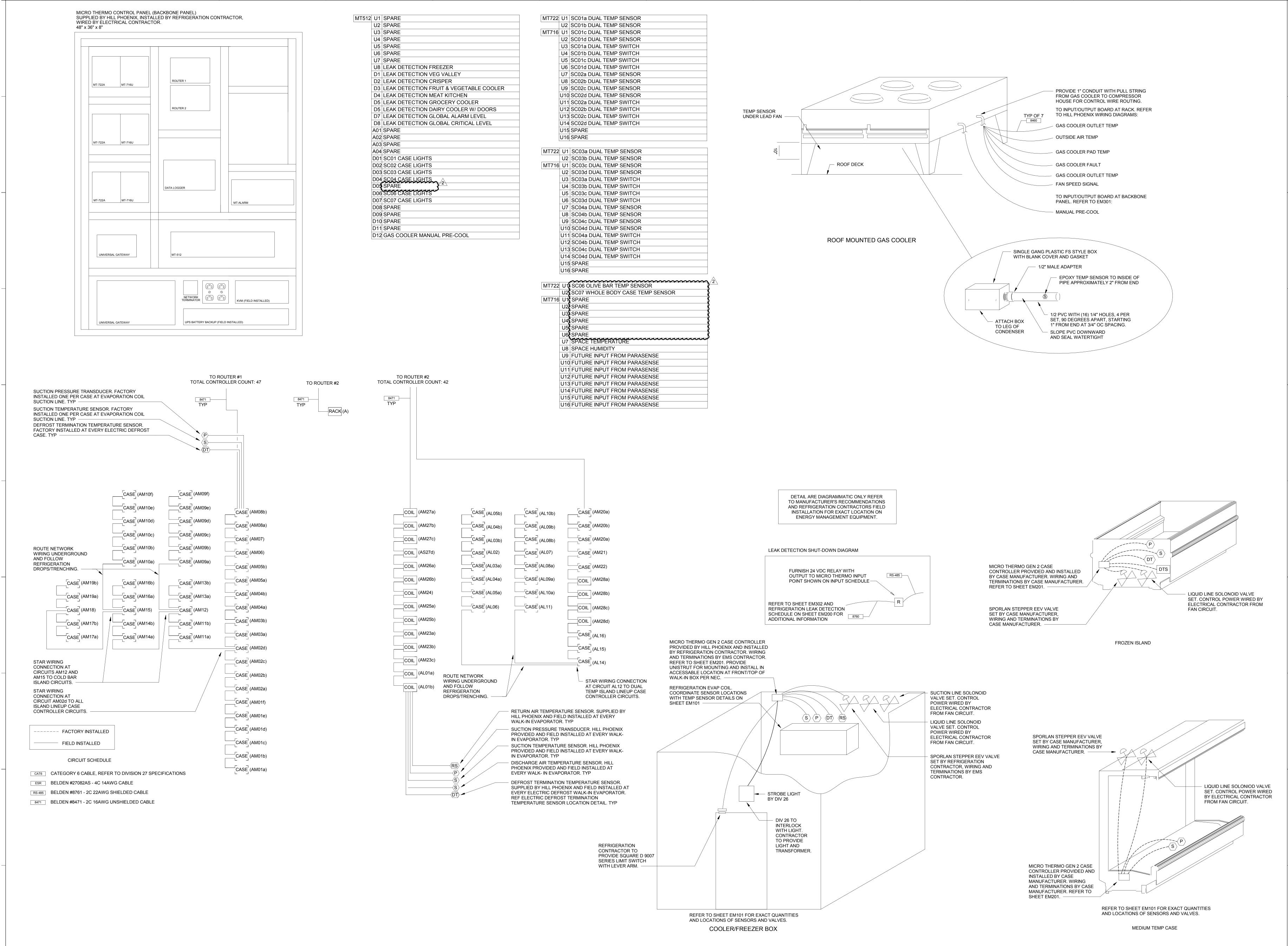
26 NOTE REMOVED.

HARD WIRED INTERLOCK BETWEEN THE KITCHEN MAKE UP "MAU" AND THE KITCHEN EXHAUST FAN "KEF" -PROVIDED BY OTHERS. THIS INTERLOCK MUST GUARANTEE THE ACTIVATION AND DE-ACTIVATION OF THE MAU SIMULTANEOUSLY WITH THE KITCHEN EXHAUST FAN.

SELF-CONTAINED UNIT. SENSORS PACKAGE, CONTROLS AND INTERLOCKS WITH KITCHEN EXHAUST BY

ONLY APPLICABLE TO RTU SERVING KITCHEN AREA OF THE FRIEND'S SPACE. AN INTERLOCK BETWEEN THE RTU AND THE MAU SHALL PREVENT THE MAU FROM HEATING WHEN THE RTU IS ENGAGED IN MECHANICAL RTU AND THE MAU SHALL PREVENT THE MAU FROM HEATING WHEN THE RTU IS ENGAGED IN MECHANICAL

REFER TO "EXHAUST FAN SCHEDULE" ON MECHANICAL DRAWINGS FOR ADDITIONAL DETAILS. MOUNT RIO PANEL AT THE FRONT OF THE STORE, PROVIDE DEDICATED POWER CIRCUIT 120V @ 20A. LABEL CIRCUIT "EMS".



Architect of Record: BOYD W. RAU 6700 Antioch Plaza Suite 300 Merriam, KS 66204 www.brrarch.com Tel: 913-262-9095 Consultants



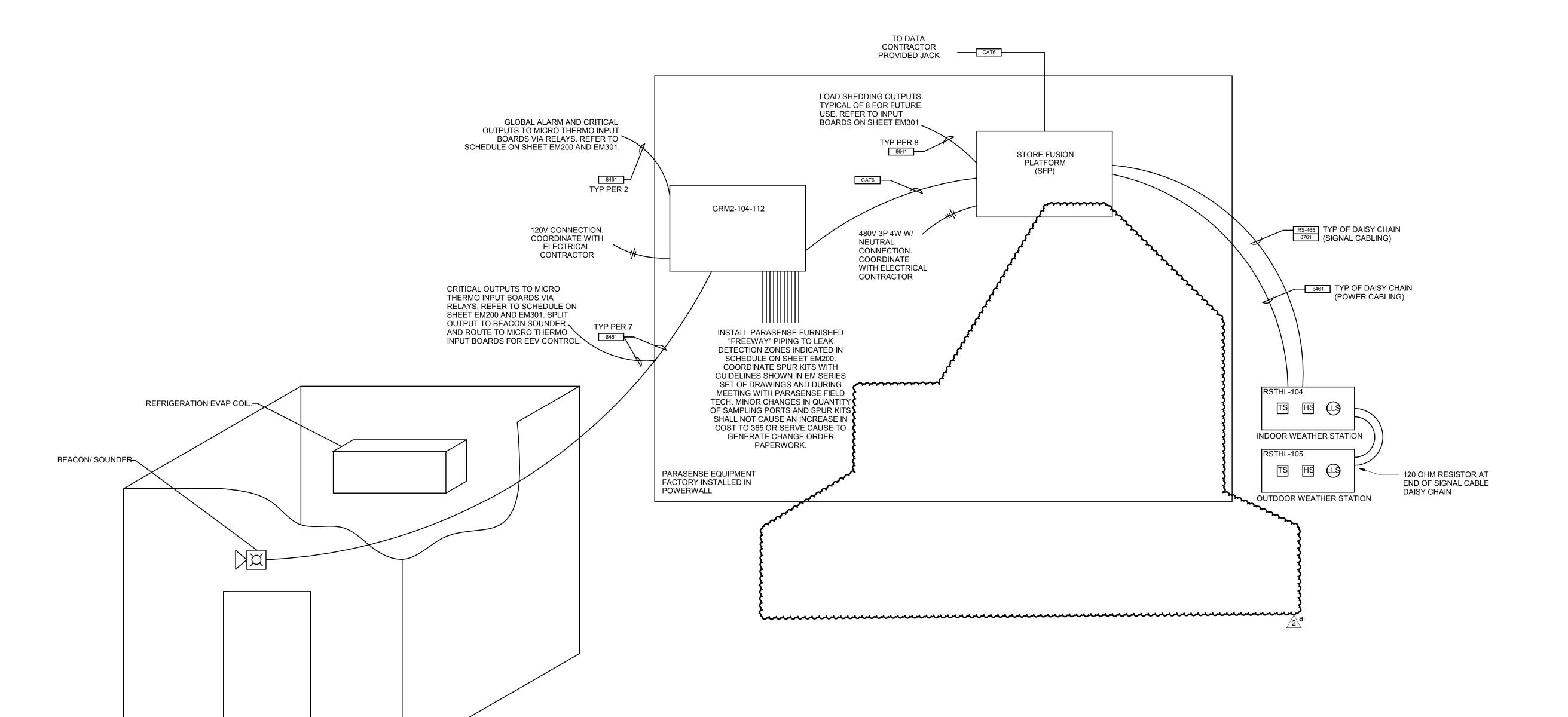
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2 05/21/18 Addendum #2

**Issues & Revisions** DESCRIPTION **Project Name** 

Document date:

**EMS REFRIGERATION ONE-LINE DIAGRAM** 



DETAIL ARE DIAGRAMMATIC ONLY REFER TO MANUFACTURER'S RECOMMENDATIONS AND REFRIGERATION CONTRACTORS FIELD INSTALLATION FOR EXACT LOCATION ON ENERGY MANAGEMENT EQUIPMENT.

---- FACTORY FURNISHED — FIELD INSTALLED

CIRCUIT SCHEDULE

RS-465 BELDEN #8761 - 2C 22AWG SHIELDED CABLE

BELDEN #8461 - 2C 18AWG UNSHIELDED CABLE

9486 BELDEN #9486 - 2C 18AWG UNSHIELDED CABLE

CATEGORY 6 CABLE, REFER TO DIVISION 27 SPECIFICATIONS

JCS

Architect of Record:

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www.brrarch.com Tel: 913-262-9095

Consultants

ENERGY SOLUTIONS

Energy Squared Texas
Engineering Consultants

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PH- (210) 510-2300 FAX - (210) 510-2319
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 05/21/18
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**Issues & Revisions** 

JCS 05/21/18

Document date: Template date:

Project No.

1 PARASENSE ONE-LINE DIAGRAM

COOLER/FREEZER BOX

# REMOVEDIN ENTIRETY

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DESCRIPTION 01/26/18 PERMIT SET

Project Name

**ENERGY MANAGEMENT** 

JCS

JCS

Document date

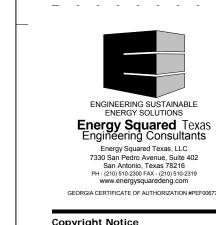
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**PARASENSE DETAILS** 

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Project Manager: JCS JCS

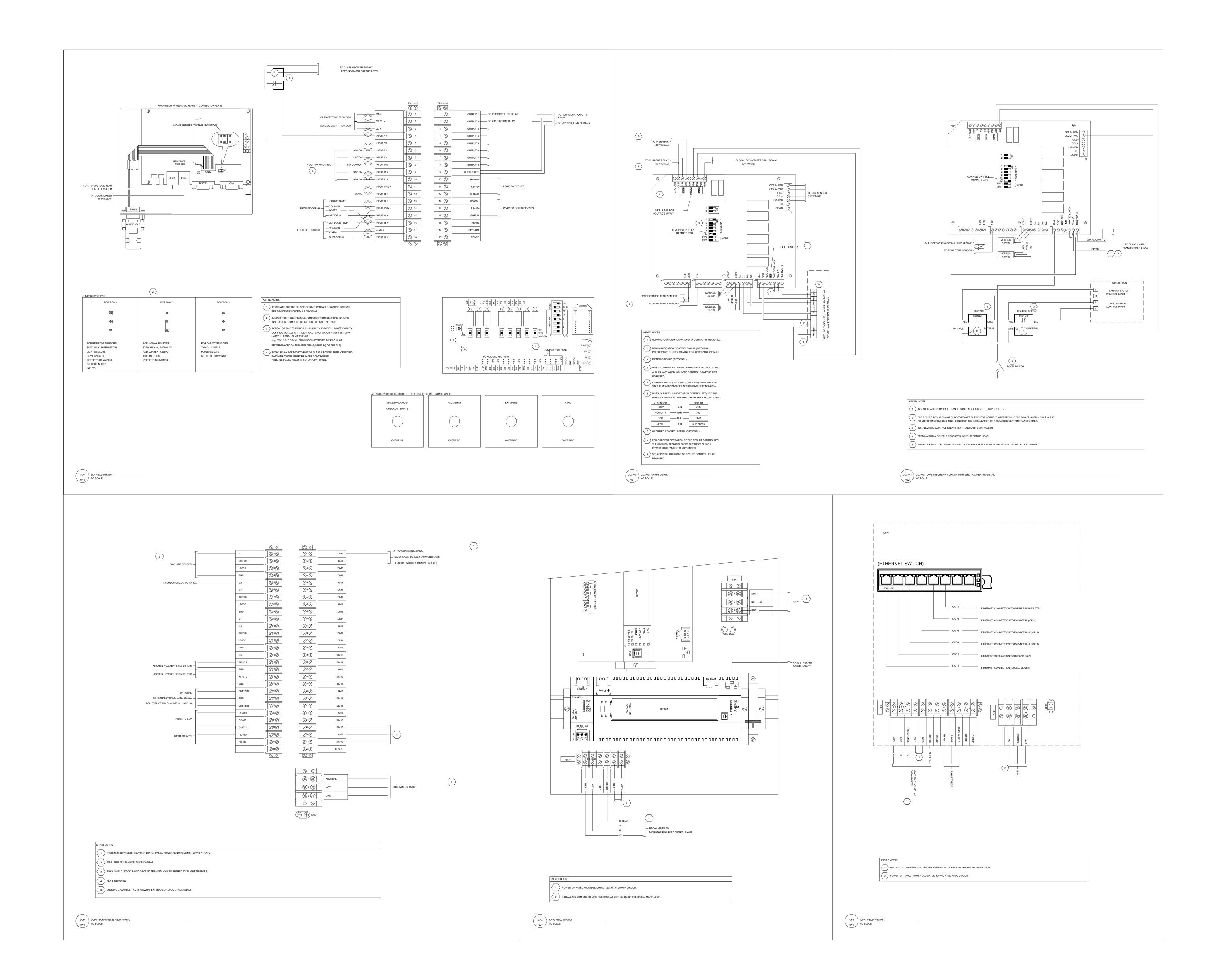
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ENERGY MANAGEMENT SIEMENS DETAILS







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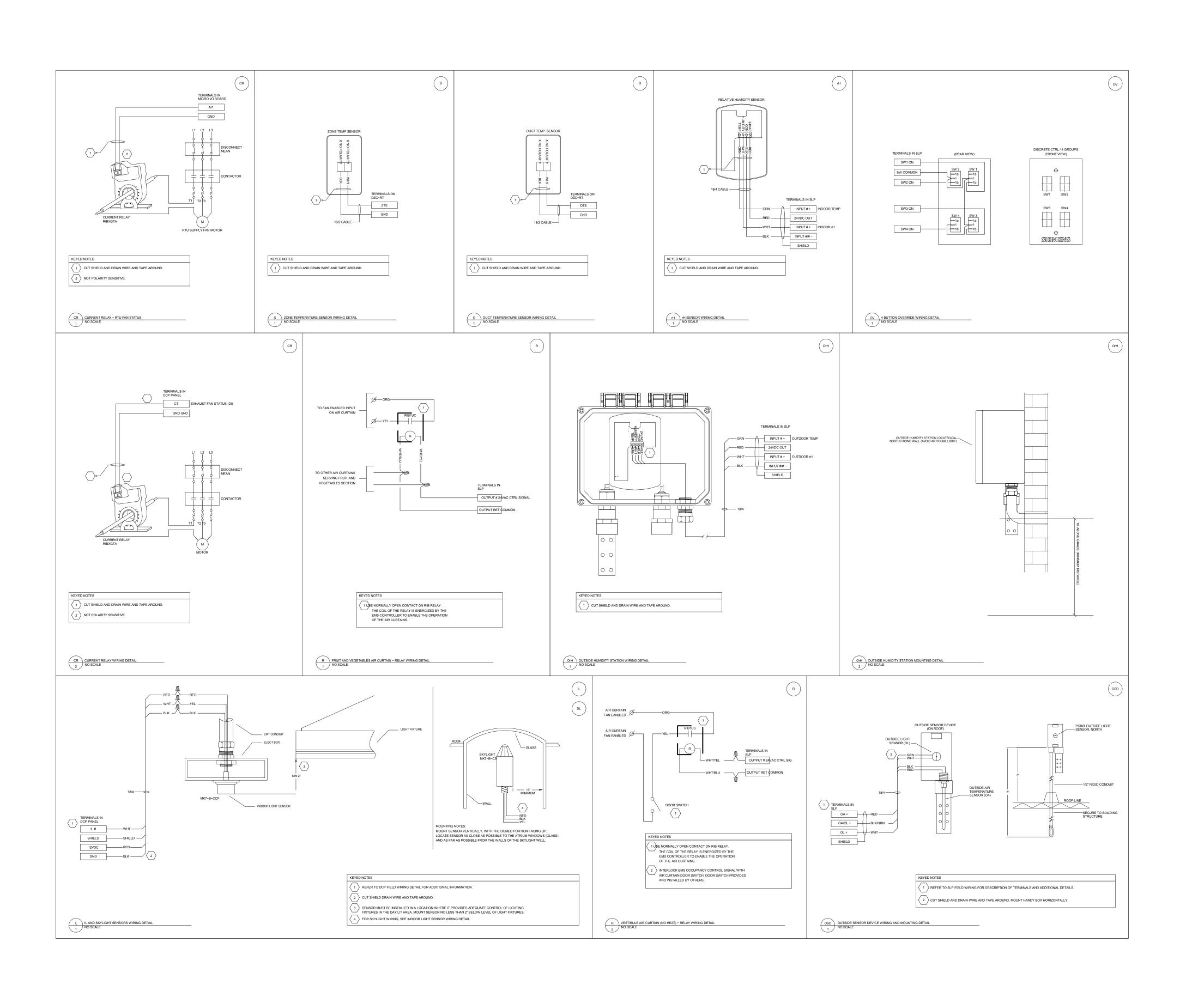
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Template date:

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ENERGY MANAGEMENT SIEMENS DETAILS



INFORMATION ON CONTRACT DOCUMENTS IS GENERAL INFORMATION AND FOR BID PURPOSES ONLY. PERFORM REQUIRED CALCULATIONS AND COORDINATE WITH OTHER TRADES.

3 DEVIATIONS FROM ENGINEERS LAYOUT WILL NOT BE CONSIDERED UNLESS A FORMALLY SUBMITTED RFI IS RECEIVED AND APPROVED. PROVIDE ADDITIONAL MATERIALS AND LABOR REQUIRED DUE TO LACK OF COORDINATION OR TO MEET AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER REQUIREMENTS AT NO

ADDITIONAL COST TO 365. PROVIDE ALL EQUIPMENT AND LABOR REQUIRED FOR A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM.

PROVIDE AUDIBLE AND VISIBLE NOTIFICATION APPLIANCES AS INDICATED ON THE DRAWINGS.

DO NOT INSTALL SMOKE DETECTORS IN A DIRECT AIR FLOW NOR CLOSER THAN 3 FEET (1 METER) FROM AN AIR SUPPLY DIFFUSER OR RETURN AIR OPENING.

PROVIDE DUCT DETECTION AND SHUTDOWN FOR AIR DISTRIBUTION SYSTEMS EXCEEDING 2000 CFM. DUCT SMOKE DETECTION SHALL TRANSMIT A SUPERVISORY SIGNAL TO THE FACP.

PROVIDE FIRE ALARM EQUIPMENT AND CONNECTIONS REQUIRED TO SHUTDOWN FAN POWERED AIR DISTRIBUTION EQUIPMENT THAT IS LESS THAN 2000 CFM AND IS NOT PROVIDED WITH DUCT SMOKE DETECTION WHEN IT'S RESPECTIVE AIR HANDLING UNIT IS SHUTDOWN.

10. FORWARD COMPLETED FIRE ALARM CERTIFICATE OF COMPLETION

11. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

### FIRE ALARM DEMOLITION NOTES:

1. PRIOR TO SUBMITTING BID, CONTRACTOR MUST VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW GENERAL NOTES, SPECIFICATIONS AND ALL APPLICABLE DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER OR 365, AS DEFINED IN BID DOCUMENTS, OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMITTING BID. ADDITIONAL COMPENSATION WILL NOT BE PAID FOR LACK OF SUCH DETERMINATION, FAMILIARIZATION, AND/OR ALLOWANCE.

EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT ACTUAL "AS-BUILT" CONDITIONS.

3. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

4. PERFORM ALL WORK ACCORDING TO THE PHASING SCHEDULE FOR THIS PROJECT. PROVIDE ALL TEMPORARY DESIGN AND/OR CONFIGURATIONS THAT MEET APPLICABLE CODE REQUIREMENTS AS NECESSARY TO CONFORM TO THE REQUIRED CONSTRUCTION PHASING OF THE PROJECT.

5. ONLY THE PORTIONS OF THE BUILDING AFFECTED BY THE SCOPE OF THE PROJECT HAVE BEEN SHOWN. INFORMATION SHOWN AS EXISTING TO REMAIN IS NOT BEING MODIFIED AS A PART OF THIS

6. ALL WORK SHALL BE PERFORMED SO AS TO NOT INTERRUPT SERVICE. THE CONTRACTOR SHALL PROPERLY NOTIFY THE LANDLORD. THE LEASER AND ADJACENT TENANTS A MINIMUM OF 48 HOURS IN ADVANCE BEFORE PROCEEDING WITH THIS WORK.

7. EQUIPMENT AND CONDUIT TO BE REMOVED SHALL BE KEPT FOR REINSTALLATION DURING THE CONSTRUCTION PHASE WHEN POSSIBLE AND/OR INDICATED ON THE DRAWINGS. AVOID DAMAGE TO SALVAGED EQUIPMENT AND CONDUIT DURING DEMOLITION PHASE. PROPERLY DISPOSE OF WIRING AND MATERIAL THAT ARE REMOVED AND ARE NOT REQUESTED TO BE SALVAGED BY 365.

REMOVE ALL UNUSED AND DEMOLISHED EQUIPMENT AND ASSOCIATED MATERIALS FROM SITE. ABANDONING UNUSED PORTIONS WILL NOT BE ACCEPTABLE.

9. AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN. REPAIR DAMAGE CAUSED DURING WORK AT NO EXTRA COST TO 365. 10. PATCH ALL OPENINGS IN AREAS THAT REMAIN TO MATCH ADJACENT

11. FIRE ALARM SYSTEM(S) NOT ASSOCIATED WITH THE DEMOLITION SHALL BE LEFT IN SERVICE AS APPLICABLE.

SURFACES AFTER EXISTING EQUIPMENT IS REMOVED AND VACATED.

### FIRE SPRINKLER GENERAL NOTES:

- 1. SPRINKLER SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH NFPA 13. SYSTEM SHALL ALSO MEET ALL APPLICABLE BUILDING CODES, FIRE CODES AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER. VERIFY REQUIREMENTS PRIOR TO BID SUBMITTAL.
- 2. INFORMATION ON CONTRACT DOCUMENTS IS GENERAL INFORMATION AND FOR BID PURPOSES ONLY. LAYOUT SYSTEM, PERFORM REQUIRED CALCULATIONS AND COORDINATE WITH OTHER TRADES.
- 3. PROVIDE ADDITIONAL MATERIALS AND LABOR REQUIRED DUE TO LACK OF COORDINATION AND TO MEET AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER REQUIREMENTS AT NO ADDITIONAL COST TO 365.
- 4. MODIFY EXISTING SPRINKLER SYSTEM. RELOCATE AND/OR PROVIDE ADDITIONAL SPRINKLERS, PIPING, HANGERS, ETC. COORDINATE WITH WALLS, CEILINGS, LIGHTS, DIFFUSERS, STRUCTURE, OBSTRUCTIONS, ETC., IN AREAS AFFECTED BY SCOPE OF WORK.
- 5. COORDINATE SPRINKLER SYSTEM MODIFICATIONS TO MINIMIZE SYSTEM IMPAIRMENT. PROVIDE FIRE WATCH AND INTERIM FIRE PROTECTION MEASURES WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION, INSURANCE CARRIER OR 365.
- 6. COORDINATE PIPE ROUTING NEAR ELECTRICAL EQUIPMENT WITH NFPA 70.
- 7. COORDINATE SPRINKLER TEMPERATURES NEAR HEAT-PRODUCING SOURCES WITH NFPA 13.
- 8. DO NOT CONNECT MORE THAN ONE SPRINKLER TO AN EXISTING ONE- INCH OUTLET.
- 9. ROUTE PIPING AND DROPS IN BACK OF HOUSE AREAS VISIBLE FROM SALES FLOOR WITH OTHER TRADES WHERE POSSIBLE TO MINIMIZE VISIBILITY FROM SALES FLOOR.
- 10. REMOVE ALL ABANDONED PIPING, FITTINGS, HANGERS, ETC. 11. FORWARD COMPLETED CONTRACTOR MATERIAL TEST
- CERTIFICATES TO 365. 12. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

PRIORITY | SYSTEM OUTPUTS

### FIRE SPRINKLER DEMOLITION NOTES:

- 1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR 365 OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- . EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
  - 365 RETAINS RIGHTS OF SALVAGE FOR EQUIPMENT AND FIXTURES TO BE REMOVED. COORDINATE WITH 365 THE EQUIPMENT AND FIXTURES TO BE SALVAGED AND THE LOCATION FOR STORAGE. AVOID DAMAGE TO EQUIPMENT, FIXTURES AND DEVICES DURING DEMOLITION WORK AND
  - PERFORM ALL WORK ACCORDING TO THE PHASING SCHEDULE FOR THIS PROJECT. PROVIDE ALL TEMPORARY DESIGN AND/OR CONFIGURATIONS THAT MEET APPLICABLE CODE REQUIREMENTS AS NECESSARY TO CONFORM TO THE REQUIRED CONSTRUCTION PHASING OF THE PROJECT.

DURING TRANSPORT TO 365'S DESIGNATED STORAGE LOCATION.

- 5. ONLY THE PORTIONS OF THE BUILDING AFFECTED BY THE SCOPE OF THE PROJECT HAVE BEEN SHOWN. INFORMATION SHOWN AS EXISTING TO REMAIN IS NOT BEING MODIFIED AS A PART OF THIS PROJECT.
- 6. ALL WORK SHALL BE PERFORMED SO AS TO NOT INTERRUPT SERVICE. THE CONTRACTOR SHALL PROPERLY NOTIFY 365, LANDLORD, THE LEASER AND ADJACENT TENANTS AS APPLICABLE A MINIMUM OF 48 HOURS IN ADVANCE BEFORE PROCEEDING WITH THIS WORK.
- REMOVE ALL UNUSED AND DEMOLISHED EQUIPMENT AND ASSOCIATED MATERIALS FROM SITE. ABANDONING UNUSED PORTIONS WILL NOT BE ACCEPTABLE.
- 8. AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN FOR NEW INSTALLATION. REPAIR ANY DAMAGE CAUSED DURING WORK AT NO EXTRA COST TO 365.
- 9. SEAL ALL PENETRATIONS THROUGH FLOORS, WALLS, CEILINGS AND ROOFS WHERE FIRE SPRINKLER COMPONENTS ARE REMOVED AND WHERE THE EXISTING PENETRATION IS NOT USED FOR THE NEW INSTALLATION. REPAIR SURFACES TO MATCH ADJACENT AREAS.
- 10. FIRE SPRINKLER SYSTEM(S) NOT ASSOCIATED WITH THE DEMOLITION SHALL BE LEFT IN SERVICE AS APPLICABLE.
- 11. VERIFY THAT EXISTING EQUIPMENT TO REMAIN IS OPERATING PROPERLY. NOTIFY THE ARCHITECT, ENGINEER AND/OR 365 OF ANY DAMAGED AND/OR MALFUNCTIONING COMPONENTS.
- 12. ALL SYSTEMS TO BE LEFT IN SERVICE PRIOR TO THE END OF EACH WORKDAY.

### FIRE PROTECTION SYMBOLS

NOTE: NECESSARILY USED ON THE DRAWINGS.

WALL MOUNTED AUDIBLE/VISIBLE NOTIFICATION

CEILING MOUNTED VISIBLE NOTIFICATION

CEILING MOUNTED AUDIBLE/VISIBLE NOTIFICATION

FIRE PROTECTION (FP)

SPRINKLER RISER

FIRE DEPARTMENT CONNECTION

## APPLIANCE, ## INDICATES CANDELA

## APPLIANCE, ## INDICATES CANDELA

## APPLIANCE, ## INDICATES CANDELA

ETR-EXTERIOR NOTIFICATION APPLIANCE

FIRE ALARM

PIPING

STANDARD MOUNTING HEIGHTS

FIRE ALARM BELL (EXTERIOR)

PULL STATIONS (HANDLE)

ANNOTATION

**ABBREVIATIONS** 

CANDELA

DUCTILE IRON

ESFR EARLY SUPPRESSION

ETR EXISTING TO REMAIN

CONTRACTOR

JUNCTION BOX

NOT APPLICABLE

MAXIMUM MINIMUM

FHC FIRE HOSE CABINET

FAST RESPONSE

FIRE PROTECTION

CD

DI

**AUDIBLE APPLIANCES (CENTERLINE)** 

VISIBLE APPLIANCES (CENTERLINE)

FIRE ALARM ANNUNCIATOR PANEL (DISPLAY)

FIRE ALARM CONTROL PANEL/UNIT (DISPLAY)

(1) FIRE PROTECTION PLAN CALLOUT

CONNECTION POINT OF NEW WORK TO EXISTING

1 DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL

FP1 NUMBER LOWER NUMBER INDICATES SHEET NUMBER

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ETC. ARE

FACE ETR-FIRE ALARM CONTROL PANEL/UNIT FAAP RECESSED FIRE ALARM ANNUNCIATOR PANEL REMOTE POWER SUPPLY RT REMOTE TEST STATION WITH INDICATING LIGHT KNOX BOX PULL STATION SMOKE DETECTOR (E INDICATES ELEVATOR RECALL) DUCT MOUNTED SMOKE DETECTOR (SD=SUPPLY/RD=RETURN)

ENGINEERING SUSTAINAB ENERGY SOLUTIONS **Energy Squared** Texa Engineering Consultants Energy Squared Texas, LLC

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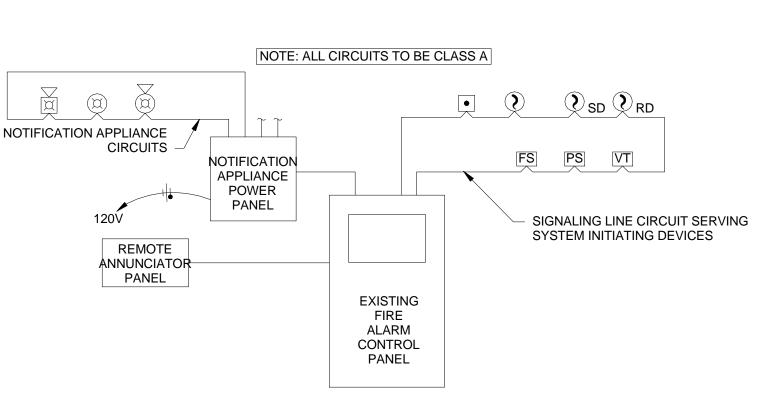
SECTION CUT DESIGNATION AFF ABOVE FINISHED FLOOR NOT IN CONTRACT AFG ABOVE FINISHED GRADE OC ON CENTER POST INDICATOR VALVE PROVIDE FURNISH AND INSTALL PRESSURE REDUCING VALVE PRV RD RETURN DUCT REV REVISION SUPPLY DUCT SQUARE FEET **TYPICAL** UNDERWRITERS LABORATORIES, INC. UNLESS NOTED OTHERWISE VOLT(S) WEATHERPROOF

(AFF, AFG, UNLESS NOTED OTHERWISE

120"

WATER SUPPLY INFORMATION:

WATER SUPPLY INFORMATION IS NOT AVAILABLE AT THIS TIME. CONTRACTOR SHALL OBTAIN CURRENT WATER SUPPLY INFORMATION PRIOR TO BID SUBMITTAL.

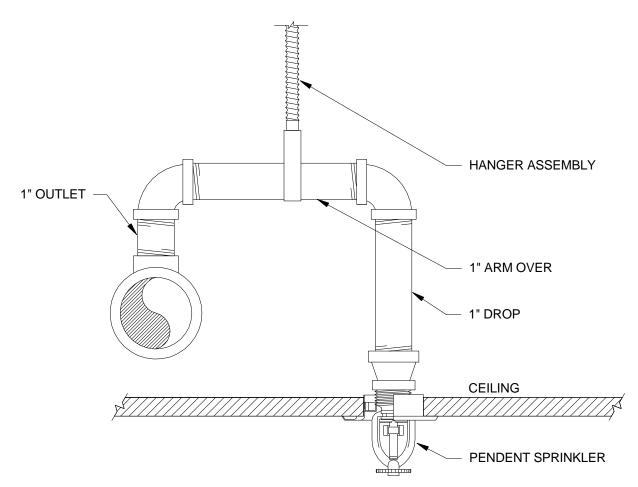


RISER DIAGRAM IS SCHEMATIC IN NATURE. NOT ALL DEVICES ARE SHOWN. REFER TO PLANS FOR EQUIPMENT QUANTITIES AND LOCATIONS.

DUCT DETECTORS MAY HAVE INTEGRAL RELAYS FOR AIR HANDLING UNIT SHUT-DOWN AND FIRE/SMOKE DAMPER CONTROL. WIRING FOR THIS FUNCTION HAS NOT BEEN SHOWN. COORDINATE WITH MECHANICAL SYSTEM INSTALLER.

FIRE ALARM RISER DIAGRAM - ADDRESSABLE SYSTEM

REFER TO PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.



PROVIDE HANGER ASSEMBLY THAT PREVENTS UPWARD MOVEMENT OF THE PIPE WHEN ARMOVER LENGTH EXCEEDS 12-INCHES AND SYSTEM STATIC PRESSURE AT THE SPRINKLER EXCEEDS 100 PSI. PROVIDE HANGER WHEN ARMOVER LENGTH EXCEEDS 24-INCHES AND SYSTEM STATIC PRESSURE AT THE SPRINKLER DOES NOT EXCEED 100 PSI

ARRANGEMENT SHOWN IS SCHEMATIC. MODIFY TO SUIT CONDITIONS AND MEET

PENDENT SPRINKLER



SYSTEM INPUTS

FIRE DEPARTMENT KEY BOX VALVE TAMPER SWITCH (KNOX BOX

SIGNALING LINE OR NOTIFICATION APPLIANCE CIRCUIT - OPEN

SIGNALING LINE OR NOTIFICATION APPLIANCE CIRCUIT - SHORT

SIGNALING LINE OR NOTIFICATION APPLIANCE CIRCUIT - GROUND

MANUAL PULL STATION

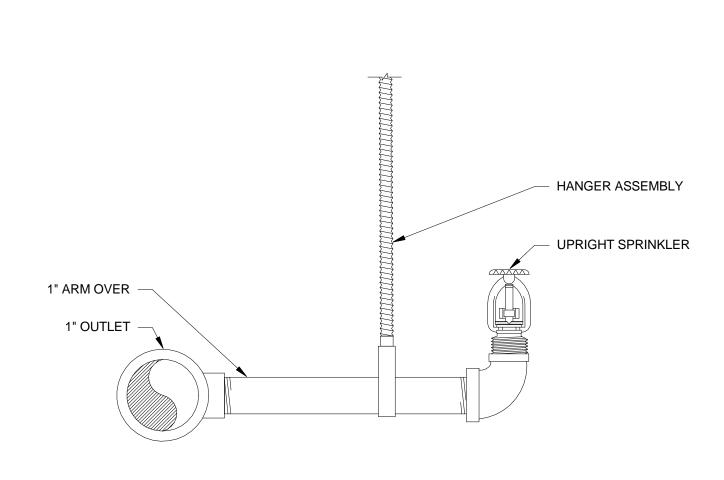
VALVE TAMPER SWITCH

KITCHEN HOOD SYSTEM

SMOKE DETECTOR - SPOT TYPE

WATERFLOW ALARM SWITCH

SMOKE DETECTOR - DUCT MOUNTED



• | • | • |

• | • | • |

AB C DEF

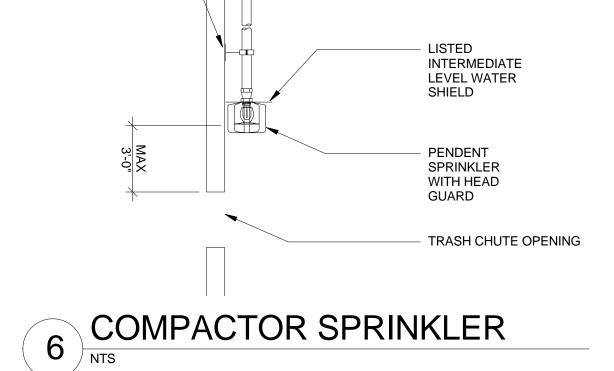
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PROVIDE HANGER WHEN ARMOVER LENGTH EXCEEDS 24 INCHES. ARRANGEMENT SHOWN IS SCHEMATIC. MODIFY TO SUIT CONDITIONS AND MEET APPLICABLE CODE REQUIREMENTS.

UPRIGHT SPRINKLER



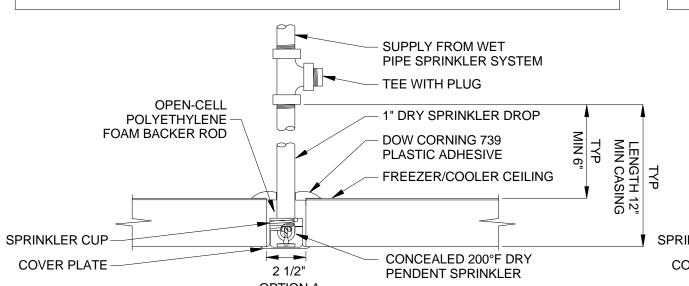
TYPICAL PIPE HANGER

REFERENCE PLAN FOR PIPING CONTINUATION

OPTION "A" INSTALLATION PROCEDURE CORE DRILL 2 1/2" DIAMETER HOLE IN THE FREEZER/COOLER INSULATED CEILING PANEL. LOCATE HOLE AND REQUIRED SPRINKLER PROTECTION IN ACCORDANCE WITH NFPA 13 OBSTRUCTION CRITERIA (SSP TYPE SPRINKLERS). MAINTAIN 6" CLEARANCE FROM COOLER SEAMS. INSTALL DRY PENDENT SPRINKLER PER MANUFACTURERS INSTALLATION

COMPLETELY FILL ANNULAR CEILING OPENING BETWEEN THE ESCUTCHEON AND TOP OF CEILING PANEL WITH OPEN-CELL POLYETHYLENE FOAM BACKER ROD. EXPANDED FOAM IS NOT PERMITTED.

I. INJECT DOW CORNING 739 PLASTIC ADHESIVE SEALANT INTO AND AROUND THE TOP OF THE FREEZER/COOLER CEILING CORE OPENING IN ACCORDANCE WITH SEALANT MANUFACTURERS INSTRUCTIONS



SUPPLY FROM WET PIPE SPRINKLER SYSTEM

2 NYLON STRAP TIES (INSTALL OPPOSITE DIRECTIONS) 1" DRY SPRINKLER DROP TYCO RUBBER SEAL **BOOT MODEL DSB-2** FREEZER/COOLER SEALANT PER BOOT CEILING MANUFACTURER SPRINKLER CUP CONCEALED 200°F DRY COVER PLATE 2 1/2" PENDENT SPRINKLER OPTION B NOTE: CONTRACTOR TO SEAL DRY PENDENT SPRINKLERS

OPTION "B" INSTALLATION PROCEDURE

CORE DRILL 2 1/2" DIAMETER HOLE IN THE FREEZER/COOLER INSULATED

CEILING PANEL FROM BELOW. LOCATE HOLE AND REQUIRED SPRINKLER

TYPE SPRINKLERS). MAINTAIN 6" CLEARANCE FROM COOLER SEAMS.

REQUIREMENTS. INSERT BOOT PRIOR TO MAKE-UP WITH PIPING.

4. APPLY STRAP TIES ON BOOT AROUND DRY SPRINKLER BARREL PER

ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

MANUFACTURERS INSTRUCTIONS.

. COMPLETELY SEAL INTERFACE BETWEEN BOOT FLANGE AND TOP OF

FREEZER/COOLER PANEL WITH ADHESIVE PROVIDED WITH BOOT IN

PROTECTION IN ACCORDANCE WITH NFPA 13 OBSTRUCTION CRITERIA (SSP

INSTALL TYCO DRY PENDENT SPRINKLER PER MANUFACTURERS INSTALLATION

TEE WITH PLUG

AT FREEZER/COOLER USING ONE OF THE OPTIONS ABOVE. FREEZER-COOLER DRY PENDENT SPRINKLER

APPLICABLE CODE REQUIREMENTS.

**FIRE PROTECTION** 

SYMBOLS, NOTES 8

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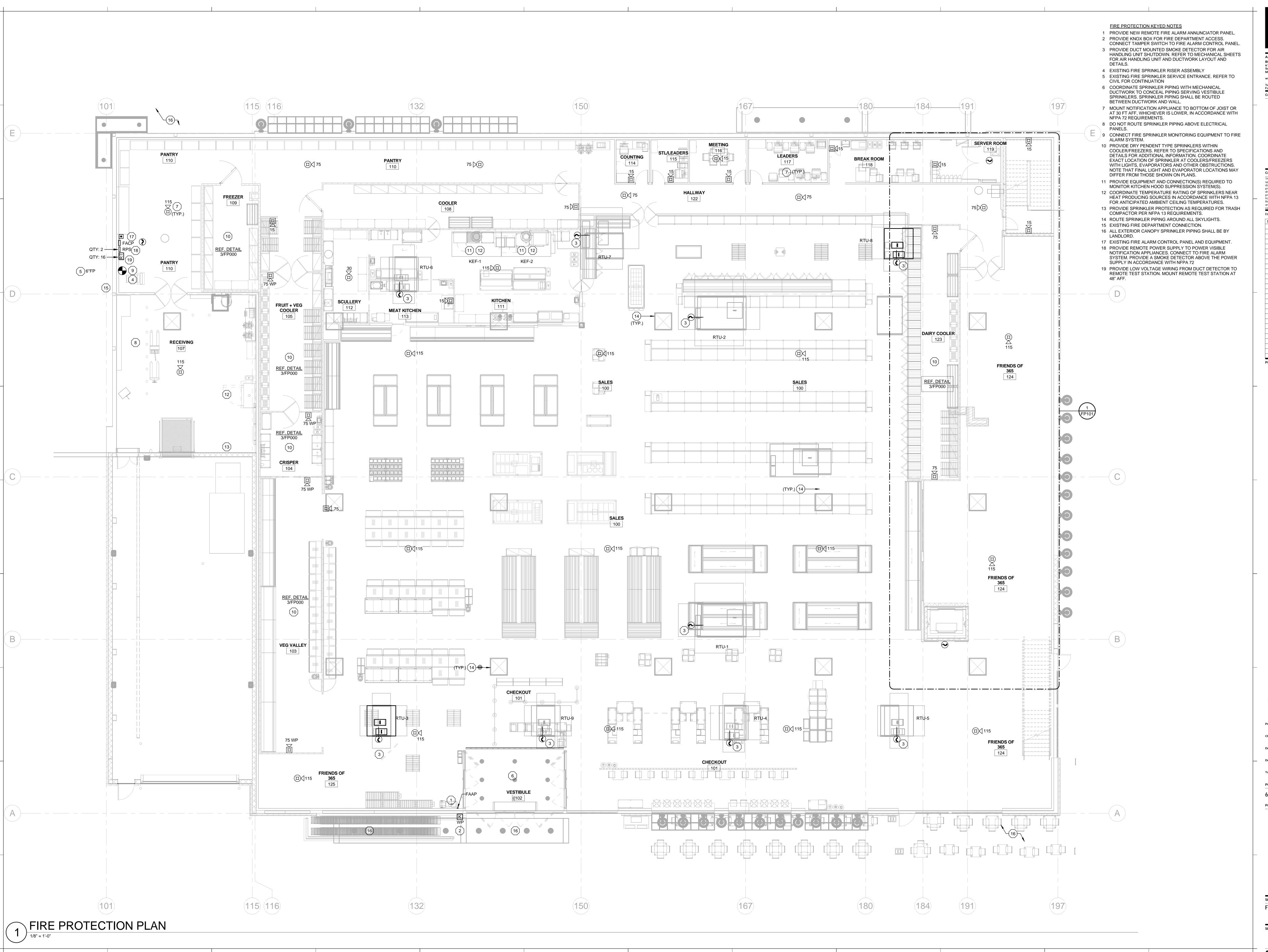
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 ADDENDUM 1

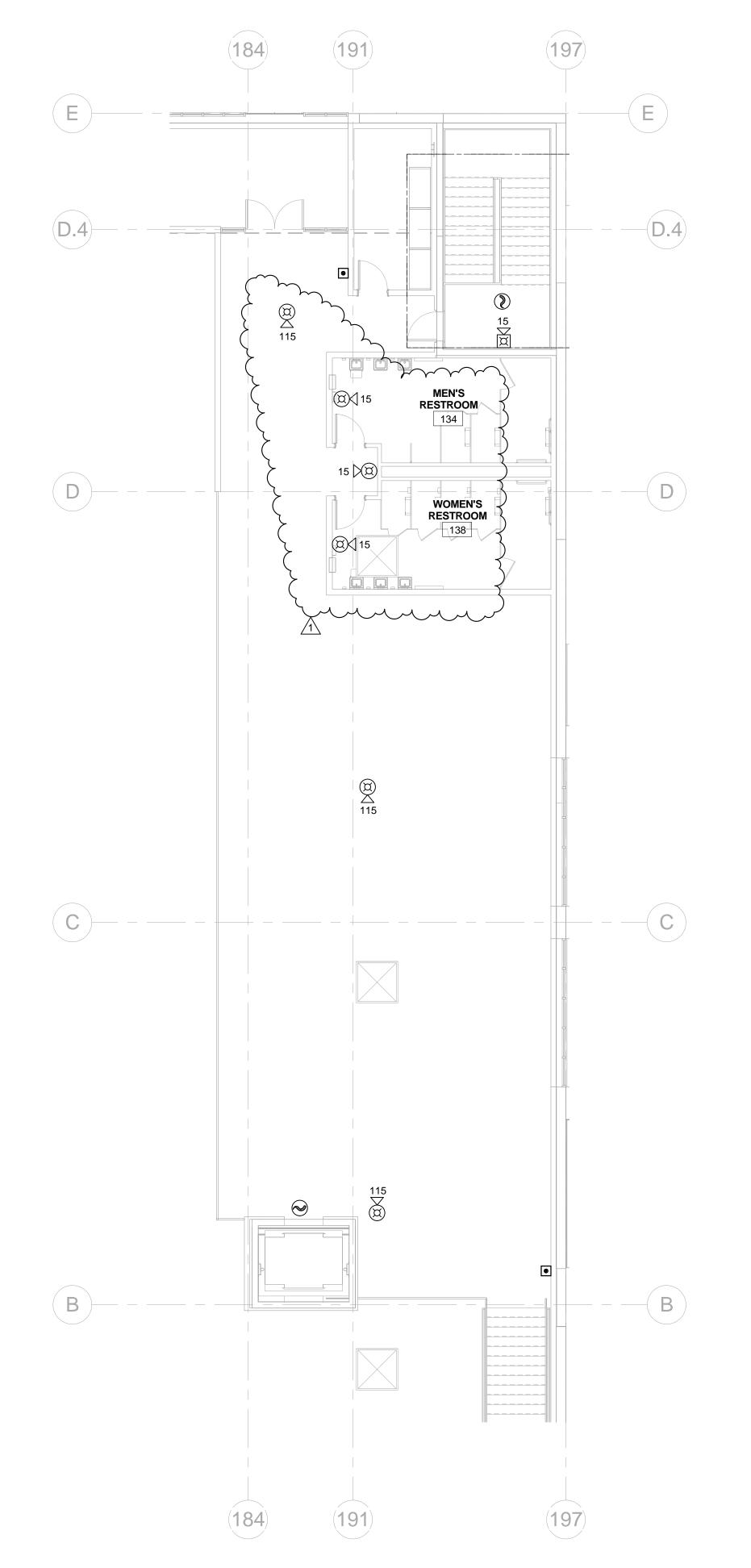
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FIRE PROTECTION PLAN - MEZZANINE



### CO2 REFRIGERANT NOTES

FROM THE SYSTEM.

- 1. COLEMAN GRADE CO2 (99.99% PURITY) IS TO BE USED.
- 2. INTRODUCTION OF LOWER-GRADE CO2 WITH PURITY LEVELS LESS THAN THOSE OF COLEMAN GRADE IS NOT RECOMMENDED DUE TO HIGHER MOISTURE CONTENT AND SHOULD ONLY BE DONE IN EMERGENCY SITUATIONS.
- 3. USE OF LOWER-GRADE CO2 MAY RESULT IN DECREASED SYSTEM PERFORMANCE AND REQUIRE SPECIFIC PROCEDURES TO PURGE NON-CONDENSABLE GASES
- CO2 IS AVAILABLE IN BOTH LIQUID AND VAPOR FORM IN A VARIETY OF CYLINDER SIZES. USE ONLY HIGH PRESSURE CYLINDERS FOR THIS APPLICATION. THE MOST COMMON TYPES OF CO2 CYLINDERS ARE LISTED BELOW:

   a) HIGH-PRESSURE VAPOR CYLINDER, 50 LBS. OF CO2
   b) HIGH-PRESSURE LIQUID CYLINDER, 50 LBS. OF CO2
   c) LOW-PRESSURE LIQUID/VAPOR CYLINDER, 200 LBS. OF CO2 (THIS TYPE IS

NOT APPLICABLE FOR USE WITH ADVANSOR SYSTEMS)

- 5. BREAKING THE VACUUM AND INITIAL SYSTEM PRESSURIZATION MUST BE PERFORMED USING VAPOR. FIELD EXPERIENCE HAS SHOWN THAT ONCE THIS HAS BEEN COMPLETED, THE REMAINDER OF THE CHARGING SHOULD BE PERFORMED USING HIGH-PRESSURE LIQUID TANKS.
- 6. SOME CO2 GAS SUPPLIERS OFFER A "CAP-CHARGE" OF HELIUM OR OTHER INERT GASES FOR LIQUID CYLINDERS WHICH INCREASES TANK PRESSURE IN ORDER TO SPEED THE CHARGING PROCESS. DO NOT ACCEPT ANY CYLINDERS WITH THIS CAP-CHARGE. USE ONLY CYLINDERS THAT ARE PURE CO2. USE OF CYLINDERS WITH A CAP-CHARGE IS LIKELY TO INTRODUCE LARGE AMOUNTS OF NON-CONDENSABLE GAS, RENDER THE SYSTEM INOPERABLE, AND REQUIRE PURGING, EVACUATION, AND RECHARGING OF THE ENTIRE SYSTEM.
- 7. TO DETERMINE IF A CYLINDER HAS A CAP-CHARGE, MEASURE THE TANK PRESSURE USING A REGULATOR AND COMPARE THIS WITH THE SATURATION PRESSURE AT THE APPROXIMATE STORAGE TEMPERATURE OF THE TANKS. TANKS WITH A CAP-CHARGE WILL HAVE A PRESSURE HIGHER THAN THE SATURATION PRESSURE.

# NEW REFRIGERATION SYSTEM COMPONENT NOTES:

1. THE FOLLOWING EQUIPMENT AND COMPONENTS ARE TO BE FURNISHED BY 365, INSTALLED BY THE REFRIGERATION CONTRACTOR (EQUIPMENT FURNISHED BY 365 AS A PART OF THE REFRIGERATION EQUIPMENT PACKAGE):

COMPRESSOR RACKS
CONDENSERS

EVAPORATOR COILS

REFRIGERATED CASES FURNISHED WITH SPORLAN ELECTRONIC EXPANSION VALVES

ISOLATION VALVES, CONDENSER SPLIT VALVES, CONDENSER PUMP- OUT VALVES, ETC.)

EVAPORATOR COIL/CASE TEMPERATURE SENSORS (TO BE

REFRIGERATION VALVES (EX: TXV, LLSV, EPR, EEPR, COIL

INSTALLED BY DIVISION 26), REFER TO LECTRICAL/RÉFRIGERATION ENERGY MANAGEMENT DRAWINGS.

PRESSURE TRANSDUCERS AND TEMPERATURE SENSORS FOR

REFRIGERATED CASES

THE FOLLOWING EQUIPMENT AND COMPONENTS ARE TO BE FURNISHED AND INSTALLED BY THE REFRIGERATION CONTRACTOR (BUT NOT LIMITED

REFRIGERANT PIPING
INSULATION

SUB-LOOP ISOLATION VALVES

CONDENSER CONTROL

HANGERS AND SUPPORTS

REFRIGERANT

CONDENSATE PIPING

COMPRESSOR OIL

REFRIGERATION TUNNELS

### **GENERAL REFRIGERATION NOTES**

- PRIOR TO SUBMITTING THE BID, REVIEW THE COMPLETE SET OF PLANS AND SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- 2. COORDINATE THE INSTALLATION OF THE REFRIGERATION SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL PIPING AS TIGHT TO STRUCTURE AS POSSIBLE, COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF PIPING TO AVOID CONFLICTS WITH DUCTWORK, ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
- AVOID DAMAGING FINISHED SURFACES AND EQUIPMENT DURING CONSTRUCTION. REPAIR DAMAGE CAUSED DURING CONSTRUCTION AT NO ADDITIONAL COST TO OWNER.
- 4. ALL REFRIGERATION EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE DIVISION 23 CONTRACTOR UNLESS OTHERWISE
- 5. REFRIGERATION EQUIPMENT AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT PIPING WITHIN AVAILABLE SPACE ALLOWED. VERIFY EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE
- 6. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE REFRIGERATION. VERIFY CHASES AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR PIPING.

AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.

- 7. GENERAL CONTRACTOR TO PROVIDE FURRING AROUND REFRIGERATION PIPING FROM FLOOR TO CEILING WHERE EXPOSED TO CUSTOMER VIEW.
- 8. ROUTE ALL UTILITY SERVICE LINES (PIPES AND CONDUIT) WITHIN STUD WALLS WHEREVER POSSIBLE. ON COOLER/FREEZER PANELS IN FOOD PREP AREAS WHERE UTILITIES MUST BE EXPOSED, CONTRACTOR TO HAVE THE OPTION OF THE FOLLOWING:
- 8A. SURFACE MOUNT UTILITIES WITH NON-CORROSIVE ANCHORS; SEAL BOTH SIDES OF PIPE/CONDUIT TO PANEL CONTINUOUSLY WITH SEALANT.
- 8B. INSTALL UTILITIES 1/2" OFF FACE OF PANEL TO ALLOW FOR CLEANING; USE ONLY NON-CORROSIVE MATERIALS FOR SPACERS AND ANCHORS.
- 8C. COVER UTILITIES WITH 20 GAUGE STAINLESS STEEL BENT PLATES MOUNTED TO WALL WITH NON-CORROSIVE ANCHORS; APPLY CONTINUOUS SEALANT ALONG EDGES AND JOINTS.
- 9. COORDINATE LOCATION OF ROOF MOUNTED REFRIGERATION EQUIPMENT WITH OTHER EQUIPMENT, ROOF PENETRATIONS, AND ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 10. INSTALL REFRIGERANT PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
- 11. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, ACCESSORIES, AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF.
- 12. COORDINATE LOCATION OF EQUIPMENT SUPPORTS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.
- 13. SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH
- 14. PIPING CROSSING FIRE RATED WALLS OR OTHER FIRE RATED ASSEMBLIES SHALL BE ENCLOSED IN 26 GAUGE SHEET METAL MINIMUM.

U.L. REQUIREMENTS

- 15. PROVIDE ACCESS PANELS FOR REFRIGERANT VALVING OR ACCESSORIES IN WALLS OR CEILINGS AS REQUIRED.
- 16. SLOPE REFRIGERANT LINES DOWN TOWARD COMPRESSORS AT 1" PER 20 FT. LOCATE HIGHEST POINT OF REFRIGERANT LINES JUST BELOW ROOF DECK OVER EVAPORATOR SERVED. ROUTE PIPING THROUGH WEBS IN JOISTS AND GIRDERS. COORDINATE WITH HVAC, LIGHTING, AND FIRE PROTECTION.
- 17. ALL VERTICAL SUCTION LINES MUST HAVE A SHORT RADIUS SUCTION LINE TRAP AT THE BASE OF THE RISER. PROVIDE AN INVERTED P-TRAP AT THE TOP OF ALL RISERS. REFER TO REFRIGERATION PIPING SCHEDULES FOR SIZES ON ALL RISERS.
- 18. SUCTION BASE P-TRAPS TO BE SAME SIZE AS HORIZONTAL RUNS. REDUCE AT THE TOP SIDE OF BASE P-TRAP. INTERMEDIATE AND INVERTED P-TRAPS
- 19. FOR RISERS OVER 16'-0" INSTALL AN INTERMEDIATE SUCTION TRAP OUT OF CUSTOMER VIEW NEAR MIDPOINT OF RISER.

SHOULD BE SAME SIZE AS REDUCED RISER.

- 20. INSTALL A FULL PORT ISOLATION BALL VALVE UPSTREAM OF LIQUID LINE SOLENOID VALVE WITH BYPASS CHECK FOR EACH REFRIGERATION CIRCUIT.
- 21. LIQUID LINE SOLENOID AND FULL PORT ISOLATION BALL VALVES INSTALLED ON TOP OF WALK-IN WITH BYPASS CHECK SHALL BE INSULATED.
- 22. COORDINATE WALL AND/OR ROOF OPENINGS FOR REFRIGERATION LINES WITH ARCHITECTURAL AND STRUCTURAL.
- 23. PROVIDE DRAIN LINE FROM EACH CASE DRAIN SAME SIZE AS CASE OUTLET TO FLOOR DRAIN. TERMINATE WITH AIR GAP. REFER TO PLUMBING PLANS FOR DRAIN LOCATIONS.
- 24. INSTALL REFRIGERATION PIPING OVERHEAD WHERE POSSIBLE UNLESS OTHERWISE NOTED ON PLAN.
- 25. DO NOT INSTALL PIPING DIRECTLY UNDER SKYLIGHT WELLS, ABOVE ELECTRICAL PANELS, OR WITHIN COOLER/FREEZER PANELS.
- 26. EMS CONTRACTOR SHALL INSTALL OWNER FURNISHED LEAK DETECTION SYSTEM. DIVISION 23M SHALL INSTALL PARASENSE FURNISHED PIPING TEE AND PRESSURE TRANSDUCER TO SUCTION AND DISCHARGE HEADERS FOR LEAK DETECTION SYSTEM. COORDINATE LEAK DETECTION SYSTEM WITH EMS CONTRACTOR.
- 27. EMS CONTRACTOR TO SET ALL LOOSE REFRIGERATION EVAPORATOR COIL SENSORS.
- 28. EMS CONTRACTOR SHALL SET ALL REFRIGERATION EVAPORATOR COIL SENSORS OR THERMOSTATS AT LOCATIONS ON PLANS.
- 29. REFRIGERATION CONTRACTOR RESPONSIBLE FOR FINAL RACK CONTROLLER LABELING AND PROGRAMMING PER PARAMETERS ON REFRIGERATION SCHEDULES.
- 30. PROVIDE AND INSTALL CIRCUIT IDENTIFICATION TAGS FOR ALL CASE AND WALK-IN CIRCUITS. REFER TO SPECIFICATIONS FOR ADDITIONAL
- 31. REFRIGERATION CONTRACTOR SHALL FURNISH AND INSTALL ALI CONDENSATE DRAINAGE PIPING FROM REFRIGERATION SYSTEM FREEZER AND COOLER EVAPORATOR UNITS TO FLOOR DRAINS WHERE INDICATED ON DRAWINGS. PROVIDE CLEANOUTS AT ALL MAJOR CHANGE OF DIRECTION IN PIPING SYSTEMS, PIPE HANGERS, AND FITTINGS AS REQUIRED FOR A COMPLETE DRAIN SYSTEM INSTALLATION. MINIMUM SIZE OF PIPING SHALL BE 3/4" COPPER TUBING. CONNECTIONS MADE AT EVAPORATOR UNIT SHALL BE INCREASED AS MULTIPLE EVAPORATORS ARE ADDED TO CONDENSATE MAIN. INSTALL ALL DRAINAGE PIPING HIGH AS POSSIBLE, WHILE MAINTAINING A PROPER FALL OF 1/8" PER 1'-0" MINIMUM. INSTALL DRAIN PIPING DOWN EXTERIOR FACE OF FREEZER OR COOLER BOX WALL TO CONDENSATE DRAIN WITH FUNNEL. TERMINATE PIPING OVER FLOOR RIM OF FUNNEL WITH CODE APPROVED AIR GAP. REFRIGERATION CONTRACTOR SHALL FURNISH AND INSTALL HEAT TRACE ON ALL INTERIOR FREEZER STORAGE CONDENSATE PIPING. ALL FREEZER/COOLER CASE CONDENSATION PIPING SHALL HAVE PIPING INSULATION INSTALLED BY REFRIGERATION CONTRACTOR. ALL PIPE PENETRATIONS THROUGH REFRIGERATED PANEL WALLS SHALL BE SEALED AIRTIGHT. ANY EVAPORATOR DRAIN SYSTEM NOT MEETING THESE REQUIREMENTS UPON FINAL INSPECTION SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE WITH NO EXTRA COST TO OWNER.
- 32. REFRIGERATION CONTRACTOR SHALL FURNISH AND INSTALL ALL UNDERFLOOR REFRIGERATION PVC TUBES. INSTALL 8" PVC FOR SINGLE REFRIGERATION LINES AND 12" PVC FOR MULTIPLE REFRIGERATION LINES. COORDINATE WITH PLUMBING CONTRACTOR. PLUMBING CONTRACTOR SHALL TRENCH AND BACKFILL REFRIGERATION TUNNELS. REFER TO SPECIFICATIONS FOR MATERIAL AND INSTALLATION REQUIREMENTS. COORDINATE TO AVOID CONFLICTS WITH ALL OTHER TRADES' BELOW SLAB
- WORK. COORDINATE LOCATIONS WITH FINAL FIXTURE PLANS.

  33. REFER TO DIVISION 20 SPECIFICATIONS FOR SEISMIC REQUIREMENTS.

REFRIGERATION SYMBOLS ELBOW - TURNED DOWN  $\bigcirc$ ELBOW - TURNED UP ISOLATION VALVE LOAD DESIGNATION EXAMPLE — A01— LOOP DESIGNATION EXAMPLE —— 1A —— REFRIGERATION PIPE FLOOR OR _ _ _ _ _ _ UNDERSLAB LEVEL —— CD— CONDENSATE PIPING CONDENSATE PIPING _ _ _ WALK-IN EVAPORATOR COIL ANNOTATION CIRCUIT DESIGNATION AND MODEL NUMBER EXAMPLE REFRIGERATION PLAN NOTE CALLOUT DETAIL REFERENCE - UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER

ABE
BV CD CO DT EEPR EEV EOR EPR EX HR LLSV LSHX LT MFR MT OEM REF SIM TXV TYP WI

### REFRIGERATION CONDENSATE PIPE HEAT TAPE

REFRIGERATION CONTRACTOR TO PROVIDE SELF-REGULATING HEAT TAPE ON CONDENSATE PIPING IN COOLERS AND FREEZERS THAT MAINTAIN A TEMPERATURE OF LESS THAN 33 DEGREES FAHRENHEIT AS SHOWN. INSTALL HEAT TAPE ACCORDING TO MANUFACTURERS INSTRUCTIONS INCLUDING BUT NOT LIMITED TO LENGTH OF HEAT TAPE, ATTACHMENT OF HEAT TAPE TO CONDENSATE PIPING, AND POWER CONNECTIONS.

120V INPUT, 5 WATTS PER LINEAR FOOT, POLYOLEFIN JACKET

MANUFACTURERMODEL NUMBERRAYCHEM (TYCO THERMAL)<br/>DELTA-THERM CORPXL-TRACE SERIES<br/>C0 SERIES

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JCS
Checked By:

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03/06/2018

REFRIGERATION
SYMBOLS & NOTES

BRR Original printed on recycled pape

R000

SEISMIC CONTROLS FOR MEPF SYSTEMS:

SEISMIC PROTECTION CRITERIA:
RISK/OCCUPANCY CATEGORY:
SITE SOIL CATEGORY:
SEISMIC DESIGN CATEGORY:
COMPONENT IMPORTANCE FACTOR:

I, II, OR III
CONTRACTOR'S SEISMIC ENGINEER TO DETERMINE
D
DETERMINED FROM ASCE 7-2010

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE REQUIREMENTS FOR SEISMIC BRACING OF MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS. SEISMIC PROTECTION CRITERIA USED TO DETERMINE SEISMIC BRACING REQUIREMENTS OF ALL MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS SHALL BE DETERMINED BY THE APPLICABLE CODE ADOPTED IN THE PROJECT JURISDICTION. WHERE NOT ALREADY DETERMINED WITHIN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING A LICENSED PROFESSIONAL ENGINEER TO ESTABLISH BUILDING SITE CLASS, SEISMIC DESIGN CATEGORY, SEISMIC ZONE OR ANY OTHER CRITERIA NECESSARY TO DETERMINE THE REQUIREMENTS FOR SEISMIC BRACING ON MECHANICAL, ELECTRICAL AND/OR PLUMBING SYSTEMS.

SEISMIC BRACING OF FIRE PROTECTION SYSTEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE PROVISIONS OF NFPA 13 (2010 OR LATER EDITION).

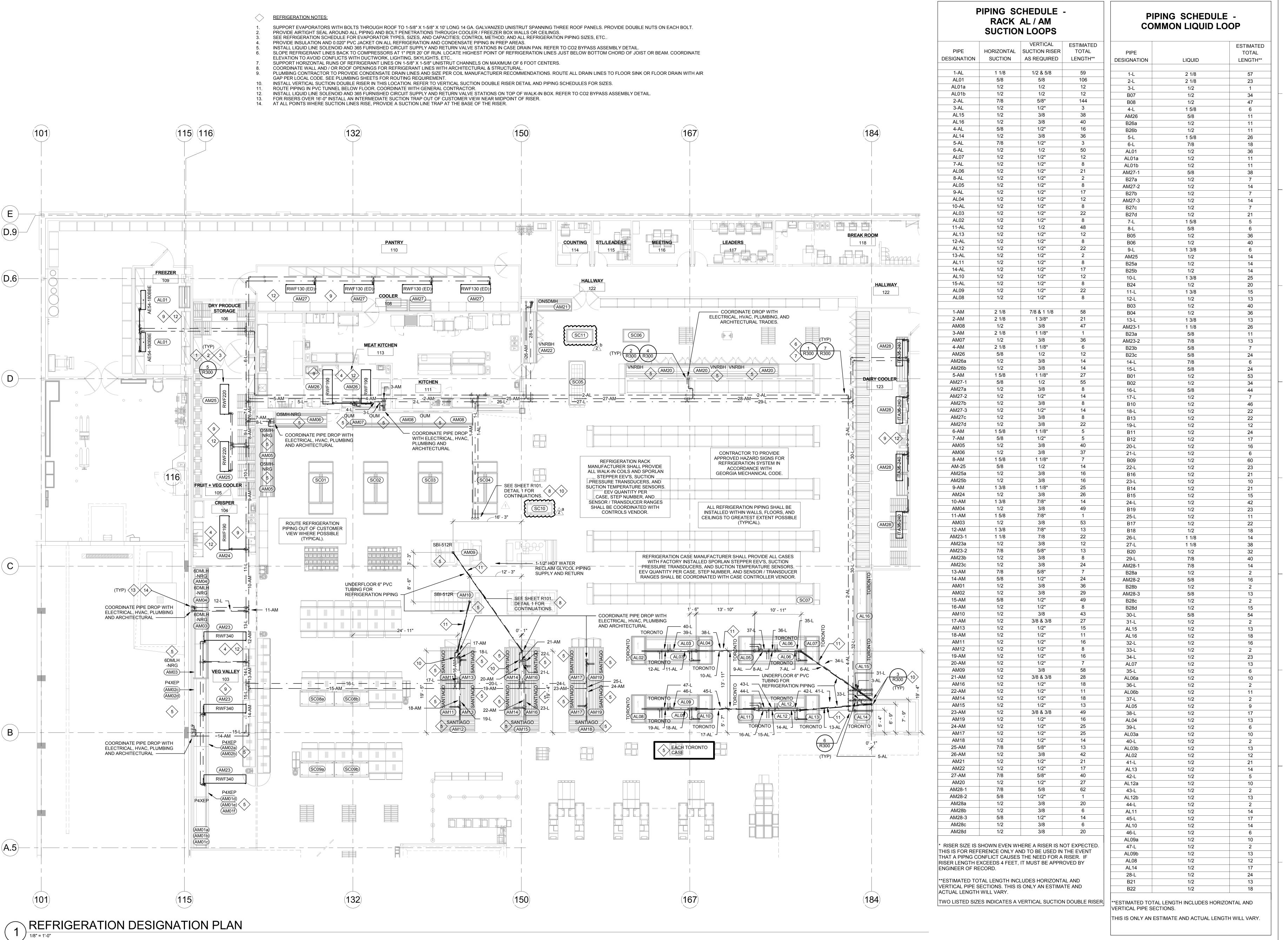
THE CONTRACTOR SHALL DETERMINE THE TYPE AND LOCATION OF SEISMIC BRACING REQUIRED FOR THE MECHANICAL ELECTRICAL AND PLUMBING ELEMENTS SHOWN ON THE DRAWINGS BASED ON THE ESTABLISHED SEISMIC CRITERIA, THE SIZE AND WEIGHT OF THE SUPPORTED ELEMENT AND THE DISTANCE FROM STRUCTURE OF THE SUPPORTED ELEMENT.

THE CONTRACTOR SHALL SUBMIT THE FOLLOWING SHOP DRAWING INFORMATION TO THE AUTHORITY HAVING JURISDICTION AND THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL: (1) SEISMIC ANALYSIS LISTING ALL APPLICABLE SEISMIC DESIGN CRITERIA (2) DESCRIPTIVE CATALOG DATA OF SEISMIC BRACING MATERIALS, (3) SHOP DRAWINGS SHOWING BRACING TYPE AND LOCATION, (4) INSTALLATION DETAILS OF ALL BRACING USED AND (5) CALCULATIONS SHOWING THAT THE SEISMIC RESTRAINTS MEET THE SEISMIC REQUIREMENTS. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF THE PROJECT AND EMPLOYED BY THE MANUFACTURER OF THE SEISMIC BRACING PRODUCTS. CALCULATIONS SHALL INCLUDE DEAD LOADS, STATIC SEISMIC LOADS AND CAPACITY OF MATERIALS UTILIZED FOR CONNECTIONS.

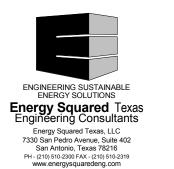
SEISMIC BRACING, RESTRAINTS, ISOLATORS, AND ISOLATION MATERIALS SHALL BE OF THE SAME MANUFACTURER AND SHALL BE CERTIFIED BY THE MANUFACTURER. APPROVED MANUFACTURERS ARE:

AMBER/BOOTH COMPANY, INC., KINETICS NOISE CONTROL, INC., LOOS & COMPANY, INC., MASON INDUSTRIES, INC., UNI-STRUT, VIBRO-ACOUSTICS, OR B-LINE/TOLCO. EACH DEVICE SHALL HAVE A PRE-APPROVAL NUMBER FROM CALIFORNIA OSHPD OR OTHER RECOGNIZED GOVERNMENT AGENCY SHOWING MAXIMUM RESTRAINT RATINGS.

SEISMIC BRACING MEASURES TO BE APPLIED TO MECHANICAL/ELECTRICAL/PLUMBING EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND/OR FEDERAL CODES AS WELL AS MANUFACTURER'S REQUIREMENTS. THE MOST STRINGENT CRITERIA SHALL APPLY. ALL ANCHOR CONNECTIONS TO STRUCTURE FOR SUPPORT OF MECHANICAL AND ELECTRICAL EQUIPMENT, REGARDLESS OF THE NEED FOR SEISMIC RESTRAINTS, SHALL BE SHOWN ON SHOP DRAWINGS.



Architect of Record: BOYD W. RAU 6700 Antioch Plaza Suite 300 Merriam, KS 66204 www.brrarch.com Tel: 913-262-9095 Consultants



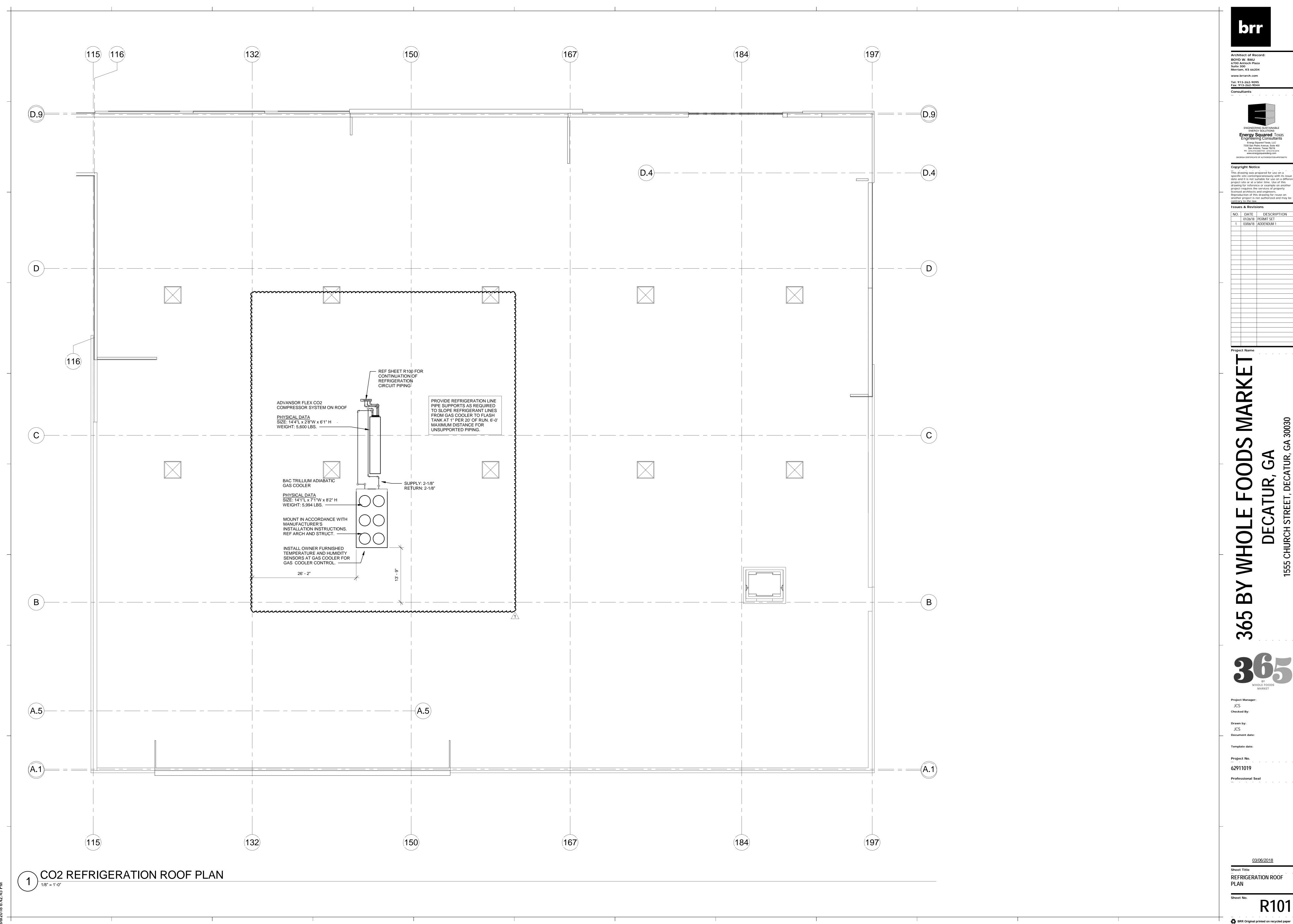
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NO. DATE DESCRIPTION 1 03/06/18 Addendum #1 2 05/21/18 Addendum #2

Project Manager: JCS

Document date Template date:

REFRIGERATION PLAN



BOYD W. RAU 6700 Antioch Plaza Suite 300 Merriam, KS 66204



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 01/26/18
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 1
 03/06/18
 ADDENDUM 1

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1	03/06/18	ADDENDUM 1

REFRIGERATION SCHEDULES

ī		СОМ	MPRESSO!	R UNIT DA	TA	Г			REFRIGERATION CIRCUIT DATA											ACCESSORIES DATA		ELECTRICAL DATA						CONDENSER DATA	
UNIT ESIGNATION	COMPRESS	2/ 1D   -	APACITY (MBH)	THR (MBH)	ĸw	COMP RPM	EER	FLA 460/3/60 (AMPS)	0 CKT	# LINE-		CUTSHEET NUMBER	MANUFACTURER'S MODEL NUMBER	DESCRIPTION	REFRIG LOAD (MBh)	EVAP TEMP (°F)	DESIGN ROO / DISCHARGI AIR TEMP (°F	E BARAMETERS	CALCULATED TXV / ROOM TEMP DISTRIBUTOR (°F) NOZZLE	DX CONTROL VALVE CONTROL	REFRIG.	DEFROST TYPE	CONDEN LINE H TRA REQUIRE	ACE CIRCUIT EMENT	PER CIRCUIT	AMPS PER CIRCUIT	<b>DEFROST HEATER</b>	MISCELLANEOU AMPS	ADIABATIC GAS COOLERS FOR TRANSCRITICAL CO2 RACK SYSTEM 'AL / AM / AH'
																TR	ANSCRITICAL CO	D2 SYSTEM MOUNT	ED IN ADVANSOR FLEX ENCLO	SURE				120V/1ph	(VOLTAGE INDICATED)	120V/1ph	INDICATED)	115V/1ph	
OMPRESSOR S							<del>^</del> ^	~~~~	•	EM 'AL' CIR	CUITS																		
GROUP #1									AL0	1 26' x 14'	•		(2) RUSSELL AE54-180B	GROCERY / ICE CREAM FREEZER	24.80	-20	-10		-13	SENSOR	R744	ELECTRIC	AL01 YE	:S	5.0 @ 208/1/60		39.2 A @ 208/1/60		MANUFACTURER: BALTIMORE AIR COIL
A1 2H	HSL-3-4SU	3	36.30	44.01	2.3	1750	16.06	6.0	AL02		/ <b>a</b> \	8-009	ARNEG TORONTO	LOW TEMP COFFIN END	1.41 1	-17	-12	-10		SENSOR	R744	ELECTRIC	AL02	0.1	0.6 @ 120/1/60	1.2	5.61 A @ 208/1/60		MODEL: TVFC EC8023-Q810
A2 2H	HSL-3-4SU		36.30	44.08	2.3	1750	16.06	6.0	AL0	3 12 F	Т	8-010	ARNEG TORONTO	LOW TEMP COFFIN ISLAND	4.74	-17	-12	-10		SENSOR	R744	ELECTRIC	AL03	0.5	1.8 @ 120/1/60	2.7	23.58 A @ 208/1/60		QUANTITY: (1)
									AL04	4 6 F	Т	8-009	ARNEG TORONTO	LOW TEMP COFFIN END	1.41	-17	-12	-10		SENSOR	R744	ELECTRIC	AL04	0.1	0.6 @ 120/1/60	1.2	5.61 A @ 208/1/60		OPERATION CAPACITY - 1,403.69 MBH
									ALO:	5 6 F	Т	8-009	ARNEG TORONTO	LOW TEMP COFFIN END	1.41	-17	-12	-10		SENSOR	R744	ELECTRIC	AL05	0.1	0.6 @ 120/1/60	1.2	5.61 A @ 208/1/60		ACTUAL TD: 4.2°F
									ALO	6 12 F	Т	8-010	ARNEG TORONTO	LOW TEMP COFFIN ISLAND	4.74	-17	-12	-10		SENSOR	R744	ELECTRIC	AL06	0.5	1.8 @ 120/1/60	2.7	23.58 A @ 208/1/60		FAN SPEED - VSEC
TO	OTAL CAPA	CITY	72.60	88.09	4.5			12.0	ALO	7 6 F	Т	8-009	ARNEG TORONTO	LOW TEMP COFFIN END	1.41	-17	-12	-10		SENSOR	R744	ELECTRIC	AL07	0.1	0.6 @ 120/1/60	1.2	5.61 A @ 208/1/60		APPROXIMATE OPERATING WEIGHT - 5,994 LBS.
	PERCENT SP		0.05%						ALO			8-009	ARNEG TORONTO	LOW TEMP COFFIN END	1.41	-17	-12	-10		SENSOR	R744		AL08	0	0.6 @ 120/1/60		5.61 A @ 208/1/60		APPROXIMATE DIMENSIONS - 14'-1" L x 7'-10" W x 8
	OTAL REQU	IRED 6	69.22						ALOS			8-010	ARNEG TORONTO	LOW TEMP COFFIN ISLAND	4.74	-17	-12	-10		SENSOR	R744		AL09	0.5	1.8 @ 120/1/60		23.58 A @ 208/1/60		SINGLE POINT ELECTRICAL - 30.2A (FLA) @ 460/3/60
GENERAL INFO	RMATION								AL10			8-009	ARNEG TORONTO	LOW TEMP COFFIN END	1.41	-17	-12	-10		SENSOR	R744		AL10	0.1	0.6 @ 120/1/60		5.61 A @ 208/1/60		
NOTE: COMPRE									AL1			8-009	ARNEG TORONTO	LOW TEMP COFFIN END	1.41	-17	-12	-10		SENSOR	R744		AL11	0.1	0.6 @ 120/1/60		5.61 A @ 208/1/60		
GROUP #1> Ts			ensing = 2	1°F / Tliquid	d = 27.1°	F / R-744	ļ		AL12			8-010	ARNEG TORONTO	LOW TEMP COFFIN ISLAND	4.74	-17	-12	-10		SENSOR	R744		AL12		1.8 @ 120/1/60		23.58 A @ 208/1/60		
RETURN GAS TE									AL1			8-009	ARNEG TORONTO	LOW TEMP COFFIN END	1.41	-17	-12	-10		SENSOR	R744		AL13		0.6 @ 120/1/60		5.61 A @ 208/1/60		
CONTROL VOLT	TAGE: 120/1/	60							AL14			8-010	ARNEG TORONTO	LOW TEMP COFFIN (AT FRIENDS OF 365)	4.74	-17	-12	-10		SENSOR	R744		AL14		1.8 @ 120/1/60		23.58 A @ 208/1/60		
									AL1			8-010	ARNEG TORONTO	LOW TEMP COFFIN (AT FRIENDS OF 365)	4.74	-17	-12	-10		SENSOR	R744		AL15		1.8 @ 120/1/60		23.58 A @ 208/1/60		
									<b>AL16</b>	6 12 F	Т	8-010	ARNEG TORONTO	LOW TEMP COFFIN (AT FRIENDS OF 365)	3 4.74	-17	-12	-10		SENSOR	R744	ELECTRIC	AL16	0.5	1.8 @ 120/1/60	2.7	23.58 A @ 208/1/60		
COMPRESSE	ever	/A#ED!! :	TE\$45	TUDE O	OTION: *	DOLLE :	BA!\		}	ENA LANCE OF	2011170				2														
COMPRESSOR S	SYSTEM 'A'	(MEDIUM )	IEMPERA	TURE SU	CHON G	KUUP 'A	rivi.)		$\dashv$	EM 'AM' CIF		4.040	LI I COMANIN DAY ED	MET DAOK VEO 9 EDI UT MULTIDEOX	20.74		24	00			D744	OFFTINA	NMO4		2.0 @ 400///25				
GROUP #2	CTC 20 ON!!!		276.40	389.79	33.0	1750	Q 20	60.0	AMO			1-018	HUSSMANN P4X-EP	WET RACK VEG & FRUIT MULTIDECK WET RACK VEG & FRUIT MULTIDECK	29.74	∠ŏ 	31	36			R744 R744		\M01		3.6 @ 120/1/60				$\dashv$
	CTC-30-2NU						8.39	62.6	AMO			1-017		RGPACKAGED FRUIT & VEG MULTIDECK	19.82	 20	31	30			R744 R744		\M02		2.4 @ 120/1/60				
	CTC-30-2NU CTC-30-2NU			389.79 389.79			8.39 9.97	0∠.0 62 €	AMO					RGPACKAGED FRUIT & VEG MULTIDECK	23.20	20	34				R744		\M03		1.8 @ 120/1/60 1.1 @ 120/1/60				
AM3 40		2	∠1 U.4U	JU3.18	JJ.U	1730	5.51	62.6	<b>\$</b>					RGPACKAGED FRUIT & VEG MULTIDECK	14.50	26	34				R744		11405	0.7	1.1 @ 120/1/60				
									AMO AMO				HILLPHOENIX O5MH-NR		23.04 17.28	20	30				R744		AM05 AM06		1.9 @ 120/1/60				$\dashv$
									AM0			3-004	HILLPHOENIX OSWH-NR	SINGLE DECK MEAT	4.55	20	27				R744		N. 40-7		0.2 @ 120/1/60				$\dashv$
	OTAL CAPA	CITV °	829.20	1169.37	08 O			197 0	AMO			3-012	HILLPHOENIX OUM	SINGLE DECK MEAT	18.19	22	27				R744		11400		0.2 @ 120/1/60				
	PERCENT SP			1 103.3 <i>l</i>	<i>3</i> 0.3			10 <i>1</i> .0	AMO					COLD BAR ISLAND W/ SODA	3.23	24	21				R744		AM08	2.5	1.2 @ 120/1/60			20A RECEPT.	$\dashv$
	OTAL REQU								AM1					COLD BAR ISLAND W/ PUMPS	7.25	24	34					OFFTIME /		0.7				20A RECEPT.	
GENERAL INFO		IKED 0	000.20						AM1			5-203	ARNEG SANTIAGO	LOW PROFILE BEVERAGE	5.28	29	32				R744	OFFTIME /			0.7 @ 120/1/60				
GROUP #1> To		F / Toondo	ensina – od	°F / Tliauid	1 = 35 0°E	- / R-711			AM1			5-014	ARNEG SANTIAGO	LOW PROFILE BEVERAGE	2.64	29	32				R744		AM12		0.7 @ 120/1/60				$\dashv$
NOTE: COMPRE			J	•					AM1			5-014	ARNEG SANTIAGO	LOW PROFILE BEVERAGE	5.28	29	32				R744		AM13		0.3 @ 120/1/60				
	_COOK AWIT	. 5 52 60	VLL[	J I /\IN [	_5501 E	_ <i>_</i> vi D			AM1			5-014	ARNEG SANTIAGO	LOW PROFILE BEVERAGE	5.28	29	32				R744		AM14	1.0	0.7 @ 120/1/60				
RETURN GAS TE	EMPERATIII	RE: 61°F							AM1			5-014	ARNEG SANTIAGO	LOW PROFILE BEVERAGE	2.64	29	32				R744		AM15		0.7 @ 120/1/60			<del></del>	
CONTROL VOLT									AM1			5-014	ARNEG SANTIAGO	LOW PROFILE BEVERAGE	5.28	29	32				R744		AM16		0.3 @ 120/1/60			<del></del>	
		- <del>-</del>							AM1			5-014	ARNEG SANTIAGO	LOW PROFILE BEVERAGE	5.28	29	32				R744		AM17	1.0	0.7 @ 120/1/60				
·······	mm				·····	····	u	<u>.</u>	₹			5-014	ARNEG SANTIAGO	LOW PROFILE BEVERAGE	2.64	29	32				R744		\M18		0.3 @ 120/1/60				
								1	AM1	<u> </u>		5-014	ARNEG SANTIAGO	LOW PROFILE BEVERAGE	5.28	29	32				R744		AM19		0.7 @ 120/1/60				
									AM2			4-023	HILLPHOENIX VNRBH	MULTIDECK BEER AND WINE	15.55	34	38				R744		AM20		2.0 @ 120/1/60				
									AM2				HILLPHOENIX ON5DMH		14.72	22	33				R744		\M21		0.9 @ 120/1/60				
									AM2				HILLPHOENIX VNRBH	REACH-IN CHILLED SPECIALTY	5.18	34	38				R744		\M22	0.0	0.7 @ 120/1/60				
										23 <b>6</b> 7' x 15'	1		(3) RUSSELL RWF340	VEGETABLE VALLEY	157.00	45	60		60		R744		AM23 NC		10.8 @ 120/1/60				
										24 <b>8</b> 16' x 15'			(1) RUSSELL RWF190	CRISPER	17.00	30	40		39		R744		AM24 NC		2.4 @ 120/1/60				
										25 <b>3</b> 4' x 15'			(2) RUSSELL RWF220	FRUIT & VEGETABLE COOLER	36.00	30	40		38		R744		AM25 NC		4.8 @ 120/1/60				-
										26 <b>(</b> 18' x 10'	—-}		(2) RUSSELL RWF190	OPEN MEAT KITCHEN	46.80	40	55		52		R744		AM26 NC		4.8 @ 120/1/60				
										27 <b>6</b> 2' x 11'			(4) RUSSELL RWF130	GROCERY COOLER	34.70	22	30	33	29	SENSOR	R744		AM27 NC		3.6 @ 208/1/60		41.6 A @ 208/1/60		$\dashv$
										28 <b>6</b> 3' x 13'	—-₹		(4) RUSSELL ITA36-240		80.90	25	35		33		R744		AM28 NC		14.4 @ 120/1/60				
										Cum	1			SYSTEM 'AL' HEAT REJECTION	88.09 1	)													
											<u>/ I \</u>																		
													1				1			<u> </u>	1		1		I				

- 1. SPORLAN SER ELECTRONIC EXPANSION VALVE AND MICRO-THERMO CASE CONTROLLER MOUNTED IN EACH CASE OR EVAPORATOR BY OEM.
- 2. REFRIGERATION EQUIPMENT MANUFACTURER TO FURNISH THERMASTOR HOT WATER RECLAIM TANK (TS-120-II-1) SHIPPED LOOSE FOR FIELD INSTALLATION BY REFRIGERATION INSTALLATION CONTRACTOR.
- 3. RESPECTIVE LOAD IS POWERED FROM THE RACK

VAPOR RETURN MAIN

REDUCE RISER SIZE

TO HORIZONTAL

CO2 DX PIPING DETAILS

AFTER BASE TRAP -

LIQUID SUPPLY

LIQUID

SUPPLY BRANCH -

THE SIDE OF THE MAIN

**REAR OF** 

SUCTION LINE

PIPING INSULATION

1 5/8"x1 5/8" GALVANIZED

MAXIMUM ON CENTERS -

UNISTRUT P-1000, 6'-0"

REFRIGERATED CASE TYP -

REDUCE RISER PIPE

SIZE AFTER BASE TRAP

LIQUID SUPPLY LINES BRANCHING

FROM THE MAIN MUST EXIT FROM

MAIN -

VAPOR RETURN RISER

- SLOPE REFRIGERANT LINES DOWN TOWARD COMPRESSORS AT 1" PER 20 FT. COORDINATE PIPE ROUTING WITH HVAC, LIGHTING, AND FIRE PROTECTION.

- PROVIDE INVERTED P-TRAP AT

TOP OF ALL SUCTION RISERS

- BRANCH SUCTION RISER

- INSTALL PIPING OUT OF

CUSTOMER VIEW AND IN

FOR RISERS OVER 16'-0" INSTALL

NEAR MIDPOINT OF RISER

AN INTERMEDIATE SUCTION TRAP

- ATTACH THREADED ROD TO STRUCTURE

IN AN APPROVED

MANNER (TYP)

LIQUID LINE

PREMANUFACTURED PIPE SADDLE

COOPER B-LINE SNAP 'N SHIELD PIPE SUPPORT. SIZE SADDLE

INSULATION. MATCH COLOR OF

INSULATION. REFERENCE SPECIFICATIONS. (TYP)

SECURED TO UNISTRUT SIMILAR TO

DIAMETER APPROX. SAME AS OD OF

WALL WHEN POSSIBLE

- BRANCH LIQUID LINE

SUCTION LINE

LIQUID LINE

BASE TRAP

4 INTERMEDIATE SUCTION LINE TRAP

NOTE: FOR OVERHEAD LINES, UNISTRUT

1 HORIZONTAL REFRIGERANT LINE SUPPORT

HORIZONTAL, TRAPEZE HUNG FOR PIPING BEHIND

CASES, UNISTRUT VERTICAL, WALL-MOUNTED

VAPOR RETURN LINES SHALL HAVE AN INVERTED TRAP

PROVIDE A P-TRAP AT THE BOTTOM OF THE RISER.

PROVIDE AN INVERTED P-TRAP AT RISER TRANSITION

- INVERTED P-TRAP

SAME SIZE AS

VERTICAL RISER

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JCS Drawn by: JCS Document date:

Template date: Project No. 62911019

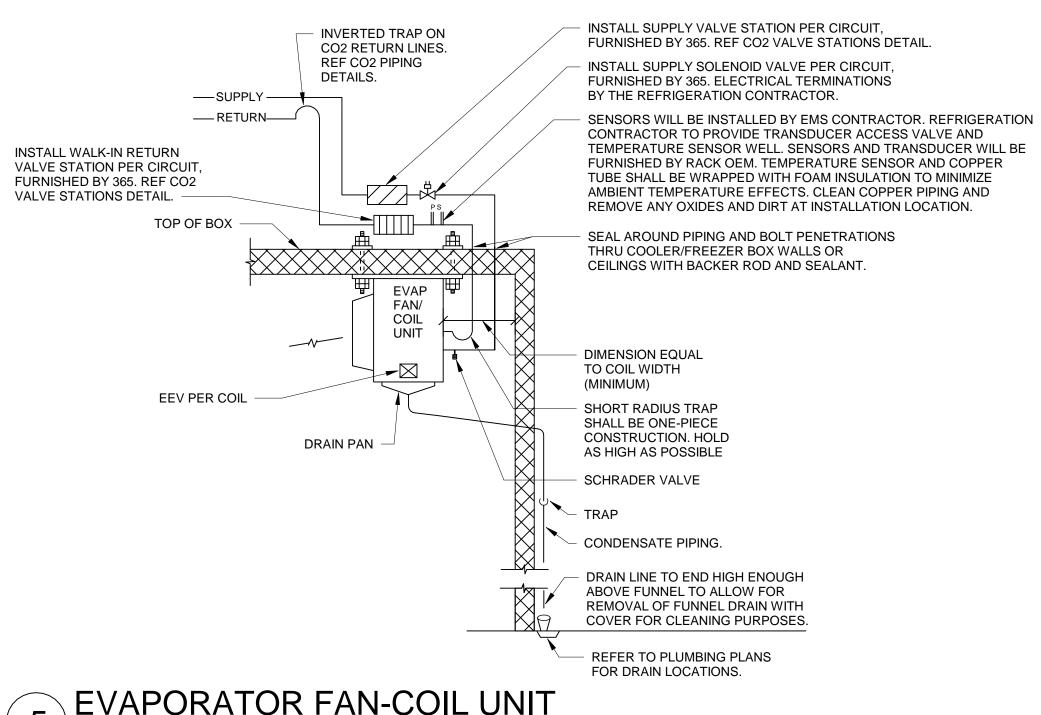
Professional Seal

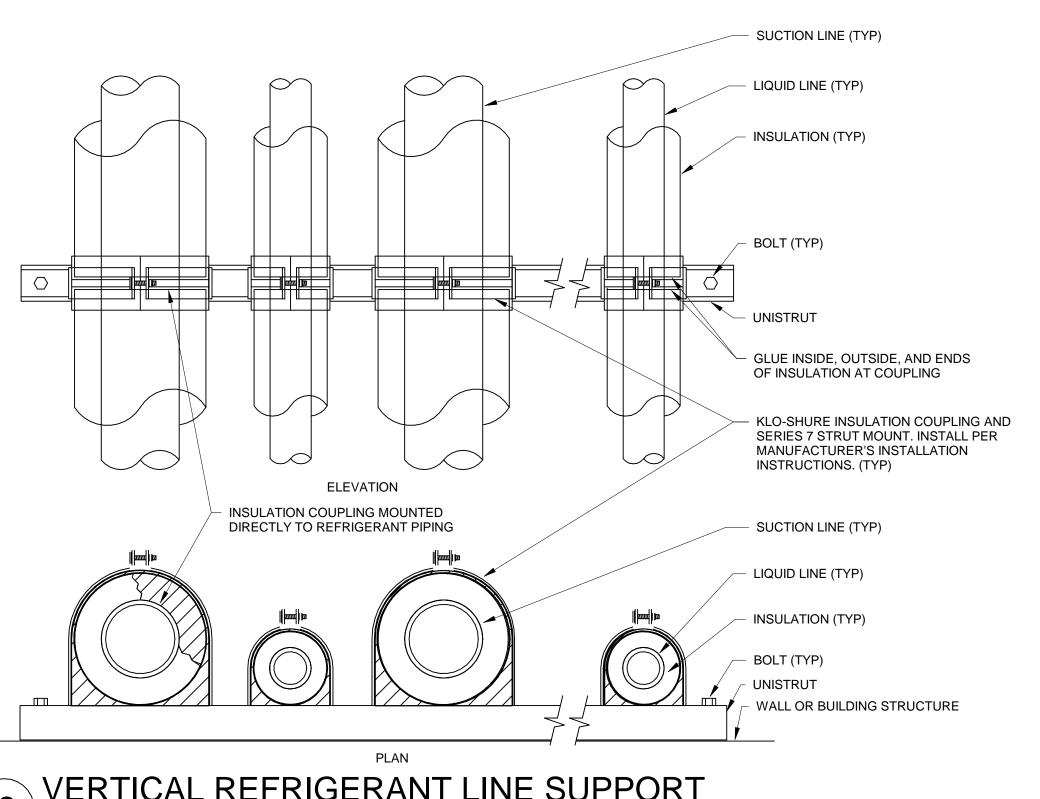
REFRIGERATION DETAILS

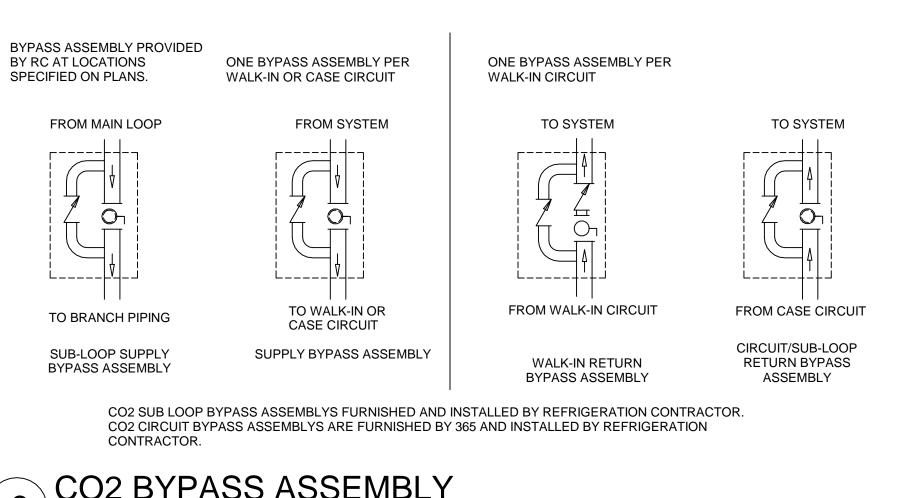
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R300

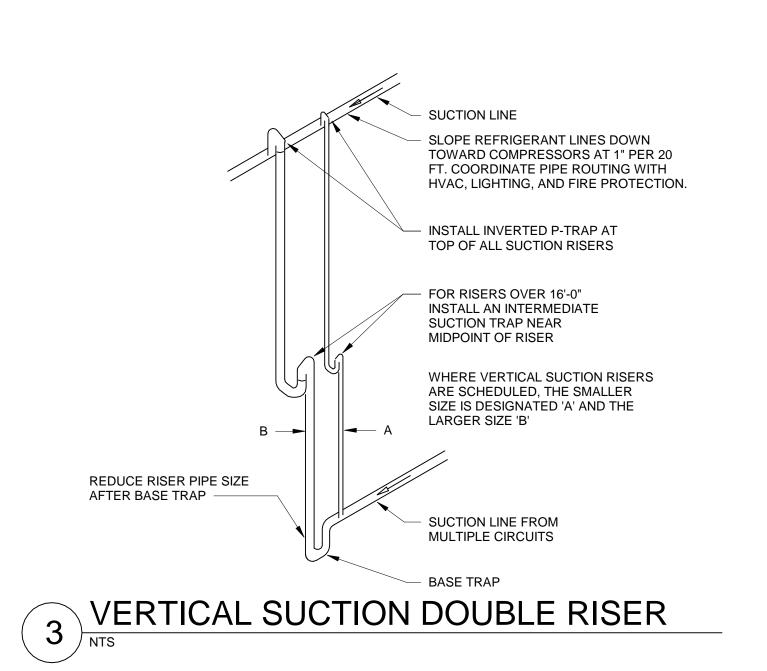
PROVIDE 20 GAUGE SHEET METAL REFRIGERATION PIPING AND CONDUIT ENCLOSURE ON ALL SIDES OF ROOF PENETRATION PREMANUFACTURED METAL CURB AND EXPANDING FOAM (TYP) VERIFY EXACT LOCATION AND CONSTRUCTION WITH ARCHITECTURAL PLANS ROOF OPENING TO ACCOMMODATE BOTH REFRIGERATION PIPING AND ELECTRICAL CONDUIT EXPANDING FOAM ABOVE EXPANDED METALSCREEN. COORDINATE INSULATION WITH ELECTRICAL CONTRACTOR. PAINT FOAM TO MATCH STRUCTURE. -PIPE SUPPORT (TYP)

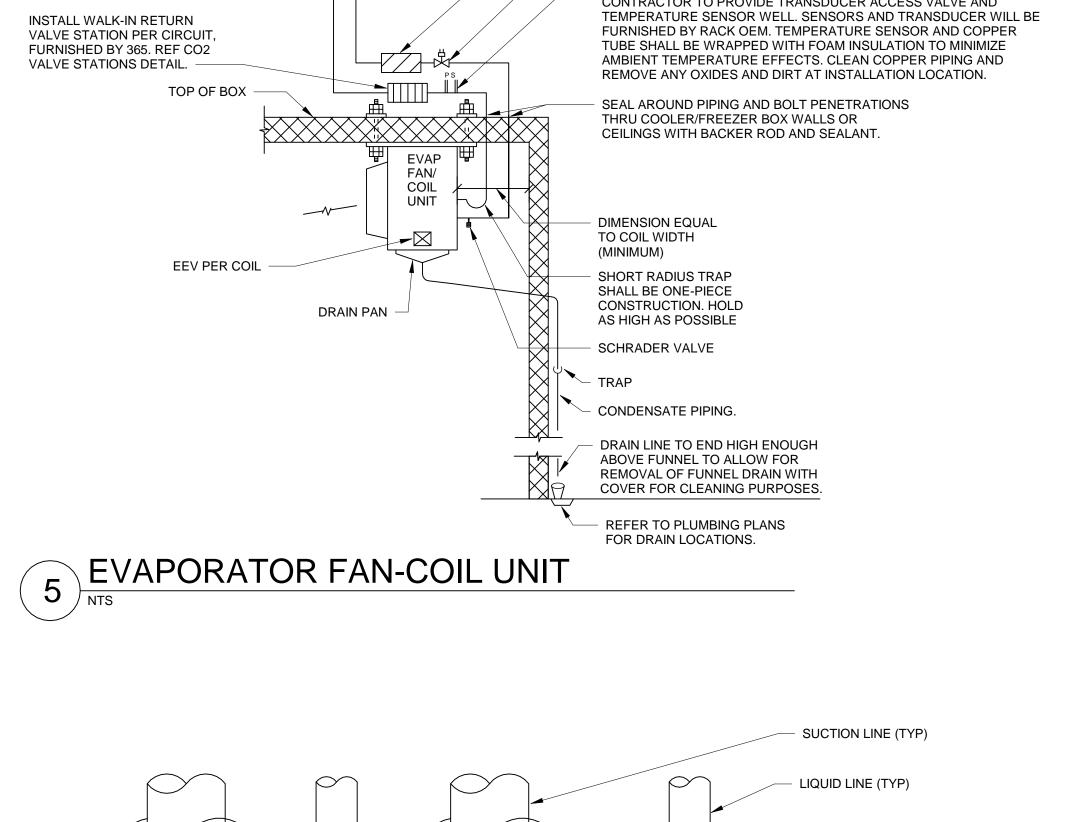


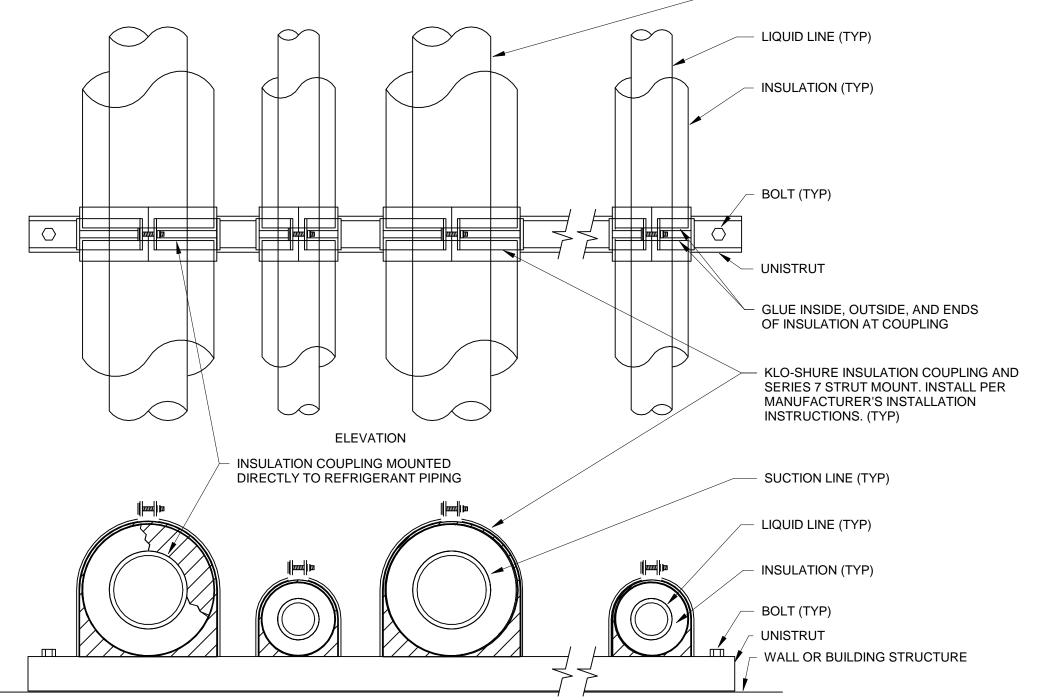




6 CO2 BYPASS ASSEMBLY







VERTICAL REFRIGERANT LINE SUPPORT