

GOVERNMENTAL AGENCIES

BUILDING DEPARTMENT

AGENCY: CITY OF LEE'S SUMMIT DEVELOPMENT SERVICES DEPARTMENT  
ADDRESS: 220 SE GREEN, LEE'S SUMMIT, MO 64063  
CONTACT: JOE FROGGE  
PHONE #: 816.969.1200  
EMAIL: DEVTECH@CITYOFLS.NET

FIRE MARSHALL

AGENCY: CITY OF LEE'S SUMMIT FIRE DEPARTMENT  
ADDRESS: 207 SE DOUGLAS, LEE'S SUMMIT, MO 64063  
CONTACT: CHIEF JIM EDEN  
PHONE #: 816.969.1300  
EMAIL: JIM.EDEN@CITYOFLS.NET

BUILDING DATA

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE W/ CITY OF LEE'S SUMMIT AMENDMENTS  
PLUMBING CODE: 2018 INTERNATIONAL PLUMBING CODE  
MECHANICAL CODE: 2018 INTERNATIONAL MECHANICAL CODE  
FUEL GAS CODE: 2018 INTERNATIONAL FUEL GAS CODE  
ELECTRIC CODE: 2017 NATIONAL ELECTRICAL CODE  
ACCESSIBILITY CODE: 2009 ICC/ ANSI A117.1  
ENERGY CODE: 2018 INTERNATIONAL ENERGY CONSERVATION CODE  
FIRE CODE: 2018 INTERNATIONAL FIRE CODE

EXIST. BUILDING OCCUPANCY A2 (NO CHANGES)  
EXIST. BLDG. CONSTRUCTION TYPE VB (SPRINKLERED, NO CHANGES)  
EXIST. BUILDING AREA: 4,161 GSF (NO CHANGES)  
EXISTING BLDG OCCUPANCY LOAD: 135 OCCUPANTS (CHANGES)

OCCUPANT LOAD CALCULATION:

	NEW
DINING AREA:	1,539 SF / 15 SF/PERSON = 103
ORDER AREA:	113 SF / 5 SF/PERSON = 23
KITCHEN / DT / SERVING / MULTI-PURPOSE	1,936 SF / 200 SF/PERSON = 10
BUSINESS AREA (OFFICE)	69 SF / 150 SF/PERSON = 1

NEW TOTAL OCCUPANCY LOAD 137 OCCUPANTS

PROPOSED NEW F2F CANOPY AREA: 1,464 SF

PROPOSED NEW OMD CANOPY AREA: 1,890 SF

SCOPE OF WORK

THESE DOCUMENTS REPRESENT AN ADDITION OF A NEW DUAL LANE OUTSIDE MEAL DELIVERY CANOPY ADDITION & DUAL LANE FACE TO FACE CANOPY AND PLAY AREA CONVERSION TO DINING.

ITEMS OF IMPORTANCE

- REFER TO CIVIL PLANS FOR EXTENT OF SITE WORK.
- EXISTING SITE ITEMS TO REMAIN UNLESS NOTED OTHERWISE.
- F2F & OMD CANOPIES BY LANE
- NO CHANGES TO BUILDING FOOTPRINT & OCCUPANCY TYPE.
- EXISTING CANOPY AT DRIVE THRU SIDE TO BE REMOVED.

PROJECT GENERAL NOTES

- ELECTRICAL WORK WILL BE PERFORMED UNDER THIS CONTRACT. ALL TO REMAIN UNLESS NOTED OTHERWISE.
- ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES, REGULATIONS, ORDINANCES, STANDARDS INCLUDING ADA, OTHER HANDICAP ACCESSIBILITY CODES AND INSURANCE RATING BOARDS. NO WORK SHALL COMMENCE UNTIL ALL JURISDICTIONAL PERMITS AND APPROVALS ARE OBTAINED.
- GENERAL CONTRACTOR SHALL COORDINATE WITH THE OWNER'S VENDORS REGARDING SCHEDULING AND SEQUENCING OF THE WORK.
- THE CONSTRUCTION NOTES AND DRAWINGS ARE SUPPLIED TO ILLUSTRATE THE DESIGN AND GENERAL TYPE OF CONSTRUCTION DESIRED AND ARE INTENDED TO IMPLY THE FINEST QUALITY OF CONSTRUCTION, MATERIALS AND WORKMANSHIP THROUGHOUT AND SHALL CONFORM TO THE APPROPRIATE NATIONAL TRADE PUBLICATION.
- IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FULLY EXAMINE THE SITE SPACE PRIOR TO THE START OF CONSTRUCTION. THE G.C. SHALL VERIFY ALL DIMENSIONS, (VERTICAL, HORIZONTAL AND OTHERWISE), AS WELL AS TO VERIFY THE CONDITIONS AND NATURE OF THE PROPOSED CONSTRUCTION, MATERIALS, AVAILABLE UTILITIES AND STRUCTURAL ELEMENTS. THE G.C. SHALL NOTIFY THE OWNER'S REPRESENTATIVE (OWNER'S REP), IN WRITING OF ANY AND ALL DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE CONSTRUCTION DOCUMENTS.
- IT SHALL BE THE JOINT RESPONSIBILITY OF THE G.C. AND ALL SUBCONTRACTORS AND SUPPLIERS OF MATERIALS TO SECURE ALL NECESSARY ADAPTATIONS AS MAY BE REQUIRED FOR THEIR RESPECTIVE WORK. PRIOR TO ORDERING, FABRICATION OR INSTALLATION OF ANY MATERIALS, EQUIPMENT OR COMPONENTS WHICH ARE TO BE INTEGRATED INTO THE WORK. NO CLAIMS FOR ADDITIONAL COMPENSATION SHALL BE MADE OR SHALL BE VALID UNLESS WRITTEN NOTIFICATION IS RECEIVED BY THE OWNER'S REP AND THE ADDITIONAL COMPENSATION IS APPROVED IN ADVANCE OF PROCEEDING WITH THE WORK.
- REFERENCE ALL DRAWINGS FOR A COMPLETE DESCRIPTION OF THE WORK.
- COMMENCEMENT OF WORK IN ANY AREA BY THE CONTRACTOR SHALL BE CONSTRUED THAT THE CONTRACTOR HAS CHECKED THE EXISTING CONDITIONS AND FOUND THEM TO BE SATISFACTORY TO ACCEPT THIS PORTION OF THE WORK.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN IN THE DRAWINGS OR NOT & TO PROTECT THEM FROM DAMAGE DURING THE WORK. THE CONTRACTOR SHALL BEAR ALL EXPENSES OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE PERFORMANCE OF THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE JOB IS IN PROGRESS & UNTIL JOB IS COMPLETED.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS & SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF ALL WORK.
- RESTAURANT REFUSE/DUMPSTER SHALL NOT BE USED FOR CONSTRUCTION DEBRIS.
- CAP AND SEAL OFF ANY PLUMBING/ELECTRICAL PENETRATIONS AS NECESSARY. DO NOT ABANDON ANY UTILITIES OR MATERIALS WITHIN THE SPACE - REMOVE BACK TO THE SOURCE.
- COVER RETURN AIR DUCTS AS NECESSARY BEFORE AND DURING CONSTRUCTION.



5200 BUFFINGTON ROAD  
ATLANTA, GEORGIA 30349-2998  
PHONE: (404) 765-8000  
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S08N-104-R  
CUSTOM PROJECT SOLUTIONS  
DUAL LANE OUTSIDE MEAL DELIVERY  
CANOPY & DUAL LANE FACE TO  
FACE CANOPY ADDITION.  
PLAY AREA CONVERSION TO DINING

SUMMIT FAIR FSR #02859  
690 NW BLUE PARKWAY,  
LEE'S SUMMIT, MO 64086  
AUGUST 2023

REVISION SCHEDULE				
REVISION NUMBER	REVISION DATE	ISSUE DESCRIPTION	CHANGE DESCRIPTION	AFFECTED SHEETS
1	02/19/24	PLAY AREA REMOVAL	-	G-000, ASP-1.1, D-201, D-221, A-005, A-201, A-211, A-221, A-601, A-620, M-1.1, M-2.1, F-201, F-211, F-701
-	-	-	-	-

ARCHITECT:

INTERPLAN LLC  
220 E CENTRAL PKWY, SUITE 4000  
ALTAMONTE SPRINGS, FL 32701  
AOR: LAUREL MARTIN, R.A., NCARB  
CONTACT: JESSICA CHERKASSKY  
PHONE: (407) 645-5008  
FAX: (407) 629-9124  
EMAIL: JCHERKASSKY@INTERPLANLLC.COM

CIVIL  
ENGINEER:

GBC DESIGN, INC  
565 WHITE POND DRIVE  
AKRON, OH 44320  
CONTACT: JACK MEANEY, P.E.  
PHONE: (330) 836-0228

ELECTRICAL  
ENGINEER:

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220 E CENTRAL PKWY,  
SUITE 4000  
ALTAMONTE SPRINGS,  
FL 32701  
PHONE: (407) 645-5008  
ENGINEER OF RECORD:  
STACY HENSON  
CONTACT: MARYANA IBRAHIM

CANOPY  
SUPPLIER

LANE SUPPLY, INC.  
120 FAIRVIEW  
ARLINGTON, TX 76010  
CONTACT: LARRY TOIBERT  
PHONE: (817) 261-9116

PLUMBING  
ENGINEER:

INTERPLAN LLC  
220 E CENTRAL PKWY,  
SUITE 4000  
ALTAMONTE SPRINGS,  
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ENGINEER OF RECORD:  
STACY HENSON  
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MECHANICAL  
ENGINEER:

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ENGINEER OF RECORD:  
STACY HENSON  
CONTACT: MARYANA IBRAHIM

DRAWING INDEX

ARCHITECTURAL

G-000 COVER SHEET  
ASP-1.0 ARCHITECTURAL SITE PLAN- F2F CANOPY  
ASP-1.1 ARCHITECTURAL SITE PLAN- OMD CANOPY  
D-201 DEMOLITION FLOOR PLAN  
D-221 DEMOLITION REFLECTED CEILING PLAN  
A-005 FINISH SCHEDULE  
A-201 PROPOSED FLOOR PLAN  
A-211 FINISH FLOOR PLAN  
A-221 PROPOSED REFLECTED CEILING PLAN  
A-601 INTERIOR ELEVATIONS  
A-620 INTERIOR DETAILS

MECHANICAL

M-1.1 MECHANICAL FLOOR PLAN  
M-2.1 MECHANICAL SPECIFICATIONS & SCHEDULES

PLUMBING

P-1.1 OMD GAS PLUMBING PLAN  
P-1.2 F2F GAS PLUMBING PLAN  
P-2.1 PLUMBING DETAILS

ELECTRICAL

E-1.1 CANOPY POWER & LIGHTING PLAN  
E-1.2 CANOPY ELECTRICAL DETAILS  
E-1.0 PHOTO-METRIC PLAN

FURNITURE

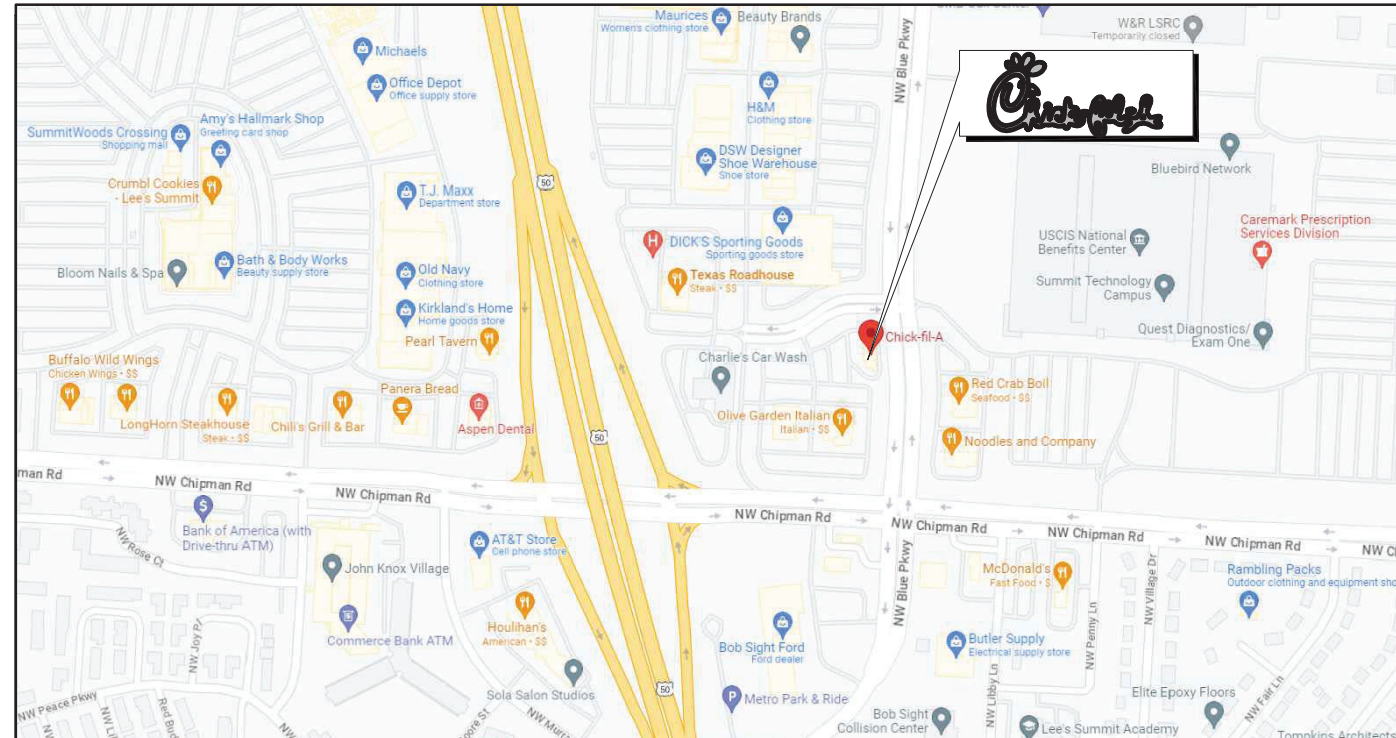
F-201 FURNITURE FLOOR PLAN  
F-211 FURNITURE CORE DRILL PLAN  
F-701 DECOR ELEVATIONS

F2F CANOPY

F2FC-1 CANOPY FOOTING LOCATIONS  
F2FC-2 CANOPY FOOTINGS  
F2FC-3 CANOPY FRAMING PLAN  
F2FC-4 CANOPY SECTIONS  
F2FC-5 CANOPY SECTIONS  
F2FC-6 CANOPY SECTIONS  
F2FC-7 CANOPY ELEVATION PLAN  
F2FC-8 CANOPY LIGHT LAYOUT

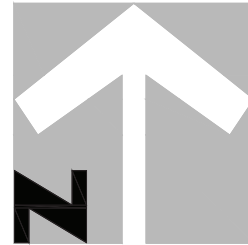
OMD CANOPY

OMD-1 CANOPY FOOTING LOCATIONS  
OMD-2 CANOPY FOOTINGS  
OMD-3 CANOPY FOOTINGS  
OMD-4 CANOPY FRAMING PLAN  
OMD-5 CANOPY SECTIONS  
OMD-6 CANOPY SECTIONS  
OMD-7 CANOPY SECTIONS  
OMD-8 CANOPY ELEVATION PLAN  
OMD-9 CANOPY LIGHT LAYOUT

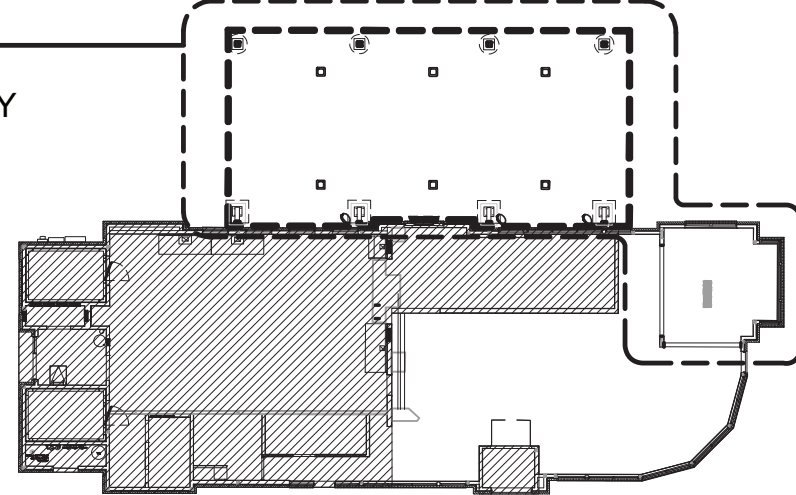


VICINITY MAP

NOT TO SCALE



SCOPE OF WORK.  
DL-OMD CANOPY  
AND DL-F2F CANOPY  
ADDITION. PLAY  
AREA CONVERSION  
TO DINING



REFER TO SITE PLAN FOR  
EXACT F2F CANOPY  
LOCATION

KEY PLAN



Chick-fil-A  
Chick-fil-A

5200 Buffington Road  
Atlanta, Georgia  
30349-2998



INTERPLAN  
INTERPLAN LLC  
ARCH COA #2015008774  
ENG COA #2003026904

ARCHITECTURE  
ENGINEERING  
PERMITTING

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ALTAMONTE SPRINGS, FL 32701  
407.645.5008

SEAL:



LAUREL R. MARTIN - ARCHITECT  
LIC # A-2019008772

CHICK-FIL-A

SUMMIT FAIR

690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, V8  
RELEASE:  
PRINTED FOR:  
PERMIT

REVISION SCHEDULE  
NO. DATE DESCRIPTION  
1 02/19/24 PLAY AREA REMOVAL

CONSULTANT PROJECT # 2023.0467  
DATE AUGUST 2023  
DRAWN BY SN  
CHECKED BY JC

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SHEET  
COVER SHEET

SHEET NUMBER

G-000



EQUIPMENT SCHEDULE	
(XO.3)	BOLLARD SLEEVE SUPPLIER: G.C. MODEL NUMBER: 1736YRS - EAGLE 6" 6-7/8" ID, 7-3/8" OD, 5614, COLOR: SAFETY YELLOW W/ REFLECTIVE RED STRIPE HIGH-DENSITY POLYETHYLENE (HDPE) CONSTRUCTION WITH UV INHIBITORS. SLIDE-ON & TRIM PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
(XO.9)	LED DECK LIGHT SUPPLIER: CANOPY MANUFACTURER. LEGACY LED CANOPY LIGHT, CRUS SC LED LW 30 LE WHI. OVER-HEAD LED LIGHT PREMOUNTED TO CANOPY PER MANUFACTURER'S GUIDELINES. 15-15/16" L X 15-15/16" X 7-1/8" H, STANDARD SYMMETRIC LIGHT DISTRIBUTION, 300K LIGHT TEMPERATURE, G.C. RESPONSIBLE FOR ELECTRICAL CONNECTIONS.
(XO.12)	OVER-HEAD GAS HEATER SUPPLIER: TOM BARROW COMPANY (CONTACT SCOTT GEORGE PH#404-351-1010 SGEORGE@TOMBARROW.COM) SCHWANK 2350 NLT OUTDOOR FOR TIER 3 48" L X 13" D X 10" H, BLACK FINISH, STAINLESS STEEL ENCLOSURE, CEILING OR COLUMN MOUNTED, HORIZONTALLY FACING 90° TO GROUND, SEE CANOPY MANUFACTURER'S SHOP DRAWINGS TOP OF HEATER TO BE MIN 8" TO BOTTOM OF DECK
(XO.13)	OVER-HEAD HEATER MOUNTING INFO BY CANOPY MANUFACTURER STEEL TUBE AND PLATE FOR MOUNTING HEATER TO TIER 3 CANOPY. BRACKET SIZE & EXTENSION LENGTH DEPENDENT ON POSITIONING HEATER ABOVE TM WALKWAY. FINISH TO MATCH CANOPY. INSTALL PER MANUFACTURER'S DRAWINGS.
(XO.14)	HEAT SHIELD SUPPLIER: TOM BARROW COMPANY ATLANTA CUSTOM FABRICATORS HS-5818 (LARGE HEATER), DUAL HEATER HEAT SHIELD TO BE MOUNTED DIRECTLY ABOVE AT BOTTOM OF MOUNTING BRACKET. LARGE HEAT SHIELD TO BE INSTALLED ON TIER 3 CANOPIES.
(XO.16)	MOUNTED FAN SUPPLIER: TOM BARROW COMPANY (CONTACT SCOTT GEORGE PH#404-351-1010 SGEORGE@TOMBARROW.COM) TPI CORP - U18TE-HD 22-1/2" DIAMETER, BLACK FINISH, 10' CORD, TOTALLY ENCLOSED, CORROSION AND DENT PROOF HOUSING, 120V, 1 PHASE, 3 SPEED MOTOR, MOUNT TO WALLS, COLUMNS OR CANOPY CEILING PER MANUFACTURER'S INSTRUCTIONS.
(XO.19)	CLEARANCE TEXT SUPPLIER: CANOPY MANUFACTURER, 9'-0" CLEARANCE TEXT, METALLIC VINYL NUMBERS. TEXT HEIGHTS VARY BY CANOPY - SEE SHOPS FOR COMPONENT AND DIMENSION INFO, CANOPY VENDOR TO INSTALL.
(XO.23)	OVER-HEAD ELECTRIC HEATER SUPPLIER: BROWIC HEATING RE ELECTRICAL PLANS 561 X 85" D X 3514, BLACK HIGH TEMPERATURE COATING FINISH, CEILING OR WALL MOUNTED, HORIZONTALLY FACING 30° TO GROUND, SEE CANOPY MANUFACTURER'S SHOP DRAWINGS TOP OF HEATER TO BE MIN 12" TO BOTTOM OF DECK. MUST BE MORE THAN 8" ABOVE GROUND, MUST BE MIN 4" BETWEEN CENTER OF HEATER TO CENTER OF FAN.

CANOPY EQUIPMENT SPEC. NOTES:  
REFER TO CANOPY MANUFACTURER CUTSHEET FOR  
HEATERS, FANS, CANOPY LIGHTS, PERMANENT  
BOLLARD & SLEEVE, AND 9'-0" CLEARANCE TEXT  
SPECIFICATIONS.

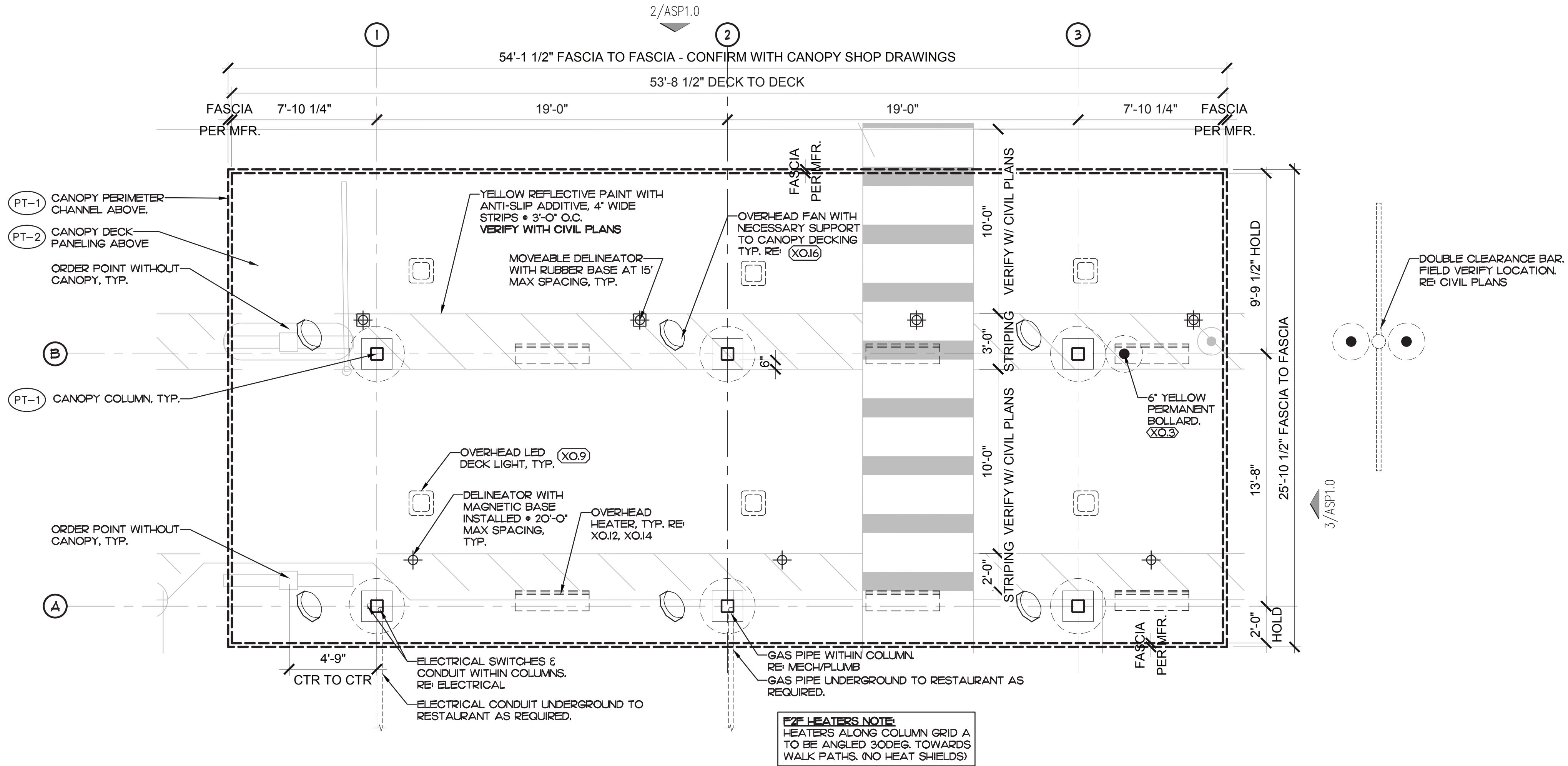
- NOTE:  
1. ALLOW 4'-0" MIN. BETWEEN  
LIGHTS/FANS AND HEATERS.  
2. UTILITIES SHALL BE FED OVER-HEAD  
ON EXISTING BLDGS.  
3. INSTALL FLASHING AT ALL WINDOW  
CONDITIONS, SEE 4ASPI.1.  
4. ALL FOOTINGS TO BE BELOW GRADE.  
5. DO NOT UNDERMINE EXISTING  
BUILDING FOUNDATION.  
6. DRAINAGE TO BE BELOW GRADE  
WHEN POSSIBLE PER SITE CONDITIONS,  
TIE INTO EXISTING UTILITIES.  
7. G.C. TO VERIFY METHOD OF DRAINAGE  
ON CANOPY SHOP DRAWINGS.  
8. G.C. TO PATCH AND REPAIR WALL  
AFFECTED BY DEMOLITION.  
FINISH TO MATCH EXISTING.  
9. X,Y DIMENSION SHOWN FOR  
ILLUSTRATIVE PURPOSES ONLY FROM  
FACE OF FINISH TO COLUMN  
CENTERLINE. G.C. TO CONFIRM  
DIMENSIONS WITH CIVIL PLANS AND  
FIELD VERIFY EXACT LOCATIONS. G.C.  
TO NOTIFY CHICK-FIL-A PROJECT TEAM  
IF CANOPY LOCATION CHANGES AND  
IMPACTS OTHER CONSTRUCTIONS  
RELATED CONDITIONS.

LEGEND:  
(XXXX) FINISH TAG.  
(XXXX) EQUIPMENT TAG.

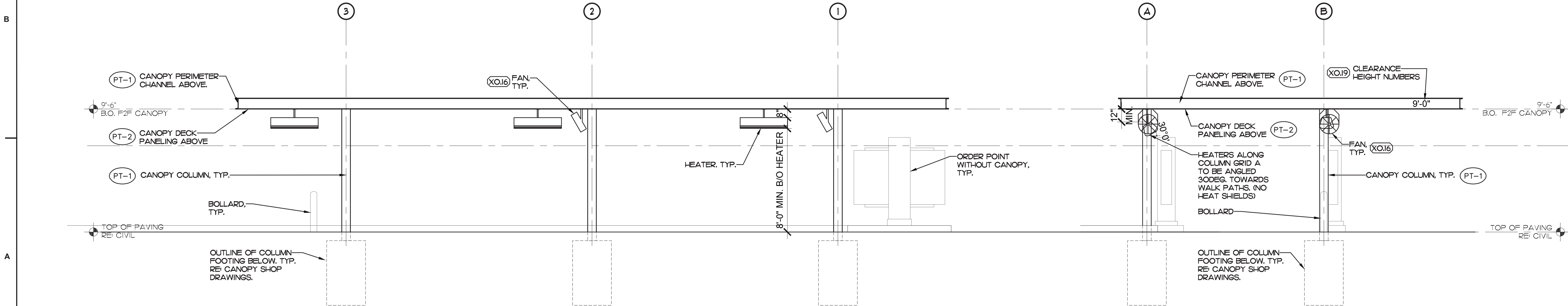
NOTE:  
REFER TO CFA'S OMD SERVICE & SAFETY  
GUIDELINES AS WELL AS CFA'S OMD G.C.  
INSTALL GUIDE FOR REFERENCE.

EXPOSED PIPING FINISHES:  
ANY EXPOSED GAS OR  
ELECTRICAL CONDUIT SHALL BE  
FINISHED. PAINTED BLACK TO  
MATCH ADJACENT MATERIAL.

EXTERIOR FINISH SCHEDULE:  
PT-1 DURA COAT, DC19ST02703  
DARK BRONZE, OIL RUBBED  
BRONZE METALLIC TEXTURE PVD  
PT-2 SMOOTH WHITE, HIGH GLOSS



1 TIER 3 DOUBLE LANE ORDER CANOPY  
1/4" = 1'-0"



2 CANOPY SIDE ELEVATION  
1/4" = 1'-0"

3 CANOPY REAR ELEVATION  
1/4" = 1'-0"



Chick-fil-A  
Chick-fil-A  
5200 Buffington Road  
Atlanta, Georgia  
30349-2998

INTERPLAN  
INTERPLAN LLC  
ARCH COA #2015008774  
ENG COA #2020026904

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ENGINEERING  
PERMITTING

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SEAL:



LAUREL R. MARTIN - ARCHITECT  
LIC # A-2019008772

CHICK-FIL-A  
SUMMIT FAIR  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

FSR#02859

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RELEASE:  
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PERMIT

REVISION SCHEDULE  
NO. DATE DESCRIPTION  
1 02/19/24 PLAY AREA REMOVAL

CONSULTANT PROJECT # 2023.0467  
DATE AUGUST 2023  
DRAWN BY RW  
CHECKED BY JC

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SHEET

ARCHITECTURAL SITE PLAN -  
F2F CANOPY

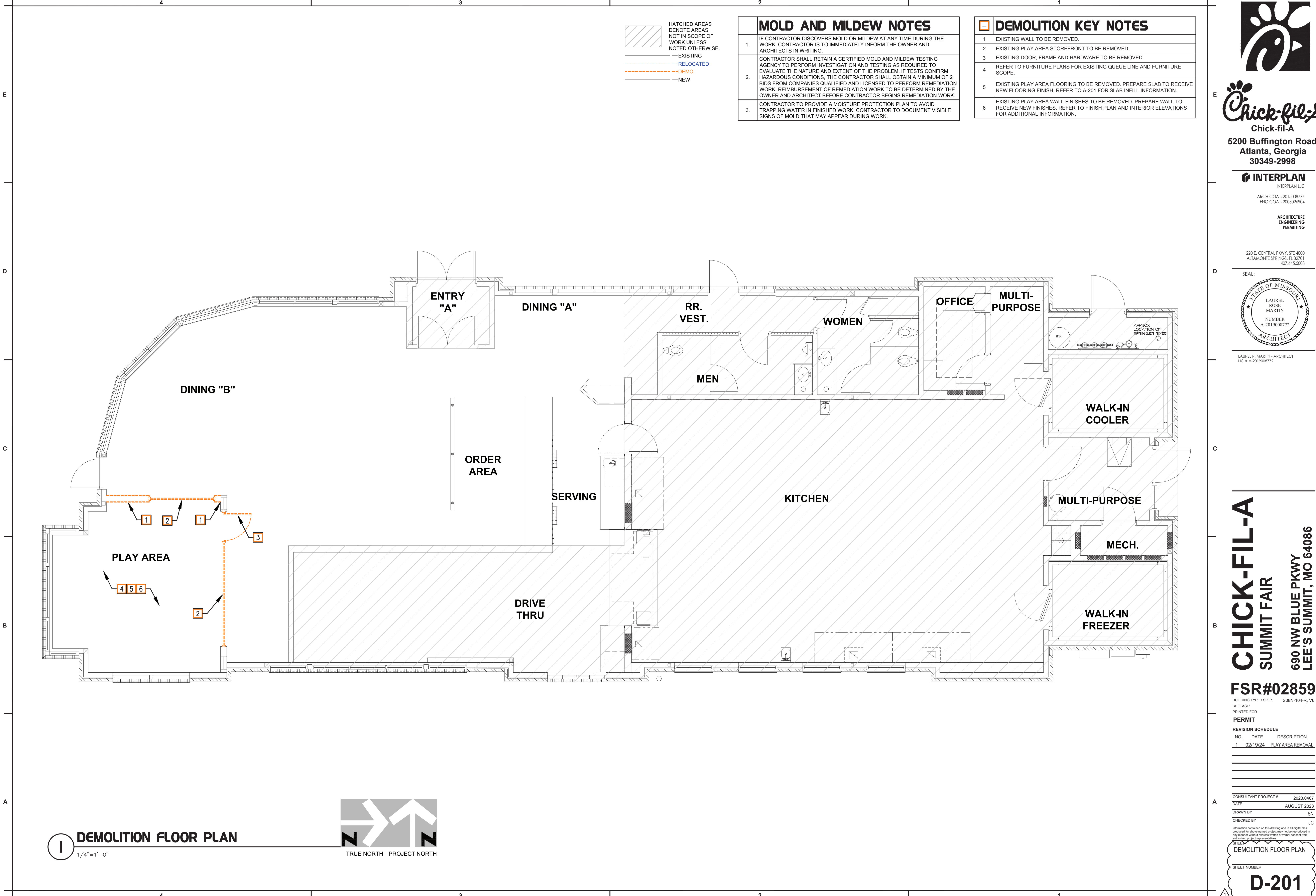
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ASP-1.0  
JESCHE - 03/05/2024 5:10:55 PM









**Chick-fil-A**  
Chick-fil-A  
5200 Buffington Road  
Atlanta, Georgia  
30349-2998



INTERPLAN LLC  
ARCH COA #2015008774  
ENG COA #2003026904

ARCHITECTURE  
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SEAL:



LAUREL R. MARTIN - ARCHITECT  
LIC # A-2019008772

**CHICK-FIL-A**  
SUMMIT FAIR

690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

**FSR#02859**

BUILDING TYPE / SIZE: S08N-104-R, V6  
RELEASE:  
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REVISION SCHEDULE  
NO. DATE DESCRIPTION  
1 02/19/24 PLAY AREA REMOVAL

CONSULTANT PROJECT # 2023.0467  
DATE AUGUST 2023  
DRAWN BY SN  
CHECKED BY JC

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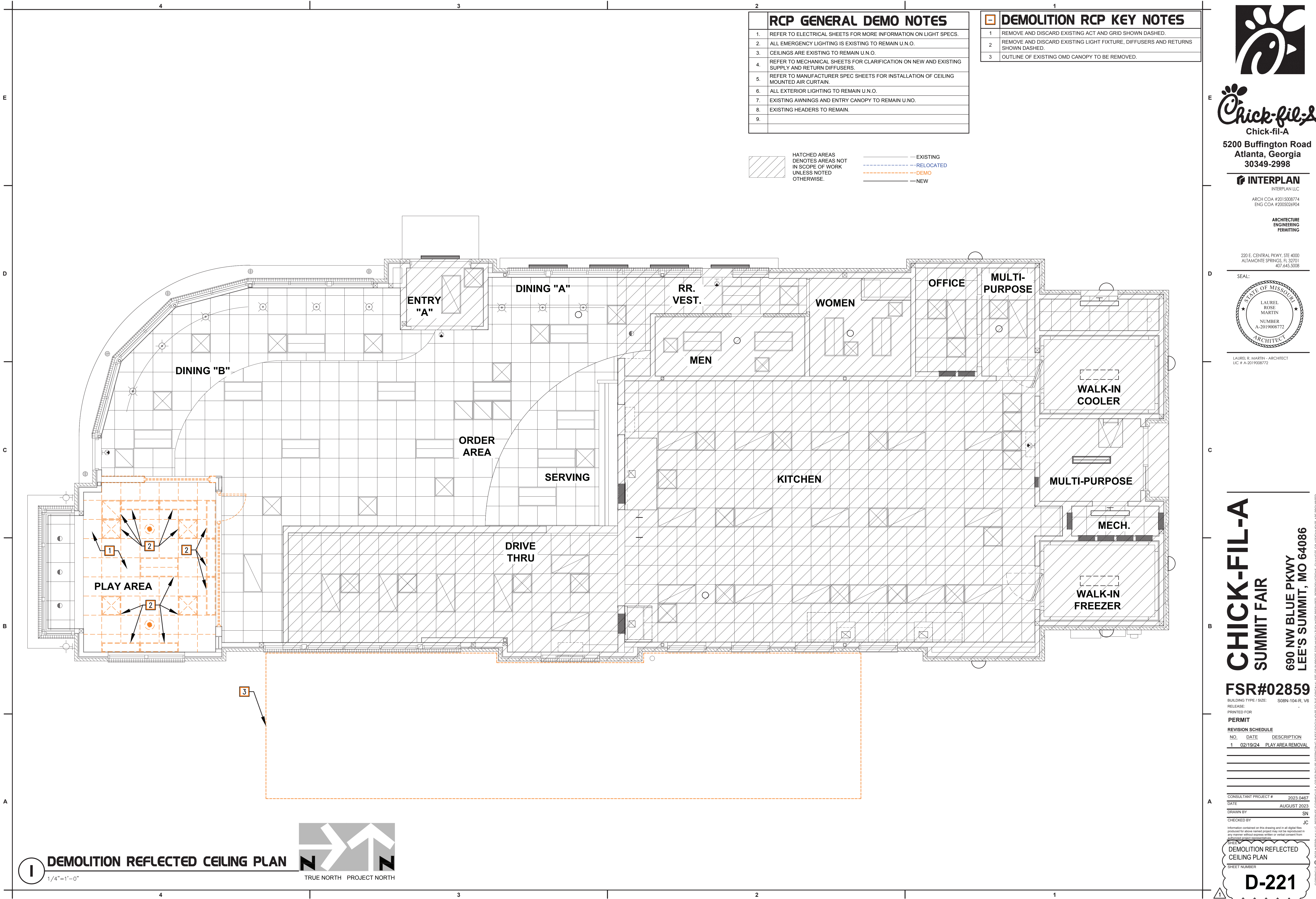
DEMOLITION FLOOR PLAN

SHEET NUMBER

**D-201**

JESCHE - 03/05/2024 5:11:15 PM











LEGEND

DOOR TAG.  
RE: DOOR SCHEDULE

WINDOW TAG.  
RE: DOOR SCHEDULE

EXISTING

RELOCATED

DEMO

NEW

HATCHED AREAS  
DENOTE AREAS  
NOT IN SCOPE OF  
WORK UNLESS  
NOTED OTHERWISE.

WOOD STUD WALL

W4  
W6  
W8  
WX

2x4 WOOD STUDS  
2x6 WOOD STUDS  
2x8 WOOD STUDS  
2x INFILL WOOD STUDS

METAL STUD WALL

M4  
M6  
M8

3 5/8" METAL STUDS  
6" METAL STUDS  
8" METAL STUDS

NW - NEW WALL TO MATCH  
EXISTING

BATT INSULATION

NEW EXTERIOR FINISH  
RE: EXTERIOR ELEVATIONS

NOTE 1: WALL BLOCKING SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY. BLOCKING SHALL INCLUDE, BUT IS NOT LIMITED TO: AREAS INDICATED ON INTERIOR ELEVATIONS FOR GRAB BARS, SHELVING BRACKETS, MONITORS, FIXTURES, ETC.; AS WELL AS BLOCKING FOR WINDOWS, CANOPIES ROOF FRAMING, ROOF TOP UNITS, ETC.

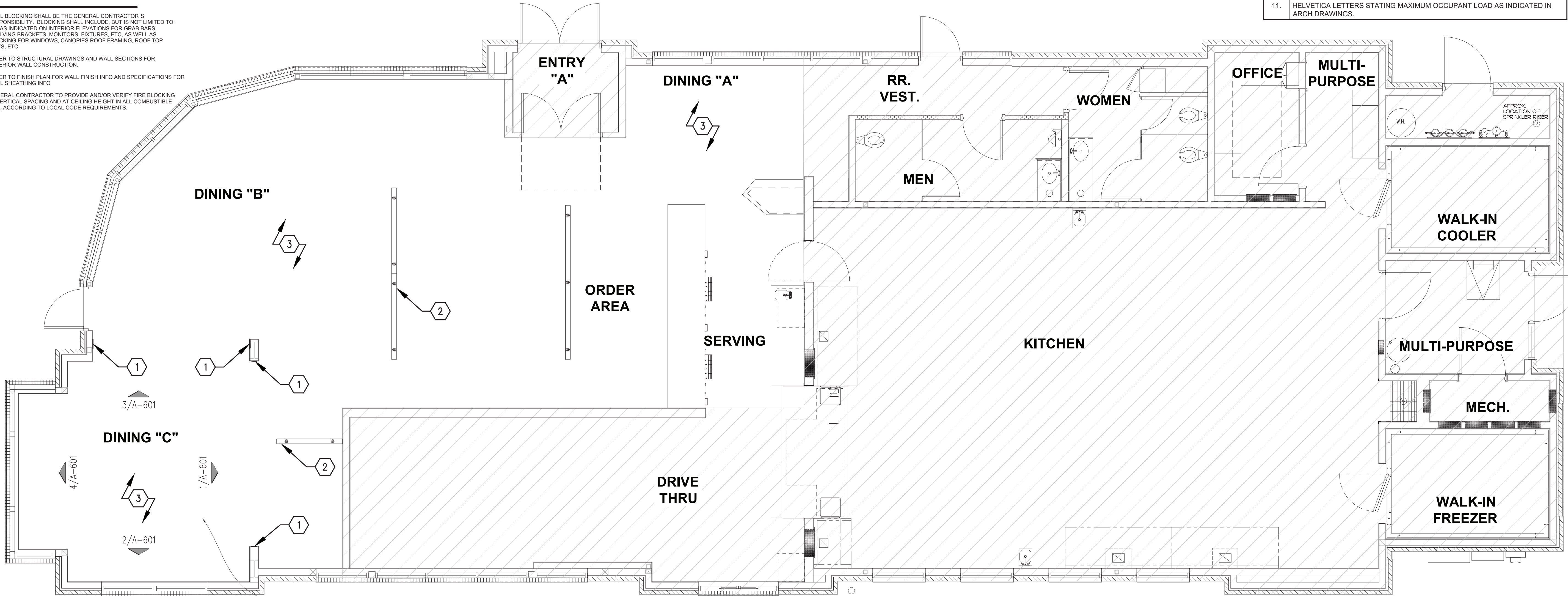
NOTE 2: REFER TO STRUCTURAL DRAWINGS AND WALL SECTIONS FOR EXTERIOR WALL CONSTRUCTION.

NOTE 3: REFER TO FINISH PLAN FOR WALL FINISH INFO AND SPECIFICATIONS FOR WALL SHEATHING INFO.

NOTE 4: GENERAL CONTRACTOR TO PROVIDE AND/OR VERIFY FIRE BLOCKING AT 10' MAX VERTICAL SPACING AND AT CEILING HEIGHT IN ALL COMBUSTIBLE STUD WALLS, ACCORDING TO LOCAL CODE REQUIREMENTS.

	PROPOSED PLAN KEY NOTES
1	PATCH AND REPAIR FINISHES WHERE DEMOLITION OCCURED. RE: FINISH FLOOR PLAN
2	NEW LOW HEIGHT WALL. RE: FURNITURE
3	REFER TO FURNITURE PLANS FOR SEATING AND QUEUING LAYOUT.

	FLOOR PLAN GENERAL NOTES
1.	ALL DIMENSIONS SHOWN ARE FRAMING DIMENSIONS (FACE OF STUD/JAMB) UNLESS OTHERWISE NOTED.
2.	FASTENERS, ANCHORS, CLIPS, STRAPS, ETC WHICH ARE IN CONTACT WITH PRESERVATIVE AND/OR FIRE TREATED WOOD SHALL BE OF G-185 HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, OR AN APPROVED EQUAL.
3.	REFER TO CIVIL AND LANDSCAPE FOR LOCATIONS OF WALKS, BOLLARDS, LANDSCAPING AREAS, FLAG POLE, AND OTHER SITE ITEMS.
4.	REFER TO INTERIOR ELEVATIONS FOR LOCATIONS AND TYPES OF CORNER GUARDS.
5.	CONTRACTOR TO COORDINATE LOCATION OF POLE MOUNTED EXTERIOR CAMERA WITH STRONG SYSTEMS AND INSTALL UNDERGROUND CONDUIT AS REQUIRED. RE: ELECTRICAL.
6.	REFER TO ACCESSIBILITY PLAN AND FURNITURE DRAWINGS FOR SEATING LAYOUT & SPECIFICATIONS. CONTACT: OWNER.
7.	REFER TO ACCESSIBILITY PLAN AND OWNER DRAWINGS FOR CONDIMENT COUNTERS AND TRASH RECEPTACLES.
8.	REFER TO IT WALLBOARD USER GUIDE FOR WALLBOARD INSTALLATION, IF APPLICABLE.
9.	REFER TO MILLWORK PLAN FOR RAISED CONCRETE CURB LOCATIONS.
10.	REFER TO FINISH PLAN FOR NEW FINISHES.
11.	OCCUPANT LOAD SIGNS BY GC. PROVIDE 2"x8" BLACK SIGN WITH 1/2" WHITE HELVETICA LETTERS STATING MAXIMUM OCCUPANT LOAD AS INDICATED IN ARCH DRAWINGS.



FOUNDATION

FORMER PLAY AREA EXISTING RECESSED SLAB TO RECEIVE 1 1/2" CONCRETE TOPPING PER THE FOLLOWING SPECIFICATIONS.

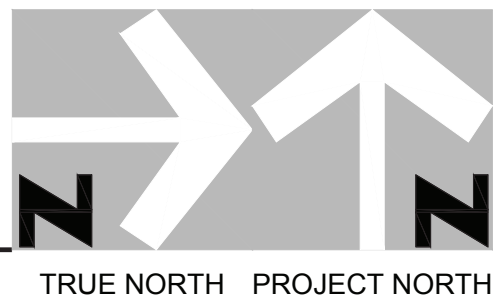
- PRIOR TO PLACING SLAB, EXISTING CONCRETE SLAB SURFACE SHALL HAVE ANY EXISTING SEALERS REMOVED AND CLEANED OF DIRT AND DEBRIS.
- SURFACE OF EXISTING CONCRETE SLAB SHALL BE ROUGHENED AND ALL LATENT MATERIAL AND DEBRIS REMOVED.
- SURFACE OF EXISTING CONCRETE SLAB SHALL BE DAMPENED JUST PRIOR TO PLACING TOPPING SLAB.
- CONCRETE TOPPING SHALL BE 3/8" MAX. SIZE AGGREGATE WITH 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI. MAXIMUM SLUMP SHALL BE 3 INCHES PRIOR TO ANY WATER REDUCING AGENTS ADDED.
- CONCRETE TOPPING SHALL BE REINFORCED W 1-1/2 LBS. OF POLYPROPYLENE FIBERMESH PER CUBIC YARD OF CONCRETE.
- SAWCUT CONTROL JOINTS SHALL BE PLACED WHERE EXISTING CONTROL JOINTS ARE LOCATED IN THE EXISTING CONCRETE SLAB.

FOUNDATION NOTES

- TOP OF SLAB = 0'-0". 0'-0" IS FOR REFERENCE ONLY. SEE CIVIL FOR NGVD ELEVATION.
- SEE MECH FOR ALL SLEEVES, PIPES, INSERTS AND EMBEDDED ITEMS.

PROPOSED FLOOR PLAN

1/4"=1'-0"



Chick-fil-A  
Chick-fil-A

5200 Buffington Road  
Atlanta, Georgia  
30349-2998



ARCH COA #2015008774  
ENG COA #2003026904

ARCHITECTURE  
ENGINEERING  
PERMITTING

220 E. CENTRAL PKWY, STE 4000  
ALTAMONTE SPRINGS, FL 32701  
407.645.5008



LAUREL R. MARTIN - ARCHITECT  
LIC # A-2019008772

CHICK-FIL-A  
SUMMIT FAIR

690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, V8  
RELEASE:  
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NO.	DATE	DESCRIPTION
1	02/19/24	PLAY AREA REMOVAL

CONSULTANT PROJECT #	2023.0467
DATE	AUGUST 2023
DRAWN BY	SN
CHECKED BY	JC

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PROPOSED FLOOR PLAN

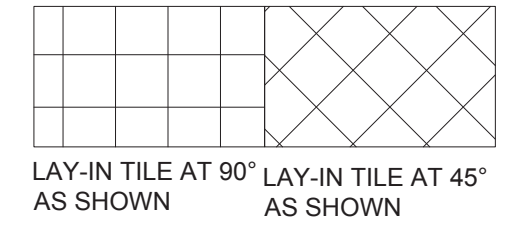
SHEET NUMBER

A-201



LEGEND

FLOOR TILE.  
REFER TO FINISH PLAN AND SCHEDULE



HATCHED AREAS  
DENOTES AREAS NOT  
IN SCOPE OF WORK  
UNLESS NOTED  
OTHERWISE.

FINISH PLAN KEY NOTES

- EXISTING FLOORING TO REMAIN. PATCH AND REPAIR FINISHES AFFECTED BY DEMOLITION.
- NEW FLOORING AS SCHEDULED.
- PLAY AREA - NEW FLOORING AS SCHEDULED. REFER TO A-201 FOR SLAB-INFILL INFORMATION.

FINISH PLAN GENERAL NOTES

- PATCH AND REPAIR EXISTING FLOORING DISTURBED BY DEMOLITION. MATCH EXISTING TILE AND FINISH AND ADJACENT SURFACE. SET NEW TILE WITH ULTRA FLEX RAPID THIN SET GROUT. COLOR TO MATCH EXISTING.
- REFER TO SHEET A-005 FOR SCHEDULE OF FINISHES.
- TILE BASE TO WRAP CONCRETE CURBS AT SERVING COUNTER.
- DINING AREAS PART OF SCOPE OF WORK TO RECEIVE LEVEL 4 PAINT FINISHES.
- REFER TO PLUMBING PLANS FOR FLOOR DRAIN / SINK LOCATIONS.
- ALL DRAIN OVERS TO BE FLUSH WITH THE TOP OF TILE.
- ALL EXISTING FLOOR DRAINS THAT ARE ABANDONED NEED TO BE LEVELED AROUND ANY DRAINS OR CLEANOUT LOCATIONS.
- PROVIDE CG-3 AROUND PERIMETER OF BOH WINDOWS / DOOR
- ALL EXTERIOR DOORS TO RECEIVE THRESHOLD SET IN BED OF MASTIC.
- NO FINGER TILES ALLOWED AT CORNERS OF FLOOR TILE BASE.
- REFER TO FURNITURE PLANS FOR CORE DRILLING LOCATIONS IN DINING AREAS
- TILE CONTRACTOR SHALL PULL FLOOR AND WALL TILE FROM MULTIPLE BOXES TO ENSURE TILE COLOR VARIATION IN PUBLIC AREAS.
- PROVIDE FRACTURE MEMBRANE/SLIP SHEET AT ALL CONTROL/EXPANSION JOINTS TO ALLOW TILE TO BRIDGE.
- FLOAT & PREPARE FLOOR SLAB FOR NEW FLOOR TILE.
- CFA VENDOR TO CLEAN FLOOR AND EQUIPMENT.
- FOR WAINSCOTTING WHERE GRAPHIC MESSAGE EXTENDS ABOVE TOP HORIZONTAL TRIM CAP. INSTALLER TO FIELD CUT VERTICAL BATTENS AND TOP CAP AT GRAPHICS AS REQUIRED.



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Chick-fil-A  
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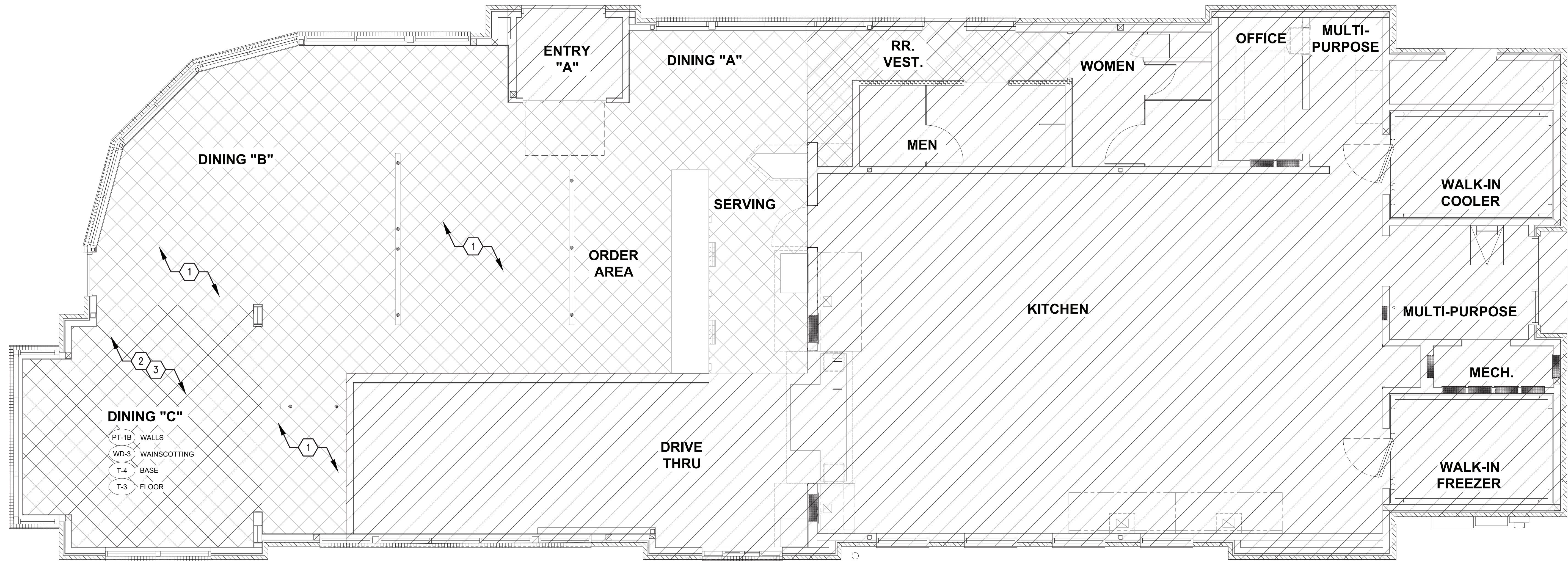
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LAUREL R. MARTIN - ARCHITECT  
LIC # A-2019008772



**CHICK-FIL-A**  
SUMMIT FAIR

690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

**FSR#02859**

BUILDING TYPE / SIZE: S08N-104-R, V6  
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REVISION SCHEDULE  
NO. DATE DESCRIPTION  
1 02/19/24 PLAY AREA REMOVAL

CONSULTANT PROJECT # 2023.0467  
DATE AUGUST 2023  
DRAWN BY SN  
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SHEET  
FINISH FLOOR PLAN

SHEET NUMBER

**A-211**

JESCHE - 03/06/2024 9:43:04 AM

FINISH FLOOR PLAN

1/4"=1'-0"

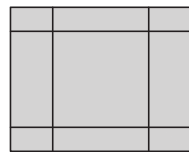
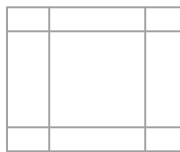
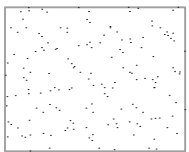

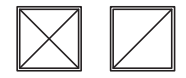


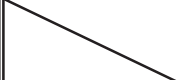
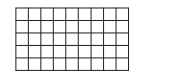


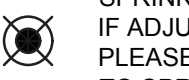
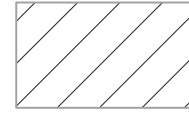



TRUE NORTH PROJECT NORTH



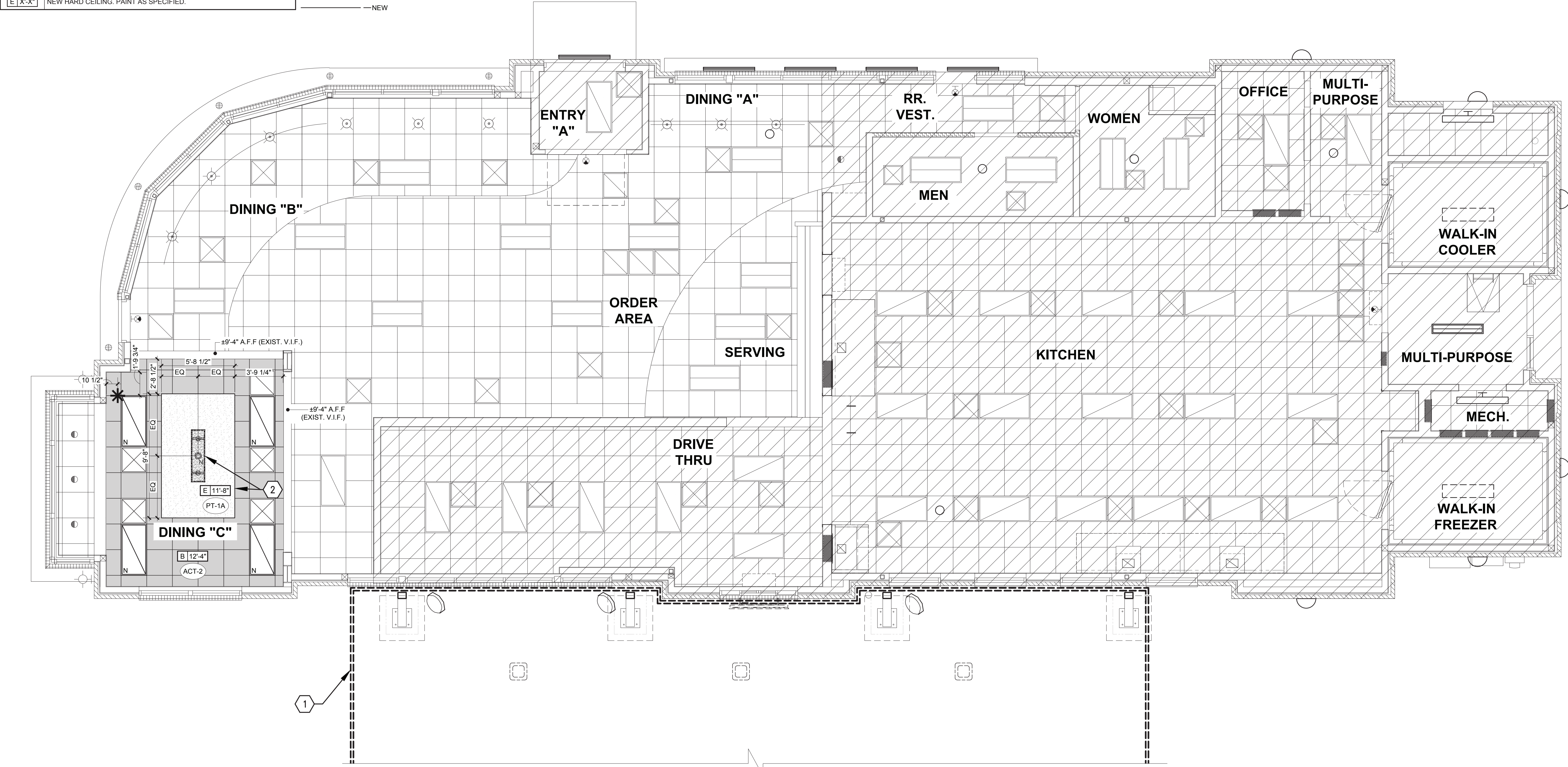
RCP GENERAL NOTES	
1.	REFER TO ELECTRICAL SHEETS FOR MORE INFORMATION ON LIGHT SPECS.
2.	ALL EMERGENCY LIGHTING IS EXISTING TO REMAIN U.N.O.
3.	CEILING ARE EXISTING TO REMAIN U.N.O.
4.	REFER TO MECHANICAL SHEETS FOR CLARIFICATION ON NEW AND EXISTING SUPPLY AND RETURN DIFFUSERS.
5.	REFER TO MANUFACTURER SPEC SHEETS FOR INSTALLATION OF CEILING MOUNTED AIR CURTAIN.
6.	ALL EXTERIOR LIGHTING TO REMAIN U.N.O.
7.	EXISTING AWNINGS AND ENTRY CANOPY TO REMAIN U.N.O.
8.	GC TO COORDINATE WITH OWNER REPRESENTATIVE FOR SECURITY CAMERAS SCOPE.

CEILING TYPE LEGEND	
SYMBOL	DESCRIPTION
<div>xxx-x</div>	FINISH TAG. RE: FINISH SCHEDULE
<div>A EXIST</div>	EXISTING ACOUSTICAL CEILING TILE AND SUSPENSION GRID TO REMAIN. PATCH AND REPAIR AS NEEDED. MATCH HEIGHT OF EXISTING CEILING.
<div>B X-X</div>	NEW ACOUSTICAL CEILING TILE AND SUSPENSION GRID SYSTEM. MATCH HEIGHT OF EXISTING CEILING
<div>C EXIST</div>	NEW ACOUSTICAL CEILING TILES - EXISTING GRID TO REMAIN. MATCH EXISTING TILE TYPE.
<div>D EXIST</div>	EXISTING TO REMAIN CLEAN, PATCH & REPAIR AS NEEDED
<div>E X-X</div>	NEW HARD CEILING. PAINT AS SPECIFIED.

CEILING LEGEND					
	NEW ACT AND GRID PER SCHEDULE		EXISTING ACT AND GRID TO REMAIN		GYP BD CEILING (COLOR/FINISH DETERMINED BY KEYNOTE) PROVIDE NEW AS NOTED. REPAIR AS REQUIRED
	6" RECESSED LED FIXTURE		DIFFUSERS/ RETURNS. RE: MECH		EMERGENCY LIGHTING
	2x2 RECESSED FLUORESCENT LIGHT FIXTURE		2x4 RECESSED FLUORESCENT LIGHT FIXTURE		EGG CRATE LIGHT LENSE RE: ELECTRICAL
	CEILING MOUNTED AIR CURTAIN. RE: MECH		BACK OF HOUSE FLY LIGHT. RE: KITCHEN DRAWINGS		SPRINKLER HEAD IF ADJUSTMENT IS REQUIRED, PLEASE REFER TO SPRINKLER SHOP DWGS.
	HATCHED AREAS DENOTES AREAS NOT IN SCOPE OF WORK UNLESS NOTED OTHERWISE.		CEILING STARTING POINT		
LIGHTING NOTES: 1. REFER TO ELECTRICAL SHEETS FOR MORE INFORMATION ON LIGHT SPECS. 2. ALL EMERGENCY LIGHTING IS EXISTING TO REMAIN U.N.O.					

— EXISTING  
- - - RELOCATED  
- - - DEMO  
— NEW

PROPOSED RCP KEY NOTES	
1	REFER TO ARCHITECTURAL SITE PLAN & CANOPY SHOP DRAWINGS FOR CANOPY SCOPE.
2	NEW SOFFIT AND COKE LIGHT FIXTURE CENTERED ABOVE GATHERING TABLE. RE: FURNITURE



1

PROPOSED REFLECTED CEILING PLAN

1/4"=1'-0"

TRUE NORTH

PROJECT NORTH

Chick-fil-A

5200 Buffington Road  
Atlanta, Georgia  
30349-2998

INTERPLAN

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ENG COA #2003026904

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SEAL:

STATE OF MISSOURI

LAUREL ROSE MARTIN

NUMBER A-2019008772

ARCHITECT

LAUREL R. MARTIN - ARCHITECT  
LIC # A-2019008772

CHICK-FIL-A

SUMMIT FAIR

690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, V6

RELEASE: PRINTED FOR PERMIT

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
1	02/19/24	PLAY AREA REMOVAL

CONSULTANT PROJECT # 2023.0467  
DATE AUGUST 2023  
DRAWN BY SN  
CHECKED BY JC

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PROPOSED REFLECTED  
CEILING PLAN

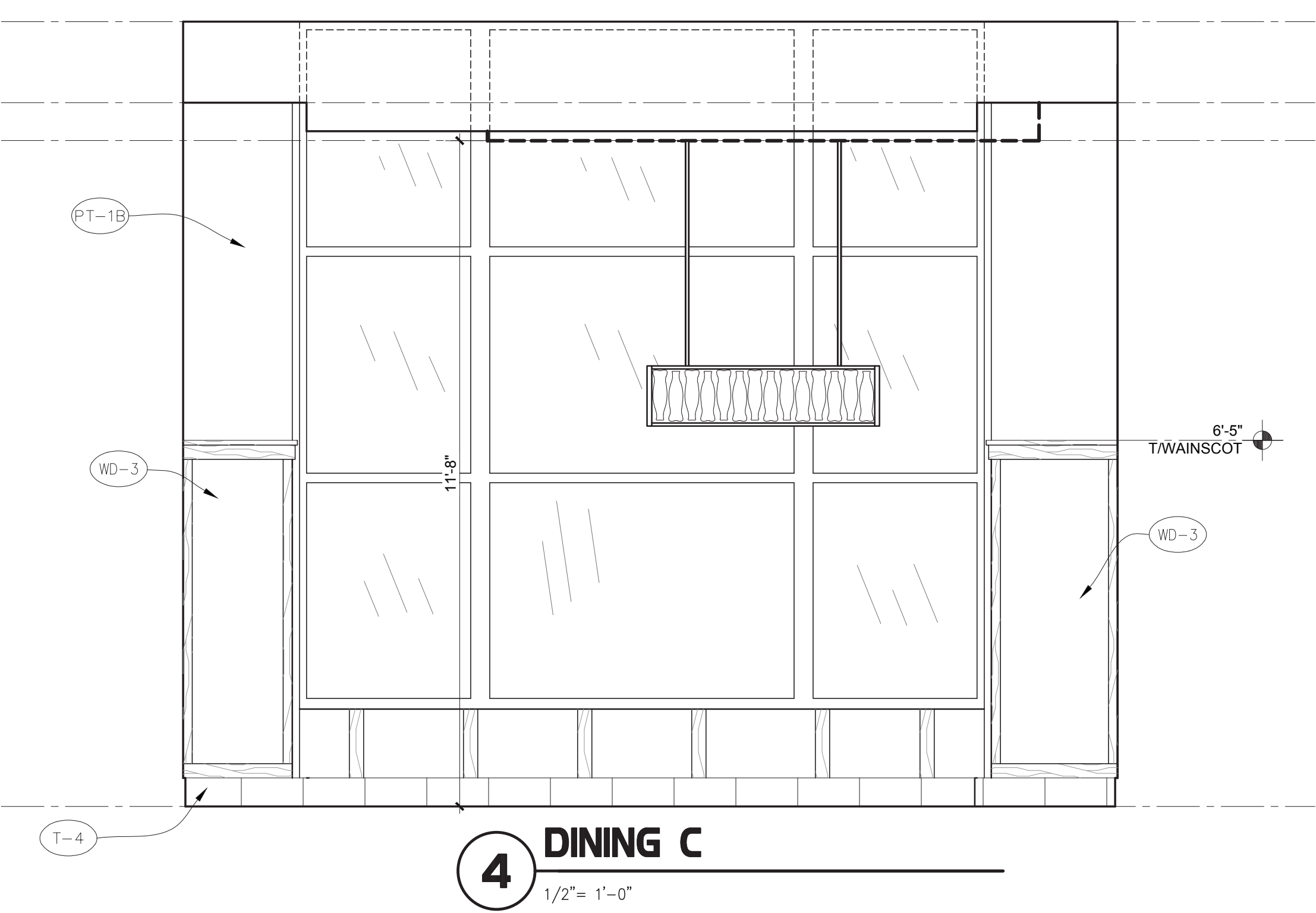
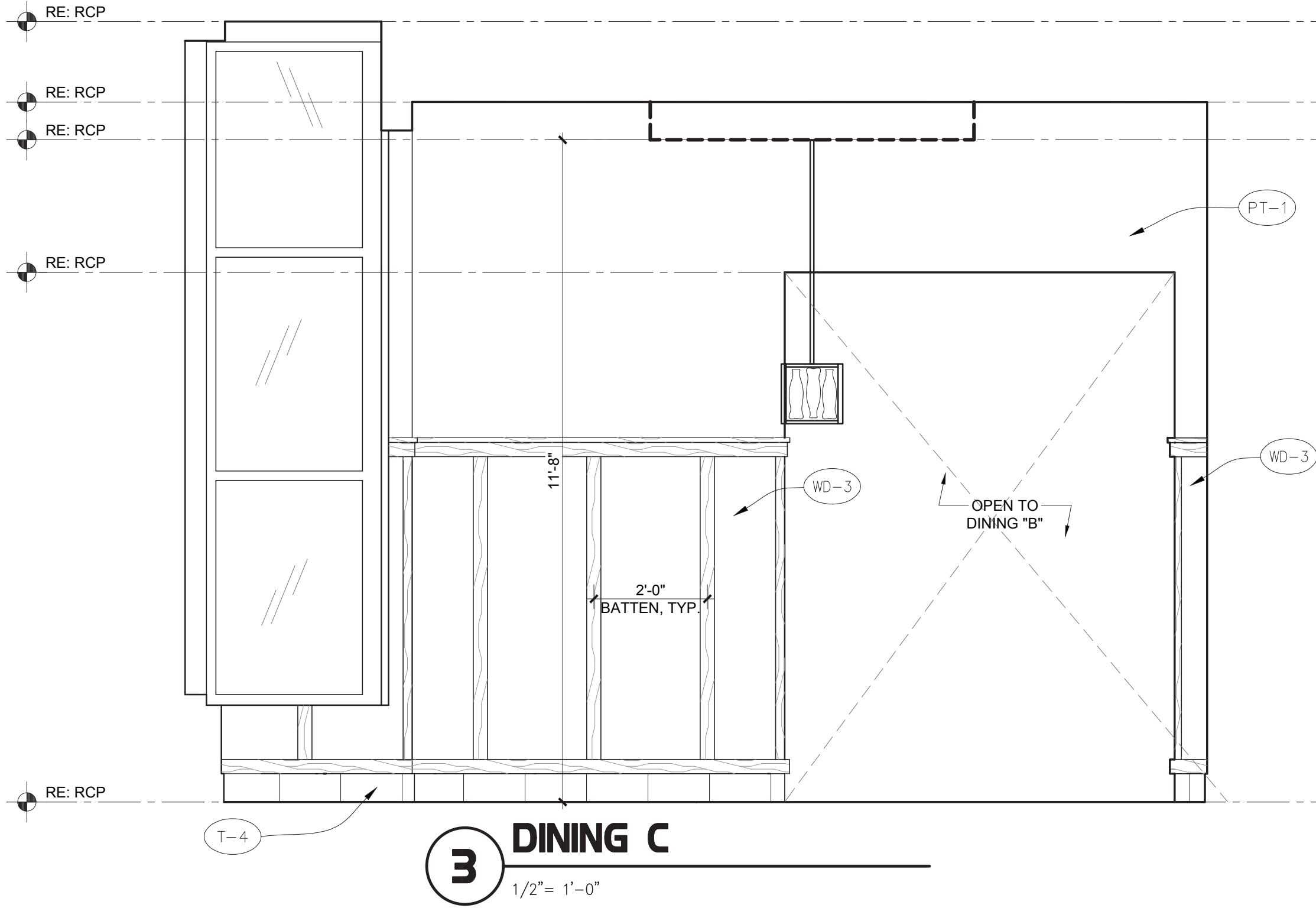
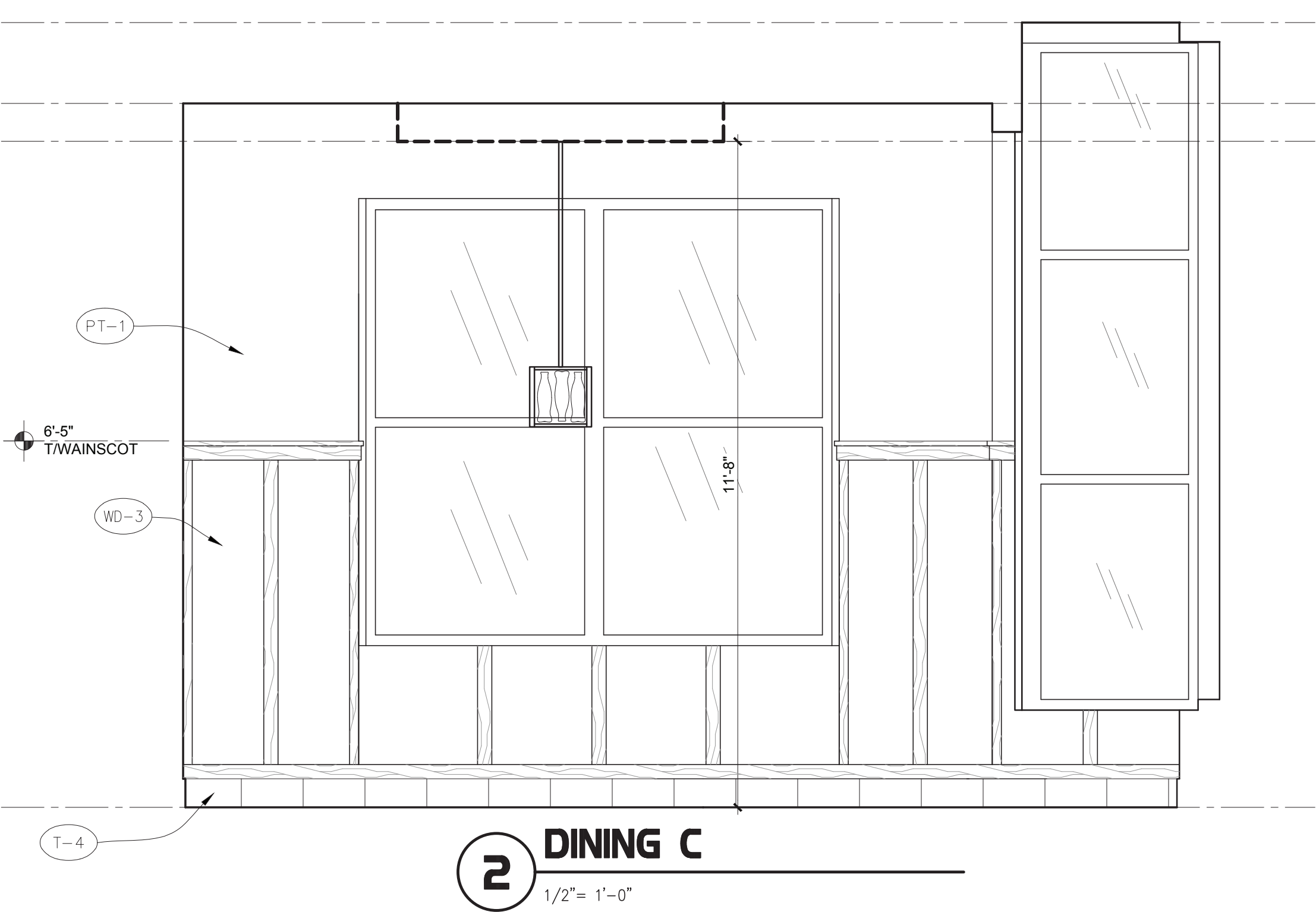
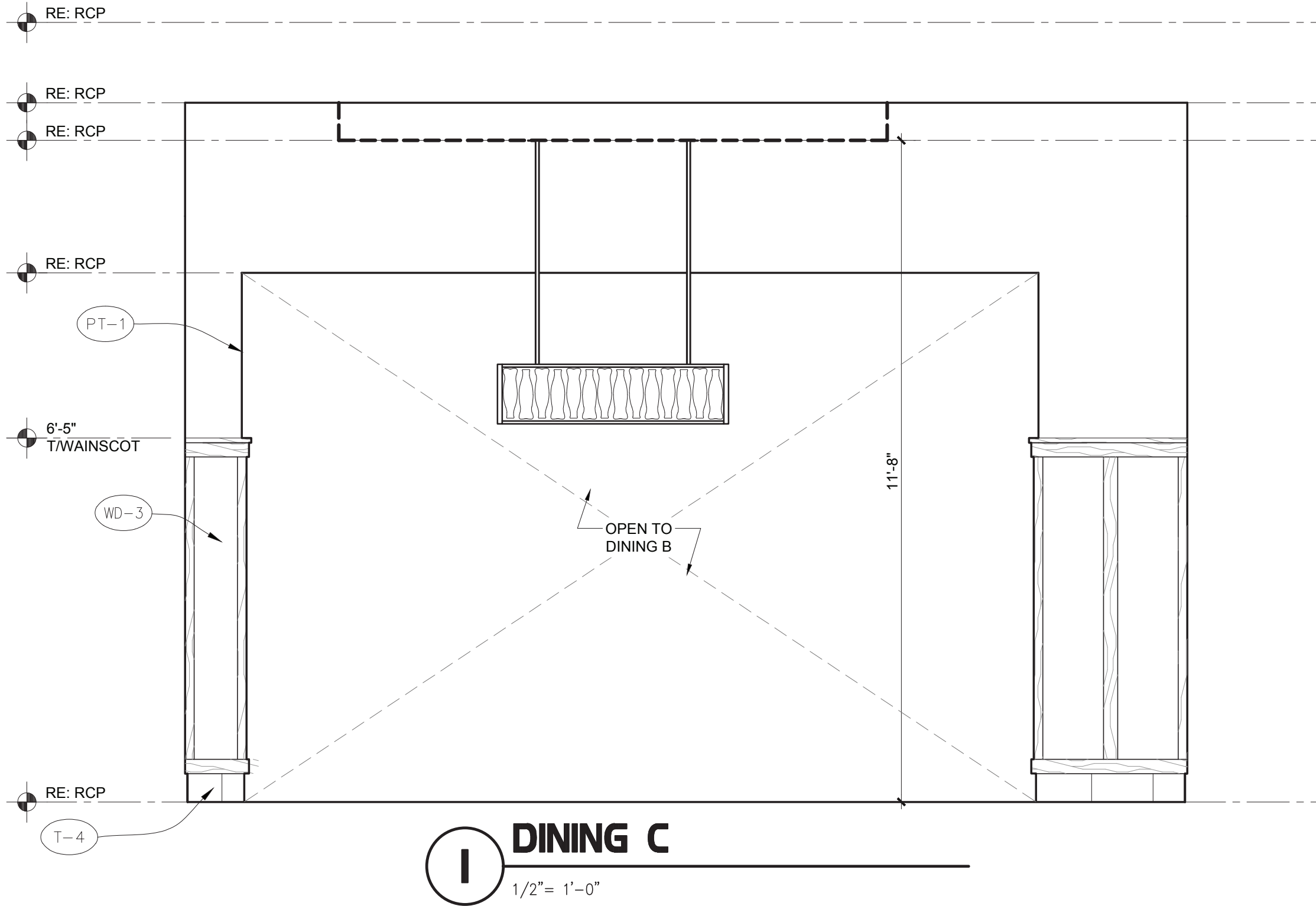
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A-221

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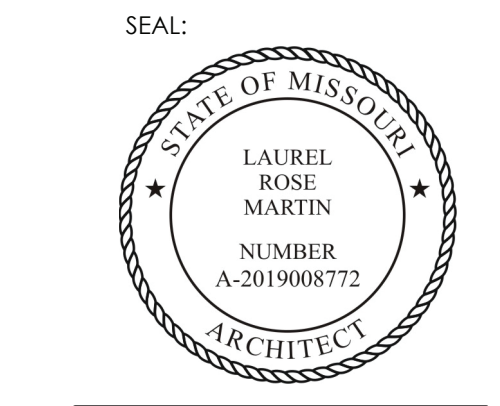
INTERIOR ELEVATION GENERAL NOTES	
1.	ALL DIMENSIONS SHOWN ARE FRAMING DIMENSIONS (FACE OF STUD/JAMB) UNLESS OTHERWISE NOTED.
2.	GC TO PROVIDE BLOCKING FOR ALL WALL SHELVING AND EQUIPMENT. REFER TO K SHEET FOR LOCATIONS. REFER TO ARCH DETAIL SHEETS FOR LOCATIONS.
3.	PROVIDE 5" HIGH CEMENTITIOUS BOARD SUBSTRATE AT BASE OF ALL WALLS IN DINING ROOM AND VESTIBULE.
4.	PROVIDE 12" HIGH CEMENTITIOUS BOARD SUBSTRATE AT BASE OF ALL WALLS IN KITCHEN.
5.	PROVIDE CEMENTITIOUS BOARD SUBSTRATE FOR THE FULL HEIGHT OF TILE AT ALL WALLS WITH WALL TILE.
6.	AT WAINSCOT LOCATIONS, PROVIDE 5" HIGH CEMENTITIOUS BOARD BEHIND TILE BASE, THEN PLYWOOD SUBSTRATE TO TOP OF WAINSCOT, THEN GYPSUM BOARD TO CEILING.
7.	BRAND ICON DIRECTION: WHEN ENTERING THE STORE FROM THE MAIN ENTRY, THE BEAK SHOULD POINT TO THE RIGHT.
8.	REFER TO FRN SHEETS FOR SIGNAGE LOCATIONS.
9.	REFER TO ARCH DETAILS FOR CORNER GUARD DETAIL.
10.	REFER TO KITCHEN PLANS FOR EQUIPMENT AND COUNTER TOP LAYOUTS.



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Chick-fil-A  
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LAURELL R. MARTIN - ARCHITECT  
LIC # A-2019008772

CHICK-FIL-A  
SUMMIT FAIR  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, V8  
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REVISION SCHEDULE	
NO.	DATE
1	02/19/24

PLAY AREA REMOVAL

CONSULTANT PROJECT #	2023.0467
DATE	AUGUST 2023
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INTERIOR ELEVATIONS

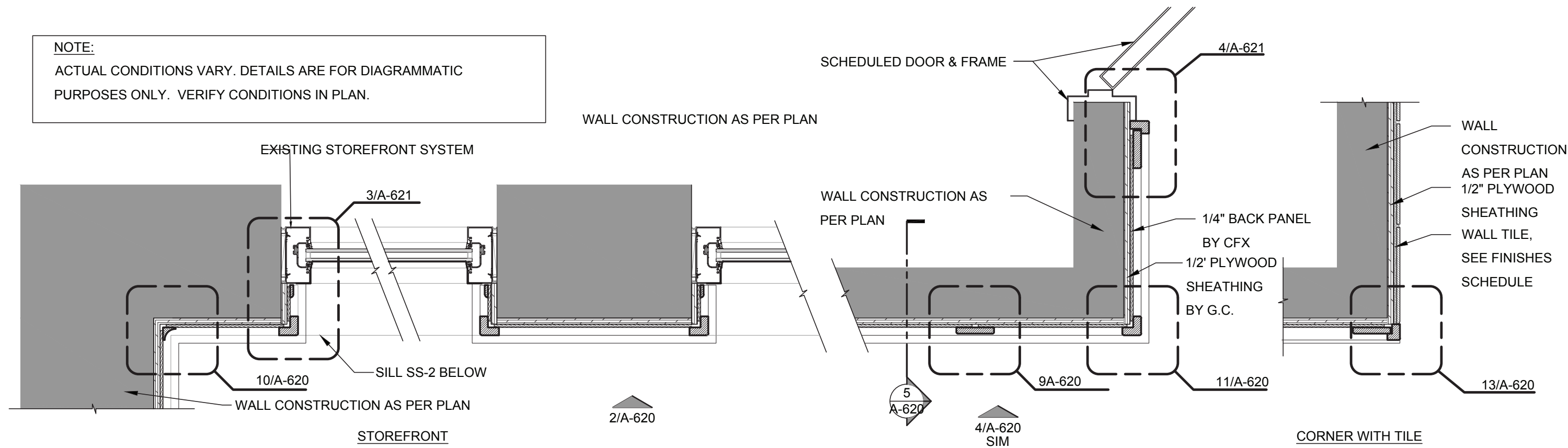
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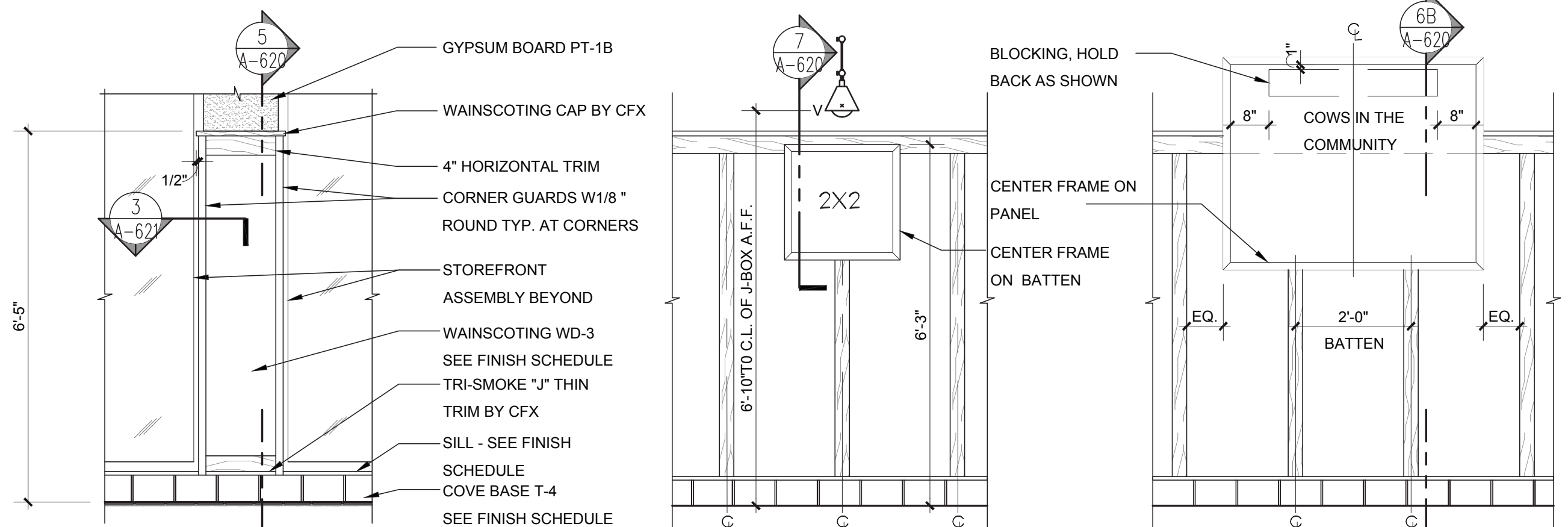
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NOTE:  
ACTUAL CONDITIONS VARY. DETAILS ARE FOR DIAGRAMMATIC  
PURPOSES ONLY. VERIFY CONDITIONS IN PLAN.

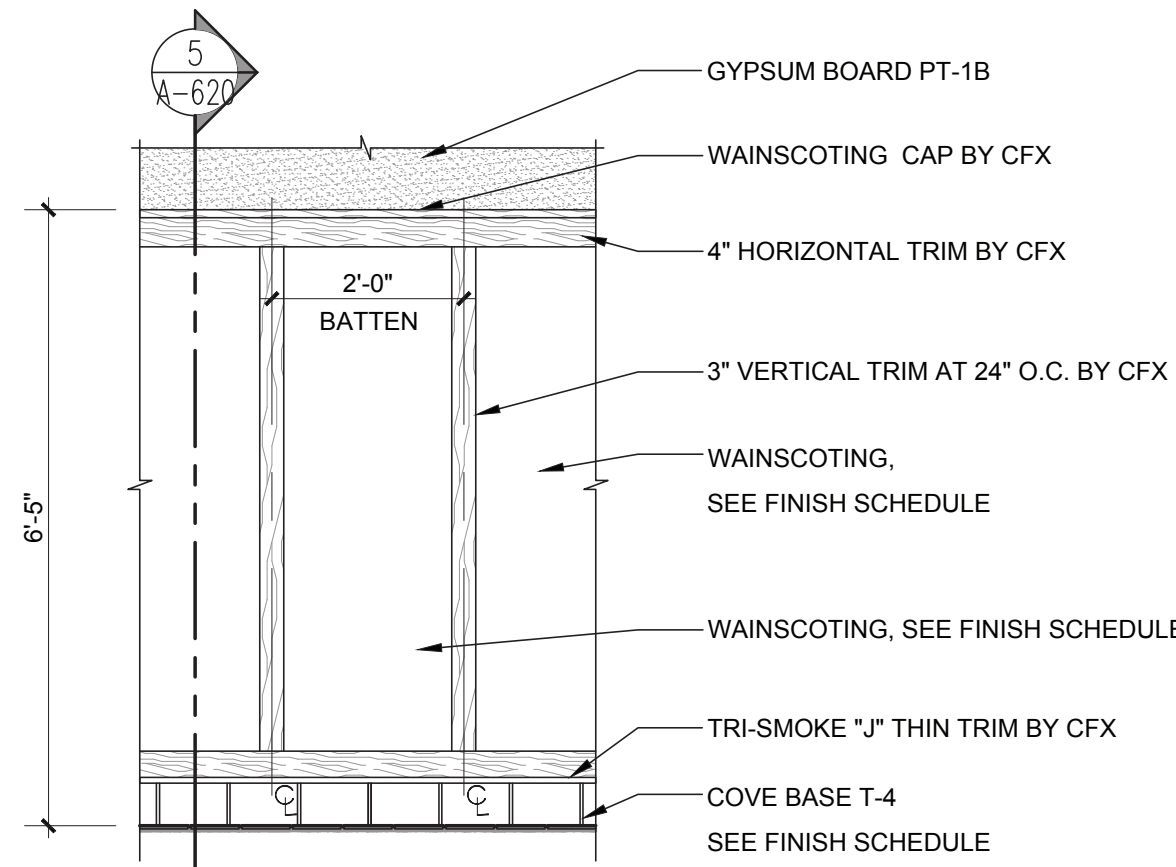


1 WAINSCOTTING PLAN DIAGRAM  
SCALE: 1 1/2" = 1'-0"

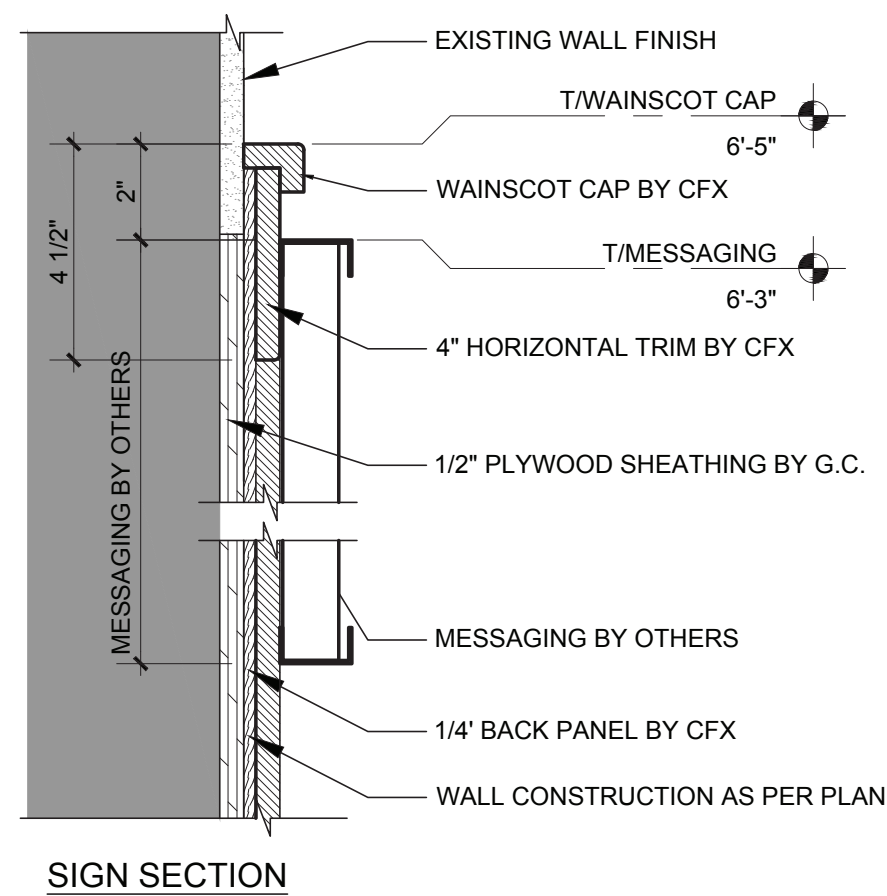


2 WAINSCOTTING ELEVATION AT WINDOW  
SCALE: 1/2" = 1'-0"

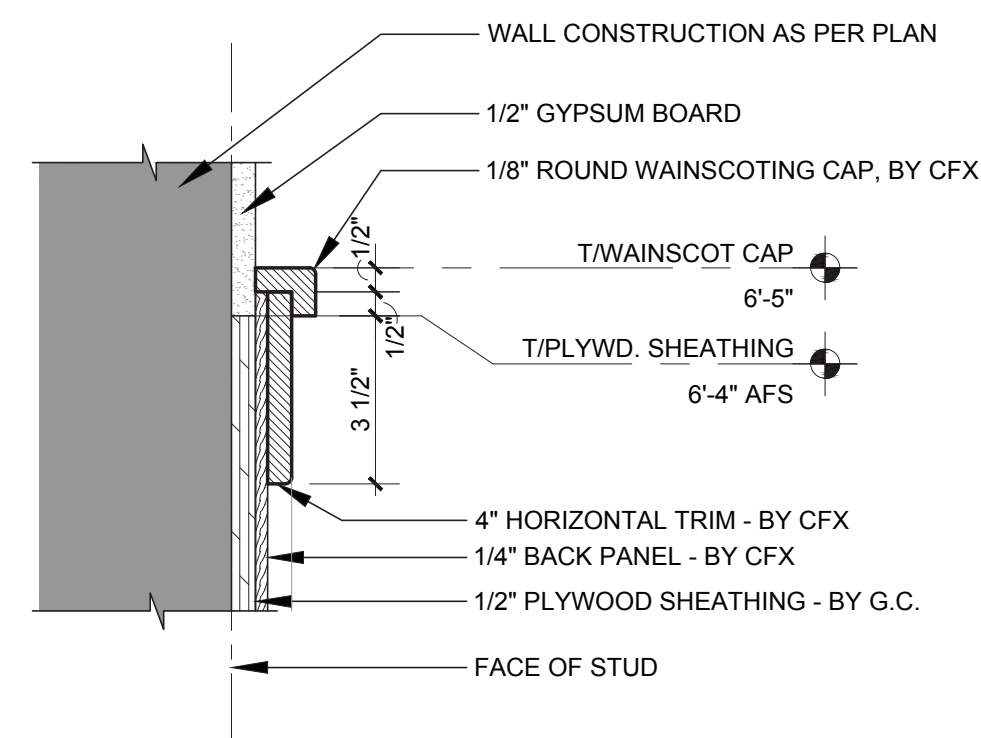
3 WAINSCOTTING ELEVATION AT SIGNAGE  
SCALE: 1/2" = 1'-0"



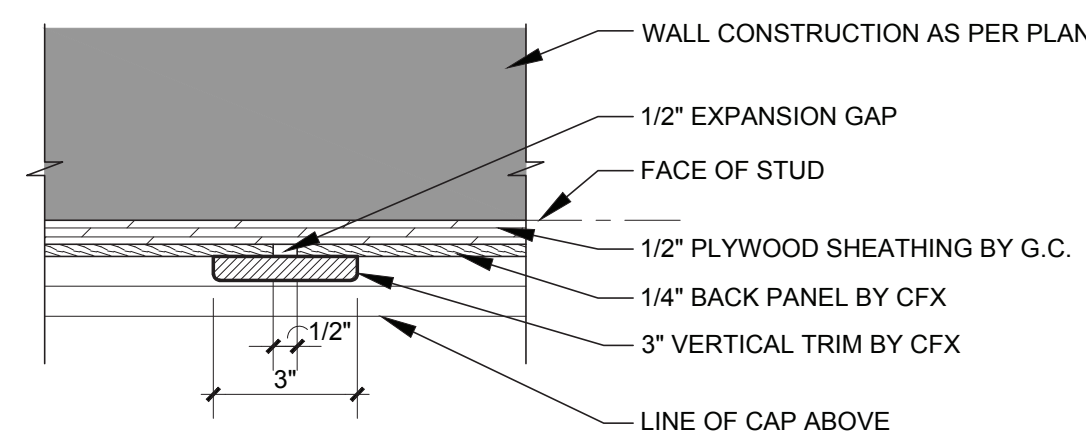
4 TYPICAL WAINSCOTTING ELEVATION  
SCALE: 1/2" = 1'-0"



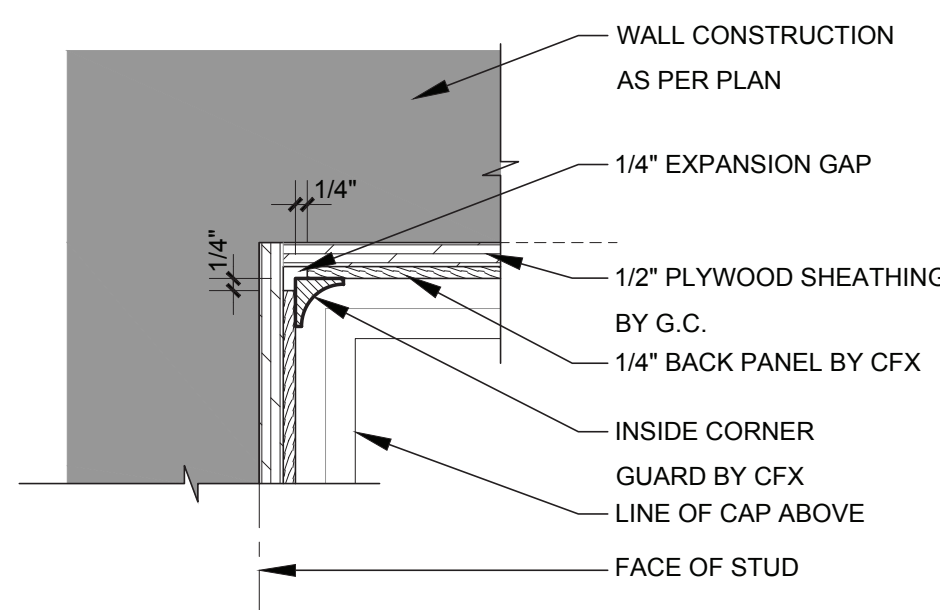
7 MESSAGING AT WAINSCOTTING  
SCALE: 3" = 1'-0"



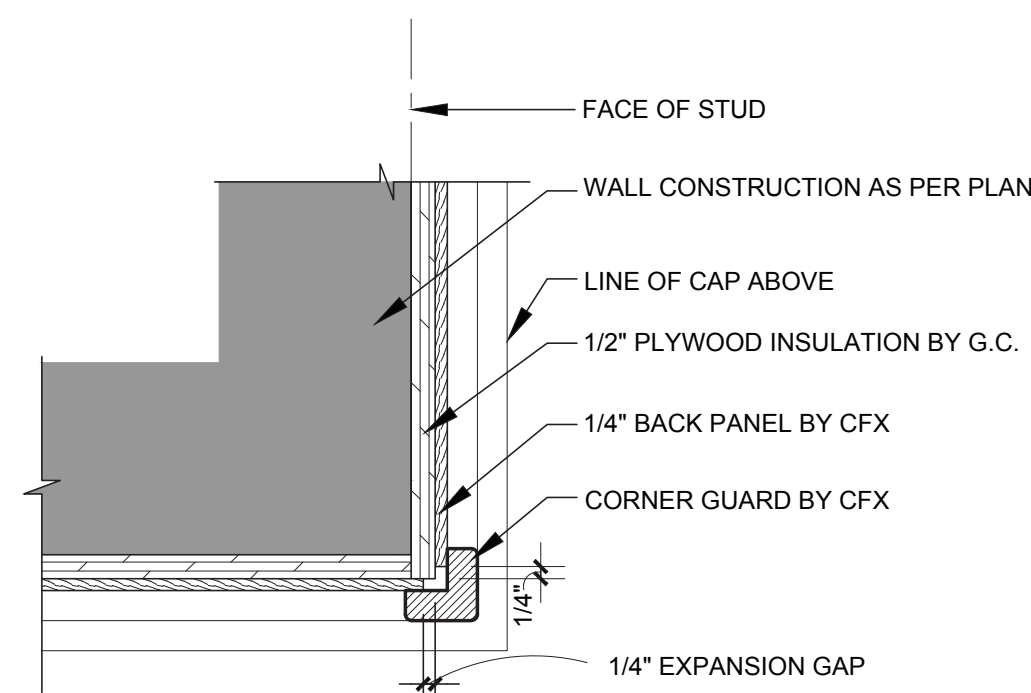
8 WAINSCOTTING CAP DETAIL  
SCALE: 3" = 1'-0"



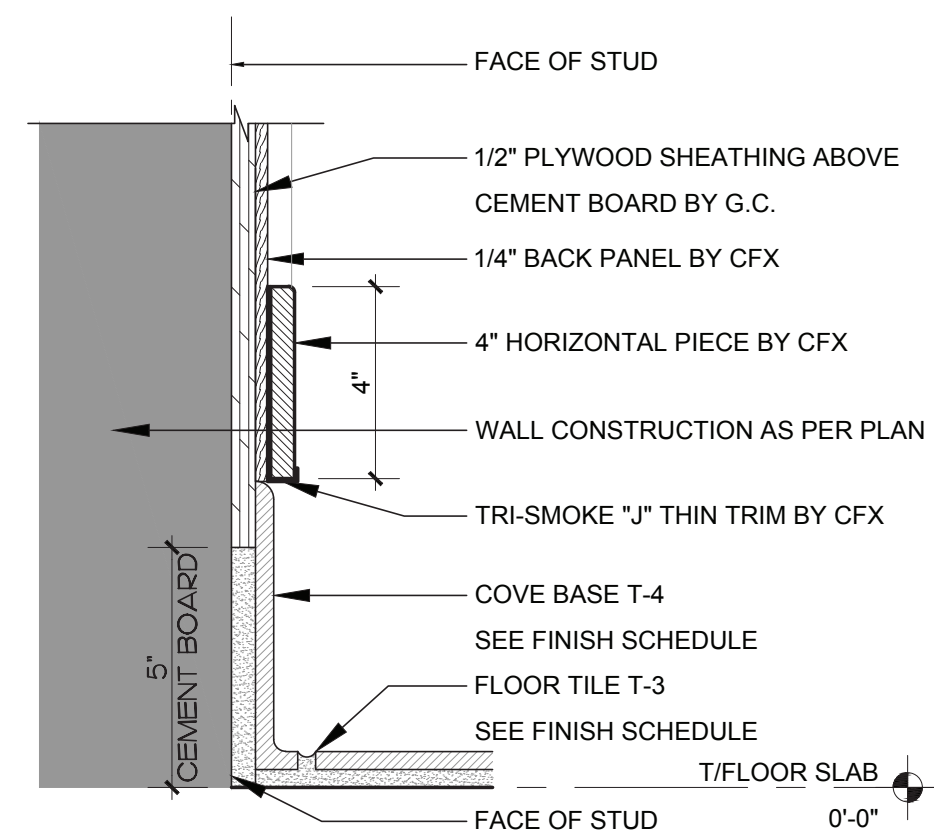
9 WAINSCOTTING TRIM DETAIL  
SCALE: 3" = 1'-0"



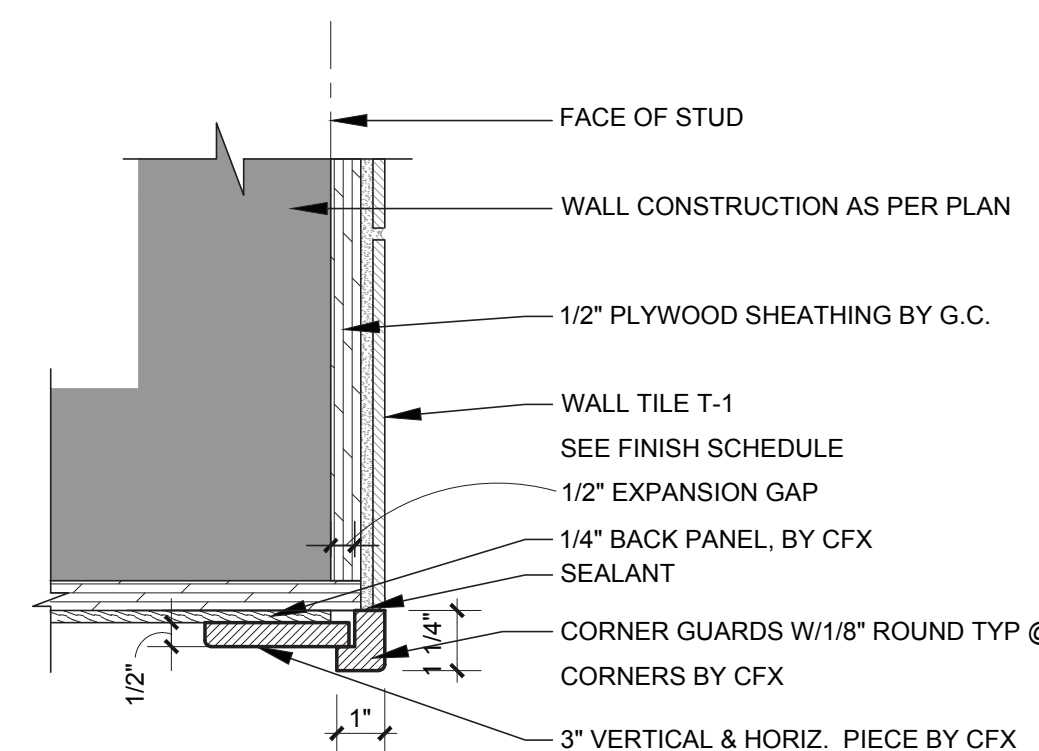
10 WAINSCOTTING CORNER DETAIL  
SCALE: 3" = 1'-0"



11 WAINSCOTTING CORNER DETAIL  
SCALE: 3" = 1'-0"



12 WAINSCOTTING BASE DETAIL  
SCALE: 3" = 1'-0"



13 WAINSCOTTING TO TILE CORNER  
SCALE: 3" = 1'-0"

GENERAL NOTE:  
WAINSCOTTING MATERIAL BY CFX/ G.C. TO ORDER FROM CFX & INSTALL:  
1. 1/4" PLYWOOD (WHITE OAK, PLAIN CUT W/ LUAN CORE)  
2. SOLID STOCK TO BE WHITE OAK (STAINED GRIFFIN LIGHT W/ GLAZE)

5 WALL SECTION AT WAINSCOTTING  
SCALE: 1" = 1'-0"

6A PLAN VIEW

6B COWS IN THE COMMUNITY  
SIGN SECTION

6 MESSAGING AT WAINSCOTTING  
SCALE: 3" = 1'-0"



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LAUREL R. MARTIN - ARCHITECT  
LIC # A-2019088772

CHICK-FIL-A  
SUMMIT FAIR  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, V8  
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NO. DATE DESCRIPTION  
1 02/19/24 PLAY AREA REMOVAL

CONSULTANT PROJECT # 2023.0467  
DATE AUGUST 2023  
DRAWN BY SN  
CHECKED BY JC

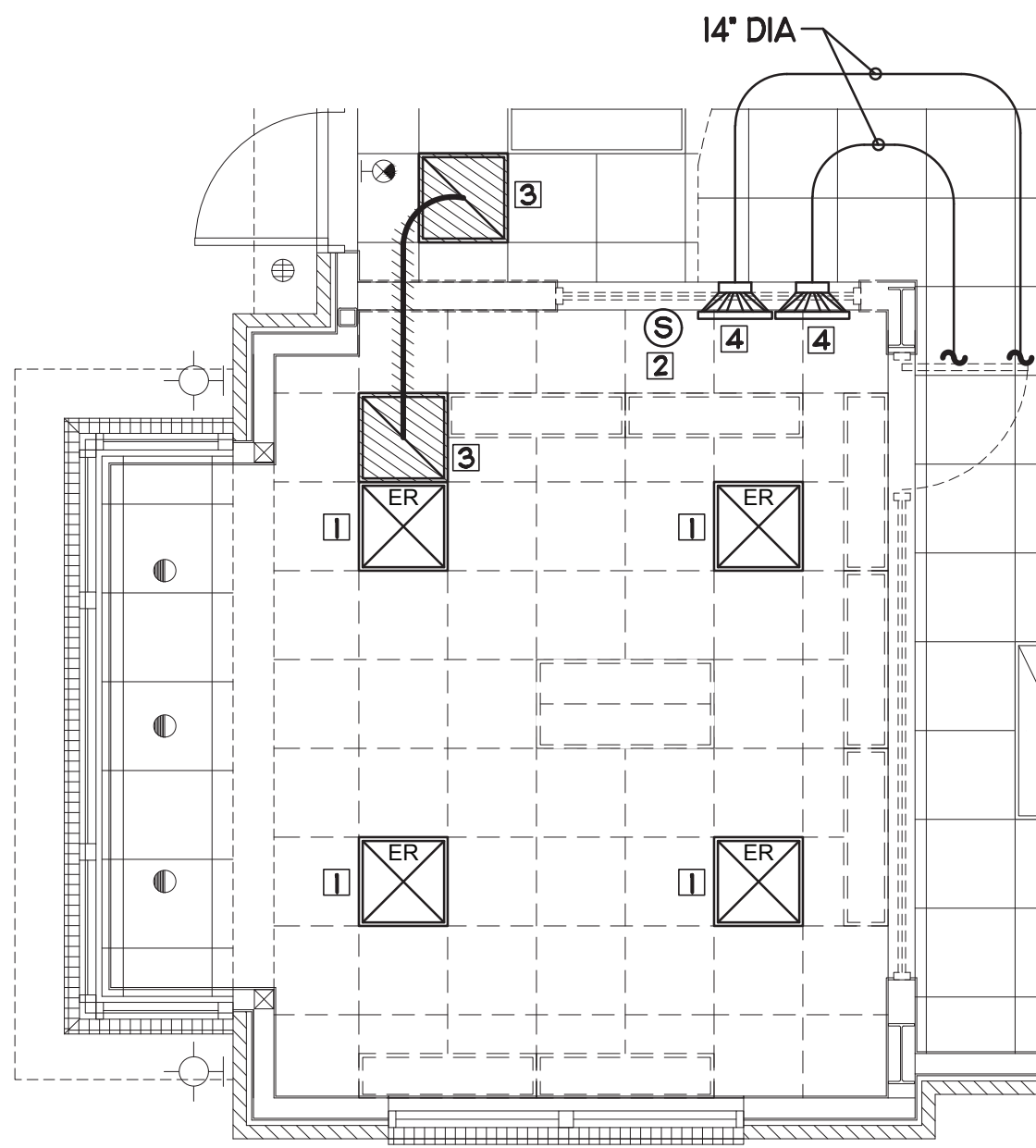
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INTERIOR DETAILS  
SHEET NUMBER

A-620

JESCHÉ - 03/07/2024 10:27:17 AM





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

#### DEMOLITION KEY NOTES

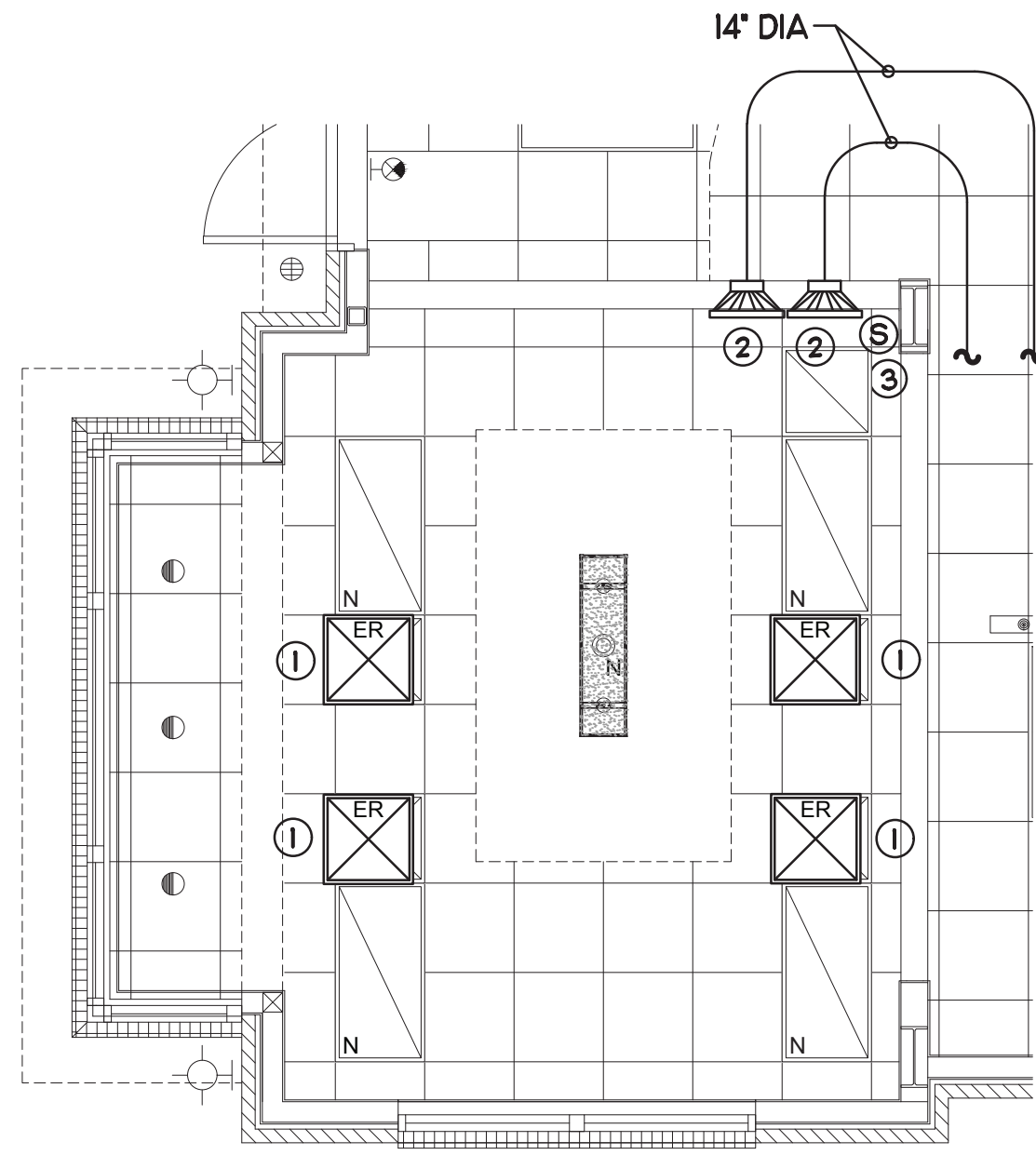
- EXISTING AIR DEVICE TO BE RELOCATED.
- EXISTING REMOTE TEMPERATURE SENSOR TO BE RELOCATED.
- DEMOLISH EXISTING TRANSFER AIR GRILLS.
- EXISTING AIR DEVICE TO REMAIN.

#### DEMOLITION LEGEND

	EXISTING EQUIPMENT, DUCT, AIR DEVICES ETC. TO REMAIN INTACT.
	EXISTING EQUIPMENT, DUCT, AIR DEVICES ETC. TO BE DEMOLISHED.

#### HVAC LEGEND

A-12-400	TYPE - NECK SIZE - CFM		EXHAUST FAN #1 (TYP.)
	SPIN-IN FITTING WITH MANUAL BALANCING DAMPER, WITHOUT SCOOP		AIR CONDITIONING UNIT #1
	SPIN-IN HARD		RETURN/EXHAUST (TYP.)
	FLEXIBLE		SUPPLY DIFFUSER, SQ FACE
	EXISTING EQUIPMENT, DUCT, & AIR DEVICE		PLAN NOTE REFERENCE
	NEW EQUIPMENT, DUCT, & AIR DEVICE		MANUAL VOLUME DAMPER
	THERMOSTAT		



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

#### MECH. KEY NOTES

- EXISTING AIR DEVICE TO BE RELOCATED.
- EXISTING AIR DEVICE TO BE REMAIN.
- RELOCATE AC#3 THERMOSTAT WALL MOUNTED AT 5'-0" AFF, ROUTE WIRING BACK TO SUNCOAST CONTROL PANEL.



**Chick-fil-A**  
Chick-fil-A

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**INTERPLAN**  
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SEAL:



STACY HENSON - P.E.  
LIC. # PE-2016036828

**CHICK-FIL-A**  
SUMMIT FAIR

690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

**FSR#02859**

BUILDING TYPE / SIZE: S08N-104-R, V6

RELEASE:

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REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
01	02/19/24	PLAY AREA REMOVAL

CONSULTANT PROJECT # 2023.0487

DATE AUGUST 2023

DRAWN BY AR

CHECKED BY DAK

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SHEET

MECHANICAL FLOOR PLAN

SHEET NUMBER

**M1.1**



E

D

C

B

A

I. SECTION C15000 - MECHANICAL SPECIFICATIONS

PART I - GENERAL

1.01 SCOPE

- A. IT IS THE RESPONSIBILITY OF CONTRACTOR TO READ ALL SPECIFICATIONS AND CONSULT ALL DRAWINGS WHICH MAY AFFECT THE INSTALLATION AND COORDINATION OF HIS WORK WITH OTHER TRADES. CONTRACTOR SHALL COORDINATE AND MAKE MINOR ADJUSTMENTS IN LOCATION OF EQUIPMENT AND MATERIALS AS NECESSARY TO SECURE COORDINATION.
- B. COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE LATEST APPROVED EDITIONS OF NFPA-96, NFPA-90A, NFPA-94, SMACNA, ASHRAE 90.1 AND ASHRAE 62.
- C. SYSTEM LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY STRUCTURAL CONDITIONS, COORDINATION WITH OTHER TRADES, COORDINATION WITH FINISHES AND OTHER CONDITIONS. STRUCTURAL SUPPORTS SHALL NOT BE CUT OR ALTERED TO ASSURE FIT OF HVAC SYSTEM. TEN FOOT CLEARANCE SHALL BE MAINTAINED BETWEEN OUTSIDE AIR INTAKES AND EXHAUST FANS AND PLUMBING VENT TERMINALS.
- D. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER FINAL PAYMENT IS APPROVED. CONTRACTOR SHALL HONOR FACTORY WARRANTIES ON ALL EQUIPMENT PROVIDED AS PART OF THIS SYSTEM.
- E. UPON COMPLETION OF PROJECT, ALL SYSTEM EQUIPMENT AND MATERIALS SHALL BE IN NEW, CLEAN CONDITION WITH ALL DAMAGE RESTORED TO CONDITION ACCEPTABLE TO THE OWNERS REPRESENTATIVE. ALL EQUIPMENT, COMPONENTS AND DUCTWORK SHALL BE INSPECTED AND THOROUGHLY CLEANED, READY FOR USE. AT COMPLETION OF JOB, ALL MISCELLANEOUS TOOLS, SCAFFOLDING, SURPLUS MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED BY CONTRACTOR.
- F. CONTRACTOR SHALL PROVIDE TWO SETS OF 2" MERV 8 OR HIGHER THROW AWAY TYPE FILTERS. A CLEAN SET SHALL BE PROVIDED PRIOR TO TEST AND BALANCE AND AGAIN PRIOR TO OPENING.

2.01 DUCTWORK (C15735)

- A. ACCEPTABLE MANUFACTURERS OF INSULATION ARE MANVILLE, OWENS CORNING OR KNAUF.
- B. ALL DUCTWORK SHALL BE SHEET METAL, UNLESS NOTED OTHERWISE (U.N.O.).
- C. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS, U.N.O.
- D. CONSTRUCTION OF DUCTWORK SHALL MEET SMACNA 1" W.C. PRESSURE CLASS STANDARD AND RECOMMENDATIONS. SMACNA SHALL BE FOLLOWED WITH RESPECT TO GAGE THICKNESS, JOINTS, REINFORCING, CONSTRUCTION, INSTALLATION AND SUPPORT FOR PRESSURE CLASS STATED. ALL TRANSVERSE JOINTS IN RECTANGULAR AND ROUND DUCT INCLUDING DUCT CONNECTION TO AIR DEVICE COLLAR SHALL BE SEALED PER SMACNA SEAL CLASS C WITH UL DUCT MASTIC SEALANT APPROVED FOR INTENDED USE. DUCT TAPE IS NOT AN ACCEPTABLE SUBSTITUTE FOR MASTIC UNLESS EQUAL TO HARDCAST FOIL-GRIP 1402 BUTYL RUBBER ADHESIVE TAPE.
- E. DUCT SHALL BE SUPPORTED AT BASE OF DUCT DROPS. CURB DUCT RAILS ARE NOT INTENDED TO AND SHALL NOT SUPPORT THE WEIGHT OF THE DUCT.
- F. ALL DUCT INSULATION SHALL MEET MINIMUM R-VALUE REQUIRED BY ASHRAE 90.1 LATEST EDITION. ALL DUCT WRAP SHALL BE MINIMUM 2" THICK, 3/4 PCF AND 5.6 R-VALUE INSTALLED WITH EITHER A VAPOR BARRIER WITH MAXIMUM PERMEANCE 0.05 OR A MINIMUM 2 MIL ALUMINUM REINFORCED FOIL/KRAFT FACING.
- G. ALL DUCT DROPS FROM THE ROOFTOP UNITS SHALL BE EXTERNALLY INSULATED.
- H. SUPPLY AND RETURN AIR DUCTWORK SERVING ALL AREAS SHALL BE EXTERNALLY INSULATED.
- I. ALL AIR CONVEYANCE COMPONENTS SUCH AS, BUT NOT LIMITED TO DUCT, DUCT PLENUMS, GRILLES/DIFFUSERS, BACK PANS, AND BOOTS SHALL BE INSULATED. INSULATION TYPE IS COVERED ELSEWHERE IN THIS SPECIFICATION.
- J. RESTROOM RECTANGULAR EXHAUST AIR DUCTWORK SHALL BE LINED WITH 1" THICK, 1/2 PCF INSULATION.

- K. TRUNK DUCTS SHALL BE ISOLATED FROM UNIT VIBRATION WITH THE USE OF NFPA AND UL APPROVED FLEXIBLE CONNECTORS INSTALLED AT THE TOP OF BOTH SUPPLY AND RETURN DROPS.
- L. INSULATED FLEXIBLE DUCT MAY BE UTILIZED FOR RUNOUTS TO GRILLES AND DIFFUSERS ONLY IN THE HORIZONTAL POSITION AND IN MAXIMUM LENGTHS OF 4'-0", NO EXCEPTIONS. SEE TAKE-OFF DETAIL ON DRAWING M3.I.
- M. CONSTRUCTION OF FLEXIBLE DUCTWORK SHALL INCLUDE SPIRAL METAL HELIX BONDED TO A POLYESTER CORE, FIBERGLASS INSULATION WITH POLYETHYLENE OR MYLAR VAPOR BARRIER. ALL COMPONENTS SHALL HAVE APPROPRIATE UL APPROVAL AND SHALL BE EQUIVALENT TO THERMAFLEX MKE.
- N. FLEXIBLE DUCT SHALL BE INSTALLED PER THE "ADC FLEXIBLE DUCT PERFORMANCE AND INSTALLATION STANDARDS, 4TH ED" USING FOIL TAPE AND DRAWBAND ON THE INNER CORE AND TAPE OR DRAWBAND ON THE OUTER JACKET.
- O. DUCT TAPE SHALL BE EQUAL TO FASSON 181-B FX, 2-1/2" WIDE.
- P. SINGLE THICKNESS TURNING VANES SHALL BE INSTALLED AT 90 DEGREE TURNS IN SUPPLY DUCTWORK WHERE ANY ONE DIMENSION IS GREATER THAN 12".
- Q. RADIUSED ELBOWS MAY BE SUBSTITUTED FOR 90 DEGREE ELBOWS AT THE DISCRETION OF THE CONTRACTOR. CENTERLINE RADIUS EQUAL TO, R+W PER FIGURE NO. 2-2 IN SMACNA HVAC DUCT CONSTRUCTION STANDARDS.
- R. EXTERNAL INSULATION ON BOTTOM OF DUCTS 24" OR WIDER SHALL BE SUPPORTED WITH STICK PINS ON 16" CENTERS. STICK PIN WASHERS SHALL BE COVERED WITH DUCT TAPE OR MASTIC.

PART III - EXECUTION

3.01 SCOPE

- A. FURNISH AND INSTALL SYSTEM IN ACCORDANCE WITH REFERENCED STANDARDS, APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON DRAWINGS.
- B. OWNER SHALL TEST AND BALANCE MECHANICAL SYSTEM IN ACCORDANCE WITH NC1 OR AABC STANDARDS TO ASSURE CONFORMANCE WITH DESIGN. G.C. WILL MAKE MECHANICAL CONTRACTOR AVAILABLE DURING TEST AND BALANCE TO ASSIST TESTING AGENCY AND TO MAKE CORRECTIONS IMMEDIATELY NECESSARY. CONTRACTOR SHALL CORRECT ITEMS ON WRITTEN TEST AND BALANCE REPORT.
- C. CONTRACTOR SHALL INSTRUCT THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT THROUGH DEMONSTRATION AND EXPLANATION OF OPERATING & MAINTENANCE MANUALS.
- D. CONTRACTOR SHALL PROVIDE A "SAMPLE MAINTENANCE PROPOSAL" TO THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT.
- E. CONTRACTOR SHALL COMPLETE A/C EQUIPMENT STARTUP DOCUMENTATION PROVIDED BY OWNER.

NATIONAL ACCOUNTS

1. PRICE AIR DEVICES - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DEVICES DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-HO10 FOR PRICING AND AVAILABILITY. AIR DEVICES NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
2. AIR DOORS - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DOORS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-HO10 FOR PRICING AND AVAILABILITY. AIR DOORS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	LOCATION	NECK SIZE	FACE SIZE	FRAME TYPE	REMARKS
A	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING AREA KITCHEN TEAM MEMBER		24X24	LAY-IN	I2
NOTES	• MECHANICAL CONTRACTOR SHALL PURCHASE THE AIR DEVICES DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-HO10, FOR PRICING AND AVAILABILITY. AIR DEVICES NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.					
REMARKS	1. STANDARD OFF WHITE FINISH. 2. FACTORY INSULATED R-6 BACKPAN.					

FIELD VERIFY ALL CONDITIONS

NOTE: AS NOTED IN THE SPECIFICATIONS, ALL WIRING LAYOUTS, LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATION OF CONDUITS, DUCTS, OR PIPING, AND START OF INSTALLATION OF SAME (INCLUDING SPRINKLER PIPING WHEN PRESENT ON JOB). ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.



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Atlanta, Georgia  
30349-2998



ARCH COA #2015008774  
ENG COA #2005026904

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SEAL:



STACY HENSON - P.E.  
LIC. # PE-2016036828

CHICK-FIL-A  
SUMMIT FAIR

690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, V6

RELEASE:

PRINTED FOR

PERMIT

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
01	02/19/24	PLAY AREA REMOVAL

CONSULTANT PROJECT # 2023 0467

DATE AUGUST 2023

DRAWN BY AR

CHECKED BY DAK

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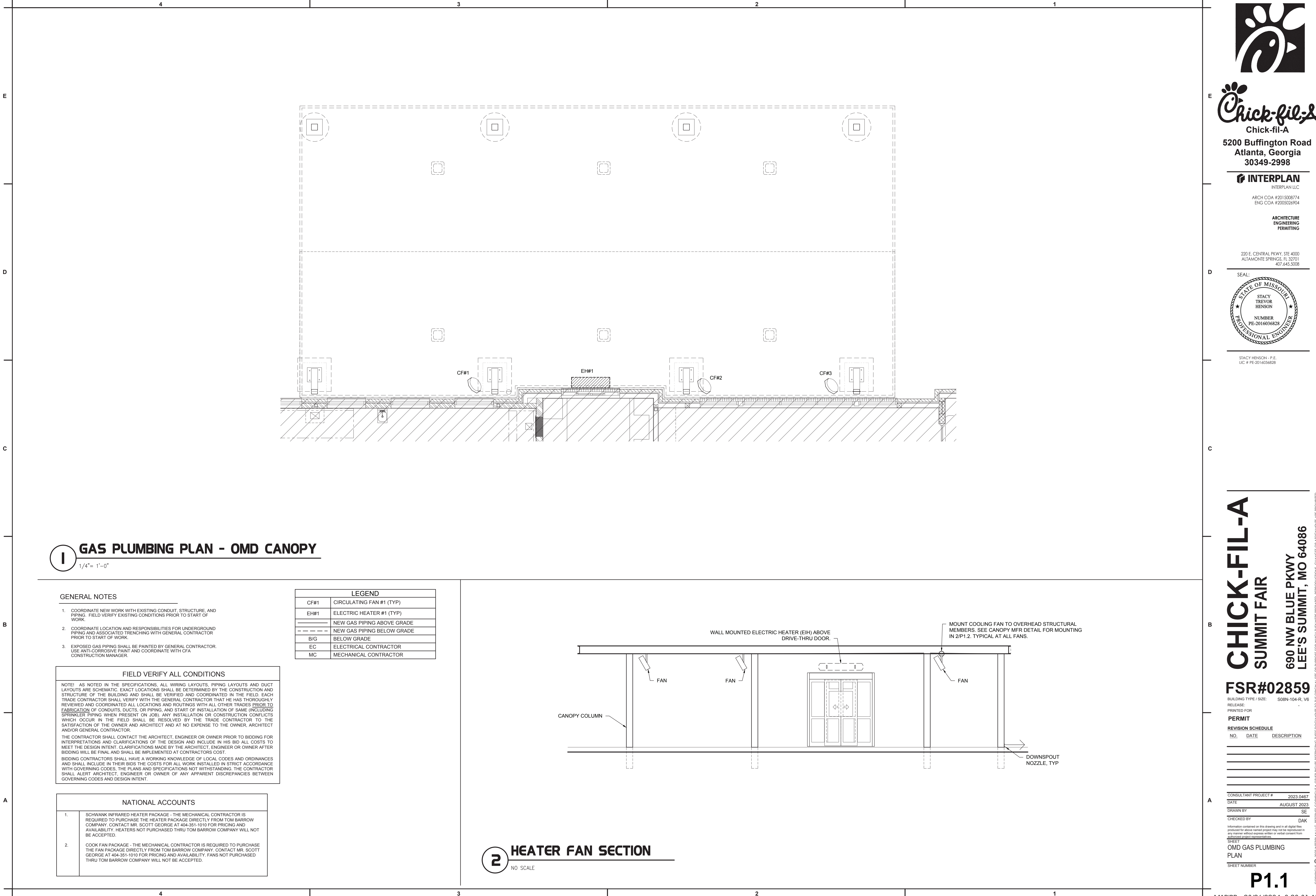
SHEET

MECH. SPECIFICATIONS & SCHEDULES

SHEET NUMBER







**I GAS PLUMBING PLAN - OMD CANOPY**  
1/4" = 1'-0"

**GENERAL NOTES**

- COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
- COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.
- EXPOSED GAS PIPING SHALL BE PAINTED BY GENERAL CONTRACTOR. USE ANTI-CORROSIVE PAINT AND COORDINATE WITH CFA CONSTRUCTION MANAGER.

**FIELD VERIFY ALL CONDITIONS**

NOTE! AS NOTED IN THE SPECIFICATIONS, ALL WIRING LAYOUTS, PIPING LAYOUTS AND DUCT LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATION OF CONDUITS, DUCTS, OR PIPING, AND START OF INSTALLATION OF SAME (INCLUDING SPRINKLER PIPING WHEN PRESENT ON JOB). ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

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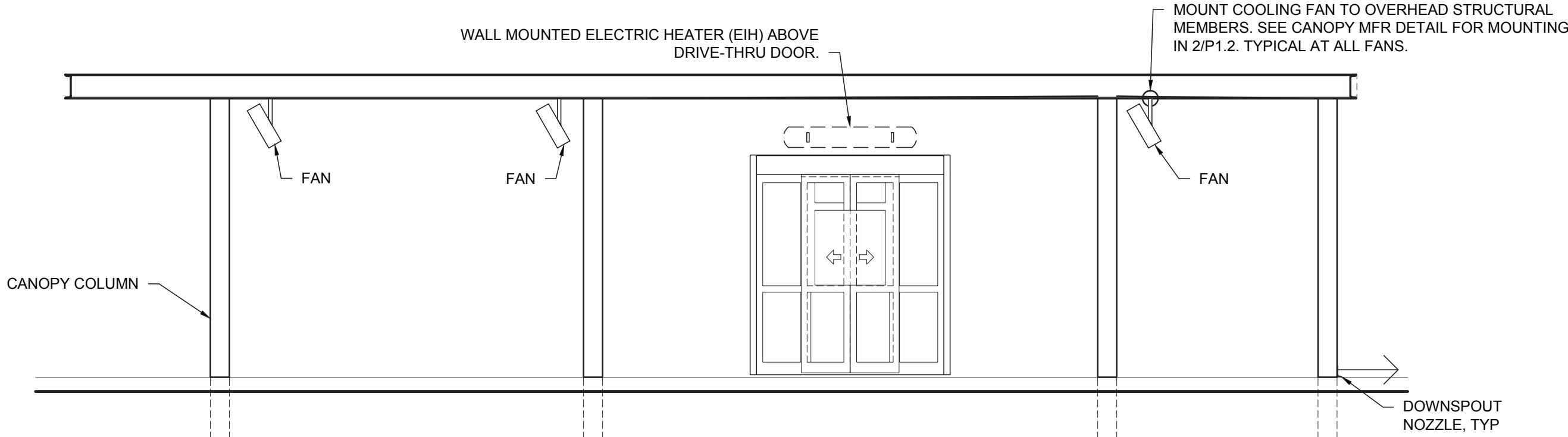
BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING, THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

**NATIONAL ACCOUNTS**

- SCHWANK INFRARED HEATER PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
- COOK FAN PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

LEGEND	
CF#1	CIRCULATING FAN #1 (TYP)
EH#1	ELECTRIC HEATER #1 (TYP)
---	NEW GAS PIPING ABOVE GRADE
- - - -	NEW GAS PIPING BELOW GRADE
B/G	BELOW GRADE
EC	ELECTRICAL CONTRACTOR
MC	MECHANICAL CONTRACTOR

**2 HEATER FAN SECTION**  
NO SCALE



**Chick-fil-A**  
Chick-fil-A  
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**CHICK-FIL-A**  
**SUMMIT FAIR**  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

**FSR#02859**

BUILDING TYPE / SIZE: S06N-104-R, V8  
RELEASE: PRINTED FOR

**PERMIT**

**REVISION SCHEDULE**

NO. DATE DESCRIPTION

CONSULTANT PROJECT # 2023.0467

DATE AUGUST 2023

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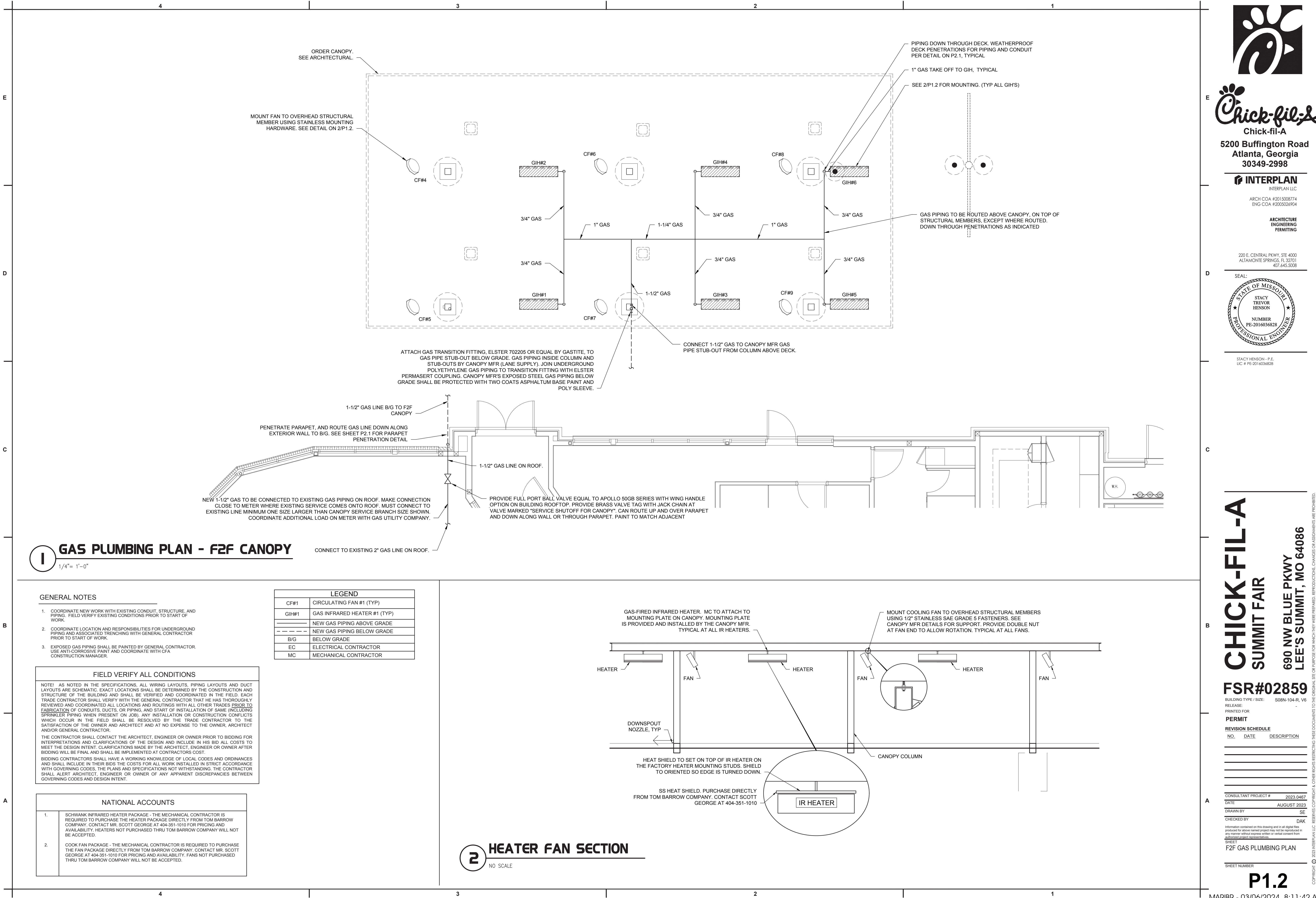
OMD GAS PLUMBING

PLAN

SHEET NUMBER

**P1.1**

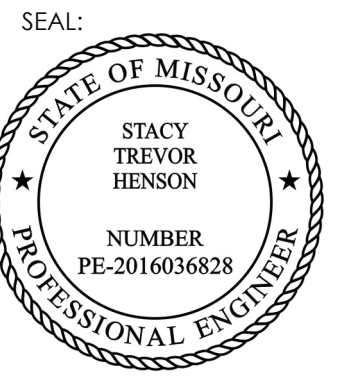




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**CHICK-FIL-A**  
**SUMMIT FAIR**  
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**FSR#02859**  
BUILDING TYPE / SIZE: S08N-104-R, V8  
RELEASE: PRINTED FOR PERMIT  
REVISION SCHEDULE  
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CONSULTANT PROJECT # 2023.0467  
DATE AUGUST 2023  
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SHEET F2F GAS PLUMBING PLAN  
SHEET NUMBER  
P1.2

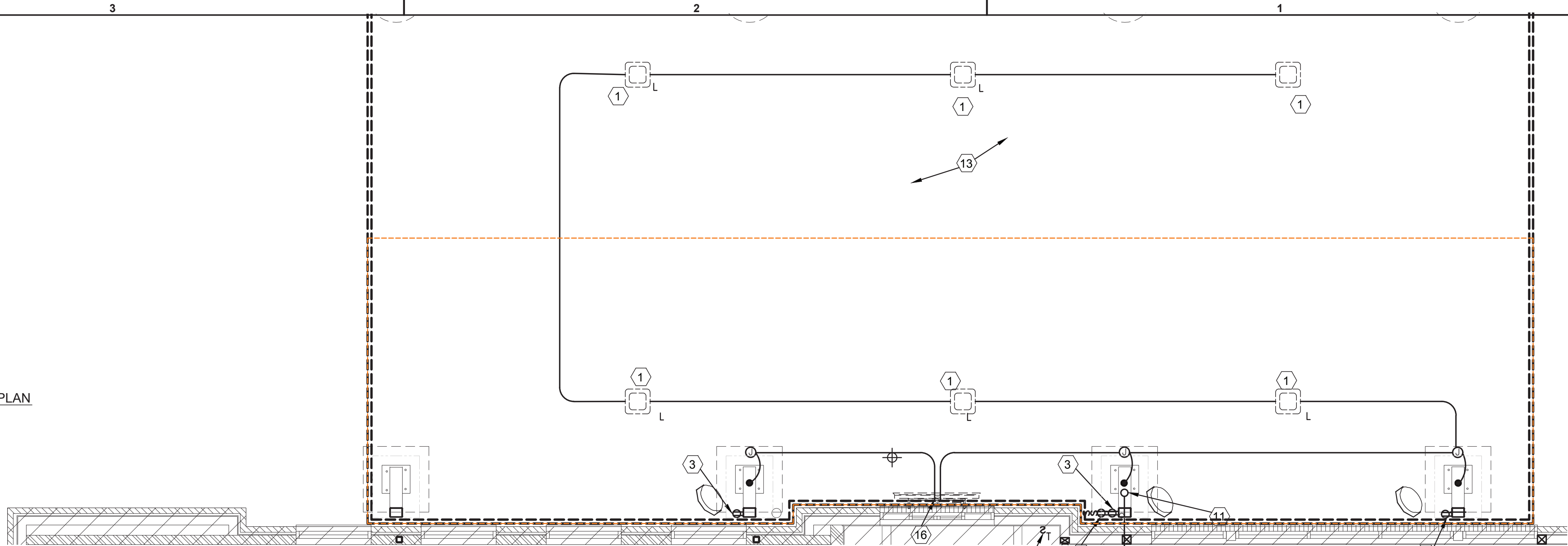






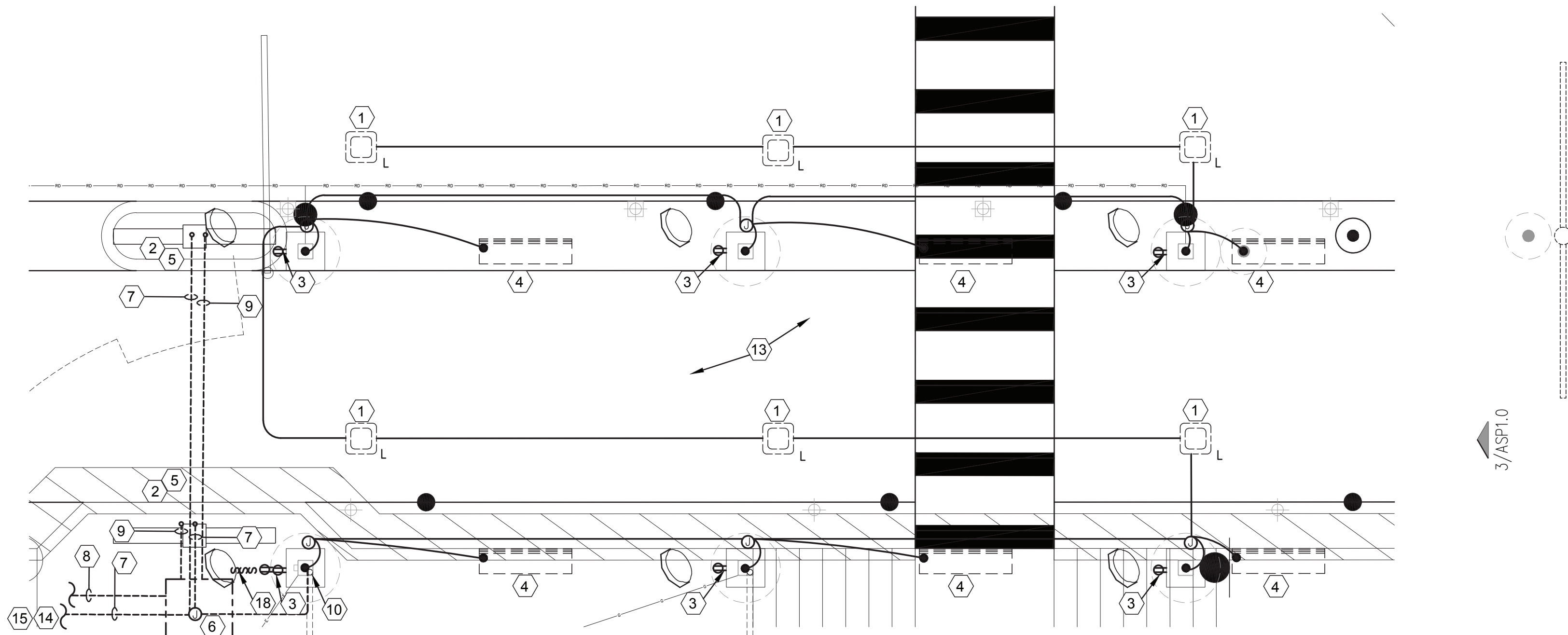
ELECTRIC INFRARED HEATER SCHEDULE - CHICK-FIL-A							
MARK	MANUFACTURER	CATALOG NUMBER	VOLTAGE/PH	WATTS	AMPS		REMARKS
H	BROMIC	BH042003	208V/1PH	6000	25		
E							

3 MEAL DELIVERY CANOPY POWER PLAN  
SCALE: 1/4" = 1'-0"



LEGEND	
---	UNDERGROUND
---	ABOVE GROUND

2 ORDER CANOPY POWER PLAN  
SCALE: 1/4" = 1'-0"



## KEYED NOTES

- CEILING LIGHT PROVIDED BY CANOPY SUPPLIER AND INSTALLED BY E.C.
- NEW OPEN/CLOSED LIGHTS ON ORDER CANOPY.
- AIR CIRCULATING FAN (WITH INTEGRAL ON-OFF SWITCH) PROVIDED BY OTHERS. PROVIDE A GFCI DUPLEX OUTLET (WITH IN-USE WP COVER PLATE) FLUSH MTD. IN CUT-OUT FOR FAN'S PLUG & CORD. LOCATE CUT-OUT AT TOP OF COLUMN ON DOWNSTREAM SIDE.
- INFRARED GAS HEATER WITH INTEGRAL ON-OFF SWITCH PROVIDED BY OTHERS.
- NEW MENUBOARD WITHOUT CANOPY.
- NEW IN-GROUND QUAZITE PULLBOX FOR MLOP DATA CABLES WITH POWER NEMA 3R JUNCTION BOX MOUNTED INSIDE THE PULLBOX.
- NEW 2" UNDERGROUND SCH40 PVC CONDUIT WITH POWER CONDUCTORS, SEE WIRING SCHEMATIC.
- NEW 2" UNDERGROUND SCH40 PVC CONDUIT FOR AUDIO SYSTEM/DETECTOR LOOP CABLES.
- NEW 1" EMPTY UNDERGROUND SCH40 PVC CONDUIT FOR AUDIO SYSTEM/DETECTOR LOOP CABLES.
- INSTALL UNDERGROUND 3" SCH40 PVC CONDUIT UP INTO THE CANOPY COLUMN WITH TYPE MC CABLE (GALVANIZED STEEL WITH PVC JACKET) RUN WITHIN FOR THE 120V POWER FOR LIGHTS AND 120 VOLT POWER FOR FANS.
- AT EXISTING BUILDINGS STUB A 3" CHASE THRU THE EXTERIOR WALL FROM THE CEILING SPACE ABOVE THE KITCHEN TO ABOVE THE CANOPY'S COLUMN FOR THE MC CABLE POWER CIRCUITS TO GO THRU THE COLUMN MOUNTED SWITCHES AND OUTLET.
- PROVIDE ONE DUPLEX GFCI (WITH IN-USE WP COVER PLATE) AND TWO 120V SINGLE-POLE SWITCHES (EACH WITH HUBBELL #RW51550 WP COVER PLATE) MOUNTED ON THE COLUMN IN FLUSH MOUNTED METAL SINGLE GANG BOXES FOR LOCAL ON-OFF CONTROL OF THE FAN AND CANOPY LIGHTS. SEE WIRING SCHEMATIC AND CANOPY COLUMN DETAILS FOR FURTHER INFORMATION. ALL SURFACE MOUNTED ITEMS AND COVER PLATES TO BE FIELD PAINTED MATTE BLACK.
- ALL CONDUIT AND BOXES SHALL BE CONCEALED FROM NORMAL VIEW; UNDERGROUND, IN COLUMNS, OR ABOVE THE CANOPY (ON THE ROOF). MC CABLE (GALVANIZED STEEL WITH PVC JACKET) TO BE USED INSIDE THE COLUMNS, BUT MUST CONVERT BACK TO IMC ABOVE THE ROOF. ALL EXPOSED ELECTRICAL BOXES TO BE NEMA 3R CAST-METAL.

- PROVIDE ONE (1) 20A/1P CIRCUIT FOR LIGHTS AND TWO (2) 20A/1P CIRCUIT FOR FANS. CONNECT TO NEXT AVAILABLE SPARE/SPACE IN LIGHTING PANEL FOR EACH. CONTRACTOR SHALL PROVIDE APPROPRIATE BREAKER SIZE AND LOAD. LIGHTING LOAD ON CIRCUIT NOT TO EXCEED 1.8 KW. FIELD VERIFY NUMBER OF SPARES/SPACES PRIOR TO BID. REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO CONSTRUCTION.
- PROVIDE ONE (1) #8 CU EQUIPMENT GROUND TO BE BONDED TO CANOPY STRUCTURE PER MANUFACTURER'S RECOMMENDATIONS.
- NEW CANOPY ELECTRIC HEATER.
- TIMER SWITCH FOR OUTSIDE ELECTRIC HEATER. REFER TO 3/E1.2 FOR DETAILS AND WIRING SCHEMATIC
- PROVIDE ONE DUPLEX GFCI (WITH IN-USE WP COVER PLATE) AND THREE 120V SINGLE-POLE SWITCHES (EACH WITH HUBBELL #RW51550 WP COVER PLATE) MOUNTED ON THE COLUMN IN FLUSH MOUNTED METAL SINGLE GANG BOXES FOR LOCAL ON-OFF CONTROL OF THE FAN AND CANOPY LIGHTS. SEE WIRING SCHEMATIC AND CANOPY COLUMN DETAILS FOR FURTHER INFORMATION. ALL SURFACE MOUNTED ITEMS AND COVER PLATES TO BE FIELD PAINTED MATTE BLACK.
- PROVIDE ONE (1) 20A/1P CIRCUIT FOR LIGHTS AND ONE (1) 20A/1P CIRCUIT FOR FANS CONNECT TO NEXT AVAILABLE SPARE/SPACE IN LIGHTING PANEL FOR EACH. PROVIDE ONE (1) 40A/2P CIRCUIT FOR ELECTRIC HEATER CONNECT TO EXISTING PANEL C. CONTRACTOR SHALL PROVIDE APPROPRIATE BREAKER SIZE AND LOAD. LIGHTING LOAD ON CIRCUIT NOT TO EXCEED 1.8 KW. FIELD VERIFY NUMBER OF SPARES/SPACES PRIOR TO BID. REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO CONSTRUCTION.

NOTES: FOR ALL CONDUITS: REFER TO PLANS FOR OTHER CONDUITS. REFER TO VENDOR DRAWINGS FOR CONDUIT AND WIRING REQUIREMENTS FOR LOW VOLTAGE SYSTEMS AND CONTROL WIRING.

MULTIPLE 1PH CIRCUITS MAY OCCUPY THE SAME CONDUIT IN ACCORDANCE WITH THE NEC. MAXIMUM OF THREE AND OF DIFFERENT PHASES.

LOW VOLTAGE AND CONTROL WIRING SHALL BE IN SEPARATE CONDUIT FROM BUILDING TO CANOPY.

### FIELD VERIFY ALL CONDITIONS

NOTE! AS NOTED IN THE SPECIFICATIONS, ALL WIRING LAYOUTS, AND LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATION OF CONDUITS, DUCTS, OR PIPING, AND START OF INSTALLATION OF SAME (INCLUDING SPRINKLER PIPING WHEN PRESENT ON JOB). ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

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BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES. THE PLANS AND SPECIFICATIONS NOT WITHSTANDING, THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

### ALTERNATE FOR EXISTING CONDITIONS:

IF THE IN-GROUND PULLBOX IS NOT EXISTING OR IS NOT ACCESSIBLE OR USABLE, THEN THE CONTRACTOR MAY PROVIDE THREE 1" UNDERGROUND CONDUIT WITH CONDUCTORS FROM THE EXISTING BUILDING TO THE DESIGNATED CANOPY COLUMN. EACH CONDUIT SHALL TERMINATE AT THE COLUMNS HANDHOLE LOCATION INSIDE THE COLUMN WITH A COUPLING TO TRANSITION FROM THE PVC CONDUIT TO FLEXIBLE "LIQUID-TITE" CONDUIT AND EXTEND TO THE BACKBOXES FOR THE SWITCHES AND OUTLET.

LIGHTING FIXTURE (LUMINAIRE) SCHEDULE - CHICK-FIL-A							
MARK	MANUFACTURER	CATALOG NUMBER	NO. LAMPS/TYPE	STL LAMP NO.	WATTS	VOLTS	MOUNTING
L	LSI INDUSTRIES	LSI CRUS-SC-LED-LW-30-CW-UE-WHT	LED	-	74	120	CANOPY DECK
NOTES: 1. LUMINAIRES UTILIZING DOUBLE-ENDED LAMPS AND CONTAIN BALLASTS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS EITHER INTERNAL OR EXTERNAL TO EACH LUMINAIRE PER NEC 410.130(G).							

COMPARISON LOAD SUMMARY			
EXISTING LOAD BASED ON DATA RECEIVED			913.62 AMPS
	QTY.	WATTS	AMPS
-DRIVE THRU CANOPY LIGHTS	6	X 74	1.2 AMPS
-MEAL DELIVERY CANOPY LIGHTS	6	X 74	1.2 AMPS
-DRIVE THRU CANOPY FANS	6	X 264	4.4 AMPS
-MEAL DELIVERY CANOPY FANS	3	X 264	2.2 AMPS
-TOTAL LOAD	1	X 6000	9.1 AMPS
EXISTING PANEL C LOAD			103.3 AMPS
-MEAL DELIVERY HEATER	1	X 6000	16.7 AMPS
EXISTING PANEL C NEW LOAD			120.0 AMPS
EXISTING PANEL C IS FED FROM A 200A BREAKER IN MDP			
NEW CONNECTED AMPS			1042.6 AMPS
EXISTING SERVICE SIZE IS 1000 AMPS BASED ON EXISTING DATA RECEIVED			



Chick-fil-A  
5200 Buffington Road  
Atlanta, Georgia  
30349-2998

INTERPLAN  
INTERPLAN LLC  
ARCH COA #2015008774  
ENG COA #2003026904

ARCHITECTURE  
ENGINEERING  
PERMITTING

220 E. CENTRAL PKWY, STE 4000  
ALTAMONTE SPRINGS, FL 32701  
407.645.5008



STACY HENSON - P.E.  
LIC. # PE-2016036828

CHICK-FIL-A  
SUMMIT FAIR  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

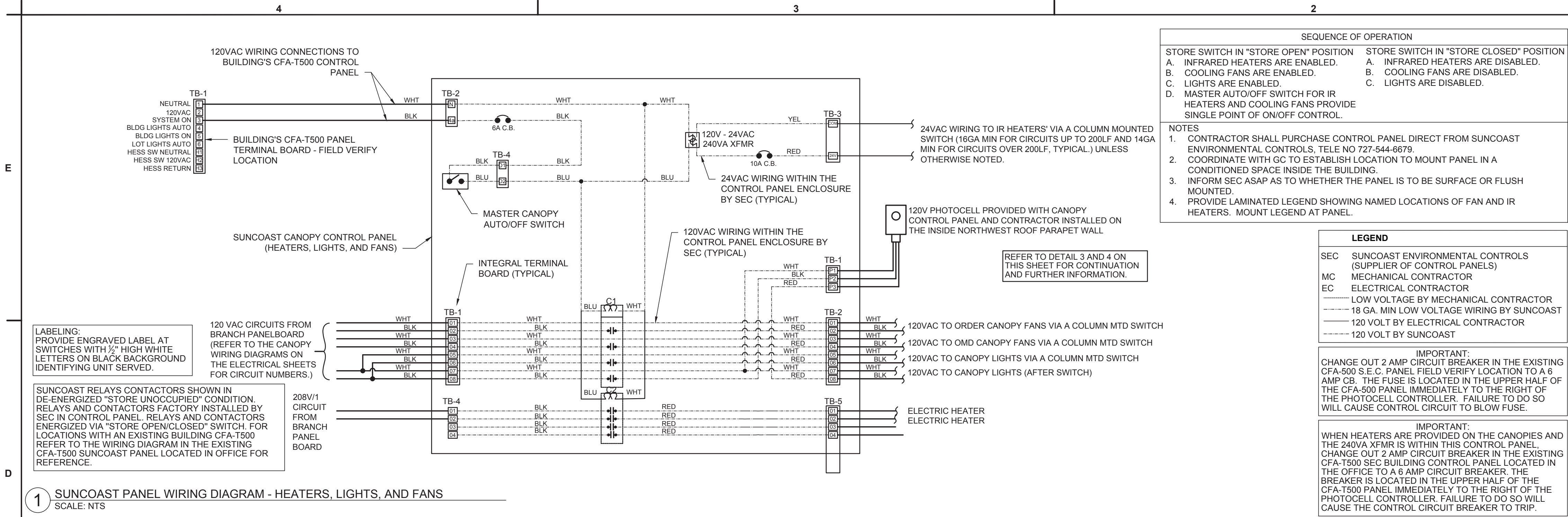
FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, V8  
RELEASE:  
PERMIT  
REVISION SCHEDULE  
NO. DATE DESCRIPTION  
CONSULTANT PROJECT # 2023.0467  
DATE AUGUST 2023  
DRAWN BY RZ  
CHECKED BY MI

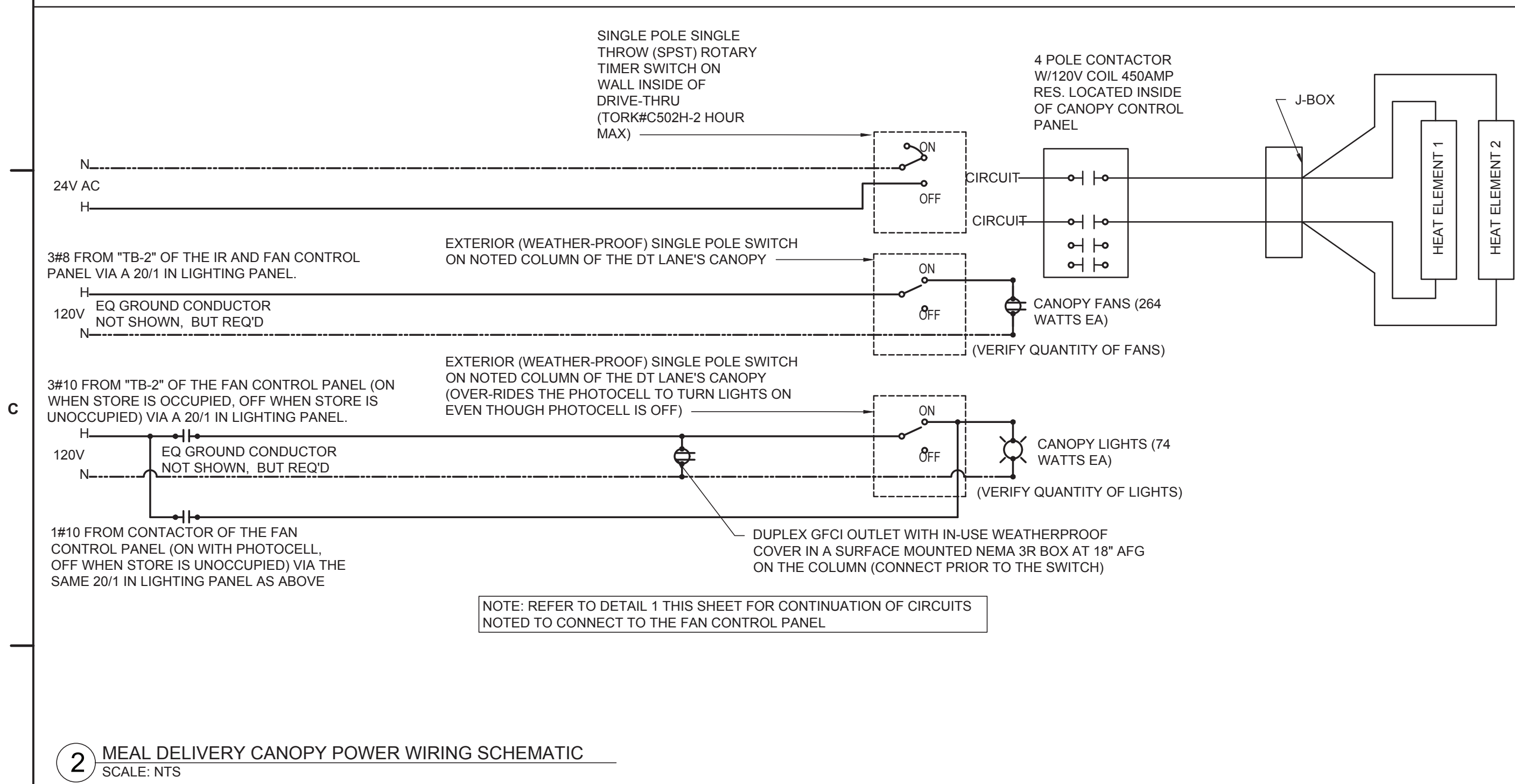
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SHEET  
CANOPY POWER & LIGHTING PLAN  
SHEET NUMBER

E1.1

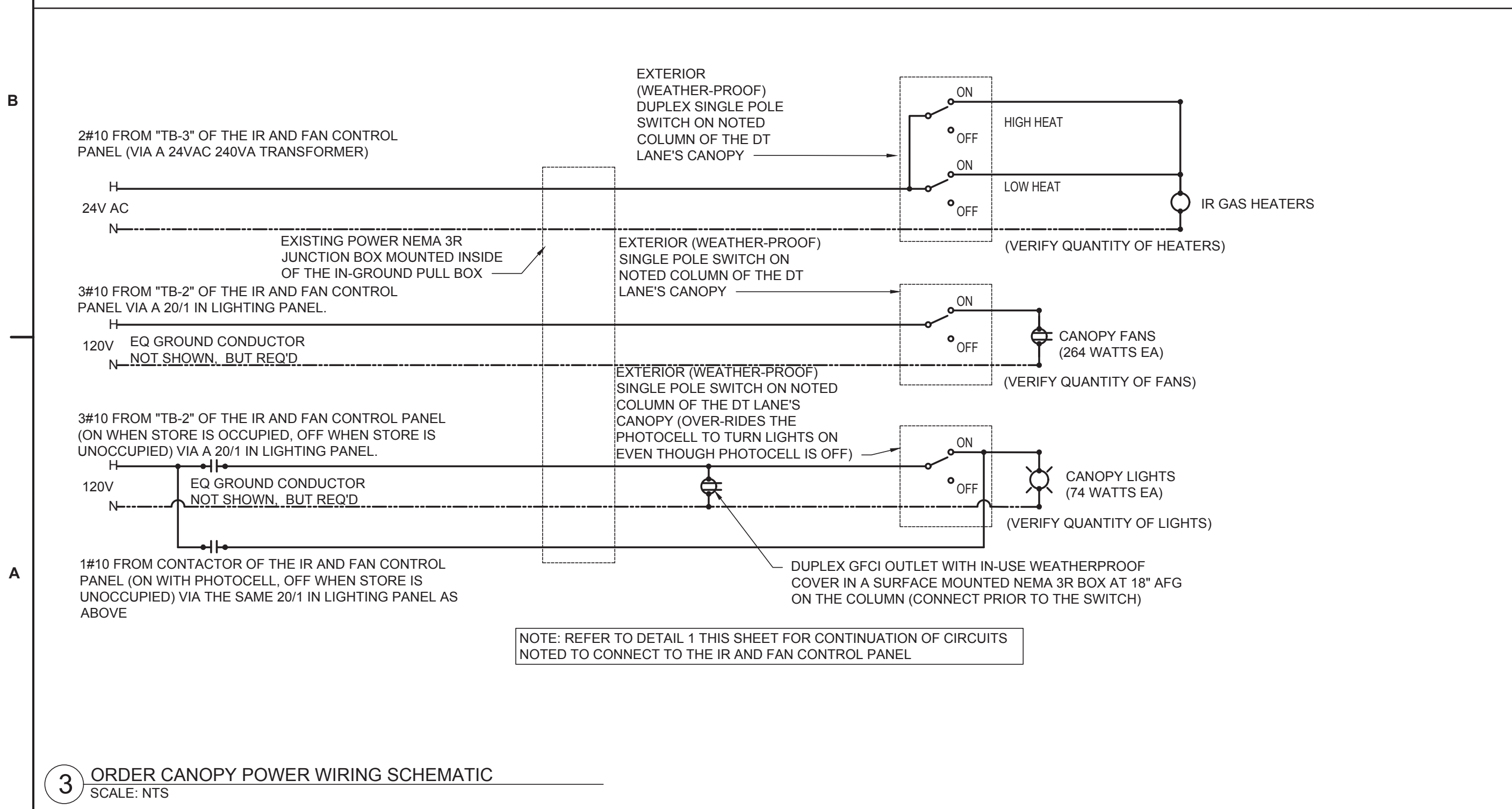




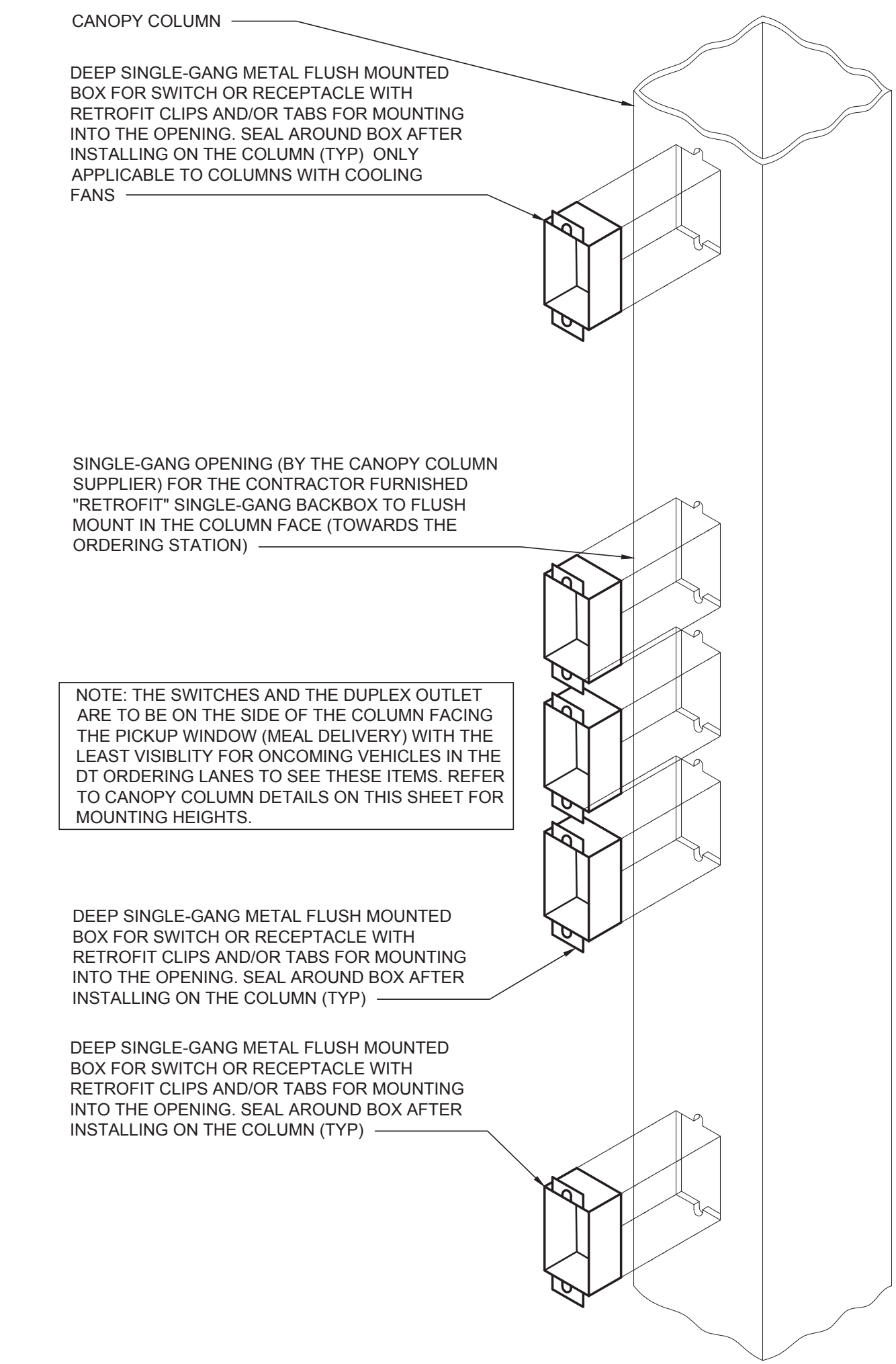
1 SUNCOAST PANEL WIRING DIAGRAM - HEATERS, LIGHTS, AND FANS



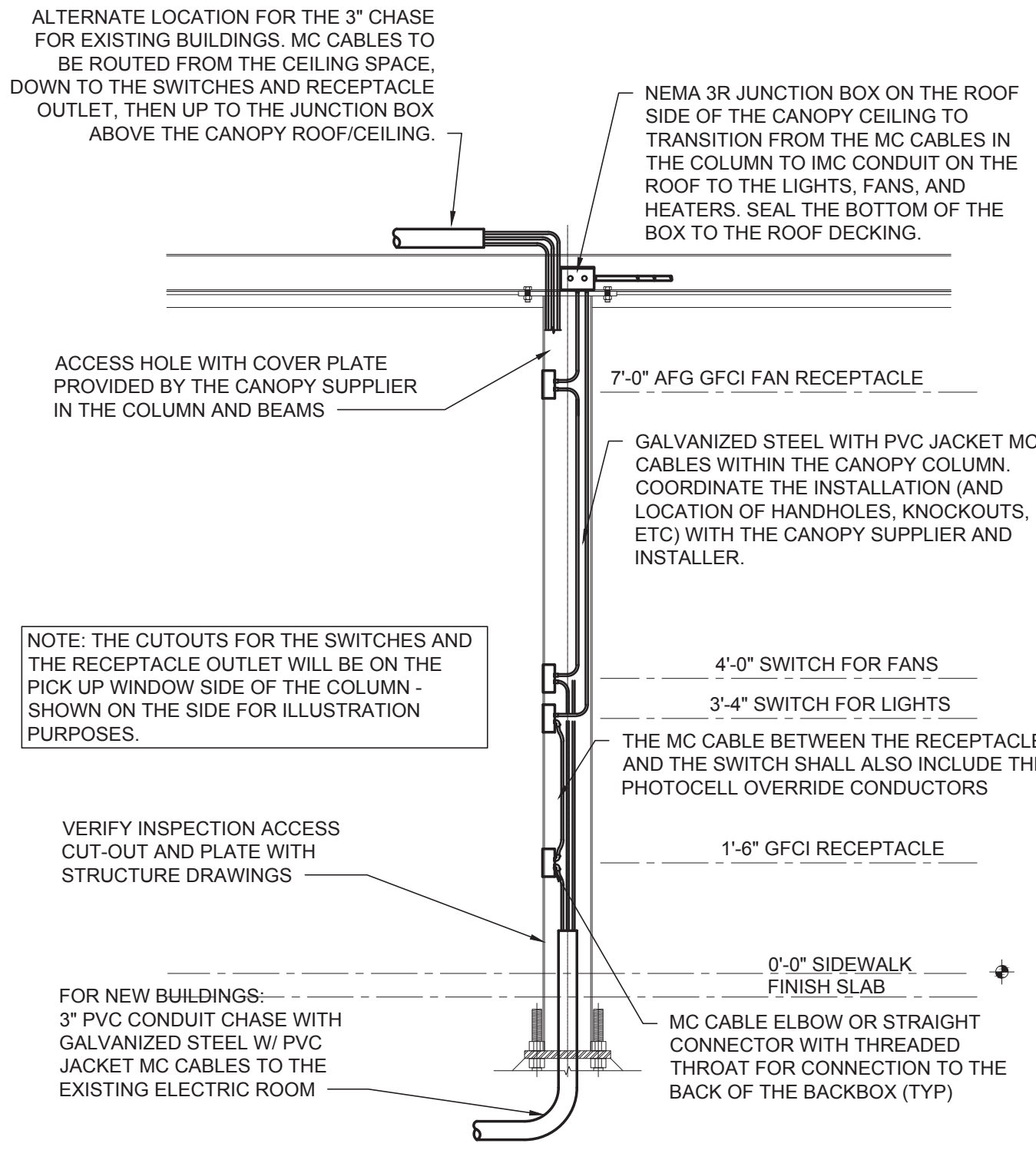
2 MEAL DELIVERY CANOPY POWER WIRING SCHEMATIC



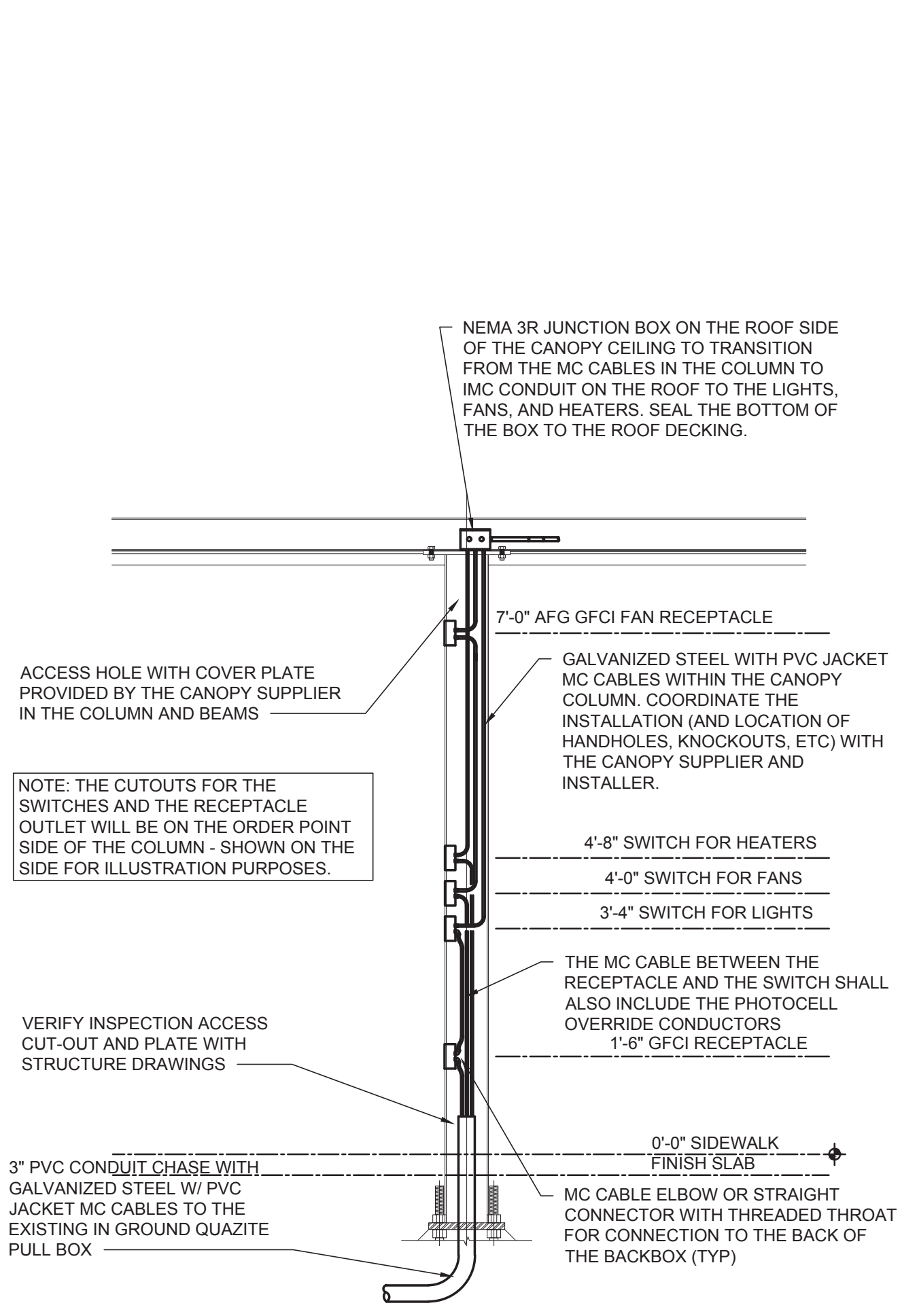
3 ORDER CANOPY POWER WIRING SCHEMATIC



4 CANOPY COLUMN ISOMETRIC



5 SECTION - MEAL DELIVERY CANOPY COLUMN



6 SECTION - ORDER CANOPY COLUMN



Chick-fil-A

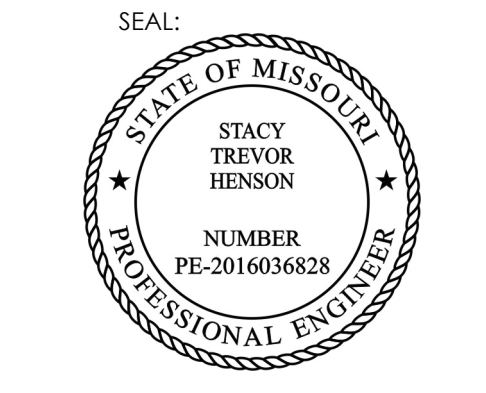
5200 Buffington Road  
Atlanta, Georgia  
30349-2998

INTERPLAN  
INTERPLAN LLC

ARCH COA #2015008774  
ENG COA #2003026904

ARCHITECTURE  
ENGINEERING  
PERMITTING

220 E. CENTRAL PKWY, STE 4000  
ALTAMONTE SPRINGS, FL 32701  
407.645.5008



STACY HENSON - P.E.  
LIC. # PE-2016036828

CHICK-FIL-A  
SUMMIT FAIR

690 NW BLUE PKWY  
LEE'S SUMMIT, MO 64086

FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, V8  
RELEASE: PRINTED FOR  
PERMIT

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2023.0467  
DATE AUGUST 2023  
DRAWN BY RZ  
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SHEET CANOPY ELEC DETAILS

SHEET NUMBER

E1.2

MARIBR - 03/05/2024 1:30:15 PM














**Chick-fil-A**  
5200 Buffington Road  
Atlanta, Georgia 30349

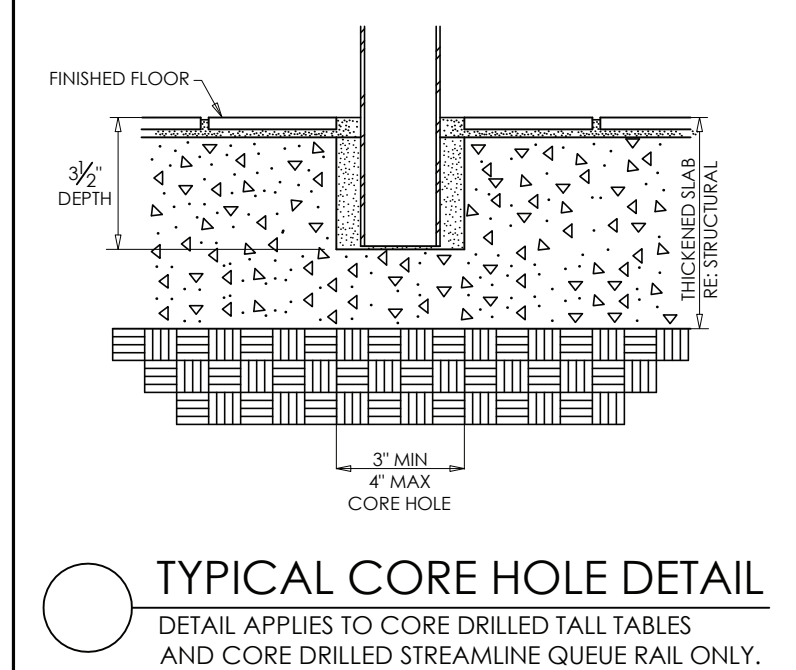
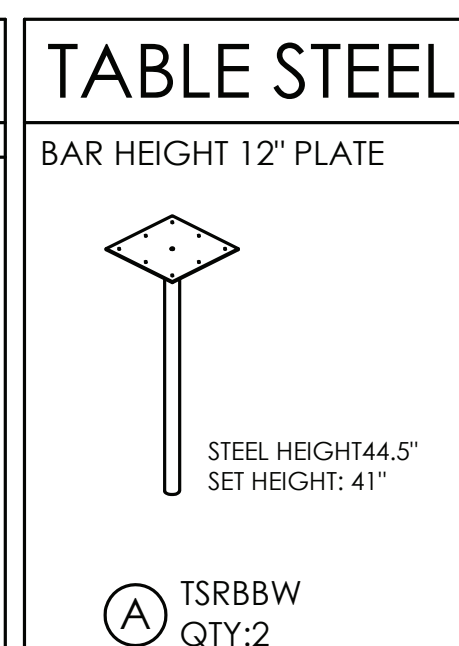
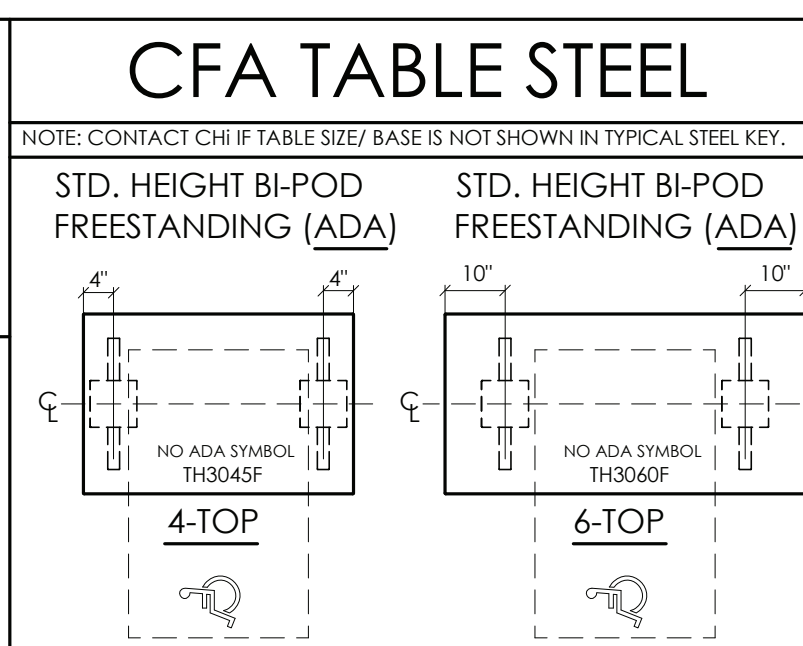
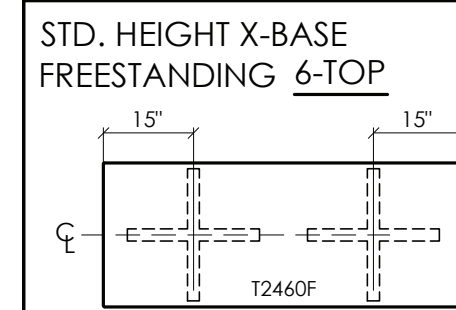
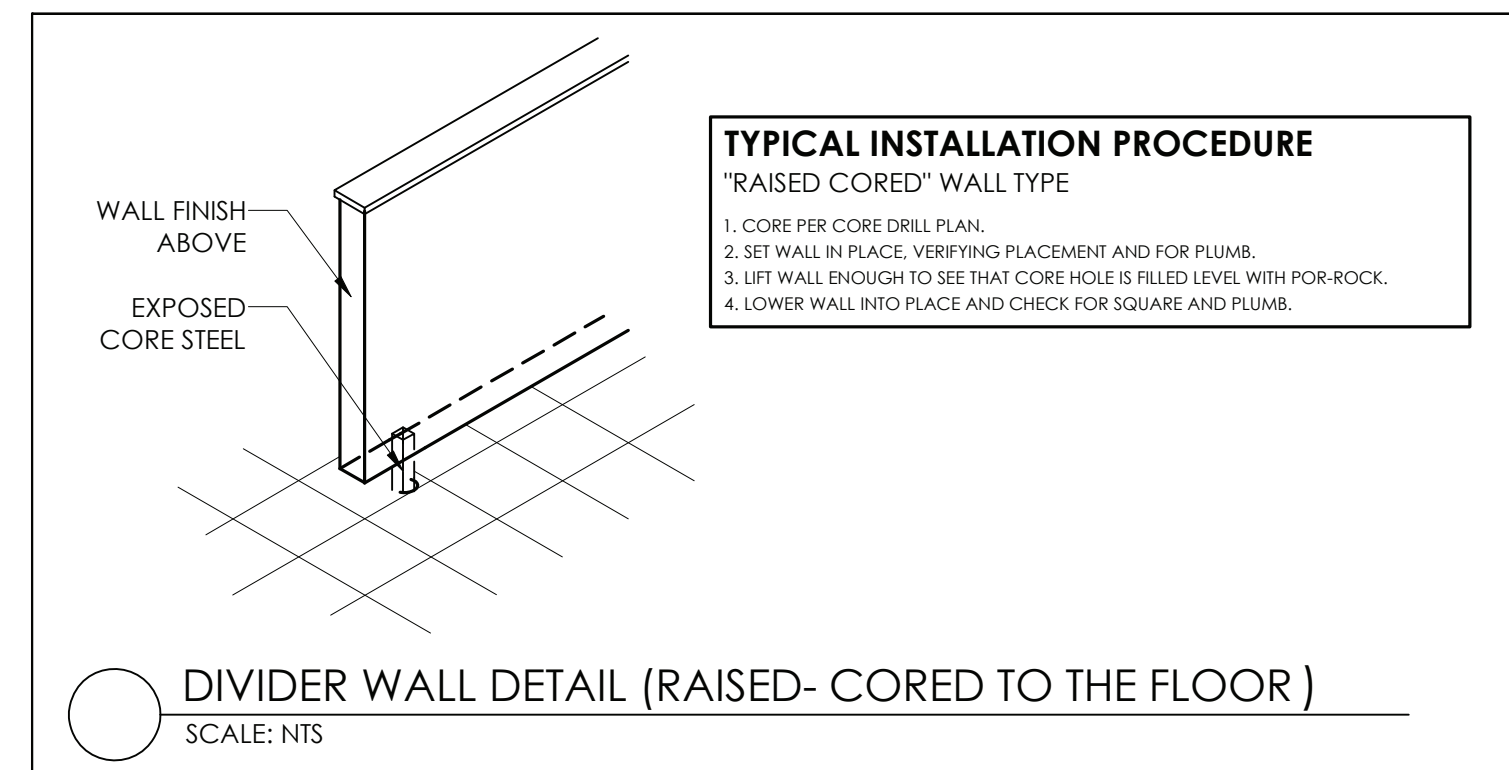
**CHICK-FIL-A**  
**LEES SUMMIT**  
**690 NW BLUE PARKWAY**  
**SUMMIT, MO. 64086**

BUILDING TYPE / SIZE: S08N - SML-R  
RELEASE: PLAY CONV.

CONSULTANT PROJECT #	####
PRINTED FOR	PERMIT
DATE	02/09/2024
DRAWN BY	RK

SHEET  
CORE DRILL PLAN

**F-211**







MATERIALS & FINISH SCHEDULE (FURNITURE & DECOR) - Always Fresh 19 Palette *MATCH EXISTING*								
MATERIAL	CODE	MANUFACTURER	PRODUCT SPECIFICATION	SIZE	CONTACT / ADDITIONAL INFORMATION	SUPPLIER	INSTALLER	REVISION
STEEL								
	S-1	N/A	BLACK WRINKLE	N/A	CHI MANUFACTURING	CHI	N/A	
	S-2	N/A	RESOLVE SILVER METALLIC	N/A	CHI MANUFACTURING	CHI	N/A	
	S-3	N/A	DARK CHERRY	N/A	CHI MANUFACTURING	CHI	N/A	
	S-4	N/A	TR-SMOKE WINI TEX. #11-7060	N/A	CHI MANUFACTURING	CHI	N/A	
	S-5							
	S-6	N/A	TIGER 89/80419 RAL 9011-FINE TEXTURE	N/A	CHI MANUFACTURING	CHI	N/A	
UPHOLSTERY								
	UPH-1	CF STINSON	SLEEK, SLK38, CHARISMA (VINYL)	N/A	CHI UPHOLSTERY DISTRIBUTOR	CHI	N/A	
	UPH-2	ARC COM	DURANGO, AC-37567 RED (VINYL)	N/A	CHI UPHOLSTERY DISTRIBUTOR	CHI	N/A	
	UPH-3	CF STINSON	MONTANA, CFASB, SABLE BROWN (VINYL)	N/A	CHI UPHOLSTERY DISTRIBUTOR	CHI	N/A	
	UPH-4	MOMENTUM	FOLD	N/A	CHI UPHOLSTERY DISTRIBUTOR	CHI	N/A	
PLASTIC LAMINATE								
	PL-1	WILSONART	CAFELLE 7933-38	N/A	LOCAL DISTRIBUTOR	CHI	N/A	
	PL-2	PIONITE	CAVALCADE SOUTH, A1650	N/A	LOCAL DISTRIBUTOR	CHI	N/A	
	PL-3	WILSONART	PRIVACILE WALNUT, 7992-38	N/A	LOCAL DISTRIBUTOR	CHI	N/A	
SOLID SURFACE								
	SS-1	AVONITE	F1-9144, PALERMO	N/A	LOCAL DISTRIBUTOR	CHI	N/A	
NOTE: DARK SOLID SURFACES SHOW MORE WEAR OVER TIME								
EDGE BAND								
	EB-1	N/A	REHAU, NU/BAH BROWN	N/A	CHI MANUFACTURING	CHI	N/A	
DECORATIVE BOARD								
	DB-1	NOT USED						
TRIMS								
	TR-1	NOT USED						
	TR-2	N/A	FURNITURE GRADE DURANODIC	N/A	CHI MANUFACTURING	CHI	N/A	
WOOD								
	WD-1	N/A	SOLID WHITE OAK	N/A	CHI MANUFACTURING	CHI	N/A	
GLASS								
	GL-1	NOT USED						
	GL-2	N/A	COKE GLASS - SMART GLASS JEWELRY	N/A	CHI MANUFACTURING	CHI	N/A	



SEATING & DECOR KEY	
#	DESCRIPTION
1	LIBRARY CHAIR, STANDARD HT (STYLE 1)
2	LIBRARY CHAIR, TALL HEIGHT (STYLE 2)
3	FARM STOOL, 22" HEIGHT
4	MINI ARENA BOOTH *MATCH EXISTING*
5	TABLE *MATCH EXISTING*
6	COKE FIXTURE
7	DIVIDER WALL *MATCH EXISTING*
8	DIVIDER WALL *MATCH EXISTING*
9	WOOD DINING COUNTER *ACCESSIBLE*




CHARTER HOUSE HOLDINGS, LLC 200 N. Franklin Street Zeeland, MI 49464  Phone: 616.399.6000 Fax: 616.796.1199 <a href="http://www.gotochi.com">www.gotochi.com</a>
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**FSR#02859**

BUILDING TYPE / SIZE: S08N - SML-  
RELEASE: PLAY CONN

<b>REVISION SCHEDULE</b>		
<b><u>NO.</u></b>	<b><u>DATE</u></b>	<b><u>DESCRIPTION</u></b>
1	02/19/24	PLAY AREA REMOVAL

CONSULTANT PROJECT #	####
PRINTED FOR	PERMIT
DATE	02/09/2024
DRAWN BY	RK

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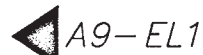
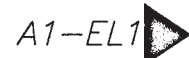
SHEET

DECOR ELEVATIONS  
PRODUCT DETAILS

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R





<b>Revisions:</b>		
Mark	Date	By



C.O.A. 2001015838

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SHEET TITLE

25'-10 1/2" X 54'-1 1/2"

Job No. : LSC: 75966

Store : 02859

Date . 8.30.23

Drawn By : RED

Checked By: RM

Sheet

F2FC-1

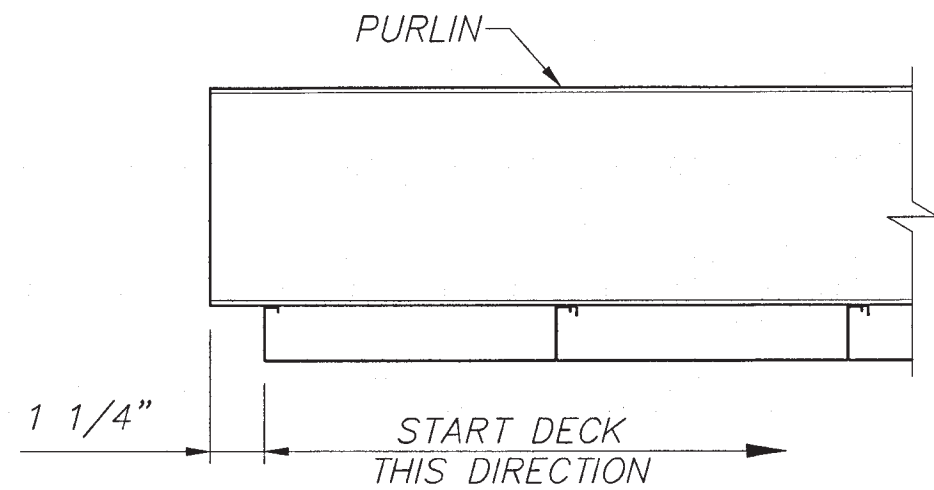
ABI OF 2

FI		COLUMN AND FOOTING LOCATIONS		A9		FOOTING ELEVATIONS	
1/4" = 1'-0"							
<ol style="list-style-type: none"> <li>ALL FOUNDATION WORK BY OTHERS AND SUBJECT TO LOCAL APPROVAL.</li> <li>THE FOUNDATION DESIGN IS BASED UPON SECTION 1807.3.2.2-IBC 2018 EDITION. THE DESIGN CRITERIA SELECTED ASSUMES: SITE CLASS D MATERIAL OR BETTER, SOIL BEARING CAPACITY OF 1,500 p.s.f. AND A PASSIVE SOIL PRESSURE OF 100 p.s.f. PER FOOT OF DEPTH.</li> <li>DRILLED SHAFT FOOTINGS SHALL BE INSTALLED PER ACI STD. 336.</li> <li>CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM TO ACI STANDARD 318-14 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."</li> <li>MINIMUM COMPRESSIVE STRENGTH OF CONCRETE (F'C) AT THE END OF 28 DAYS SHALL BE 2500 PSI MIN.</li> <li>REINFORCING STEEL SHALL BE GRADE 60 AND CONFORM TO ASTM A615 LATEST REVISION.</li> <li>DETAILING, FABRICATION AND PLACEMENT OF REINFORCING BARS SHALL COMPLY WITH ACI 315, ACI 318 AND CRSI STANDARDS.</li> <li>ANCHOR BOLTS SHALL CONFORM TO ASTM F1554-GR36.</li> <li>LANE IS NOT RESPONSIBLE FOR FOOTING POURED PRIOR TO PERMITTING.</li> <li>FOOTINGS ARE DESIGNED TO BE CONSTRAINED AT THE TOP BY A 6" SLAB. IF THEY ARE NOT, PLEASE NOTIFY LANE SUPPLY CO.</li> <li>POUR FOOTINGS TO SAME TOP ELEVATION.</li> <li>USE MASTER FLOW 928 NON-SHRINK GROUT OR EQUIVALENT F'm=5000 p.s.i.</li> <li>G.C. TO ENSURE THAT FOOTINGS DO NOT INTERFERE WITH UNDERGROUND UTILITIES</li> </ol>		<ol style="list-style-type: none"> <li>TOP OF ALL CANOPY FOOTINGS ARE TO BE POURED A MINIMUM OF 12" BELOW FINISHED GRADE OR AS REQUIRED BY LOCAL CODES AND ORDINANCES.</li> <li>IT IS THE OWNERS RESPONSIBILITY TO CONVEY TO ALL CONTRACTORS THAT IT IS THEIR RESPONSIBILITY TO INSURE THAT THE SITE IS PROPERLY EXCAVATED AND GRADED. DURING CONCRETE FORMING PRIOR TO AND AFTER THE POUR, THE CONCRETE SHOULD BE CHECKED FOR PROPER ELEVATION, SQUARE AND CORRECT DIMENSIONS.</li> <li>MEASUREMENTS FOR ANCHOR BOLTS ARE EXACT AND SHOULD BE RECHECKED TO INSURE PROPER LOCATION.</li> <li>CORRECTION OF LOCATION, OF ELEVATION AND OF DIMENSIONAL ERRORS MUST BE MADE PRIOR TO THE ARRIVAL OF THE ERECTION CREW AND PRIOR TO THE ERECTION OF THE STRUCTURE.</li> <li>AFTER THE FORMS HAVE BEEN REMOVED, ALL TRENCHES, HOLES AND UNEVEN SITE CONDITIONS MUST BE LEVELED TO INSURE A SAFE WORKING AND ACCESS AREA ACCEPTABLE TO LOCAL, STATE, FEDERAL AND OSHA AGENCIES.</li> </ol>		<p><u>VERY IMPORTANT:</u></p> <p>AFTER FOOTINGS ARE POURED PLEASE PROVIDE LANE CO. WITH THE FOOTING ELEVATIONS ON THE ELEVATION SHEET ATTACHED.</p>		<p>DEAD LOAD = 3 p.s.f.(DECK + LIGHTS) + WEIGHT OF STRUCTURAL COMPONENTS</p> <p>LIVE LOAD = 20 p.s.f.</p> <p>SNOW LOAD = 20 p.s.f.</p> <p>WIND LOAD V,ULT = 116 m.p.h. EXP. C</p> <p>WIND V,ASD = 90 m.p.h. EXP C</p> <p>BLDG CODE = MISSOURI BUILDING CODE 2018</p> <p>ADOPTING 2018 INTERNATIONAL BUILDING CODE</p> <p>EQUIVALENT LATERAL FORCE PROCEDURE</p> <p>LATERAL FORCE RESISTING SYSTEM = CANTILEVERED COLUMN SYSTEM-ORDINARY STEEL MOMENT FRAME</p> <p>Pf = 20 p.s.f. Ce = 1.2 Ct = 1.2 Is = 1.0</p> <p>W = DRIFT LOADS NOT CONSIDERED</p> <p>Pd = DRIFT LOADS NOT CONSIDERED</p> <p>SITE CLASS = D</p> <p>Ss (0.2) = 0.099</p> <p>S1 (1.0) = 0.068</p> <p>SDS = 0.11</p> <p>SD1 = 0.11</p> <p>Fa = 1.60</p> <p>Fv = 2.40</p> <p>R = 1.25</p> <p>IMPORTANCE FACTOR = 1.0</p> <p>RISK CATEGORY = II</p> <p>SEISMIC DESIGN CATEGORY = D</p> <p>CS = 0.084</p> <p>CONSTRUCTION TYPE = IIB</p> <p>OCCUPANCY CATEGORY = A2</p> <p>TOTAL SEISMIC BASE SHEAR BOTH DIRECTIONS = 0.84 KIPS</p>	
AI	FOUNDATION NOTES	A5	GENERAL NOTES	A9	FOOTING ELEVATIONS	A14	DESIGN LOADS
N.T.S.		N.T.S.		N.T.S.		N.T.S.	



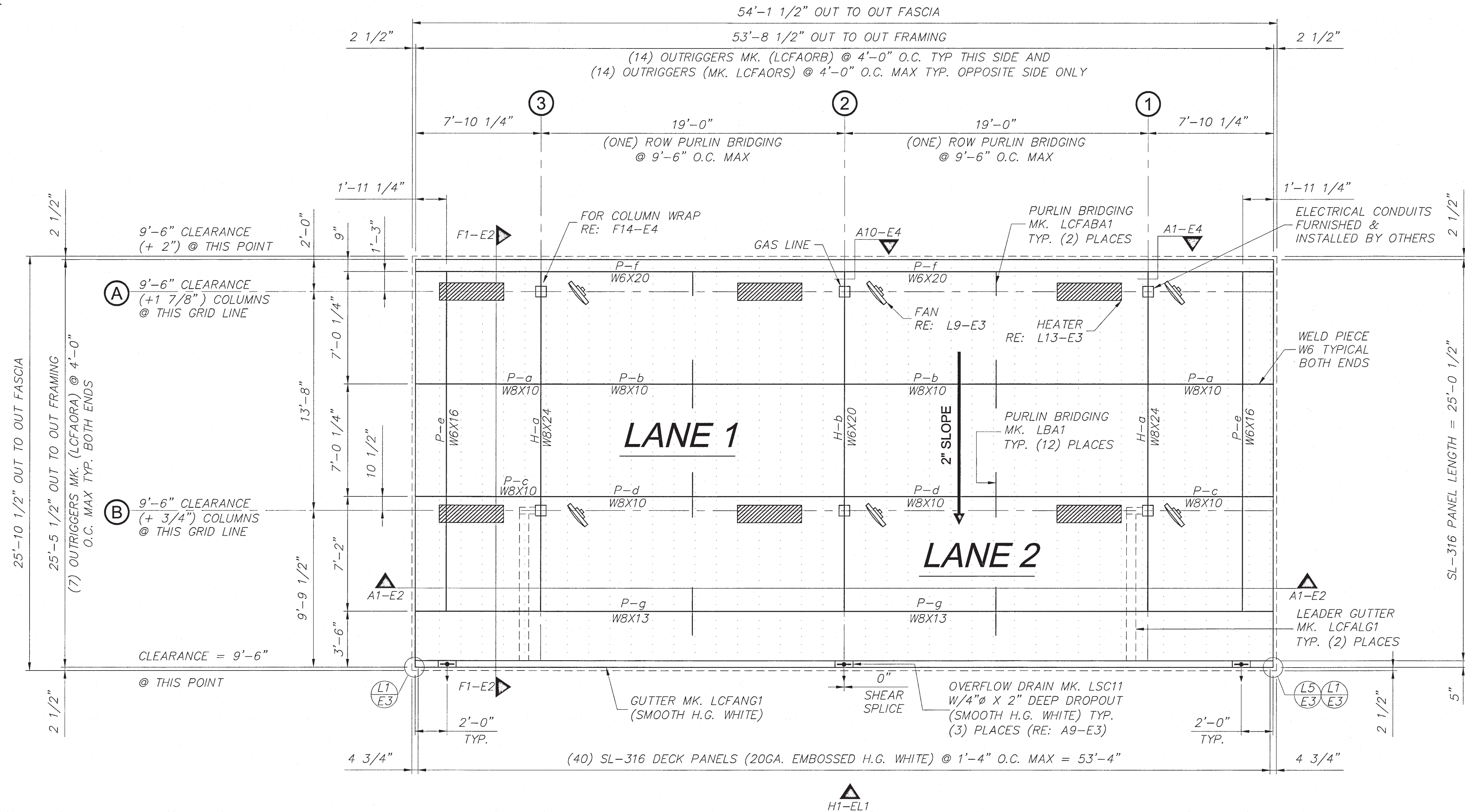






LANE 1 ENTRANCE

LANE 2 ENTRANCE



LANE 1 EXIT

LANE 2 EXIT

FI CANOPY FRAMING LAYOUT

1/4" = 1'-0"

STRUCTURAL STEEL SHALL MEET THE AISC 2017 SPECIFICATION 15TH EDITION AND THE AISC CODE OF STANDARD PRACTICE, CURRENT VERSION.  
COLUMNS TO BE ASTM A500, GRADE B  
BOLTS TO BE ASTM A325 OR ASTM F1852 (A325-TC)  
INSTALLATION OF BOLTS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION-DEFINED AS THE CONDITION THAT EXISTS WHEN ALL OF THE PLIES IN A CONNECTION HAVE BEEN PULLED INTO FIRM CONTACT BY THE BOLTS IN THE JOINT AND ALL OF THE BOLTS IN THE JOINT HAVE BEEN TIGHTENED SUFFICIENTLY TO PREVENT THE REMOVAL OF THE NUTS WITHOUT THE USE OF A WRENCH.

WIDE FLANGE BEAMS TO BE ASTM A992  
ANGLES, & PLATES TO BE ASTM A36  
REINFORCING STEEL TO BE ASTM 615, GRADE 60  
DECK PANELS TO BE ASTM 653, GRADE C MINIMUM  
WELD FILLER METALS SHALL MEET THE MINIMUM CHARPY V-NOTCH REQUIREMENT OF 20 FT-LB AT 0°F WELDING SHALL MEET THE REQUIREMENTS OF THE AWS FOR BUILDING CONSTRUCTION USING E70XX ELECTRODES  
ALL STRUCTURAL STEEL TO BE PAINTED WITH ONE SHOP COAT PRIMER  
CANOPY FABRICATOR SHALL BE AISC CERTIFIED  
LANE SUPPLY INC. IS AN AISC CERTIFIED FABRICATOR (AISC # C-00022431)

1. REFERENCE SEALANT SCHEDULE FOR ALL APPLICATIONS
2. SEAL ALL JOINTS WITH A SMOOTH, CLEAN APPLICATION
3. APPLY CAULK CLEAR AROUND THE COLUMNS ON THE TOP SIDE OF THE DECK AFTER BOTTOM SIDE HAS BEEN CAULKED.
4. DECK PANELS AND TRIM WILL BE WIPED CLEAN AFTER INSTALLATION
5. ALL TRASH AND EXTRA MATERIALS WILL BE HAULED OFF JOBSITE
6. CHECK WITH GENERAL CONTRACTOR FOR DRAIN ORIENTATION
7. FURNISH & INSTALL LANE DESIGNED AND ENGINEERED "HUNG" DECK
8. FURNISH & INSTALL SUPPORT FRAMING FOR (6) FANS & (6) HEATERS (FANS & HEATERS FURNISHED & INSTALLED BY OTHERS.)
9. FURNISH & INSTALL (6) LSI CRUS-CS-LED-LW-30-UE-WHT CANOPY DECK LIGHTS.
10. FURNISH & INSTALL SHEET METAL FASCIA "CHICK-FIL-A BRONZE".

SEALANT SCHEDULE		
SEALANT	COLOR	APPLICATION
Soudaseal FC	WHITE	DECK TO COLUMN @ BOTTOM
Soudaseal FC	WHITE	GUTTER JOINTS
Soudaseal FC	WHITE	DECK TO COLUMN @ TOP
Soudaseal FC	WHITE	SEAL @ OVERFLOW DROPOUTS
Soudaseal FC	WHITE	SEAL BOLTS @ HEATER SUPPORTS
Soudaseal FC	WHITE	DAM UP DECK @ DECK CLOSURE
Soudaseal FC	WHITE	SEAL FASCIA @ DECK CLOSURE

DEAD LOAD = 3 p.s.f.(DECK + LIGHTS) +  
WEIGHT OF STRUCTURAL COMPONENTS  
LIVE LOAD = 20 p.s.f.  
SNOW LOAD = 20 p.s.f.  
WIND LOAD V<sub>ULT</sub> = 116 m.p.h. EXP. C  
WIND V<sub>ASD</sub> = 90 m.p.h. EXP. C  
BLDG CODE = MISSOURI BUILDING CODE 2018  
ADOPTING 2018 INTERNATIONAL BUILDING CODE  
EQUIVALENT LATERAL FORCE PROCEDURE  
LATERAL FORCE RESISTING SYSTEM = CANTILEVERED  
COLUMN SYSTEM-ORDINARY STEEL MOMENT FRAME  
P<sub>f</sub> = 20 p.s.f. C<sub>e</sub> = 1.2 C<sub>t</sub> = 1.2 I<sub>s</sub> = 1.0  
W = DRIFT LOADS NOT CONSIDERED  
P<sub>d</sub> = DRIFT LOADS NOT CONSIDERED  
SITE CLASS = D  
S<sub>s</sub> (0.2) = 0.099  
S<sub>1</sub> (1.0) = 0.068  
SDS = 0.11  
SD1 = 0.11  
F<sub>a</sub> = 1.60  
F<sub>v</sub> = 2.40  
R = 1.25  
IMPORTANCE FACTOR = 1.0  
RISK CATEGORY = II  
SEISMIC DESIGN CATEGORY = D  
CS = 0.084  
CONSTRUCTION TYPE = IIB  
OCCUPANCY CATEGORY = A2  
TOTAL SEISMIC BASE SHEAR BOTH DIRECTIONS = 0.84 KIPS

AI GENERAL NOTES

N.T.S.

A6 ERECTOR'S NOTES

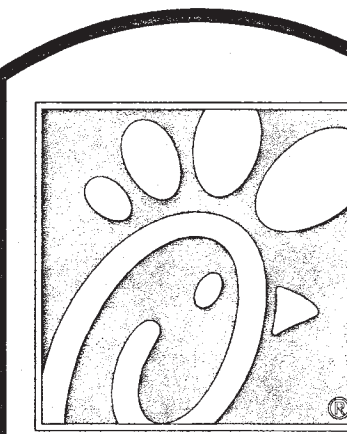
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AII NOT USED

N.T.S.

A14 DESIGN LOADS

N.T.S.



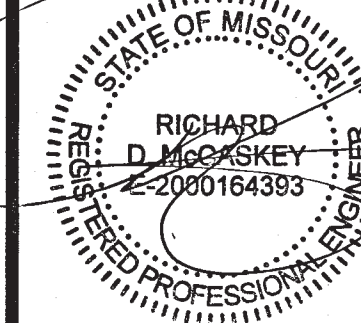
Chick-fil-A

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:

Mark Date By

Seal



SEP 07 2023

C.O.A. 2001015838

LANE  
SUPPLY, INC.  
120 FAIRVIEW  
ARLINGTON, TX. 76010  
(817) 261-9116

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STORE  
Chick-fil-A #02859  
690 NW BLUE  
PARKWAY.  
LEE'S SUMMIT,MO  
64086

SHEET TITLE

CANOPY FRAMING  
PLAN

25'-10 1/2" X 54'-1 1/2"

Job No.: LSC: 759966

Store : 02859

Date : 8.30.23

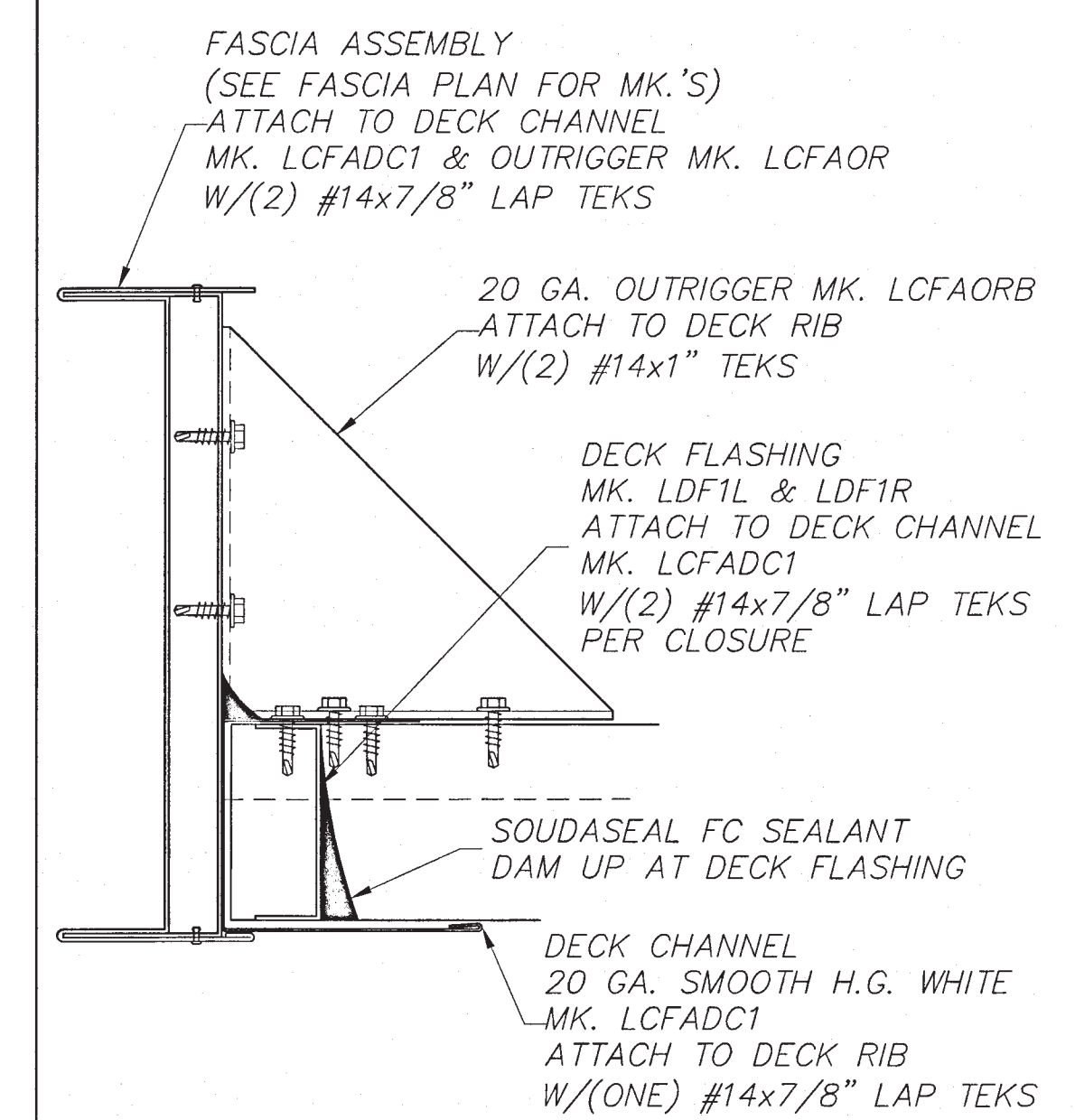
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Checked By: RM

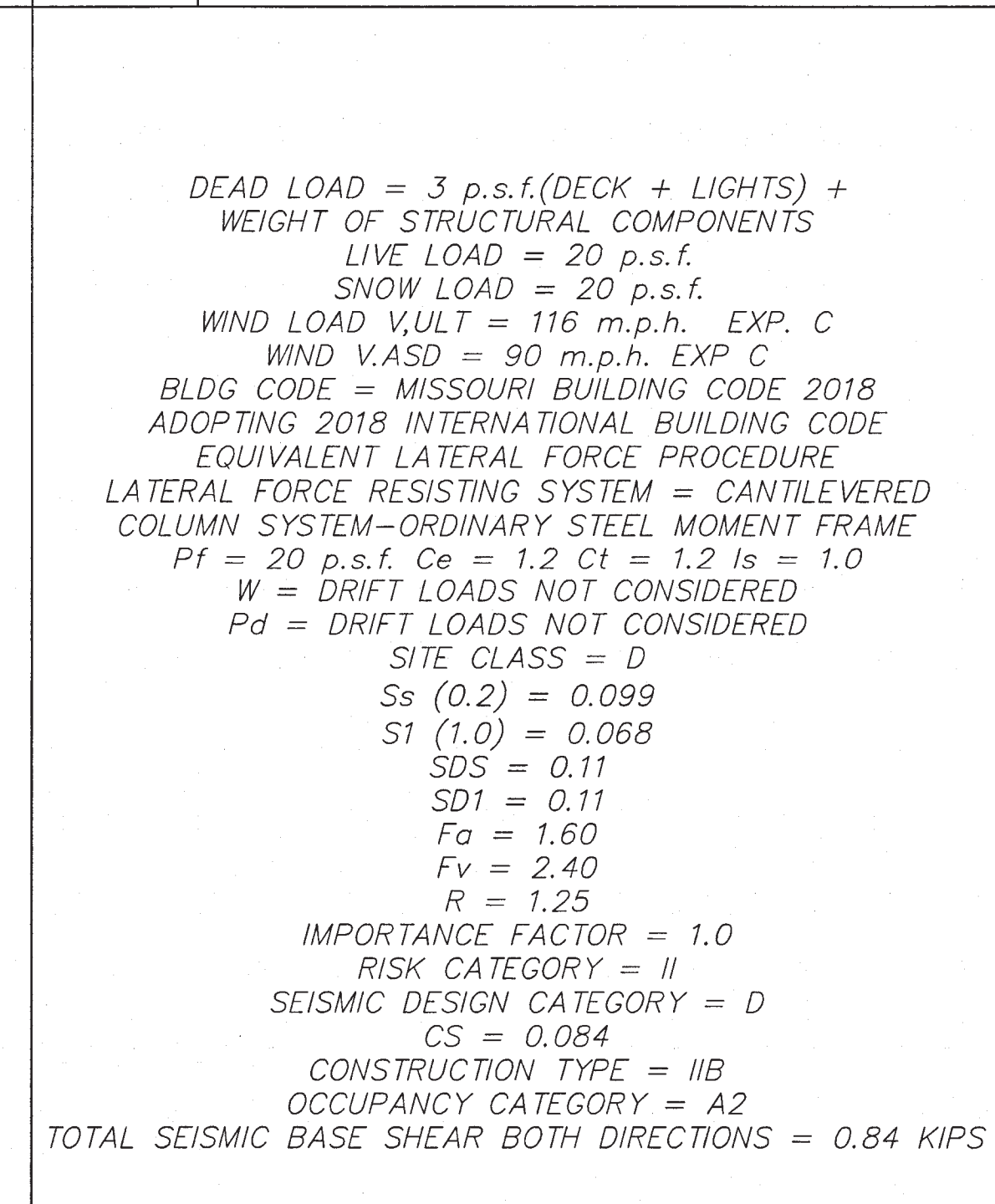
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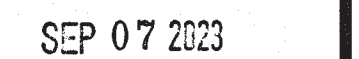




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Revisions:



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ORE  
ick-fil-A #02859  
00 NW BLUE  
ARKWAY.  
E'S SUMMIT,MO  
-086

EET TITLE

## CANOPY SECTIONS

1'-10 1/2" X 54'-1 1/2"

b No. : LSC: 75966

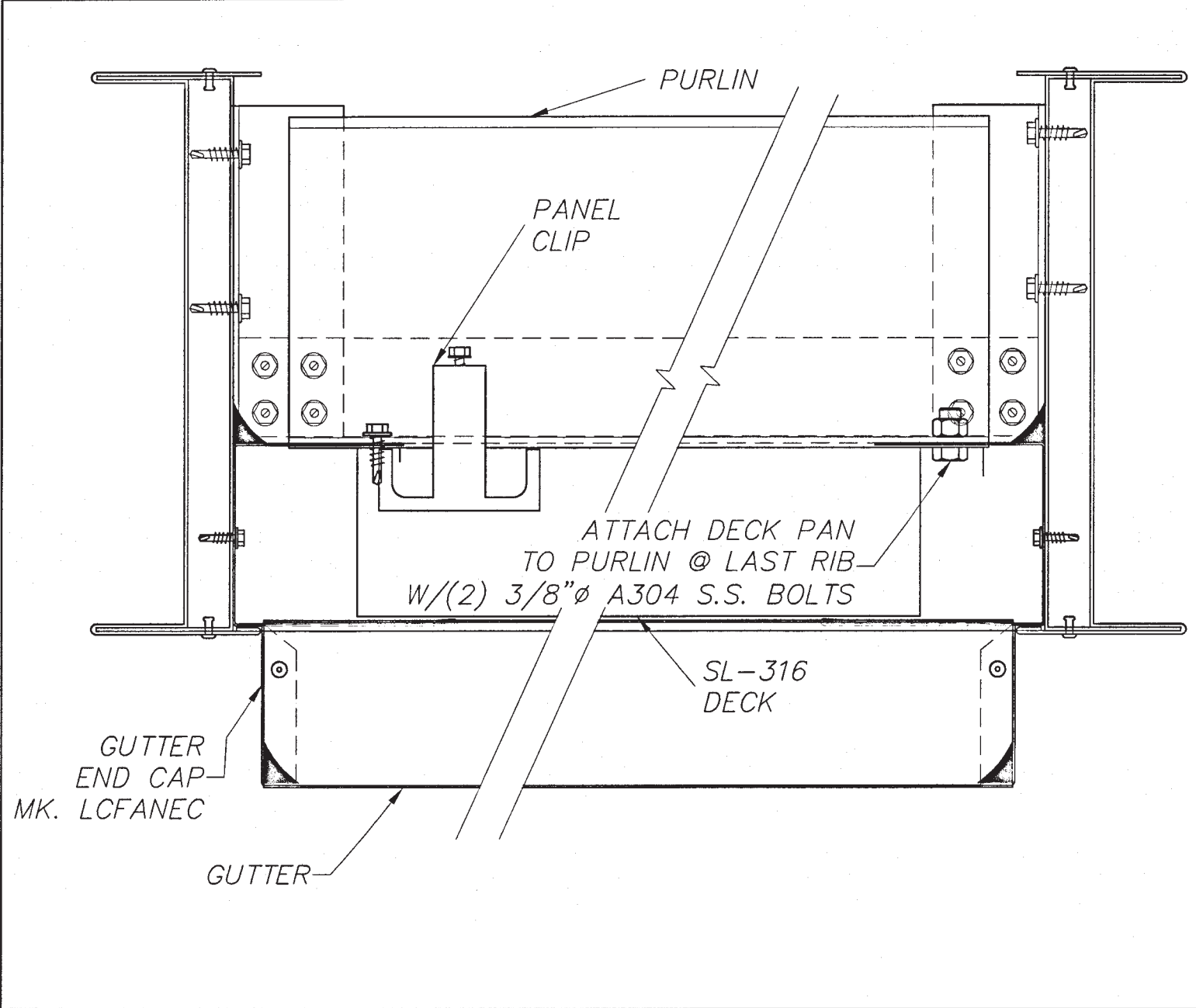
8.30.23

awn By : RED

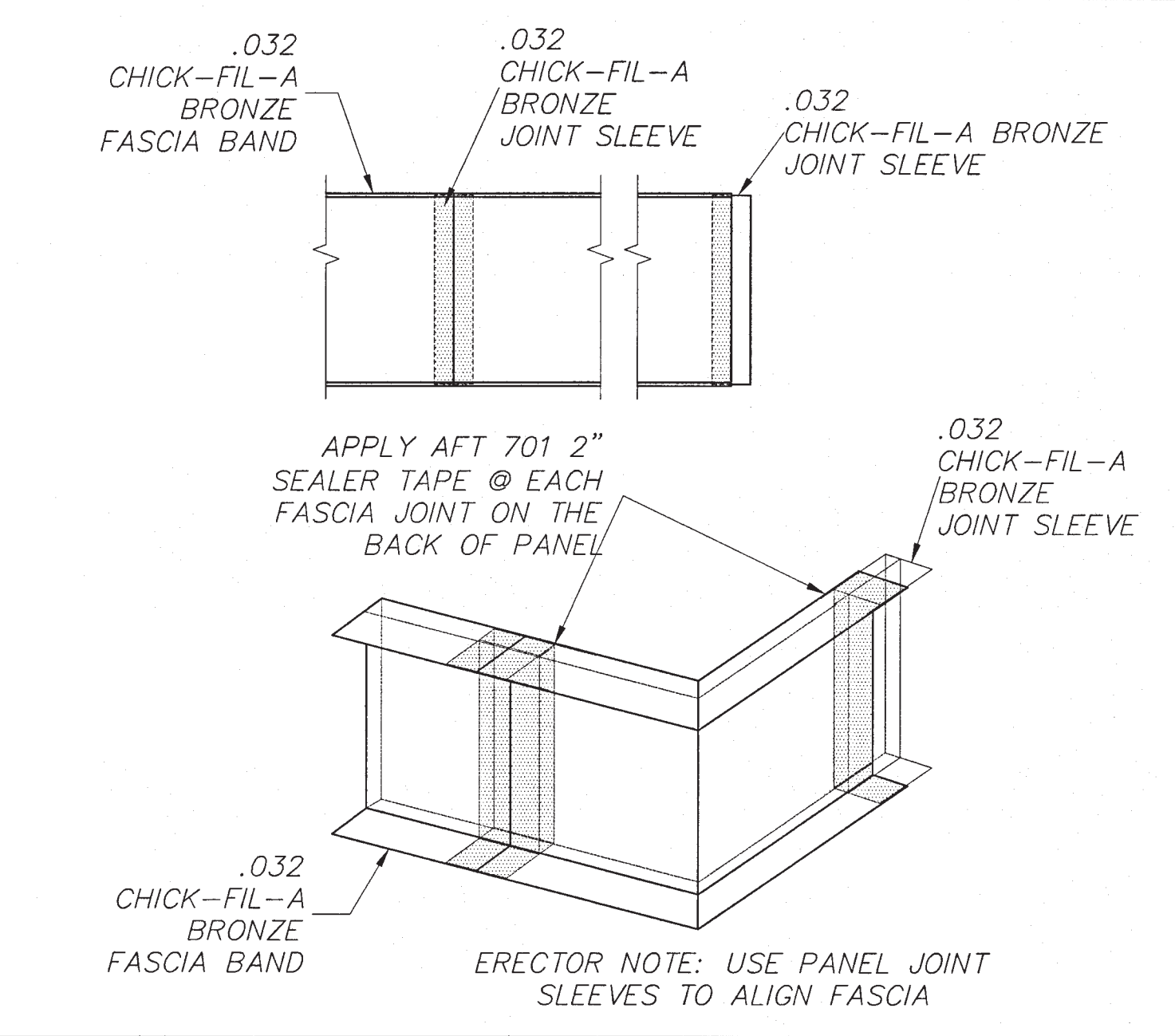
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F2FC-4  
E2 OF 4

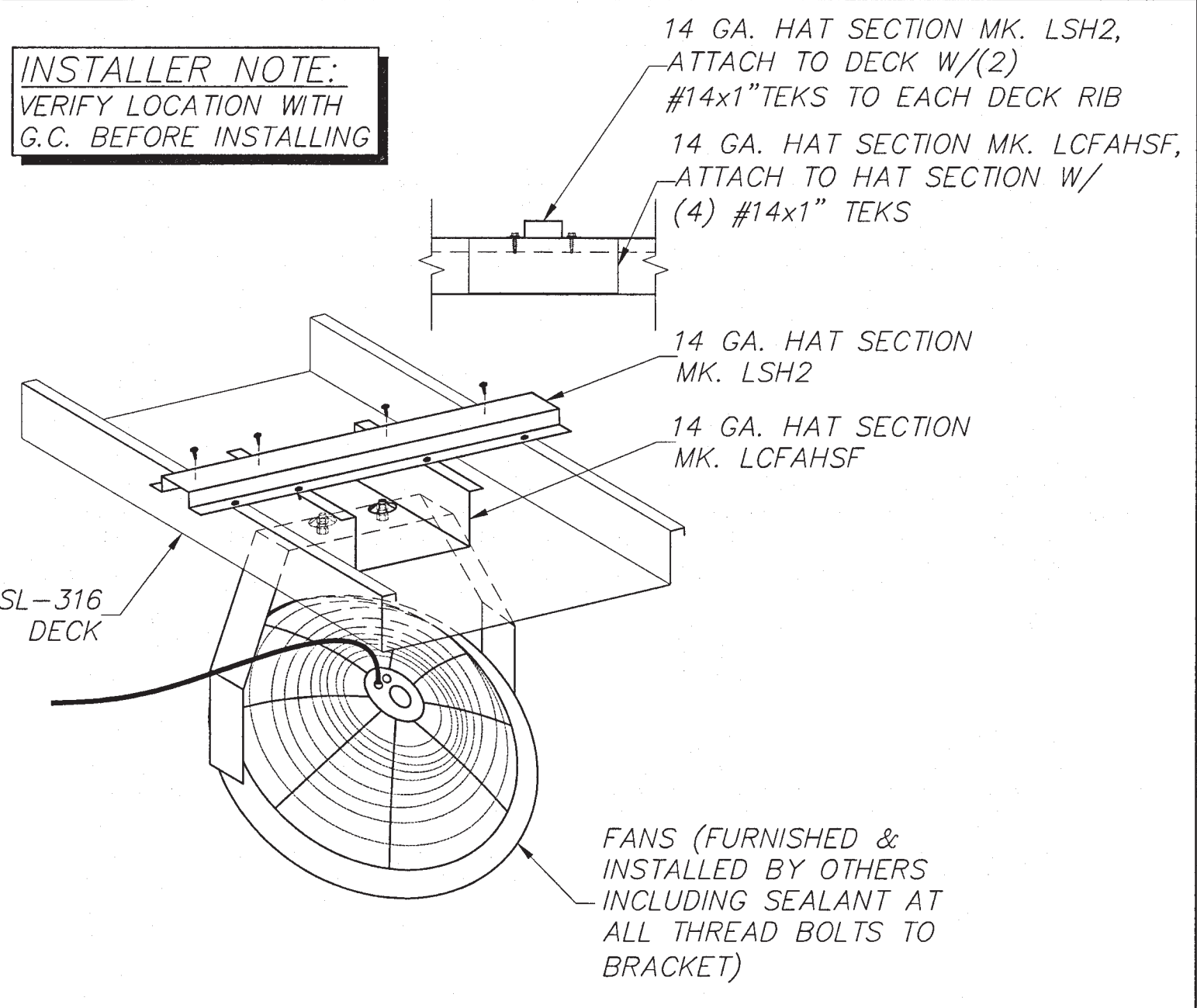




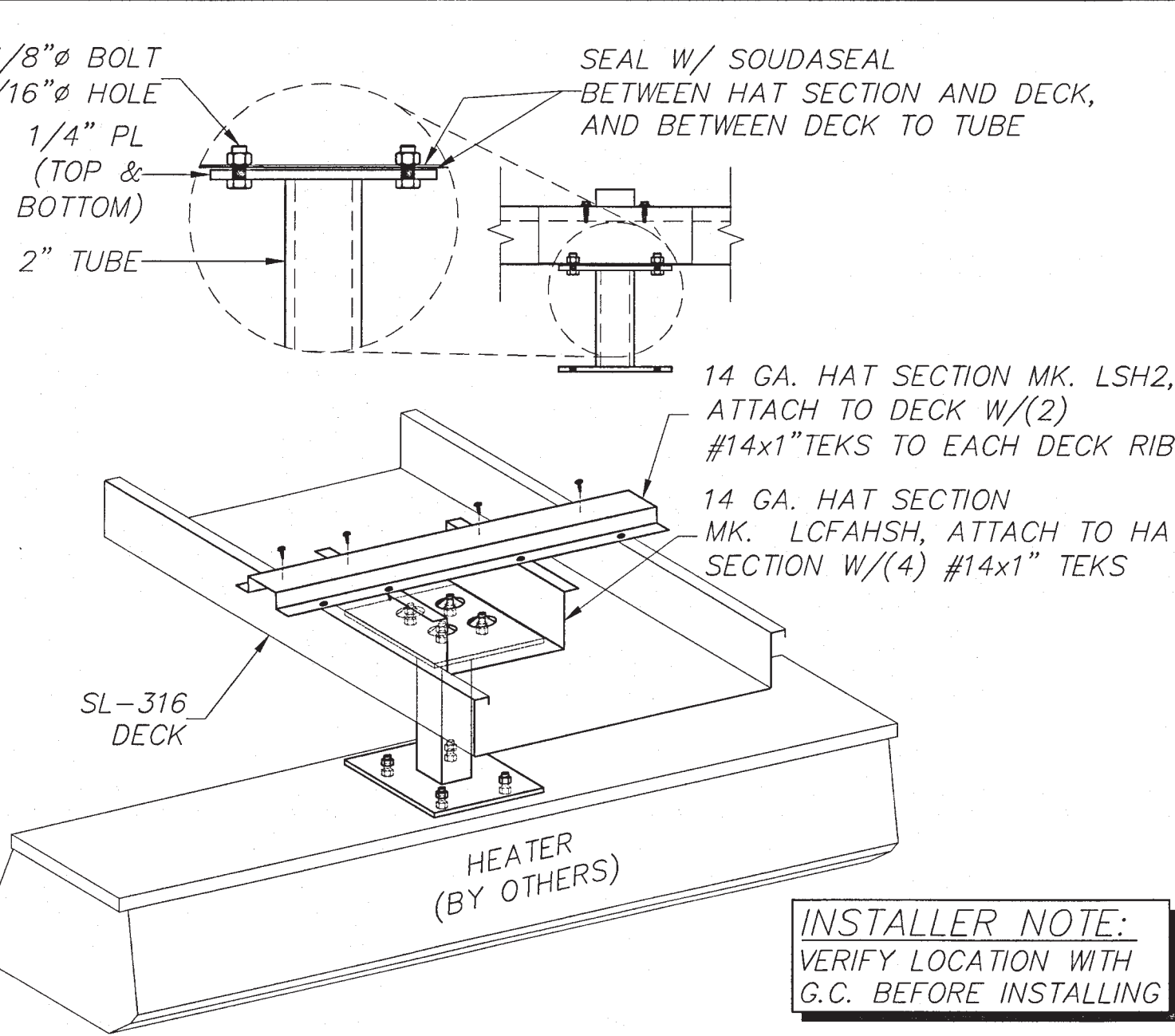
L1 DETAIL AT SIDES OF CANOPY  
N.T.S. AI-E2, FI-EI



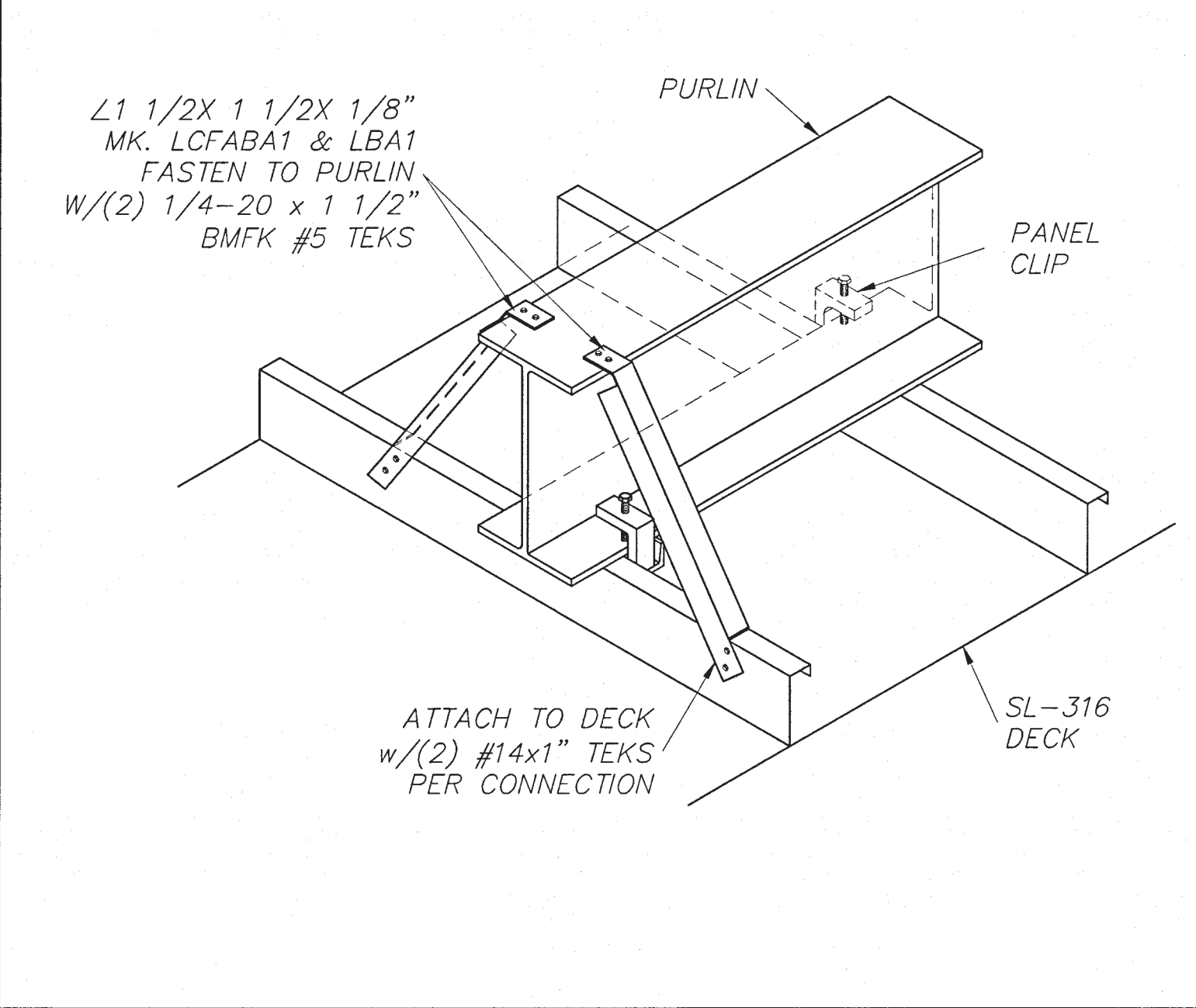
L5 DETAIL AT FASCIA CORNER AND SPLICE  
N.T.S. FI-EI



L9 SECTION AT FAN SUPPORT  
N.T.S. FI-EI



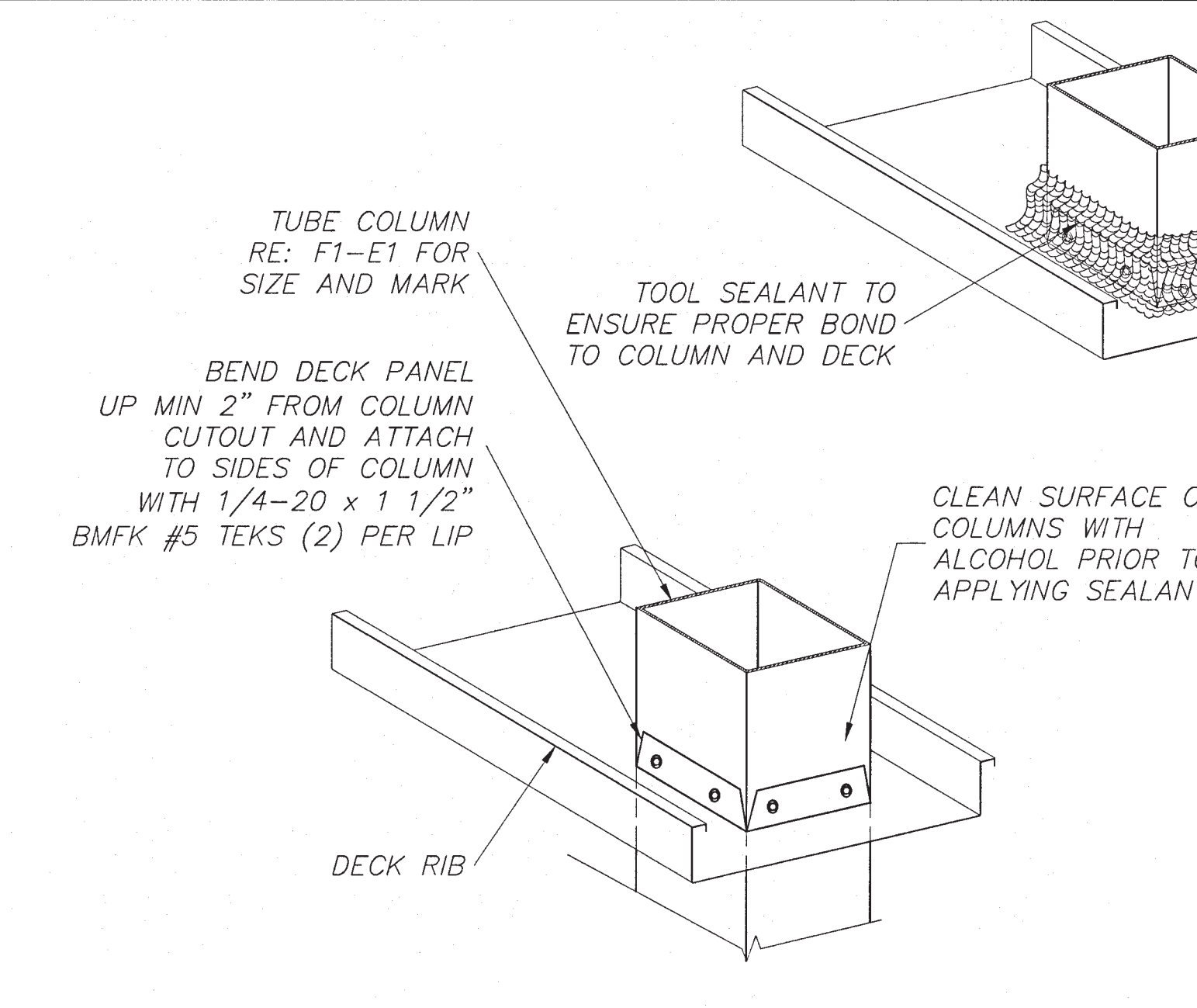
LI3 SECTION AT HEATER SUPPORT  
N.T.S. FI-EI



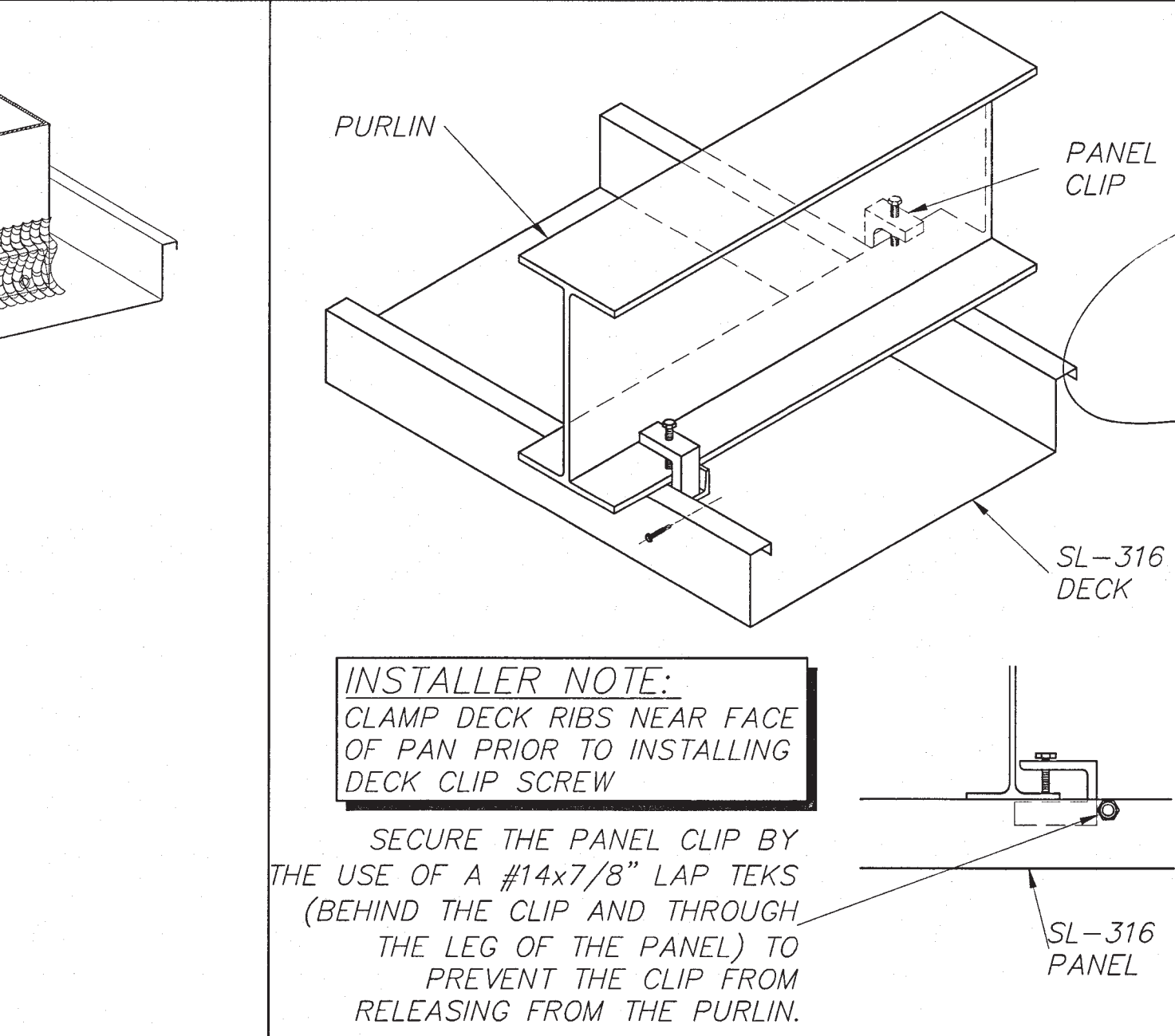
FI SECTION AT PURLIN BRIDGING  
N.T.S. FI-EI



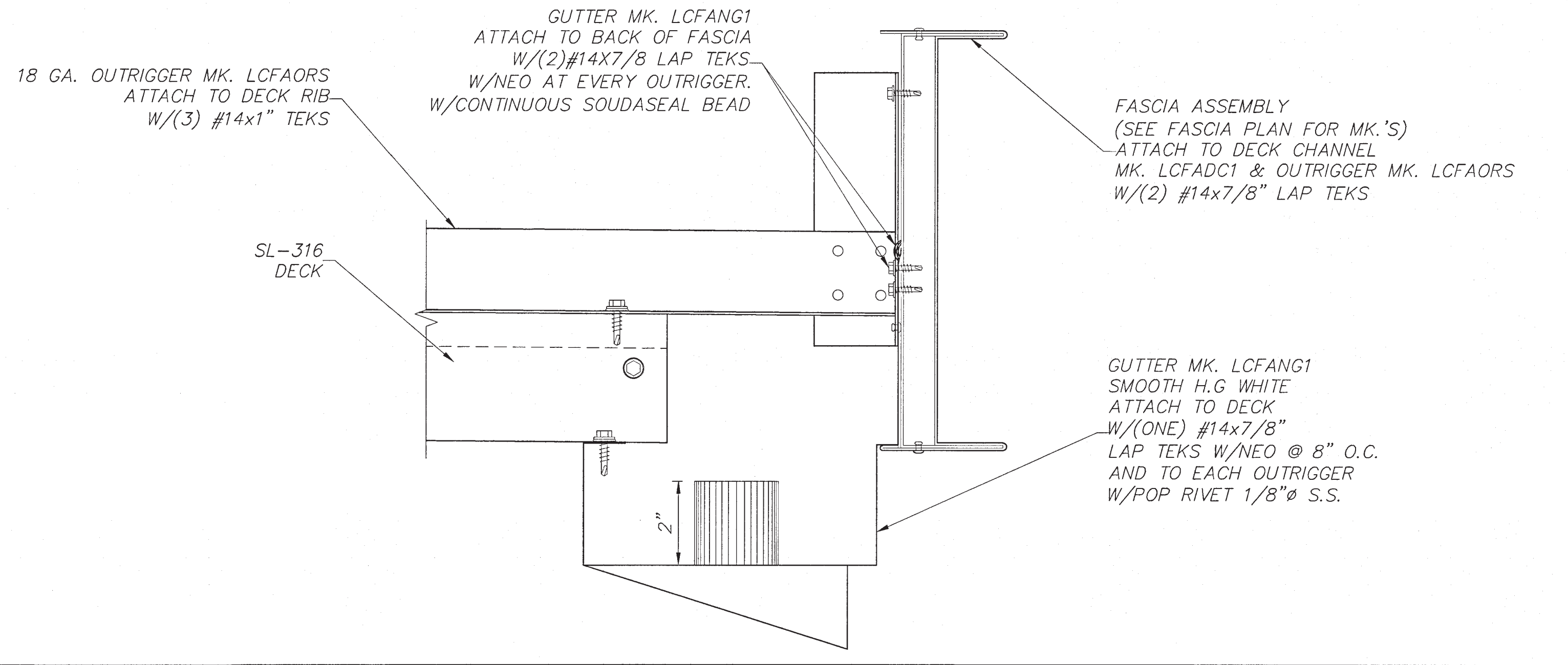
F5 NOT USED



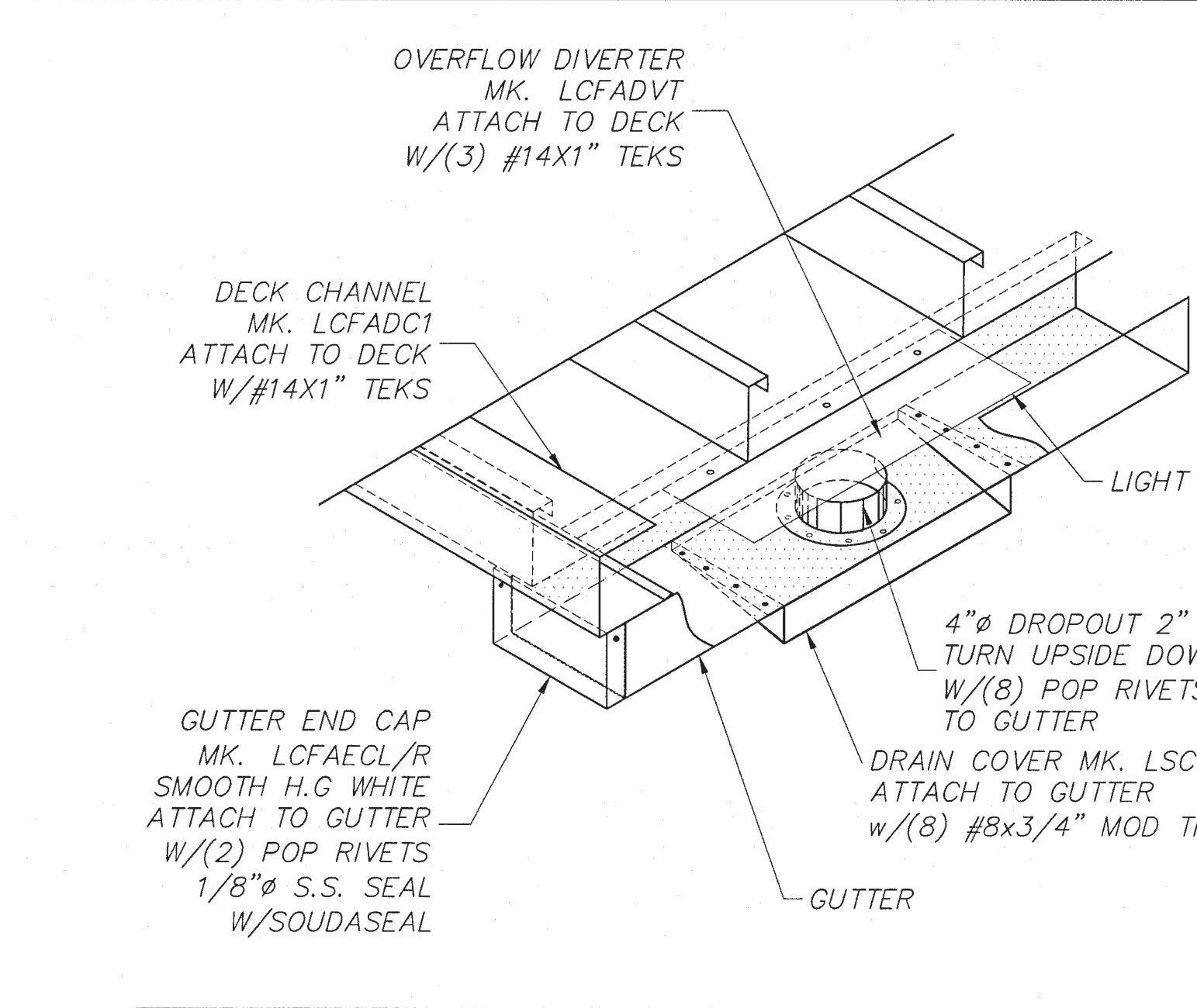
F9 DETAIL AT DECK SUPPORT  
1 1/2\"/>



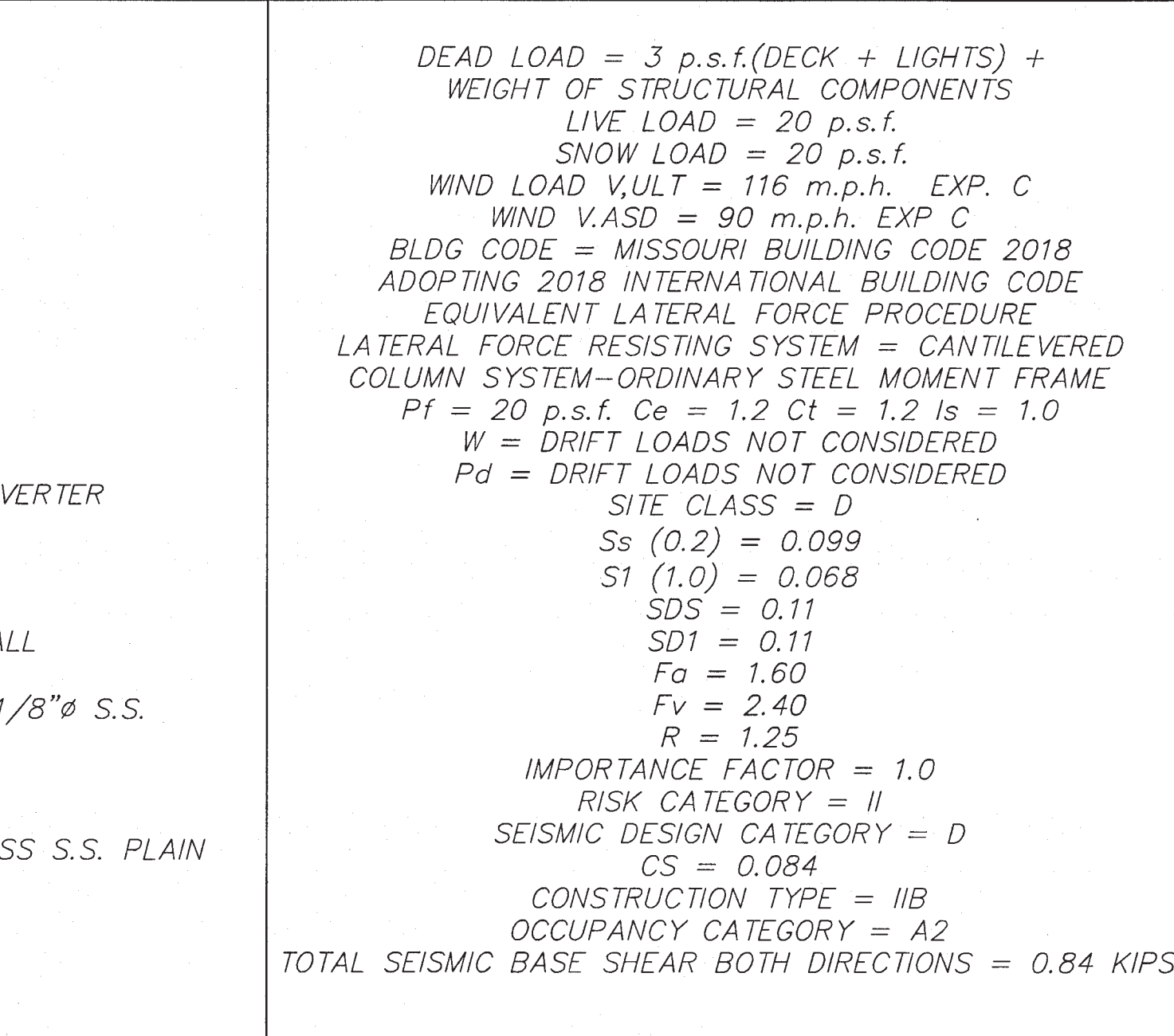
FI4 DETAIL AT DECK CLIP  
N.T.S. AI-E2, FI-E2



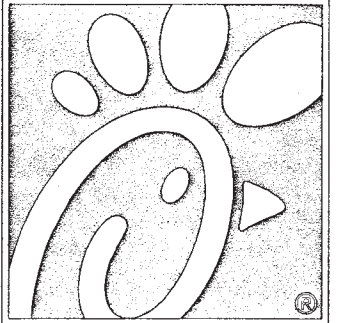
AI DETAIL AT END OF CANOPY  
N.T.S. FI-EI, FI-E2



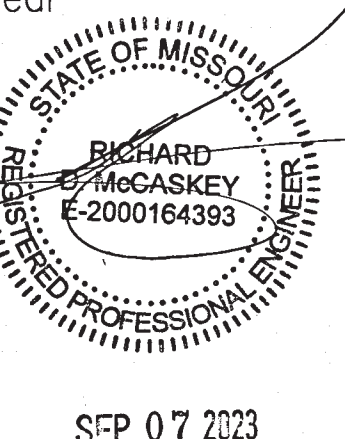
A9 DETAIL OF OVERFLOW DRAIN  
N.T.S. FI-EI



AI4 DESIGN LOADS  
N.T.S.

  
5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:  
Mark Date By

Seal  


C.O.A. 2001015838

  
120 FAIRVIEW  
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STORE  
Chick-fil-A #02859  
690 NW BLUE  
PARKWAY,  
LEE'S SUMMIT, MO  
64086

SHEET TITLE

CANOPY SECTIONS

25'-10 1/2" X 54'-1 1/2"

Job No.: LSC: 75966

Store : 02859

Date : 8.30.23

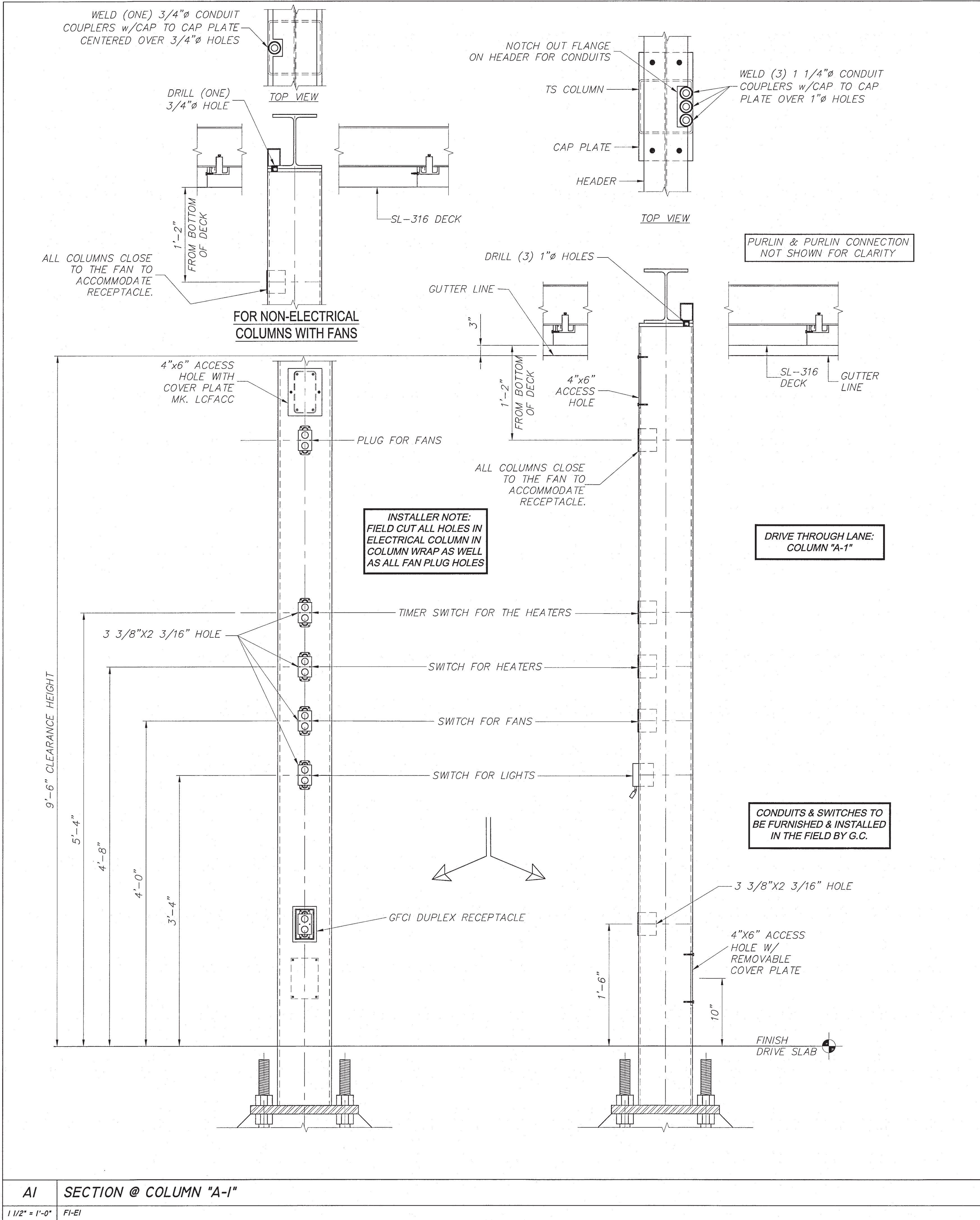
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Checked By: RM

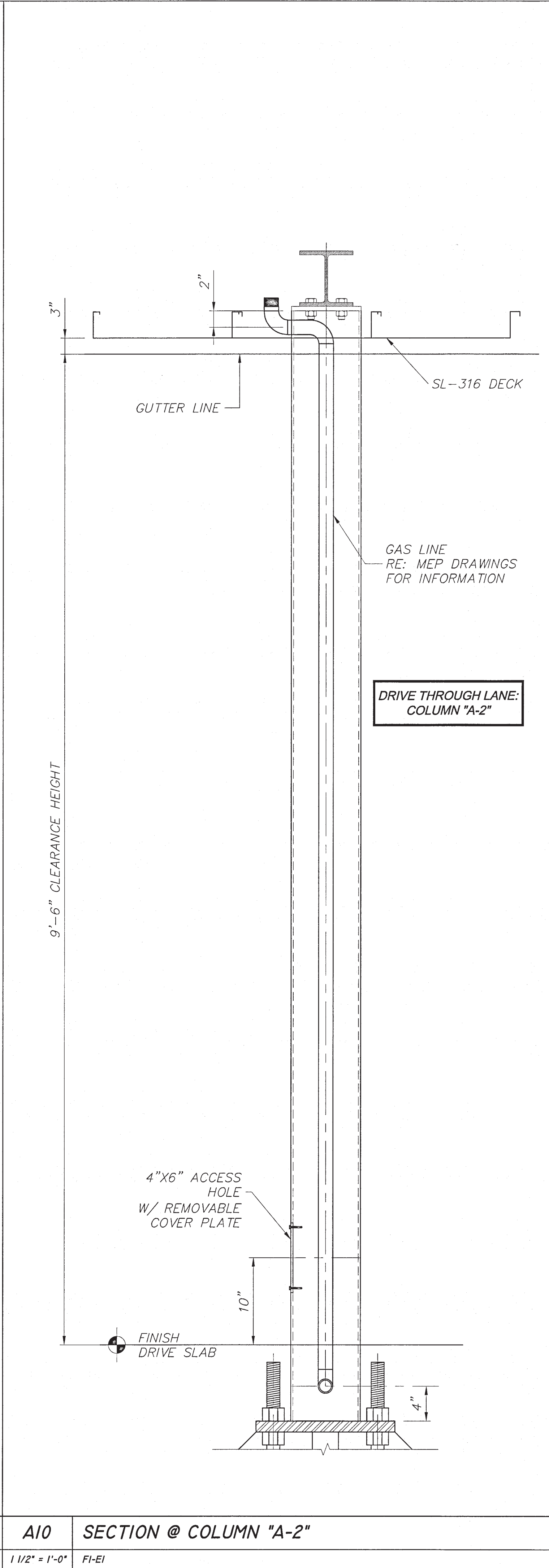
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F2FC-5  
E3 OF 4

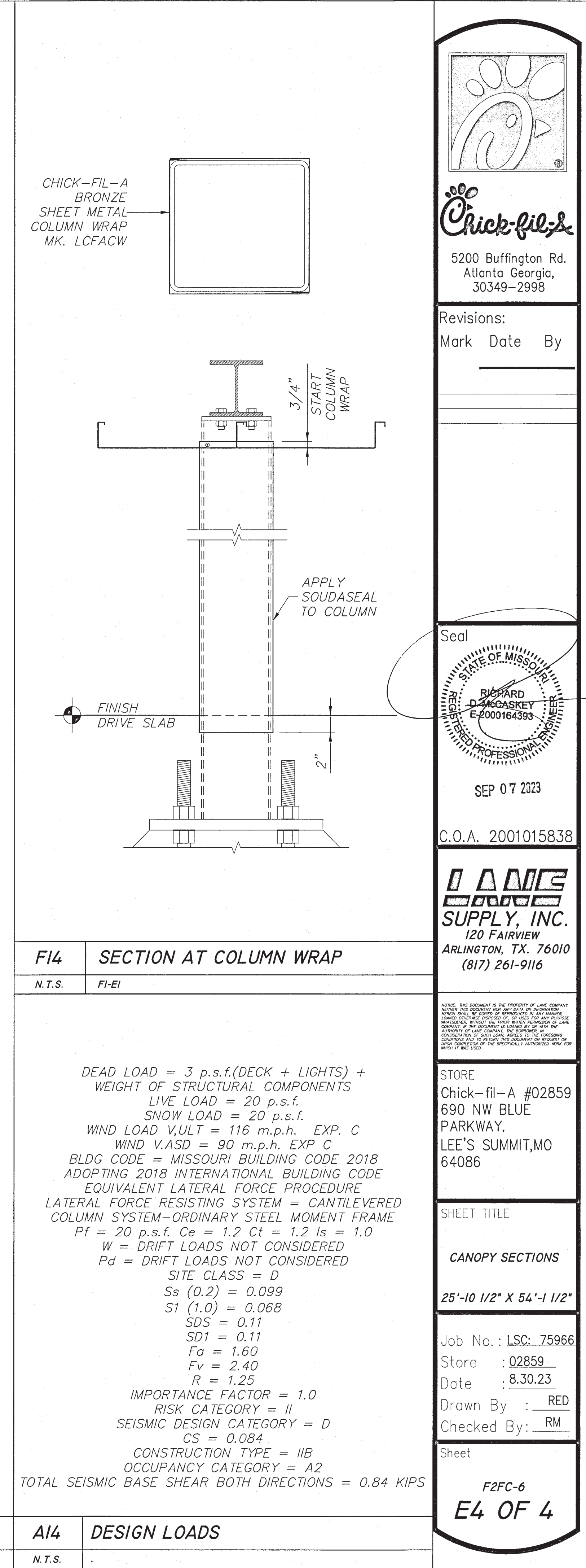




AI SECTION @ COLUMN "A-1"

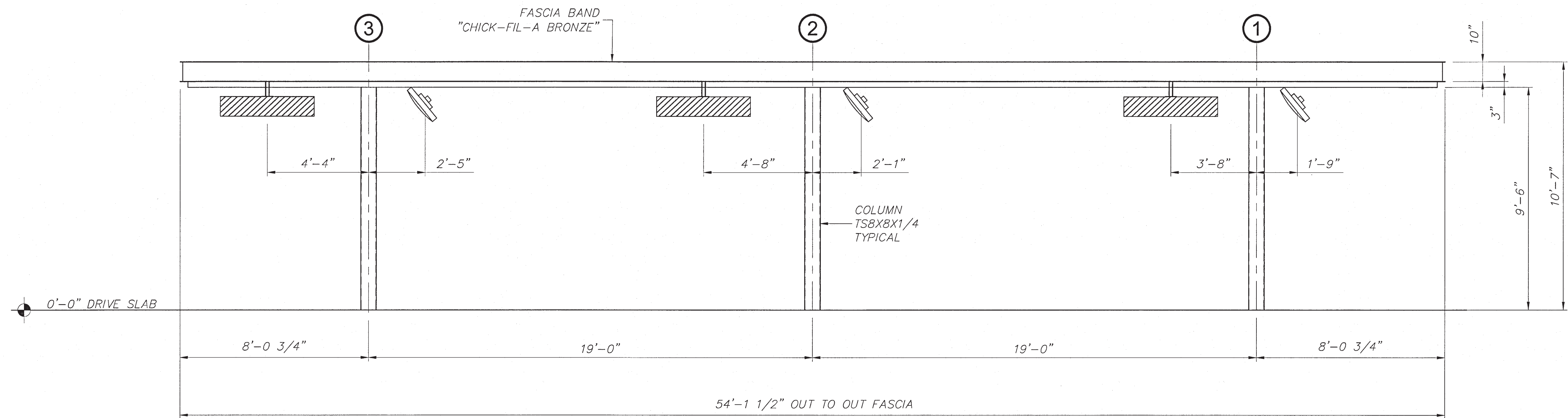


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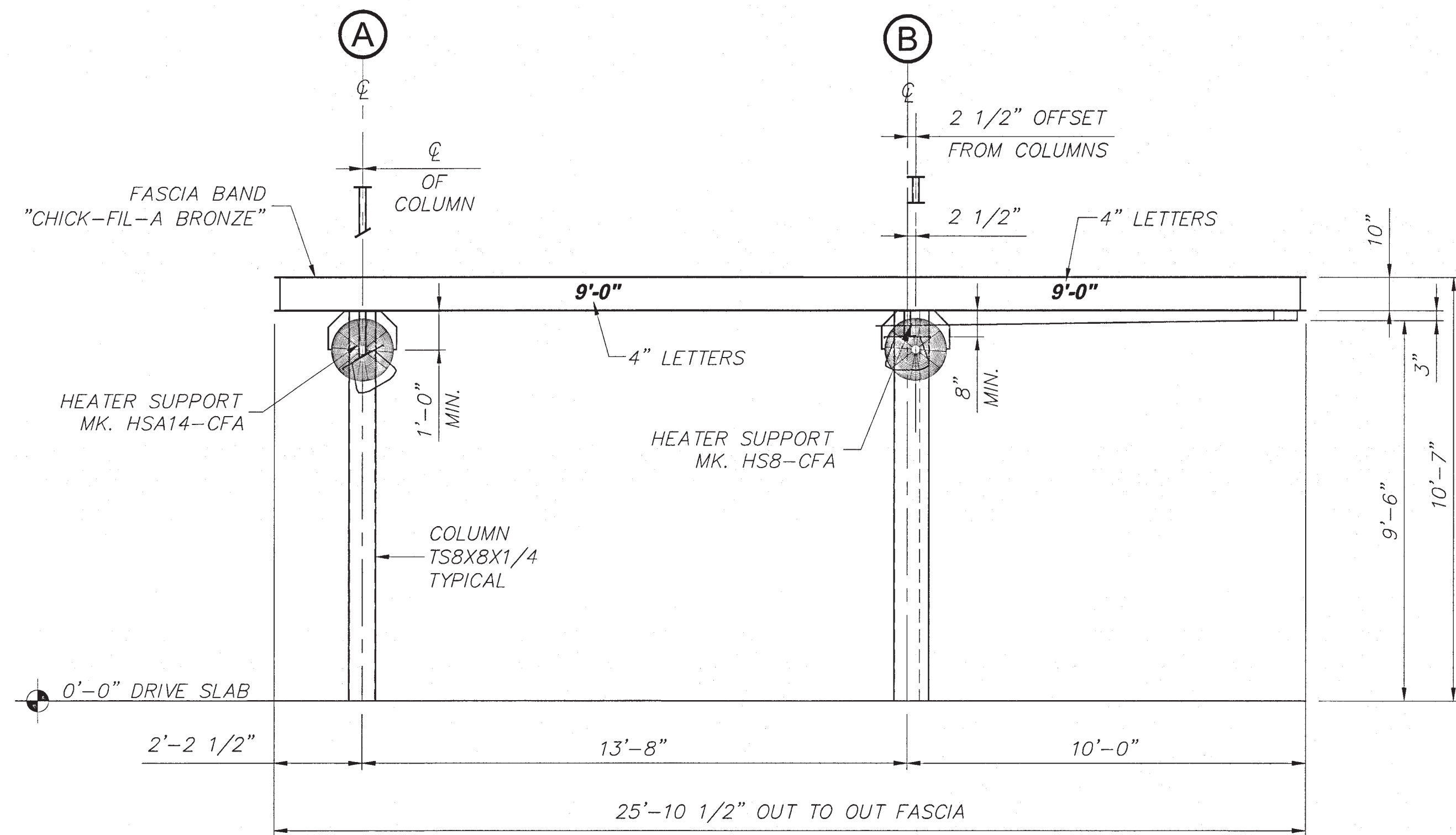
A14 DESIGN LOADS





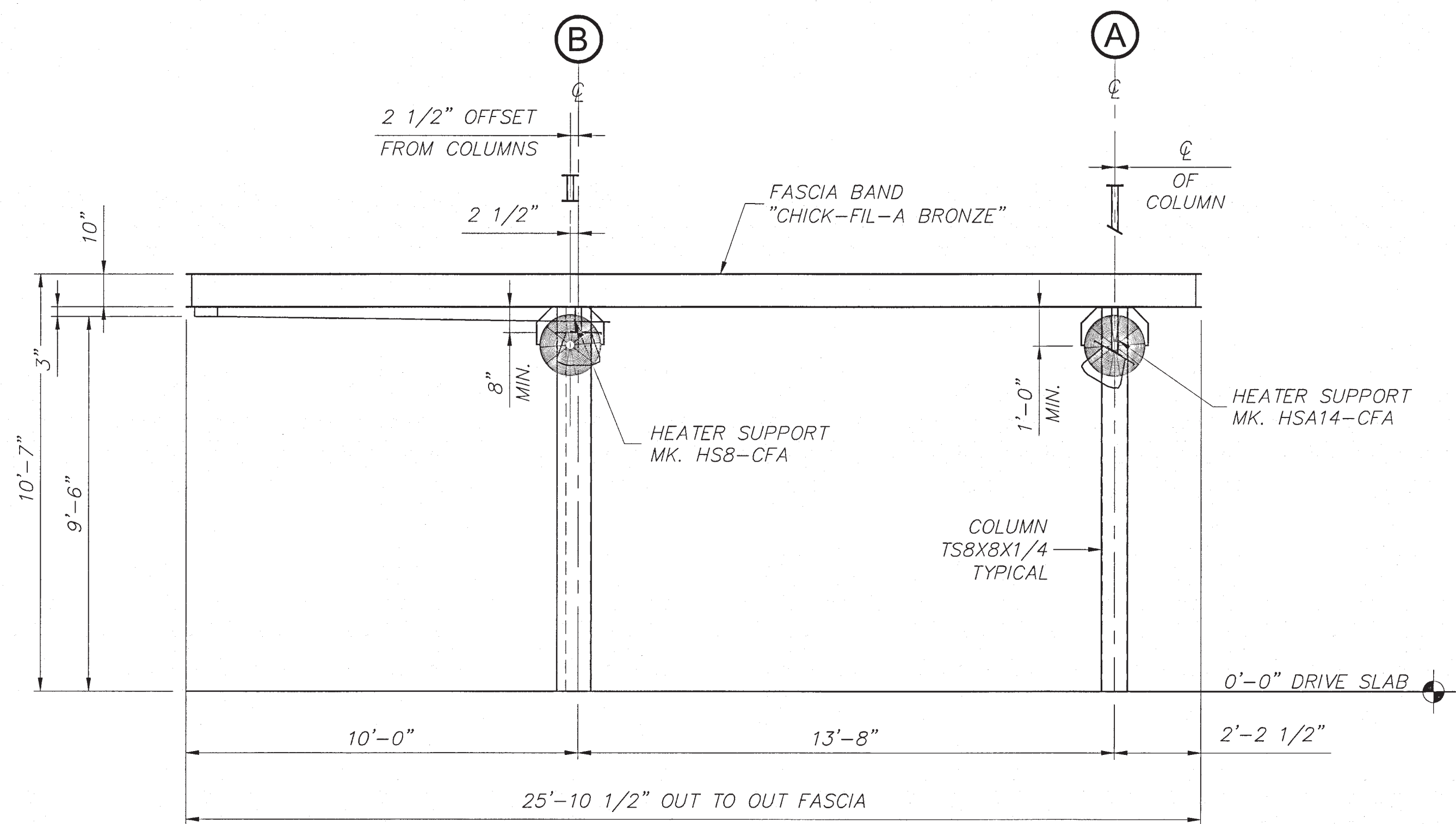
HI CANOPY SIDE ELEVATION

3/8" = 1'-0" FI-ABI, FI-EI, FI-LLI



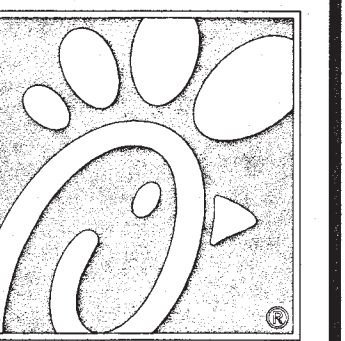
AI CANOPY END ELEVATION

3/8" = 1'-0" FI-ABI, FI-EI, FI-LLI



A9 CANOPY END ELEVATION

3/8" = 1'-0" FI-ABI, FI-EI, FI-LLI



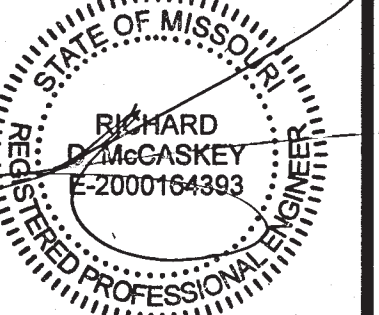
Chick-fil-A

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:

Mark Date By

Seal



SEP 07 2023

C.O.A. 2001015838

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SUPPLY, INC.  
120 FAIRVIEW  
ARLINGTON, TX. 76010  
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STORE  
Chick-fil-A #02859  
690 NW BLUE  
PARKWAY,  
LEE'S SUMMIT, MO  
64086

SHEET TITLE

CANOPY ELEVATION  
PLAN

25'-10 1/2" X 54'-1 1/2"

Job No.: LSC: 75966

Store : 02859

Date : 8.30.23

Drawn By : RED

Checked By: RM

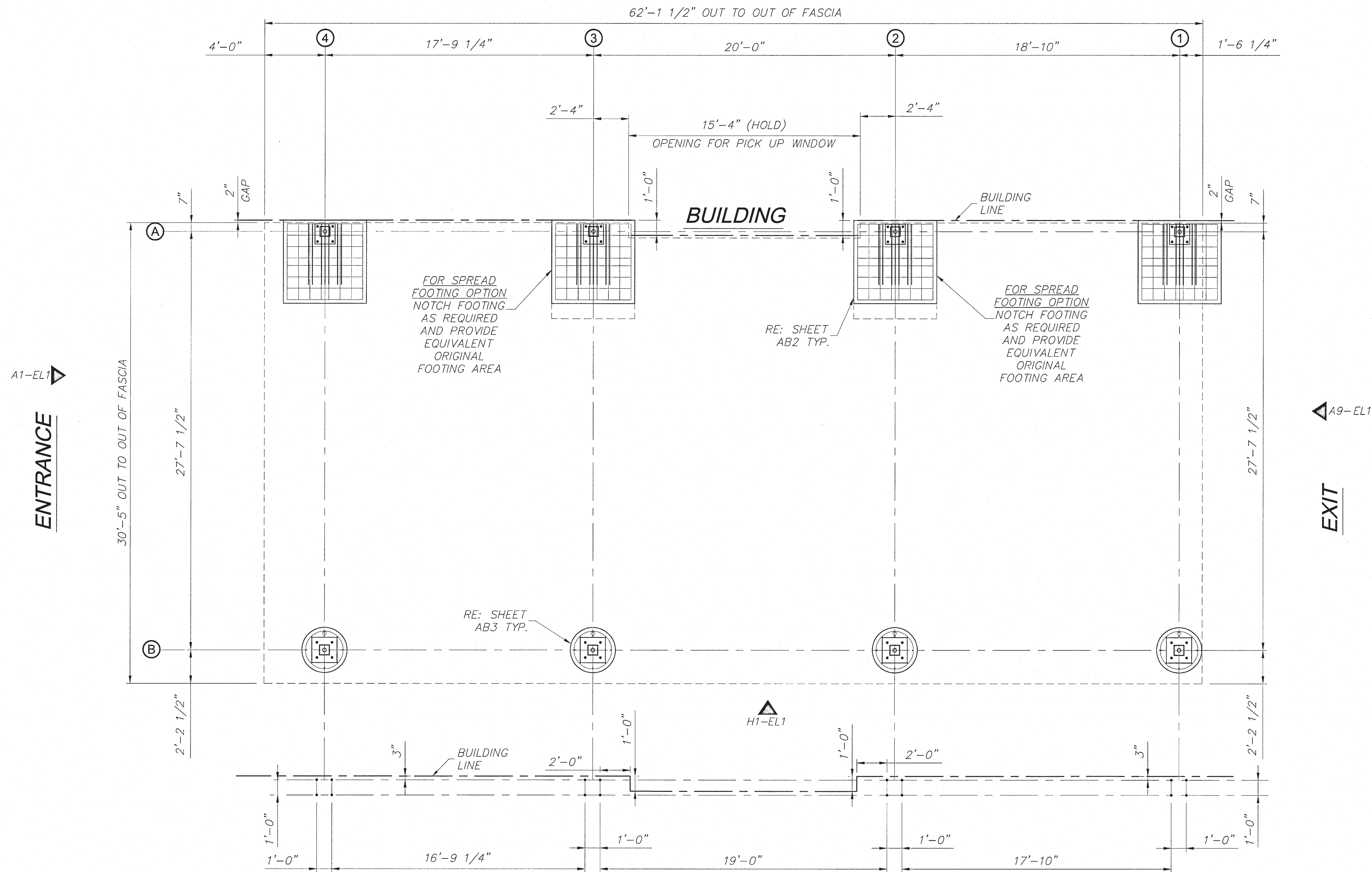
Sheet

F2FC-7  
ELI OF 1









FI								COLUMN AND FOOTING LOCATIONS							
1/4" = 1'-0"															
<div>1. ALL FOUNDATION WORK BY OTHERS AND SUBJECT TO LOCAL APPROVAL.</div> <div>2. THE FOUNDATION DESIGN IS BASED UPON SECTION 1807.3.2.2-IBC 2018 EDITION . THE DESIGN CRITERIA SELECTED ASSUMES: SITE CLASS D MATERIAL OR BETTER, SOIL BEARING CAPACITY OF 1,500 p.s.f. AND A PASSIVE SOIL PRESSURE OF 100 p.s.f. PER FOOT OF DEPTH.</div> <div>3. DRILLED SHAFT FOOTINGS SHALL BE INSTALLED PER ACI STD. 336.</div> <div>4. CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM TO ACI STANDARD 318-14 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."</div> <div>5. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE (F'C) AT THE END OF 28 DAYS SHALL BE 3,000 PSI MIN.</div> <div>6. REINFORCING STEEL SHALL BE GRADE 60 AND CONFORM TO ASTM A615 LATEST REVISION.</div> <div>7. DETAILING, FABRICATION AND PLACEMENT OF REINFORCING BARS SHALL COMPLY WITH ACI 315, ACI 318 AND CRSI STANDARDS.</div> <div>8. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554-GR36.</div> <div>9. LANE IS NOT RESPONSIBLE FOR FOOTING POURED PRIOR TO PERMITTING.</div> <div>10. FOOTINGS ARE DESIGNED TO BE CONSTRAINED AT THE TOP BY A 6" SLAB. IF THEY ARE NOT, PLEASE NOTIFY LANE SUPPLY CO.</div> <div>11. POUR FOOTINGS TO SAME TOP ELEVATION.</div> <div>12. USE MASTER FLOW 928 NON-SHRINK GROUT OR EQUIVALENT F'm=5000 p.s.i.</div> <div>13. G.C. TO ENSURE THAT FOOTINGS DO NOT INTERFERE WITH UNDERGROUND UTILITIES</div>				<div>1. TOP OF ALL CANOPY FOOTINGS ARE TO BE POURED A MINIMUM OF 24" BELOW FINISHED GRADE OR AS REQUIRED BY LOCAL CODES AND ORDINANCES.</div> <div>2. IT IS THE OWNERS RESPONSIBILITY TO CONVEY TO ALL CONTRACTORS THAT IT IS THEIR RESPONSIBILITY TO INSURE THAT THE SITE IS PROPERLY EXCAVATED AND GRADED. DURING CONCRETE FORMING PRIOR TO AND AFTER THE POUR, THE CONCRETE SHOULD BE CHECKED FOR PROPER ELEVATION, SQUARE AND CORRECT DIMENSIONS.</div> <div>3. MEASUREMENTS FOR ANCHOR BOLTS ARE EXACT AND SHOULD BE RECHECKED TO INSURE PROPER LOCATION.</div> <div>4. CORRECTION OF LOCATION, OF ELEVATION AND OF DIMENSIONAL ERRORS MUST BE MADE PRIOR TO THE ARRIVAL OF THE ERECTION CREW AND PRIOR TO THE ERECTION OF THE STRUCTURE.</div> <div>5. AFTER THE FORMS HAVE BEEN REMOVED, ALL TRENCHES, HOLES AND UNEVEN SITE CONDITIONS MUST BE LEVELED TO INSURE A SAFE WORKING AND ACCESS AREA ACCEPTABLE TO LOCAL, STATE, FEDERAL AND OSHA AGENCIES.</div>				<div>VERY IMPORTANT:</div> <div>AFTER FOOTINGS ARE POURED PLEASE PROVIDE LANE CO. WITH THE FOOTING ELEVATIONS ON THE ELEVATION SHEET ATTACHED.</div> <div></div>				<div>DEAD LOAD = 3 p.s.f.(DECK + LIGHTS) + WEIGHT OF STRUCTURAL COMPONENTS</div> <div>LIVE LOAD = 20 p.s.f.</div> <div>SNOW LOAD = 20 p.s.f.</div> <div>WIND LOAD V<sub>ULT</sub> = 116 m.p.h. EXP. C</div> <div>WIND V<sub>ASD</sub> = 90 m.p.h. EXP. C</div> <div>BLDG CODE = MISSOURI BUILDING CODE 2018</div> <div>ADOPTING 2018 INTERNATIONAL BUILDING CODE</div> <div>EQUIVALENT LATERAL FORCE PROCEDURE</div> <div>LATERAL FORCE RESISTING SYSTEM = CANTILEVERED COLUMN SYSTEM- ORDINARY STEEL MOMENT FRAME</div> <div>P<sub>f</sub> = 20 p.s.f.</div> <div>C<sub>e</sub> = 1.2</div> <div>C<sub>t</sub> = 1.2</div> <div>I<sub>s</sub> = 1.0</div> <div>W = 4.92</div> <div>P<sub>d</sub> = 20.44</div> <div>SITE CLASS = D</div> <div>S<sub>s</sub> (0.2) = 0.099</div> <div>S<sub>1</sub> (1.0) = 0.068</div> <div>S<sub>D</sub>S = 0.11</div> <div>S<sub>D</sub>1 = 0.11</div> <div>F<sub>a</sub> = 1.60</div> <div>F<sub>v</sub> = 2.40</div> <div>R = 1.25</div> <div>IMPORTANCE FACTOR = 1.0</div> <div>RISK CATEGORY = II</div> <div>SEISMIC DESIGN CATEGORY = D</div> <div>C<sub>S</sub> = 0.084</div> <div>CONSTRUCTION TYPE = IIB</div> <div>OCCUPANCY CATEGORY = A2</div> <div>TOTAL SEISMIC BASE SHEAR BOTH DIRECTIONS = 1.43 KIPS</div>			
AI		FOUNDATION NOTES		A5		GENERAL NOTES		A9		FOOTING ELEVATIONS		A14		DESIGN LOADS	
N.T.S.				N.T.S.				N.T.S.				N.T.S.			

STORE

Chick-fil-A #02859

690 NW BLUE PKWY

LEE'S SUMMIT, MO

64086

SHEET TITLE

CANOPY FOOTING LOCATIONS

30'-5" X 62'-1 1/2"

Job No.: LSC: 75967

Store : 02859

Date : 09.01.23

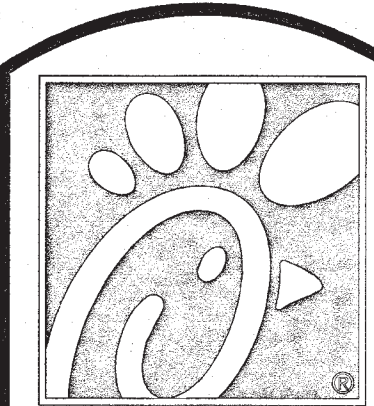
Drawn By : KLM

Checked By: RM

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OMD-I

ABI OF 3

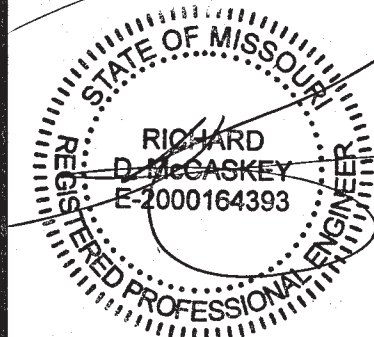


Chick-fil-A

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:  
Mark Date By

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SEP 07 2023

C.O.A. 2001015838

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120 FAIRVIEW  
ARLINGTON, TX. 76010  
(817) 261-9116

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STORE  
Chick-fil-A #02859  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO  
64086

SHEET TITLE

CANOPY FOOTING  
LOCATIONS

30-5" X 62'-1 1/2"

Job No.: LSC: 75967  
Store : 02859  
Date : 09.01.23  
Drawn By : KLM  
Checked By: RM

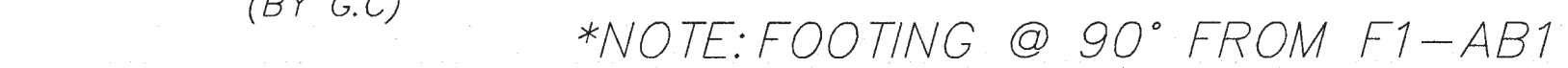
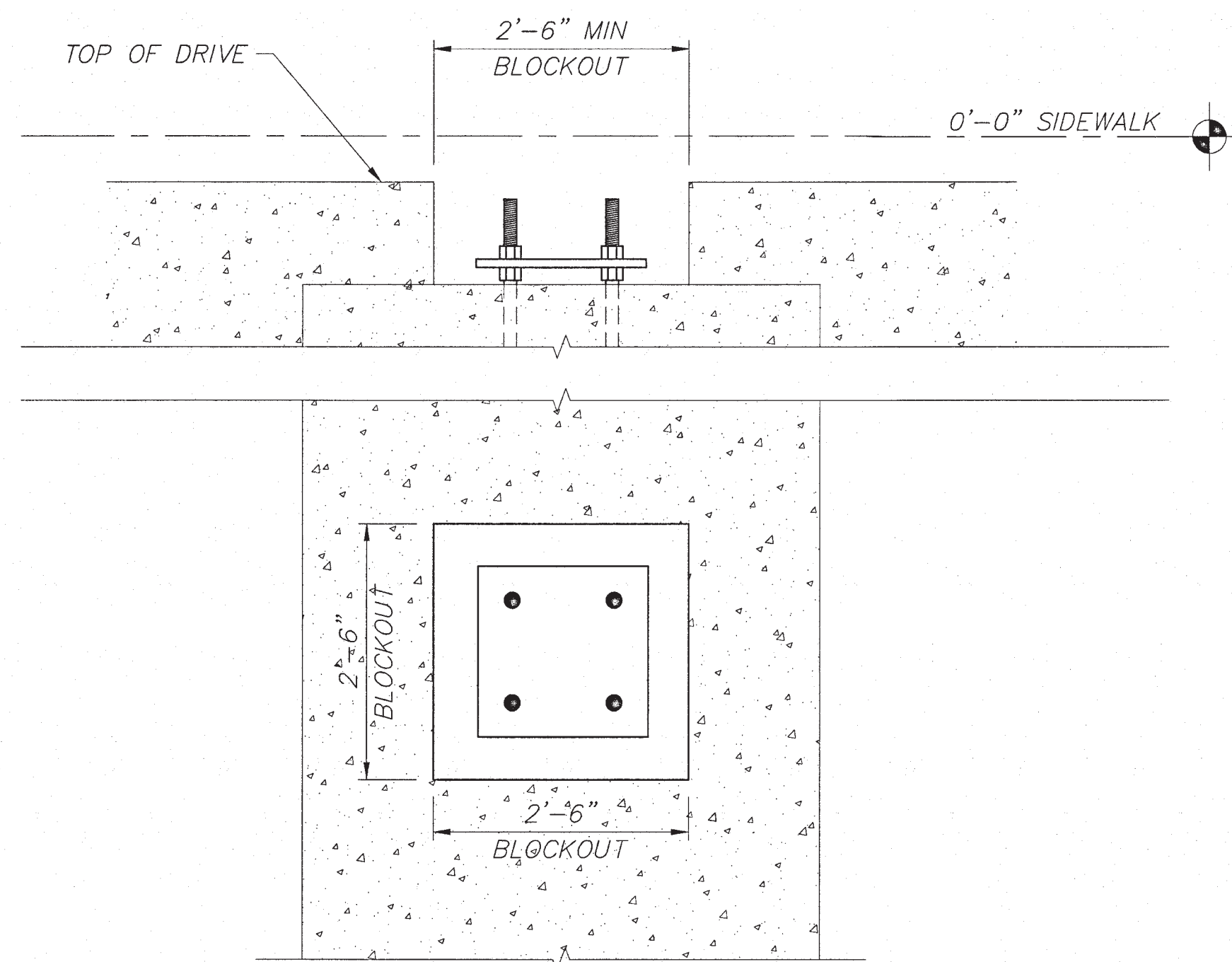
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OMD-1  
ABI OF 3










Seal



The seal is circular with a dotted border. The text "STATE OF MISSOURI" is at the top, "REGISTERED PROFESSIONAL ENGINEER" is at the bottom, and "RICHARD D. MCCASKEY" and "E-2000164393" are in the center. The expiration date "SEP 07 2023" is at the bottom right.

**I A ME**  
**SUPPLY, INC.**  
120 FAIRVIEW  
ARLINGTON, TX. 76010  
(817) 261-9116

STORE  
Chick-fil-A #02859  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO  
64086

## CANOPY FOOTINGS

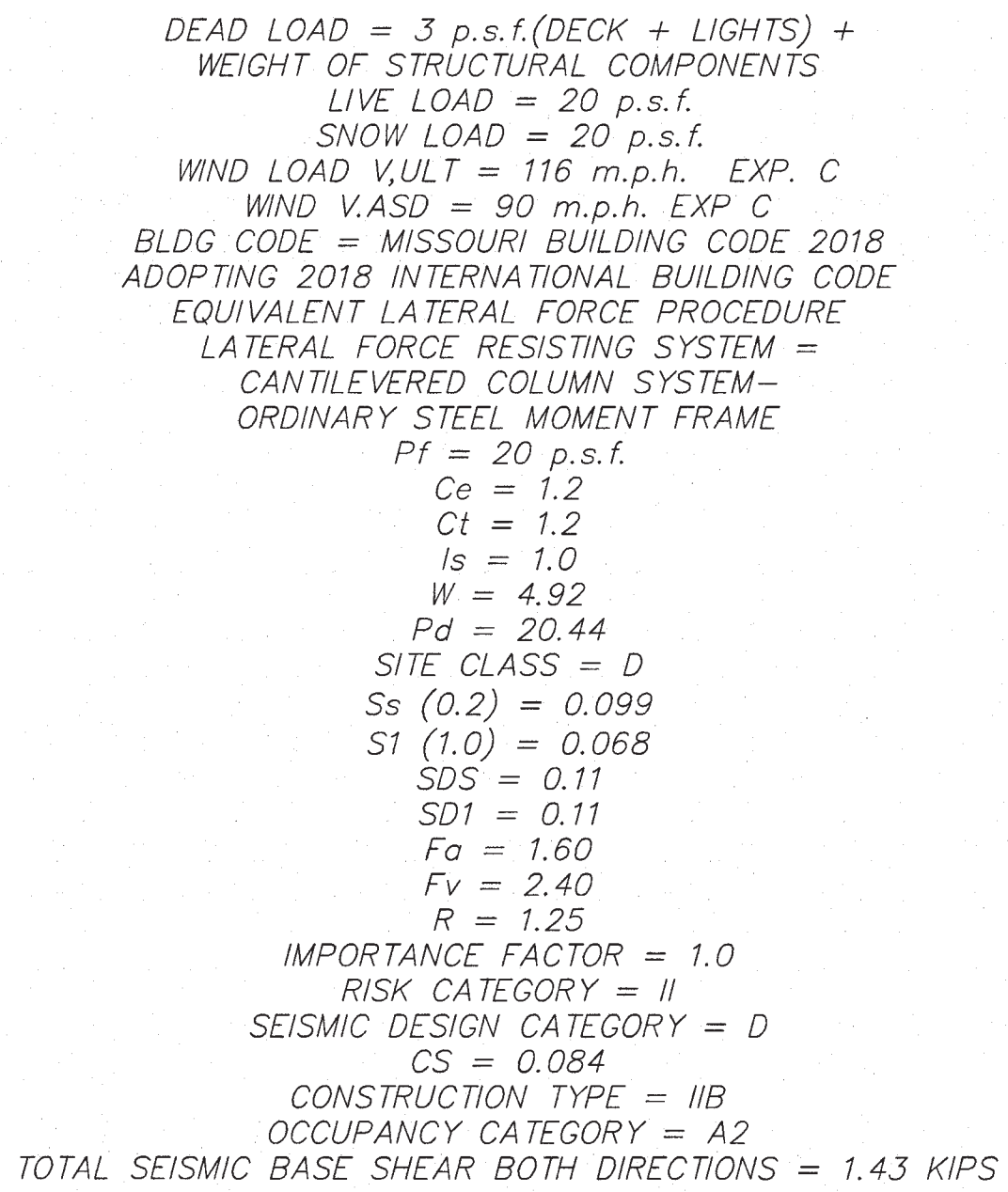
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00 01 03

Date : 09.01.23

Drawn By : REM  
Checked By: RM

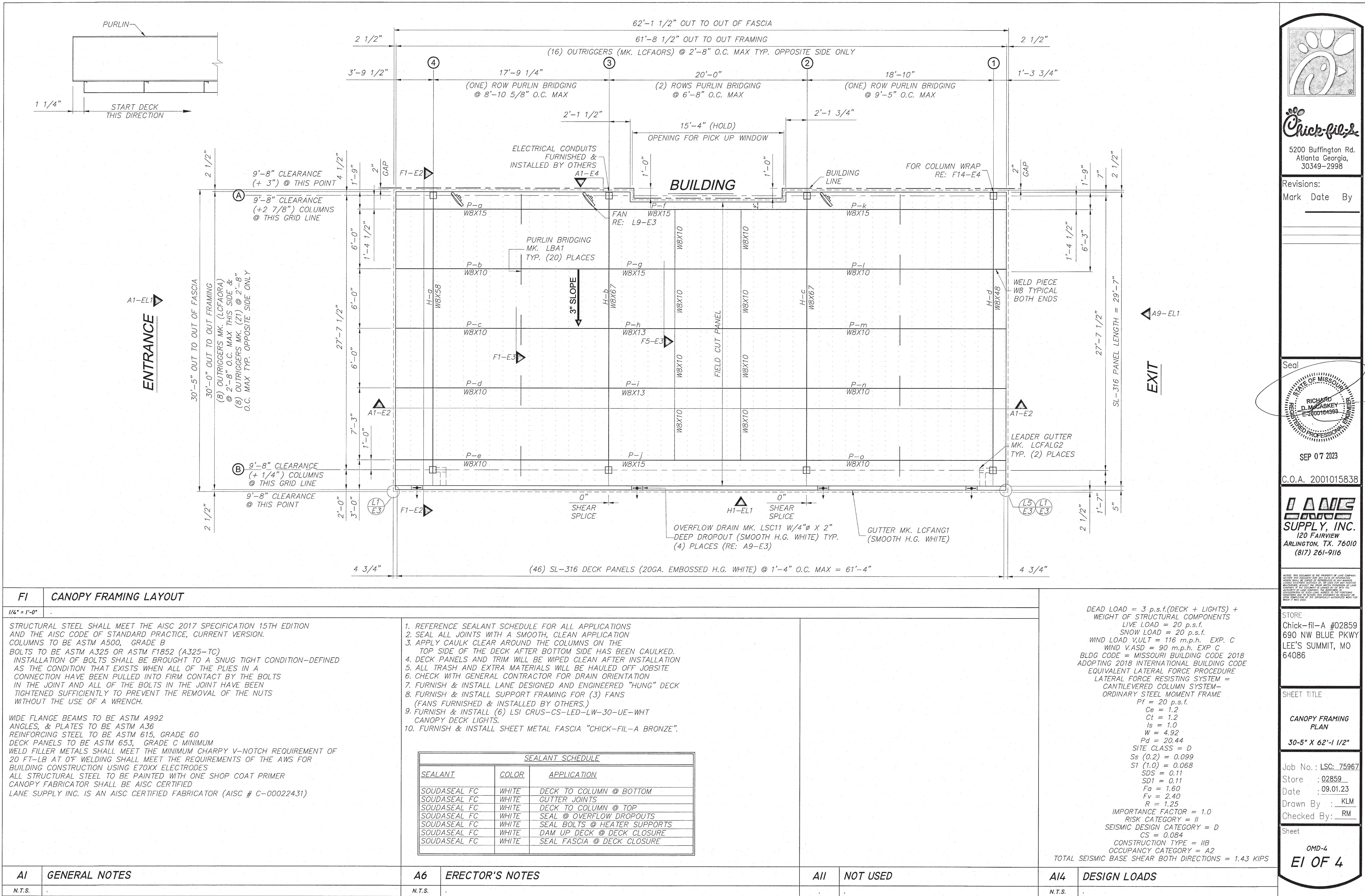
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OMD-3  
AB3 OF 3



<i>AI</i>	<i>ANCHOR BOLT DETAIL</i>	<i>A6</i>	<i>NOT USED</i>	<i>A10</i>	<i>NOT USED</i>	<i>A14</i>	<i>DESIGN LOADS</i>
<i>N.T.S.</i>	<i>FI-AB2, FII-AB2</i>					<i>N.T.S.</i>	





5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

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STORE  
Chick-fil-A #02859  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO  
64086

SHEET TITLE  
  
CANOPY FRAMING  
PLAN  
  
30-5" X 62'-1 1/2"

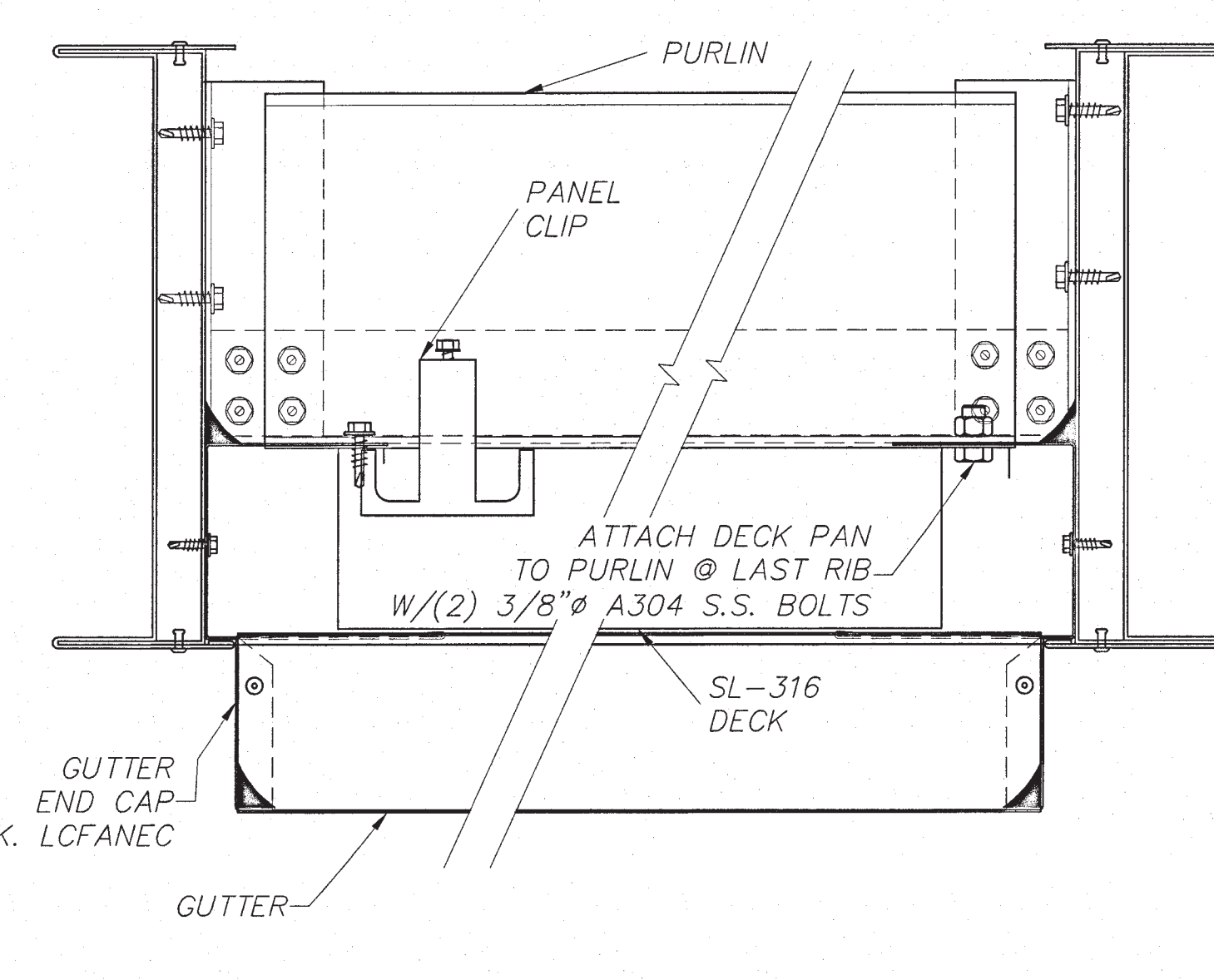
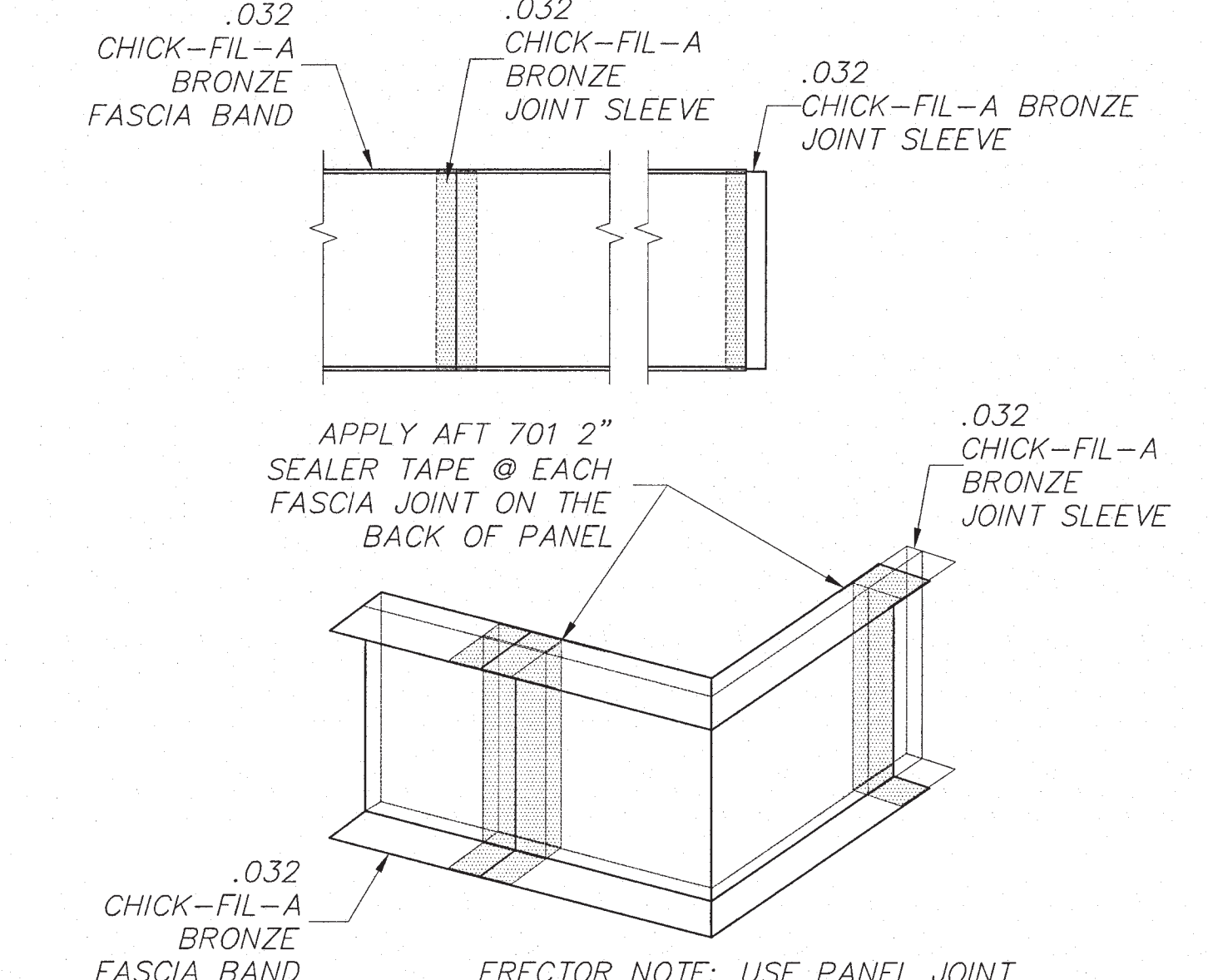
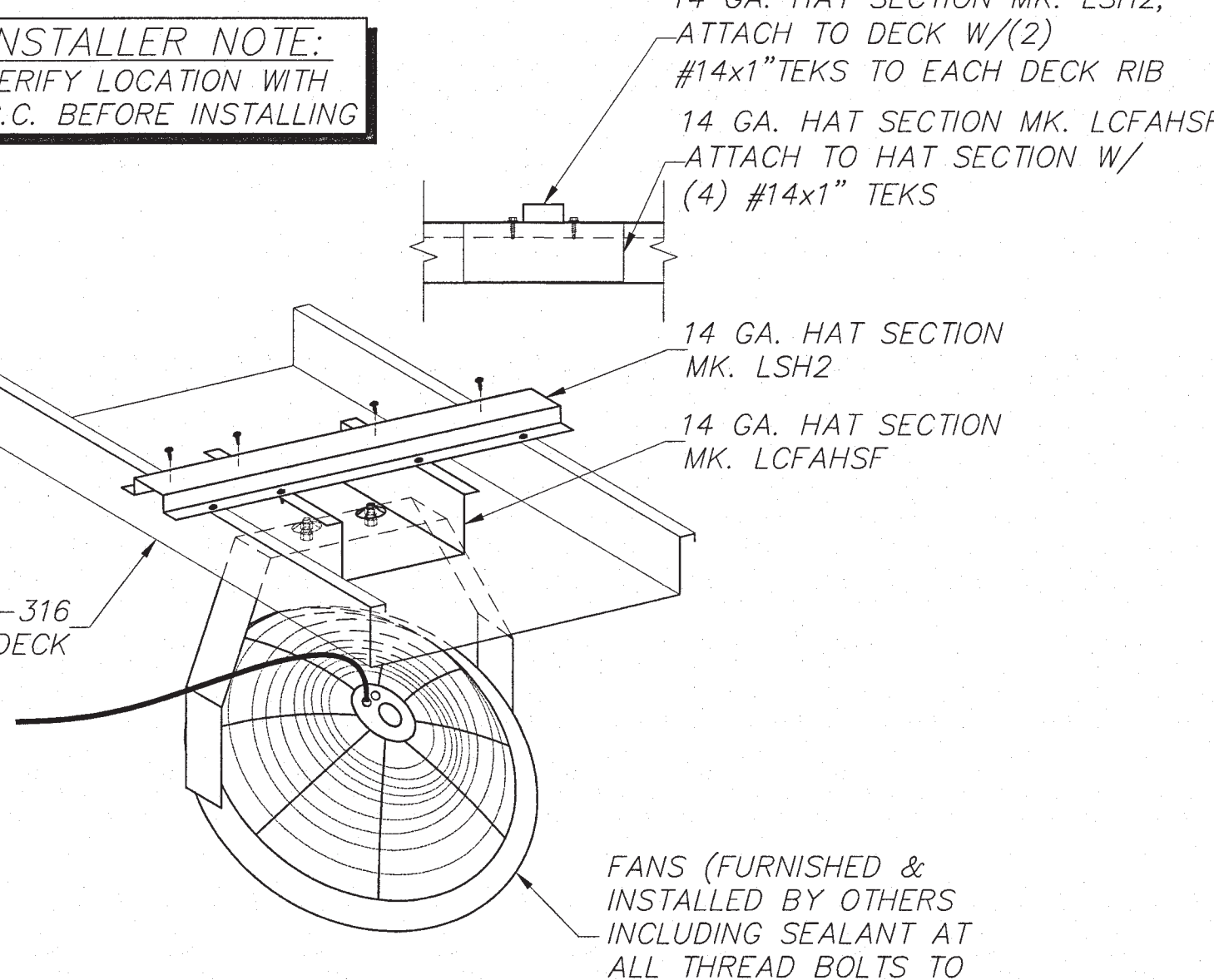
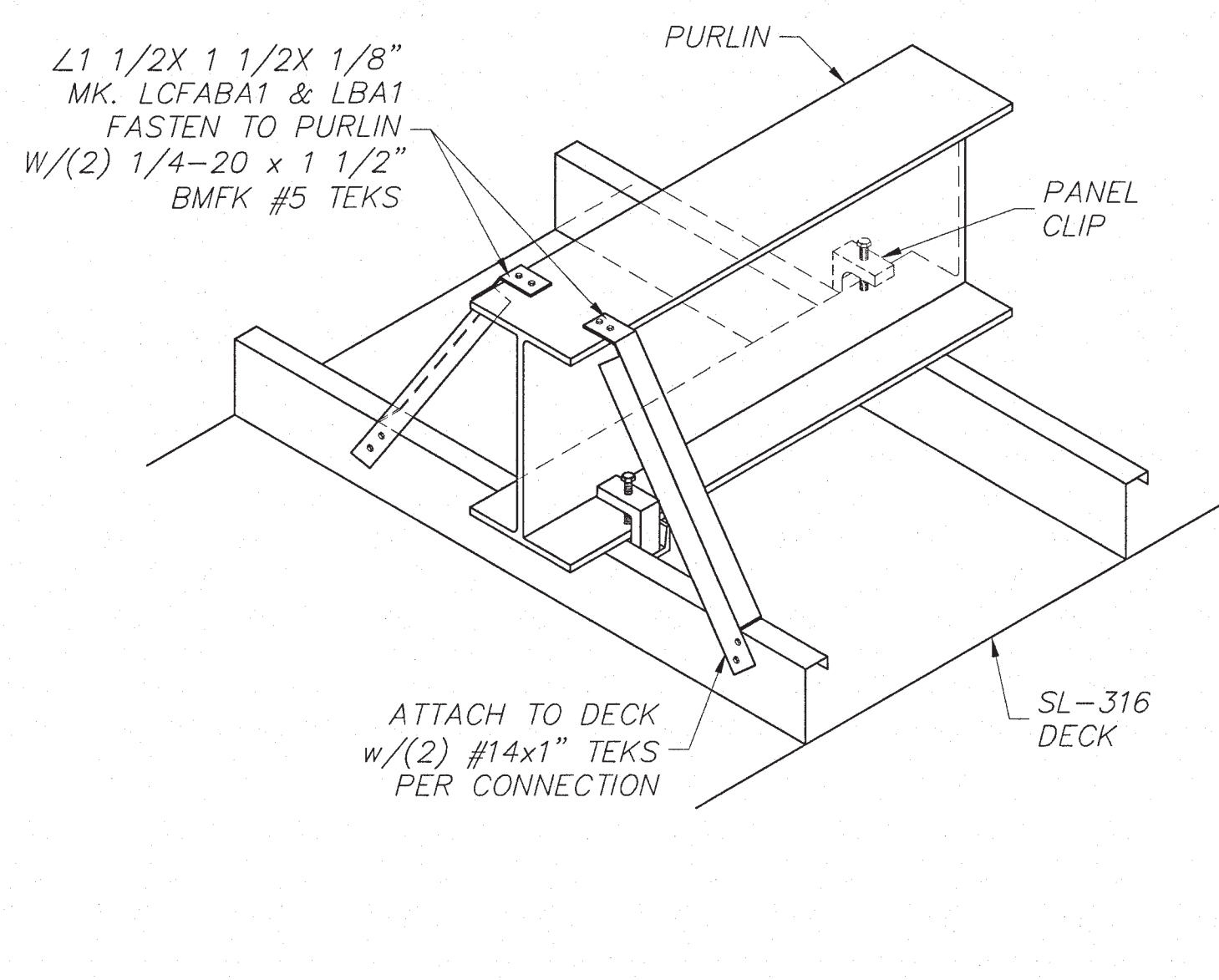
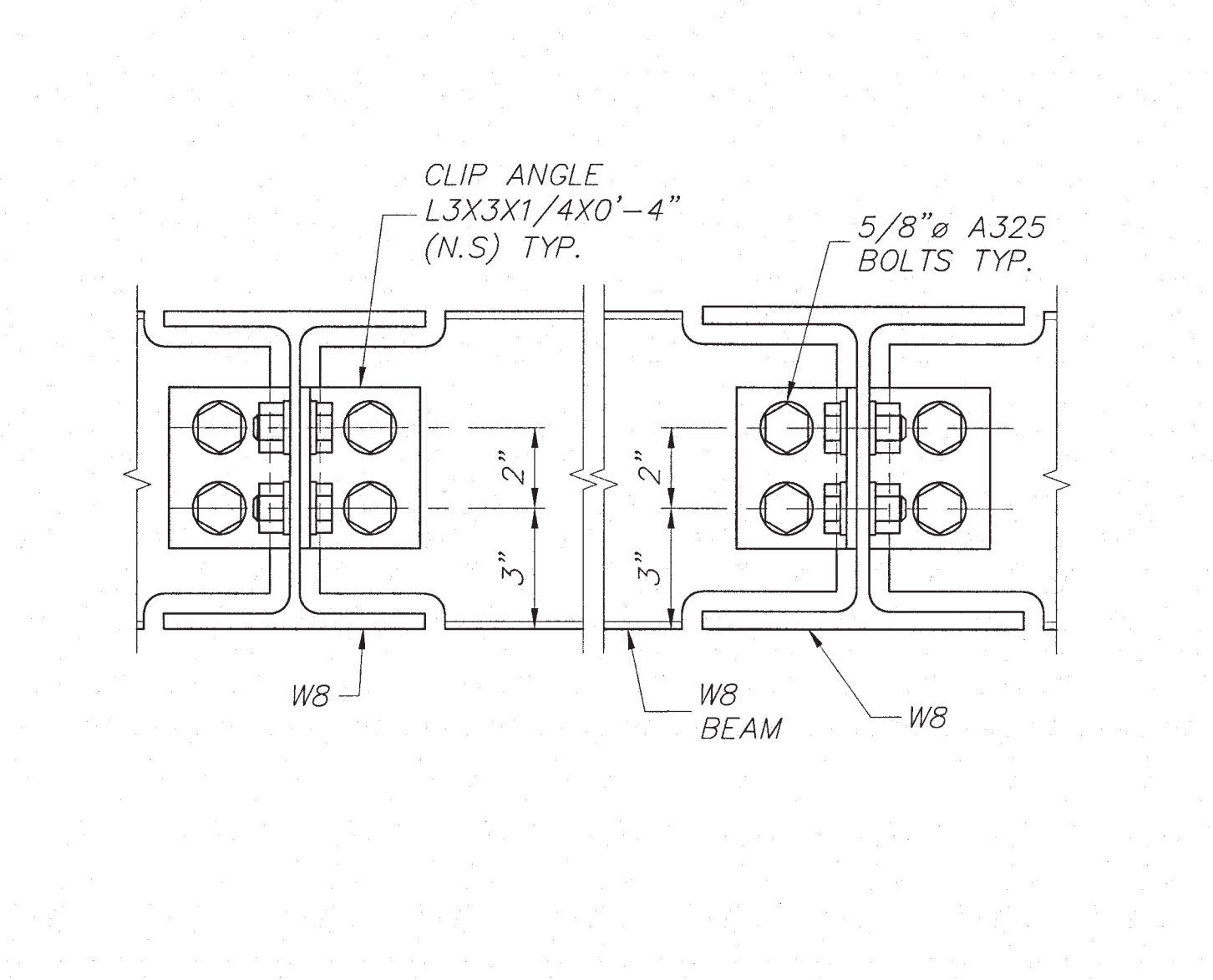
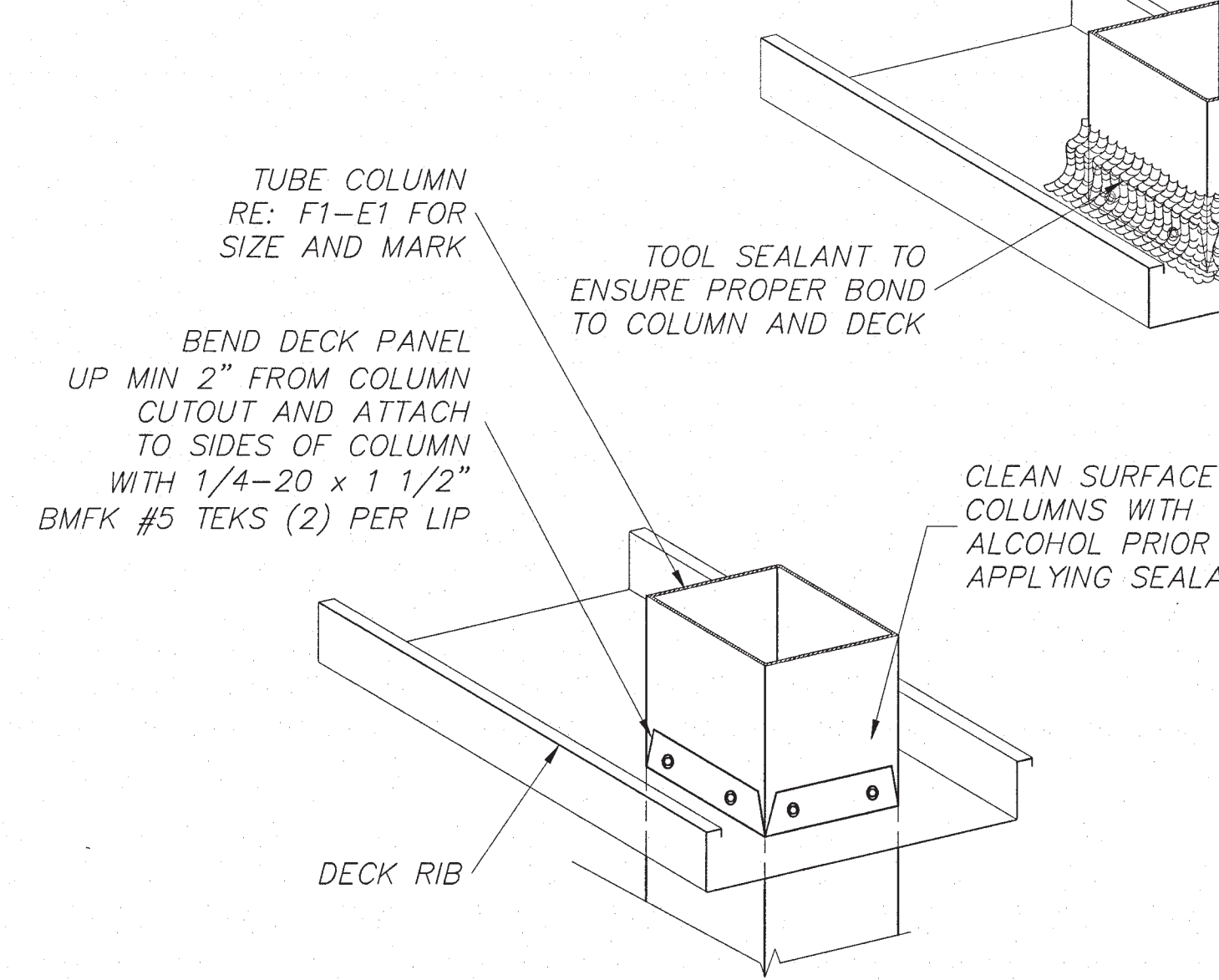
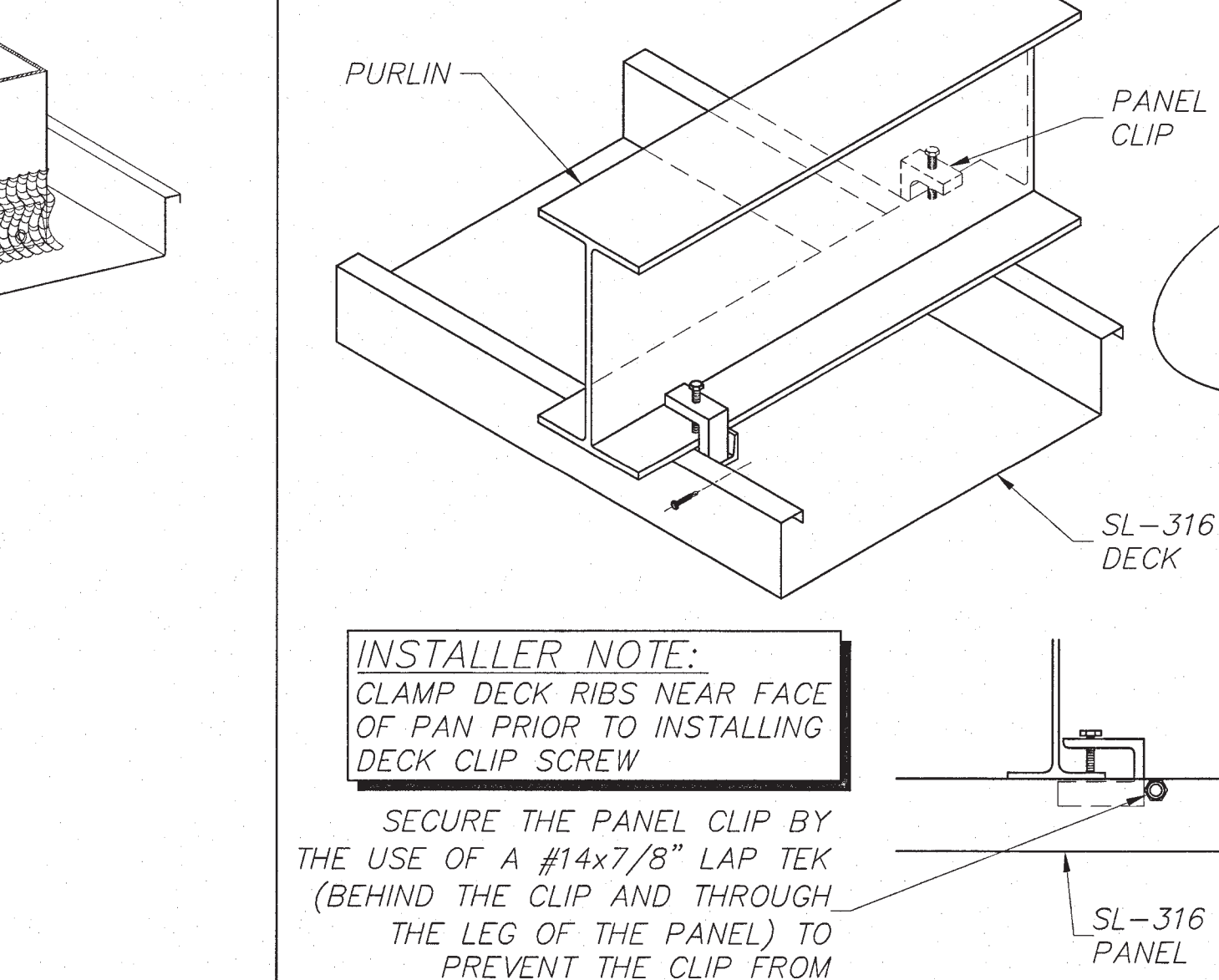
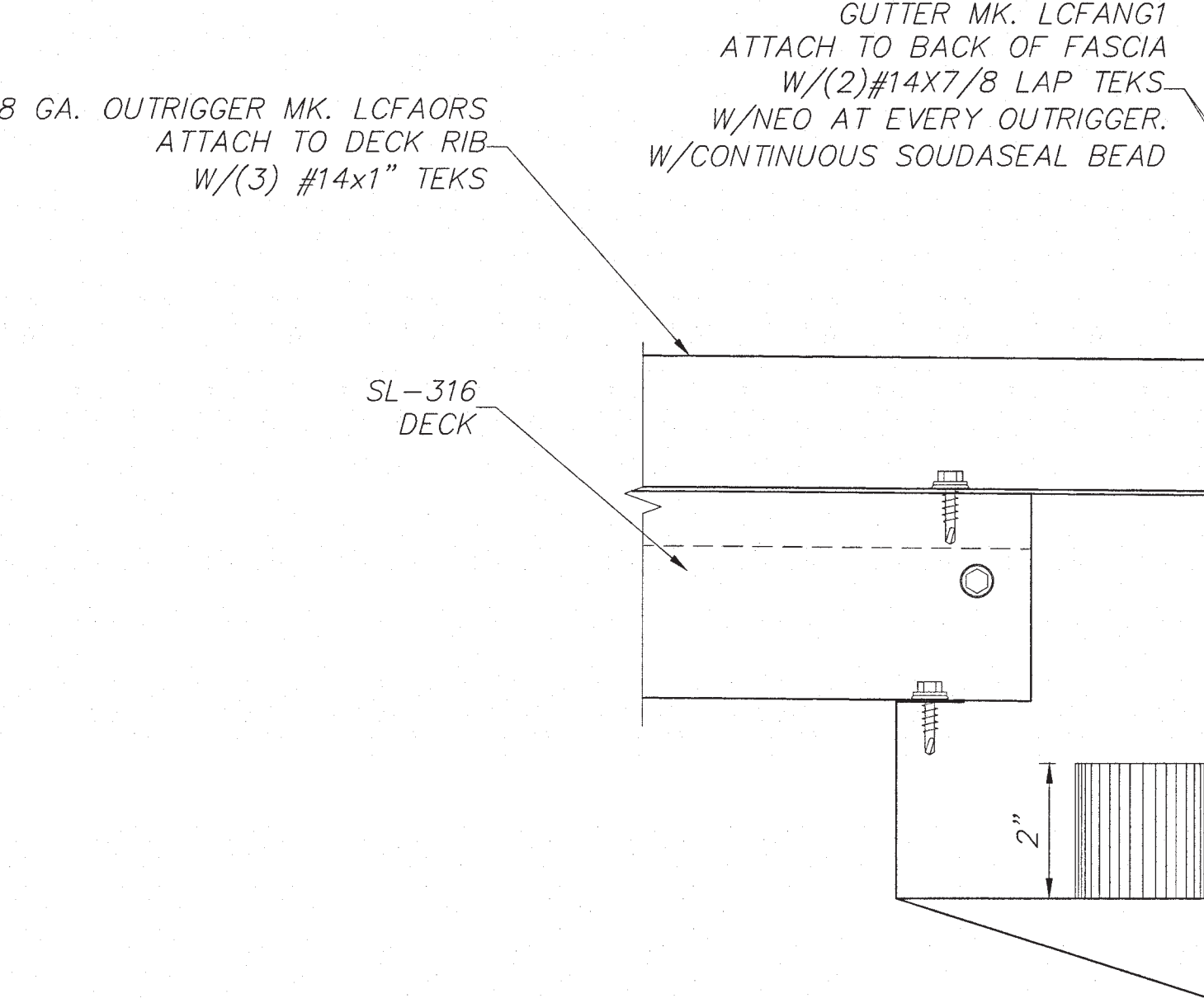
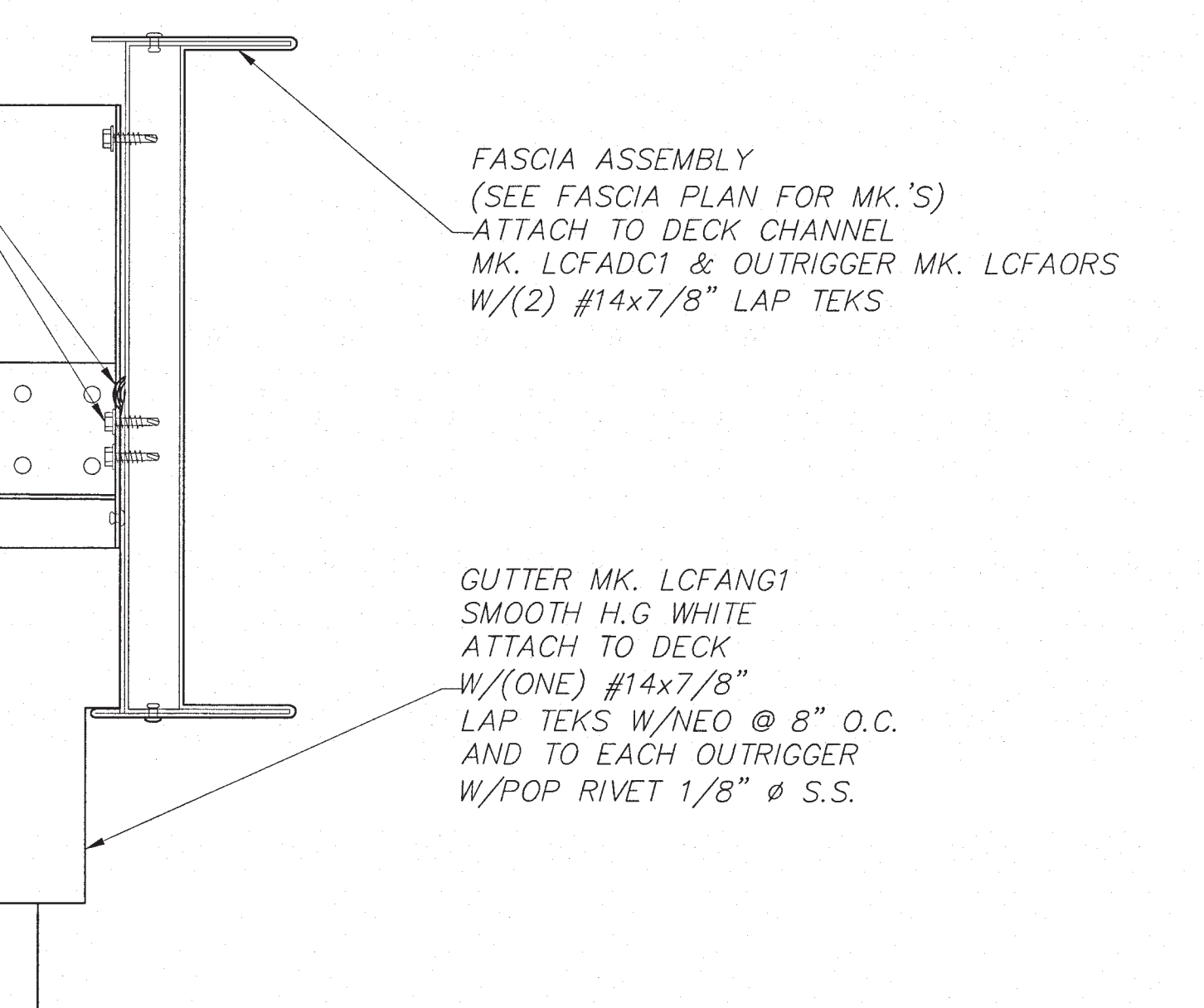
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Store : 02859  
Date : 09.01.23  
Drawn By : KLM  
Checked By: RM

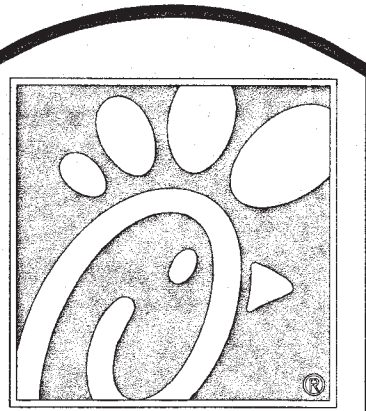
Sheet  
OMD-4  
EI OF 4







 <p>PURLIN</p> <p>PANEL CLIP</p> <p>ATTACH DECK PAN TO PURLIN @ LAST RIB W/(2) 3/8" A304 S.S. BOLTS</p> <p>SL-316 DECK</p> <p>GUTTER END CAP MK. LCFANEC</p> <p>GUTTER</p>		 <p>.032 CHICK-FIL-A BRONZE FASCIA BAND</p> <p>.032 CHICK-FIL-A BRONZE JOINT SLEEVE</p> <p>.032 CHICK-FIL-A BRONZE JOINT SLEEVE</p> <p>APPLY AFT 701 2" SEALER TAPE @ EACH FASCIA JOINT ON THE BACK OF PANEL</p> <p>.032 CHICK-FIL-A BRONZE JOINT SLEEVE</p> <p>.032 CHICK-FIL-A BRONZE FASCIA BAND</p> <p>ERECTOR NOTE: USE PANEL JOINT SLEEVES TO ALIGN FASCIA</p>		 <p>INSTALLER NOTE: VERIFY LOCATION WITH G.C. BEFORE INSTALLING</p> <p>14 GA. HAT SECTION MK. LSH2, ATTACH TO DECK W/(2) #14x1"TEKS TO EACH DECK RIB</p> <p>14 GA. HAT SECTION MK. LCFHASF, ATTACH TO HAT SECTION W/(4) #14x1" TEKS</p> <p>14 GA. HAT SECTION MK. LSH2</p> <p>14 GA. HAT SECTION MK. LCFHASF</p> <p>SL-316 DECK</p> <p>FANS (FURNISHED &amp; INSTALLED BY OTHERS INCLUDING SEALANT AT ALL THREAD BOLTS TO BRACKET)</p>		<p>L13</p> <p>NOT USED</p>	
L1	DETAIL AT SIDES OF CANOPY	L5	DETAIL AT FASCIA CORNER AND SPLICE	L9	SECTION AT FAN SUPPORT	L13	NOT USED
N.T.S.	AI-E2, FI-EI	N.T.S.	FI-EI	N.T.S.	FI-EI		
 <p>L1 1/2X 1 1/2X 1/8" MK. LCFABA1 &amp; LBA1 FASTEN TO PURLIN W/(2) 1/4-20 x 1 1/2" BMFK #5 TEKS</p> <p>PURLIN</p> <p>PANEL CLIP</p> <p>ATTACH TO DECK W/(2) #14x1" TEKS PER CONNECTION</p> <p>SL-316 DECK</p>		 <p>CLIP ANGLE L3X3X1/4X0'-4" (N.S.) TYP.</p> <p>5/8" A325 BOLTS TYP.</p> <p>W8 BEAM</p> <p>W8</p> <p>W8</p> <p>W8</p>		 <p>TUBE COLUMN RE: F1-E1 FOR SIZE AND MARK</p> <p>BEND DECK PANEL UP MIN 2" FROM COLUMN CUTOFF AND ATTACH TO SIDES OF COLUMN WITH 1/4-20 x 1 1/2" BMFK #5 TEKS (2) PER LIP</p> <p>TOOL SEALANT TO ENSURE PROPER BOND TO COLUMN AND DECK</p> <p>CLEAN SURFACE ON COLUMNS WITH ALCOHOL PRIOR TO APPLYING SEALANT.</p> <p>DECK RIB</p>		 <p>PURLIN</p> <p>PANEL CLIP</p> <p>SL-316 DECK</p> <p>SL-316 PANEL</p> <p>INSTALLER NOTE: CLAMP DECK RIBS NEAR FACE OF PAN PRIOR TO INSTALLING DECK CLIP SCREW</p> <p>SECURE THE PANEL CLIP BY THE USE OF A #14x7/8" LAP TEK (BEHIND THE CLIP AND THROUGH THE LEG OF THE PANEL) TO PREVENT THE CLIP FROM RELEASING FROM THE PURLIN.</p>	
FI	SECTION AT PURLIN BRIDGING	F5	SECTION AT PURLIN BRIDGING	F9	DETAIL AT DECK SUPPORT	FI4	DETAIL AT DECK CLIP
N.T.S.	FI-EI	N.T.S.	FI-EI	1 1/2" = 1'-0"	FI-E2	N.T.S.	AI-E2, FI-E2
 <p>GUTTER MK. LCFANG1 ATTACH TO BACK OF FASCIA W/(2)#14X7/8 LAP TEKS W/NEO AT EVERY OUTRIGGER. W/CONTINUOUS SODASEAL BEAD</p> <p>18 GA. OUTRIGGER MK. LCFAORS ATTACH TO DECK RIB W/(3) #14x1" TEKS</p> <p>SL-316 DECK</p> <p>FASCIA ASSEMBLY (SEE FASCIA PLAN FOR MK.'S) ATTACH TO DECK CHANNEL MK. LCFADC1 &amp; OUTRIGGER MK. LCFAORS W/(2) #14x7/8" LAP TEKS</p> <p>GUTTER MK. LCFANG1 SMOOTH H.G WHITE ATTACH TO DECK W/(ONE) #14x7/8" LAP TEKS W/NEO @ 8" O.C. AND TO EACH OUTRIGGER W/POP RIVET 1/8" S.S.</p>		 <p>OVERFLOW DIVERTER MK. LCFADVT ATTACH TO DECK W/(3) #14X1" TEKS</p> <p>DECK CHANNEL MK. LCFADC1 ATTACH TO DECK W/#14X1" TEKS</p> <p>4"Ø DROP-OUT 2" TALL TURN UPSIDE DOWN W/(8) POP RIVETS 1/8"Ø S.S. TO GUTTER</p> <p>GUTTER END CAP MK. LCFACL/R SMOOTH H.G WHITE ATTACH TO GUTTER W/(2) POP RIVETS 1/8"Ø S.S. SEAL W/SODASEAL</p> <p>DRAIN COVER MK. LSC11 ATTACH TO GUTTER W/(8) #8x3/4" MOD TRUSS S.S. PLAIN</p> <p>GUTTER</p> <p>LIGHT DIVERTER</p>		<p>DEAD LOAD = 3 p.s.f.(DECK + LIGHTS) + WEIGHT OF STRUCTURAL COMPONENTS</p> <p>LIVE LOAD = 20 p.s.f.</p> <p>SNOW LOAD = 20 p.s.f.</p> <p>WIND LOAD VULT = 116 m.p.h. EXP. C</p> <p>WIND V.ASD = 90 m.p.h. EXP. C</p> <p>BLDG CODE = MISSOURI BUILDING CODE 2018</p> <p>ADOPTING 2018 INTERNATIONAL BUILDING CODE</p> <p>EQUIVALENT LATERAL FORCE PROCEDURE</p> <p>LATERAL FORCE RESISTING SYSTEM = CANTILEVERED COLUMN SYSTEM-ORDINARY STEEL MOMENT FRAME</p> <p>Pf = 20 p.s.f.</p> <p>Ce = 1.2</p> <p>Ct = 1.2</p> <p>Is = 1.0</p> <p>W = 4.92</p> <p>Pd = 20.44</p> <p>SITE CLASS = D</p> <p>Ss (0.2) = 0.099</p> <p>S1 (1.0) = 0.068</p> <p>SDS = 0.11</p> <p>SD1 = 0.11</p> <p>Fa = 1.60</p> <p>Fv = 2.40</p> <p>R = 1.25</p> <p>IMPORTANCE FACTOR = 1.0</p> <p>RISK CATEGORY = II</p> <p>SEISMIC DESIGN CATEGORY = D</p> <p>CS = 0.084</p> <p>CONSTRUCTION TYPE = IIB</p> <p>OCCUPANCY CATEGORY = A2</p> <p>TOTAL SEISMIC BASE SHEAR BOTH DIRECTIONS = 1.43 KIPS</p>			
AI	DETAIL AT END OF CANOPY	A9	DETAIL OF OVERFLOW DRAIN	A14	DESIGN LOADS	A14	DESIGN LOADS
N.T.S.	FI-EI, FI-E2	N.T.S.	FI-EI	N.T.S.		N.T.S.	



Chick-fil-A

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:  
Mark Date By

Seal

STATE OF MISSOURI  
RICHARD D. McCASKEY  
E-2000164393  
LICENSED PROFESSIONAL ENGINEER

SEP 07 2023

C.O.A. 2001015838

LANE  
SUPPLY, INC.  
120 FAIRVIEW  
ARLINGTON, TX. 76010  
(817) 261-9116

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STORE  
Chick-fil-A #02859  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO  
64086

SHEET TITLE

CANOPY SECTIONS

30'-5" X 62'-1 1/2"

Job No.: LSC: 75967

Store : 02859

Date : 09.01.23

Drawn By : KLM

Checked By: RM

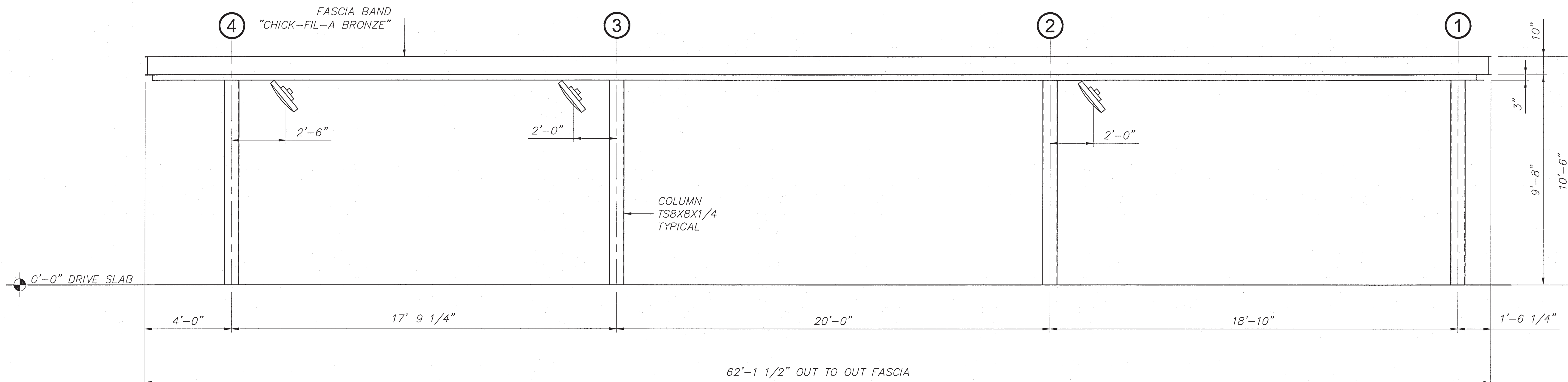
Sheet

OMD-6  
E3 OF 4



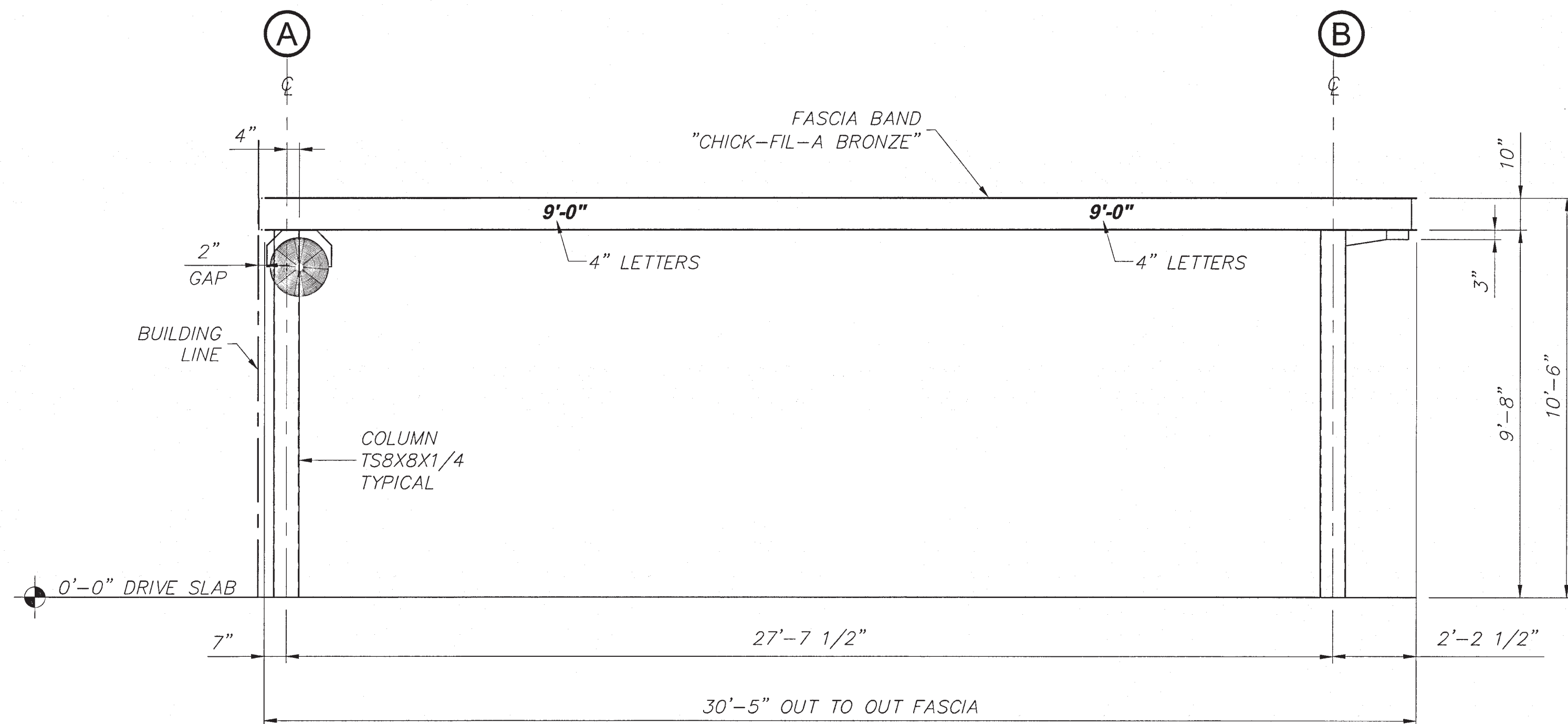






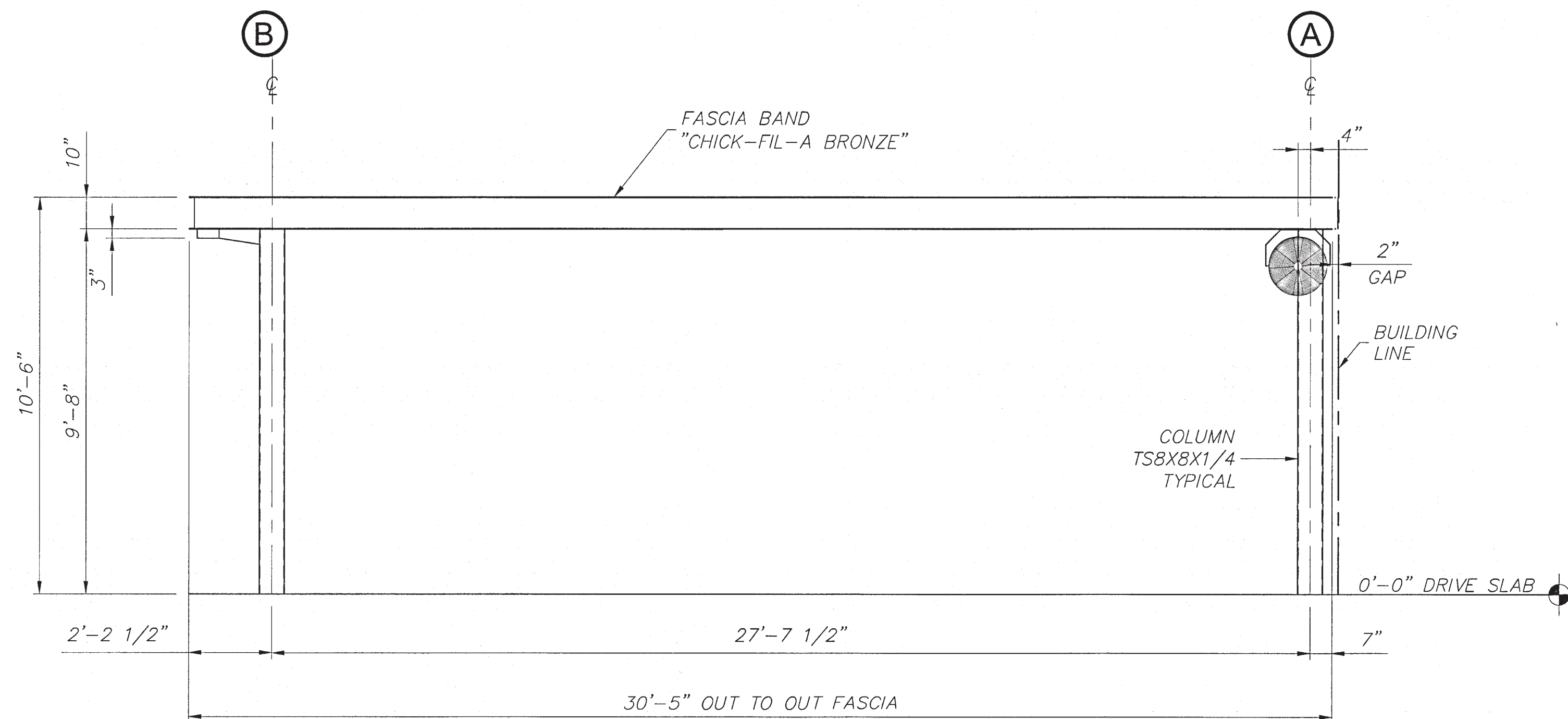
HI CANOPY SIDE ELEVATION

3/8" = 1'-0" FI-ABI, FI-EI, FI-LLI



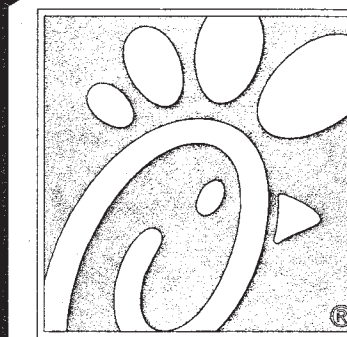
AI CANOPY END ELEVATION

3/8" = 1'-0" FI-ABI, FI-EI, FI-LLI



A9 CANOPY END ELEVATION

3/8" = 1'-0" FI-ABI, FI-EI, FI-LLI

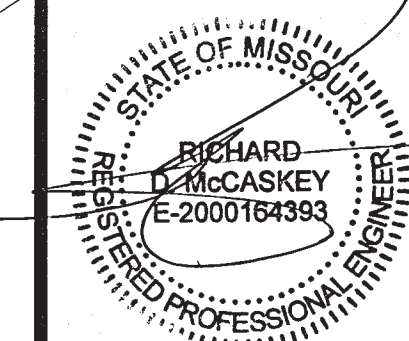


**Chick-fil-A**

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:  
Mark Date By

Seal



SEP 07 2023

C.O.A. 2001015838

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**SUPPLY, INC.**  
120 FAIRVIEW  
ARLINGTON, TX. 76010  
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STORE  
Chick-fil-A #02859  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO  
64086

SHEET TITLE  
**CANOPY ELEVATION  
PLAN**

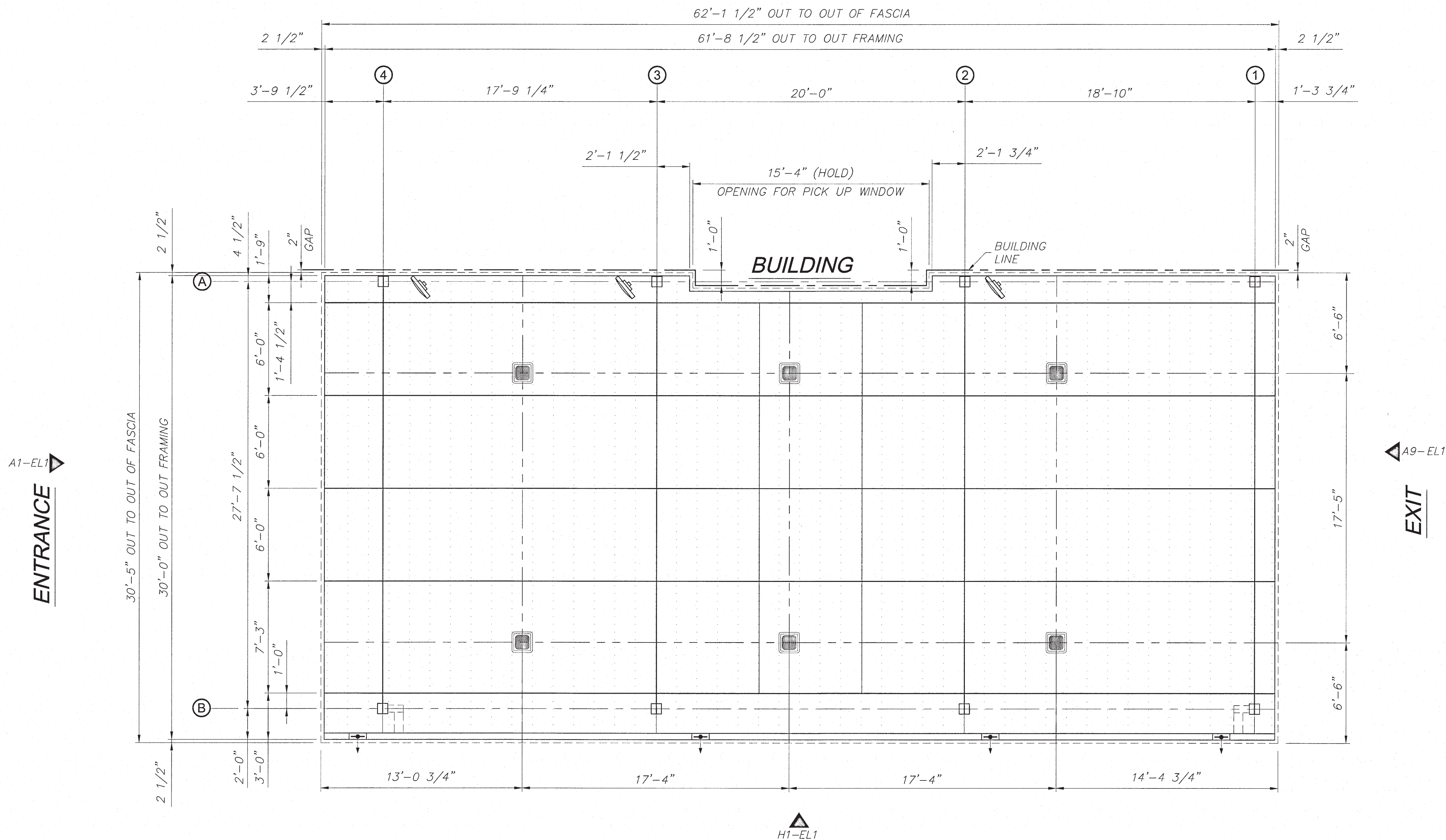
30'-5" X 62'-1 1/2"

Job No.: LSC: 75967  
Store : 02859  
Date : 09.01.23  
Drawn By : KLM  
Checked By: RM

Sheet

OMD-8  
**ELI OF 1**





FI CANOPY LIGHT LAYOUT

1/4" = 1'-0"

1. THE LIGHT LAYOUT IS A SUGGESTED PLAN ONLY. IT IS PROVIDED BY LANE AS A SERVICE TO ITS CUSTOMER AND IS TO BE USED AS A GUIDE ONLY.
2. THESE LIGHT FIXTURES NEED TO BE CENTERED IN DECK PANELS.
3. ENSURE ADEQUATE CLEARANCE FROM STRUCTURAL MEMBERS PRIOR TO CUTTING DECK.
4. INSTALLATION OF FIXTURES TO BE DONE IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS AND RECOMMENDATIONS.
5. IF LIGHTS INTERFERE WITH LEADER GUTTERS MOVE ROW LIGHTS TO THE NEXT DECK.

LEGEND:

INDICATES LSI CRUS-SC-LED-LW-30-CW-UE-WHT CANOPY DECK LIGHTS.

INDICATES DECK STITCHING.

MOUNTED FANS  
(BY OTHERS)  
RE: SHEET E3 FOR  
MOUNTING SUPPORT

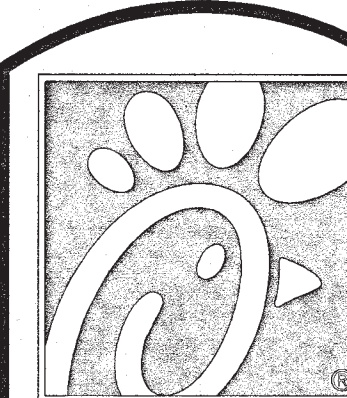
INDICATES MOUNTED FAN

AI GENERAL NOTES

N.T.S.

A6 NOT USED

A10 NOT USED



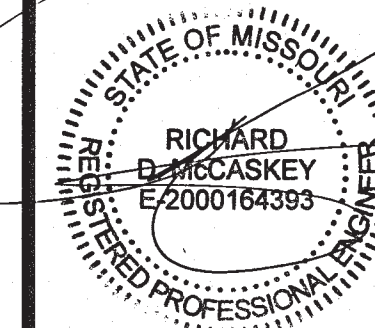
Chick-fil-A

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:

Mark Date By

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SEP 07 2023

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STORE  
Chick-fil-A #02859  
690 NW BLUE PKWY  
LEE'S SUMMIT, MO  
64086

SHEET TITLE

CANOPY LIGHT  
LAYOUT

30'-5" X 62'-1 1/2"

Job No.: LSC: 75967

Store : 02859

Date : 09.01.23

Drawn By : KLM

Checked By: RM

Sheet

OMD-9

LLI OF 1





LANE SUPPLY, INC.

120 Fairview  
Arlington, TX 76010  
817-261-9116

**DESIGN CALCULATIONS FOR :**

Chick-fil-A #02859 Order Canopy  
690 NW Blue Parkway  
Lee's Summit, MO

Six-Column Canopy :	25'-5" X 53'-9" Canopy
Lane Reference Number :	LSC-75966
Date :	01-Sep-23

**TABLE OF CONTENTS :**

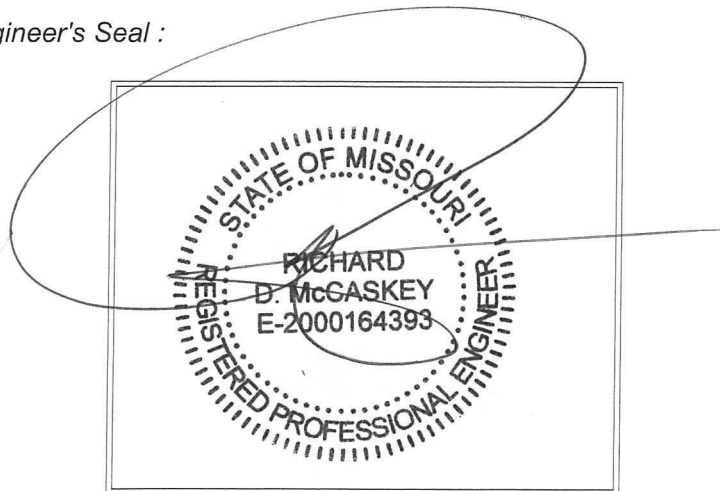
*Canopy Calculations :*

Design Loads :	1-2
Deck Design :	3
Purlin Design :	4-8
Header Design :	9-10
Column & Foundation Design :	11-12

*Attachments :*

Lane SL-316 Deck Panel Properties  
Lane Standard Base Plate Design  
Design Sketch

*Engineer's Seal :*



C.O.A. 2001015838

SEP 07 2023



Calculations By:  
Customer:  
Project:

Lane Supply, Inc.  
Chick-fil-A #02859 Order Canopy  
25'-5" X 53'-9" Canopy

LSC - 75966  
By: JO  
Check:

Code:

**Missouri Building Code 2018**  
**2018 International Building Code**

Roof Loads:

Dead Load = 3.00 psf (SL-316 Deck)  
Live/Snow Load = 20.00 psf  
TOTAL = 23.00 psf

Fascia Load:

Height = 10.00 in.  
Dead Load = 5.83 plf

Wind Loads:

Risk Category = II  
V, ULT Speed = 116 m.p.h. Exp C  
V, ASD Speed = 90 m.p.h. Exp C  
Height = 15 ft  
Kd = 0.85  
Kh = 0.85  
G = 0.85  
qz = 14.93 psf

Lateral Load = 1.0 (H)•qz = 16.00 psf  
Deck Uplift = -1.7 (V)•G•qz = -21.58 psf  
Frame Uplift = -1.1 (V)•G•qz = -13.96 psf

Base Shear : V = CS • W = 0.084 • W

Site Class = D  
Ss(0.2) = 0.099  
S1(1.0) = 0.068  
Fa = 1.60  
Fv = 2.40  
SM1 = Fv•S1 = 0.16  
SMS = Fa•Ss = 0.16  
SD1 = 2/3•SM1 = 0.11  
SDS = 2/3•SMS = 0.11  
R = 1.25  
Risk Category = II  
CS = (SDS/R) = 0.084 (12.8-2)

Seismic Design Category Based on SDS : A  
Seismic Design Category Based on SD1 : B

Design Category : B



**Section 7.1--Symbols & Notation**

$C_e =$	1.2	Exposure Factor as determined from Table 7-2
$C_t =$	1.2	Thermal factor as determined from Table 7-3
$D =$	Snow Density in pcf as determined from Eq. 7-4	
$h_b =$	Height of balanced snow load determined by dividing $P_f$ by $D$ , in feet.	
$h_d =$	Height of snow drift, in feet	
$h_c =$	Clear height from top of balanced snow to top of parapet, ft	
$h_r =$	0.83	= Fascia height, ft
$I_s =$	1.0	= Importance factor (see Table 7-4).
$P_f =$	Snow load on flat roofs, psf.	
$P_g =$	20	= ground snow, psf.
$P_d =$	Maximum intensity of drift surcharge load, psf.	
$l_u =$	25.875	= Length of roof upwind of the drift, feet
$w =$	Width of snow drift, in feet	

**Section 7.3--Flat-Roof Snow Loads,  $P_f$** 

The snow load,  $P_f$ , on a roof with a slope equal to or less than  $15^\circ$  shall be calculated in psf using equation 7.3-1, but not less than the following minimum values for low slope roofs: where  $P_g$  is 20 psf or less  $P_f = I(P_g)$ , where  $P_g$  exceeds 20 psf,  $P_f = 20 (I)$ .

**Section 7.7 & Section 7.8**

The geometry of the surcharge load due to snow drifting shall be approximated by a triangle as shown in figure 7-8. Drift loads shall be superimposed on the balanced snow load. If  $h_c/h_b$  is less than 0.2, drift loads are not required to be applied. The height of such drifts shall be taken as  $0.75 \times h_d$  as determined from Fig 7-9, with  $l_u$  equal to the length of the roof upwind of the projection or parapet wall. If the side of a roof projection is less than 15 ft long, a drift load is not required to be applied to that side. If the height,  $h_d$ , is equal to or less than  $h_c$ , the drift width shall equal  $4h_d$  and the drift height shall equal  $h_d$ . If this height exceeds  $h_c$ , the drift width,  $w$ , shall equal  $4h_d^2/h_c$  and the drift height shall equal  $h_c$ . However, the drift width  $w$  shall not exceed  $8h_c$ . The maximum intensity of the drift surcharge load,  $p_d$ , equals  $h_d \times D$  where the snow density,  $D$ , is defined by Eq 7.7-

**Section 7.10--Rain-On-Snow Surcharge Load**

For locations where  $P_g$  is 20 psf or less but not zero, all roofs with a slope less than  $W/50$ , shall have a 5 psf rain-on-snow surcharge load applied to establish the design snow loads. This rain-on-snow augmented design load applies only to the balanced load case and need not be used in combination with drift, sliding, unbalanced, or partial loads.

$$P_f = 0.7 \times C_e \times C_t \times I_s \times P_g \quad \text{Eq 7.3-1}$$

$$P_f = 20.0 \text{ psf}$$

$$h_d = 0.75 \times (0.43(l_u)^{1/3} \times (P_g + 10)^{1/4 - 1.5})$$

$$h_d = 1.11 \text{ ft}$$

$$D = 0.13P_g + 14 < 30 \text{ psf} \quad \text{Eq 7.7-1}$$

$$D = 16.60 \text{ psf}$$

$$h_b = 1.20 \text{ ft}$$

$$h_c = h_r - h_b = -0.37 \text{ ft}$$

$$h_c/h_b = -0.31$$

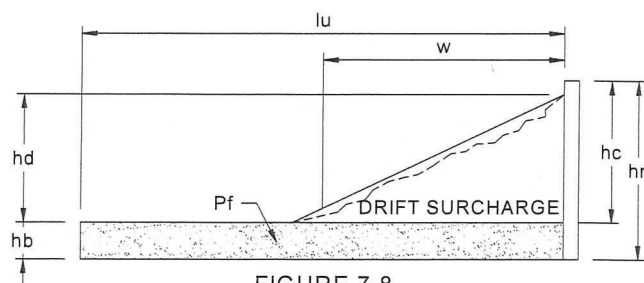
Drift Loads Not Considered

$$w = -13.20 \text{ ft}$$

$$P_d = D \times h_d < D \times h_c$$

$$P_d = -6.17 \text{ psf}$$

Ref. Fig. 7-9

FIGURE 7-8  
Configuration of Snow Drifts on Lower Roofs



DECK DESIGN:

P1		o		23.00 psf		o		P2	
v		^A		B^		^C		D^	
<-- X1 -->  <-----		L1		<-----		L2		<-----	
		Wd=		3.00 psf		X1=		0.75 ft	
		Wl=		20.00 psf		L1=		7.02 ft	
Deck :		Ww=		-21.58 psf		L2=		7.02 ft	
Frame :		Ww=		-13.96 psf		L3=		7.17 ft	
		P1=		5.83 plf		X2=		3.50 ft	
		P2=		5.83 plf					
						RA d=		19.36 plf	
						RA l=		86.01 plf	
						Frame : RA w=		-60.04 plf	
						Deck : RA w=		-92.80 plf	
		MA d=		5.22 ft-lbs/ft		RA(d+l)=		105.37 plf	
		MA l=		5.63 ft-lbs/ft		Frame : RA(d+w)=		-40.69 plf	
Deck : MA w=				-6.07 ft-lbs/ft		Deck : RA(d+w)=		-73.44 plf	
		MA(d+l)=		10.84 ft-lbs/ft					
Deck : MA(d+w)=				-0.85 ft-lbs/ft		RB d=		20.32 plf	
						RB l=		140.42 plf	
						Frame : RB w=		-97.47 plf	
						Deck : RB w=		-150.63 plf	
						RB(d+l)=		160.74 plf	
MAB(d+l)=		139.12 ft-lbs/ft				Frame : RB(d+w)=		-77.15 plf	
Deck : MAB(d+w)=				-114.04 ft-lbs/ft		Deck : RB(d+w)=		-130.31 plf	
		MBC(d+l)=		141.71 ft-lbs/ft		RC d=		15.87 plf	
Deck : MBC(d+w)=				-114.47 ft-lbs/ft		RC l=		141.88 plf	
						Frame : RC w=		-87.11 plf	
						Deck : RC w=		-134.63 plf	
						RC(d+l)=		157.74 plf	
MCD(d+l)=		128.90 ft-lbs/ft				Frame : RC(d+w)=		-71.24 plf	
Deck : MCD(d+w)=				-77.16 ft-lbs/ft		Deck : RC(d+w)=		-118.76 plf	
		MD d=		38.79 ft-lbs/ft		RD d=		32.50 plf	
		MD l=		122.50 ft-lbs/ft		RD l=		158.76 plf	
Deck : MD w=				-132.17 ft-lbs/ft		Frame : RD w=		-110.83 plf	
						Deck : RD w=		-171.29 plf	
						RD(d+l)=		191.26 plf	
MD(d+l)=		161.29 ft-lbs/ft				Frame : RD(d+w)=		-78.34 plf	
Deck : MD(d+w)=				-93.37 ft-lbs/ft		Deck : RD(d+w)=		-138.79 plf	

USE 20 GAUGE GRADE C DECK

+S=.3961 in^3 -S=.3036 in^3 FY=40 ksi







[illegible]

USE: W8X10  $F_y = 50$  ksi

	Wd=	25.87	plf			
	WI=	141.88	plf			
	Ww=	-87.11	plf			
	L=	19.00	ft			
		167.74	plf			
		$\overline{\hspace{1cm}}$				
		$\wedge$	$\wedge$			
		<-----	L ----->	Rd=	246 lbs	
				RI=	1348 lbs	
Md=	1167.3	ft-lbs		Rw=	-828 lbs	
MI=	6402.1	ft-lbs		<hr/> R(d+l)=	1594 lbs	
Mw=	-3930.9	ft-lbs		R(d+w)=	-582 lbs	
M(d+l)=	7569.4	ft-lbs		Lu=	9.50 ft	OK
M(d+w)=	-2763.6	ft-lbs		Lu=	1.33 ft	OK

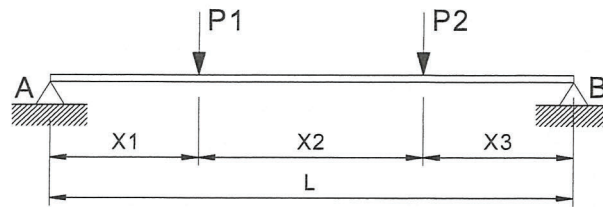
USE: W8X10                       $F_y =$                       50 ksi

Deflections: (inches)	Midspan
DL=	0.085
DL+LL=	0.551
(+downward, -upward)	



P1d = 212.11 lbs  
P1l = 732.00 lbs  
P1w = -508.10 lbs  
P2d = 183.17 lbs  
P2l = 739.60 lbs  
P2w = -454.12 lbs

Wd = 16.00 plf  
Wl = 0.00 plf  
Ww = 0.00 plf



X1 = 7.02 ft  
X2 = 7.02 ft  
X3 = 7.17 ft  
L = 21.21 ft

RA<sub>d</sub> = 373 lbs  
RA<sub>l</sub> = 740 lbs  
RA<sub>w</sub> = -493 lbs  
RA(d+l) = 1113 lbs  
RA(d+w) = -120 lbs

RB<sub>d</sub> = 361 lbs  
RB<sub>l</sub> = 732 lbs  
RB<sub>w</sub> = -469 lbs  
RB(d+l) = 1093 lbs  
RB(d+w) = -108 lbs

MAB(dl) = 2301 ft-lbs  
MAB(ll) = 5246 ft-lbs  
MAB(wl) = -3464 ft-lbs  
MAB(dl+ll) = 7520 ft-lbs lu = 7.17 ft  
MAB(dl+wl) = -1236 ft-lbs lu = 7.17 ft

#### Deflection

dl = 0.202 in  
dl+ll = 0.665 in

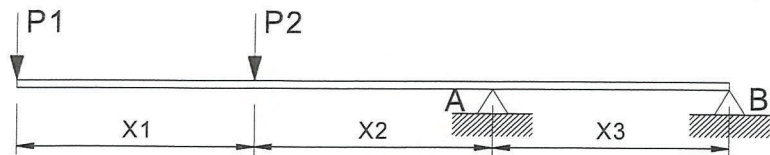
USE: W6X16 F<sub>y</sub> = 50 ksi



BEAM DESIGN: P-f

P1d= 25.09 lbs  
P1l= 0.00 lbs  
P1w= 0.00 lbs  
P2d= 373.46 lbs  
P2l= 739.60 lbs  
P2w= -493.36 lbs  
Wd = 39.36 plf  
Wl = 86.01 plf  
Ww = -60.04 plf

X1= 1.94 ft  
X2= 5.92 ft  
X3= 19.00 ft



RAd= 1272.12 lbs  
RAI= 2602.17 lbs  
RAw= -1786.49 lbs  
RAd+l= 3874.29 lbs  
RAd+w= -514.36 lbs

RBd= 183.34 lbs  
RBI= 447.15 lbs  
RBw= -319.32 lbs  
RBd+l= 630.49 lbs  
RBd+w= -135.97 lbs

MA(d)= 3621 ft-lbs  
MA(l)= 7029 ft-lbs  
MA(w)= -4771 ft-lbs  
MA(d+l)= 10649 ft-lbs lu = 1.33 ft  
MA(d+w)= -1150 ft-lbs lu = 5.92 ft  
MAB(d+l)= 1557 ft-lbs lu = 9.50 ft  
MAB(d+w)= -439 ft-lbs lu = 1.33 ft

Deflections		
	OH	SPAN
dl (in)=	0.221	-0.023
dl+ll (in) =	0.616	-0.045

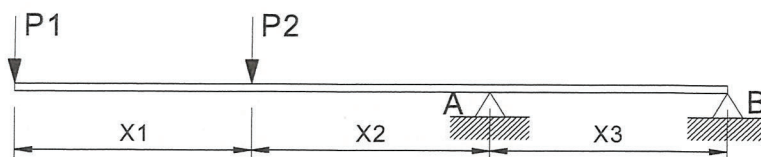
USE: W6X20 Fy = 50 ksi



BEAM DESIGN: P-g

P1d= 46.30 lbs  
P1l= 0.00 lbs  
P1w= 0.00 lbs  
P2d= 361.16 lbs  
P2l= 732.00 lbs  
P2w= -468.87 lbs  
Wd = 45.50 plf  
Wl = 158.76 plf  
Ww = -110.83 plf

X1= 1.94 ft  
X2= 5.92 ft  
X3= 19.00 ft



RAd= 1402.47 lbs  
RAI= 3972.82 lbs  
RAw= -2718.20 lbs  
RAd+l= 5375.29 lbs  
RAd+w= -1315.73 lbs

RBd= 226.75 lbs  
RBI= 1022.54 lbs  
RBw= -726.98 lbs  
RBd+l= 1249.29 lbs  
RBd+w= -500.23 lbs

MA(d)= 3904 ft-lbs  
MA(l)= 9228 ft-lbs  
MA(w)= -6193 ft-lbs  
MA(d+l)= 13132 ft-lbs lu = 1.33 ft  
MA(d+w)= -2289 ft-lbs lu = 5.92 ft  
MAB(d+l)= 3803 ft-lbs lu = 9.50 ft  
MAB(d+w)= -1915 ft-lbs lu = 1.33 ft

Deflections		
	OH	SPAN
dl (in)=	0.239	-0.018
dl+ll (in) =	0.624	0.067

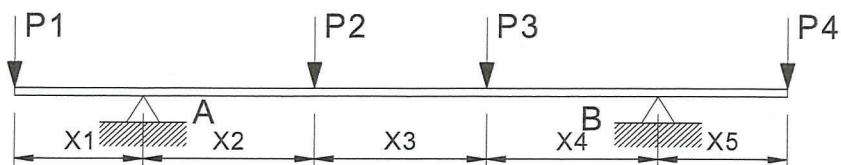
USE: W8X13 Fy = 50 ksi



HEADER BEAM DESIGN:

H-a

P1d = 1272 lbs  
P1l = 2602 lbs  
P1w = -1786 lbs  
P2d = 355 lbs  
P2l = 1749 lbs  
P2w = -1183 lbs  
P3d = 302 lbs  
P3l = 1768 lbs  
P3w = -1058 lbs  
P4d = 1402 lbs  
P4l = 3973 lbs  
P4w = -2718 lbs



X1 = 1.25 ft  
X2 = 5.77 ft  
X3 = 7.02 ft  
X4 = 0.88 ft  
X5 = 6.29 ft

Wd = 24.00 plf  
Wl = 0.00 plf  
Ww = 0.00 plf

RAd = 1128 lbs  
RAI = 2135 lbs  
RAw = -1450 lbs  
RAd+l = 3263 lbs  
RAd+w = -322 lbs

RBd = 2713 lbs  
RBI = 7957 lbs  
RBw = -5296 lbs  
RBd+l = 10670 lbs  
RBd+w = -2583 lbs

MA(DL): -1608.9 ft-lbs  
MA(LL): -3252.7 ft-lbs  
MA(WL): 2233.1 ft-lbs  
MA(DL+LL): -4861.6 ft-lbs lu = 1.25 ft  
MA(DL+WL): 624.2 ft-lbs lu = 1.25 ft

Deflection  
DL = 0.02 in  
DL+LL = 0.06 in

SPAN  
M(DL+LL): -4861.6 ft-lbs lu = 7.02 ft  
M(DL+WL): 624.2 ft-lbs lu = 7.02 ft

Deflection  
DL = -0.06 in  
DL+LL = -0.08 in

MB(DL): -9298.9 ft-lbs  
MB(LL): -24995.6 ft-lbs  
MB(WL): 17102.0 ft-lbs  
MB(DL+LL): -34294.5 ft-lbs lu = 6.29 ft  
MB(DL+WL): 7803.1 ft-lbs lu = 6.29 ft

Deflection  
DL = 0.11 in  
DL+LL = 0.38 in

USE: W8X24 Fy = 50 ksi

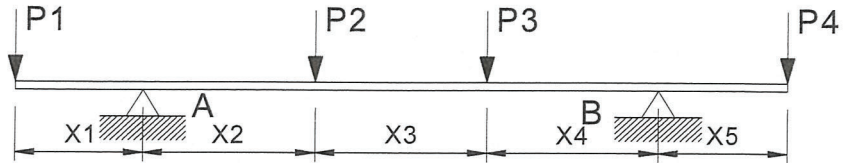


HEADER BEAM DESIGN:

H-b

P1d = 367 lbs  
P1l = 894 lbs  
P1w = -639 lbs  
P2d = 576 lbs  
P2l = 2668 lbs  
P2w = -1852 lbs  
P3d = 492 lbs  
P3l = 2696 lbs  
P3w = -1655 lbs  
P4d = 453 lbs  
P4l = 2045 lbs  
P4w = -1454 lbs

Wd = 20.00 plf  
Wl = 0.00 plf  
Ww = 0.00 plf



X1 = 1.25 ft  
X2 = 5.77 ft  
X3 = 7.02 ft  
X4 = 0.88 ft  
X5 = 6.29 ft

RAd = 690 lbs  
RAI = 1749 lbs  
RAw = -1204 lbs  
RAd+l = 2438 lbs  
RAd+w = -514 lbs

RBd = 1622 lbs  
RBI = 6554 lbs  
RBw = -4396 lbs  
RBd+l = 8177 lbs  
RBd+w = -2774 lbs

MA(DL): -474.0 ft-lbs  
MA(LL): -1117.9 ft-lbs  
MA(WL): 798.3 ft-lbs  
MA(DL+LL): -1591.9 ft-lbs lu = 1.25 ft  
MA(DL+WL): 324.3 ft-lbs lu = 1.25 ft

Deflection  
DL = -0.00 in  
DL+LL = -0.00 in

SPAN  
M(DL+LL): 4724.0 ft-lbs lu = 7.02 ft  
M(DL+WL): -1549.8 ft-lbs lu = 7.02 ft

Deflection  
DL = -0.01 in  
DL+LL = 0.01 in

MB(DL): -3249.1 ft-lbs  
MB(LL): -12867.0 ft-lbs  
MB(WL): 9147.8 ft-lbs  
MB(DL+LL): -16116.1 ft-lbs lu = 6.29 ft  
MB(DL+WL): 5898.7 ft-lbs lu = 6.29 ft

Deflection  
DL = 0.06 in  
DL+LL = 0.30 in

USE: W6X20

Fy = 50 ksi



## Column Design

AISC 15th ed, Use First Order Analysis Criteria

P DL =	2.71 kips	Clr. Ht.=	9.50 ft
P LL =	7.96 kips	Fascia Ht.=	1.00 ft
P WL =	-5.30 kips	Col. Trib=	19.27 ft
Base Shear =	0.20 kips	Wind Load=	16.00 psf
Total Base Shear =	0.84 kips	# of COL.=	2
M WL =	w(Fascia Ht*2.5*Col Trib./# of col*L)+ w(Wrap*1/2 Clr. Ht^2)		Max All. Defl = 1.20 in
M Seis =	Base Shear x L		Max Defl Ratio = L/ 100
M Unbal =	Live Load x Col. Trib.x (Canopy Width/2)^2/2		Max Defl. = 0.13 in, OK
L =	Clr. Ht. + Fascia Ht/2		
Pr =	10.67 kips 1.6Pr<0.5Py First-Order Analysis Allowed (A-7-1)		
Py =	326.60 kips		
N =	0.00 •Yi (A-7-2)		
B2 =	1.05 OK, A-8-6		
M WL =	4.58 kip-ft		
M Seis =	1.98 kip-ft		
M DL(Nod) =	0.11 kip-ft		
M LL(Nod) =	0.33 kip-ft		
M Unbal DL=	0.00 kip-ft		
M Unbal LL=	0.00 kip-ft		
M Unbal WL=	0.00 kip-ft		

Use: TS8X8X1/4

Fy =	46.00 ksi
K =	1.00
L, Col =	10.00 ft
A =	7.10 in^2
I =	70.70 in^4
Cm =	1.00
Pe1 =	447.31 kips
B1 =	1.04 (A-8-3)
P, All =	177.38 kips
M, All =	44.10 kip-ft

Load Combination	Pr, Kips	Mr, Kip-ft	Equation	Result
D+L	10.67	0.47	0.04	OK
D+W	2.71	4.88	0.12	OK
D+0.7E	2.71	1.56	0.04	OK
D+0.75W+0.75L	8.68	3.95	0.11	OK
D+0.525E+0.75L	8.68	1.46	0.06	OK

Top Connection : Standard Cap Plate

Base Plate : LBP 8 - 20

Foundation: (Restrained at Grade)

$$d^2 = (4.25 * M) / (S3 * b)$$

M(MAX)=	4877 ft-lbs
S3=	100 PCF X d
b=	3.000 ft
d=	4.103 ft

Pmax=	10.67 kips
Footing Area=	7.07 ft^2
Bearing=	1509.44 psf

Footing= Round

USE: 3.00 FT.RND. X 5.00 ft deep footing

$$As = 12 * M / (jd * 24000) = 0.0653 \text{ in}^2$$

USE: 8 #8's (RND. Cage) w/ #4 Ties @ 12" O.C. w/135 hooks



$P_{dl} = 2713$  lbs  
 $P_{ll} = 7957$  lbs  
 $P_w = -5296$  lbs  
 $M = 4877$  ft-lbs  
 Soil Density = 110 pcf

Width = 4.50 ft  
 Length = 4.50 ft  
 Depth = 3.00 ft

$a = 0.00$  ft  
 $b = 0.00$  ft  
 $c = 0.00$  ft

Footing Weight = 9112.5 lbs  
 Soil Weight = 0 lbs

Overturning :  $OTM = 4877$  ft-lbs  
 $RM = 12250$  ft-lbs  
 $FS = 2.51 > 1.5$  Therefore OK

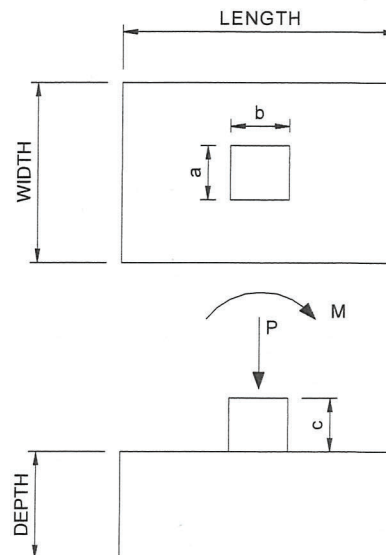
Soil Pressure :  $q_{(dl+ll)} = 526.89$  psf Net  
 $q(ALLOW) = 1500$  psf OK

For  $dl+(wl, seismic)$  :

$P = 11825$  lbs  
 $e=M/P = 0.41$  ft  
 $L/6 = 0.75$  ft  
*Resultant within middle 3rd*  
 $q_{(dl+wl, seismic)} = 455.06$  psf Net  
 $q(ALLOW) = 1500.00$  psf OK

REINFORCING:  $M_{(dl+ll)} = 1333.70$  ft-lbs/ft  
 $M_{(dl+wl, seismic)} = 517.28$  ft-lbs/ft  
*dl+ll Controls*  
 Assume:  $f'_c = 2500$  psi,  $F_y = 40000$  psi  
 $d = 32.63$  in  
 $As(REQ'D) = 0.03$  in<sup>2</sup>  
 $As(PROV.) = 0.44$  in<sup>2</sup>

USE #6's AT 12"O.C. T&B, EACH WAY

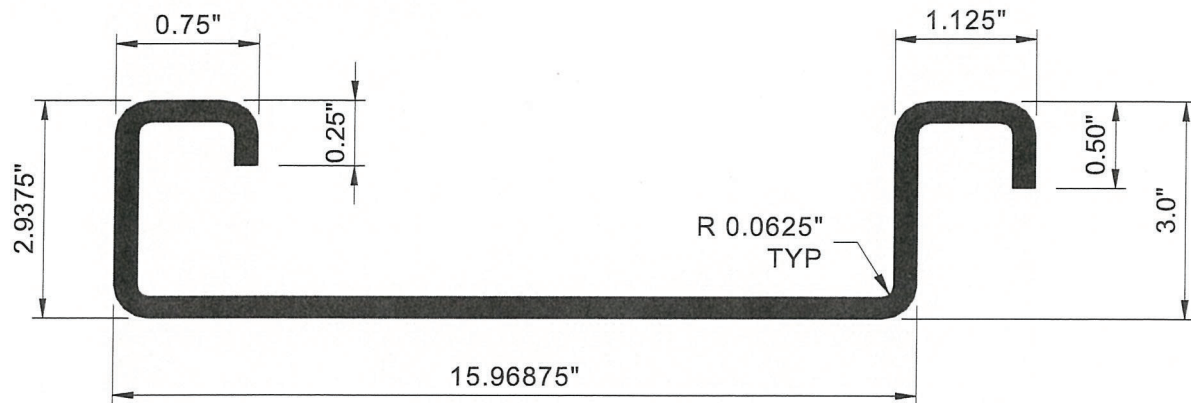






LANE SUPPLY, INC.

120 Fairview  
Arlington, Texas 76010  
817-261-9116



### SL-316 DECK PANEL

#### Section Properties

Gage	Wt, psf	Thickness, in	ASTM 653	+I, in <sup>4</sup>	-I, in <sup>4</sup>	+S, in <sup>3</sup>	-S, in <sup>3</sup>	+M, ft-lbs/ft	-M, ft-lbs/ft
20	2.20	0.0359	Grade 40	0.9346	0.4680	0.3961	0.3036	592.70	454.44
			Grade 50	0.9208	0.4522	0.3879	0.2880	725.86	538.92
18	2.93	0.0478	Grade 40	1.2486	0.6827	0.5329	0.4377	797.77	655.28
			Grade 50	1.2129	0.6518	0.5141	0.4296	962.09	803.92

#### Notes:

- 1 Designed per AISI Cold Formed Steel Manual, 2016 ed.
- 2 Complete calculations are available upon request.
- 3  $\pm M$  is allowable bending moment.

Issued 12-5-17





LANE SUPPLY, INC.

120 Fairview  
Arlington, Texas 76010  
817-261-9116  
FAX 817-275-1660

## STANDARD BASE PLATE DESIGN

LBP #	M	P <sub>BOLT</sub>	Bolt Dia.	t <sub>REQ'D</sub>	t <sub>ACTUAL</sub>	Weld Req'd	Weld Actual	Base Plate
(D - M)	(ft-k)	(k)	(in)	(in)	(in)	(1/16 in)	(in)	Mark
8 - 10	10	5.58	1 1/2	0.72	3/4	1.52	1/4	LBP 1
8 - 20	20	10.91	1 1/2	0.99	1	3.03	5/16	LBP 2
8 - 30	30	16.00	1 1/2	1.17	1 1/4	4.55	5/16	LBP 3
8 - 40	40	20.87	1 1/2	1.32	1 1/2	6.06	F.P.	LBP 4
8 - 50	50	26.09	1 1/2	1.46	1 1/2	7.58	F.P.	LBP 5

TS 8 X 8 COLUMN:

D= 8 in.  
e= 2 in.  
b,d= 8 in.

CONSTANTS:

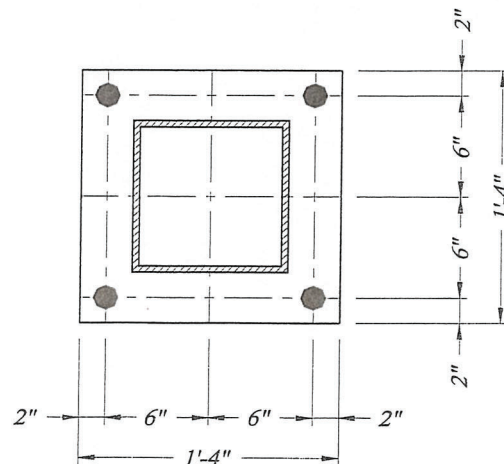
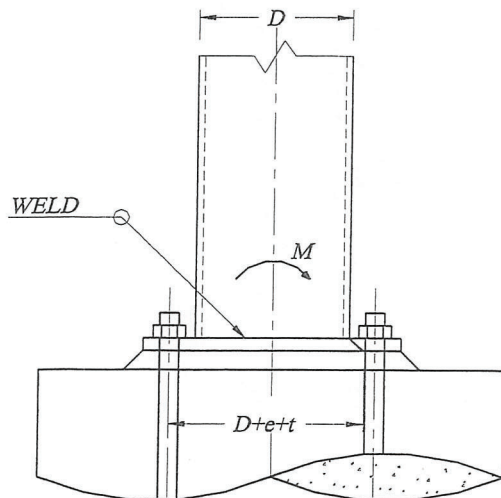
A36 Steel Plate  
E70xx Electrode  
A307 Anchor Bolts  
Fy = 36 ksi  
Fw = 0.928 k/in/16th  
Ft = 20 ksi

EQUATIONS:

$$P_{BOLT} = \frac{M \times 12 \text{ in/ft}}{2 \text{ bolts } (D+e+t)}$$

$$Weld = \frac{M \times 12 \text{ in/ft}}{S_{Weld} \times Fw} = \frac{M \times 12 \text{ in/ft}}{Fw (bd+d^2/3)}$$

$$t_{REQ'D} = \sqrt{\frac{6 \times P \times e \times 2 \text{ bolts}}{0.75 \times Fy \times (D+2t)}}$$











LANE SUPPLY, INC.

120 Fairview  
Arlington, TX 76010  
817-261-9116

**DESIGN CALCULATIONS FOR :**

Chick-fil-A #02859 Outside Meal Delivery Canopy  
690 NW Blue Parkway  
Lee's Summit, MO

Eight-Column Canopy :	30'-0" X 61'-9" Canopy
Lane Reference Number :	LSC-75967
Date :	04-Sep-23

**TABLE OF CONTENTS :**

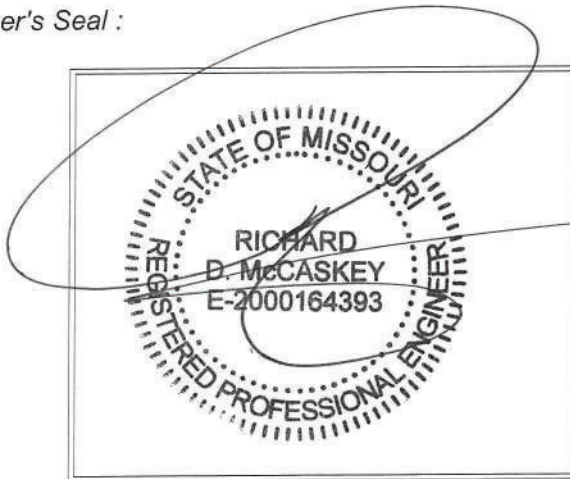
*Canopy Calculations :*

Design Loads :	1-2
Deck Design :	3-6
Purlin Design :	7-14
Header Design :	15-18
Column & Foundation Design :	19-23

*Attachments :*

Lane SL-316 Deck Panel Properties  
Lane Standard Cap Plate Design  
Lane Offset Base Plate Design  
Design Sketch

*Engineer's Seal :*



C.O.A. 2001015838

SEP 07 2023



Calculations By:

Lane Supply, Inc.

LSC - 75967

Customer:

Chick-fil-A #02859 Outside Meal Delivery Canopy

By: JO

Project:

30'-0" X 61'-9" Canopy

Check:

Code:

Missouri Building Code 2018

2018 International Building Code

Roof Loads:

Dead Load = 3.00 psf (SL-316 Deck)  
 Live/Snow Load = 20.00 psf  
 TOTAL = 23.00 psf

Fascia Load:

Height = 10.00 in.  
 Dead Load = 5.83 plf

Wind Loads:

Risk Category = II  
 V, ULT Speed = 116 m.p.h. Exp C  
 V, ASD Speed = 90 m.p.h. Exp C  
 Height = 15 ft  
 Kd = 0.85  
 Kh = 0.85  
 G = 0.85  
 qz = 14.93 psf

Lateral Load = 1.0 (H)•qz = 16.00 psf  
 Deck Uplift = -1.7 (V)•G•qz = -21.58 psf  
 Frame Uplift = -1.1 (V)•G•qz = -13.96 psf

Base Shear : V = CS • W = 0.084 • W

Site Class = D  
 Risk Category = II  
 Ss(0.2) = 0.099  
 S1(1.0) = 0.068  
 Fa = 1.60  
 Fv = 2.40  
 SMS = Fa•Ss = 0.16 (11.4-1)  
 SM1 = Fv•S1 = 0.16 (11.4-2)  
 SDS = 2/3•SMS = 0.11 (11.4-3)  
 SD1 = 2/3•SM1 = 0.11 (11.4-4)  
 R = 1.25  
 CS = (SDS/R) = 0.084 (12.8-2)

Seismic Design Category Based on SDS : A

Seismic Design Category Based on SD1 : B

Design Category : B



## Section 7.1.2--Symbols &amp; Notation

$C_e =$	1.2	Exposure Factor as determined from Table 7.3-1
$C_t =$	1.2	Thermal factor as determined from Table 7.3-2
$D =$	Snow Density in pcf as determined from Eq. 7.7-1	
$h_b =$	Height of balanced snow load determined by dividing $P_f$ by $D$ , in feet.	
$h_d =$	Height of snow drift, in feet	
$h_c =$	Clear height from top of balanced snow to top of parapet, ft	
$h_r =$	6.00	= Fascia height, ft
$I_s =$	1.0	= Importance factor (see Table 1.5-2).
$P_f =$	Snow load on flat roofs, psf.	
$P_g =$	20	= ground snow, psf.
$P_d =$	Maximum intensity of drift surcharge load, psf.	
$l_u =$	30.42	= Length of roof upwind of the drift, feet
$w =$	Width of snow drift, in feet	

Section 7.3--Flat-Roof Snow Loads,  $P_f$ 

The snow load,  $P_f$ , on a roof with a slope equal to or less than  $5^\circ$  shall be calculated in psf using equation 7.3-1, but not less than the following minimum values for low slope roofs: where  $P_g$  is 20 psf or less  $P_f = I(P_g)$ , where  $P_g$  exceeds 20 psf,  $P_f = 20 (I)$ .

## Section 7.7 &amp; Section 7.8

The geometry of the surcharge load due to snow drifting shall be approximated by a triangle as shown in figure 7.7-2. Drift loads shall be superimposed on the balanced snow load. If  $h_c/h_b$  is less than 0.2, drift loads are not required to be applied.

The height of such drifts shall be taken as  $0.75 \times h_d$  as determined from Fig 7.6-1, with  $l_u$  equal to the length of the roof upwind of the projection or parapet wall. If the side of a roof projection is less than 15 ft long, a drift load is not required to be applied to that side. If the height,  $h_d$ , is equal to or less than  $h_c$ , the drift width shall equal  $4h_d$  and the drift height shall equal  $h_d$ . If this height exceeds  $h_c$ , the drift width,  $w$ , shall equal  $4h_d^2/h_c$  and the drift height shall equal  $h_c$ . However, the drift width  $w$  shall not exceed  $8h_c$ . The maximum intensity of the drift surcharge load,  $p_d$ , equals  $h_d \times D$  where the snow density,  $D$ , is defined by Eq 7.7-

## Section 7.10--Rain-On-Snow Surcharge Load

For locations where  $P_g$  is 20 psf or less but not zero, all roofs with a slope less than  $W/50$ , shall have a 5 psf rain-on-snow surcharge load applied to establish the design snow loads. This additional load applies only to the sloped roof (balanced) load case and need not be used in combination with drift, sliding, unbalanced, or partial loads.

$$P_f = 0.7 \times C_e \times C_t \times I_s \times P_g \quad \text{Eq 7.3-1}$$

$$P_f = 20.0 \text{ psf}$$

$$h_d = 0.75 \times (0.43(l_u)^{1/3} \times (P_g + 10)^{1/4 - 1.5}) \quad \text{Ref. Fig. 7.6-1}$$

$$h_d = 1.23 \text{ ft}$$

$$D = 0.13P_g + 14 < 30 \text{ psf} \quad \text{Eq 7.7-1}$$

$$D = 16.60 \text{ psf}$$

$$h_b = 1.20 \text{ ft}$$

$$h_c = h_r - h_b = 4.80 \text{ ft}$$

$$h_c/h_b = 3.98$$

Consider Drift

$$w = 4.92 \text{ ft}$$

$$P_d = D \times h_d < D \times h_c$$

$$P_d = 20.44 \text{ psf}$$

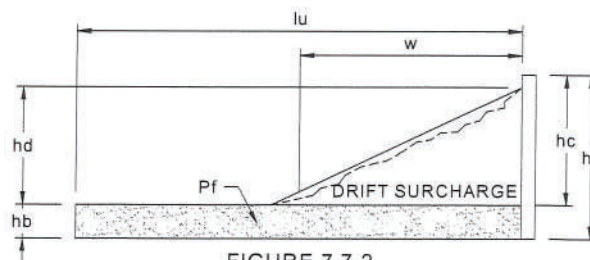


FIGURE 7.7-2  
Configuration of Snow Drifts on Lower Roofs



## Deck 1

P1						P2
v	23.00 PSF					v
	^A	^B	^C	^D	^E	
<--- X1 --->	<----- L1 ----->	<--- L2 --->	<--- L3 --->	<----- L4 ----->	<--- X2 --->	

Wd=	3.00	psf	X1=	1.75	ft
WI=	20.00	psf	L1=	6.00	ft
Deck : Ww=	-21.58	psf	L2=	6.00	ft
Frame : Ww=	-13.96	psf	L3=	6.00	ft
P1=	5.83	plf	L4=	7.25	ft
P2=	5.83	plf	X2=	3.00	ft

MAd=	14.80	ft-lbs/ft	RAAd=	22.55	plf
MAI=	30.63	ft-lbs/ft	RAI=	100.10	plf
Deck : MAw=	-33.04	ft-lbs/ft	Frame : RAW=	-69.88	plf
MA(d+l)=	45.43	ft-lbs/ft	RA(d+l)=	122.65	plf
Deck : MA(d+w)=	-18.24	ft-lbs/ft	Frame : RA(d+w)=	-47.33	plf

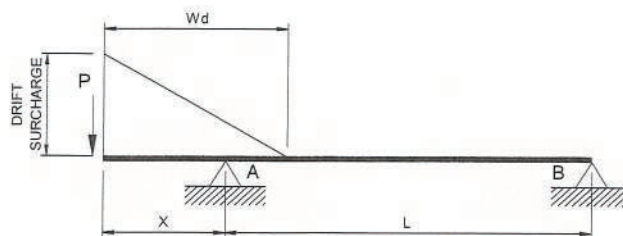
MAB(d+l)=	96.23	ft-lbs/ft	RBd=	15.53	plf
Deck : MAB(d+w)=	-74.73	ft-lbs/ft	RBI=	120.00	plf
MBC(d+l)=	103.50	ft-lbs/ft	Frame : RBw=	-80.21	plf
Deck : MBC(d+w)=	-83.60	ft-lbs/ft	RB(d+l)=	135.53	plf
MCD(d+l)=	103.50	ft-lbs/ft	Frame : RB(d+w)=	-64.68	plf
Deck : MCD(d+w)=	-83.60	ft-lbs/ft	RCd=	18.00	plf
MDE(d+l)=	136.01	ft-lbs/ft	RCI=	120.00	plf
Deck : MDE(d+w)=	-91.25	ft-lbs/ft	Frame : RCw=	-83.77	plf
MEd=	31.00	ft-lbs/ft	RC(d+l)=	138.00	plf
MEI=	90.00	ft-lbs/ft	Frame : RC(d+w)=	-65.77	plf
Deck : MEw=	-97.10	ft-lbs/ft	RDd=	15.60	plf
ME(d+l)=	121.00	ft-lbs/ft	RDI=	132.50	plf
Deck : ME(d+w)=	-66.10	ft-lbs/ft	Frame : RDw=	-83.83	plf
			RD(d+l)=	148.10	plf
			Frame : RD(d+w)=	-68.23	plf
			REd=	29.98	plf
			REI=	144.91	plf
			Frame : REw=	-101.17	plf
			RE(d+l)=	174.90	plf
			Frame : RE(d+w)=	-71.18	plf

USE 20 GAUGE GRADE C DECK

$$+S = .3961 \text{ in}^3 \quad -S = .3036 \text{ in}^3 \quad FY = 40 \text{ ksi}$$



$w_d = 3.00$  psf  
 $w_s = 20.00$  psf  
 Deck :  $w_w = -21.58$  psf  
 Frame :  $w_w = -13.96$  psf  
 $P = 5.83$  plf  
 (Drift Surcharge)  $P_m = 20.44$  psf  
 $L = 6.00$  ft  
 $X = 1.75$  ft  
 (Drift Length)  $W_d = 4.92$  ft



$RA_d = 22.55$ plf	$RB_d = 6.53$ plf
$RA_s = 151.33$ plf	$RB_s = 53.98$ plf
Frame : $RA_w = -69.88$ plf	Frame : $RB_w = -38.32$ plf
Deck : $RA_w = -108.00$ plf	Deck : $RB_w = -59.23$ plf
$RA(d+s) = 173.88$ plf	$RB(d+s) = 60.52$ plf
Frame : $RA(d+w) = -47.33$ plf	Frame : $RB(d+w) = -31.79$ plf
Deck : $RA(d+w) = -85.45$ plf	Deck : $RB(d+w) = -52.69$ plf
$MA_d = -14.80$ ft-lbs/ft	
$MA_s = -58.21$ ft-lbs/ft	
Deck : $MA_w = 33.04$ ft-lbs/ft	
$MA(d+s) = -73.01$ ft-lbs/ft	$MAB(d+s) = 79.59$ ft-lbs/ft
Deck : $MA(d+w) = 18.24$ ft-lbs/ft	Deck : $MAB(d+w) = -74.73$ ft-lbs/ft

#### USE 20 GAUGE GRADE C DECK

$+S = .3961 \text{ in}^3$   $-S = .3036 \text{ in}^3$   $FY = 40 \text{ ksi}$

#### DECK DESIGN:

$W_d = 3.00$ psf	$23.00$ psf
$W_l = 20.00$ psf	$\overline{A} \quad \overline{B}$
Deck : $W_w = -21.58$ psf	$  \leftarrow \quad \quad \quad \rightarrow  $
Frame : $W_w = -13.96$ psf	$L$
$L = 6.00$ ft	
	$R_d = 9.00$ plf
	$R_l = 60.00$ plf
	Frame : $R_w = -41.89$ plf
	Deck : $R_w = -64.73$ plf
$M(d+l) = 103.50$ ft-lbs/ft	$R(d+l) = 69.00$ plf
Deck : $M(d+w) = -83.60$ ft-lbs/ft	Frame : $R(d+w) = -32.89$ plf
	Deck : $R(d+w) = -55.73$ plf

#### USE 20 GAUGE GRADE C DECK

$+S = .3961 \text{ in}^3$   $-S = .3036 \text{ in}^3$   $FY = 40 \text{ ksi}$



P1						P2	
v		23.00 PSF	o	o	o		v
	^A		^B	^C	^D	^E	
<--- X1 --->	<-----L1----->		<---L2--->	<---L3--->	<-----L4----->	<---X2--->	

Wd=	3.00	psf	X1=	0.75	ft
Wl=	20.00	psf	L1=	6.00	ft
Deck : Ww=	-21.58	psf	L2=	6.00	ft
Frame : Ww=	-13.96	psf	L3=	6.00	ft
P1=	5.83	plf	L4=	7.25	ft
P2=	5.83	plf	X2=	3.00	ft

MAd=	5.22	ft-lbs/ft
MAI=	5.63	ft-lbs/ft
Deck : MAw=	-6.07	ft-lbs/ft
MA(d+l)=	10.84	ft-lbs/ft
Deck : MA(d+w)=	-0.85	ft-lbs/ft

MAB(d+l)=	100.91	ft-lbs/ft
Deck : MAB(d+w)=	-83.18	ft-lbs/ft

MBC(d+l)=	103.50	ft-lbs/ft
Deck : MBC(d+w)=	-83.60	ft-lbs/ft

MCD(d+l)=	103.50	ft-lbs/ft
Deck : MCD(d+w)=	-83.60	ft-lbs/ft

MDE(d+l)=	136.01	ft-lbs/ft
Deck : MDE(d+w)=	-91.25	ft-lbs/ft

MEd=	31.00	ft-lbs/ft
MEI=	90.00	ft-lbs/ft
Deck : MEw=	-97.10	ft-lbs/ft
ME(d+l)=	121.00	ft-lbs/ft
Deck : ME(d+w)=	-66.10	ft-lbs/ft

RA d=	17.95	plf
RAI=	75.94	plf
Frame : RAw=	-53.01	plf
RA(d+l)=	93.89	plf
Frame : RA(d+w)=	-35.06	plf

RBd=	17.13	plf
RBI=	120.00	plf
Frame : RBw=	-83.12	plf
RB(d+l)=	137.13	plf
Frame : RB(d+w)=	-65.99	plf

RCd=	18.00	plf
RCI=	120.00	plf
Frame : RCw=	-83.77	plf
RC(d+l)=	138.00	plf
Frame : RC(d+w)=	-65.77	plf

RDd=	15.60	plf
RDI=	132.50	plf
Frame : RDw=	-83.83	plf
RD(d+l)=	148.10	plf
Frame : RD(d+w)=	-68.23	plf

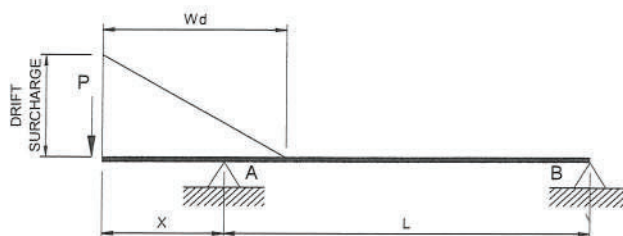
REd=	29.98	plf
REI=	144.91	plf
Frame : REw=	-101.17	plf
RE(d+l)=	174.90	plf
Frame : RE(d+w)=	-71.18	plf

**USE 20 GAUGE GRADE C DECK**

+S=.3961 in^3 -S=.3036 in^3 FY=40 ksi



$w_d = 3.00$  psf  
 $w_s = 20.00$  psf  
 Deck :  $w_w = -21.58$  psf  
 Frame :  $w_w = -13.96$  psf  
 $P = 5.83$  plf  
 (Drift Surchage)  $P_m = 20.44$  psf  
 $L = 6.00$  ft  
 $X = 0.75$  ft  
 (Drift Length)  $W_d = 4.92$  ft



$R_{Ad} = 17.95$  plf  
 $R_{As} = 118.78$  plf  
 Frame :  $R_{Aw} = -53.01$  plf  
 Deck :  $R_{Aw} = -81.93$  plf  


---

 $R_{A(d+s)} = 136.73$  plf  
 Frame :  $R_{A(d+w)} = -35.06$  plf  
 Deck :  $R_{A(d+w)} = -63.98$  plf

$R_{Bd} = 8.13$  plf  
 $R_{Bs} = 66.54$  plf  
 Frame :  $R_{Bw} = -41.23$  plf  
 Deck :  $R_{Bw} = -63.72$  plf  


---

 $R_{B(d+s)} = 74.67$  plf  
 Frame :  $R_{B(d+w)} = -33.10$  plf  
 Deck :  $R_{B(d+w)} = -55.59$  plf

$M_{Ad} = -5.22$  ft-lbs/ft  
 $M_{As} = -11.08$  ft-lbs/ft  
 Deck :  $M_{Aw} = 6.07$  ft-lbs/ft  


---

 $M_{A(d+s)} = -16.30$  ft-lbs/ft  
 Deck :  $M_{A(d+w)} = 0.85$  ft-lbs/ft

$M_{AB(d+s)} = 119.51$  ft-lbs/ft  
 Deck :  $M_{AB(d+w)} = -83.04$  ft-lbs/ft

#### USE 20 GAUGE GRADE C DECK

$+S = .3961 \text{ in}^3$   $-S = .3036 \text{ in}^3$   $FY = 40 \text{ ksi}$

#### DECK DESIGN:

$W_d = 3.00$  psf  
 $W_l = 20.00$  psf  
 Deck :  $W_w = -21.58$  psf  
 Frame :  $W_w = -13.96$  psf  
  
 $L = 6.00$  ft  
  
 $M(d+l) = 103.50$  ft-lbs/ft  
 Deck :  $M(d+w) = -83.60$  ft-lbs/ft

$23.00$  psf  


---

 $\overset{\wedge}{A}$   $\overset{\wedge}{B}$   
 $| \text{-----} L \text{-----} |$   
  
 $R_d = 9.00$  plf  
 $R_l = 60.00$  plf  
 Frame :  $R_w = -41.89$  plf  
 Deck :  $R_w = -64.73$  plf  
  
 $R(d+l) = 69.00$  plf  
 Frame :  $R(d+w) = -32.89$  plf  
 Deck :  $R(d+w) = -55.73$  plf

#### USE 20 GAUGE GRADE C DECK

$+S = .3961 \text{ in}^3$   $-S = .3036 \text{ in}^3$   $FY = 40 \text{ ksi}$



## BEAM DESIGN:

P-a

Wd=	37.55	plf		P		
Wl=	151.33	plf		v	188.88	plf
Ww=	-69.88	plf			^A	B^
Pd=	29.20	lbs		<----X---->	<-----	L ----->
Pl=	0.00	lbs				
Pw=	0.00	lbs				
L=	17.77	ft				
X=	3.79	ft				
			Deflections: (inches)	Overhang	Midspan	
			DL=	-0.029	0.051	
			DL+LL=	-0.160	0.268	
			(+downward, -upward)			
MA(d) =	381	ft-lbs		RA d=	527	lbs
MA(l) =	1088	ft-lbs		RA l=	1980	lbs
MA(w) =	-502	ft-lbs		RA w=	-914	lbs
MA(d+l) =	1468	ft-lbs lu=	1.33 ft	RA(d+l)=	2506	lbs
MA(d+w) =	-122	ft-lbs lu=	3.79 ft	RA(d+w)=	-388	lbs
				RB d=	312	lbs
				RBI(Max)=	1345	lbs
				RB w=	-593	lbs
MAB(d+l)=	7267	ft-lbs lu=	8.89 ft	RB(d+l)=	1657	lbs
MAB(d+w)=	-1216	ft-lbs lu=	1.33 ft	RB(d+w)=	-280	lbs

USE: W8X15

Fy =

50 ksi

## BEAM DESIGN:

P-b

Wd=	25.53	plf		P		
Wl=	120.00	plf		v	145.53	plf
Ww=	-80.21	plf			^A	B^
Pd=	33.51	lbs		<----X---->	<-----	L ----->
Pl=	0.00	lbs				
Pw=	0.00	lbs				
L=	17.77	ft				
X=	3.79	ft				
			Deflections: (inches)	Overhang	Midspan	
			DL=	-0.028	0.052	
			DL+LL=	-0.190	0.321	
			(+downward, -upward)			
MA(d) =	311	ft-lbs		RA d=	375	lbs
MA(l) =	863	ft-lbs		RA l=	1570	lbs
MA(w) =	-577	ft-lbs		RA w=	-1049	lbs
MA(d+l) =	1173	ft-lbs lu=	1.33 ft	RA(d+l)=	1944	lbs
MA(d+w) =	-266	ft-lbs lu=	3.79 ft	RA(d+w)=	-675	lbs
				RB d=	209	lbs
				RBI(Max)=	1066	lbs
				RB w=	-680	lbs
MAB(d+l)=	5591	ft-lbs lu=	8.89 ft	RB(d+l)=	1276	lbs
MAB(d+w)=	-2027	ft-lbs lu=	1.33 ft	RB(d+w)=	-471	lbs

USE: W8X10

Fy =

50 ksi



## BEAM DESIGN:

P-c

Wd=	28.00	plf	P	
WI=	120.00	plf	v	148.00 plf
Ww=	-83.77	plf		<sup>A</sup> <sup>B</sup>
Pd=	35.00	lbs	<---X--->	<----- L ----->
Pl=	0.00	lbs		
Pw=	0.00	lbs		
L=	17.77	ft		
X=	3.79	ft		
Deflections: (inches)				
	DL=		Overhang	Midspan
			-0.031	0.058
	DL+LL=		-0.193	0.326
(+downward, -upward)				
MA(d) =	334	ft-lbs	RA <sub>d</sub> =	409 lbs
MA(l) =	863	ft-lbs	RA <sub>l</sub> =	1570 lbs
MA(w) =	-602	ft-lbs	RA <sub>w</sub> =	-1096 lbs
MA(d+l) =	1197	ft-lbs lu=	RA(d+l)=	1979 lbs
MA(d+w) =	-268	ft-lbs lu=	RA(d+w)=	-687 lbs
			RB <sub>d</sub> =	230 lbs
			RBI(Max)=	1066 lbs
			RB <sub>w</sub> =	-710 lbs
MAB(d+l)=	5677	ft-lbs lu=	RB(d+l)=	1296 lbs
MAB(d+w)=	-2070	ft-lbs lu=	RB(d+w)=	-480 lbs

USE: W8X10

F<sub>y</sub> =

50 ksi

## BEAM DESIGN:

P-d

Wd=	25.60	plf	P	
WI=	132.50	plf	v	158.10 plf
Ww=	-83.83	plf		<sup>A</sup> <sup>B</sup>
Pd=	35.03	lbs	<---X--->	<----- L ----->
Pl=	0.00	lbs		
Pw=	0.00	lbs		
L=	17.77	ft		
X=	3.79	ft		
Deflections: (inches)				
	DL=		Overhang	Midspan
			-0.028	0.052
	DL+LL=		-0.207	0.349
(+downward, -upward)				
MA(d) =	317	ft-lbs	RA <sub>d</sub> =	377 lbs
MA(l) =	952	ft-lbs	RA <sub>l</sub> =	1733 lbs
MA(w) =	-603	ft-lbs	RA <sub>w</sub> =	-1097 lbs
MA(d+l) =	1269	ft-lbs lu=	RA(d+l)=	2111 lbs
MA(d+w) =	-286	ft-lbs lu=	RA(d+w)=	-719 lbs
			RB <sub>d</sub> =	210 lbs
			RBI(Max)=	1177 lbs
			RB <sub>w</sub> =	-711 lbs
MAB(d+l)=	6084	ft-lbs lu=	RB(d+l)=	1387 lbs
MAB(d+w)=	-2158	ft-lbs lu=	RB(d+w)=	-501 lbs

USE: W8X10

F<sub>y</sub> =

50 ksi



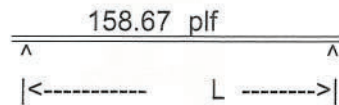
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## BEAM DESIGN:

P-g

Wd= 32.13 plf  
 Wl= 126.54 plf  
 Ww= -83.12 plf  
 L= 20.00 ft



Md= 1606.5 ft-lbs	Rd= 321 lbs	
MI= 6326.8 ft-lbs	RI= 1265 lbs	
Mw= -4156.0 ft-lbs	Rw= -831 lbs	
	R(d+l)= 1587 lbs	
	R(d+w)= -510 lbs	
M(d+l)= 7933.4 ft-lbs	Lu= 6.67 ft	OK
M(d+w)= -2549.5 ft-lbs	Lu= 1.33 ft	OK

USE: W8X15

Fy =

50 ksi

Deflections: (inches)

Midspan

DL=

0.083

DL+LL=

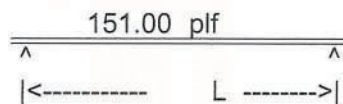
0.410

(+downward, -upward)

## BEAM DESIGN:

P-h

Wd= 31.00 plf  
 Wl= 120.00 plf  
 Ww= -83.77 plf  
 L= 20.00 ft



Md= 1550.0 ft-lbs	Rd= 310 lbs	
MI= 6000.0 ft-lbs	RI= 1200 lbs	
Mw= -4188.7 ft-lbs	Rw= -838 lbs	
	R(d+l)= 1510 lbs	
	R(d+w)= -528 lbs	
M(d+l)= 7550.0 ft-lbs	Lu= 6.67 ft	OK
M(d+w)= -2638.7 ft-lbs	Lu= 1.33 ft	OK

USE: W8X13

Fy =

50 ksi

Deflections: (inches)

Midspan

DL=

0.097

DL+LL=

0.473

(+downward, -upward)



## BEAM DESIGN:

P-i

Wd= 28.60 plf  
 Wl= 132.50 plf  
 Ww= -83.83 plf  
 L= 20.00 ft

161.10 plf

 $\overline{\Lambda} \quad \overline{\Lambda}$ 

|&lt;----- L -----&gt;|

Md= 1430.0 ft-lbs  
 Ml= 6625.0 ft-lbs  
 Mw= -4191.7 ft-lbs  
 M(d+l)= 8055.0 ft-lbs  
 M(d+w)= -2761.7 ft-lbs

Rd= 286 lbs  
 Rl= 1325 lbs  
 Rw= -838 lbs  
 R(d+l)= 1611 lbs  
 R(d+w)= -552 lbs

Lu= 6.67 ft  
 Lu= 1.33 ft

OK  
 OK

USE: W8X13

Fy = 50 ksi

Deflections: (inches)

Midspan

DL= 0.090

DL+LL= 0.505

(+downward, -upward)

## BEAM DESIGN:

P-j

Wd= 44.98 plf  
 Wl= 144.91 plf  
 Ww= -101.17 plf  
 L= 20.00 ft

189.90 plf

 $\overline{\Lambda} \quad \overline{\Lambda}$ 

|&lt;----- L -----&gt;|

Md= 2249.2 ft-lbs  
 Ml= 7245.7 ft-lbs  
 Mw= -5058.3 ft-lbs  
 M(d+l)= 9494.9 ft-lbs  
 M(d+w)= -2809.1 ft-lbs

Rd= 450 lbs  
 Rl= 1449 lbs  
 Rw= -1012 lbs  
 R(d+l)= 1899 lbs  
 R(d+w)= -562 lbs

Lu= 6.67 ft  
 Lu= 1.33 ft

OK  
 OK

USE: W8X15

Fy = 50 ksi

Deflections: (inches)

Midspan

DL= 0.116

DL+LL= 0.491

(+downward, -upward)



BEAM DESIGN: P-k

Wd=	37.55	plf	P	
Wl=	151.33	plf	v	188.88 plf
Ww=	-69.88	plf	^A	B^
Pd=	29.20	lbs	<----X---->	<----- L ----->
Pl=	0.00	lbs		
Pw=	0.00	lbs		
L=	18.83	ft		
X=	1.31	ft		
Deflections: (inches)				
	DL=		Overhang	Midspan
			-0.016	0.074
	DL+LL=		-0.083	0.379
(+downward, -upward)				
MA(d) =	71	ft-lbs	RAd=	436 lbs
MA(l) =	130	ft-lbs	RAI=	1631 lbs
MA(w) =	-60	ft-lbs	RAw=	-753 lbs
MA(d+l) =	201	ft-lbs lu=	RA(d+l)=	2066 lbs
MA(d+w) =	10	ft-lbs lu=	RA(d+w)=	-317 lbs
			RBd=	350 lbs
			RBI(Max)=	1425 lbs
			RBw=	-655 lbs
MAB(d+l)=	8339	ft-lbs lu=	RB(d+l)=	1775 lbs
MAB(d+w)=	-1439	ft-lbs lu=	RB(d+w)=	-305 lbs

USE: W8X15

Fy =

50 ksi

BEAM DESIGN: P-l

Wd=	25.53	plf	P	
Wl=	120.00	plf	v	145.53 plf
Ww=	-80.21	plf	^A	B^
Pd=	33.51	lbs	<----X---->	<----- L ----->
Pl=	0.00	lbs		
Pw=	0.00	lbs		
L=	18.83	ft		
X=	1.31	ft		
Deflections: (inches)				
	DL=		Overhang	Midspan
			-0.017	0.078
	DL+LL=		-0.100	0.454
(+downward, -upward)				
MA(d) =	66	ft-lbs	RAd=	311 lbs
MA(l) =	103	ft-lbs	RAI=	1293 lbs
MA(w) =	-69	ft-lbs	RAw=	-864 lbs
MA(d+l) =	169	ft-lbs lu=	RA(d+l)=	1604 lbs
MA(d+w) =	-3	ft-lbs lu=	RA(d+w)=	-553 lbs
			RBd=	237 lbs
			RBI(Max)=	1130 lbs
			RBw=	-752 lbs
MAB(d+l)=	6420	ft-lbs lu=	RB(d+l)=	1367 lbs
MAB(d+w)=	-2423	ft-lbs lu=	RB(d+w)=	-515 lbs

USE: W8X10

Fy =

50 ksi



## BEAM DESIGN:

P-m

Wd=	28.00	plf	P	
Wl=	120.00	plf	v	148.00 plf
Ww=	-83.77	plf		^A B^
Pd=	35.00	lbs	<-----X----->	L ----->
Pl=	0.00	lbs		
Pw=	0.00	lbs		
L=	18.83	ft		
X=	1.31	ft		
Deflections: (inches)				
	DL=		Overhang	Midspan
			-0.019	0.086
	DL+LL=		-0.102	0.462
(+downward, -upward)				
MA(d) =	70	ft-lbs	RA d=	339 lbs
MA(l) =	103	ft-lbs	RA l=	1293 lbs
MA(w) =	-72	ft-lbs	RA w=	-903 lbs
MA(d+l) =	173	ft-lbs lu=	RA(d+l)=	1632 lbs
MA(d+w) =	-2	ft-lbs lu=	RA(d+w)=	-564 lbs
			RB d=	260 lbs
			RBI(Max)=	1130 lbs
			RB w=	-785 lbs
MAB(d+l)=	6527	ft-lbs lu=	RB(d+l)=	1390 lbs
MAB(d+w)=	-2472	ft-lbs lu=	RB(d+w)=	-525 lbs

USE: W8X10

Fy =

50 ksi

## BEAM DESIGN:

P-n

Wd=	25.60	plf	P	
Wl=	132.50	plf	v	158.10 plf
Ww=	-83.83	plf		^A B^
Pd=	35.03	lbs	<-----X----->	L ----->
Pl=	0.00	lbs		
Pw=	0.00	lbs		
L=	18.83	ft		
X=	1.31	ft		
Deflections: (inches)				
	DL=		Overhang	Midspan
			-0.017	0.078
	DL+LL=		-0.109	0.493
(+downward, -upward)				
MA(d) =	68	ft-lbs	RA d=	313 lbs
MA(l) =	114	ft-lbs	RA l=	1428 lbs
MA(w) =	-72	ft-lbs	RA w=	-903 lbs
MA(d+l) =	182	ft-lbs lu=	RA(d+l)=	1741 lbs
MA(d+w) =	-4	ft-lbs lu=	RA(d+w)=	-590 lbs
			RB d=	237 lbs
			RBI(Max)=	1248 lbs
			RB w=	-786 lbs
MAB(d+l)=	6976	ft-lbs lu=	RB(d+l)=	1485 lbs
MAB(d+w)=	-2580	ft-lbs lu=	RB(d+w)=	-548 lbs

USE: W8X10

Fy =

50 ksi



BEAM DESIGN:

P-o

Wd=	39.98	plf		P		
WI=	144.91	plf		v	184.90	plf
Ww=	-101.17	plf			^A	B^
Pd=	42.27	lbs		<-----X----->	<-----	L ----->
PI=	0.00	lbs				
Pw=	0.00	lbs				
L=	18.83	ft				
X=	1.31	ft				
			Deflections: (inches)		Overhang	Midspan
			DL=		-0.027	0.123
			DL+LL=		-0.127	0.577
			(+downward, -upward)			
MA(d) =	90	ft-lbs			RAd=	476 lbs
MA(l) =	125	ft-lbs			RAI=	1561 lbs
MA(w) =	-87	ft-lbs			RAw=	-1090 lbs
MA(d+l) =	215	ft-lbs lu=	1.33 ft		RA(d+l)=	2037 lbs
MA(d+w) =	3	ft-lbs lu=	1.31 ft		RA(d+w)=	-614 lbs
					RBd=	372 lbs
					RBI(Max)=	1365 lbs
					RBw=	-948 lbs
MAB(d+l)=	8153	ft-lbs lu=	9.42 ft		RB(d+l)=	1736 lbs
MAB(d+w)=	-2714	ft-lbs lu=	1.33 ft		RB(d+w)=	-576 lbs

USE: W8X10

Fy =

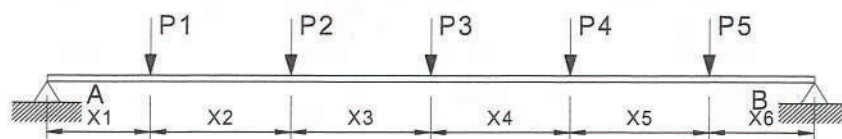
50 ksi



HEADER BEAM DESIGN:

H-a

P1d= 527 lbs  
P1l= 1980 lbs  
P1w= -914 lbs  
P2d= 375 lbs  
P2l= 1570 lbs  
P2w= -1049 lbs  
P3d= 409 lbs  
P3l= 1570 lbs  
P3w= -1096 lbs  
P4d= 377 lbs  
P4l= 1733 lbs  
P4w= -1097 lbs  
P5d= 574 lbs  
P5l= 1896 lbs  
P5w= -1323 lbs



X1 = 1.38 ft  
X2 = 6.00 ft  
X3 = 6.00 ft  
X4 = 6.00 ft  
X5 = 7.25 ft  
X6 = 1.00 ft  
L = 27.63 ft

Wd= 58.00 plf  
Wl= 0.00 plf  
Ww= 0.00 plf

RA(d)= 1921 lbs  
RA(l)= 4428 lbs  
RA(w)= -2579 lbs  
RA(d+l)= 6348 lbs  
RA(d+w)= -658 lbs

Deflection

dl= 0.24 in  
dl+ll= 0.77 in

RB(d)= 1943 lbs  
RB(l)= 4320 lbs  
RB(w)= -2901 lbs  
RB(d+l)= 6264 lbs  
RB(d+w)= -957 lbs

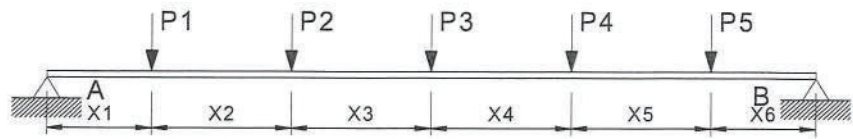
Mspan(d+l) = 37979.5 ft-lbs lu= 7.25 ft  
Mspan(d+w) = -5290.7 ft-lbs lu= 7.25 ft

USE: W8X58

Fy = 50 ksi



P1d= 642 lbs  
 P1l= 2532 lbs  
 P1w= -1123 lbs  
 P2d= 531 lbs  
 P2l= 2332 lbs  
 P2w= -1511 lbs  
 P3d= 540 lbs  
 P3l= 2266 lbs  
 P3w= -1548 lbs  
 P4d= 496 lbs  
 P4l= 2502 lbs  
 P4w= -1549 lbs  
 P5d= 780 lbs  
 P5l= 2737 lbs  
 P5w= -1870 lbs



X1 = 1.38 ft  
 X2 = 6.00 ft  
 X3 = 6.00 ft  
 X4 = 6.00 ft  
 X5 = 7.25 ft  
 X6 = 1.00 ft  
 L = 27.63 ft

Wd= 67.00 plf  
 Wl= 0.00 plf  
 Ww= 0.00 plf

RA(d)= 2379 lbs  
 RA(l)= 6131 lbs  
 RA(w)= -3504 lbs  
 RA(d+l)= 8510 lbs  
 RA(d+w)= -1125 lbs

RB(d)= 2460 lbs  
 RB(l)= 6238 lbs  
 RB(w)= -4098 lbs  
 RB(d+l)= 8698 lbs  
 RB(d+w)= -1638 lbs

Deflection

dl= 0.25 in  
 dl+ll= 0.89 in

Mspan(d+l) = 52564.0 ft-lbs lu= 7.25 ft  
 Mspan(d+w) = -9379.9 ft-lbs lu= 7.25 ft

USE: W8X67

Fy =

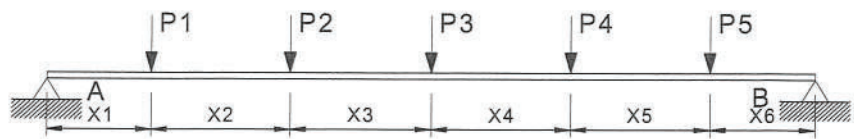
50 ksi



HEADER BEAM DESIGN:

H-c

P1d= 679 lbs  
P1l= 2613 lbs  
P1w= -1185 lbs  
P2d= 558 lbs  
P2l= 2395 lbs  
P2w= -1583 lbs  
P3d= 570 lbs  
P3l= 2330 lbs  
P3w= -1623 lbs  
P4d= 523 lbs  
P4l= 2573 lbs  
P4w= -1624 lbs  
P5d= 822 lbs  
P5l= 2814 lbs  
P5w= -1960 lbs



X1 = 1.38 ft  
X2 = 6.00 ft  
X3 = 6.00 ft  
X4 = 6.00 ft  
X5 = 7.25 ft  
X6 = 1.00 ft  
L = 27.63 ft

Wd= 67.00 plf  
Wl= 0.00 plf  
Ww= 0.00 plf

RA(d)= 2460 lbs  
RA(l)= 6311 lbs  
RA(w)= -3679 lbs  
RA(d+l)= 8771 lbs  
RA(d+w)= -1219 lbs

Deflection

dl= 0.26 in  
dl+l= 0.91 in

RB(d)= 2543 lbs  
RB(l)= 6414 lbs  
RB(w)= -4295 lbs  
RB(d+l)= 8957 lbs  
RB(d+w)= -1752 lbs

Mspan(d+l) = 54091.1 ft-lbs lu= 7.25 ft  
Mspan(d+w) = -10082.3 ft-lbs lu= 7.25 ft

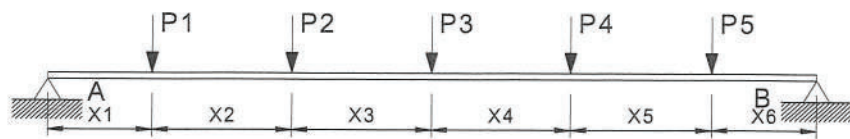
USE: W8X67 Fy = 50 ksi



HEADER BEAM DESIGN:

H-d

P1d= 436 lbs  
P1l= 1631 lbs  
P1w= -753 lbs  
P2d= 311 lbs  
P2l= 1293 lbs  
P2w= -864 lbs  
P3d= 339 lbs  
P3l= 1293 lbs  
P3w= -903 lbs  
P4d= 313 lbs  
P4l= 1428 lbs  
P4w= -903 lbs  
P5d= 476 lbs  
P5l= 1561 lbs  
P5w= -1090 lbs



X1 = 1.38 ft  
X2 = 6.00 ft  
X3 = 6.00 ft  
X4 = 6.00 ft  
X5 = 7.25 ft  
X6 = 1.00 ft  
L = 27.63 ft

Wd= 48.00 plf  
Wl= 0.00 plf  
Ww= 0.00 plf

RA(d)= 1591 lbs  
RA(l)= 3647 lbs  
RA(w)= -2124 lbs  
RA(d+l)= 5238 lbs  
RA(d+w)= -533 lbs

RB(d)= 1610 lbs  
RB(l)= 3559 lbs  
RB(w)= -2389 lbs  
RB(d+l)= 5169 lbs  
RB(d+w)= -779 lbs

Deflection

dl= 0.25 in  
dl+ll= 0.78 in

Mspan(d+l) = 31342.8 ft-lbs lu= 7.25 ft  
Mspan(d+w) = -4297.5 ft-lbs lu= 7.25 ft

USE: W8X48 Fy = 50 ksi



## Column Design

## Col Line A

AISC 15th ed, Use First Order Analysis Criteria

P DL =	2.46 kips	Clr. Ht.=	10.17 ft
P LL =	6.31 kips	Fascia Ht.=	1.00 ft
P WL =	-3.68 kips	Col. Trib=	19.36 ft
Base Shear =	0.21 kips	Wind Load=	16.00 psf
Total Base Shear =	1.43 kips	# of COL.=	2
M WL =	$w(\text{Fascia Ht} \cdot 2.5 \cdot \text{Col Trib} / \# \text{ of col} \cdot L) + w(\text{Wrap} \cdot 1/2 \text{ Clr. Ht}^2)$		Max All. Defl = 1.28 in
M Seis =	Base Shear x L		Max Defl Ratio = L/ 100
M Unbal =	Live Load x Col. Trib.x (Canopy Width/2)^2/2		Max Defl. = 0.16 in, OK
L =	Clr. Ht. + Fascia Ht/2		
Pr =	8.77 kips	1.6Pr<0.5Py First-Order Analysis Allowed (A-7-1)	
Py =	326.60 kips		
N =	0.00 •Yi (A-7-2)	Use: TS8X8X1/4	
B2 =	1.05 OK, A-8-6		
M WL =	4.96 kip-ft	Fy = 46.00 ksi	
M Seis =	2.25 kip-ft	K = 1.00	
M DL(Nod) =	0.11 kip-ft	L, Col = 10.67 ft	
M LL(Nod) =	0.28 kip-ft	A = 7.10 in^2	
M Unbal DL=	0.00 kip-ft	I = 70.70 in^4	
M Unbal LL=	0.00 kip-ft	Cm = 1.00	
M Unbal WL=	0.00 kip-ft	Pe1 = 393.14 kips	
		B1 = 1.04 (A-8-3)	
		P, All = 175.01 kips	
		M, All = 44.10 kip-ft	

Load Combination	Pr, Kips	Mr, Kip-ft	Equation	Result
D+L	8.77	0.41	0.03	OK
D+W	2.46	5.25	0.13	OK
D+0.7E	2.46	1.75	0.05	OK
D+0.75W+0.75L	7.19	4.19	0.12	OK
D+0.525E+0.75L	7.19	1.56	0.06	OK

Top Connection : Standard Cap Plate

Offset Base Plate : MODLBP 8 - 20

Spread Footing Design

Col Line A

From Column

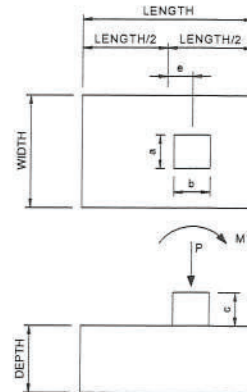
P dl = 2.46 kips  
P ll = 6.31 kips  
P wl = -3.68 kips

Soil Density = 110 pcf  
Width = 5.50 ft  
Length = 5.50 ft  
Depth = 3.00 ft  
e = 2.08 ft  
a = 0.00 ft  
b = 0.00 ft  
c = 0.00 ft

Unbalanced Load to Column

M dl = 0.00 kip-ft  
M ll = 0.00 kip-ft  
M wl = 0.00 kip-ft  
From Lateral  
M wl = 4.96 kip-ft  
M el = 2.82 kip-ft

Kern = L/6 = 0.92 ft  
Footing Weight = 13.61 kips  
Soil Weight = 0.00 kips



Total Loads to Spread Footing

PDL = 16.07 kips  
PLL = 6.31 kips  
PWL = -3.68 kips  
MDL = 5.13 kip-ft  
MLL = 13.15 kip-ft  
MWL = -2.71 kip-ft  
MEL = 2.82 kip-ft

Load Combination	Pr, Kips	Mr, Kip-ft	ecc, ft	Soil Pressure psf
D+L	22.38	18.27	0.82	1068.92
D+W	12.39	2.42	0.19	166.84
0.6D+W	5.96	0.37	0.06	-119.63
0.6D+0.7E	9.64	5.05	0.52	170.84
D+0.7E	16.07	7.10	0.44	457.31
D+0.75W+0.75L	18.05	12.95	0.72	733.74
D+0.75(0.7E)+0.75L	20.81	16.47	0.79	951.59

q(ALLOW)= 1500.00 psf OK

REINFORCING:

M = 17867.31 ft-lbs/ft

Assume:  $f'_c=3000$  psi,  $F_y=40000$  psi

d = 32.63 in

As(REQ'D)= 0.38 in<sup>2</sup>

As(PROV.)= 0.59 in<sup>2</sup> OK

USE #6's AT 9"O.C. T&B, EACH WAY



Foundation: (Restrained at Grade)

Col Line A

$$d^2 = (4.25 * M) / (S3 * b)$$

M(MAX)= 20603 ft-lbs  
S3= 100 PCF X d  
b= 3.000 ft  
d= 6.633 ft

Pmax= 8.77 kips  
Footing Area= 7.07 ft^2  
Bearing= 1240.83 psf

Footing= Round

USE: 3.00 FT.RND. X 6.75 ft deep footing

$$As = 12 * M / (jd * 24000) = 0.2759 \text{ in}^2$$

USE: 10 #8's (RND. Cage) w/ #4 Ties @ 4" O.C. w/135 degree hooks In The Top  
3'-0" of The Footing, #4 Ties @ 12" o.c w/ 135 Degree Hooks In The Balance of Footing

**Footing design to allow offset column placement of 1'-9" from centerline of footing.**

## Column Design

## Col Line B

AISC 15th ed, Use First Order Analysis Criteria

P DL =	2.54 kips	Clr. Ht.=	10.17 ft
P LL =	6.41 kips	Fascia Ht.=	1.00 ft
P WL =	-4.29 kips	Col. Trib.=	19.36 ft
Base Shear =	0.21 kips	Wind Load=	16.00 psf

M WL =	w(Fascia Ht*2.5*Col Trib./# of col*L)+ w(Wrap*1/2 Clr. Ht^2)	# of COL.=	2
M Seis =	Base Shear x L	Max All. Defl =	1.28 in
M Unbal =	Live Load x Col. Trib.x (Canopy Width/2)^2/2	Max Defl Ratio =	L/ 100
L =	Clr. Ht. + Fascia Ht/2	Max Defl. =	0.16 in, OK

Pr = 8.96 kips 1.6Pr&lt;0.5Py First-Order Analysis Allowed (A-7-1)

Py = 326.60 kips

N = 0.00 •Yi (A-7-2)

B2 = 1.05 OK, A-8-6

M WL = 4.96 kip-ft

M Seis = 2.25 kip-ft

M DL(Nod) = 0.11 kip-ft

M LL(Nod) = 0.29 kip-ft

M Unbal DL= 0.00 kip-ft

M Unbal LL= 0.00 kip-ft

M Unbal WL= 0.00 kip-ft

Use: TS8X8X1/4

Fy = 46.00 ksi

K = 1.00

L, Col = 10.67 ft

A = 7.10 in^2

I = 70.70 in^4

Cm = 1.00

Pe1 = 393.14 kips

B1 = 1.04 (A-8-3)

P, All = 175.01 kips

M, All = 44.10 kip-ft

Load Combination	Pr, Kips	Mr, Kip-ft	Equation	Result
D+L	8.96	0.42	0.04	OK
D+W	2.54	5.26	0.13	OK
D+0.7E	2.54	1.76	0.05	OK
D+0.75W+0.75L	7.35	4.20	0.12	OK
D+0.525E+0.75L	7.35	1.57	0.06	OK

Top Connection : Standard Cap Plate

Base Plate : LBP 8 - 20

Foundation: (Restrained at Grade)

$$d^2 = (4.25 * M) / (S3 * b)$$

M(MAX)= 5262 ft-lbs

S3= 100 PCF X d

b= 3.000 ft

d= 4.209 ft

Footing= Round

Pmax= 8.96 kips

Footing Area= 7.07 ft^2

Bearing= 1267.17 psf

USE: 3.00 FT.RND. X 5.00 ft deep footing

$$As = 12 * M / (jd * 24000) = 0.0705 \text{ in}^2$$

USE: 8 #8's (RND. Cage) w/ #4 Ties @ 12" O.C. w/135 hooks



$P_{dl} = 2543$  lbs  
 $P_{ll} = 6414$  lbs  
 $P_w = -4295$  lbs  
 $M = 5262$  ft-lbs  
 Soil Density = 110 pcf

Width = 4.50 ft  
 Length = 4.50 ft  
 Depth = 3.00 ft

$a = 0.00$  ft  
 $b = 0.00$  ft  
 $c = 0.00$  ft

Footing Weight = 9112.5 lbs  
 Soil Weight = 0 lbs

Overturning :  $OTM = 5262$  ft-lbs  
 $RM = 14273$  ft-lbs  
 $FS = 2.71 > 1.5$  Therefore OK

Soil Pressure :  $q_{(dl+ll)} = 442.33$  psf Net  
 $q_{(ALLOW)} = 1500$  psf OK

For  $dl+(wl, seismic)$  :

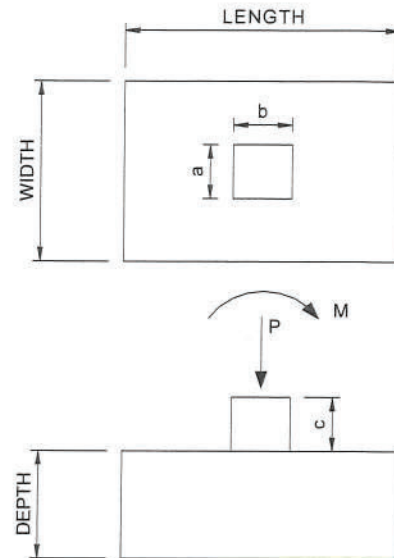
$P = 11656$  lbs  
 $e=M/P = 0.45$  ft  
 $L/6 = 0.75$  ft

Resultant within middle 3rd

$q_{(dl+wl, seismic)} = 472.04$  psf Net  
 $q_{(ALLOW)} = 1500.00$  psf OK

REINFORCING:  $M_{(dl+ll)} = 1119.64$  ft-lbs/ft  
 $M_{(dl+wl, seismic)} = 574.90$  ft-lbs/ft  
 $dl+ll$  Controls  
 Assume:  $f'_c = 3000$  psi,  $F_y = 40000$  psi  
 $d = 32.63$  in  
 $As(REQ'D) = 0.02$  in<sup>2</sup>  
 $As(PROV.) = 0.44$  in<sup>2</sup>

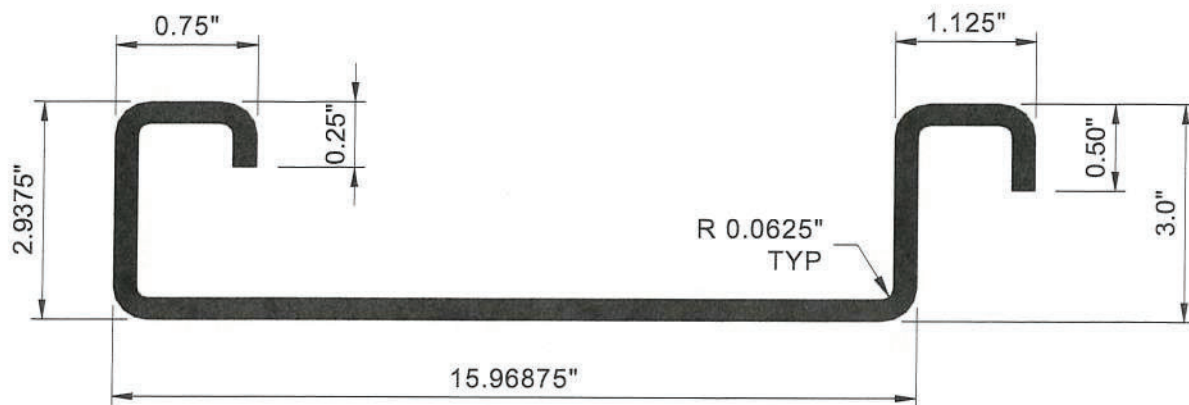
USE #6's AT 12"O.C. T&B, EACH WAY





LANE SUPPLY, INC.

120 Fairview  
Arlington, Texas 76010  
817-261-9116



### SL-316 DECK PANEL

#### Section Properties

Gage	Wt, psf	Thickness, in	ASTM 653	+I, in <sup>4</sup>	-I, in <sup>4</sup>	+S, in <sup>3</sup>	-S, in <sup>3</sup>	+M, ft-lbs/ft	-M, ft-lbs/ft
20	2.20	0.0359	Grade 40	0.9346	0.4680	0.3961	0.3036	592.70	454.44
			Grade 50	0.9208	0.4522	0.3879	0.2880	725.86	538.92
18	2.93	0.0478	Grade 40	1.2486	0.6827	0.5329	0.4377	797.77	655.28
			Grade 50	1.2129	0.6518	0.5141	0.4296	962.09	803.92

#### Notes:

- 1 Designed per AISI Cold Formed Steel Manual, 2016 ed.
- 2 Complete calculations are available upon request.
- 3  $\pm M$  is allowable bending moment.

Issued 12-5-17



Moment = 20.00 kip-ft  
 Column = TS8X8X1/4  
 D = 8 in.  
 e1 = 8 in.  
 e2 = 4 in.  
 Anchor Bolts = 1 1/2 in  
 t plate = 2.00 in

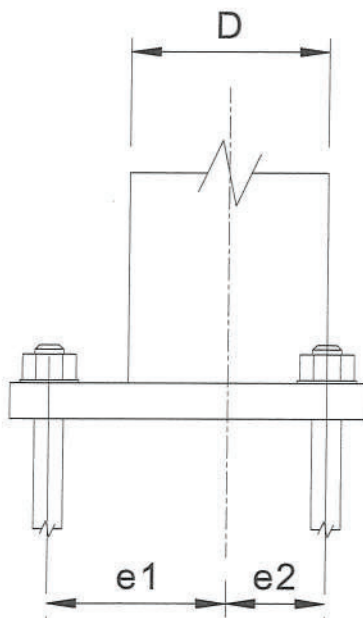
A36 Steel Plate       $F_y = 36$  ksi  
 E70 Electrode       $F_w = 0.928$  kips / in / 16th  
 A307 Anchor Bolts       $F_t = 20$  ksi

Clockwise Moment

Pbolt = 8.57 kips < 35.3, OK  
 t(req'd) = 1.04 in  
 t(actual) = 2.00 in  
 Weld(req'd) = 3.03 /16th's  
 Weld(actual) = F.P. /16th's

Counter-Clockwise Moment

Pbolt = 12.00 kips < 35.3, OK





LANE SUPPLY, INC.

120 Fairview  
Arlington, Texas 76010  
817-261-9116  
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## STANDARD BASE PLATE DESIGN

LBP #	M	P <sub>BOLT</sub>	Bolt Dia.	t <sub>REQ'D</sub>	t <sub>ACTUAL</sub>	Weld Req'd	Weld Actual	Base Plate
(D - M)	(ft-k)	(k)	(in)	(in)	(in)	(1/16 in)	(in)	Mark
8 - 10	10	5.58	1 1/2	0.72	3/4	1.52	1/4	LBP 1
8 - 20	20	10.91	1 1/2	0.99	1	3.03	5/16	LBP 2
8 - 30	30	16.00	1 1/2	1.17	1 1/4	4.55	5/16	LBP 3
8 - 40	40	20.87	1 1/2	1.32	1 1/2	6.06	F.P.	LBP 4
8 - 50	50	26.09	1 1/2	1.46	1 1/2	7.58	F.P.	LBP 5

TS 8 X 8 COLUMN:

D= 8 in.  
e= 2 in.  
b,d= 8 in.

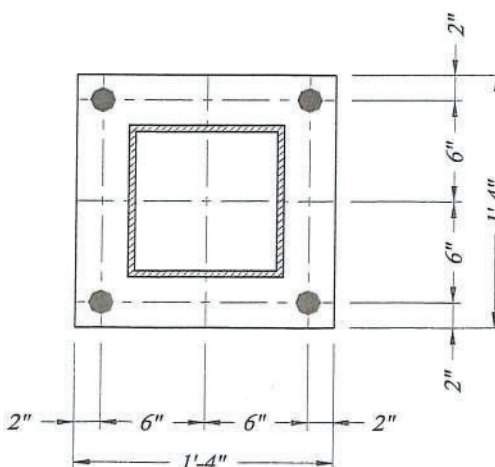
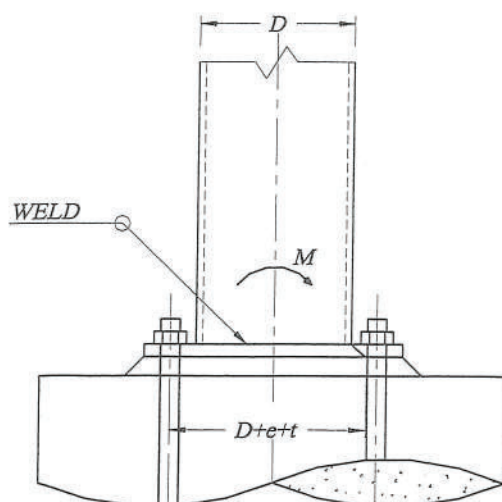
CONSTANTS:

A36 Steel Plate      Fy = 36 ksi  
E70xx Electrode      Fw = 0.928 k/in/16th  
A307 Anchor Bolts      Ft = 20 ksi

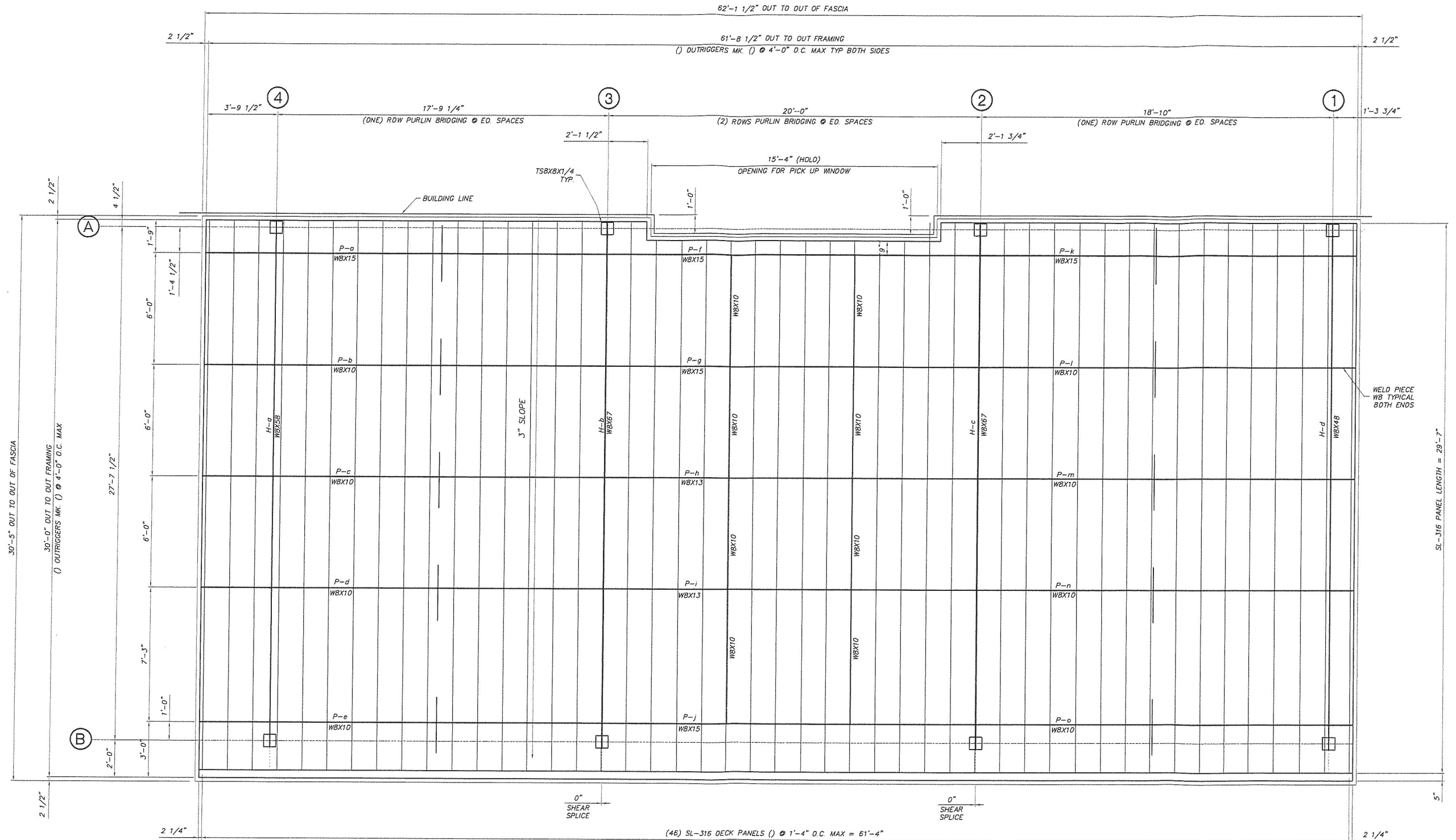
EQUATIONS:

$$P_{BOLT} = \frac{M \times 12 \text{ in/ft}}{2 \text{ bolts } (D+e+t)} \quad \text{Weld} = \frac{M \times 12 \text{ in/ft}}{S_{Weld} \times Fw} = \frac{M \times 12 \text{ in/ft}}{Fw (bd+d^2/3)}$$

$$t_{REQ'D} = \sqrt{\frac{6 \times P \times e \times 2 \text{ bolts}}{0.75 \times Fy \times (D+2t)}}$$







### DESIGN LOADS:

DEAD LOAD = 3 p.s.f. (DECK + LIGHTS) + WEIGHT OF STRUCTURAL COMPONENTS  
 LIVE LOAD = 20 p.s.f.  
 SNOW LOAD = 20 p.s.f.  
 WIND LOAD VULT = 116 m.p.h. EXP. C  
 WIND VASD = 90 m.p.h. EXP. C  
 BLDG CODE = MISSOURI BUILDING CODE 2018  
 ADOPTING 2018 INTERNATIONAL BUILDING CODE  
 EQUIVALENT LATERAL FORCE PROCEDURE  
 LATERAL FORCE RESISTING SYSTEM = CANTILEVERED COLUMN SYSTEM-ORDINARY STEEL MOMENT FRAME  
 Pf = 20 p.s.f.  
 Ce = 1.2  
 Ct = 1.2  
 Is = 1.0  
 W = 4.92  
 Pd = 20.44  
 SITE CLASS = D  
 Ss (0.2) = 0.099  
 S1 (1.0) = 0.068  
 SDS = 0.11  
 SD1 = 0.11  
 Fa = 1.60  
 Fv = 2.40  
 R = 1.25  
 IMPORTANCE FACTOR = 1.0  
 RISK CATEGORY = II  
 SEISMIC DESIGN CATEGORY = D  
 CS = 0.084  
 CONSTRUCTION TYPE = WB  
 OCCUPANCY CATEGORY = A2  
 TOTAL SEISMIC BASE SHEAR BOTH DIRECTIONS = 1.43 KIPS