





2012 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(except 1 and 2-family dwellings and townhouses)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: McDONALD'S CAMERON 32-1466
Address: 935 NC HWY 24-87, CAMERON, NC Zip Code 27310
Proposed Use: RESTAURANT
Owner/Authorized Agent: ROBERT PULLINS Phone # (678) 395-4920 E-Mail: robertpullins@axiscompanies.com
Owned By: City/County Private State
Code Enforcement Jurisdiction: City County MOORE State

LEAD DESIGN PROFESSIONAL: PAYTON W. CRADDOCK, P.E.
designer firm name license # telephone # e-mail
Building Tower Engineering Payton W. Craddock 043770 919-703-4163 pcraddock@tepgroup.net
Civil
Electrical Tower Engineering Payton W. Craddock 043770 919-703-4163 pcraddock@tepgroup.net
Fire Alarm
Plumbing
Mechanical
Sprinkler-Standpipe
Structural
Retaining Walls >5' High
Other

2012 EDITION OF NC CODE FOR: New Construction Addition Upfit
EXISTING: Reconstruction Alteration Repair Renovation
CONSTRUCTED: (date) ORIGINAL USE(S) (Ch. 3): A-2
RENOVATED: (date) CURRENT USE(S) (Ch. 3): A-2
PROPOSED USE(S) (Ch. 3): A-2

BASIC BUILDING DATA
Construction Type: I-A II-A III-A IV V-A
(check all that apply) I-B II-B III-B IV-B V-B
Sprinklers: No Partial Yes NFPA 13 NFPA 13R NFPA 13D
Standpipes: No Yes Class I II III Wet Dry
Fire District: No Yes (Primary) Flood Hazard Area: No Yes
Building Height: (feet) 23' - 4"
Gross Building Area: 4057 SF
Floor Schedule Table: 5th Floor, 4th Floor, 3rd Floor, 2nd Floor, Mezzanine, 1st Floor, Basement

Exterior wall opening area with respect to distance to assumed property lines (705.8)
Existing structures within 30' of the proposed building
Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1)
Occupant loads for each area
Exit access travel distances (1016)
Common path of travel distances (1014.3 & 1028.8)
Dead end lengths (1018.4)
Clear exit widths for each exit door
Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
Actual occupant load for each exit door
A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
Location of doors with panic hardware (1008.1.10)
Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
Location of doors with electromagnetic egress locks (1008.1.9.8)
Location of doors equipped with hold-open devices
Location of emergency escape windows (1029)
The square footage of each fire area (902)
The square footage of each smoke compartment (407.4)
Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS
(SECTION 1107) NO CHANGE

Table with 5 columns: TOTAL UNITS, ACCESSIBLE UNITS REQUIRED, ACCESSIBLE UNITS PROVIDED, TYPE A UNITS REQUIRED, TYPE B UNITS PROVIDED, TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING
(SECTION 1106) NO CHANGE

Table with 5 columns: LOT OR PARKING AREA, TOTAL # OF PARKING SPACES UNITS, # OF ACCESSIBLE SPACES PROVIDED, TOTAL # ACCESSIBLE UNITS PROVIDED

STRUCTURAL DESIGN

DESIGN LOADS: NO CHANGE

Importance Factors: Wind (IW)
Snow (IS)
Seismic (IE)

Live Loads: Roof psf
Mezzanine psf
Floor psf

Ground Snow Load: psf

Allowable area NO CHANGE
Occupancy: Assembly A-1 A-2 A-3 A-4 A-5
Business
Educational
Factory F-1 Moderate F-2 Low
Hazardous H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM
Institutional I-1 I-2 I-3 I-4
I-3 Condition I1 I2 I3 I4 I5
Mercantile
Residential R-1 R-2 R-3 R-4
Storage S-1 Moderate S-2 Low High-piled
Parking Garage Open Enclosed Repair Garage
Utility and Miscellaneous

Accessory Occupancies:
Assembly A-1 A-2 A-3 A-4 A-5
Business
Educational
Factory F-1 Moderate F-2 Low
Hazardous H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM
Institutional I-1 I-2 I-3 I-4
I-3 Condition I1 I2 I3 I4 I5
Mercantile
Residential R-1 R-2 R-3 R-4
Storage S-1 Moderate S-2 Low High-piled
Parking Garage Open Enclosed Repair Garage
Utility and Miscellaneous

Incidental Uses (Table 508.2.5):
Furnace room where any piece of equipment is over 400,000 Btu per hour input
Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
Refrigerant machine room
Hydrogen cutoff rooms, not classified as Group H
Incinerator rooms
Paint shops, not classified as Group H, located in occupancies other than Group F
Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
Laundry rooms over 100 square feet
Group I-3 cells equipped with padded surfaces
Group I-2 waste and linen collection rooms
Waste and linen collection rooms over 100 square feet
Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies
Rooms containing fire pumps
Group I-2 storage rooms over 100 square feet
Group I-2 commercial kitchens
Group I-2 laundries equal to or less than 100 square feet
Group I-2 rooms or spaces that contain fuel-fired heating equipment
Special Uses: 402 403 404 405 406 407 408 409 410 411 412 413
414 415 416 417 418 419 420 421 422 423 424
425 426 427
Special Provisions: 509.2 509.3 509.4 509.5 509.6 509.7 509.8 509.9
Mixed Occupancy: No Yes Separation: 0 Hr. Exception:
Incidental Use Separation (508.2.5)
This separation is not exempt as a Non-Separated Use (see exemptions)

Wind Load: Basic Wind Speed mph (ASCE-7)
Exposure Category
Wind Base Shears (for MWFRS) Vx = Vy =
SEISMIC DESIGN CATEGORY: A B C D
Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) I II III IV
Spectral Response Acceleration SS %g S1 %g
Site Classification (Table 1613.5.2) A B C D E F
Data Source: Field Test Presumptive Historical Data
Basic structural system (check one)
Bearing Wall Dual w/ Special Moment Frame
Building Frame Dual w/ Intermediate R/C or Special Steel
Moment Frame Inverted Pendulum
Seismic base shear: VX = VY =
Analysis Procedure: Simplified Equivalent Lateral Force Dynamic
Architectural, Mechanical, Components anchored? Yes No

Lateral design Control: Earthquake Wind

Soil Bearing Capacities:
Field Test (provide copy of test report) psf
Presumptive Bearing capacity psf
Pile size, type, and capacity

SPECIAL INSPECTIONS REQUIRED: Yes No
PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1) NO CHANGE
Table with 8 columns: USE, WATERCLOSETS, LAVATORIES, SHOWERS/TUBS, DRINKING FOUNTAINS, MALE, FEMALE, REGULAR, ACCESSIBLE

SPECIAL APPROVALS
Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)

Non-Separated Use (508.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
Separated Use (508.4) - See below for area calculations
For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

Actual Area of Occupancy A + Actual Area of Occupancy B
Allowable Area of Occupancy A Allowable Area of Occupancy B
3527 SF + 529 SF + ..... = 0.65 <= 1.00
6000 SF 9000 SF

Table with 6 columns: STORY NO., DESCRIPTION AND USE, (A) BLDG AREA PER STORY (ACTUAL), (B) TABLE 503 AREA, (C) AREA FOR FRONTAGE INCREASE, (D) AREA FOR SPRINKLER INCREASE, (E) ALLOWABLE AREA OR UNLIMITED, (F) MAXIMUM BUILDING AREA

maximum building area 1 Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = (F)
b. Total Building Perimeter = (P)
c. Ratio (F/P) = (F/P)
d. W = Minimum width of public way = (W)
e. Percent of frontage increase If = 100 [ F/P - 0.25 ] x W/30 = (%)
2 The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building Is = 200 percent
b. Single story building Is = 300 percent
3 Unlimited area applicable under conditions of Section 507.
4 Maximum Building Area = total number of stories in the building x E (506.4).
5 The maximum area of open parking garages must comply with Table 406.3.5. The maximum area of air traffic control towers must comply with Table 412.1.2.

ALLOWABLE HEIGHT

Table with 4 columns: TYPE OF CONSTRUCTION, TYPE, INCREASE FOR SPRINKLERS, SHOWN ON PLANS, CODE REFERENCE

ENERGY SUMMARY NO CHANGE
ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Climate Zone: 3 4 5
Method of Compliance:
Prescriptive (Energy Code)
Performance (Energy Code)
Prescriptive (ASHRAE 90.1)
Performance (ASHRAE 90.1)

THERMAL ENVELOPE
Roof/ceiling Assembly (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Skylights in each assembly:
U-Value of skylight:
total square footage of skylights in each assembly:
Exterior Walls (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Openings (windows or doors with glazing)
U-Value of assembly:
Solar heat gain coefficient:
projection factor:
Door R-Values:
Walls below grade (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Floors over unconditioned space (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Floors slab on grade
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Horizontal/vertical requirement:
slab heated:

Table with 8 columns: BUILDING ELEMENT, FIRE SEPARATION DISTANCE (FEET), REQ'D, RATING, PROVIDED (W/ REDUCTION), DETAIL # AND SHEET #, DESIGN # FOR RATED ASSEMBLY, DESIGN # FOR RATED PENETRATION, DESIGN # FOR RATED JOINTS

LIFE SAFETY SYSTEM REQUIREMENTS
Emergency Lighting: No Yes
Exit Signs: No Yes
Fire Alarm: No Yes
Smoke Detection Systems: No Yes Partial hvac
Panic Hardware: No Yes

LIFE SAFETY PLAN REQUIREMENTS
Life Safety Plan Sheet #: 2.0
Fire and/or smoke rated wall locations (Chapter 7)
Assumed and real property line locations

Table with 4 columns: FLOOR, ROOM OR SPACE DESIGNATION, MINIMUM # NUMBER OF EXITS, TRAVEL DISTANCE, ARRANGEMENT OF EGRESS (1.3) (SECTION 1004.3)

- 1. CORRIDOR DEAD ENDS (SECTION 1004.3.2.3)
2. SINGLE EXITS TABLE (1005.2)
3. COMMON PATH OF TRAVEL (SECTION 1004.2.5)

Table with 5 columns: USE GROUP OR SPACE DESCRIPTION, (A) AREA 1 SQ. FT., (B) AREA 1 PER OCCUPANT (TABLE 1003.2.2.2), (C) CALCULATED OCCUPANT LOAD (A/B), (D) REQUIRED WIDTH PER OCCUPANT TABLE 1003.2.3, (E) EXIT WIDTH (IN) (2.3.4.5.6) (SECTION 1004.3)

- 1. SEE TABLE 1003.2.2 TO DETERMINE WHETHER NET OR GROSS AREA IS APPLICABLE. SEE DEFINITION "AREA, GROSS" AND "AREA, NET" (SECTION 1002).
2. MINIMUM STAIRWAY WIDTH (SECTION 1003.3); MIN. DOOR WIDTH (SECTION 1003.3.1)
3. MINIMUM WIDTH OF EXIT PASSAGEWAY (SECTION 1003.3.3)
4. SEE SECTION 1003.2.7 FOR CONVENING EXITS
5. THE LOSS OF ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50 PERCENT OF THE TOTAL REQUIRED (SECTION 1003.2.5)
6. ASSEMBLY OCCUPANCIES (SECTION 1008)

MECHANICAL SUMMARY
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
NO CHANGE

Thermal Zone
winter dry bulb:
summer dry bulb:
Interior design conditions
winter dry bulb:
summer dry bulb:
relative humidity:
Building heating load:
Building cooling load:
Mechanical Spacing Conditioning System
Unity
description of unit:
heating efficiency:
cooling efficiency:
size category of unit:

ELECTRICAL SUMMARY
ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:
Energy Code: Prescriptive Performance
ASHRAE 90.1: Prescriptive Performance
Lighting schedule (each fixture type)
lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs. allowed (whole building or space by space)
total exterior wattage specified vs. allowed
Additional Prescriptive Compliance
506.2.1 More Efficient Mechanical Equipment
506.2.2 Reduced Lighting Power Density
506.2.3 Energy Recovery Ventilation Systems
506.2.4 Higher Efficiency Service Water Heating
506.2.5 On-Site Supply of Renewable Energy
506.2.6 Automatic Daylighting Control Systems

Table with 2 columns: TITLE, DESCRIPTION

Table with 2 columns: DATE, REV

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # C-1794



November 8, 2018

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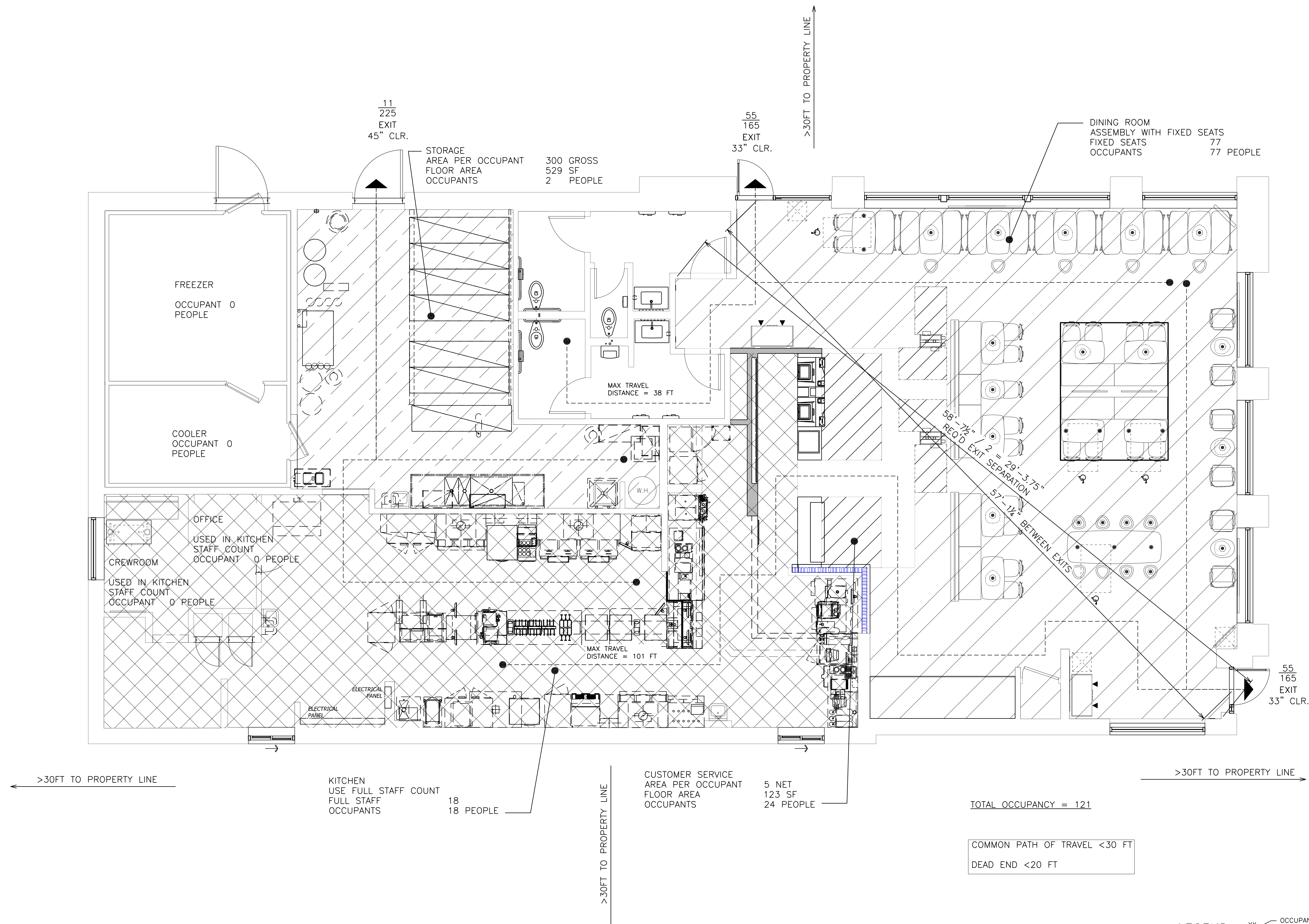
Table with 4 columns: DRAWN BY, BRB, TEP, PID NO., REVIEWED BY, PWC, DATE ISSUED, 11/08/18

Table with 2 columns: SHEET NO., T1.0, APPENDIX B

SITE ADDRESS: 935 NORTH CAROLINA HIGHWAY 24-87



LIFE SAFETY PLAN:



**LEGEND:**

- xx — OCCUPANT LOAD
- xxx — DOOR CAPACITY (2" / PERSON)
- PH — DOOR WITH PANIC HARDWARE
- HC — HANDICAP ACCESSIBLE SEATING SPACE

REV	DATE	DESCRIPTION
0	11/08/18	FOR CONSTRUCTION

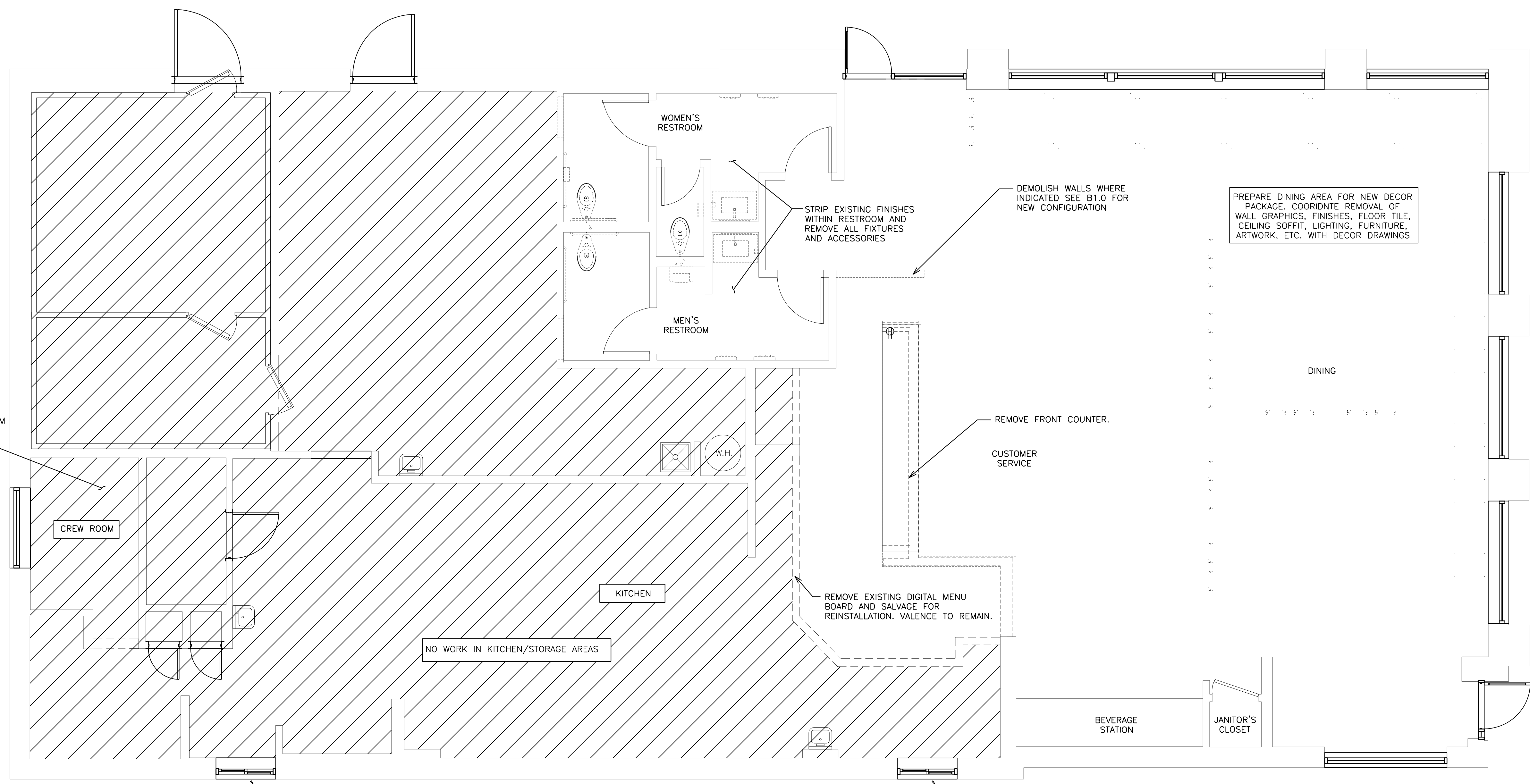
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November 8, 2018

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PREPARED FOR:	McDonald's USA, LLC
DRAWN BY:	BRB
TEP PID NO.:	
REVIEWED BY:	PWC
DATE ISSUED:	11/08/18
TITLE:	CAMERON, NC INTERIOR REMODEL DRAWINGS
SHEET NO.:	T2.0 LIFE SAFETY PLAN
SITE ID:	32-1466
SITE ADDRESS:	935 NORTH CAROLINA HIGHWAY 24-87



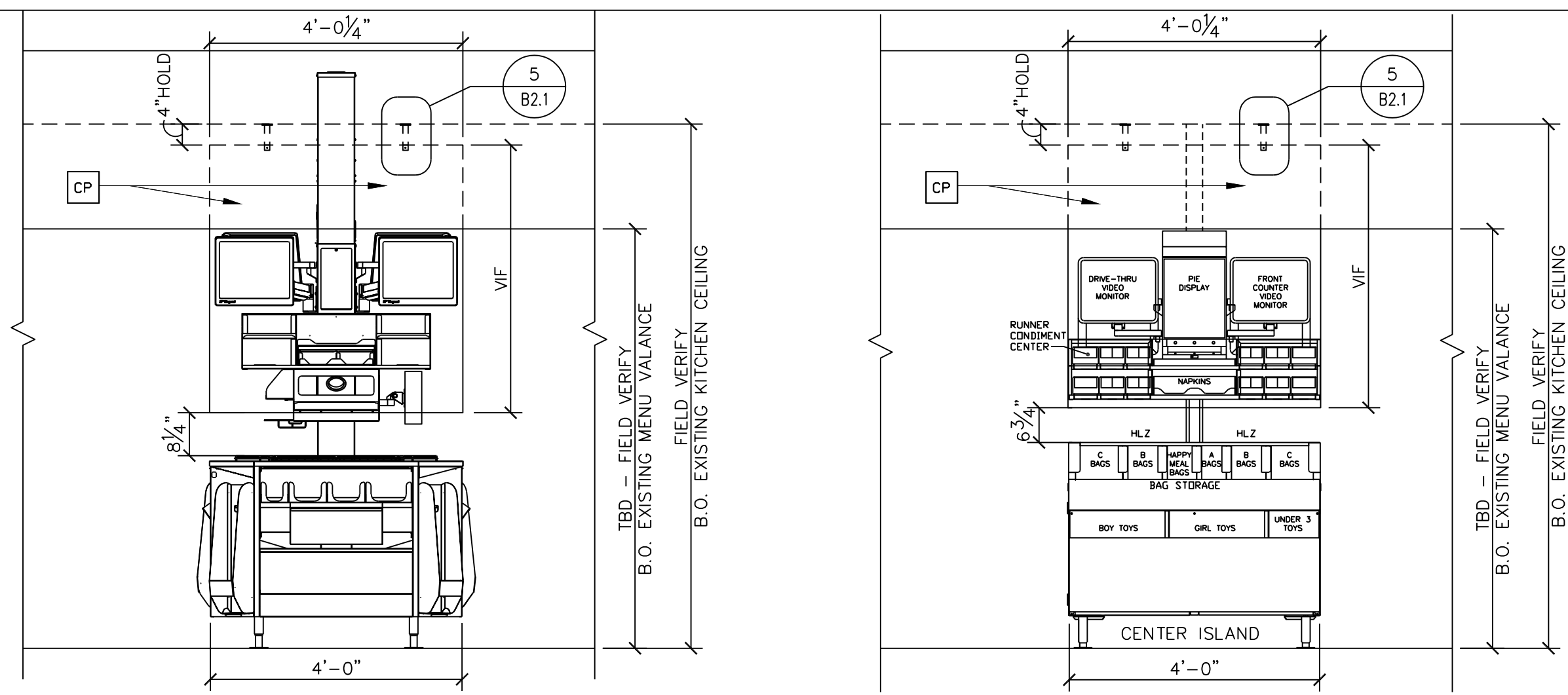
1  
D1.0 DEMOLITION FLOOR PLAN  
1/4" = 1'-0"

DRAWN BY BRB		TEP PID NO.		REVIEWED BY PWC		DATE ISSUED 11/08/18	
TITLE CAMERON, NC INTERIOR REMODEL DRAWINGS				SHEET NO. D1.0 DEMO FLOOR PLAN			
PREPARED FOR: <b>McDonald's USA, LLC</b>				These drawings and specifications are the confidential and proprietary property of McDonald's USA, LLC and shall not be copied or reproduced without written authorization. The contract documents were prepared not suitable for use on a different site or at a later time. Use of these drawings for reference or example on another project requires the approval of the project manager. The use of these drawings on any other project is not authorized.			
TOWER ENGINEERING PROFESSIONALS 326 TRYON ROAD RALEIGH, NC 27603 OFFICE: (919) 661-6351 www.tepgroup.net N.C. LICENSE # C-1794							
REV		DATE		FOR CONSTRUCTION		DESCRIPTION	
0		11/08/18					

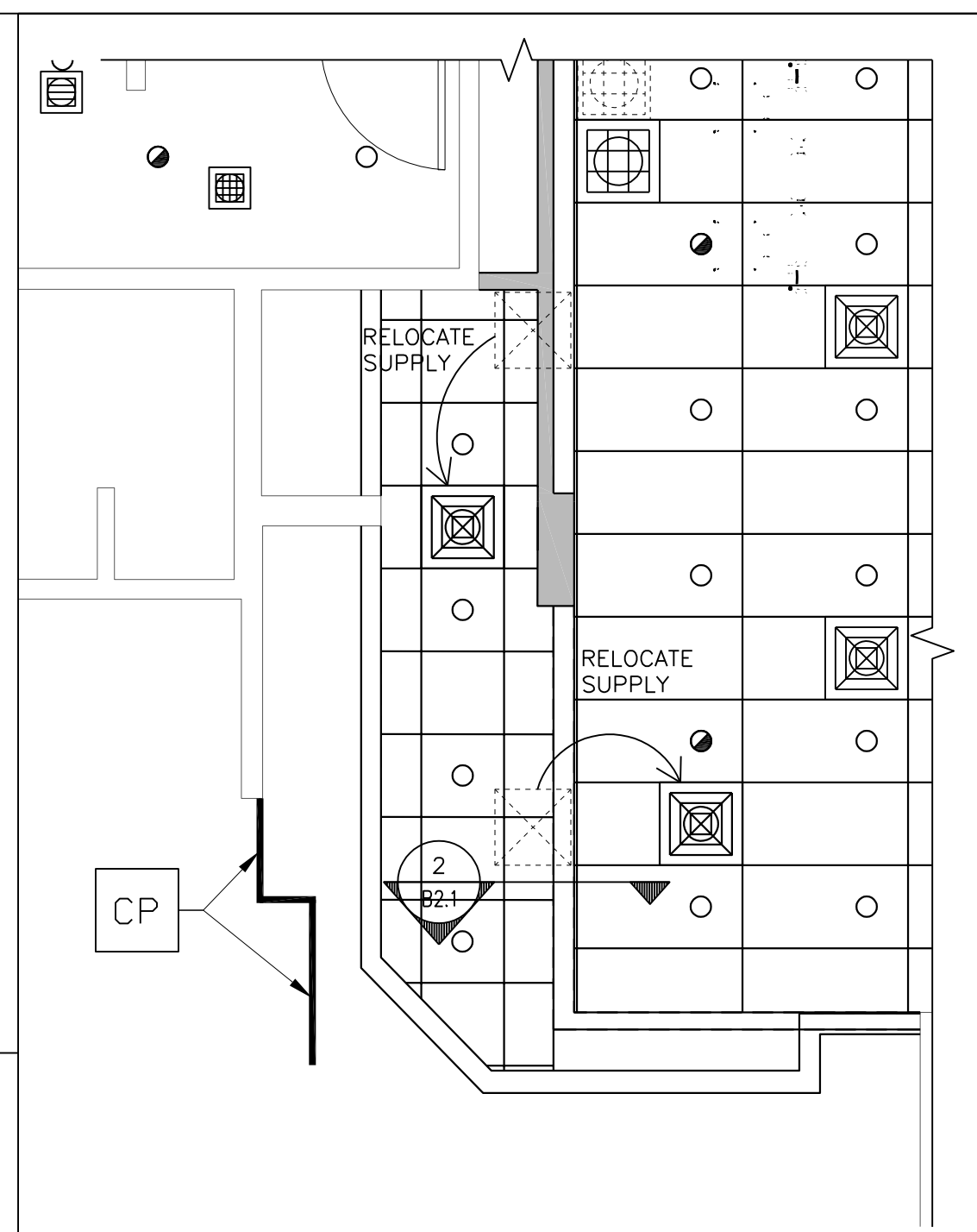




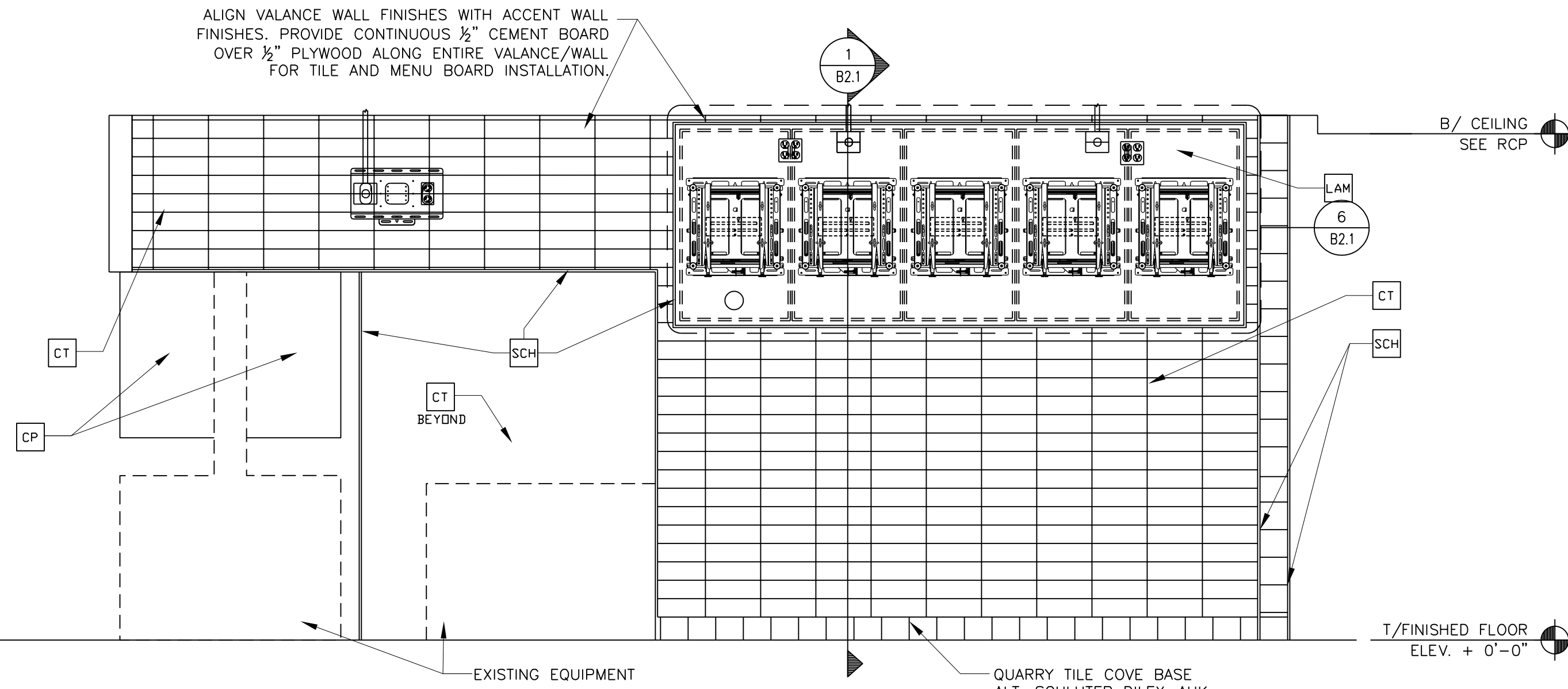




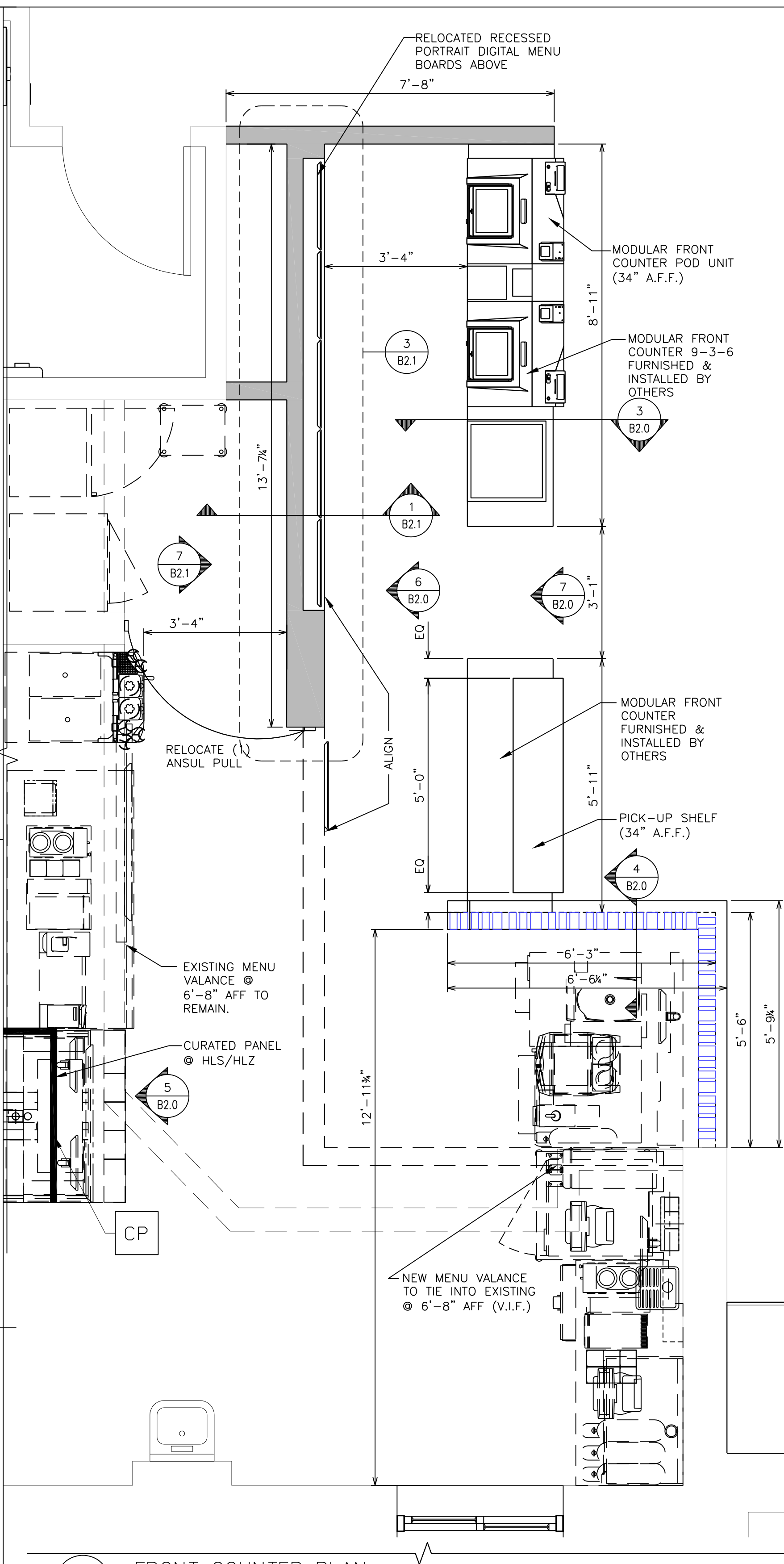
5 CURATED VIEW PANEL ELEVATION  
1/2" = 1'-0"



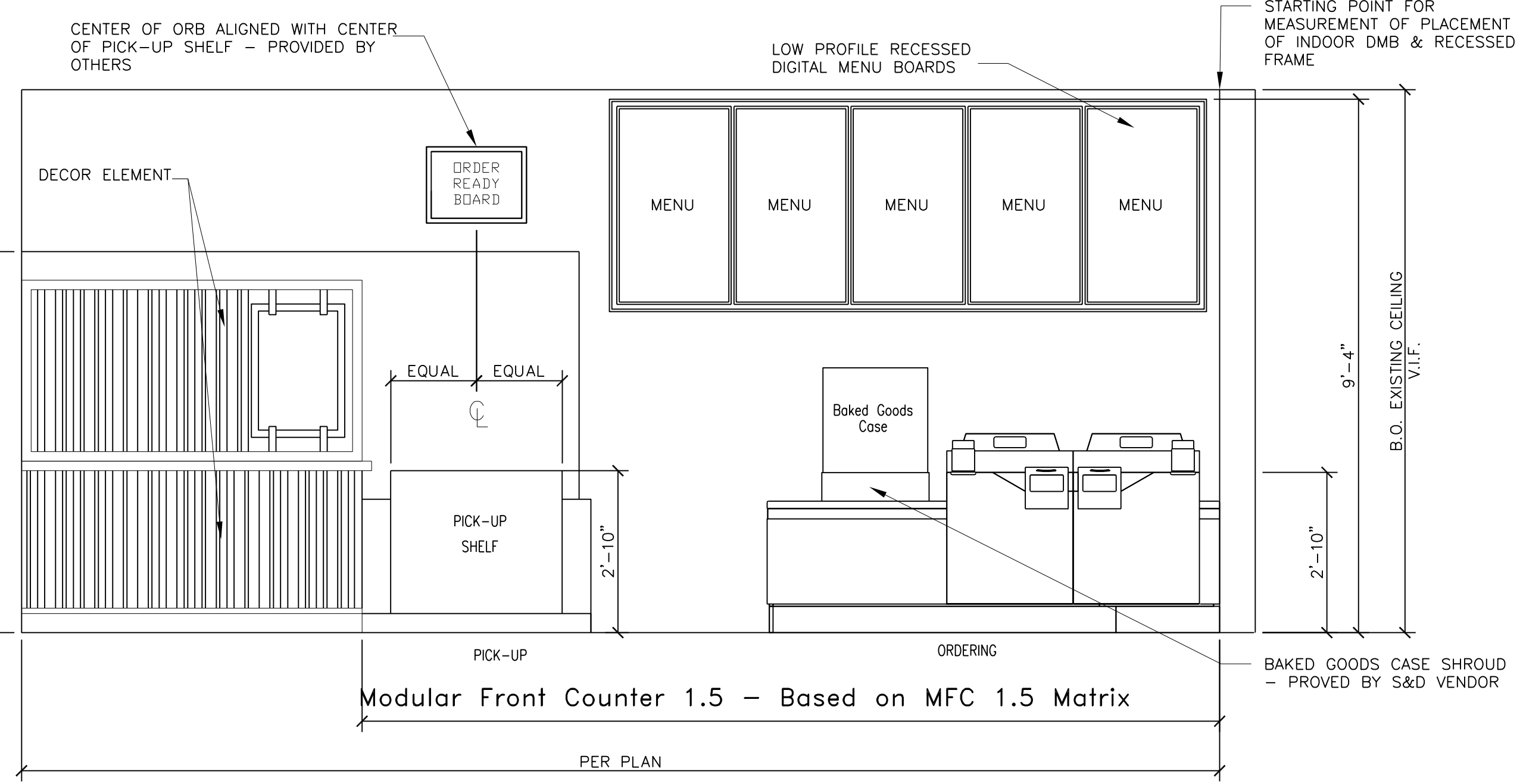
2 FRONT COUNTER RCP  
1/4" = 1'-0"



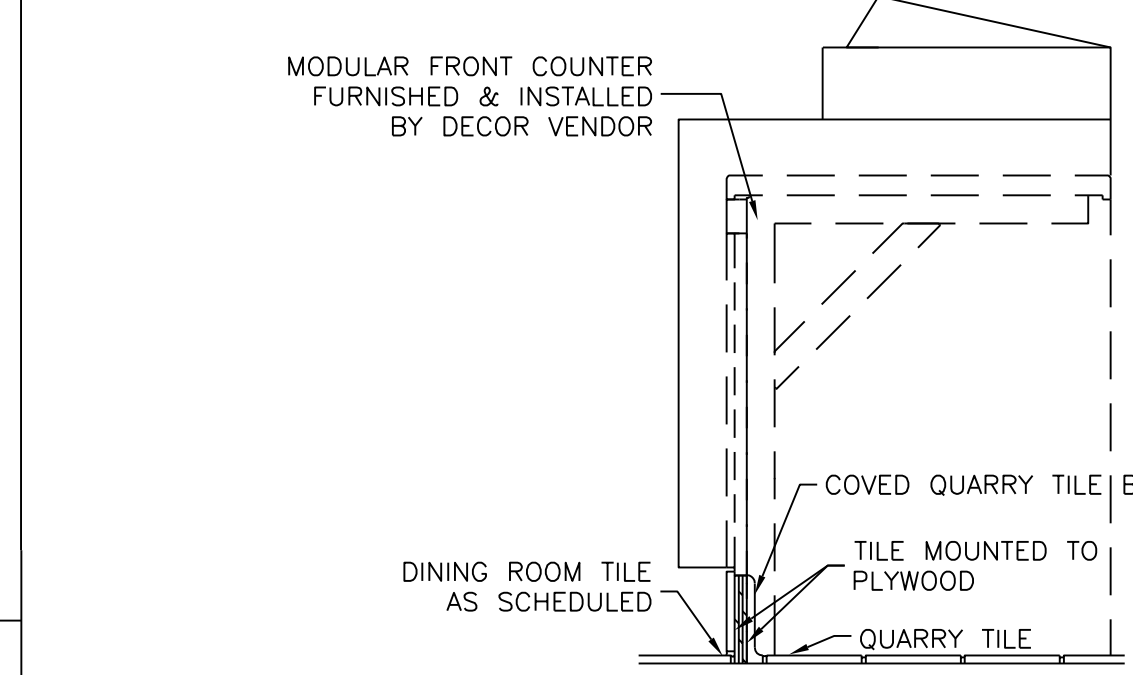
6 INTERIOR ELEVATION-FINISHES  
1/2" = 1'-0"



1 FRONT COUNTER PLAN  
1/2" = 1'-0"



7 INTERIOR ELEVATION  
1/2" = 1'-0"



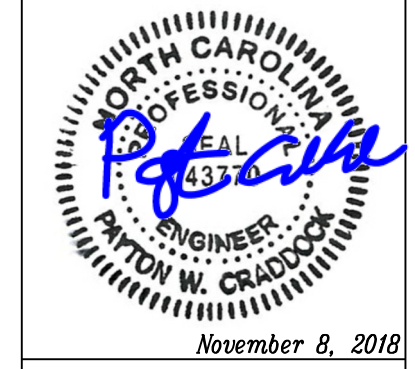
4 CBB WALL SECTION  
1" = 1'-0"

3 MODULAR FRONT COUNTER SECTION  
1" = 1'-0"

- KEY NOTES** \*\* COORDINATE ALL FINISHES WITH MCDONALD'S ACM PRIOR TO INSTALLATION
- CT DARK PORCELAIN WALL TILE: EUROWEST  
COLOR: NOIR 4"x12" PATTERN: STACK BOND  
GROUT: MAPEI - ULTRACOLOR PLUS FA 47 CHARCOAL -JOINT TO BE 1/16" MAX.
  - CP DARK CURATED VIEW PANEL:  
COLOR: WILSONART - STEEL MESH 4879-38  
NOTE: GC TO RECEIVE CURATED PANEL MOUNTS FROM S&D VENDOR
  - LAM DARK LAMINATE:  
COLOR: MARLITE S - 807N SMOOTH BLACK
  - SCH DARK SCHLUTER: 1/2" QUADAC Q100TSG  
COLOR: TUSCAN PEWTER

REV	DATE	DESCRIPTION
0	11/08/18	FOR CONSTRUCTION

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PREPARED FOR:	McDonald's USA, LLC
DRAWN BY:	TEP
TEP PID NO.:	
REVIEWED BY:	PWC
DATE ISSUED:	11/08/18
TITLE:	CAMERON, NC DESCRIPTION: INTERIOR REMODEL DRAWINGS
SHEET NO.:	B2.0 DETAILS
SITE ADDRESS:	935 NORTH CAROLINA HIGHWAY 24-87



**KEY NOTES**

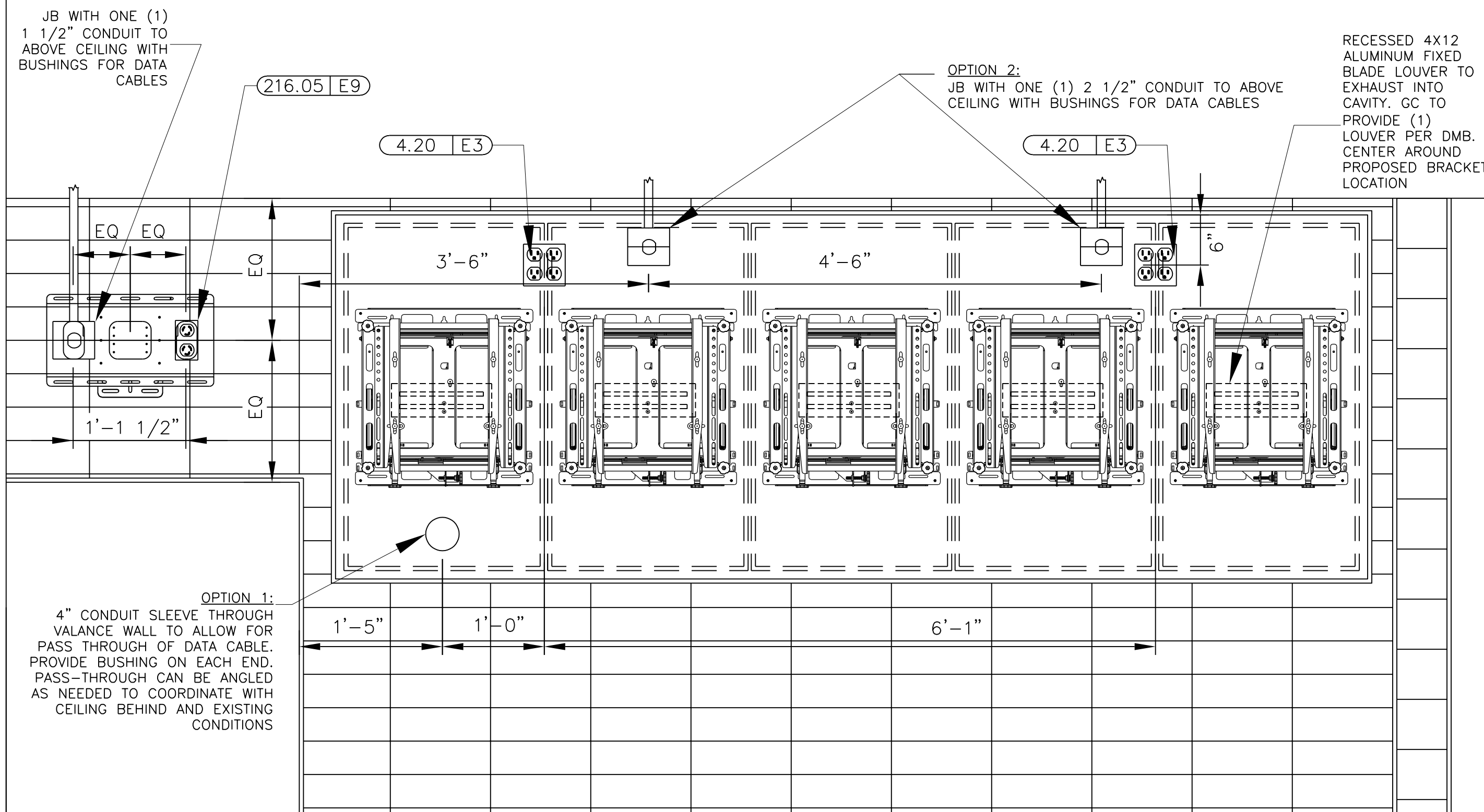
COORDINATE ALL FINISHES WITH McDONALD'S A/CW PRIOR TO INSTALLATION

- CT** DARK PORCELAIN WALL TILE: EUROWEST  
COLOR: NOIR 4"x12" PATTERN: STACK BOND  
GROUT: MAPEI - ULTRACOLOR PLUS FA 47 CHARCOAL -JOINT TO BE 3/16" MAX.
- CP** DARK CURATED VIEW PANEL:  
COLOR: WILSONART - STEEL MESH 4879-38  
NOTE: GC TO RECEIVE CURATED PANEL MOUNTS FROM S&D VENDOR
- LAM** DARK LAMINATE:  
COLOR: MARLITE S - 807N SMOOTH BLACK
- SCH** DARK SCHLUTER: 1/2" QUADEC Q100TSG  
COLOR: TUSCAN PEWTER

PB = Pullbox  
JB = Junction Box  
EQ = Electrical Contractor  
VIF = Verify in Field

**ELECTRICAL SCHEDULE**

TAG #	QTY	DESCRIPTION	VOLT/PH	FLA	BRK SIZE	COND/WIRE	PNL/CCT	RECEP TYPE	HGT AFF	REQUIREMENTS & REMARKS
004.20E3	2	MENU BOARD - DIGITAL	120/1 ISOLATED	5.3	20A	-	-	(2) IG5262	SEE PLAN	SEE LAYOUT FOR GANGED OUTLET CONFIGURATION
004.21E1	2	MENU BOARD - DIGITAL - MEDIA PLAYER	120/1 ISOLATED	1.0	20A	-	-	(2) IG5262	SEE PLAN	SEE LAYOUT FOR GANGED OUTLET CONFIGURATION
216.05E9	1	ORB MONITOR	120/1 ISOLATED	1.5EA	20A	-	-	(1) IG4700	SEE PLAN	SEE LAYOUT FOR GANGED OUTLET CONFIGURATION



NOTE: OPTION 1 IS PREFERRED IF AREA BEHIND BOARDS IS A NON-CUSTOMER AREA AND MEDIA PLAYERS WON'T BE INSTALLED ABOVE FOOD PREP. SLEEVES SHOULD NOT BE INSTALLED WITHIN CUSTOMER VIEW. IF AREA BEHIND MENU BOARDS IS DINING, RESTROOMS, OR OTHER CUSTOMER-FACING LOCATION, USE OPTION 2.

**6 RECESSED MENU BOARDS**  
B2.1 1" = 1'-0"

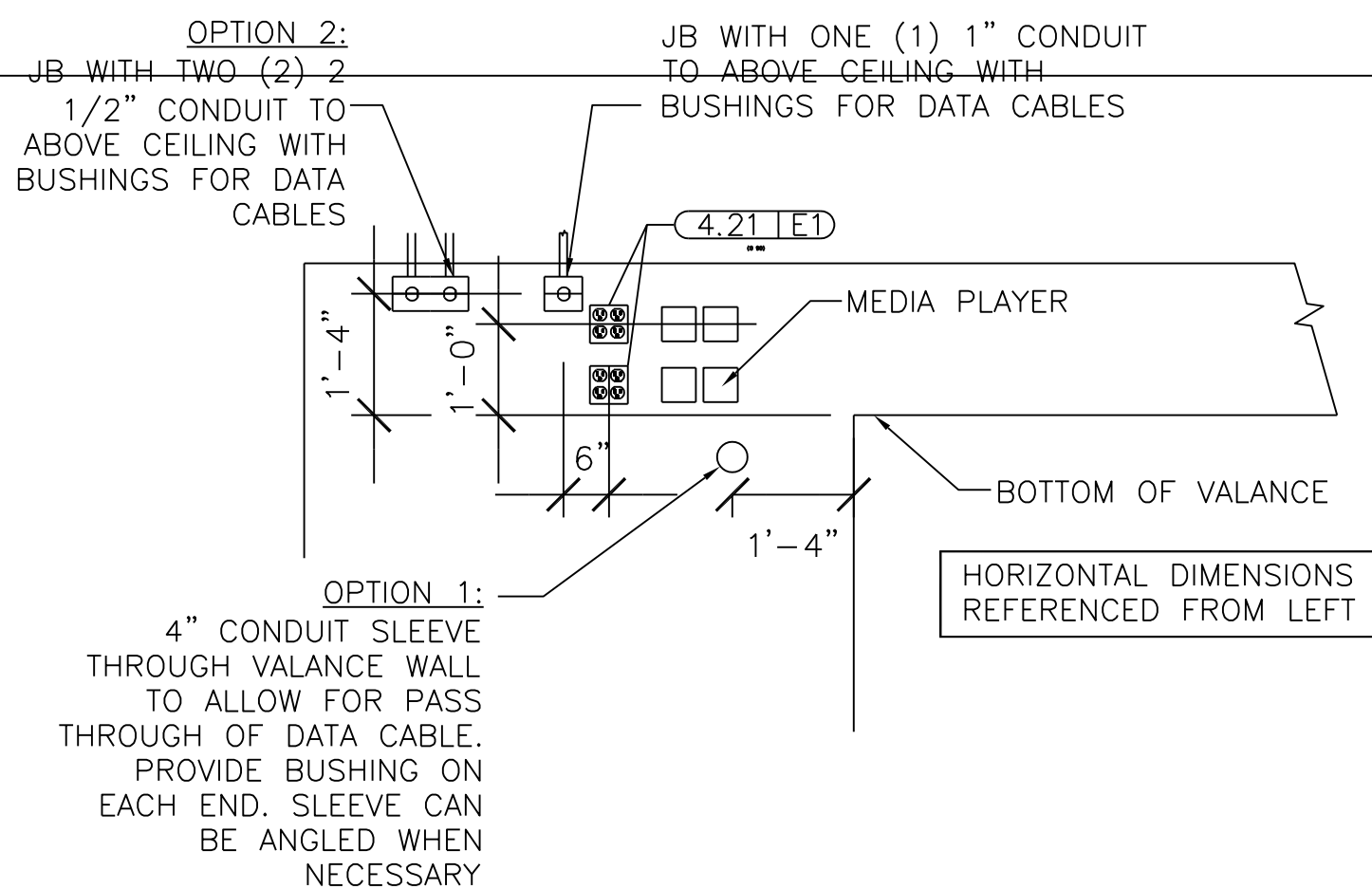
**KEY NOTES**

THIS SLIP SHEET IS PROVIDED FOR ELECTRICAL ROUGH-IN PREPARATION AND GENERAL DIGITAL MENU BOARD MOUNTING GUIDELINES. EVALUATE EXISTING VALANCE WALL STRUCTURE AND BACKING MATERIALS TO ENSURE ADEQUATE SUPPORT OF EQUIPMENT.

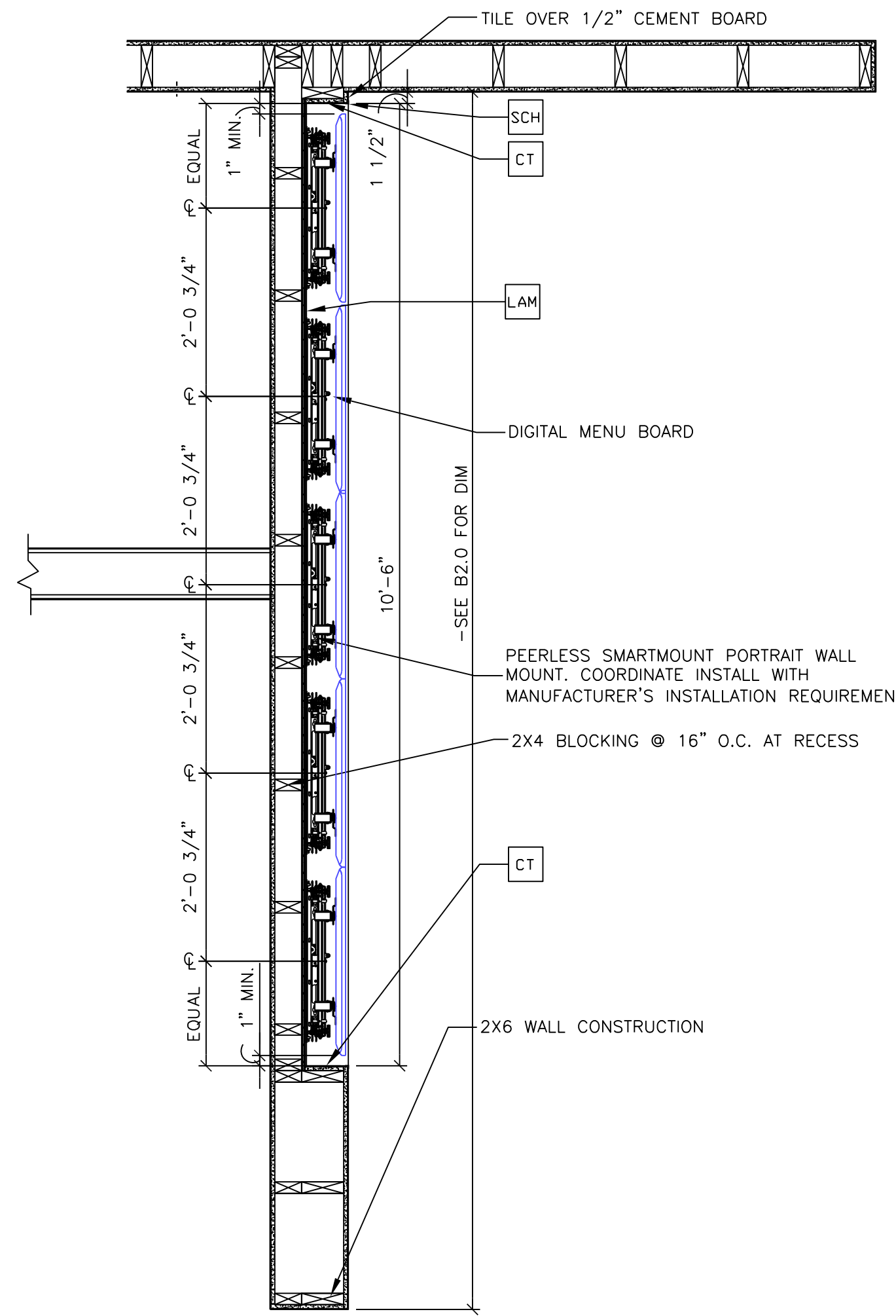
ALL HEADER AND WALL PENETRATIONS FOR CONDUITS OR OTHER ELECTRICAL ROUTING MUST BE SEALED TIGHT.

**DIGITAL MENU BOARD (DMB) INSTALLATION NOTES:**

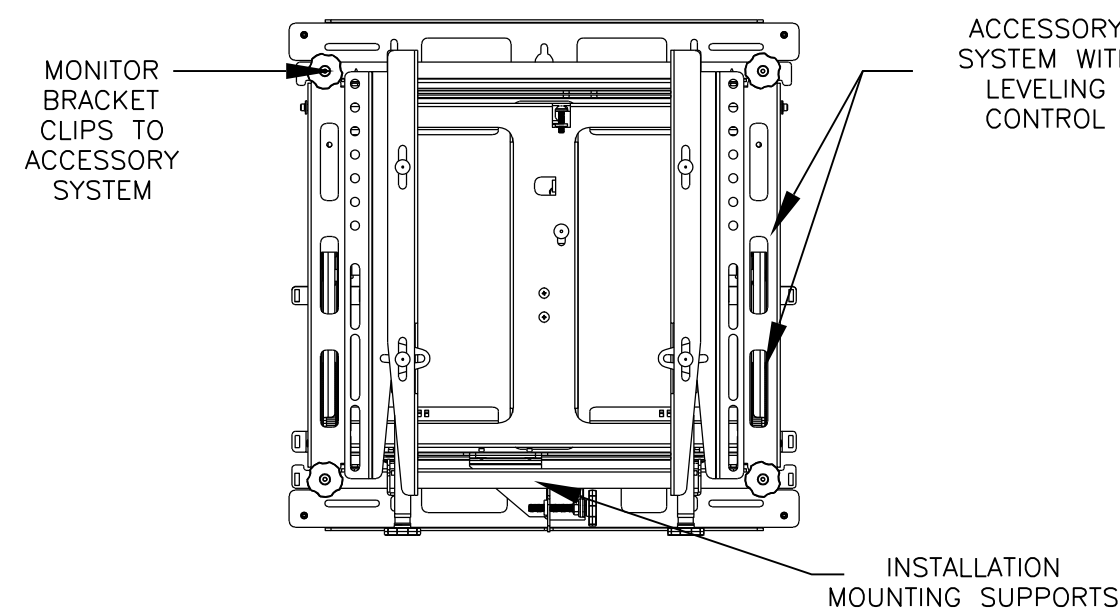
- DMB SUPPORT EQUIPMENT INCLUDES:
  - NETWORK MANAGEMENT DEVICE (NMD)
  - 24 PORT ENHANCED WAYPOINT SWITCH (EWS)
 THIS EQUIPMENT IS TYPICALLY MOUNTED IN TECHNOLOGY CLOSET OR IN MANAGER'S OFFICE.
- DMB INSTALLERS TO ROUTE CONTROL WIRES FROM NMD/EWS ABOVE CEILING TO MENU BOARD VALANCE WALL. WIRES TO EXIT WALL VIA J-BOXES.
- EACH DMB SECTION REQUIRES A DEDICATED MEDIA PLAYER.



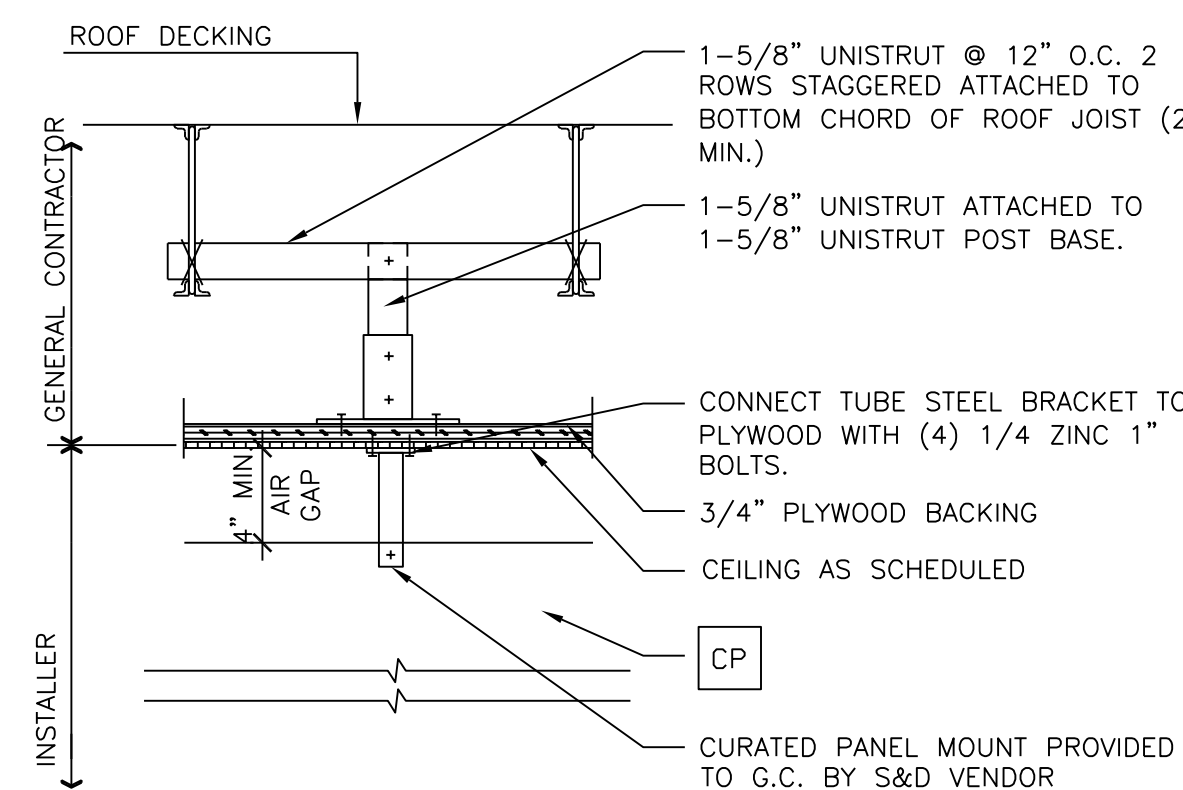
**7 BACK OF WALL VALANCE**  
B2.1 1/2" = 1'-0"



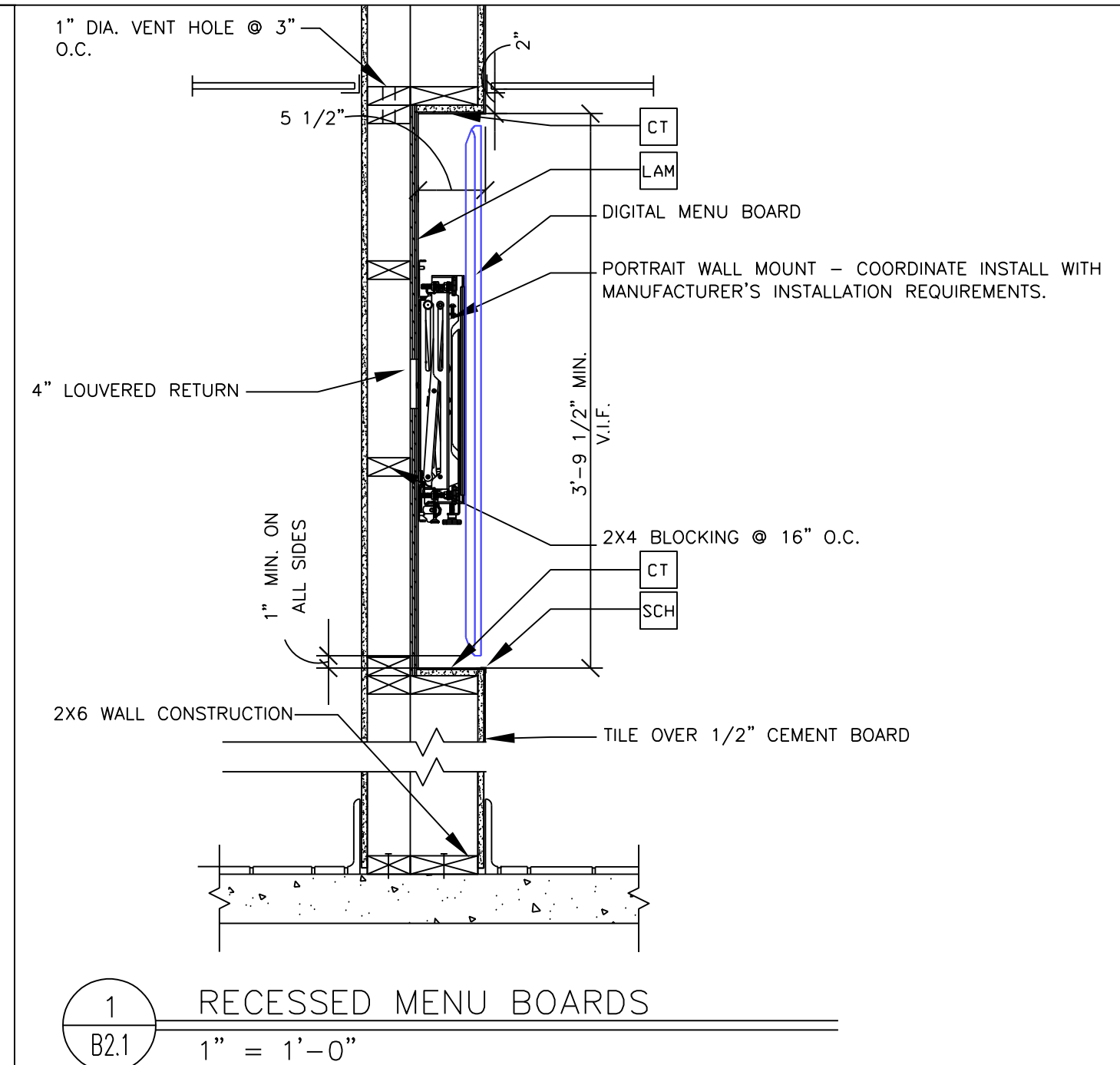
**3 RECESSED MENU BOARDS**  
B2.1 3/4" = 1'-0"



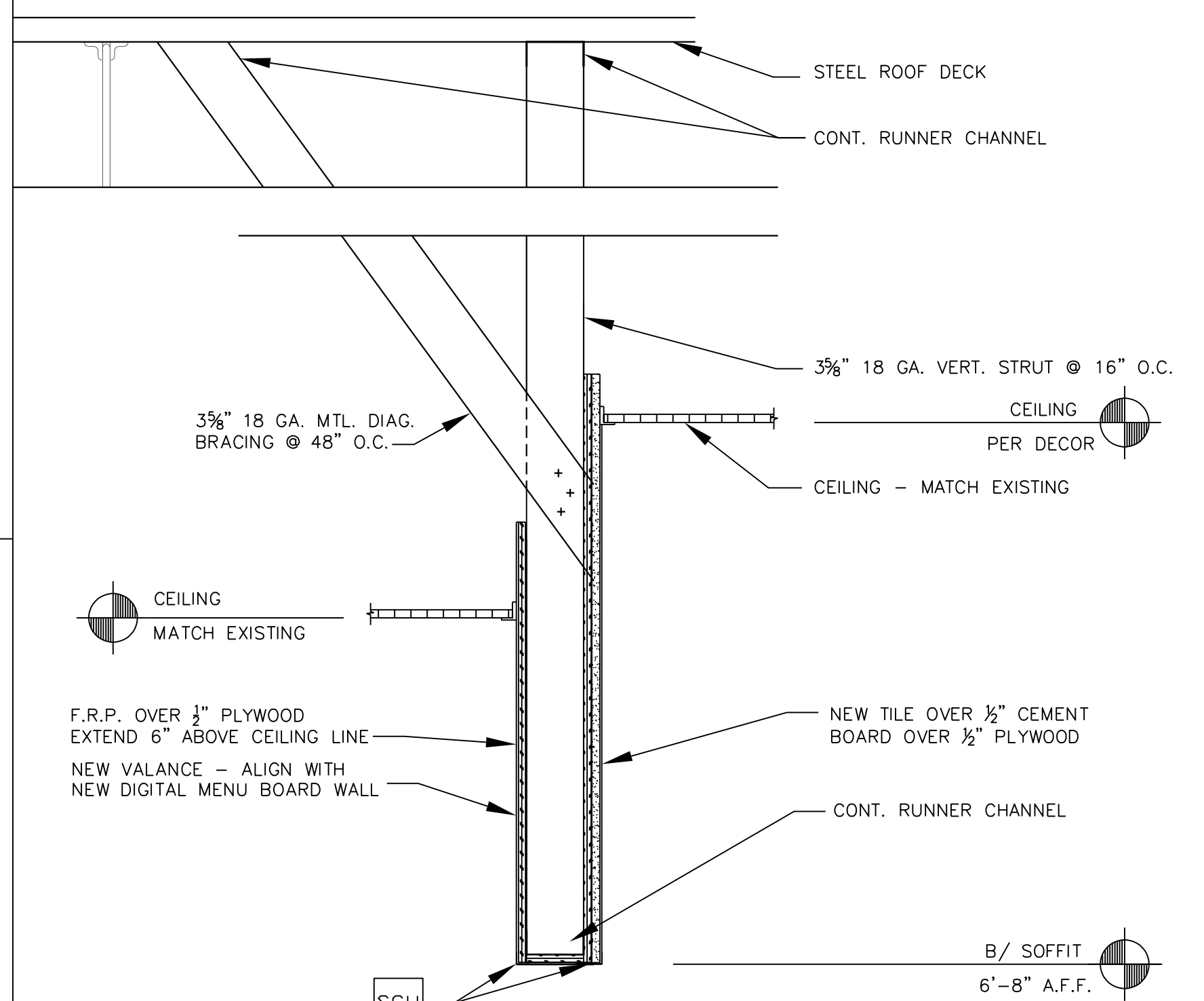
**4 DIGITAL MENU BOARD BRACKET DETAIL**  
B2.1 1 1/2" = 1'-0"



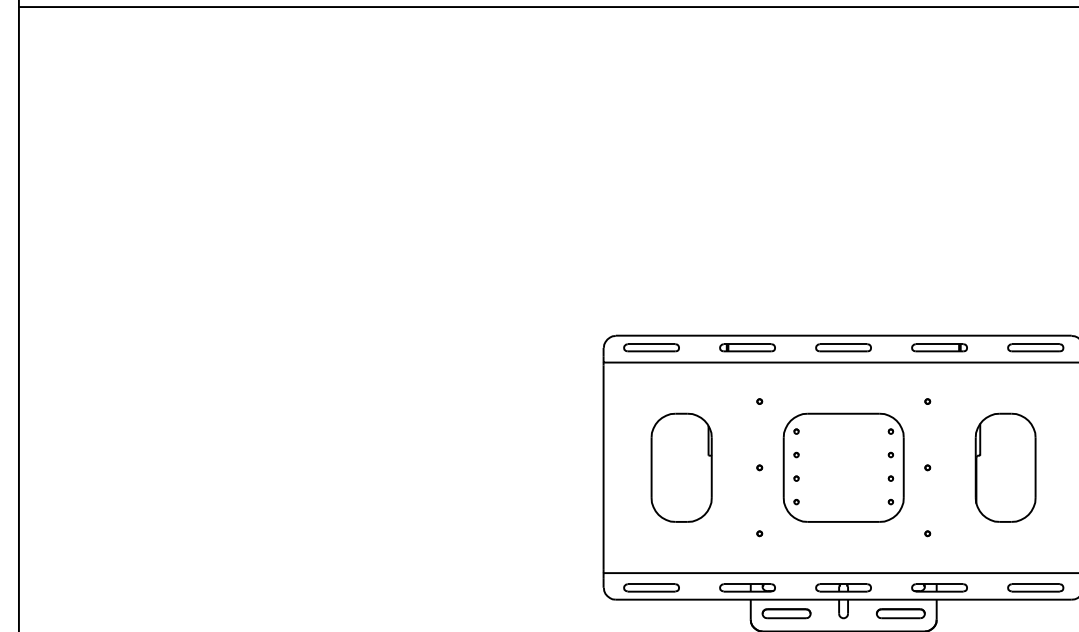
**5 CURATED PANEL INSTALL. DETAIL**  
B2.1 1 1/2" = 1'-0"



**1 RECESSED MENU BOARDS**  
1" = 1'-0"



**2 VALANCE SECTION**  
B2.1 1 1/2" = 1'-0"



**8 ORB BRACKET DETAIL**  
B2.1 1 1/2" = 1'-0"

**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603  
OFFICE: (919) 661-6351  
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November 8, 2018

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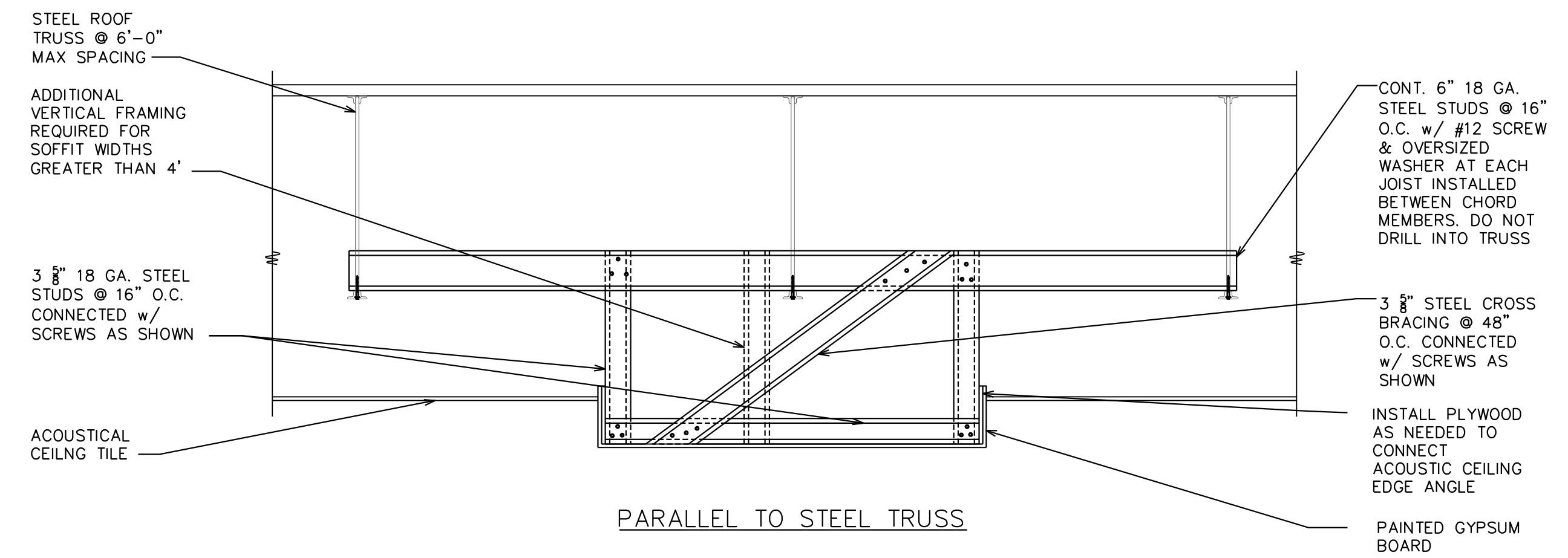
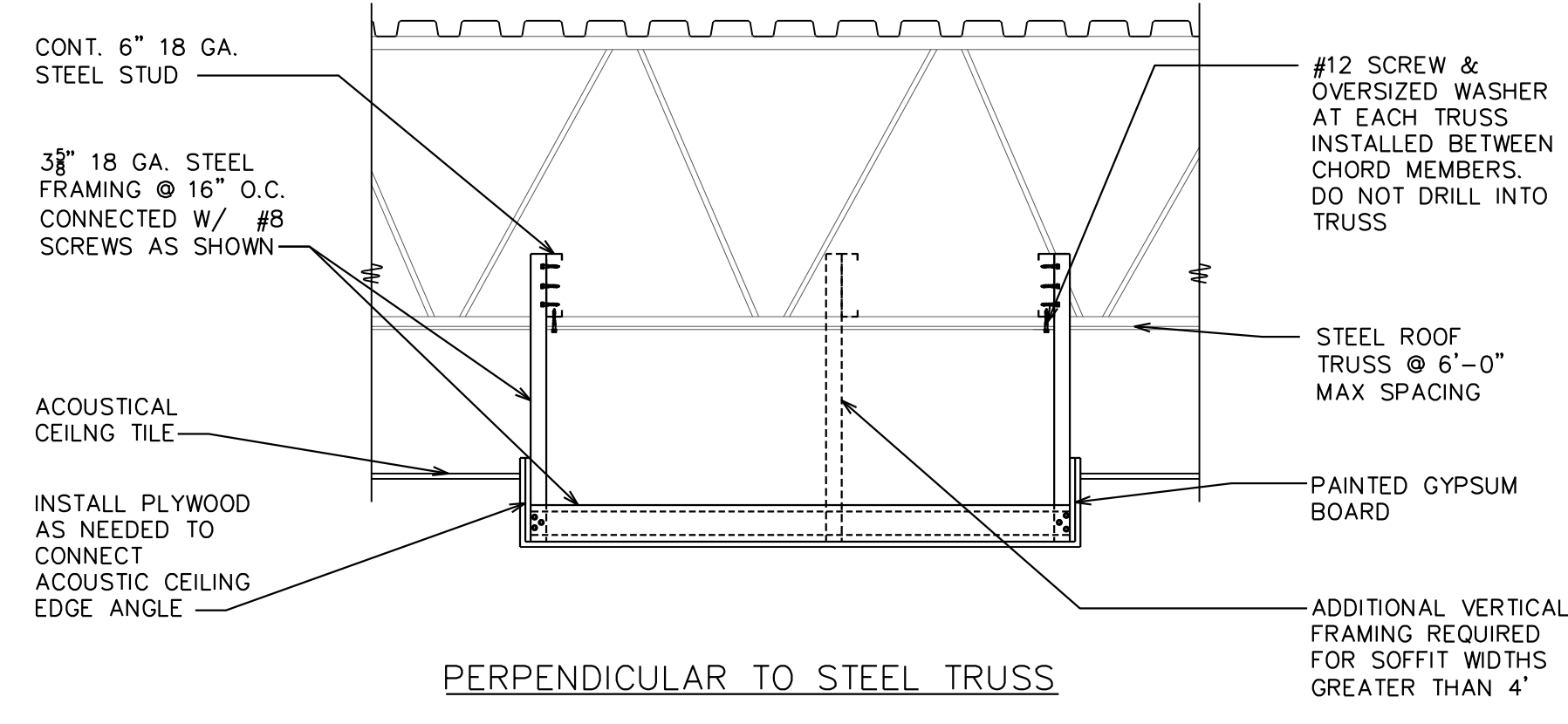
**CAMERON, NC**

DESCRIPTION: INTERIOR REMODEL DRAWINGS

SHEET NO: B2.1  
DATE ISSUED: 11/08/18

935 NORTH CAROLINA HIGHWAY 24-87





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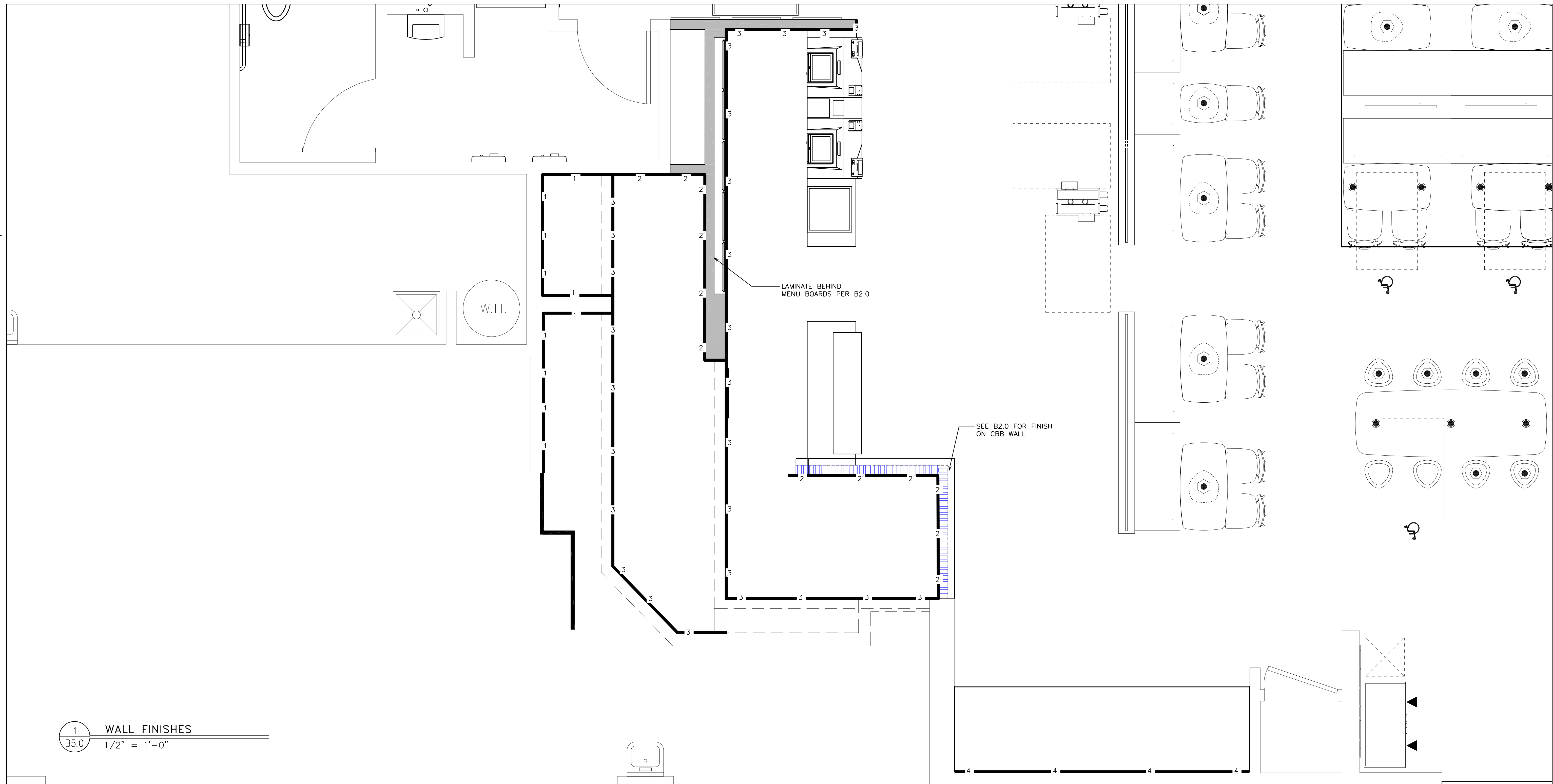
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SHEET NO. <b>B3.0</b>	TITLE CAMERON, NC INTERIOR REMODEL DRAWINGS	DRAWN BY PWC	TEP PID NO. -	REVIEWED BY PWC	DATE ISSUED 11/08/18
		SITE ADDRESS 935 NORTH CAROLINA HIGHWAY 24-87			









1 WALL FINISHES  
B5.0 1/2" = 1'-0"

TAG	DESCRIPTION
1	EXISTING TILE TO REMAIN
2	PREPOSED WHITE FRP
3	PORCELAIN WALL TILE: EUROWEST COLOR: NOIR 4"x12" PATTERN: STACK BOND GROUT: MAPEI - ULTRACOLOR PLUS FA 47 CHARCOAL -JOINT TO BE 1/16" MAX.
4	PORCELAIN WALL TILE: EUROWEST COLOR: NOIR 4"x12" PATTERN: STACK BOND GROUT: MAPEI - ULTRACOLOR PLUS FA 47 CHARCOAL -JOINT TO BE 1/16" MAX. -VERIFY WITH CORRESPONDING DECOR PACKAGE

2 WALL FINISH SCHEDULE  
B5.0 N.T.S.

REV	DATE	DESCRIPTION
0	11/08/18	FOR CONSTRUCTION

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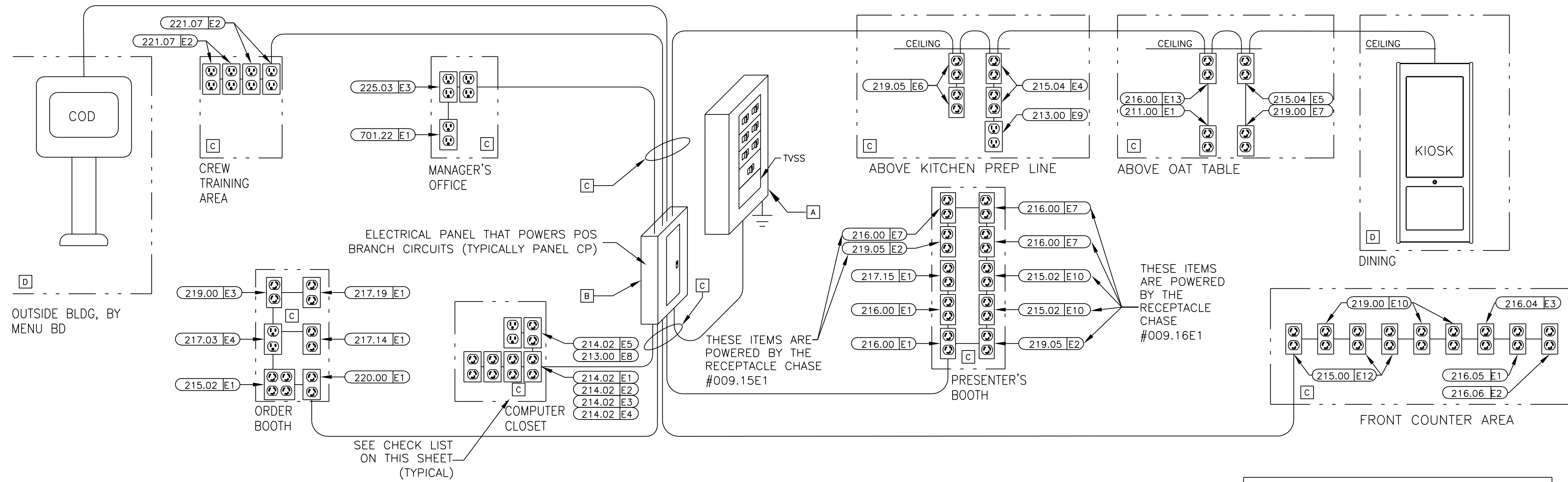
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PREPARED FOR:	CAMERON, NC
DESCRIPTION:	INTERIOR REMODEL DRAWINGS
SITE ADDRESS:	935 NORTH CAROLINA HIGHWAY 24-87
DRAWN BY:	BRB
TEP PID NO.:	
REVIEWED BY:	PWC
DATE ISSUED:	11/08/18
SHEET NO.:	B5.0
TITLE:	WALL FINISHES



THE PURPOSE OF THIS SHEET IS TO PROVIDE A CHECKLIST AND VISUAL GUIDE SO THE INSTALLING EC CAN VERIFY THE WORK IS IN COMPLIANCE WITH MCDONALD'S SPECIFICATIONS THAT ARE CRITICAL TO THE PROPER FUNCTIONING OF OUR POINT OF SALE (POS) COMPUTER SYSTEMS.



### POS ELECTRICAL RISER DIAGRAM

THIS RISER DIAGRAM SHOWS THE ELECTRICAL ROUGH-INS REQUIRED FOR A TYPICAL POINT OF SALE (POS) SYSTEM IN A FREE STANDING FAST FORWARD RESTAURANT. VERIFY ALL POS ROUGH-INS AND MOUNTING HEIGHTS WITH THE ELECTRICAL ROUGH-IN PLAN, NOTES AND INFORMATION DRAWINGS.

ISOLATED GROUND SYMBOLS	
SYMBOL	DESCRIPTION
	IG4710
	IG4700A
	IG5261
	IG5262

START HERE

**A VISUALLY INSPECT THE MAIN ELECTRICAL PANEL (MDP)**

yes no

1. IS AN EQUIPMENT GROUND BAR INSTALLED SUCH THAT IT IS ELECTRICALLY CONNECTED TO THE PANEL?
2. DO ALL NEUTRAL CONDUCTORS TERMINATE ONLY TO THE NEUTRAL BAR?
3. DO ALL EQUIPMENT GROUND CONDUCTORS TERMINATE ONLY TO THE EQUIPMENT GROUND BAR?
4. DOES THE ISOLATED GROUND CONDUCTOR (GREEN W/YELLOW STRIPE) TERMINATE ON THE EQUIPMENT GROUND BAR?
5. IS THERE AN APPROPRIATE ELECTRICAL CONNECTION (BOND) BETWEEN THE NEUTRAL BAR AND THE EQUIPMENT GROUND BAR?
6. DOES THE GROUNDING SYSTEM COMPLY WITH MCDONALD'S "BUILDING ELECTRICAL GROUNDING DETAIL"?
7. IS A SURGE PROTECTOR INSTALLED THAT COMPLIES WITH MCDONALD'S "TVSS INSTALLATION GUIDE" OR DETAIL?
8. ARE ALL ELECTRICAL CONNECTIONS (WIRING & BUSING) PROPERLY TIGHTENED?
9. ARE ALL CIRCUIT BREAKERS CLEARLY LABELED?

**B VISUALLY INSPECT THE PANEL "CP" THAT POWERS POS**

yes no

1. IS AN EQUIPMENT GROUND BAR INSTALLED SUCH THAT IT IS ELECTRICALLY CONNECTED TO THE PANEL?
2. IS AN ISOLATED GROUND BAR INSTALLED SUCH THAT IT IS ELECTRICALLY INSULATED FROM THE PANEL?
3. DO ALL NEUTRAL CONDUCTORS TERMINATE ONLY TO THE NEUTRAL BAR?
4. DO ALL EQUIPMENT GROUND CONDUCTORS TERMINATE ONLY TO THE EQUIPMENT GROUND BAR?
5. DO ALL ISOLATED GROUND CONDUCTORS (GREEN W/YELLOW STRIPE) TERMINATE ONLY TO THE ISOLATED GROUND BAR?
6. ARE ALL ELECTRICAL CONNECTIONS (WIRING & BUSING) PROPERLY TIGHTENED?
7. ARE ALL POS AND COD CIRCUIT BREAKERS ON THE SAME PANEL?
8. ARE ALL CIRCUIT BREAKERS CLEARLY LABELED?
9. DO ALL POS & COD CIRCUIT BREAKERS HAVE A LOCKING MECHANISM ON THEIR HANDLES TO PREVENT THEM FROM BEING SHUT OFF BY MISTAKE?
10. DOES THE FEEDER CIRCUIT FOR THIS SUBPANEL CONTAIN PHASE, NEUTRAL ONE EQUIPMENT GROUND AND ONE ISOLATED GROUND CONDUCTORS THAT ARE PROPERLY TERMINATED (SEE POS & COD ISO GND/DED CT DETAIL)?

**VISUALLY INSPECT ALL REMAINING ELECTRICAL SUBPANELS**

yes no

1. IS AN EQUIPMENT GROUND BAR INSTALLED SUCH THAT IT IS ELECTRICALLY CONNECTED TO THE PANEL?
2. DO ALL NEUTRAL CONDUCTORS TERMINATE ONLY TO THE NEUTRAL BAR?
3. DO ALL EQUIPMENT GROUND CONDUCTORS TERMINATE ONLY TO THE EQUIPMENT GROUND BAR?
4. ARE ALL ELECTRICAL CONNECTIONS (WIRING & BUSING) PROPERLY TIGHTENED?
5. ARE ALL CIRCUIT BREAKERS CLEARLY LABELED?
6. DOES THE FEEDER CIRCUIT FOR THIS SUBPANEL CONTAIN PHASE, NEUTRAL AND ONE EQUIPMENT GROUND CONDUCTORS THAT ARE PROPERLY TERMINATED? (SEE BUILDING ELECTRICAL GROUNDING DETAIL)

**C VISUALLY INSPECT THE POS BRANCH CIRCUITS**

yes no

1. ARE THE POS BRANCH CIRCUITS ROUTED IN THEIR OWN CONDUIT BY THEMSELVES?
2. IF THE POS BRANCH CIRCUIT IS ROUTED ABOVE GRADE, IS IT IN A METALLIC CONDUIT?
3. DOES EACH POS BRANCH CIRCUIT CONTAIN: ONE PHASE (BLACK COLORED INSULATION) ONE NEUTRAL (WHITE COLORED INSULATION) ONE EQUIPMENT GROUND (GREEN COLORED INSULATION) ONE ISOLATED GROUND (GREEN W/YELLOW STRIPE COLORED INSULATION).
4. DO ALL POS BRANCH CIRCUITS TERMINATE AT EITHER AN IG4700, IG4710, IG5261, IG5262 RECEPTACLES OR ANY COMBINATION OF THESE?
5. ARE ALL ELECTRICAL TERMINATIONS TO IG RECEPTACLES MADE WITH SOLID #12 AWG WIRE CAPTURED AROUND THE SCREW BARREL AND SUITABLY TIGHTENED?
6. ARE ALL BRANCH CIRCUIT CONNECTIONS PROPERLY TIGHTENED?
7. ARE THE CORRECT AMOUNT AND TYPE OF IG RECEPTACLES PROVIDED AS SHOWN IN THE ELECTRICAL ROUGH-IN PLAN, NOTES AND INFORMATION?
8. DO ALL POS RECEPTACLES HAVE ORANGE "COMPUTER ONLY" COVERPLATES?
9. DO ALL POS BRANCH CIRCUITS COMPLY WITH THE "POS & COD ISOLATED GROUND/DEDICATED CIRCUIT DETAIL"?

**D VISUALLY INSPECT THE POS BRANCH CIRCUIT FOR THE COD & KIOSK**

yes no

1. ARE THE COD AND KIOSK BRANCH CIRCUITS ROUTED IN THEIR OWN CONDUIT BY THEMSELVES?
2. DOES EACH COD AND KIOSK BRANCH CIRCUIT CONTAIN:
  - ONE PHASE (BLACK COLORED INSULATION),
  - ONE NEUTRAL (WHITE COLORED INSULATION),
  - ONE EQUIPMENT GROUND (GREEN COLORED INSULATION),
  - ONE ISOLATED GROUND (GREEN W/YELLOW STRIPE COLORED INSULATION).
3. ARE THE COD(S) AND KIOSK(S) POWERED FROM THE SAME PANEL AS THE POS?
4. DO THE BREAKERS FOR THE COD(S) AND KIOSK(S) HAVE A LOCKING MECHANISM ON THEIR HANDLES THAT WILL PREVENT IT FROM BEING SHUT OFF?
5. DO THE COD BRANCH CIRCUIT(S) COMPLY WITH THE "POS & COD ISOLATED GROUND/DEDICATED CIRCUIT DETAIL"?
6. IF THE COD HAS AN OPTICAL ISOLATOR, IS A STRAIGHT BLADE ISOLATED GROUND RECEPTACLE ON AN ISOLATE GROUND/DEDICATED CIRCUIT PROVIDED FOR IT?

REWORK ELECTRICAL SYSTEM TO BRING INTO COMPLIANCE WITH MCDONALD'S SPECIFICATIONS

ALL WORK IS NOT CONSIDERED TO MEET MCDONALD'S SPECIFICATIONS UNTIL THE INSTALLED ELECTRICAL SYSTEM SUPPORTS A "YES" ANSWER FOR ALL QUESTIONS ASKED.

AS PART OF THIS PROCESS, THE EC AND THE GC WILL BE REQUIRED TO SIGN THE ELECTRICAL CERTIFICATION DOCUMENT INDICATING THAT THE INSTALLED ELECTRICAL SYSTEM MEETS MCDONALD'S SPECIFICATIONS.

**NOTICE:**  
CHANGES SHALL NOT BE MADE TO THE POS ELECTRICAL SYSTEM AFTER THE POS EQUIPMENT HAS BEEN INSTALLED WITHOUT FIRST NOTIFYING THE POS VENDOR.

IF CHANGES ARE MADE TO THE POS ELECTRICAL SYSTEM AFTER THE CERTIFICATION PROCESS HAS BEEN COMPLETED, THEN A SYSTEM RE-CERTIFICATION SHALL BE REQUIRED.

ARE ALL BOXES CHECKED "YES"?

FINISHED

### LOW VOLTAGE CABLE MANAGEMENT SPECIFICATION

#### GENERAL/MATERIALS

- THE GC OR EC SHALL FURNISH AND INSTALL A COMPLETE LOW VOLTAGE CABLE MANAGEMENT SYSTEM UTILIZING CADDY-ERICO TYPE CAT-32 J-HOOK SUPPORTS (2-INCH DIAMETER LOOP MINIMUM). ALL J-HOOKS SHALL:
  - HAVE A MINIMUM BEARING SURFACE OF 1 3/8"
  - HAVE FLARED EDGES TO PREVENT DAMAGE TO HIGH PERFORMANCE CABLES.
  - HAVE AN ELECTRO-GALVANIZED FINISH.
  - HAVE 3/8" WIDE CABLE RETAINING STRAPS.
  - BE UL LISTED AND LABELED.
  - BEAR THE UL SYMBOL MARKING ON THE PART FOR IDENTIFICATION
  - BE INSTALLED PER THE MANUFACTURERS INSTALLATION INSTRUCTIONS.
- THE ENTIRE INSTALLATION SHALL BE IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), NEC SECTION 800, BICSI STANDARDS 568 & 569, ALL APPLICABLE NATIONAL, STATE, LOCAL, AND SAFETY CODES, AND MCDONALD'S SPECIFICATIONS.

#### INSTALLATION

- LOW VOLTAGE J-HOOK CABLE PATHWAY (FOR POS CABLING SYSTEM) SHALL BE PROVIDED FROM THE MANAGERS OFFICE (OR COMPUTER CLOSET) DATA CONDUIT STUB-UP LOCATION TO THE FOLLOWING DATA CONDUIT STUB-UP LOCATIONS (AS APPLICABLE):
  - FRONT COUNTER.
  - PRESENTERS BOOTH.
  - CASHIERS BOOTH.
  - THIRD DRIVE-THRU WINDOW(IF PRESENT).
  - CREW ROOM.
  - VALENCE WALL.
  - REMOTE ORDERING STATIONS.
  - NETPOP TELEPHONE PANEL LOCATION.

CABLE SUPPORTS SHALL BE PROVIDED WITHIN 24 INCHES OF THESE STUB-UP LOCATIONS. ALL STUB-UP CONDUITS SHALL BE PROVIDED WITH AN INSULATED BUSHING TO PROTECT CABLES DURING INSTALLATION.
- THE LOCATION AND ROUTING OF THE LOW VOLTAGE CABLE MANAGEMENT SYSTEM SHALL BE COORDINATED WITH ALL OTHER CONSTRUCTION TRADES PRIOR TO INSTALLATION TO AVOID CONFLICTS WITH THE OTHER TRADES' FINAL INSTALLATIONS, BOTH BEFORE AND AFTER THE CABLE MANAGEMENT SYSTEM AND THE POS CABLING ARE INSTALLED. FINAL INSTALLATION LOCATION SHALL BE READILY ACCESSIBLE TO ALLOW FOR EASE IN INSTALLATION OF THE POS CABLING BY THE POS VENDOR'S INSTALLER.
- LOW VOLTAGE J-HOOK CABLE SUPPORTS AND APPURTENANCES SHALL BE FASTENED TO THE BUILDING STRUCTURAL AND/OR FRAMING MEMBERS. LOW VOLTAGE J-HOOK CABLE SUPPORTS SHALL NOT BE FASTENED OR UTILIZE THE CEILING GRID SUSPENSION WIRES OR T-BAR GRID FOR INSTALLATION. CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACKETS, HANGERS, RODS, CLAMPS, FLANGES, SUPPORTS, ETC. FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM. THE INSTALLATION OF THE LOW-VOLTAGE CABLE MANAGEMENT SYSTEM SHALL BE DONE SO THAT THE ROUTING OF THE CABLES IS PARALLEL TO AND/OR PERPENDICULAR TO FRAMING AND STRUCTURAL BUILDING MEMBERS.
- LOW VOLTAGE J-HOOK CABLE SUPPORTS SHALL BE INSTALLED A MAXIMUM OF 36 INCHES APART. AT TRANSITION LOCATIONS, THE CONTRACTOR SHALL PROVIDE ADDITIONAL J-HOOKS TO ALLOW FOR A MINIMUM ONE-FOOT RADIUS BEND AND FOR ADDITIONAL CABLE SUPPORT AT THESE TRANSITION POINTS.
- TO AVOID ELECTROMAGNETIC INTERFERENCE (EMI), ALL PATHWAYS SHALL PROVIDE A MINIMUM CLEARANCE OF 4 FEET (1.2 METERS) FROM MOTORS AND TRANSFORMERS AND A MINIMUM CLEARANCE OF 1 FOOT (0.3 METERS) FROM CONDUIT AND CABLES UTILIZED FOR ELECTRICAL POWER DISTRIBUTION, OR FROM FLUORESCENT OR HID TYPE LIGHTING FIXTURES AND OTHER NON-POS LOW VOLTAGE CONDUCTORS.
- ANY CEILING TILES IN THE AREA WHERE THE LOW-VOLTAGE CABLE MANAGEMENT SYSTEM IS LOCATED SHALL NOT BE INSTALLED UNTIL THE POS VENDOR'S CONTRACTOR COMPLETES THE INSTALLATION OF ALL POS CABLING.
- ALL NON-POS LOW VOLTAGE CABLING SHALL BE INSTALLED IN A SEPARATE CABLE MANAGEMENT SYSTEM INDEPENDENT OF THE LOW-VOLTAGE CABLE MANAGEMENT SYSTEM UTILIZED FOR THE POS CABLING.
- THE POS INSTALLER SHALL BE RESPONSIBLE TO FURNISH AND INSTALL ALL LOW VOLTAGE CABLING REQUIRED FOR THE COMPLETE AND FULLY FUNCTIONAL OPERATION OF THE POS SYSTEM. ALL POS CABLING SHALL BE INSTALLED WITHIN THE LOW-VOLTAGE CABLE MANAGEMENT SYSTEM.

### ELECTRICAL POS CERTIFICATION

AS OF THE DATE BELOW, I HEREBY CERTIFY THAT ALL ELECTRICAL WORK, ELECTRICAL SERVICE AND ELECTRICAL SYSTEMS, MATERIALS AND LABOR RELATED TO THE POS ELECTRICAL INSTALLATION IN WHICH THE UNDERSIGNED ARE DIRECTLY OR INDIRECTLY RESPONSIBLE HAVE BEEN PROPERLY INSTALLED IN FULL COMPLIANCE WITH ALL CONSTRUCTION DOCUMENTS AND ALL NFPA, BUILDING, ELECTRICAL AND OTHER APPLICABLE CODES, ALONG WITH ALL OF THE REQUIREMENTS OUTLINED ON THIS DRAWING. I FURTHER CERTIFY THAT THE ELECTRIC SERVICE POWERING THE POS SYSTEM HAS BEEN PROPERLY INSTALLED BY A QUALIFIED ELECTRICIAN, SKILLED, KNOWLEDGEABLE AND TRAINED TO INSTALL ALL THE REQUIRED ELECTRICAL DISTRIBUTION COMPONENTS NECESSARY TO POWER THE POINT OF SALE (POS) SYSTEM.

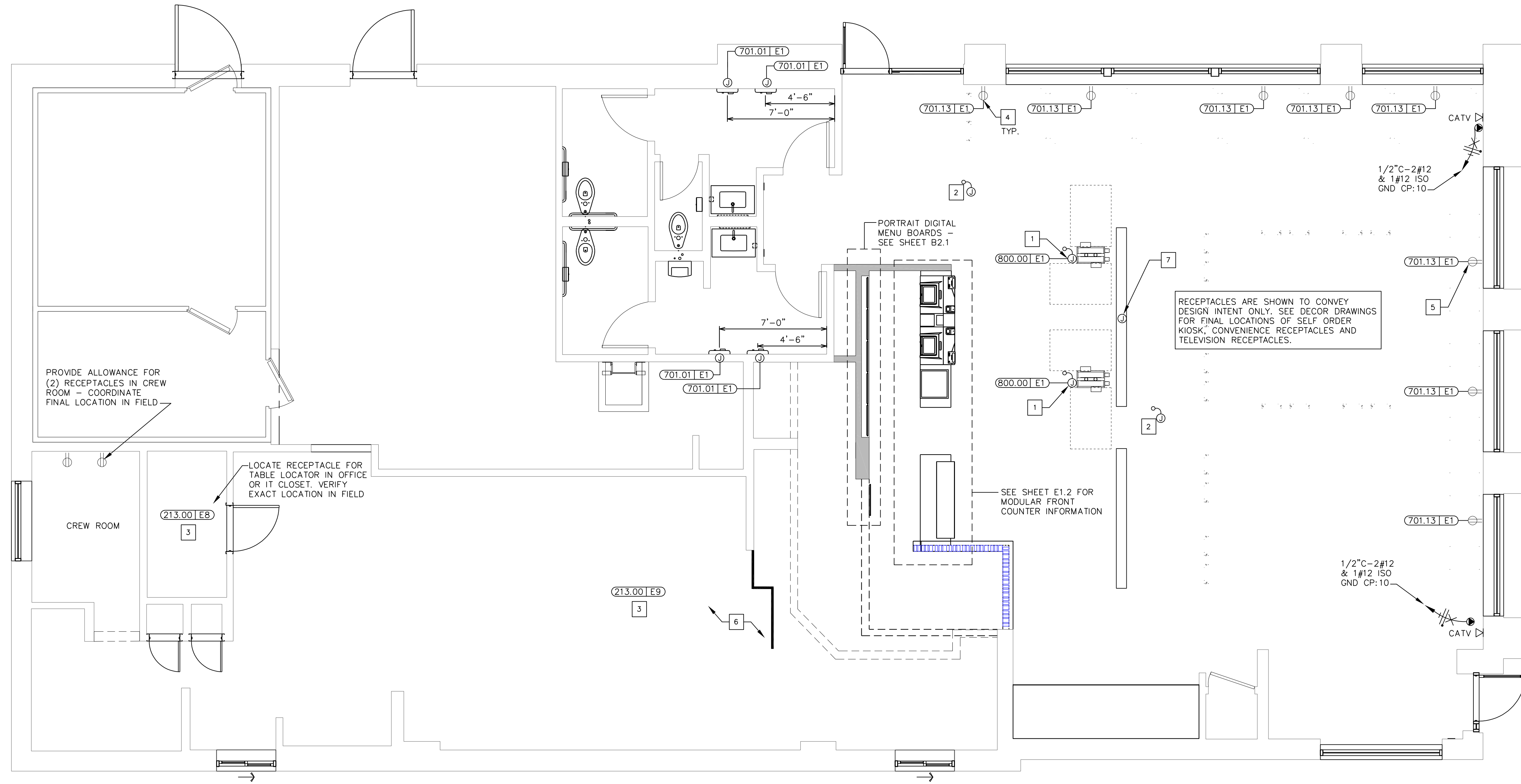
GENERAL CONTRACTOR: \_\_\_\_\_ ELECTRICAL CONTRACTOR: \_\_\_\_\_

BY: \_\_\_\_\_ BY: \_\_\_\_\_

DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

NO.	DATE	DESCRIPTION
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PWC		PWC
DATE ISSUED:		11/08/18
<p>TITLE: CAMERON, NC DESCRIPTION: INTERIOR REMODEL DRAWINGS</p>		
SHEET NO.:		E1.0
SITE ADDRESS:		935 NORTH CAROLINA HIGHWAY 24-87
SITE ID:		32-1466





1  
E1.1 ROUGH-IN PLAN  
1/4"=1'-0"

SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SINGLE POLE SWITCH, 3W=THREE WAY SWITCH, K=KEYED SWITCHED		BUZZER
	TRANSFORMER		BUTTON FOR BUZZER
	JB WITH DUPLEX CONVENIENCE OUTLET (FLUSH WITH CEILING)		PULL BOX
	JB WITH SINGLE CONVENIENCE OUTLET		PANELBOARD
	JB WITH DUPLEX CONVENIENCE OUTLET		CIRCUIT BREAKER
	JB WITH TWO DUPLEX CONVENIENCE OUTLETS	A	AMPERS
	JB WITH FLUSH FLOOR MOUNTED OUTLET	ACM	AREA CONSTRUCTION MANAGER
	JB WITH SPECIAL PURPOSE OUTLET	AFB	ABOVE FINISHED FLOOR
	JB WITH ISOLATED GROUND OUTLET	C	CONDUIT
	IG4710	CCT	CIRCUIT
	IG5261	EC	ELECTRICAL CONTRACTOR
	IG4700A	GC	GENERAL CONTRACTOR
	IG5262	GF1/GFCI	GROUND FAULT CIRCUIT INTERRUPTER
	INTERCOM STATION W/ 3/4"C- TO MAIN STATION	GND	GROUND
	TELEPHONE JACK	IG	ISOLATED GROUND
	JUNCTION BOX - WALL OR CEILING MOUNTED	JB	JUNCTION BOX
	DISCONNECT SWITCH	KES	KITCHEN EQUIPMENT SUPPLIER
	STUB UP THRU ROOF	MLD	MAIN LUGS ONLY
	THERMOSTAT SENSOR W/ 1/2"C- UP TO CEILING SPACE	WP	WEATHERPROOF
	MOTOR CONNECTION		
	CONDUIT RUN CONCEALED IN CEILING OR WALLS		
	CONDUIT RUN IN FLOOR SLAB		
	MANUAL SWITCH (T=THERMAL OVERLOADS)		
	HOT (SHORT), NEUTRAL (LONG), EQUIP GRD (LONG WITH DOT), & 'X' DENOTES ISOLATED GRD		
	J-BX WITH FINAL EQUIPMENT CONNECTION		

GENERAL NOTES

- CIRCUIT NUMBERS SHOWN ARE FOR DESIGN INTENT ONLY. ACTUAL CONDITIONS WILL AFFECT CIRCUITRY. ALL NEW CIRCUIT BREAKERS FOR EXISTING PANELBOARDS SHALL MATCH EXISTING CIRCUIT BREAKER TYPE. AIC RATINGS OF NEW BREAKERS SHALL MATCH RATING OF PANELBOARD IN WHICH INSTALLED. WHERE SERIES RATING SYSTEMS ARE USED, THE NEW BREAKER SHALL BE INSTALLED AS TO MAINTAIN THE SERIES RATING OF THE SYSTEM.
- SEE ELECTRICAL SCHEDULE FOR PANEL & CIRCUIT BREAKER ASSIGNMENT, VOLT/PH, FLA, BREAKER SIZE, COND/WIRE, RECEPTACLE TYPE, HEIGHT ABOVE FINISHED FLOOR, REQUIREMENTS & REMARKS FOR ALL ELECTRICAL EQUIPMENT.

KEY NOTES

- PROVIDE POWER WITHIN CEILING FOR CONNECTION TO SELF ORDER KIOSKS. COORDINATE EXACT LOCATION OF KIOSKS WITH DECOR DRAWINGS. PROVIDE 2#12, 1#12 GRD., & 1#12 ISOLATED GROUND ON A 20A DEDICATED CIRCUIT FED FROM THE CP PANEL FOR EVERY ONE (1) DOUBLE SIDED OR TWO (2) SINGLE SIDED KIOSKS. IF RESTAURANT DOES NOT RECEIVE KIOSK, PROVIDE J-BOX AND 1/2" CONDUIT WITH PULL STRINGS TO TWO (2) SPARE 20A/1P BREAKERS WITHIN CP PANEL.

- PROVIDE AN ALLOWANCE IN BID TO PROVIDE TWO(2) FLEXIBLE POWER CONNECTIONS FOR POWER TO FURNITURE / FAMILY EXPERIENCE ELEMENTS AS PART OF THE DECOR PACKAGE. VERIFY EXACT LOCATIONS IN FIELD AND WITH DECOR DRAWINGS. PROVIDE ALL NECESSARY MATERIALS AND LABOR FOR A COMPLETE AND FULLY NEC CODE COMPLIANT INSTALLATION. ALL COMPONENTS SHALL BE FED FROM A GFCI TYPE CIRCUIT BREAKER AND BRANCH CIRCUIT SHALL CONTAIN TWO PATHS OF GROUNDING (CONDUIT BODY AND AN INSULATED GROUNDING CONDUCTOR) TO COMPLY WITH McDONALD'S GROUNDING STANDARDS.
- VERIFY IF OPTIONAL TABLE TRACKER SYSTEM IS TO BE USED. IF USED, PROVIDE 2#12, 1#12 GRD TO AVAILABLE SPARE 20A/1P BREAKER. CONNECT CIRCUIT TO THREE (3) 5-20R RECEPTACLES, ONE (1) RECEPTACLE FOR MODEM/GATEWAY (TYPICALLY LOCATED BEHIND VALENCE AT 7'-9" A.F.F.), ONE (1) RECEPTACLE FOR LOCATOR CHARGER (TYPICALLY LOCATED IN MANAGER'S OFFICE), AND ONE (1) RECEPTACLE FOR MONITOR (TYPICALLY LOCATED AT PICKUP COUNTER). COORDINATE EXACT LOCATION(S) IN THE FIELD.

- TAMPER RESISTANT GFCI DUPLEX RECEPTACLE MOUNTED AT 18" AFF. IN PUBLIC AREAS. EC SHALL PROVIDE PASS & SEYMOUR "SAFELOCK" 2095-TR-\* (\*=I=IVORY, W=WHITE, GRY=GRAY, BK=BLACK, RED=RED, LA=LIGHT ALMOND). SPECIFIED RECEPTACLE BECOMES DE-ENERGIZED UPON FAILURE OF GFCI DEVICE. NO SUBSTITUTIONS.(TYPICAL)
- PER THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG), A MINIMUM OF ONE (1) ADA COMPLIANT ELECTRICAL RECEPTACLE SHALL BE INSTALLED AT AN ACCESSIBLE TABLE. GC/EC SHALL REFERENCE FINAL DECOR PLANS AND PROVIDE RECEPTACLES AS NECESSARY FOR COMPLIANCE (TYP.)
- ALL NEW OR RELOCATED 125 VOLT 15 AND 20 AMP RECEPTACLES IN THE KITCHEN AREA MUST HAVE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION PER NEC 210.8(B)(2)
- PROVIDE POWER UNDER SLAB FOR LIGHT WITHIN TOY DISPLAY. COORDINATE WITH DECOR PLANS

ELECTRICAL SCHEDULE

TAG #	QTY	DESCRIPTION	VOLT/PHASE	AMPS	RECEPT TYPE	BRKR SIZE	COND / WIRE	PNL / CCT	HGT AFF	SPECIAL REMARKS
213.00E8	1	TABLE LOCATOR SYSTEM	120/1 ISOLATED	5.2	SEE REMARKS	20A	1/2"C-2#12IG	CP:30	VERIFY	FOR GATEWAY/SERVER. TYPICALLY LOCATED IN OFFICE OR IT CLOSET. COORDINATE EXACT REQUIREMENTS WITH MANUFACTURER INSTRUCTIONS. VERIFY EXACT LOCATION IN FIELD.
213.00E9	1	TABLE LOCATOR SYSTEM	120/1 ISOLATED	2.6	SEE REMARKS	20A	1/2"C-2#12IG	CP:30	VERIFY	FOR MONITOR. TYPICALLY LOCATED IN HS CHASE OR AT PICKUP COUNTER. COORDINATE EXACT REQUIREMENTS WITH MANUFACTURER INSTRUCTIONS. VERIFY EXACT LOCATION IN FIELD.
701.01E1	4	HAND DRYER	120/1	18.0	JB	20A	1/2"C-2#12 EA	EXISTING	SEE RMKS	INSTALL JB AT A MOUNTING HGT. THAT RESULTS IN A MAX. OF 3'-4" AFF TO OPERATING MECHANISM. RECONNECT TO EXIST. CIRCUIT
701.13E1	8	DCO - GENERAL PURPOSE	120/1	1.5	5-20R	20A	1/2"C-2#12	EXIST/AVAILABLE	1'-6"	COORDINATE QUANTITY, LOCATION, AND HEIGHT(S) WITH APPROVED DECOR PACKAGE PRIOR TO INSTALLATION.
701.13E3	0	DCO - GENERAL PURPOSE	120/1	1.5	5-20R	20A	1/2"C-2#12	EXIST/AVAILABLE	4'-6"	COORDINATE QUANTITY, LOCATION, AND HEIGHT(S) WITH APPROVED DECOR PACKAGE PRIOR TO INSTALLATION.
800.00E1	2	KIOSK	120/1 ISOLATED	SEE REMARKS	JB	20A	1/2"C-2#12IG	CP:24,26	SEE REMARKS	SINGLE SIDED KIOSK IS 8 AMPS, DOUBLE SIDED IS 9 AMPS. PROVIDE JB ABOVE CEILING. RUN POWER DOWN KIOSK CHANNEL PER MANUFACTURER INSTRUCTIONS. COORDINATE EXACT LOCATION WITH DECOR DRAWINGS.

FOR CONSTRUCTION

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REV: 0

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November 8, 2018

McDonald's USA, LLC

PREPARED FOR: CAMERON, NC

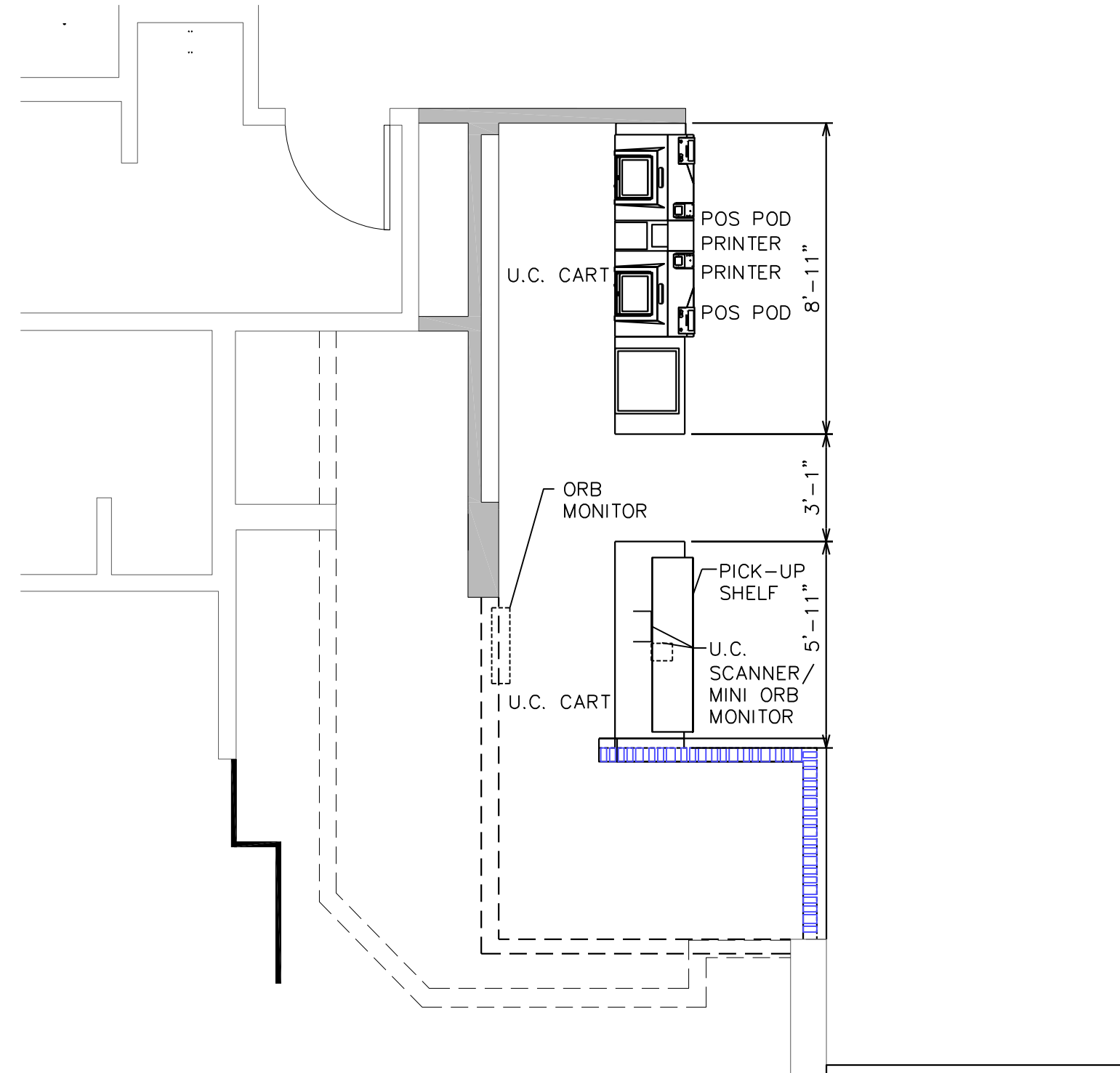
DESCRIPTION: INTERIOR REMODEL DRAWINGS

SHEET NO: E1.1

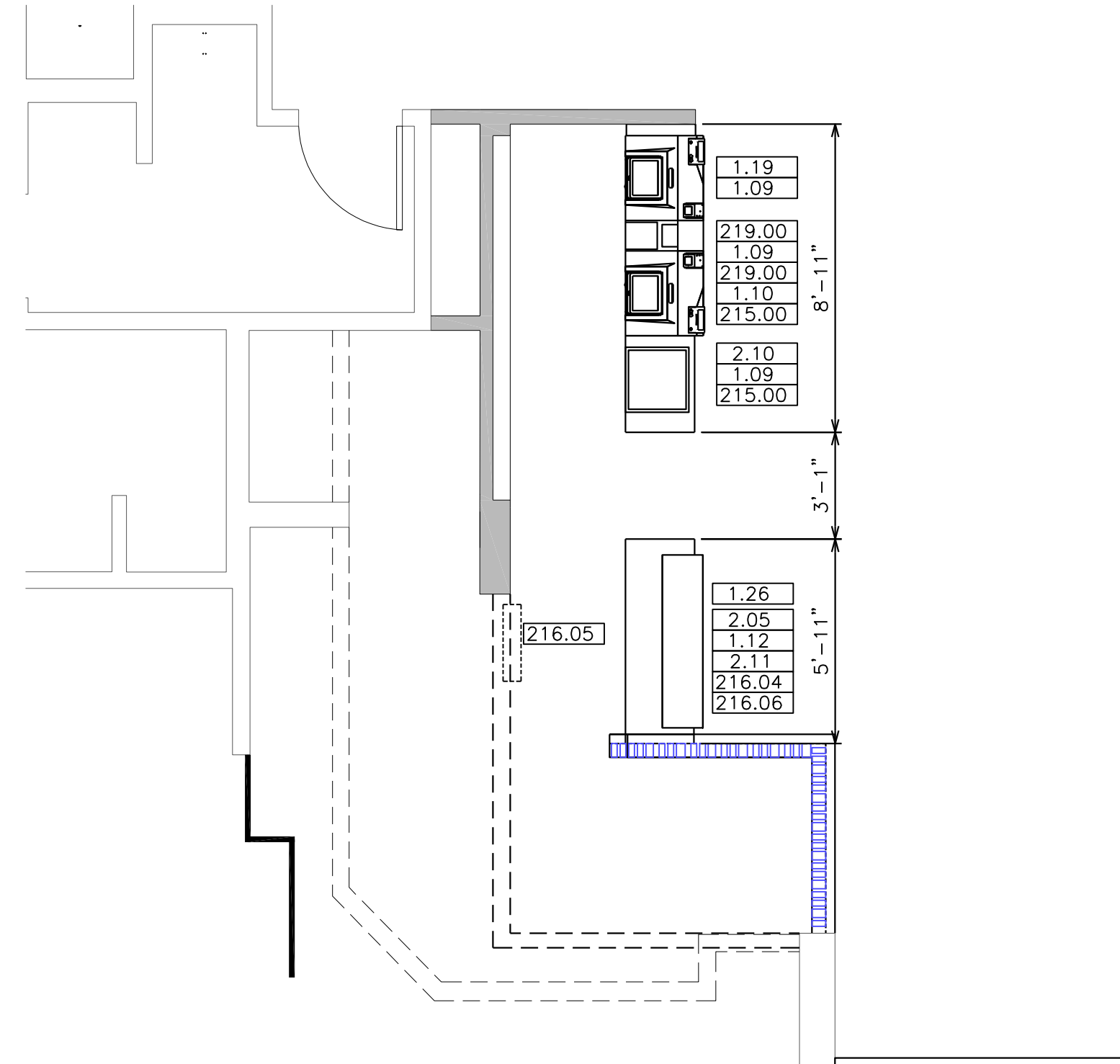
DESCRIPTION: ELECTRICAL ROUGH-IN

935 NORTH CAROLINA HIGHWAY 24-87

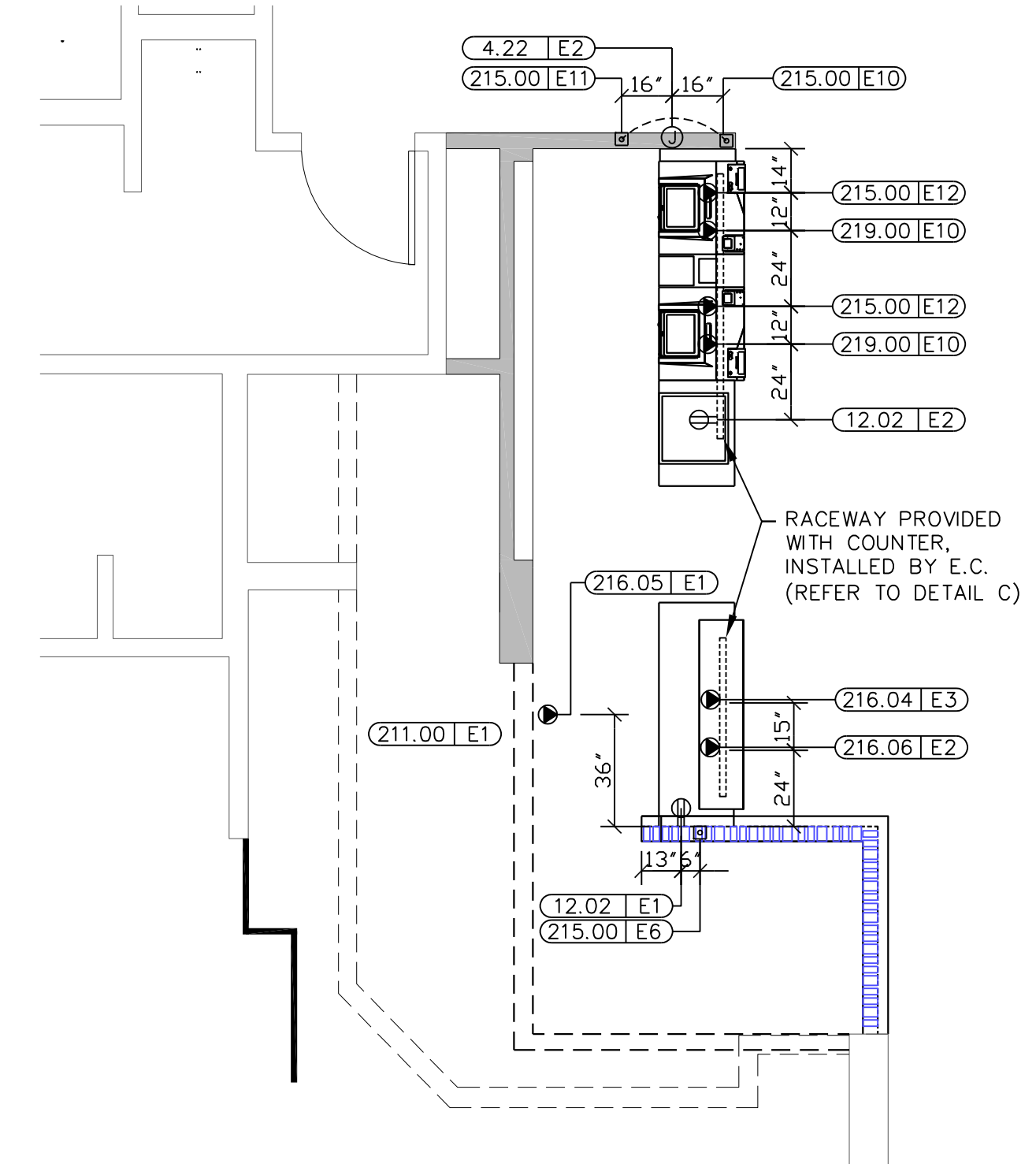




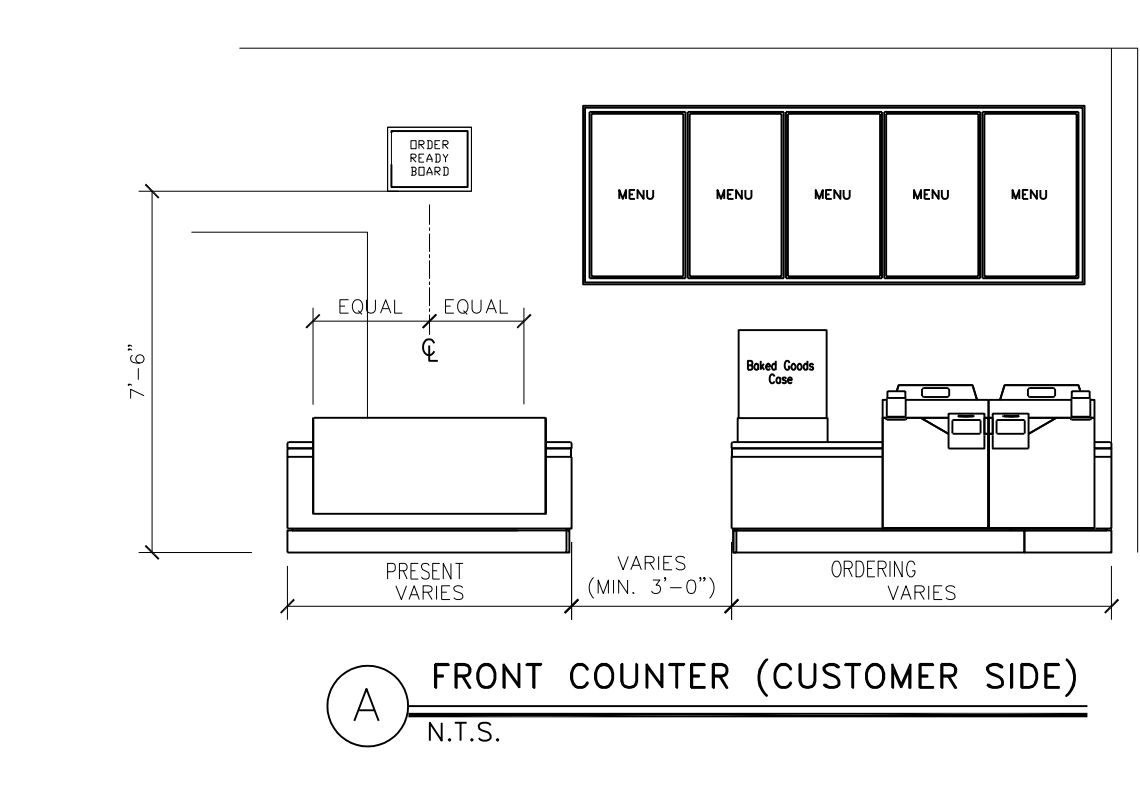
1 KITCHEN COVER SHEET  
N.T.S.



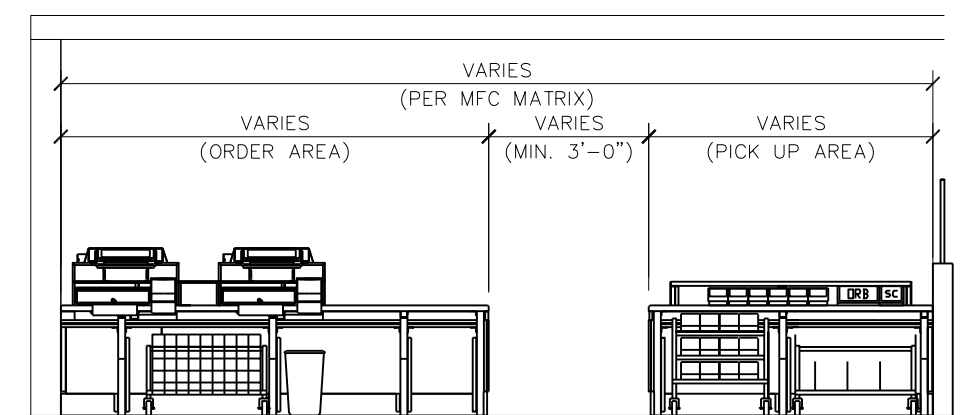
2 KITCHEN EQUIPMENT LAYOUT  
N.T.S.



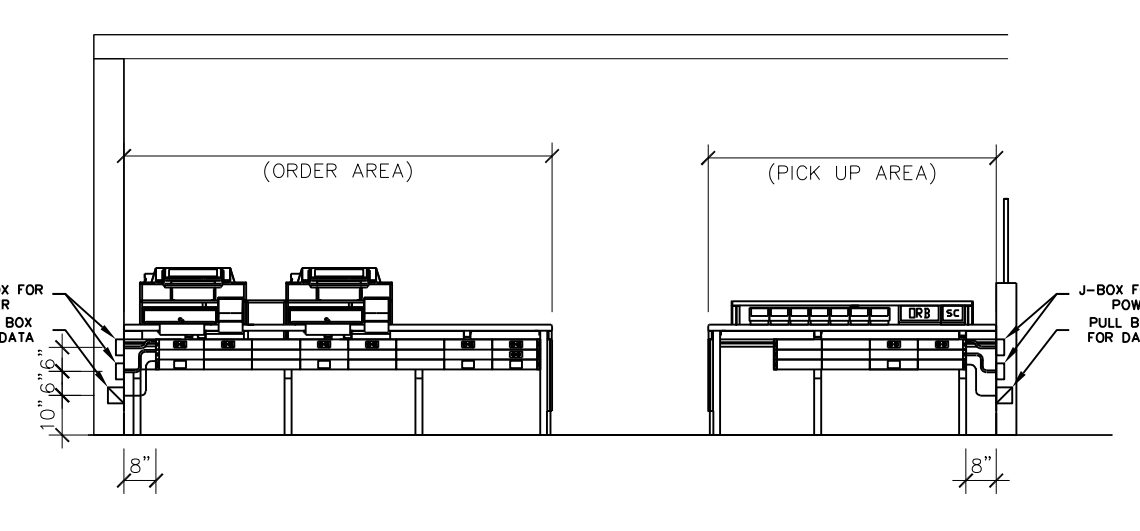
3 ELECTRICAL ROUGH-IN PLAN  
N.T.S.



A FRONT COUNTER (CUSTOMER SIDE)  
N.T.S.



B FRONT COUNTER (CREW SIDE)  
N.T.S.



C MODULAR COUNTER RACEWAY (TYP.)  
N.T.S.

SYMBOL	CATALOG #	DESCRIPTION	QUANTITY
[Symbol]	HBLALU57DR & IG4700	RECEPTACLE COVERPLATE WITH ORANGE, TWIST LOCK, ISOLATED GROUND DUPLEX RECEPTACLE	1 PER ISOLATED GROUND RECEPTACLE
[Symbol]	HBLALU57DR & 5-15R	RECEPTACLE COVERPLATE WITH STRAIGHT BLADE DUPLEX RECEPTACLE	1
[Symbol]	HBLALU57LPB	COMMUNICATIONS COVERPLATE	1 PER REGISTER & 1 FOR DUAL POINT & 1 FOR ANALOG WIRELESS OPTION
[Symbol]	HBLALU57BL	BLANK COVERPLATE	AS NECESSARY TO FILL RACEWAY
[Symbol]	HBLALU5000B02M290	2' SECTION OF RACEWAY, INCLUDES COUPLERS	1 FOR PICK UP COUNTER AND AS NECESSARY TO MAKE ORDER COUNTER RACEWAY 1' LESS THEN COUNTER LENGTH
[Symbol]	HBLALU5000B04M290	4' SECTION OF RACEWAY, INCLUDES COUPLERS	AS NECESSARY TO MAKE ORDER COUNTER RACEWAY 1' LESS THEN COUNTER LENGTH
[Symbol]	HBLALU5000B05M290	5' SECTION OF RACEWAY, INCLUDES COUPLERS	AS NECESSARY TO MAKE ORDER COUNTER RACEWAY 1' LESS THEN COUNTER LENGTH
[Symbol]	HBLALU5010B	BLANK END FITTING	AS NEEDED
[Symbol]	HBLALU5010B2M2	SERVICE ENTRANCE FITTING & BUSHING FOR DATA CABLES	AS NEEDED
[Symbol]	N/A HBLALU5701	COUPLER (INCLUDED WITH RACEWAY SECTION)	RECEIVE 1 PAIR PER RACEWAY SECTION
[Symbol]	N/A HBLALU5709	GROUND ADAPTER	AS NEEDED

ELECTRICAL RACEWAY NOTES:  
 1. RACEWAY AND RECEPTACLES TO BE PROVIDED WITH MODULAR FRONT COUNTER, INSTALLED BY CONTRACTOR.  
 2. DETAIL SHOWN IS A TYPICAL CONFIGURATION ONLY. SITE SPECIFICS MIGHT CAUSE DEVIATIONS.

x = Optional Equipment    W/F = Verify in Field  
 GC = General Contractor  
 R = Relocated Equipment

ITEM	QTY	DESCRIPTION	MANUFACTURER	MODEL #	UL	NSF	FURNISHED	GENERAL REMARKS	SPECIAL REQUIREMENTS
1.09	2	MODULAR FRONT COUNTER POS POD	DECOR	VERIFY W/ECM	-	2	GC	-	
1.11	1	MODULAR FRONT COUNTER OVERSHELF	DECOR	VERIFY W/ECM	-	2	GC	-	
1.18	1	MODULAR FRONT COUNTER BASE	DECOR	VERIFY W/ECM	-	2	GC	-	
1.26	1	MODULAR FRONT COUNTER BASE	DECOR	VERIFY W/ECM	-	2	GC	-	
2.05	1	UNDER COUNTER CART - 24"W x 18"D FRONT COUNTER	INTERMETRO	UC18-DMS	-	2	KES	-	
2.10	1	BAG/NAPKIN STOCK CART	INTERMETRO	MCD-DP1430B	-	2	KES	-	
2.11	1	CUP AND LID SLEEVE STOCK CART	INTERMETRO	MCD-DP1830CS	-	2	KES	-	
215.00	2	POS REGISTER - FRONT COUNTER	BY OWNER	BY OWNER	OEM	-	OWNER	INCLUDES MONITOR AND CPU	
216.04	1	ORB MINI MONITOR	BY OWNER	BY OWNER	-	-	OWNER	UNDER COUNTER BRACKET BY POS SUPPLIER	
216.05	1	ORB MONITOR	BY OWNER	BY OWNER	-	-	OWNER	MOUNTING KIT PROVIDED BY KES	
216.06	1	ORB SCANNER	BY OWNER	BY OWNER	-	-	OWNER	UNDER COUNTER BRACKET BY POS SUPPLIER	
219.00	2	POS - RECEIPT PRINTER	BY OWNER	BY OWNER	OEM	-	OWNER	-	

PB = Pullbox    V/F = Verify in Field  
 JB = Junction Box  
 EC = Electrical Contractor

TAG #	QTY	DESCRIPTION	VOLT/PH	FLA	BRK SIZE	COND/WIRE	PNL/CCT	RECEP TYPE	HGT AFF	REQUIREMENTS & REMARKS
004.22E2	1	DIGITAL INTERRUPT PANEL	-	-	-	1/2"C	-	JB	ABOVE CLG.	EC TO PROVIDE JB WITH BLANK COVER PLATE AND 1/2" EMPTY CONDUIT TO 4.20E3
012.02E1	1	BAKED GOODS DISPLAY CASE - 22"	120/1	2.5	15A	1/2"C-2#12	AP-3:1	5-15R	1'-6"	-
012.02E2	1	BAKED GOODS DISPLAY CASE - 22"	120/1	2.5	15A	1/2"C-2#12	AP-3:1	5-15R	SEE RMKS	PROVIDE RECEP. IN COUNTER-MOUNTED RACEWAY
211.00E1	1	DELIVERY TABLET	120/1 ISOLATED	1.5	20A	1/2"C-2#12IG	CP:21	IG5262	SEE RMKS	TABLET LOCATED HERE IN ASSEMBLY AREA AFTER FULL POS INTEGRATION. VERIFY EXACT MOUNTING LOCATION IN FIELD.
211.00E2	1	DELIVERY TABLET	120/1 ISOLATED	1.5	20A	1/2"C-2#12IG	CP:4	SEE RMKS	SEE RMKS	TABLET LOCATED HERE AT FRONT COUNTER UNTIL FULL POS INTEGRATION. POWER FROM SAME RECT. AS 219.00E10 VIA TWIST-LOCK ADAPTER PROVIDED WITH UNIT.
215.00E10	1	POS REGISTER - FRONT COUNTER	DATA CABLE	-	-	-	-	4x4x4 PB	1'-2"	EXTEND 2 1/2" CONDUIT TO 215.00E11 FOR POS DATA CABLES
215.00E11	1	POS REGISTER - FRONT COUNTER	DATA CABLE	-	-	-	-	4x4x4 PB	1'-2"	EXTEND 2 1/2" CONDUIT TO ABOVE CEILING AND TO 215.00E10 FOR POS DATA CABLES
215.00E12	2	POS REGISTER - FRONT COUNTER	120/1 ISOLATED	3.0 EA.	-	3/4"C-2#12IG	CP:19	IG4700	SEE RMKS	PROVIDE IG RECEP. IN COUNTER-MOUNTED RACEWAY
215.00E6	1	POS REGISTER - FRONT COUNTER	DATA CABLE	-	-	-	-	4x4x4 PB	1'-2"	EXTEND 2 1/2" CONDUIT UNDER SLAB TO 215.00E7 FOR POS DATA CABLES
216.04E3	1	ORB MONITOR (MIN)	120/1 ISOLATED	1.5 EA.	20A	3/4"C-2#12IG	CP:4	IG4700	SEE RMKS	PROVIDE IG RECEP. IN COUNTER-MOUNTED RACEWAY
216.05E1	1	ORB MONITOR	120/1 ISOLATED	1.5 EA.	20A	1/2"C-2#12IG	CP:4	IG4700	FLUSH ON CLG	-
216.06E2	1	ORB SCANNER	120/1 ISOLATED	1.5 EA.	20A	3/4"C-2#12IG	CP:4	IG4700	SEE RMKS	PROVIDE IG RECEP. IN COUNTER-MOUNTED RACEWAY
219.00E10	2	POS - RECEIPT PRINTER	120/1 ISOLATED	0.7	20A	3/4"C-2#12IG	CP:4	IG4700	SEE RMKS	PROVIDE IG RECEP. IN COUNTER-MOUNTED RACEWAY

ELECTRICAL SCHEDULE NOTES:  
 1. CIRCUIT NUMBERS SHOWN ARE FOR DESIGN INTENT ONLY. ACTUAL CONDITIONS WILL AFFECT CIRCUITRY.  
 2. WHEN AVAILABLE ONLY ONE BAKED GOODS CASE WILL BE PROVIDED PER RESTAURANT.

FOR CONSTRUCTION DESCRIPTION

REV 0 11/08/18 DATE

NOVEMBER 8, 2018

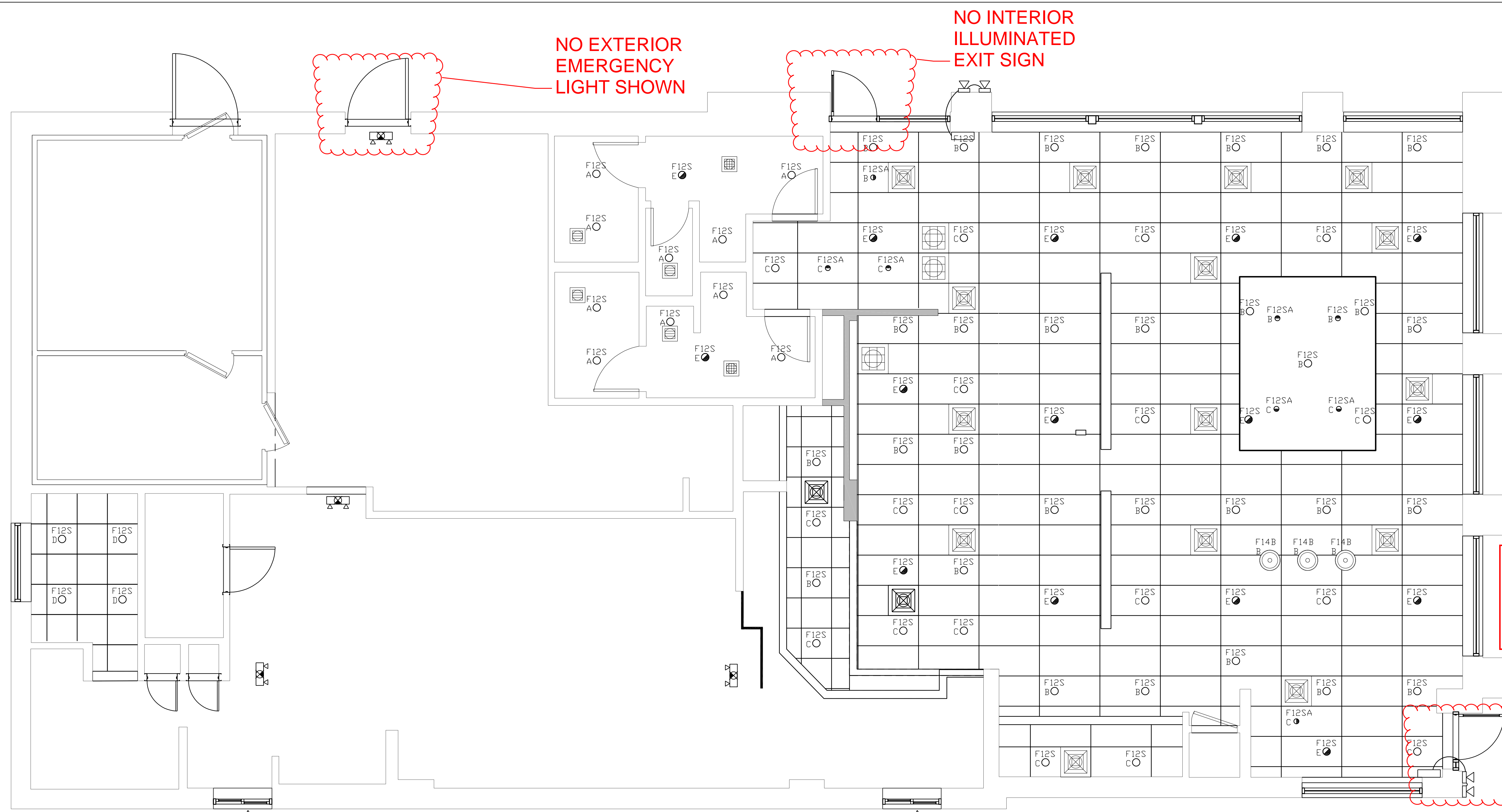
**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603  
 OFFICE: (919) 661-6351  
 www.tepgroup.net  
 N.C. LICENSE # C-1794

**McDonald's USA, LLC**  
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PREPARED FOR: CAMERON, NC  
 DESCRIPTION: INTERIOR REMODEL DRAWINGS  
 SHEET NO.: E1.2  
 MODULAR FRONT COUNTER

DRAWN BY: BRB  
 TEP PID NO.:  
 REVIEWED BY: PWC  
 DATE ISSUED: 11/08/18  
 SITE ADDRESS: 935 NORTH CAROLINA HIGHWAY 24-87  
 SITE ID: 32-1466





**LIGHTING CIRCUITS**

MARK	DESCRIPTION
A	EXISTING RESTROOM LIGHTING CIRCUIT
B	EXISTING DINING ROOM LIGHTING CIRCUIT
C	EXISTING DINING ROOM LIGHTING CIRCUIT
D	EXISTING CREW ROOM LIGHTING CIRCUIT
E	EXISTING NIGHT LIGHT/EMERGENCY LIGHTING CIRCUIT

NOTE:  
LIGHTING LOCATIONS ARE APPROXIMATE. EC TO VERIFY FINAL PLACEMENT OF ALL LIGHTING WITH DECOR DRAWINGS. VERIFY ALL FIXTURE MODEL NUMBERS WITH DECOR DRAWINGS.

**Reviewed For Code Compliance By:**  
**D. Banks Wallace**  
Chief Deputy Fire Marshal  
12/12/2018 12:56:12 PM

**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603  
OFFICE: (919) 661-6351  
www.tepgroup.net  
N.C. LICENSE # C-1794

November 8, 2018

1 ELEC. REFLECTED CEILING PLAN  
E2.0 1/4"=1'-0"

**LIGHTING FIXTURE SCHEDULE:**

MARK	SYMBOL	DESCRIPTION	DIFFUSER	LAMPS		BALLAST	MOUNTING	MANUFACTURER AND CATALOG NUMBER
				WATTS	TYPE			
F12S	○	6" LED DOWN LIGHT	-	12W	LED	-	RECESSED	SECURITY LIGHTING #LB6LEDA10L-35K-9-SA/DBXQL
F12SA	●	6" LED ADJUSTABLE DOWN LIGHT	-	12W	LED	-	RECESSED	SECURITY LIGHTING #LB6LEDA10L-35K-9-WW-SA/DBXQL
F14A	⊙	DECOR PENDANT	-	8W	LED	-	FLUSH	VERIFY PENDANT LIGHTING MODEL NUMBERS WITH DECOR DRAWINGS
F14B	⊙	DECOR PENDANT	-	8W	LED	-	FLUSH	VERIFY PENDANT LIGHTING MODEL NUMBERS WITH DECOR DRAWINGS
F14C	⊙	DECOR PENDANT	-	8W	LED	-	FLUSH	VERIFY PENDANT LIGHTING MODEL NUMBERS WITH DECOR DRAWINGS
F20	⊙	EXIT SIGN WITH BATTERY BACKUP	-	1.8W	LED	-	SURFACE	SECURITY LIGHTING: PRB. SEE NOTE LS2 ON THIS SHEET
F21	⊙	2 HEADED EMERGENCY BATTERY LIGHT	-	-	LED	-	SURFACE TO WALL OR CEILING	SECURITY LTG. #EV4D
F22	⊙	EMERG BATTERY & 2 REMOTE HEADS	-	-	LED	-	SURFACE TO WALL OR SOFFIT	SECURITY LTG. #EV4D-02L-0/EV0DB
F23	⊙	2 HEADED EMERG LIGHT & 2 REMOTE HEAD IF REQ'D	-	-	LED	-	SURFACE TO WALL OR SOFFIT	SECURITY LTG. #EV4D/EV0DB
	⊙	EXISTING EXIT SIGN WITH 2 HEADED EMERGENCY BATTERY LIGHT	-	-	-	-	-	-

**LIGHTING SCHEDULE NOTES:**

LS1. FLUORESCENT LIGHT FIXTURE PERFORMANCE SPECIFICATION: EC SHALL SELECT LIGHT FIXTURES FROM SECURITY LIGHTING THAT MEET OR EXCEED THE FOLLOWING REQUIREMENTS:  
 A. REQUIREMENTS:  
 B. SHEET METAL SHALL BE MINIMUM 22 GAGE STEEL, WHITE ENAMEL PAINTED.  
 C. PLASTIC LENSES SHALL BE PRISMATIC ACRYLIC. A12 PATTERN, UNLESS NOTED OTHERWISE.  
 D. LAY-IN FIXTURES SHALL HAVE HINGED, GASKETED DROP DOWN DOOR FRAMES. PROVIDE FLANGE KITS FOR INSTALLATION IN GYPSUM BOARD CEILING. VERIFY IN THE FIELD.

ORDER LED EXIT SIGNS WITH LETTER COLORS THAT COMPLY WITH LOCAL CODES.  
 - FOR RED LETTERS USE #PRB (UNIVERSAL),  
 - FOR GREEN LETTERS USE #PGB (UNIVERSAL), OR  
 IF THE ABOVE EXIT SIGNS DO NOT COMPLY WITH LOCAL CODES USE: LED SIGN WITH BATTERY BACKUP, LETTER SIZE, COLOR, TYPE & DIRECTIONAL ARROWS AS REQUIRED BY THE LOCAL AUTHORITIES.

LS3. ALL INTERIOR LIGHT FIXTURES SHALL BE 120 VOLT UNLESS NOTED OTHERWISE.

LS4. LIGHTING FIXTURES AND LAMPS HAVE BEEN CHOSEN TO ACHIEVE MAXIMUM ENERGY CONSERVATION WHILE MAINTAINING ADEQUATE LEVEL OF ILLUMINATION. LAMP AND BALLAST SPECIFICATIONS SHALL BE STRICTLY FOLLOWED. ANY DEVIATION FROM LAMP SPECIFICATIONS SHALL BE APPROVED IN WRITING BY McDONALD'S CORPORATION.

LS5. ALL FIXTURES SHALL BE ORDERED WITH LOW WATTAGE ENERGY EFFICIENT BALLASTS FROM MANUFACTURER.

**ORDER ALL LIGHT FIXTURES FROM:**  
 SECURITY LIGHTING SYSTEMS, INC.  
 PHONE: (800) 544-4848 FAX: (847) 279-0642

**EMERGENCY LIGHTING NOTES**

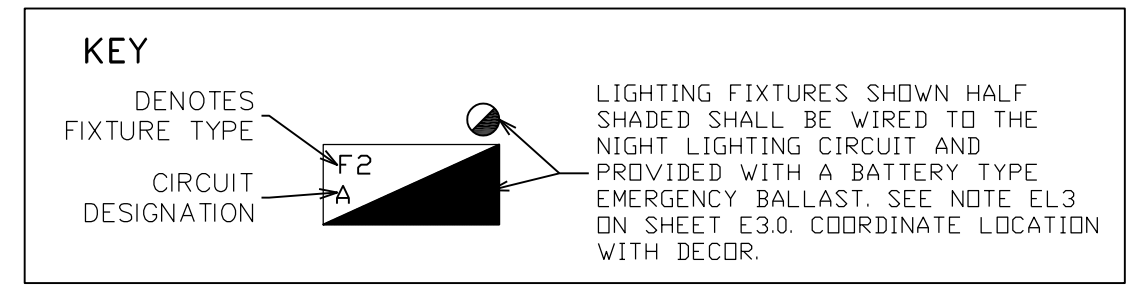
EL1. EC SHALL INSTALL A LOCK ON CIRCUIT BREAKER HANDLE, FOR ALL EMERGENCY LIGHTING CIRCUITS. EC SHALL VERIFY ALL REQUIREMENTS AND FINAL EMERGENCY LIGHTING LOCATIONS WITH LOCAL AUTHORITIES. INCLUDE ALL COSTS IN BASE BID.

EL2. IF NOT INSTALLED BY MANUFACTURER, EC SHALL BE RESPONSIBLE FOR THE COMPLETE INSTALLATION OF THE EMERGENCY INVERTER BALLAST IN NIGHT LIGHTING FIXTURES SHOWN ON THIS SHEET.

EL3. ALL FIXTURES DENOTED AS NIGHT LIGHTING FIXTURES SHALL BE PROVIDED WITH A BATTERY INVERTER EMERGENCY TYPE BALLAST. EMERGENCY BALLAST SHALL BE A TWO LAMP TYPE OF 600-700 INITIAL LUMEN RATED (MINIMUM) TO ILLUMINATE FIXTURE IN THE EVENT OF A POWER FAILURE. BALLAST BATTERY SHALL MAINTAIN 87.5% OF THE NOMINAL BATTERY VOLTAGE AFTER 1.5 HOURS TO COMPLY WITH NEC SECTION 700 AND UL924. BALLAST SHALL BE AS MANUFACTURED BY BODINE, (MODEL B60 FOR TB APPLICATIONS) SECURITY LIGHTING (MODEL U0120 FOR COMPACT FLUORESCENT APPLICATIONS) OR AN APPROVED EQUAL TO MEET THE SPECIFICATIONS LISTED ABOVE. LED FIXTURES DENOTED AS NIGHT LIGHTING SHALL BE APPROVED WITH DUAL LITE LIGHTING INVERTER MODEL # LGT-I. INVERTER SHALL BE CAPABLE OF ILLUMINATING FIXTURE FOR 1.5 HOURS TO COMPLY WITH NEC SECTION 700 AND UL924. E.C. SHALL NOT INSTALL MORE THEN FOUR FIXTURES TO EACH INVERTER. PROVIDE ADDITIONAL INVERTERS AS NECESSARY.

EL4. EMERGENCY BATTERY LIGHTING WALL PACKS IN PLAYPLACE SHALL BE LOCATED SO AS TO PROVIDE FOR MAXIMUM ILLUMINATION OF AREA. EC SHALL VERIFY EXACT PLACEMENT IN THE FIELD WITH McDONALD'S ACM (IF APPLICABLE).

EL5. EMERGENCY LIGHTING HAS BEEN DESIGNED PER NFPA 101 TO MAINTAIN 1 FC IN PATH OF EGRESS. IF FIELD CONDITIONS REQUIRE ANY CHANGES TO LIGHTING DESIGN, EMERGENCY LIGHTING, SHALL BE INSTALLED TO MEET THE ABOVE REQUIREMENTS.



**McDonald's USA, LLC**

PREPARED FOR: CAMERON, NC  
 DRAWN BY: BRB  
 CHECKED BY: PWC  
 DATE ISSUED: 11/08/18

SHEET NO. E2.0  
 LIGHTING PLAN

935 NORTH CAROLINA HIGHWAY 24-87



**ELECTRICAL SPECIFICATIONS AND GENERAL NOTES:**

- THE ELECTRICAL CONTRACTOR (E.C.) SHALL PROVIDE ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM/INSTALLATION.
- MATERIALS AND INSTALLATION SHALL COMPLY WITH ALL CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
- ALL MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY UL, ETL, CSA, OR ANOTHER RECOGNIZED TESTING LABORATORY.
- THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF ALL ELECTRICAL WORK.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES, UTILITY COMPANIES, AND LOCAL CODE OFFICIALS, SHOP DRAWINGS AND/OR INSTALLATION DETAILS WHICH ARE REQUIRED BY THESE AGENCIES FOR THEIR APPROVAL.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, ENGINEER, AND PROJECT MANAGER IN WRITING OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES, OR REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE FIRE PREVENTION BUREAU ALL DOCUMENTS, INCLUDING DRAWINGS AND SUBMITTALS, REQUIRED TO OBTAIN APPROVAL OF THE EMERGENCY LIGHTING, LIFE SAFETY, AND EXIT SIGN SYSTEM(S) FOR TYPES AND LOCATIONS. A COPY OF THE APPROVED DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- ALL NEW ELECTRICAL WORK OR MODIFICATIONS TO EXISTING ELECTRICAL DISTRIBUTION PANELS, PANELBOARDS, METERS, ETC. SHALL BE INSTALLED AS INDICATED ON THE ELECTRICAL CONSTRUCTION DOCUMENTS. E.C. SHALL SUBMIT SHOP DRAWINGS OF ALL EQUIPMENT TO BE INSTALLED INDICATING FLOOR PLAN LAYOUT, ELEVATIONS, AND AL DIMENSIONS FOR APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION. CODE REQUIRED CLEARANCES IN FRONT OF ALL ELECTRICAL EQUIPMENT SHALL BE MAINTAINED AT ALL TIMES.
- THE CONTRACTOR SHALL INCLUDE IN BID AN ALLOWANCE FOR THE FOLLOWING ADDITIONAL LIFE SAFETY DEVICES, INCLUDING INSTALLATION AND ALL CONDUIT AND WIRE, FOR ADDITIONAL DEVICES AS MAY BE REQUIRED BY THE REVIEW OF THE AUTHORITY HAVING JURISDICTION.
  - EXIT SIGN FIXTURES
  - EMERGENCY LIGHTING FIXTURES
 CONTRACTOR SHALL PROVIDE A UNIT PRICE FOR EACH FOR QUANTITY ADJUSTMENT.
- THE CONTRACTOR SHALL INCLUDE IN BID ELECTRICAL UNIT PRICES (EUP) TO PROVIDE ADDITIONAL LIFE SAFETY DEVICES WITHIN FINISHED CEILING SYSTEMS, INCLUDING ALL CONDUIT AND WIRE, FOR EACH TYPE OF DEVICE AS SCHEDULED IN NOTE NUMBER 9. THE UNIT PRICE SHALL INCLUDE ALL GENERAL CONTRACTOR ASSOCIATED COSTS TO INSTALL DEVICES WITHIN INSTALLED CEILING SYSTEMS.
- THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, MAKE A SCHEDULED ARRANGEMENT WITH THE PROJECT MANAGER TO VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND WIRING FOR THE PERFORMANCE OF ALL TRADES, FOR THE ENTIRE PERIOD OF CONSTRUCTION AND SHALL REMOVE ALL TEMPORARY WIRING AT THE COMPLETION OF CONSTRUCTION. ALL COSTS FOR ESTABLISHING AND REMOVING TEMPORARY POWER SHALL BE INCLUDED IN BID.
- THE EXISTING POWER, SIGNAL, AND COMMUNICATIONS SYSTEMS ARE TO REMAIN IN SERVICE TO PROVIDE FOR THE OWNER'S EXISTING FUNCTIONS. SHOULD IT BECOME NECESSARY TO SHUT-DOWN ANY SYSTEM OR PORTION OF A SYSTEM, APPROVAL IN WRITING MUST BE OBTAINED FROM THE PROJECT MANAGER AND SHALL BE ONLY FOR THE PERIOD AND TIME AGREED UPON. THE BID IS TO INCLUDE THE COST OF ANY TEMPORARY WIRING AND PREMIUM TIME REQUIRED FOR THE SHUTDOWN.
- ALL MATERIALS AND EQUIPMENT SHALL BE ERECTED, INSTALLED, TOOLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE

**MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.**

- ALL CUTTING, DRILLING, AND PATCHING OF MASONRY, DRYWALL, CONCRETE, STEEL, OR IRON WORK BELONGING TO THE BUILDING SHALL BE DONE BY THIS CONTRACTOR IN ORDER THAT WORK MAY BE PROPERLY INSTALLED. UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT. EXCEPT AT THE DIRECTION OF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE.
- SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS, AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE REQUIRED TO IDENTIFY AND REVIEW THE EQUIPMENT. SUBMITTALS SHALL BE IN LOGICAL GROUPS (FOR EXAMPLE ALL LIGHTING FIXTURES). PARTIAL SUBMITTALS WILL NOT BE REVIEWED.
- SUBMIT FOUR (4) COPIES OF THE FOLLOWING SHOP DRAWINGS FOR REVIEW:
  - LIGHTING FIXTURES AND LAMPS
  - WIRING DEVICES
  - LOW VOLTAGE RELAYS AND SWITCHES
  - DIMMERS AND CONTROLS
- CONTRACTOR SHALL PROVIDE "AS-BUILT" DOCUMENTATION AND HARD COPY REPRODUCIBLE DRAWINGS AT THE COMPLETION OF THE PROJECT AND SUBMIT TO THE ARCHITECT AND THE ENGINEER. AS-BUILT DRAWINGS SHALL INDICATE EXACT CIRCUIT NUMBERS, LOCATIONS OF ALL DEVICES, CEILING FIXTURES, AND RACEWAY FOR LIGHTING, TELECOMMUNICATIONS AND POWER DISTRIBUTION SYSTEMS AS INSTALLED.
- ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW AND OF COMMERCIAL GRADE UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED ON DRAWINGS.
- EXCEPT AS NOTED OTHERWISE, ALL WORK REQUIRED FOR THE ELECTRICAL INSTALLATION AS SHOWN ON DRAWINGS SHALL INCLUDE ALL LABOR, INSTALLATION METHODS, EQUIPMENT, AND MATERIALS AND SHALL BE IN STRICT COMPLIANCE WITH ALL BUILDING STANDARDS.
- PROVIDE A COMPLETE METAL RACEWAY SYSTEM, FITTINGS AND ENCLOSURES FOR ALL ELECTRICAL WIRING SYSTEMS TO BE INSTALLED FOR THE PROJECT. SYSTEMS SHALL INCLUDE, BUT NOT BE LIMITED TO POWER, COMMUNICATIONS, SECURITY, PAGING, TEMPERATURE CONTROL AND CONTROLS.
- NOT USED.
- MINIMUM CONDUIT SIZE SHALL BE 1/2 INCH FOR GENERAL LIGHTING AND POWER CIRCUITRY UNLESS OTHERWISE INDICATED AND/OR REQUIRED BY CODE.
- FLEXIBLE CONDUIT CONNECTIONS TO RECESSED LIGHTING FIXTURES SHALL BE MADE WITH FLEXIBLE STEEL CONDUIT, 1/2 INCH MINIMUM, INCLUDING AN INSULATED COPPER GREEN EQUIPMENT GROUNDING CONDUCTOR OR SHALL BE MADE WITH METAL CLAD TYPE CABLE.
- NOT USED.
- WIRE NUMBER 8 AND SMALLER FOR USE IN INTERIOR DRY LOCATIONS SHALL BE TYPE THIN THERMOPLASTIC 600 VOLT INSULATED COPPER CONDUCTORS. FEEDERS AND POWER WIRING NUMBER 6 AND LARGER SHALL BE TYPE THW 600 VOLT INSULATED COPPER, WIRE WHICH IS INSTALLED IN RACEWAY IN MOIST OR DAMP LOCATIONS SHALL BE THW, 600 VOLT INSULATED COPPER CONDUCTORS. NO WIRE SMALLER THAN NUMBER 12 AWG SHALL BE USED FOR LIGHTING OR POWER.
- BRANCH CIRCUIT HOMERUN WIRING:
  - GENERAL PURPOSE BRANCH CIRCUIT HOMERUNS CONSISTING OF TWO NETWORKS SHALL HAVE PHASE, NEUTRAL AND GROUND CONDUCTORS INCREASED TO NUMBER 10 AWG, THIN AS A MINIMUM. WHERE HOMERUN (ONE OR MORE NETWORKS) EXCEEDS 100 LINEAR FEET, CONDUCTOR SIZE SHALL BE INCREASED ONE TRADE SIZE.
  - ALL BRANCH CIRCUITS, FEEDERS, AND HOMERUNS SHALL BE PROVIDED WITH AN INSULATED COPPER GREEN GROUNDING CONDUCTOR ROUTED IN THE SAME CONDUIT. GROUNDING CONDUCTOR SHALL BE SIZED PER THE REQUIREMENTS OF NEC SECTION 250.
  - HOMERUN LENGTH SHALL BEGIN AT HE CENTRAL POINT OF ALL DISTRIBUTED CIRCUITS TO THE PANELBOARD CIRCUIT BREAKER.

- ALL NEW CIRCUIT BREAKERS FOR EXISTING PANELBOARDS AND DISTRIBUTION PANELBOARDS SHALL MATCH EXISTING BUILDING PANELBOARD MANUFACTURER AND CIRCUIT BREAKER TYPE. ALL CIRCUIT BREAKERS SHALL BE BOLT ON TYPE. AIC RATING OF NEW CIRCUIT BREAKER SHALL MATCH AIC RATING OF PANELBOARD IN WHICH IT IS INSTALLED. WHERE SERIES RATED TYPE CIRCUIT BREAKERS ARE USED, NEW CIRCUIT BREAKERS SHALL BE INSTALLED SO AS TO MAINTAIN THE UL SERIES RATING OF THE ENTIRE SYSTEM. THE CONTRACTOR SHALL PROVIDE A NEW TYPED PRINTED PANEL DIRECTORY FOR EACH PANEL CHANGED AT THE COMPLETION OF THE PROJECT. EACH CIRCUIT BREAKER SHALL BE LABELED TO IDENTIFY LOAD TYPE AND LOCATION.
- THE CONTRACTOR SHALL VERIFY THE CEILING CONSTRUCTION TYPE WITH ARCHITECTURAL DETAILS BEFORE ORDERING LIGHTING FIXTURES IN ORDER TO CONFIRM PROPER MOUNTING.
- EACH SWITCH, LIGHT, RECEPTACLE, OR OTHER MISCELLANEOUS DEVICE SHALL BE PROVIDED WITH A GALVANIZED OR SHEARPOZZED PRESSED STEEL OUTLET BOX OF THE KNOCKOUT TYPE, OF NOT LESS THAN NUMBER 14 U.S. GAUGE STEEL. CONDUITS SHALL BE FASTENED WITH LOCKNUTS AND BUSHINGS AND ALL UNUSED KNOCKOUTS SHALL BE LEFT SEALED. THERE SHALL BE SUFFICIENT ROOM FOR WIRES AND BUSHINGS AND DEEP BOXES SHALL BE INSTALLED WHERE REQUIRED. BOXES SHALL BE SECURELY AND ADEQUATELY SUPPORTED.
- NOT USED
- IN SUSPENDED CEILINGS, SUPPORT CONDUITS AND JUNCTION BOXES DIRECTLY FROM THE STRUCTURAL SYSTEM, DECK OR FRAMING PROVIDED FOR THAT PURPOSE. LIGHTING BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SUPPORT WIRES OR SPLINE UNLESS THE CEILING SYSTEM HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE AND APPROVAL HAS BEEN GRANTED BY THE ARCHITECT AND THE ENGINEER.
- E.C. SHALL PROVIDE "3M" FIRESEAL SYSTEMS FOR ALL CORES AND RACEWAY PENETRATIONS IN FIRE RATED WALLS AND PARTITIONS. FIRE RATE WALL AND CEILING PENETRATIONS, ETC. USING "CP-25" CAULK, "JOST" PUTTY AND/OR "FLAMESEAL" PUTTY AS PER MANUFACTURER'S INSTRUCTIONS TO MAINTAIN EXISTING AND NEW FIRE RATINGS. VERIFY FIRE RATING CONDITIONS AND LOCATIONS PRIOR TO FINAL BIDS. ALL OPEN SLEEVE PENETRATIONS SHALL BE FIRESEALED INSIDE AND OUTSIDE BY E.C. AFTER ALL CABLING IS COMPLETELY INSTALLED. SEALING METHODS SHALL BE PROVIDED BY E.C. AND SHALL BE SUBJECT TO THE APPROVAL OF THE CABLING CONTRACTOR.
- NOT USED
- NOT USED
- NUMBERED CIRCUITS SHOWN ON PLAN ARE FOR THE CONVEYANCE OF DESIGN INTENT ONLY. ACTUAL FIELD CONDITIONS WILL AFFECT CIRCUITRY. INDICATE THE ACTUAL CIRCUIT NUMBERS INSTALLED ON THE "AS-BUILT" DRAWINGS.
- BUILDING STANDARDS
  - ALL NEW CONDUIT RACEWAYS AND BOXES FOR ALL SYSTEMS SHALL BE INSTALLED TIGHT-UP TO THE BOTTOM OF THE STRUCTURAL BEAMS WHERE REQUIRED AND PROPERLY SUPPORTED FROM STRUCTURAL MEMBERS.
  - ALL NEW CONDUIT RUNS SHALL BE INSTALLED ABOVE AND OVER THE TOP OF ALL NEW AND/OR EXISTING DUCTWORK, PIPING, CONDUITS, PULLBOXES, ETC. E.C. SHALL PROVIDE ALL NECESSARY ACCESSIBLE PULLBOXES. CONDUIT BENDS SHALL NOT EXCEED CODE REQUIREMENTS WITHIN A SINGLE RUN. E.C. SHALL PROVIDE ALL PULLBOXES AS REQUIRED.
  - NEW CONDUIT RUNS OR PULLBOXES SHALL NOT BE INSTALLED LESS THAN 2 INCHES ABOVE RECESSED LIGHTING FIXTURES UNLESS APPROVED BY THE ENGINEER.
  - NEW CONDUIT RUNS OR PULLBOXES SHALL NOT BLOCK OR PREVENT FULL AND COMPLETE ACCESS AND OPERATION OF NEW OR EXISTING HVAC EQUIPMENT, ACCESS DOORS, PIPING VALVES, JUNCTION BOXES, DUCT HEATERS, MAIN SUPPLY AND RETURN AIR DUCTS, PULLBOXES, CLEANOUTS, ETC.
  - NEW CONDUIT AND PULLBOXES TO BE INSTALLED BELOW NEW OR EXISTING DUCTWORK SHALL BE MOUNTED TIGHT UP TO BOTTOM OF DUCT WITH 90 DEGREE BENDS UP SIDEWALL OF DUCT TO MEET REQUIREMENTS OF LETTER C ABOVE. SUPPORTS SHALL NOT PENETRATE

DUCTWORK, AND SHALL BE INDEPENDENT OF ALL DUCTWORK SUPPORTS. DIRECT CONTACT OF CONDUIT RACEWAY SYSTEMS WITH DUCTWORK OR PIPING SHALL BE PROVIDED WITH VIBRATION SEPARATION METHOD APPROVED BY THE ENGINEER.

F. NEW CONDUIT AND BOXES TO BE INSTALLED WITHIN ALL EXISTING FINISHED BUILDING DRYWALL, FURRED BUILDING WALLS, PARTITIONS, AND COLUMNS SHALL BE INSTALLED WITH EMT AND FLEXIBLE RACEWAYS NOT MORE THAN 6'-0" LONG. ELECTRICAL CONTRACTOR SHALL INCLUDE ALL COSTS FOR DRYWALL ACCESS, CUTTING, PATCHING, PAINTING, ETC. IN BIDS FOR SUCH CONDITIONS. FIELD VERIFY ALL LOCATIONS ON SITE PRIOR TO FINAL BIDS. EXCEPTIONS DURING BIDS SHALL BE SUBMITTED IN WRITING.

G. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE HELD RESPONSIBLE TO HAVE EXAMINED THE CONSTRUCTION SITE WITH RESPECT TO CONSTRUCTION DRAWINGS, ACTUAL FIELD CONDITIONS, DOOR FRAME HEIGHTS, PIPING OBSTRUCTIONS, DUCTWORK HEIGHTS AND LEVELS, FLOOR LEVELS, CEILING HEIGHTS, ETC. PRIOR TO FINAL BIDS.

H. ALL NEW BUILDING STANDARD EQUIPMENT, DEVICES, AND MATERIALS SHALL BE EQUAL TO OR GREATER IN QUALITY TO EXISTING APPROVED BUILDING STANDARD MATERIALS PRESENTLY INSTALLED IN BUILDING. EQUIPMENT, DEVICES AND MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, PROJECT MANAGER, AND THE ENGINEER.

I. ALL EMERGENCY AND EXIT SIGN JUNCTION BOXES SHALL BE PAINTED RED. PANEL TAG AND CIRCUIT NUMBER FOR ALL WIRING WITHIN JUNCTION BOX SHALL BE INDICATED ON COVER.

J. ALL JUNCTION BOXES SERVING LIGHTING AND POWER SHALL HAVE CIRCUIT NUMBERS AND PANEL TAGS FOR ALL WIRING WITHIN JUNCTION BOX SHALL BE INDICATED ON COVERS.

- A NEW PANELBOARD COPPER GROUND BUS SHALL BE INSTALLED FOR EQUIPMENT GROUNDING REQUIREMENTS FOR ALL PANELBOARDS LACKING A GROUND BUS.
- PERFORM ALL WORK OF A DEMOLITION NATURE THAT MAY BE REQUIRED OR NECESSARY FOR THE FULL AND COMPLETE EXECUTION OF THE WORK, WHETHER EXPLICITLY SHOWN AND/OR SPECIFIED OR NOT. EXACT EXTENT OF DEMOLITION WILL NOT BE FULLY INDICATED BY DRAWINGS. DETERMINE THE NATURE AND EXTENT OF DEMOLITION THAT WILL BE NECESSARY BY COMPARING THE CONTRACT DOCUMENTS WITH ARCHITECTURAL AND DEMOLITION DRAWINGS TO EXISTING CONDITIONS. ELECTRICAL EQUIPMENT WHICH WILL NOT BE REUSED SHALL BE TURNED OVER TO THE OWNER OR REMOVED FROM THE PREMISES AS DETERMINED BY THE PROJECT MANAGER.
- ANY EXISTING ELECTRICAL MATERIAL AND EQUIPMENT WHICH INTERFERES WITH THE NEW ADDITION OR THE REMOVAL OF EXISTING WALLS SHALL BE REMOVED OR RELOCATED BY THE CONTRACTOR. VERIFY REMOVAL AND NEW LOCATION OF EQUIPMENT WITH THE PROJECT MANAGER AND THE ARCHITECT/ENGINEER PRIOR TO WORK.
- VERIFY CLEARANCES FOR ALL NEW OR EXISTING RELOCATED ELECTRICAL WORK BEFORE PROCEEDING WITH CONSTRUCTION. COORDINATE USAGE OF AVAILABLE SPACE WITH ALL TRADES. IN THE EVENT OF CONFLICTS, NOTIFY THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
- WHERE EXISTING CONDUIT IS SHOWN ON THE DRAWINGS, IT IS SHOWN DIAGRAMMATICALLY. THE EXACT ROUTING OF THE EXISTING CONDUIT SHALL BE DETERMINED ON THE JOB SITE BY THE CONTRACTOR.
- NOT USED
- ALL HANGER AND/OR ROD SUPPORT SYSTEMS SHALL BE SUPPORTED TO THE BOTTOM RIB OF THE METAL DECK, WHERE APPLICABLE.
- PROVIDE A WRITTEN GUARANTEE THAT THE ELECTRICAL INSTALLATION IS FREE FROM MECHANICAL AND ELECTRICAL DEFECTS. CONTRACTOR AT THEIR COST SHALL REPLACE AND/OR REPAIR, TO THE SATISFACTION OF THE OWNER AND/OR THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, ANY PARTS OF THE INSTALLATION WHICH MAY FAIL WITHIN A PERIOD OF 12 MONTHS FROM CONSTRUCTION ACCORDANCE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, PROVIDED THAT SUCH FAILURE IS DUE TO DEFECTS IN MATERIAL, WORKMANSHIP, OR FAILURE TO FOLLOW THE SPECIFICATIONS, MANUFACTURER'S INSTALLATION INSTRUCTIONS AND/OR DRAWINGS.

- CONTRACTOR SHALL PROVIDE ALL NECESSARY PROPERLY SIZED WALL OR MILLWORK MOUNTED BOXES, RINGS, SUPPORTS, AND DEVICES AS REQUIRED VIA COORDINATION WITH ARCHITECTURAL WALL SECTIONS, AND MILLWORK DETAILS.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS. WHERE MORE STRINGENT REQUIREMENTS THAN THOSE DESCRIBED HEREIN OR AS SET FORTH UNDER CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL GOVERNING BODIES HAVING JURISDICTION, THOSE GREATER REQUIREMENTS SHALL BE ADHERED TO.
- ALL NEW EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS SHALL BE PROVIDED WITH AN INTEGRAL EMERGENCY BACKUP BALLAST TO ILLUMINATE THE FIXTURES IN THE EVENT OF A POWER FAILURE. ALL COMPONENTS SHALL BE IN COMPLIANCE WITH NFPA 101 AND NFPA 70 SECTION700. BALLAST BATTERY SHALL MAINTAIN 87.5% OF THE NOMINAL BATTERY VOLTAGE AFTER 1.5 HOURS TO COMPLY WITH HNEC SECTION700 AND UL 924.
- IDENTIFICATION OF ELECTRICAL ITEMS
  - PROVIDE PERMANENT IDENTIFICATION MARKING AND NAMEPLATES FOR ALL CONDUCTORS AND EACH ITEM OF ELECTRICAL APPARATUS AND ASSOCIATED CONTROLLED EQUIPMENT, WITH THE SAME INSCRIPTIONS AS SHOWN ON THE DRAWINGS. ALL IDENTIFICATION MARKINGS SHALL BE CLEARLY AND NEATLY APPLIED.
  - APPLY ENGRAVED PLASTIC LAMINATE NAMEPLATES WITH NON-CORRODING TYPE SCREW FASTENERS OR RIVETS TO ALL MOTOR STARTERS, DISCONNECT SWITCHES, RELAYS, REMOTE CONTROL PANELS, PUSH BUTTON STATIONS, PANELBOARDS, SWITCHBOARDS, TRANSFORMERS, AND OTHER ELECTRICAL APPARATUS. NAMEPLATES SHALL BE WHITE WITH BLACK CORE, 1-1/4" X 3" MINIMUM WITH 3/16" HIGH LETTERING. THE NAMEPLATE SHALL IDENTIFY:
    - NAME OF DEVICE OR
    - LOAD THE DEVICE IS SERVING
  - PROVIDE A TYPED DIRECTORY OF CIRCUITS IN LIGHTING AND POWER PANELS AND PROVIDE PANEL IDENTIFICATION IN BLACK ALKYD PAINT STENCILED INSCRIPTIONS ON THE INSIDE OF THE DOOR, DIRECTLY ABOVE THE CENTERLINE OF THE DIRECTORY FRAME, OR ON THE VERTICAL AND HORIZONTAL CENTERLINE OF DOORS WITHOUT DIRECTORY FRAMES.
  - PROVIDE ON DEVICE PLATES FOR LOCAL TOGGLE SWITCHES, TOGGLE SWITCH MANUAL STARTERS, PILOT LIGHTS AND OTHER ELECTRICAL ITEMS, WHOSE FUNCTION IS NOT READILY APPARENT, ENGRAVED SUITABLE INSCRIPTIONS OR PLASTIC LAMINATE NAMEPLATES DESCRIBING THE EQUIPMENT CONTROLLED OR INDICATED.
  - EMBOSSED SELF-ADHERING PLASTIC TAPE LABELS WILL NOT BE ACCEPTED.

50. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL EXISTING OR NEW NON-ACCESSIBLE SYSTEM DEVICES, PULLBOXES, AND EQUIPMENT, ETC. FOR RELOCATION TO ACCESSIBLE CEILING AREAS. E.C. SHALL INCLUDE ALL COMPLETE COSTS FOR RELOCATION AND VERIFY SUCH CONDITIONS WITH ARCHITECTURAL CEILING PLANS PRIOR TO FINAL BIDS.

51. EXISTING CONDITIONS OF ALL EXISTING BUILDING EQUIPMENT, DEVICES, FIXTURES, AND SYSTEMS THAT REQUIRE REWIRING, REUSE, RELOCATION, OR REFURBISHING AS PER DRAWINGS AND SPECIFICATIONS SHALL BE FIELD VERIFIED BY THE E.C. PRIOR TO COMMENCEMENT OF ANY WORK TO BE COMPLETELY OPERATIONAL. E.C. SHALL SUBMIT A WRITTEN STATEMENT AND ITEMIZED LISTING OF ALL EXISTING CONDITIONS OF THE FOLLOWING, ALTHOUGH NOT LIMITED TO THOSE LISTED:

- HVAC EQUIPMENT
- EXIT SIGNS AND EMERGENCY LIGHTING FIXTURES
- LIFE SAFETY/FIRE ALARM SYSTEM DEVICES
- LIGHTING AND RECEPTACLE DEVICES.

THE WRITTEN STATEMENT SHALL BE SUBMITTED TO THE PROJECT MANAGER, ARCHITECT, AND ENGINEER PRIOR TO WORK. IN THE EVENT THAT THE CONTRACTOR COMMENCES WORK WITHOUT SUBMITTAL, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY AND COST TO MAINTAIN THE ABOVE IN GOOD WORKING ORDER AND CONDITION.

52. E.C. SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL ELECTRICAL AND COMMUNICATIONS OUTLETS. ELECTRICAL ENGINEERING DRAWINGS SHALL BE USED FOR CIRCUITING INFORMATION ONLY.

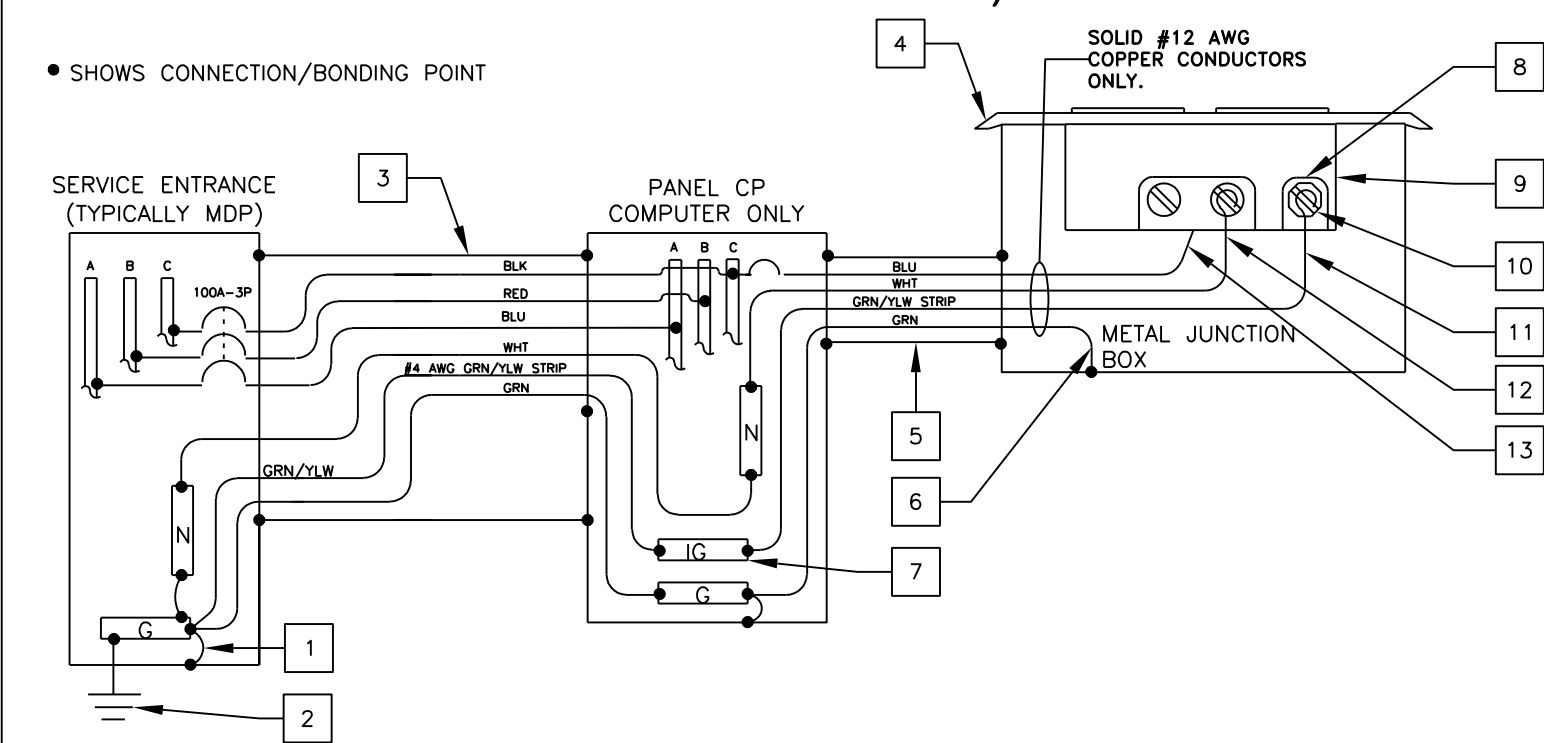
53. E.C. SHALL REFER TO MECHANICAL AND PLUMBING ENGINEERING DRAWINGS FOR EXACT LOCATIONS OF ALL MECHANICAL AND PLUMBING EQUIPMENT.

**FLAT PANEL TELEVISIONS:**

- EC SHALL PROVIDE A DUPLEX RECEPTACLE AND A LOW VOLTAGE BROADBAND CONNECTION FOR THE INSTALLATION OF FLAT PANEL TELEVISIONS. COORDINATE EXACT LOCATIONS WITH DECOR COMPANY. FOR BROADBAND CONNECTION, EC SHALL PROVIDE A 4 X 4 BOX WITH A 3/4" CONDUIT STUB-UP WITH A BUSHING INTO ACCESSIBLE CEILING SPACE.

**POS & COD ISOLATED GROUND/DEDICATED CIRCUIT**

• SHOWS CONNECTION/BONDING POINT



**KEY NOTES**

- THIS IS THE ONLY POINT WHERE THE ISOLATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE CONNECTED TO THE BUILDING'S GROUNDING SYSTEM.
- SEE BUILDING GROUNDING DETAIL THIS SHEET.
- 1-1/2" METAL CONDUIT: 4-#1 CU + 1-#6 CU EQUIP GND + 1-#4 CU ISOLATED GND.
- ALL ISOLATED GROUND/ DEDICATED CIRCUIT RECEPTACLE COVER PLATES SHALL BE ORANGE HUBBELL P1200 (SINGLE), P1200 (ONE DUPLEX) OR P12200 (TWO DUPLEX) MARKED "COMPUTER ONLY".
- METAL CONDUIT SHALL CONTAIN ONLY P.O.S. CIRCUIT CONDUCTORS (DEDICATED CIRCUIT). ONLY USE RIGID NON-METALLIC CONDUIT BELOW GRADE WHEN REQUIRED BY LOCAL CODE.
- EQUIPMENT GROUNDING BONDING CONDUCTOR (TYPICAL)
- ISOLATED GROUND BUS, ELECTRICALLY INSULATED FROM PANEL ENCLOSURE USED TO TERMINATE ONLY ISOLATED EQUIPMENT GROUNDING CONDUCTORS.
- ALL CONDUCTORS SHALL BE SOLID COPPER AND TERMINATED TO THEIR APPROPRIATE TERMINAL SCREWS BY WRAPPING THE CONDUCTOR COMPLETELY AROUND THE SCREW BARREL AND TIGHTENING THE SCREW PER MANUFACTURER'S TORQUE SPECIFICATIONS.
- ISOLATED GROUND RECEPTACLE HUBBELL-#470, #4710, #5262 OR #5261. SEE ROUGH IN SCHEDULE FOR THE APPROPRIATE RECEPTACLE TO USE.
- ISOLATED GREEN GROUND SCREW.
- ISOLATED EQUIPMENT GROUNDING CONDUCTOR (GRN W/YLW STRIP)
- NEUTRAL CONDUCTOR TERMINATED ON SILVER SCREW.
- PHASE CONDUCTOR TERMINATED ON BRASS SCREW.

- NOTES**
- ALL P.O.S. EQUIPMENT (COMPUTERS, PRINTERS, MONITORS, KVS, MODEM, HUB & COD) SHALL BE POWERED FROM THE COMPUTER PANEL.
  - ALL OTHER COMPUTER/DIGITAL EQUIPMENT SHALL BE POWERED FROM PHASE "A" IN THE COMPUTER PANEL.
  - ISOLATED GROUND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF NEC SECTION 250.
  - EACH 20 AMP CIRCUIT SHALL HAVE ITS OWN ISOLATED EQUIPMENT GROUNDING CONDUCTOR.
  - ENTIRE GROUNDING SYSTEM SHALL COMPLY WITH NEC ARTICLE 250 AND MCDONALD'S BUILDING GROUNDING DETAIL.
  - EC SHALL VERIFY CORRECT POLARITY AT RECEPTACLE.
  - EC SHALL VERIFY THAT SUBPANEL CP DOES NOT CONTAIN ANY ILLEGAL NEUTRAL TO GROUND BONDS.
  - PANEL CP SHALL ONLY BE USED TO POWER SENSITIVE ELECTRONIC EQUIPMENT, AS OUTLINED IN NOTE #1. IT SHALL NOT BE USED TO POWER ANY OTHER LOADS.
  - IT IS A SAFETY HAZARD AND AN NEC VIOLATION FOR THE POS SYSTEM TO HAVE ITS OWN INDEPENDENT GROUNDING ROD. IF AN INDEPENDENT GROUND ROD IS FOUND FOR THE POS SYSTEM, IT SHALL BE BONDED TO THE BUILDING GROUNDING SYSTEM.

TITLE	DATE	REV	DESCRIPTION
	11/08/18	0	FOR CONSTRUCTION

**TOWER ENGINEERING PROFESSIONALS**  
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 RALEIGH, NC 27603  
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 N.C. LICENSE # C-1794



November 8, 2018

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PREPARED BY:	DATE ISSUED:
DRAWN BY:	11/08/18
PWC	
TEP PID NO.:	
REVIEWED BY:	
PWC	
DESCRIPTION:	
INTERIOR REMODEL DRAWINGS	
TITLE:	
CAMERON, NC	
SHEET NO.:	
E3.1	
GENERAL NOTES	
SITE ADDRESS:	
935 NORTH CAROLINA HIGHWAY 24--87	



**ELECTRICAL SPECIFICATIONS AND GENERAL NOTES:**

- THE ELECTRICAL CONTRACTOR (E.C.) SHALL PROVIDE ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM/INSTALLATION.
- MATERIALS AND INSTALLATION SHALL COMPLY WITH ALL CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
- ALL MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY UL, ETL, CSA, OR ANOTHER RECOGNIZED TESTING LABORATORY.
- THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF ALL ELECTRICAL WORK.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES, UTILITY COMPANIES, AND LOCAL CODE OFFICIALS, SHOP DRAWINGS AND/OR INSTALLATION DETAILS WHICH ARE REQUIRED BY THESE AGENCIES FOR THEIR APPROVAL.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, ENGINEER, AND PROJECT MANAGER IN WRITING OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES, OR REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE FIRE PREVENTION BUREAU ALL DOCUMENTS, INCLUDING DRAWINGS AND SUBMITTALS, REQUIRED TO OBTAIN APPROVAL OF THE EMERGENCY LIGHTING, LIFE SAFETY, AND EXIT SIGN SYSTEM(S) FOR TYPES AND LOCATIONS. A COPY OF THE APPROVED DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- ALL NEW ELECTRICAL WORK OR MODIFICATIONS TO EXISTING ELECTRICAL DISTRIBUTION PANELS, PANELBOARDS, METERS, ETC. SHALL BE INSTALLED AS INDICATED ON THE ELECTRICAL CONSTRUCTION DOCUMENTS. E.C. SHALL SUBMIT SHOP DRAWINGS OF ALL EQUIPMENT TO BE INSTALLED INDICATING FLOOR PLAN LAYOUT, ELEVATIONS, AND ALL DIMENSIONS FOR APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION. CODE REQUIRED CLEARANCES IN FRONT OF ALL ELECTRICAL EQUIPMENT SHALL BE MAINTAINED AT ALL TIMES.
- THE CONTRACTOR SHALL INCLUDE IN BID AN ALLOWANCE FOR THE FOLLOWING ADDITIONAL LIFE SAFETY DEVICES, INCLUDING INSTALLATION AND ALL CONDUIT AND WIRE, FOR ADDITIONAL DEVICES AS MAY BE REQUIRED BY THE REVIEW OF THE AUTHORITY HAVING JURISDICTION.
  - EXIT SIGN FIXTURES
  - EMERGENCY LIGHTING FIXTURES

CONTRACTOR SHALL PROVIDE A UNIT PRICE FOR EACH FOR QUANTITY ADJUSTMENT.
- THE CONTRACTOR SHALL INCLUDE IN BID ELECTRICAL UNIT PRICES (EUP) TO PROVIDE ADDITIONAL LIFE SAFETY DEVICES WITHIN FINISHED CEILING SYSTEMS, INCLUDING ALL CONDUIT AND WIRE, FOR EACH TYPE OF DEVICE AS SCHEDULED IN NOTE NUMBER 9. THE UNIT PRICE SHALL INCLUDE ALL GENERAL CONTRACTOR ASSOCIATED COSTS TO INSTALL DEVICES WITHIN INSTALLED CEILING SYSTEMS.
- THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, MAKE A SCHEDULED ARRANGEMENT WITH THE PROJECT MANAGER TO VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND WIRING FOR THE PERFORMANCE OF ALL TRADES, FOR THE ENTIRE PERIOD OF CONSTRUCTION AND SHALL REMOVE ALL TEMPORARY WIRING AT THE COMPLETION OF CONSTRUCTION. ALL COSTS FOR ESTABLISHING AND REMOVING TEMPORARY POWER SHALL BE INCLUDED IN BID.
- THE EXISTING POWER, SIGNAL, AND COMMUNICATIONS SYSTEMS ARE TO REMAIN IN SERVICE TO PROVIDE FOR THE OWNER'S EXISTING FUNCTIONS. SHOULD IT BECOME NECESSARY TO SHUT-DOWN ANY SYSTEM OR PORTION OF A SYSTEM, APPROVAL IN WRITING MUST BE OBTAINED FROM THE PROJECT MANAGER AND SHALL BE ONLY FOR THE PERIOD AND TIME AGREED UPON. THE BID IS TO INCLUDE THE COST OF ANY TEMPORARY WIRING AND PREMIUM TIME REQUIRED FOR THE SHUTDOWN.
- ALL MATERIALS AND EQUIPMENT SHALL BE ERECTED, INSTALLED, TOOLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE

MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.

- ALL CUTTING, DRILLING, AND PATCHING OF MASONRY, DRYWALL, CONCRETE, STEEL, OR IRON WORK BELONGING TO THE BUILDING SHALL BE DONE BY THIS CONTRACTOR IN ORDER THAT WORK MAY BE PROPERLY INSTALLED. UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT. EXCEPT AT THE DIRECTION OF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE.
- SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS, AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE REQUIRED TO IDENTIFY AND REVIEW THE EQUIPMENT. SUBMITTALS SHALL BE IN LOGICAL GROUPS (FOR EXAMPLE ALL LIGHTING FIXTURES). PARTIAL SUBMITTALS WILL NOT BE REVIEWED.
- SUBMIT FOUR (4) COPIES OF THE FOLLOWING SHOP DRAWINGS FOR REVIEW:
  - LIGHTING FIXTURES AND LAMPS
  - WIRING DEVICES
  - LOW VOLTAGE RELAYS AND SWITCHES
  - DIMMERS AND CONTROLS
- CONTRACTOR SHALL PROVIDE "AS-BUILT" DOCUMENTATION AND HARD COPY REPRODUCIBLE DRAWINGS AT THE COMPLETION OF THE PROJECT AND SUBMIT TO THE ARCHITECT AND THE ENGINEER. AS-BUILT DRAWINGS SHALL INDICATE EXACT CIRCUIT NUMBERS, LOCATIONS OF ALL DEVICES, CEILING FIXTURES, AND RACEWAY FOR LIGHTING, TELECOMMUNICATIONS AND POWER DISTRIBUTION SYSTEMS AS INSTALLED.
- ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW AND OF COMMERCIAL GRADE UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED ON DRAWINGS.
- EXCEPT AS NOTED OTHERWISE, ALL WORK REQUIRED FOR THE ELECTRICAL INSTALLATION AS SHOWN ON DRAWINGS SHALL INCLUDE ALL LABOR, INSTALLATION METHODS, EQUIPMENT, AND MATERIALS AND SHALL BE IN STRICT COMPLIANCE WITH ALL BUILDING STANDARDS.
- PROVIDE A COMPLETE METAL RACEWAY SYSTEM, FITTINGS AND ENCLOSURES FOR ALL ELECTRICAL WIRING SYSTEMS TO BE INSTALLED FOR THE PROJECT. SYSTEMS SHALL INCLUDE, BUT NOT BE LIMITED TO POWER, COMMUNICATIONS, SECURITY, PAGING, TEMPERATURE CONTROL AND CONTROLS.
- NOT USED.
- MINIMUM CONDUIT SIZE SHALL BE 1/2 INCH FOR GENERAL LIGHTING AND POWER CIRCUITRY UNLESS OTHERWISE INDICATED AND/OR REQUIRED BY CODE.
- FLEXIBLE CONDUIT CONNECTIONS TO RECESSED LIGHTING FIXTURES SHALL BE MADE WITH FLEXIBLE STEEL CONDUIT, 1/2 INCH MINIMUM, INCLUDING AN INSULATED COPPER GREEN EQUIPMENT GROUNDING CONDUCTOR OR SHALL BE MADE WITH METAL CLAD TYPE CABLE.
- NOT USED.
- WIRE NUMBER 8 AND SMALLER FOR USE IN INTERIOR DRY LOCATIONS SHALL BE TYPE THHN THERMOPLASTIC 600 VOLT INSULATED COPPER CONDUCTORS. FEEDERS AND POWER WIRING NUMBER 6 AND LARGER SHALL BE TYPE THW 600 VOLT INSULATED COPPER, WIRE WHICH IS INSTALLED IN RACEWAY IN MOIST OR DAMP LOCATIONS SHALL BE THW. 600 VOLT INSULATED COPPER CONDUCTORS. NO WIRE SMALLER THAN NUMBER 12 AWG SHALL BE USED FOR LIGHTING OR POWER.
- BRANCH CIRCUIT HOMERUN WIRING:
  - GENERAL PURPOSE BRANCH CIRCUIT HOMERUNS CONSISTING OF TWO NETWORKS SHALL HAVE PHASE, NEUTRAL AND GROUND CONDUCTORS INCREASED TO NUMBER 10 AWG, THHN AS A MINIMUM. WHERE HOMERUN (ONE OR MORE NETWORKS) EXCEEDS 100 LINEAR FEET, CONDUCTOR SIZE SHALL BE INCREASED ONE TRADE SIZE.
  - ALL BRANCH CIRCUITS, FEEDERS, AND HOMERUNS SHALL BE PROVIDED WITH AN INSULATED COPPER GREEN GROUNDING CONDUCTOR ROUTED IN THE SAME CONDUIT. GROUNDING CONDUCTOR SHALL BE SIZED PER THE REQUIREMENTS OF NEC SECTION 250.
  - HOMERUN LENGTH SHALL BEGIN AT HE CENTRAL POINT OF ALL DISTRIBUTED CIRCUITS TO THE PANELBOARD CIRCUIT BREAKER.

- ALL NEW CIRCUIT BREAKERS FOR EXISTING PANELBOARDS AND DISTRIBUTION PANELBOARDS SHALL MATCH EXISTING BUILDING PANELBOARD MANUFACTURER AND CIRCUIT BREAKER TYPE. ALL CIRCUIT BREAKERS SHALL BE BOLT ON TYPE. AIC RATING OF NEW CIRCUIT BREAKER SHALL MATCH AIC RATING OF PANELBOARD IN WHICH IT IS INSTALLED. WHERE SERIES RATED TYPE CIRCUIT BREAKERS ARE USED, NEW CIRCUIT BREAKERS SHALL BE INSTALLED SO AS TO MAINTAIN THE UL SERIES RATING OF THE ENTIRE SYSTEM. THE CONTRACTOR SHALL PROVIDE A NEW TYPED PRINTED PANEL DIRECTORY FOR EACH PANEL CHANGED AT THE COMPLETION OF THE PROJECT. EACH CIRCUIT BREAKER SHALL BE LABELED TO IDENTIFY LOAD TYPE AND LOCATION.
- THE CONTRACTOR SHALL VERIFY THE CEILING CONSTRUCTION TYPE WITH ARCHITECTURAL DETAILS BEFORE ORDERING LIGHTING FIXTURES IN ORDER TO CONFIRM PROPER MOUNTING.
- EACH SWITCH, LIGHT, RECEPTACLE, OR OTHER MISCELLANEOUS DEVICE SHALL BE PROVIDED WITH A GALVANIZED OR SHEARPOINDED PRESSED STEEL OUTLET BOX OF THE KNOCKOUT TYPE, OF NOT LESS THAN NUMBER 14 U.S. GAUGE STEEL. CONDUITS SHALL BE FASTENED WITH LOCKNUTS AND BUSHINGS AND ALL UNUSED KNOCKOUTS SHALL BE LEFT SEALED. THERE SHALL BE SUFFICIENT ROOM FOR WIRES AND BUSHINGS AND DEEP BOXES SHALL BE INSTALLED WHERE REQUIRED. BOXES SHALL BE SECURELY AND ADEQUATELY SUPPORTED.
- NOT USED
- IN SUSPENDED CEILINGS, SUPPORT CONDUITS AND JUNCTION BOXES DIRECTLY FROM THE STRUCTURAL SYSTEM, DECK OR FRAMING PROVIDED FOR THAT PURPOSE. LIGHTING BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SUPPORT WIRES OR SPLINE UNLESS THE CEILING SYSTEM HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE AND APPROVAL HAS BEEN GRANTED BY THE ARCHITECT AND THE ENGINEER.
- E.C. SHALL PROVIDE "3M" FIRESEAL SYSTEMS FOR ALL CORES AND RACEWAY PENETRATIONS IN FIRE RATED WALLS AND PARTITIONS. FIRE RATE WALL AND CEILING PENETRATIONS, ETC. USING "CP-25" CALK, "303" PUTTY AND/OR "FLAMESEAL" PUTTY AS PER MANUFACTURER'S INSTRUCTIONS TO MAINTAIN EXISTING AND NEW FIRE RATINGS. VERIFY FIRE RATING CONDITIONS AND LOCATIONS PRIOR TO FINAL BIDS. ALL OPEN SLEEVE PENETRATIONS SHALL BE FIRESEALED INSIDE AND OUTSIDE BY E.C. AFTER ALL CABLING IS COMPLETELY INSTALLED. SEALING METHODS SHALL BE PROVIDED BY E.C. AND SHALL BE SUBJECT TO THE APPROVAL OF THE CABLING CONTRACTOR.
- NOT USED
- NOT USED
- NUMBERED CIRCUITS SHOWN ON PLAN ARE FOR THE CONVEYANCE OF DESIGN INTENT ONLY. ACTUAL FIELD CONDITIONS WILL AFFECT CIRCUITRY. INDICATE THE ACTUAL CIRCUIT NUMBERS INSTALLED ON THE "AS-BUILT" DRAWINGS.
- BUILDING STANDARDS
  - ALL NEW CONDUIT RACEWAYS AND BOXES FOR ALL SYSTEMS SHALL BE INSTALLED TIGHT-UP TO THE BOTTOM OF THE STRUCTURAL BEAMS WHERE REQUIRED AND PROPERLY SUPPORTED FROM STRUCTURAL MEMBERS.
  - ALL NEW CONDUIT RUNS SHALL BE INSTALLED ABOVE AND OVER THE TOP OF ALL NEW AND/OR EXISTING DUCTWORK, PIPING, CONDUITS, PULLBOXES, ETC. E.C. SHALL PROVIDE ALL NECESSARY ACCESSIBLE PULLBOXES. CONDUIT BENDS SHALL NOT EXCEED CODE REQUIREMENTS WITHIN A SINGLE RUN. E.C. SHALL PROVIDE ALL PULLBOXES AS REQUIRED.
  - NEW CONDUIT RUNS OR PULLBOXES SHALL NOT BE INSTALLED LESS THAN 2 INCHES ABOVE RECESSED LIGHTING FIXTURES UNLESS APPROVED BY THE ENGINEER.
  - NEW CONDUIT RUNS OR PULLBOXES SHALL NOT BLOCK OR PREVENT FULL AND COMPLETE ACCESS AND OPERATION OF NEW OR EXISTING HVAC EQUIPMENT, ACCESS DOORS, PIPING VALVES, JUNCTION BOXES, DUCT HEATERS, MAIN SUPPLY AND RETURN AIR DUCTS, PULLBOXES, CLEANOUTS, ETC.
  - NEW CONDUIT AND PULLBOXES TO BE INSTALLED BELOW NEW OR EXISTING DUCTWORK SHALL BE MOUNTED TIGHT UP TO BOTTOM OF DUCT WITH 90 DEGREE BENDS UP SIDEWALL OF DUCT TO MEET REQUIREMENTS OF LETTER C ABOVE. SUPPORTS SHALL NOT PENETRATE

DUCTWORK, AND SHALL BE INDEPENDENT OF ALL DUCTWORK SUPPORTS. DIRECT CONTACT OF CONDUIT RACEWAY SYSTEMS WITH DUCTWORK OR PIPING SHALL BE PROVIDED WITH VIBRATION SEPARATION METHOD APPROVED BY THE ENGINEER.

F. NEW CONDUIT AND BOXES TO BE INSTALLED WITHIN ALL EXISTING FINISHED BUILDING DRYWALL, FURRED BUILDING WALLS, PARTITIONS, AND COLUMNS SHALL BE INSTALLED WITH EMT AND FLEXIBLE RACEWAYS NOT MORE THAN 6'-0" LONG. ELECTRICAL CONTRACTOR SHALL INCLUDE ALL COSTS FOR DRYWALL ACCESS, CUTTING, PATCHING, PAINTING, ETC. IN BIDS FOR SUCH CONDITIONS. FIELD VERIFY ALL LOCATIONS ON SITE PRIOR TO FINAL BIDS. EXCEPTIONS DURING BIDS SHALL BE SUBMITTED IN WRITING.

G. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE HELD RESPONSIBLE TO HAVE EXAMINED THE CONSTRUCTION SITE WITH RESPECT TO CONSTRUCTION DRAWINGS, ACTUAL FIELD CONDITIONS, DOOR FRAME HEIGHTS, PIPING OBSTRUCTIONS, DUCTWORK HEIGHTS AND LEVELS, FLOOR LEVELS, CEILING HEIGHTS, ETC. PRIOR TO FINAL BIDS.

H. ALL NEW BUILDING STANDARD EQUIPMENT, DEVICES, AND MATERIALS SHALL BE EQUAL TO OR GREATER IN QUALITY TO EXISTING APPROVED BUILDING STANDARD MATERIALS PRESENTLY INSTALLED IN BUILDING. EQUIPMENT, DEVICES AND MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, PROJECT MANAGER, AND THE ENGINEER.

I. ALL EMERGENCY AND EXIT SIGN JUNCTION BOXES SHALL BE PAINTED RED. PANEL TAG AND CIRCUIT NUMBER FOR ALL WIRING WITHIN JUNCTION BOX SHALL BE INDICATED ON COVER.

J. ALL JUNCTION BOXES SERVING LIGHTING AND POWER SHALL HAVE CIRCUIT NUMBERS AND PANEL TAGS FOR ALL WIRING WITHIN JUNCTION BOX SHALL BE INDICATED ON COVERS.

- A NEW PANELBOARD COPPER GROUND BUS SHALL BE INSTALLED FOR EQUIPMENT GROUNDING REQUIREMENTS FOR ALL PANELBOARDS LACKING A GROUND BUS.
- PERFORM ALL WORK OF A DEMOLITION NATURE THAT MAY BE REQUIRED OR NECESSARY FOR THE FULL AND COMPLETE EXECUTION OF THE WORK, WHETHER EXPLICITLY SHOWN AND/OR SPECIFIED OR NOT. EXACT EXTENT OF DEMOLITION WILL NOT BE FULLY INDICATED BY DRAWINGS. DETERMINE THE NATURE AND EXTENT OF DEMOLITION THAT WILL BE NECESSARY BY COMPARING THE CONTRACT DOCUMENTS WITH ARCHITECTURAL AND DEMOLITION DRAWINGS TO EXISTING CONDITIONS. ELECTRICAL EQUIPMENT WHICH WILL NOT BE REUSED SHALL BE TURNED OVER TO THE OWNER OR REMOVED FROM THE PREMISES AS DETERMINED BY THE PROJECT MANAGER.
- ANY EXISTING ELECTRICAL MATERIAL AND EQUIPMENT WHICH INTERFERES WITH THE NEW ADDITION OR THE REMOVAL OF EXISTING WALLS SHALL BE REMOVED OR RELOCATED BY THE CONTRACTOR. VERIFY REMOVAL AND NEW LOCATION OF EQUIPMENT WITH THE PROJECT MANAGER AND THE ARCHITECT/ENGINEER PRIOR TO WORK.
- VERIFY CLEARANCES FOR ALL NEW OR EXISTING RELOCATED ELECTRICAL WORK BEFORE PROCEEDING WITH CONSTRUCTION. COORDINATE USAGE OF AVAILABLE SPACE WITH ALL TRADES. IN THE EVENT OF CONFLICTS, NOTIFY THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
- WHERE EXISTING CONDUIT IS SHOWN ON THE DRAWINGS, IT IS SHOWN DIAGRAMMATICALLY. THE EXACT ROUTING OF THE EXISTING CONDUIT SHALL BE DETERMINED ON THE JOB SITE BY THE CONTRACTOR.
- NOT USED
- ALL HANGER AND/OR ROD SUPPORT SYSTEMS SHALL BE SUPPORTED TO THE BOTTOM RIB OF THE METAL DECK, WHERE APPLICABLE.
- PROVIDE A WRITTEN GUARANTEE THAT THE ELECTRICAL INSTALLATION IS FREE FROM MECHANICAL AND ELECTRICAL DEFECTS. CONTRACTOR AT THEIR COST SHALL REPLACE AND/OR REPAIR, TO THE SATISFACTION OF THE OWNER AND/OR THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, ANY PARTS OF THE INSTALLATION WHICH MAY FAIL WITHIN A PERIOD OF 12 MONTHS FROM CONSTRUCTION ACCORDANCE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, PROVIDED THAT SUCH FAILURE IS DUE TO DEFECTS IN MATERIAL, WORKMANSHIP, OR FAILURE TO FOLLOW THE SPECIFICATIONS, MANUFACTURER'S INSTALLATION INSTRUCTIONS AND/OR DRAWINGS.

CONTRACTOR SHALL PROVIDE ALL NECESSARY PROPERLY SIZED WALL OR MILLWORK MOUNTED BOXES, RINGS, SUPPORTS, AND DEVICES AS REQUIRED VIA COORDINATION WITH ARCHITECTURAL WALL SECTIONS, AND MILLWORK DETAILS.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS. WHERE MORE STRINGENT REQUIREMENTS THAN THOSE DESCRIBED HEREIN OR AS SET FORTH UNDER CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL GOVERNING BODIES HAVING JURISDICTION, THOSE GREATER REQUIREMENTS SHALL BE ADHERED TO.

ALL NEW EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS SHALL BE PROVIDED WITH AN INTEGRAL EMERGENCY BACKUP BALLAST TO ILLUMINATE THE FIXTURES IN THE EVENT OF A POWER FAILURE. ALL COMPONENTS SHALL BE IN COMPLIANCE WITH NFPA 101 AND NFPA 70 SECTION 700. BALLAST BATTERY SHALL MAINTAIN 87.5% OF THE NOMINAL BATTERY VOLTAGE AFTER 1.5 HOURS TO COMPLY WITH HNEC SECTION 7000 AND UL 924.

IDENTIFICATION OF ELECTRICAL ITEMS

A. PROVIDE PERMANENT IDENTIFICATION MARKING AND NAMEPLATES FOR ALL CONDUCTORS AND EACH ITEM OF ELECTRICAL APPARATUS AND ASSOCIATED CONTROLLED EQUIPMENT, WITH THE SAME INSCRIPTIONS AS SHOWN ON THE DRAWINGS. ALL IDENTIFICATION MARKINGS SHALL BE CLEARLY AND NEATLY APPLIED.

B. APPLY ENGRAVED PLASTIC LAMINATE NAMEPLATES WITH NON-CORRODING TYPE SCREW FASTENERS OR RIVETS TO ALL MOTOR STARTERS, DISCONNECT SWITCHES, RELAYS, REMOTE CONTROL PANELS, PUSH BUTTON STATIONS, PANELBOARDS, SWITCHBOARDS, TRANSFORMERS, AND OTHER ELECTRICAL APPARATUS. NAMEPLATES SHALL BE WHITE WITH BLACK CORE, 1-1/4" X 3" MINIMUM WITH 3/16" HIGH LETTERING. THE NAMEPLATE SHALL IDENTIFY:
 

- NAME OF DEVICE OR
- LOAD THE DEVICE IS SERVING

C. PROVIDE A TYPED DIRECTORY OF CIRCUITS IN LIGHTING AND POWER PANELS AND PROVIDE PANEL IDENTIFICATION IN BLACK ALKYD PAINT STENCILED INSCRIPTIONS ON THE INSIDE OF THE DOOR, DIRECTLY ABOVE THE CENTERLINE OF THE DIRECTORY FRAME, OR ON THE VERTICAL AND HORIZONTAL CENTERLINE OF DOORS WITHOUT DIRECTORY FRAMES.

D. PROVIDE ON DEVICE PLATES FOR LOCAL TOGGLE SWITCHES, TOGGLE SWITCH MANUAL STARTERS, PILOT LIGHTS AND OTHER ELECTRICAL ITEMS, WHOSE FUNCTION IS NOT READILY APPARENT, ENGRAVED SUITABLE INSCRIPTIONS OR PLASTIC LAMINATE NAMEPLATES DESCRIBING THE EQUIPMENT CONTROLLED OR INDICATED.

E. EMBOSSED SELF-ADHERING PLASTIC TAPE LABELS WILL NOT BE ACCEPTED.

ELECTRICAL CONTRACTOR SHALL COORDINATE ALL EXISTING OR NEW NON-ACCESSIBLE SYSTEM DEVICES, PULLBOXES, AND EQUIPMENT, ETC. FOR RELOCATION TO ACCESSIBLE CEILING AREAS. E.C. SHALL INCLUDE ALL COMPLETE COSTS FOR RELOCATION AND VERIFY SUCH CONDITIONS WITH ARCHITECTURAL CEILING PLANS PRIOR TO FINAL BIDS.

EXISTING CONDITIONS OF ALL EXISTING BUILDING EQUIPMENT, DEVICES, FIXTURES, AND SYSTEMS THAT REQUIRE REWIRING, REUSE, RELOCATION, OR REFURBISHING AS PER DRAWINGS AND SPECIFICATIONS SHALL BE FIELD VERIFIED BY THE E.C. PRIOR TO COMMENCEMENT OF ANY WORK TO BE COMPLETELY OPERATIONAL. E.C. SHALL SUBMIT A WRITTEN STATEMENT AND ITEMIZED LISTING OF ALL EXISTING CONDITIONS OF THE FOLLOWING, ALTHOUGH NOT LIMITED TO THOSE LISTED:

- HVAC EQUIPMENT
- EXIT SIGNS AND EMERGENCY LIGHTING FIXTURES
- LIFE SAFETY/FIRE ALARM SYSTEM DEVICES
- LIGHTING AND RECEPTACLE DEVICES.

THE WRITTEN STATEMENT SHALL BE SUBMITTED TO THE PROJECT MANAGER, ARCHITECT, AND ENGINEER PRIOR TO WORK. IN THE EVENT THAT THE CONTRACTOR COMMENCES WORK WITHOUT SUBMITTAL, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY AND COST TO MAINTAIN THE ABOVE IN GOOD WORKING ORDER AND CONDITION.

E.C. SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL ELECTRICAL AND COMMUNICATIONS OUTLETS. ELECTRICAL ENGINEERING DRAWINGS SHALL BE USED FOR CIRCUITING INFORMATION ONLY.

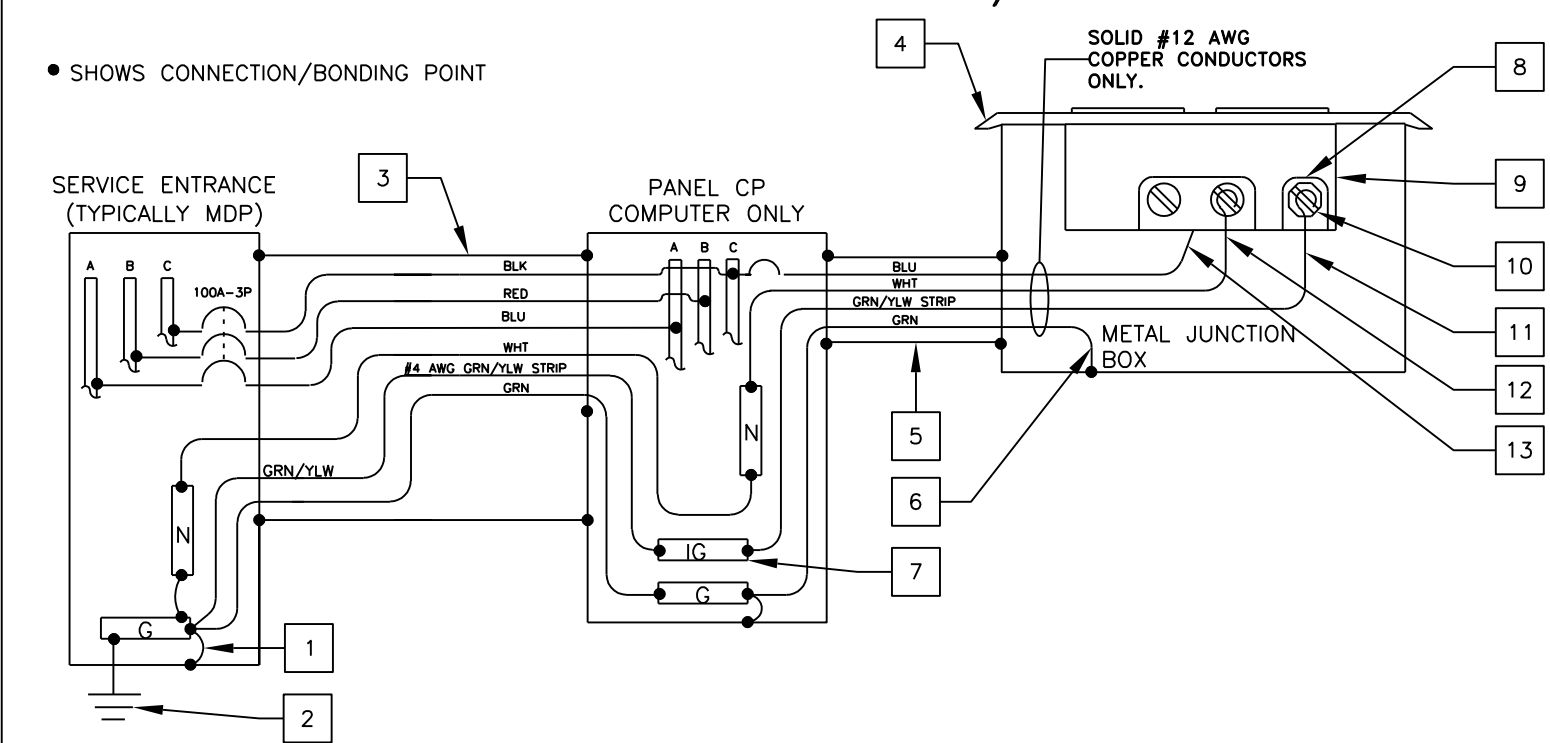
E.C. SHALL REFER TO MECHANICAL AND PLUMBING ENGINEERING DRAWINGS FOR EXACT LOCATIONS OF ALL MECHANICAL AND PLUMBING EQUIPMENT.

**FLAT PANEL TELEVISIONS:**

- E.C. SHALL PROVIDE A DUPLEX RECEPTACLE AND A LOW VOLTAGE BROADBAND CONNECTION FOR THE INSTALLATION OF FLAT PANEL TELEVISIONS. COORDINATE EXACT LOCATIONS WITH DECOR COMPANY. FOR BROADBAND CONNECTION, E.C. SHALL PROVIDE A 4 X 4 BOX WITH A 3/4" CONDUIT STUB-UP WITH A BUSHING INTO ACCESSIBLE CEILING SPACE.

**POS & COD ISOLATED GROUND/DEDICATED CIRCUIT**

• SHOWS CONNECTION/BONDING POINT

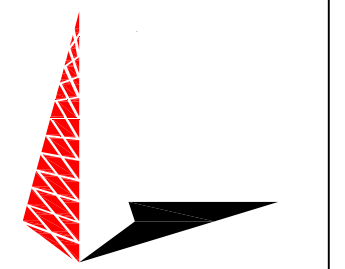


**KEY NOTES**

- THIS IS THE ONLY POINT WHERE THE ISOLATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE CONNECTED TO THE BUILDING'S GROUNDING SYSTEM.
- SEE BUILDING GROUNDING DETAIL THIS SHEET.
- 1-1/2" METAL CONDUIT: 4-#1 CU + 1-#6 CU EQUIP GND + 1-#4 CU ISOLATED GND.
- ALL ISOLATED GROUND/DEDICATED CIRCUIT RECEPTACLE COVER PLATES SHALL BE ORANGE HUBBELL P100 (SINGLE), PJB00 (ONE DUPLEX) OR PJB200 (TWO DUPLEX) MARKED "COMPUTER ONLY".
- METAL CONDUIT SHALL CONTAIN ONLY P.O.S. CIRCUIT CONDUCTORS (DEDICATED CIRCUIT). ONLY USE RIGID NON-METALLIC CONDUIT BELOW GRADE WHEN REQUIRED BY LOCAL CODE.
- EQUIPMENT GROUNDING BONDING CONDUCTOR (TYPICAL)
- ISOLATED GROUND BUS, ELECTRICALLY INSULATED FROM PANEL ENCLOSURE USED TO TERMINATE ONLY ISOLATED EQUIPMENT GROUNDING CONDUCTORS.
- ALL CONDUCTORS SHALL BE SOLID COPPER AND TERMINATED TO THEIR APPROPRIATE TERMINAL SCREWS BY WRAPPING THE CONDUCTOR COMPLETELY AROUND THE SCREW BARREL AND TIGHTENING THE SCREW PER MANUFACTURER'S TORQUE SPECIFICATIONS.
- ISOLATED GROUND RECEPTACLE HUBBELL-#470, G4710, G5262 OR IG5261. SEE ROUGH IN SCHEDULE FOR THE APPROPRIATE RECEPTACLE TO USE.
- ISOLATED GREEN GROUND SCREW.
- ISOLATED EQUIPMENT GROUNDING CONDUCTOR (GRN W/YLW STRIP)
- NEUTRAL CONDUCTOR TERMINATED ON SILVER SCREW.
- PHASE CONDUCTOR TERMINATED ON BRASS SCREW.

- NOTES**
- ALL P.O.S. EQUIPMENT (COMPUTERS, PRINTERS, MONITORS, KVS, MODEM, HUB & COD) SHALL BE POWERED FROM THE COMPUTER PANEL.
  - ALL OTHER COMPUTER/DIGITAL EQUIPMENT SHALL BE POWERED FROM PHASE "A" IN THE COMPUTER PANEL.
  - ISOLATED GROUND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF NEC SECTION 250.
  - EACH 20 AMP CIRCUIT SHALL HAVE ITS OWN ISOLATED EQUIPMENT GROUNDING CONDUCTOR.
  - ENTIRE GROUNDING SYSTEM SHALL COMPLY WITH NEC ARTICLE 250 AND MCDONALD'S BUILDING GROUNDING DETAIL.
  - E.C. SHALL VERIFY CORRECT POLARITY AT RECEPTACLE.
  - E.C. SHALL VERIFY THAT SUBPANEL CP DOES NOT CONTAIN ANY ILLEGAL NEUTRAL TO GROUND BONDS.
  - PANEL CP SHALL ONLY BE USED TO POWER SENSITIVE ELECTRONIC EQUIPMENT AS OUTLINED IN NOTE #1. IT SHALL NOT BE USED TO POWER ANY OTHER LOADS.
  - IT IS A SAFETY HAZARD AND AN NEC VIOLATION FOR THE POS SYSTEM TO HAVE ITS OWN INDEPENDENT GROUNDING ROD. IF AN INDEPENDENT GROUND ROD IS FOUND FOR THE POS SYSTEM, IT SHALL BE BONDED TO THE BUILDING GROUNDING SYSTEM.

NO.	DESCRIPTION	DATE	REV.
0		11/08/18	



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November 8, 2018

PREPARED BY:  
**M. McDonald's USA, LLC**  
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DRAWN BY	PWC	DESCRIPTION	INTERIOR REMODEL DRAWINGS
TEP PID NO.	-	REVIEWED BY	PWC
DATE ISSUED	11/08/18	SITE ADDRESS	935 NORTH CAROLINA HIGHWAY 24--87
DATE	11/08/18	SITE ID	32--1466
GENERAL NOTES			