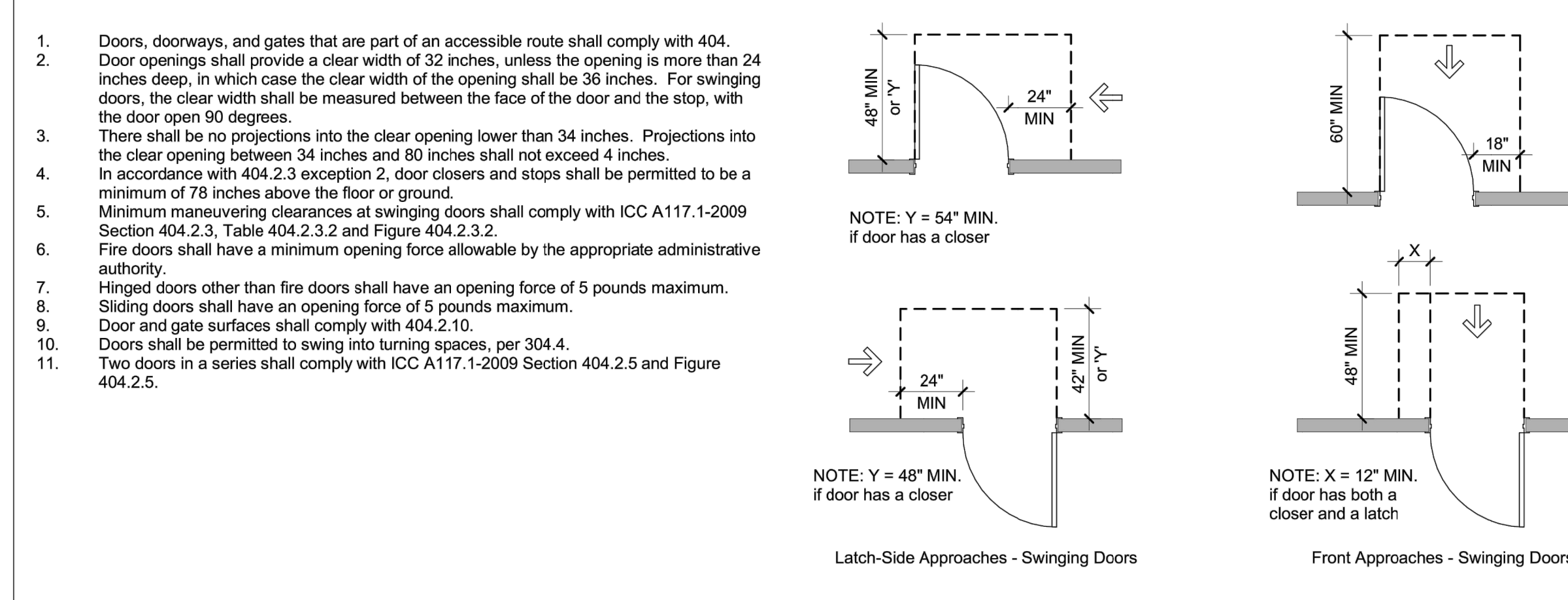
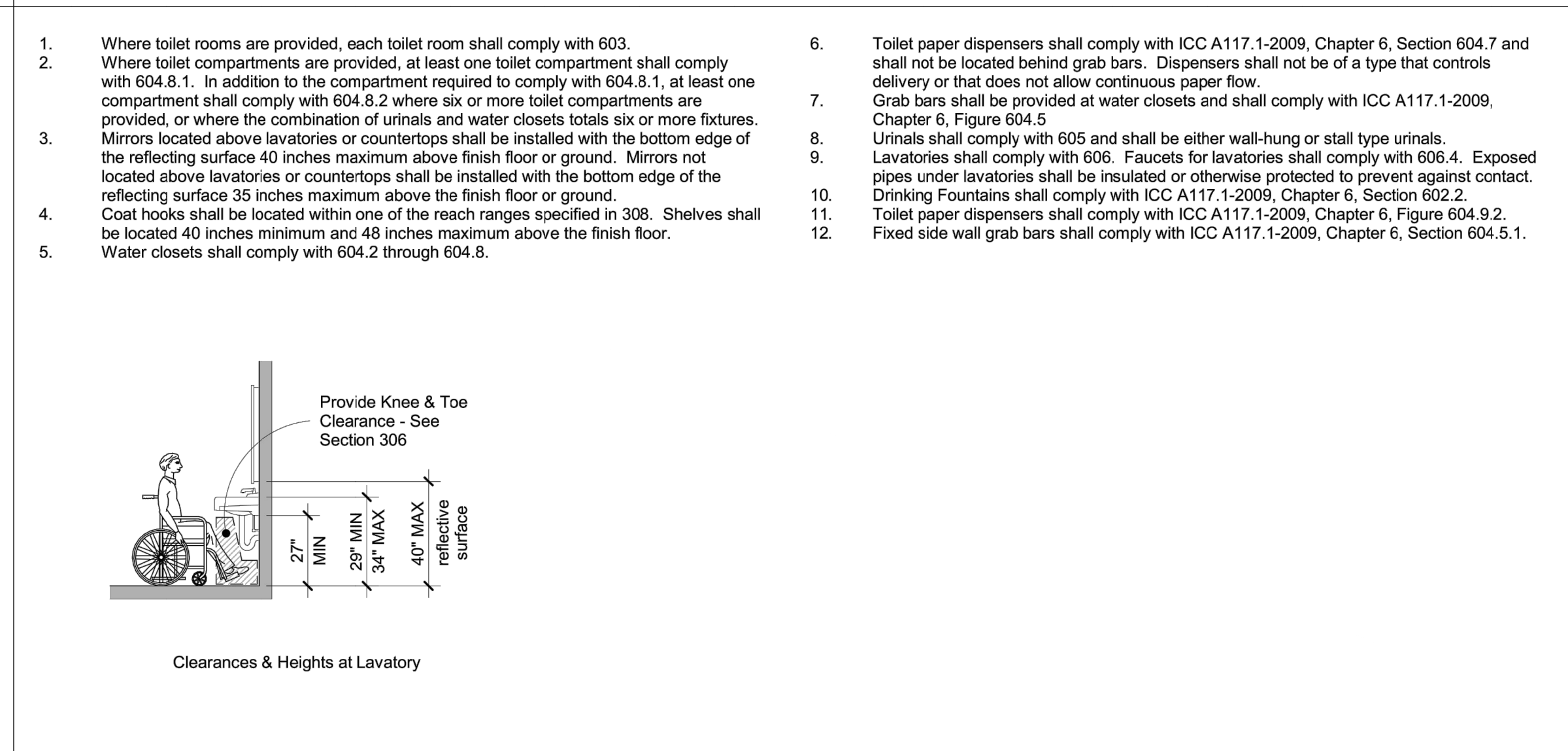
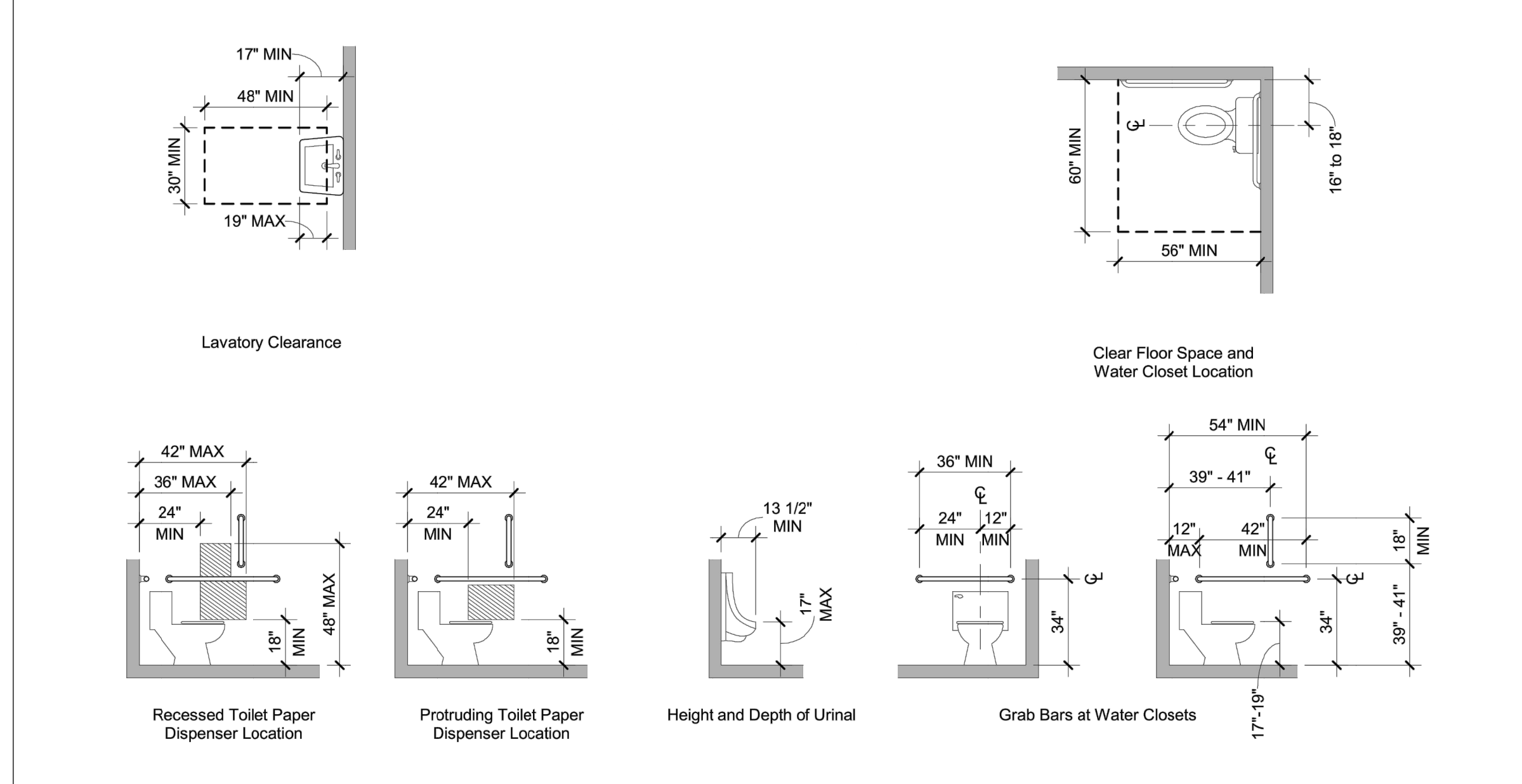
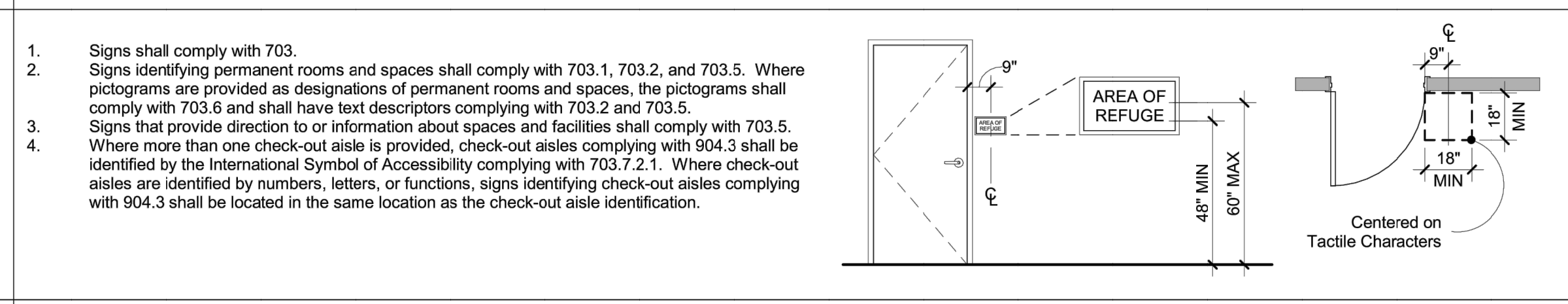
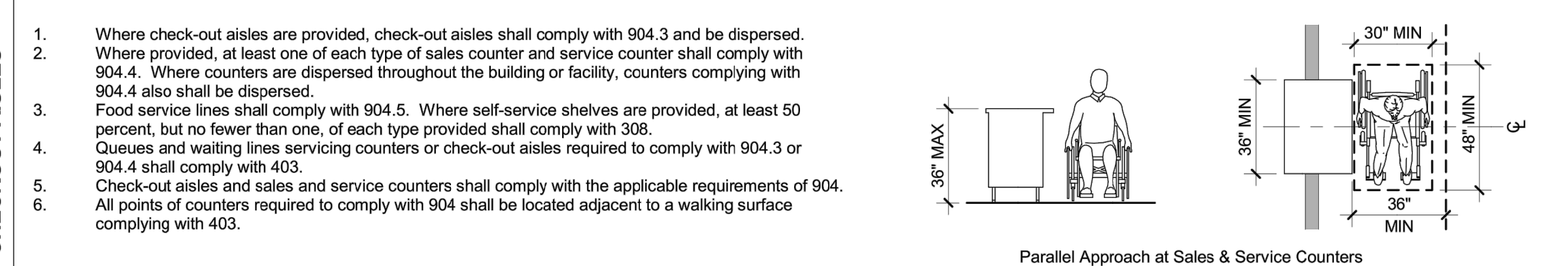





## ICC A117.1-2009 : ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

ALL INTERIOR CONSTRUCTION WITHIN THE SCOPE OF THIS PROJECT IS REQUIRED TO BE ACCESSIBLE AS SET FORTH IN THE "ICC A117.1-2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES. SECTIONS INDICATED ON THIS SHEET REFERENCE THE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, UNLESS NOTED OTHERWISE.

DOORS	<ol style="list-style-type: none"> <li>Doors, doorways, and gates that are part of an accessible route shall comply with 404.</li> <li>Door openings shall provide a clear width of 32 inches, unless the opening is more than 24 inches deep, in which case the clear width of the opening shall be 36 inches. For swinging doors, the clear width shall be measured between the face of the door and the stop, with the door open 90 degrees.</li> <li>There shall be no projections into the clear opening lower than 34 inches. Projections into the clear opening between 34 inches and 80 inches shall not exceed 4 inches.</li> <li>In accordance with 404.2.3 exception 2, door closers and stops shall be permitted to be a minimum of 78 inches above the floor or ground.</li> <li>Minimum maneuvering clearances at swinging doors shall comply with ICC A117.1-2009 Section 404.2.3, Table 404.2.3.2 and Figure 404.2.3.2.</li> <li>Fire doors shall have a minimum opening force allowable by the appropriate administrative authority.</li> <li>Hinged doors other than fire doors shall have an opening force of 5 pounds maximum.</li> <li>Sliding doors shall have an opening force of 5 pounds maximum.</li> <li>Door and gate surfaces shall comply with 404.2.10.</li> <li>Doors shall be permitted to swing into turning spaces, per 304.4.</li> <li>Two doors in a series shall comply with ICC A117.1-2009 Section 404.2.5 and Figure 404.2.5.</li> </ol> 
RESTROOMS & DRINKING FOUNTAINS	<ol style="list-style-type: none"> <li>Where toilet rooms are provided, each toilet room shall comply with 603.</li> <li>Where toilet compartments are provided, at least one toilet compartment shall comply with 604.8.1. In addition to the compartment required to comply with 604.8.1, at least one compartment shall comply with 604.8.2 where six or more toilet compartments are provided, or where the combination of urinals and water closets totals six or more fixtures.</li> <li>Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches maximum above finish floor or ground. Mirrors not located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 35 inches maximum above the finish floor or ground.</li> <li>Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches minimum and 48 inches maximum above the finish floor.</li> <li>Water closets shall comply with 604.2 through 604.8.</li> <li>Toilet paper dispensers shall comply with ICC A117.1-2009, Chapter 6, Section 604.7 and shall not be located behind grab bars. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.</li> <li>Grab bars shall be provided at water closets and shall comply with ICC A117.1-2009, Chapter 6, Figure 604.5.</li> <li>Urinals shall comply with 605 and shall be either wall-hung or stall type urinals.</li> <li>Lavatories shall comply with 606. Faucets for lavatories shall comply with 606.4. Exposed pipes under lavatories shall be insulated or otherwise protected to prevent against contact.</li> <li>Drinking Fountains shall comply with ICC A117.1-2009, Chapter 6, Section 602.2.</li> <li>Toilet paper dispensers shall comply with ICC A117.1-2009, Chapter 6, Figure 604.9.2.</li> <li>Fixed side wall grab bars shall comply with ICC A117.1-2009, Chapter 6, Section 604.5.1.</li> </ol> 
REACH RANGES, CONTROLS & OPERATING MECHANISMS	<ol style="list-style-type: none"> <li>Reach ranges shall comply with 308.</li> <li>Operable parts shall comply with 309 and shall be placed within one or more of the reach ranges specified in 308.</li> <li>In accordance with 309.4, operable parts shall be operable with one hand and shall not require light grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum.</li> </ol> 
PATH OF TRAVEL	<ol style="list-style-type: none"> <li>The running slopes of walking surfaces that are part of an accessible route shall not be steeper than 1:20 with a cross slope that is not steeper than 1:48.</li> <li>Changes in level shall comply with ICC A117.1-2009 Section 303. The clear width of walking surfaces on an accessible route shall comply with 403.5.1.</li> <li>The clear width at turns along an accessible route shall comply with 403.5.2.</li> <li>In accordance with 403.5.3, an accessible route with a clear width of less than 60 inches shall provide passing spaces at intervals of 200 feet.</li> </ol> 
SEATING AT TABLES & COUNTERS	<ol style="list-style-type: none"> <li>Where dining surfaces are provided for the consumption of food and drink, at least 5 percent of the seating spaces and standing spaces at the dining surfaces shall comply with 902. In addition, where work surfaces are provided for use by other than employees, at least 5 percent shall comply with 902.</li> <li>Confirm actual seat counts with Table 221.2.1.</li> <li>Dining surfaces and work surfaces required to comply with 902 shall be dispersed throughout the space or facility containing dining surfaces and work surfaces.</li> <li>Dining surfaces and work surfaces shall comply with 902.2 and 903.3.</li> </ol> 
SIGNAGE	<ol style="list-style-type: none"> <li>Signs shall comply with 703.</li> <li>Signs identifying permanent rooms and spaces shall comply with 703.1, 703.2, and 703.5. Where pictograms are provided as designations of permanent rooms and spaces, the pictograms shall comply with 703.6 and shall have text descriptors complying with 703.2 and 703.5.</li> <li>Signs that provide direction to or information about spaces and facilities shall comply with 703.5.</li> <li>Where more than one check-out aisle is provided, check-out aisles complying with 904.3 shall be identified by the International Symbol of Accessibility complying with 703.7.2.1. Where check-out aisles are identified by numbers, letters, or functions, signs identifying check-out aisles complying with 904.3 shall be located in the same location as the check-out aisle identification.</li> </ol> 
FOODSERVICE LINES, TABLEWARE AREAS & CHECKOUT AISLES	<ol style="list-style-type: none"> <li>Where check-out aisles are provided, check-out aisles shall comply with 904.3 and be dispersed.</li> <li>Where provided, at least one of each type of sales counter and service counter shall comply with 904.4. Where counters are dispersed throughout the building or facility, counters complying with 904.4 also shall be dispersed.</li> <li>Food service lines shall comply with 904.5. Where self-service shelves are provided, at least 50 percent, but no fewer than one, of each type provided shall comply with 308.</li> <li>Queues and waiting lines servicing counters or check-out aisles required to comply with 904.3 or 904.4 shall comply with 403.</li> <li>Check-out aisles and sales and service counters shall comply with the applicable requirements of 904.</li> <li>All points of counters required to comply with 904 shall be located adjacent to a walking surface complying with 403.</li> </ol>

CONSULTANT:



15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8660/ [www.wilkusarch.com](http://www.wilkusarch.com)

CLIENT:



15505 WRIGHT BROTHERS DRIVE  
ADDISON, TX 75001  
TELEPHONE: (972) 686-6500  
FAX: (972) 686-6502

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PROJECT INFORMATION:

**WING•STOP**  
STORE NUMBER: GL#Y175  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64096

SEAL:



MATTHEW M. WILKUS, ARCHITECT  
LICENSE NUMBER: 2019000244  
EXPIRATION DATE: 12-31-21

06-16-21  
DATE

PROJECT NO.: 2021-0158  
DRAWN BY: NAV  
CHECKED BY: JSS

ISSUE:	DATE:
PERMIT & BID SET	06-16-21

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REVISION:	DATE:
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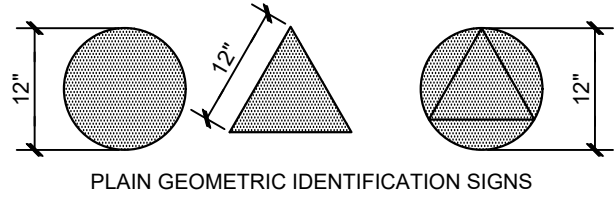
PROJECT LOCATION:  
LEE'S SUMMIT, M

SHEET NUMBER / TITLE:

# B1.0

## INTERIOR ACCESSIBILITY

NOTE:  
REFER TO B1.0 FOR ADDITIONAL  
ACCESSIBILITY REQUIREMENTS

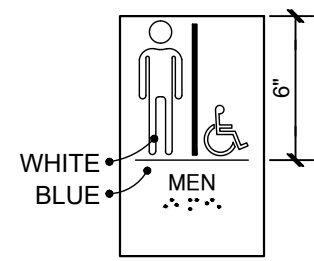


PLAIN GEOMETRIC IDENTIFICATION SIGNS

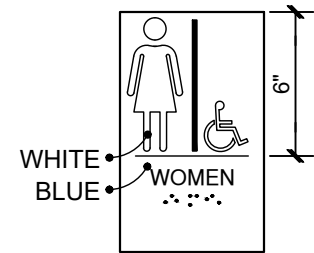
ISA SYMBOL - TYPICAL @ THESE LOCATIONS, BUT NOT LIMITED TO:  
RESTROOMS, TABLES/BOOTHES, SERVICE COUNTERS, ACCESSIBLE  
RESTROOM STALLS, AND FRONT ENTRY

REFER TO ADAAG 703.7.2.1 FOR SIGNAGE REQUIREMENTS

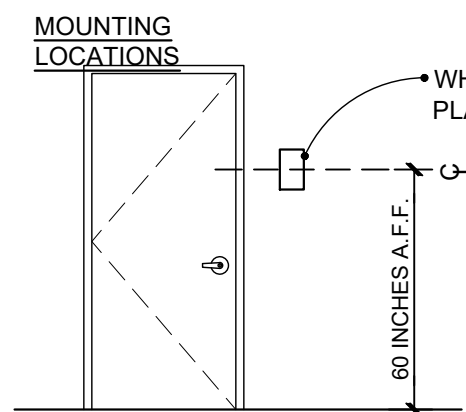
MODEL NUMBERS:



MEN'S: #840-A  
(PROVIDE @ SPACES W/ (2)  
TOILET ROOMS)



WOMEN'S: #840  
(PROVIDE @ SPACES W/ (2)  
TOILET ROOMS)



WHERE NO WALL SPACE ON LATCH SIDE,  
PLACE NEAREST ADJACENT

ACCESSIBILITY SIGNAGE:  
ANSI APPROVED E.S.  
PLASTIC, NEMA RATED  
SELF-EXTINGUISHING  
ADHESIVE MOUNTED

BLUE COLOR NO. EQUAL TO  
15090 IN FEDERAL  
STANDARD 595B

## RESTROOM SIGNAGE DETAILS

NOTE:  
REFER TO B1.0 FOR ADDITIONAL  
ACCESSIBILITY REQUIREMENTS



## ENLARGED RESTROOM PLAN

1/2" = 1'-0"

## ACCESS. PLAN LEGEND

- 1 PROVIDE INTERNATIONAL SYMBOL OF ACCESSIBILITY - MOUNT 60" A.F.F. TO CENTERLINE OF SIGN
- 2 PROVIDE TACTILE GRADE-2 CONTRACTED BRAILLE WALL SIGN - REFER TO RESTROOM SIGNAGE DETAIL 4/B2.0 FOR ADDITIONAL INFORMATION
- 3 LINE INDICATES 36" PATH OF TRAVEL
- 4 ACCESSIBLE TABLE - PROVIDE KNEE / TOE CLEARANCE PER B1.0 "TABLE SEATING & COUNTERS"

NOT USED

3  
B2.0

NOTE:  
- REFER TO B1.0 FOR ADDITIONAL  
ACCESSIBILITY REQUIREMENTS  
- 5% OF EACH SEATING TYPE MUST BE  
ACCESSIBLE PER B1.0



1  
B2.0

## ACCESSIBILITY PLAN

1/4" = 1'-0"

CONSULTANT:



15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8850 / www.wilkusarch.com

CLIENT:



15505 WRIGHT BROTHERS DRIVE  
ADDISON, TX 75001  
TELEPHONE: (972) 686-6500  
FAX: (972) 686-6502

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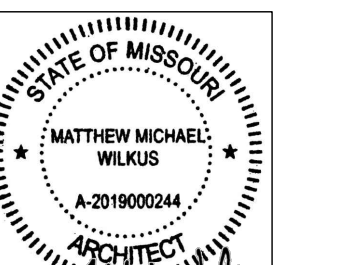
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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: GL#Y175  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



MATTHEW M. WILKUS, ARCHITECT  
LICENSE NUMBER: 2019000244  
EXPIRATION DATE: 12-31-21

06-16-21  
DATE

PROJECT NO.: 2021-0158

DRAWN BY: NAV

CHECKED BY: JSS

ISSUE: DATE:  
PERMIT & BID SET 06-16-21

REVISION: DATE:

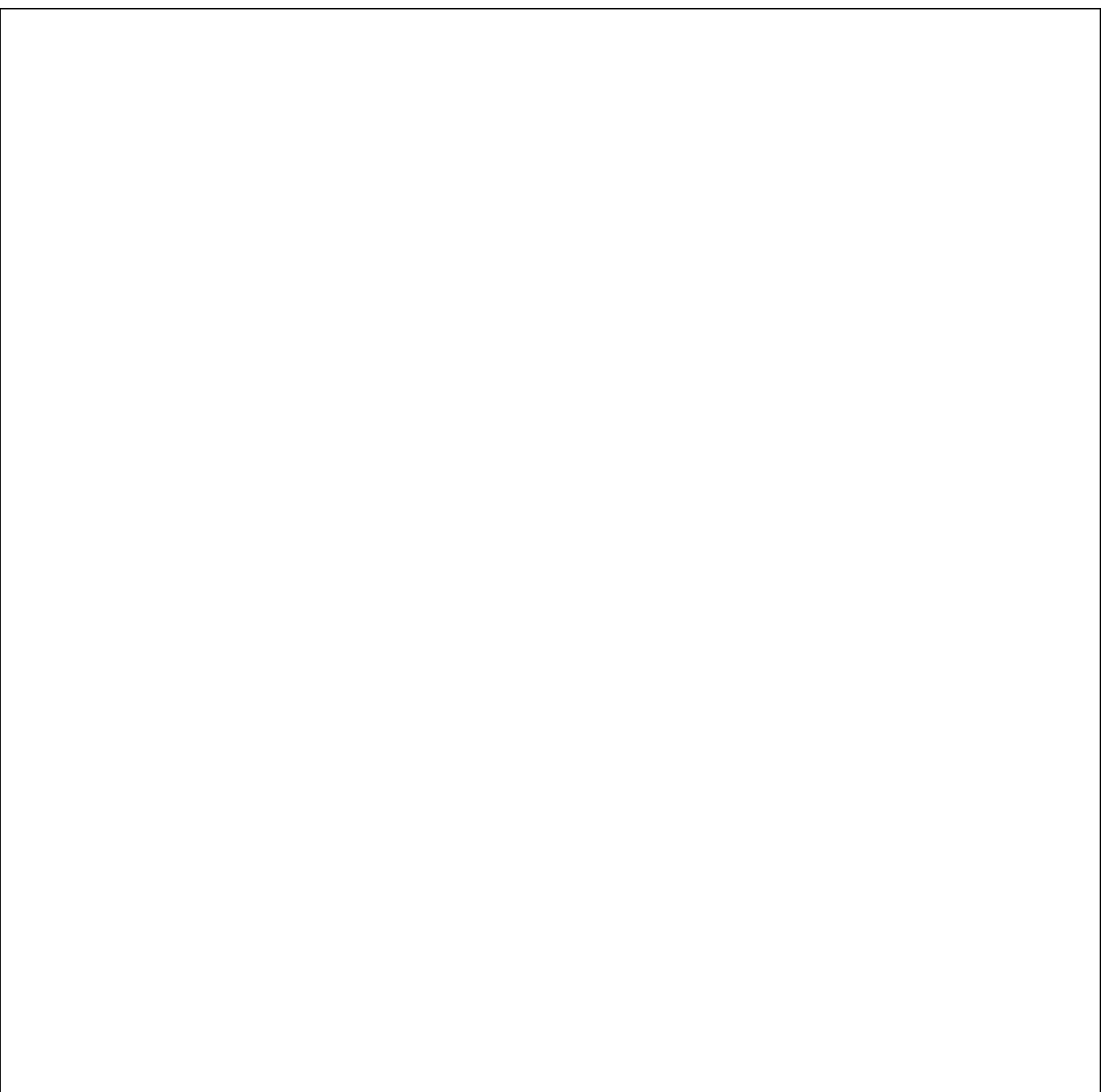
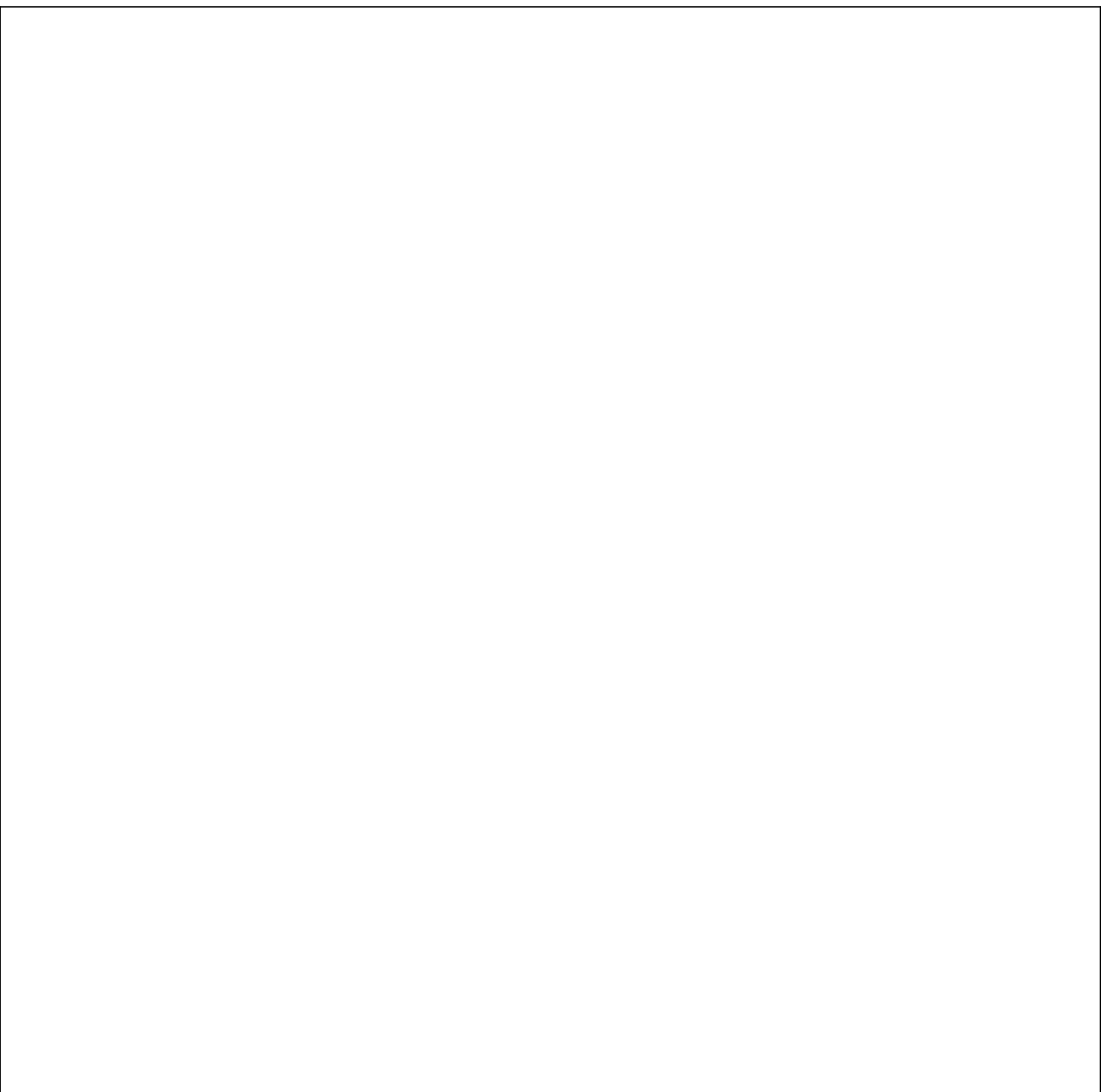
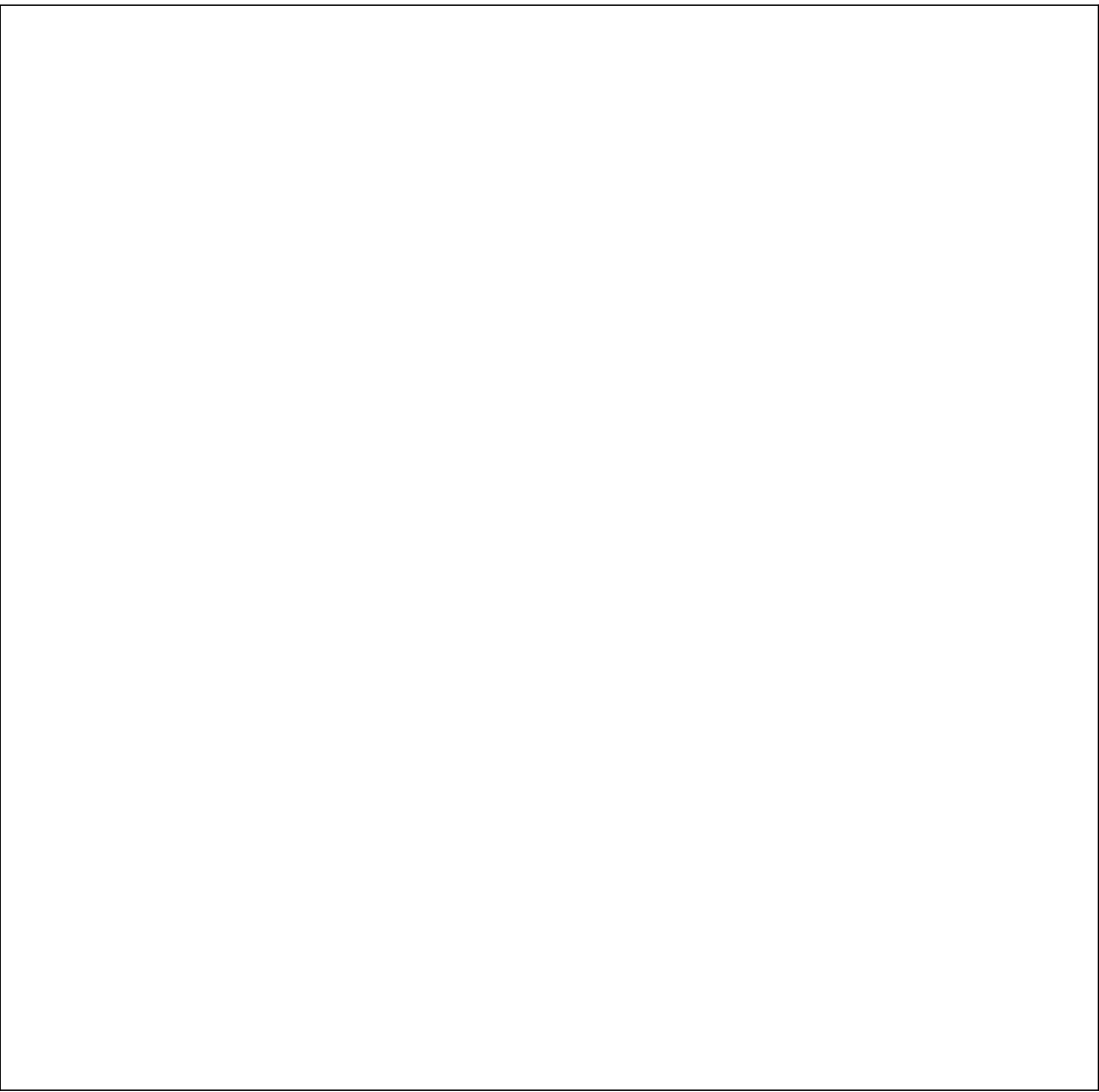
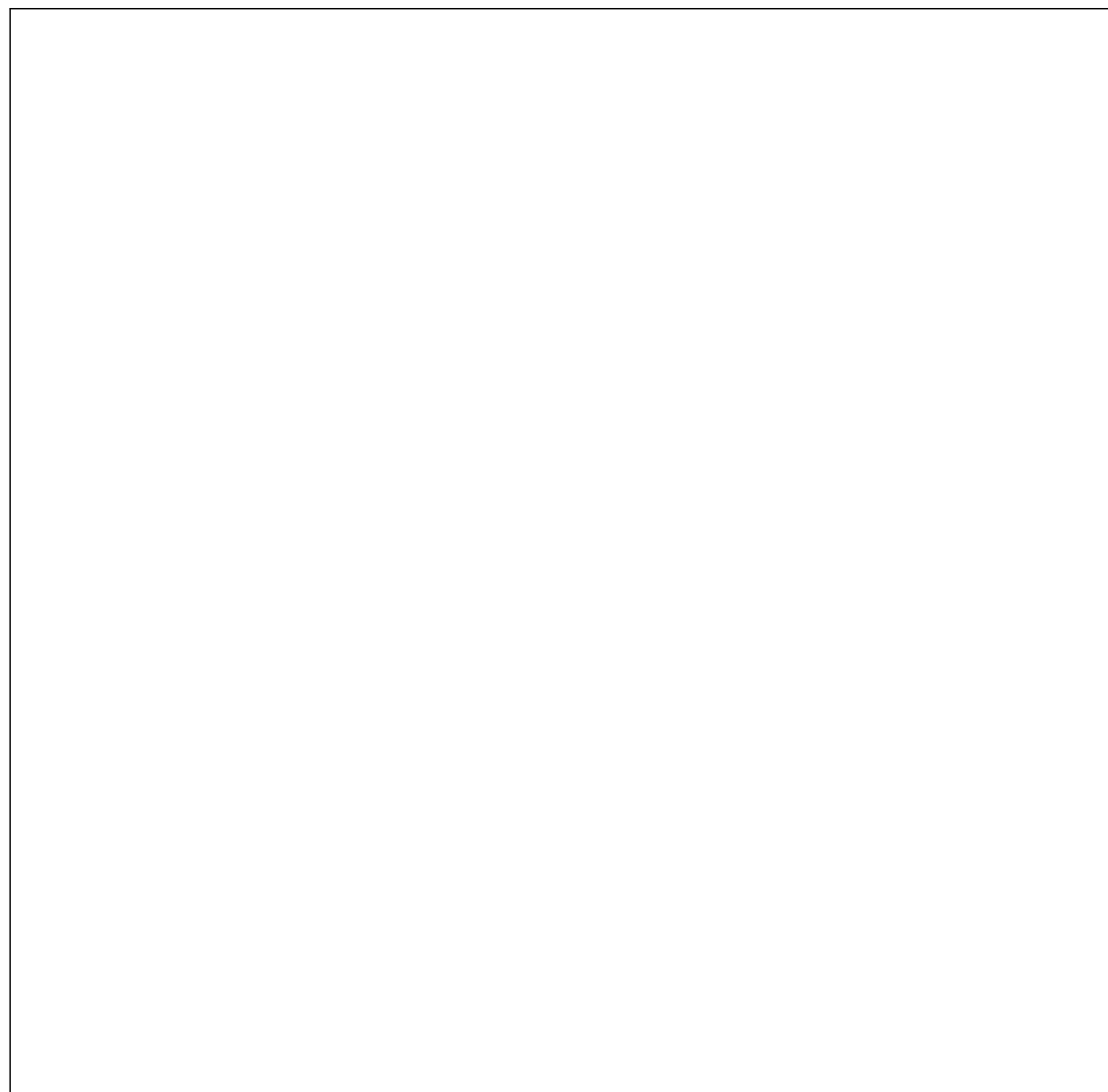
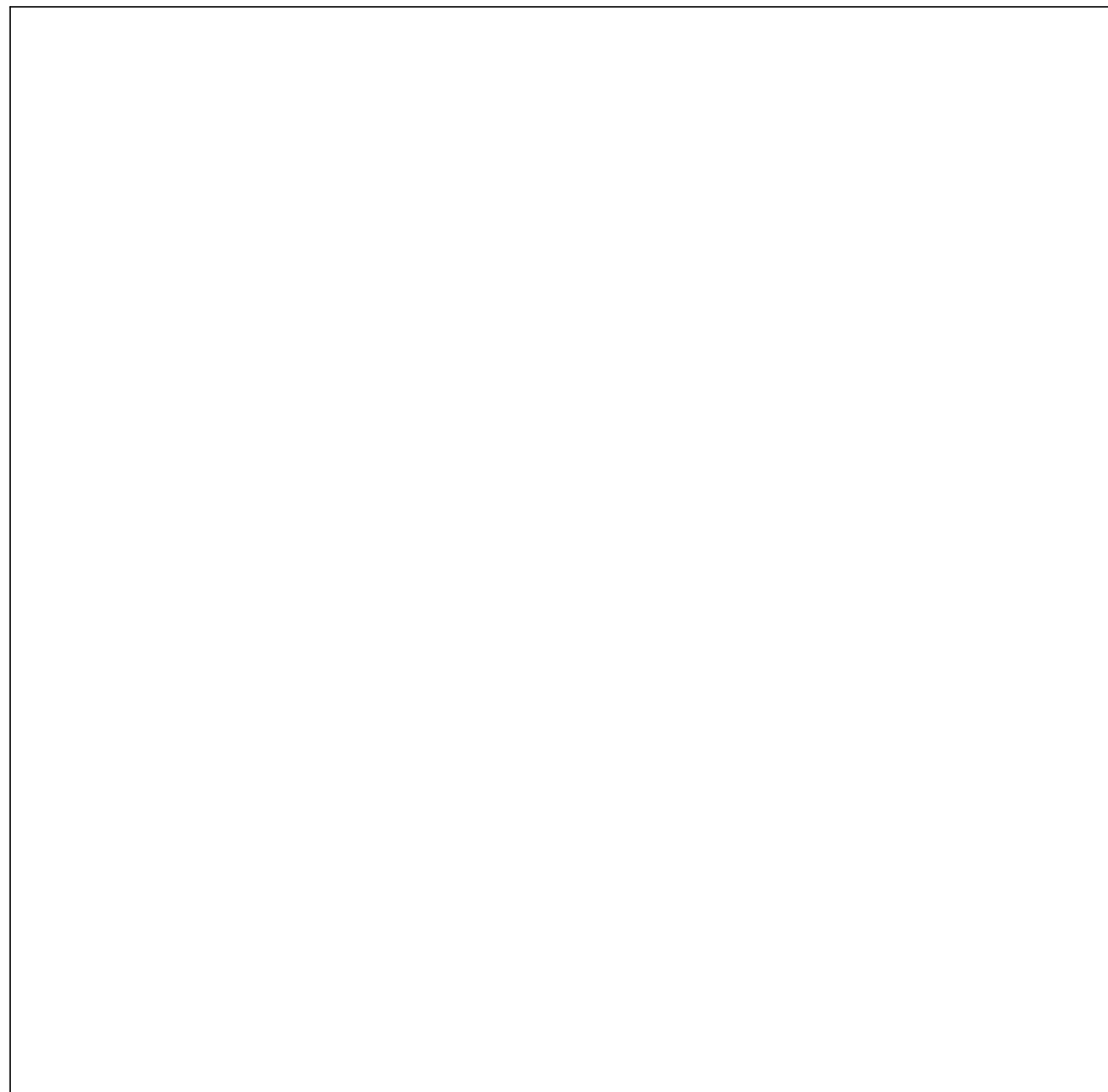
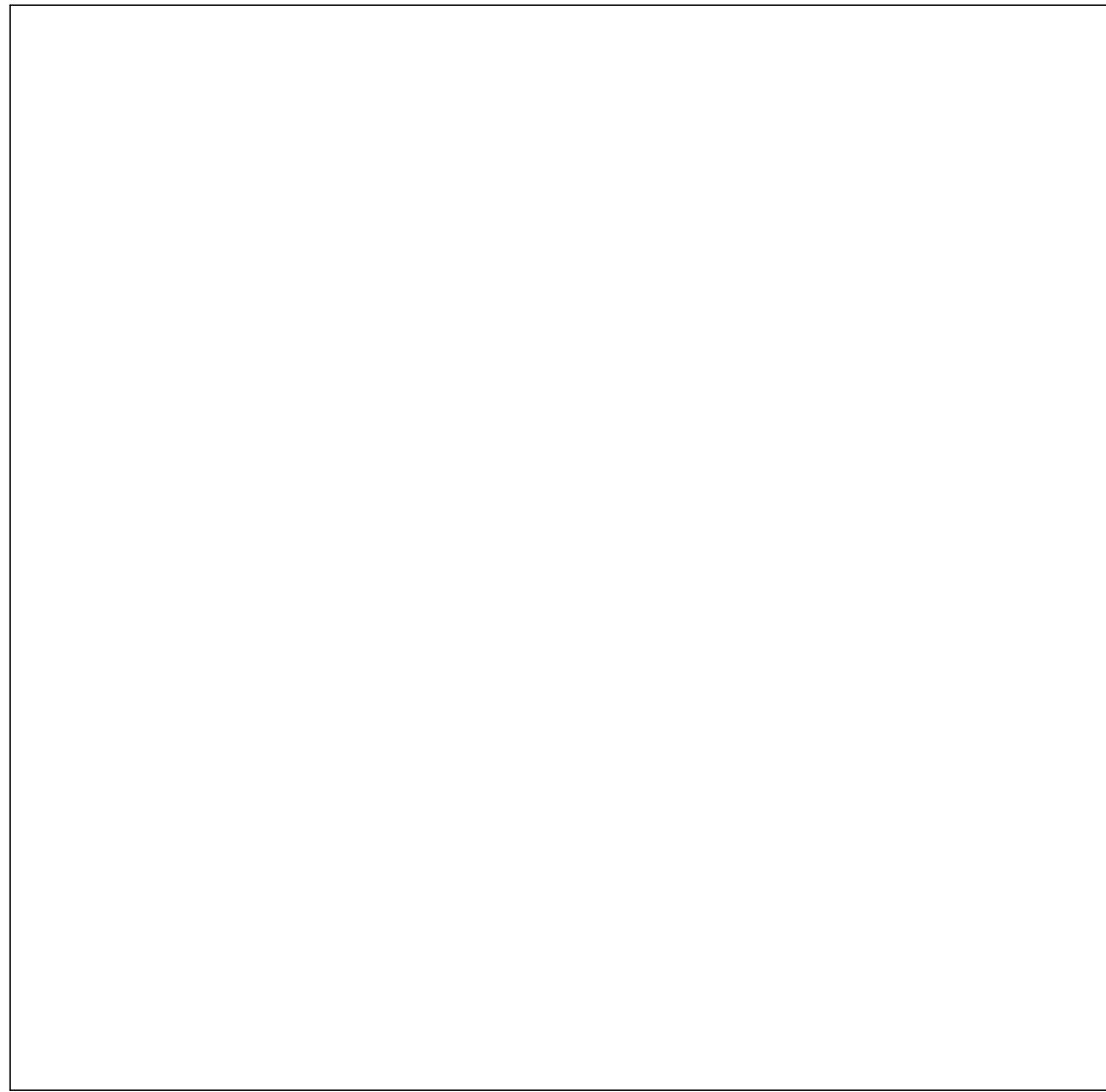
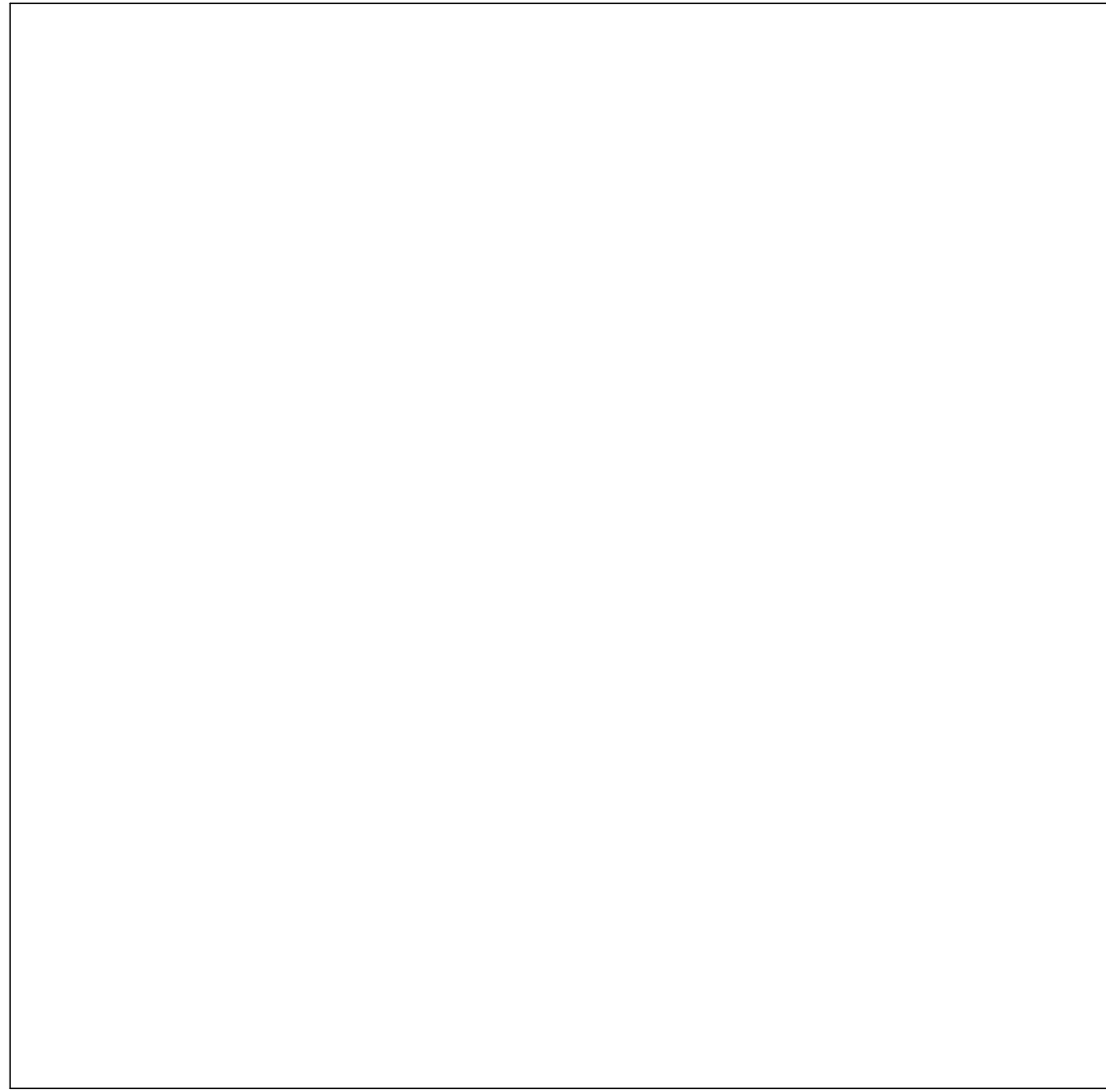
PROJECT LOCATION:

LEE'S SUMMIT, MO

SHEET NUMBER / TITLE:

**B2.0**

ACCESSIBILITY PLAN



WALL LEGEND:

EXISTING WALLS, OR PARTITIONS

EXISTING WALLS AND FIXTURES TO BE REMOVED

DEMOLITION PLAN LEGEND

1

REMOVE PARTIAL AS REQUIRED FOR NEW DOOR INSTALLATION.

2

PREPARE EXISTING FLOORS/WALLS TO ACCEPT NEW FINISHES - REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION

3

EXISTING ELECTRICAL PANEL TO BE REMOVED/RELOCATED - REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION

4

RELOCATE AS NECESSARY IRRIGATION AND WATER SERVICE TO MAINTAIN ACCESS

DEMOLITION PLAN NOTES

1. DEMOLITION CONTRACTOR RESPONSIBLE FOR VERIFICATION OF ALL MATERIALS AND CONSTRUCTION OF ALL FLOOR, WALL, CEILING AND ROOF ASSEMBLIES.

2. DEMOLITION CONTRACTOR TO SURVEY THE CONDITION OF THE BUILDING TO DETERMINE WHETHER REMOVING ANY ELEMENT MIGHT RESULT IN A STRUCTURAL DEFICIENCY OR UNPLANNED COLLAPSE OF ANY PORTION OF THE STRUCTURE OR ADJACENT STRUCTURES DURING SELECTIVE DEMOLITION.

3. EXISTING CONSTRUCTION THAT IS TO REMAIN SHALL BE PROTECTED FROM DAMAGE AS REQUIRED DURING DEMOLITION OPERATIONS. ANY DAMAGE CAUSED BY THE DEMOLITION SHALL BE REPAIRED AT THE EXPENSE OF THE DEMOLITION CONTRACTOR.

4. DEMOLITION CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE CONSTRUCTION FIRE ASSEMBLY RATING FOR ALL EXISTING RATED WALL ASSEMBLIES, ROOF ASSEMBLIES AND/OR SHAFTS.

5. EXISTING UTILITIES TO REMAIN IN SERVICE AND PROTECT THEM DURING SELECTIVE DEMOLITION.

6. CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMAL INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS. PROMPTLY DISPOSE OF ALL DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON SITE. LEGALLY TRANSPORT AND DISPOSE OF ALL DEMOLISHED MATERIALS.

7. PROVIDE TEMPORARY WEATHER PROTECTION, AS REQUIRED, DURING SELECTIVE DEMOLITION AND CONSTRUCTION PROCESS TO ENSURE THAT NO WATER DAMAGE OCCURS TO STRUCTURE, EQUIPMENT, EXTERIOR OR INTERIOR AREAS.

8. ANY EXISTING FINISHED SURFACES TO REMAIN THAT ARE AFFECTED BY SELECTIVE DEMOLITION SHALL BE PATCHED TO MATCH EXISTING ADJACENT SURFACES UNLESS CONCEALED BY NEW CONSTRUCTION.

9. ALL EXISTING CABINETRY, COUNTERTOPS, SHELVES, ETC. IN AREAS OF DEMOLITION SHALL BE REMOVED, INCLUDING THAT NOT SPECIFICALLY SHOWN ON DRAWINGS.

10. ALL DOORS AND HARDWARE TO REMAIN UNLESS NOTED OTHERWISE IN THE DOOR AND FRAME SCHEDULE.

11. REFER TO MECHANICAL DRAWINGS FOR ALL MECHANICAL BEING REMOVED, RELOCATED OR ABANDONED. CUT AND PATCH FLOOR AS REQUIRED FOR ALL NEW MECHANICAL. CAP ABANDONED MECHANICAL BELOW PATCH OF FLOOR SLAB.

12. VERIFY ALL MODIFICATIONS OF HVAC AND PLUMBING WITH MECHANICAL DRAWINGS.

13. REFER TO PLUMBING DRAWINGS FOR ALL PLUMBING BEING REMOVED, RELOCATED OR ABANDONED. CUT AND PATCH FLOOR AS REQUIRED FOR NEW PLUMBING. CAP ABANDONED PLUMBING BELOW PATCH OF FLOOR SLAB.

14. REFER TO ELECTRICAL DRAWINGS FOR ALL ELECTRICAL BEING REMOVED, RELOCATED OR ABANDONED CUT AND PATCH FLOOR AS REQUIRED FOR NEW ELECTRICAL.

15. THOROUGHLY CLEAN BUILDING UPON COMPLETION OF SELECTIVE DEMOLITION.

16. TOTAL SCOPE OF DEMOLITION MAY NOT BE COVERED ON THIS SHEET, REVIEW ALL SHEETS IN THE CONSTRUCTION DOCUMENTS TO DETERMINE TOTAL SCOPE OF DEMOLITION.

3

4

40"

17"

2

PLAN NORTH

TRUE NORTH

1

A0.1

DEMOLITION PLAN

1/4" = 1'-0"

CONSULTANT:

wa

WILKUS

ARCHITECTS

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Phone: 952.941.8850 / www.wilkusarch.com

CLIENT:

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PROJECT INFORMATION:

WING-STOP

STORE NUMBER: GL#Y175  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:

STATE OF MISSOURI

MATTHEW MICHAEL WILKUS

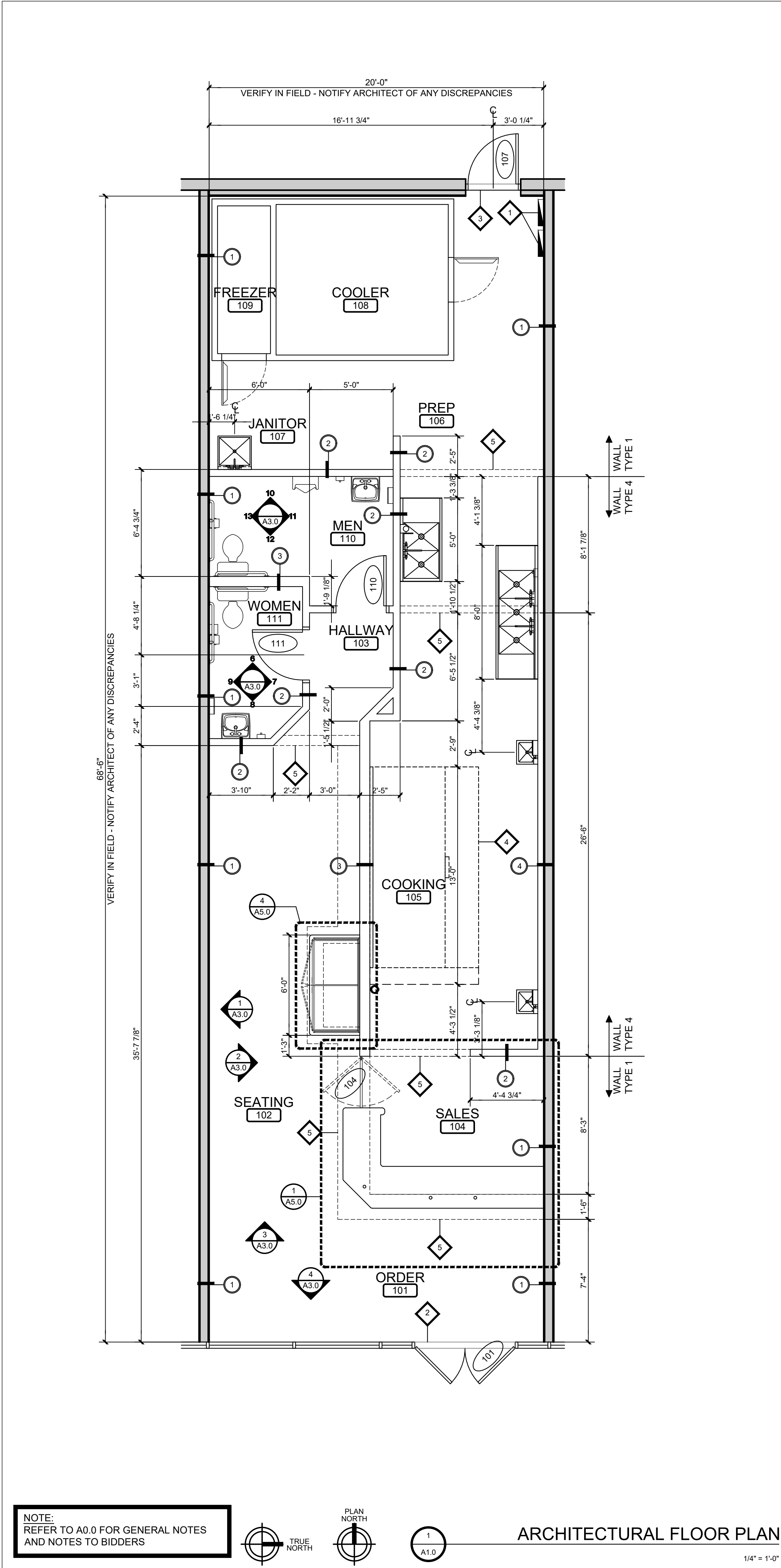
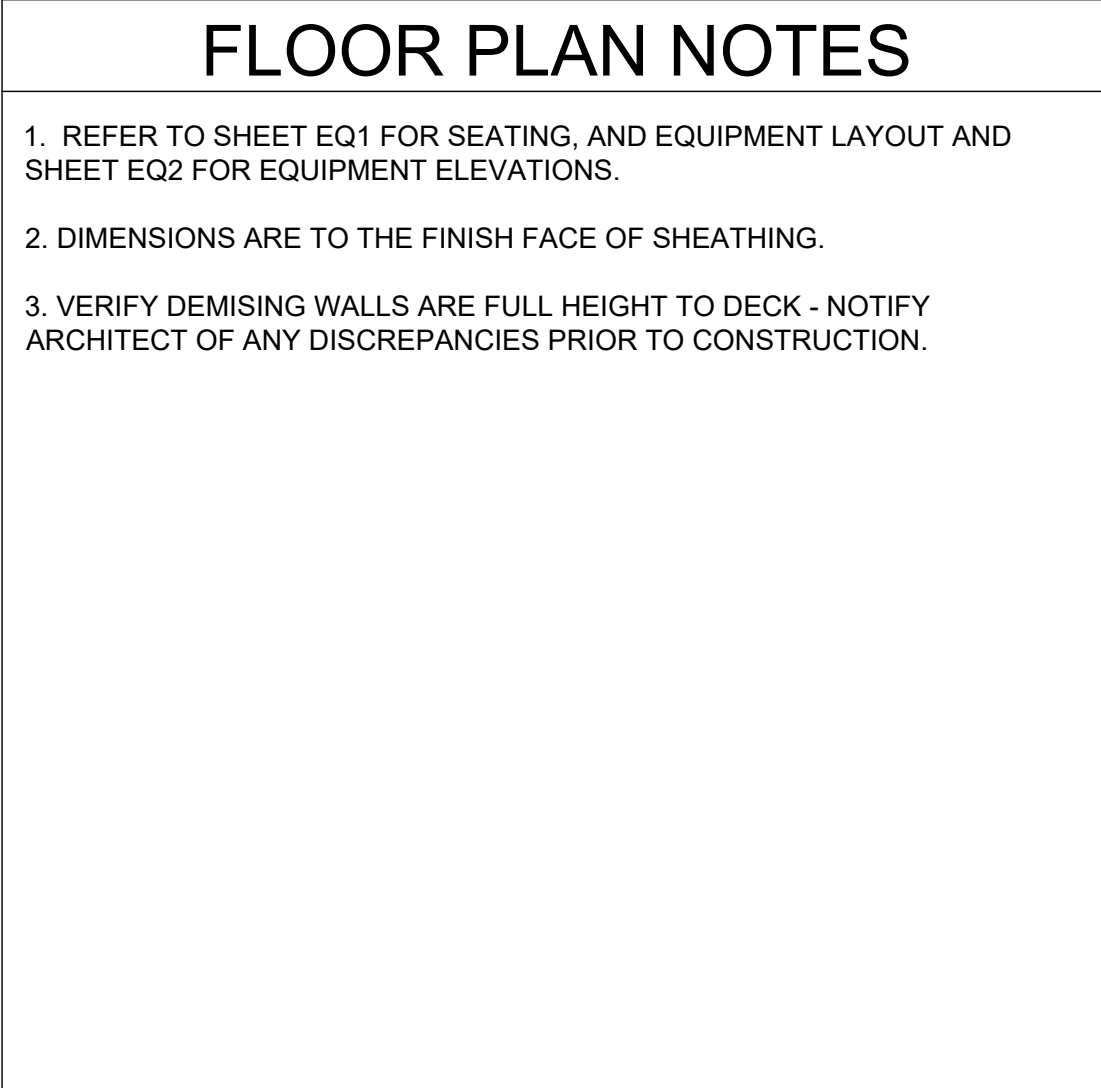
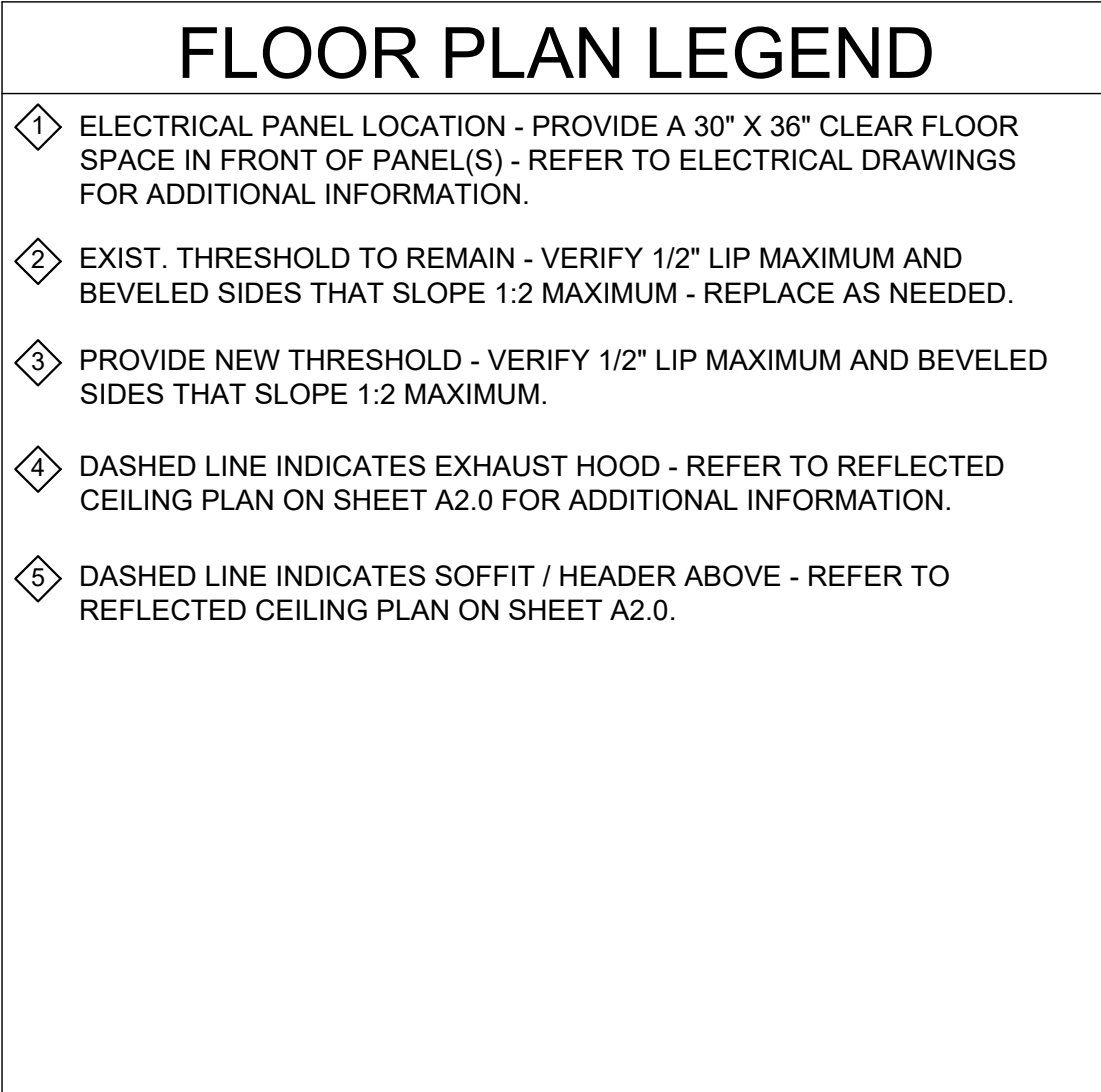
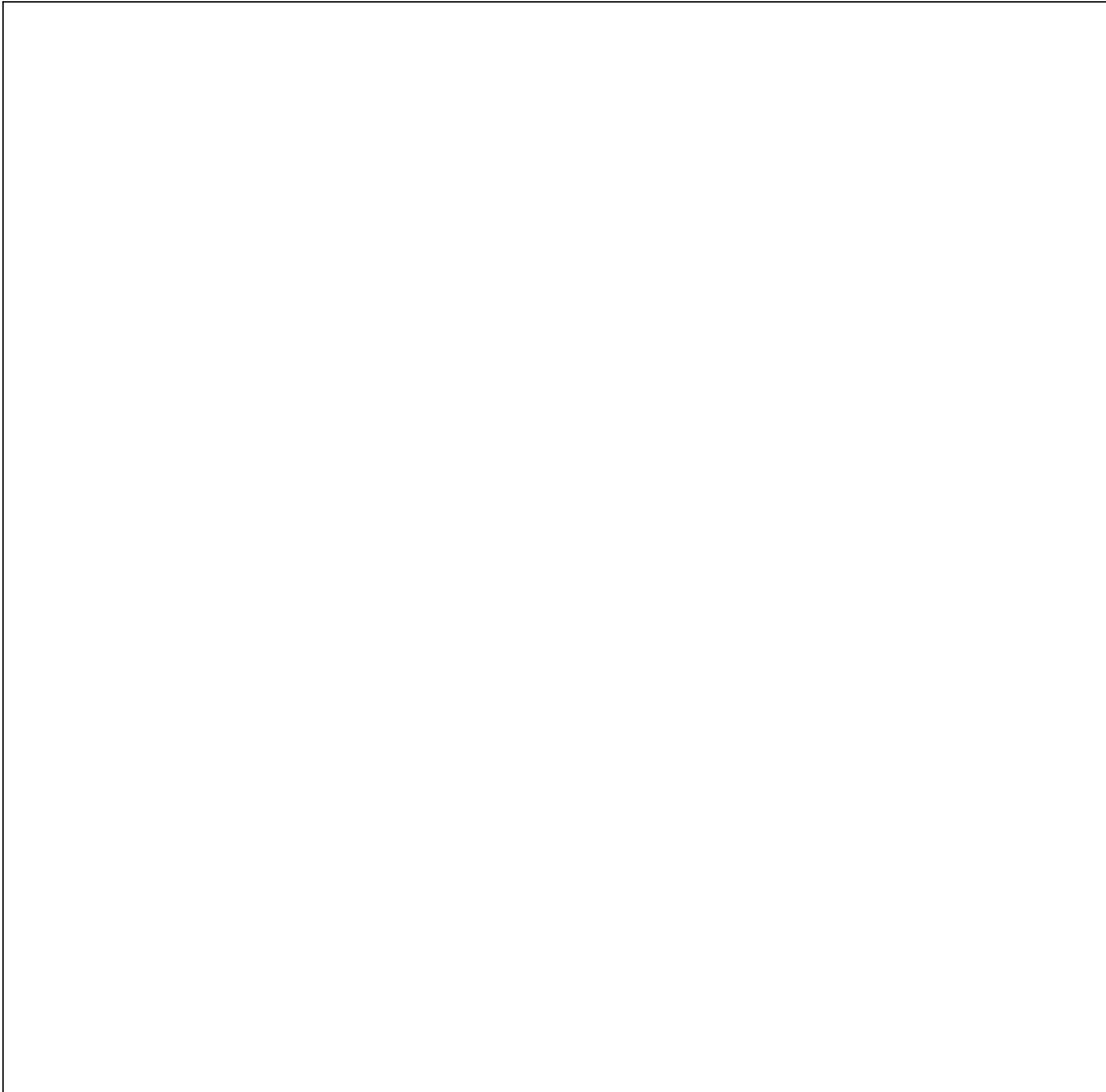
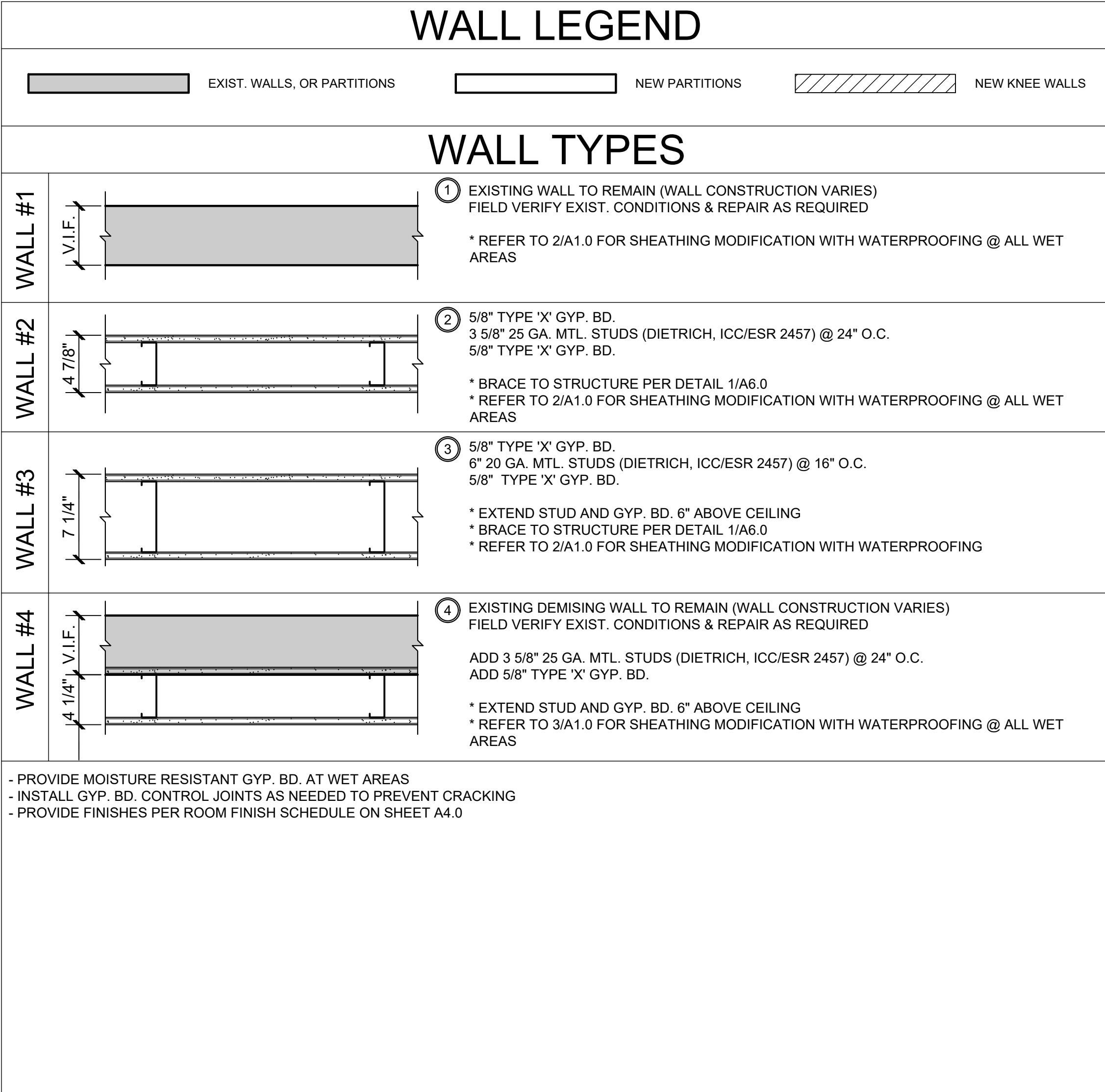
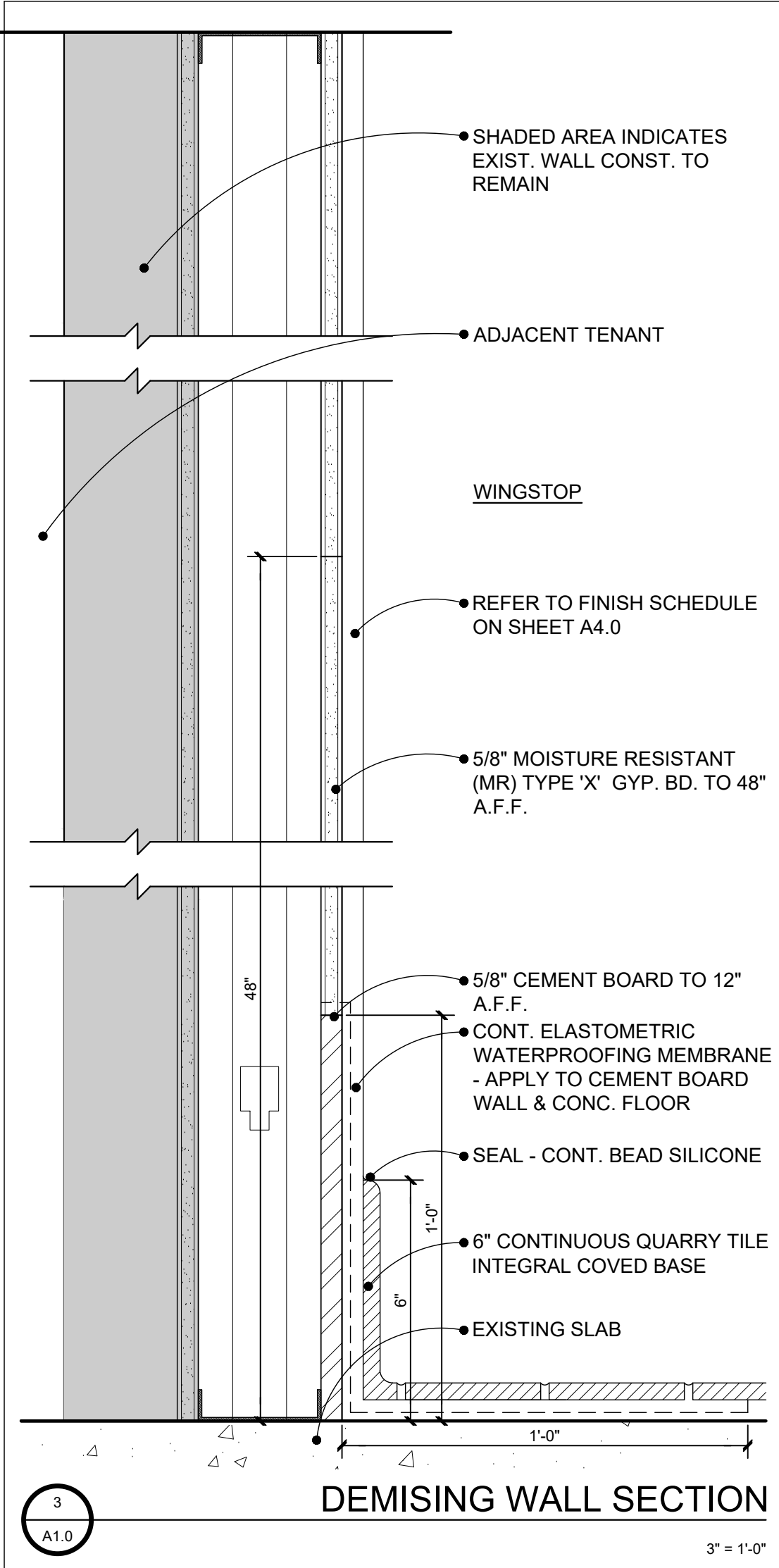
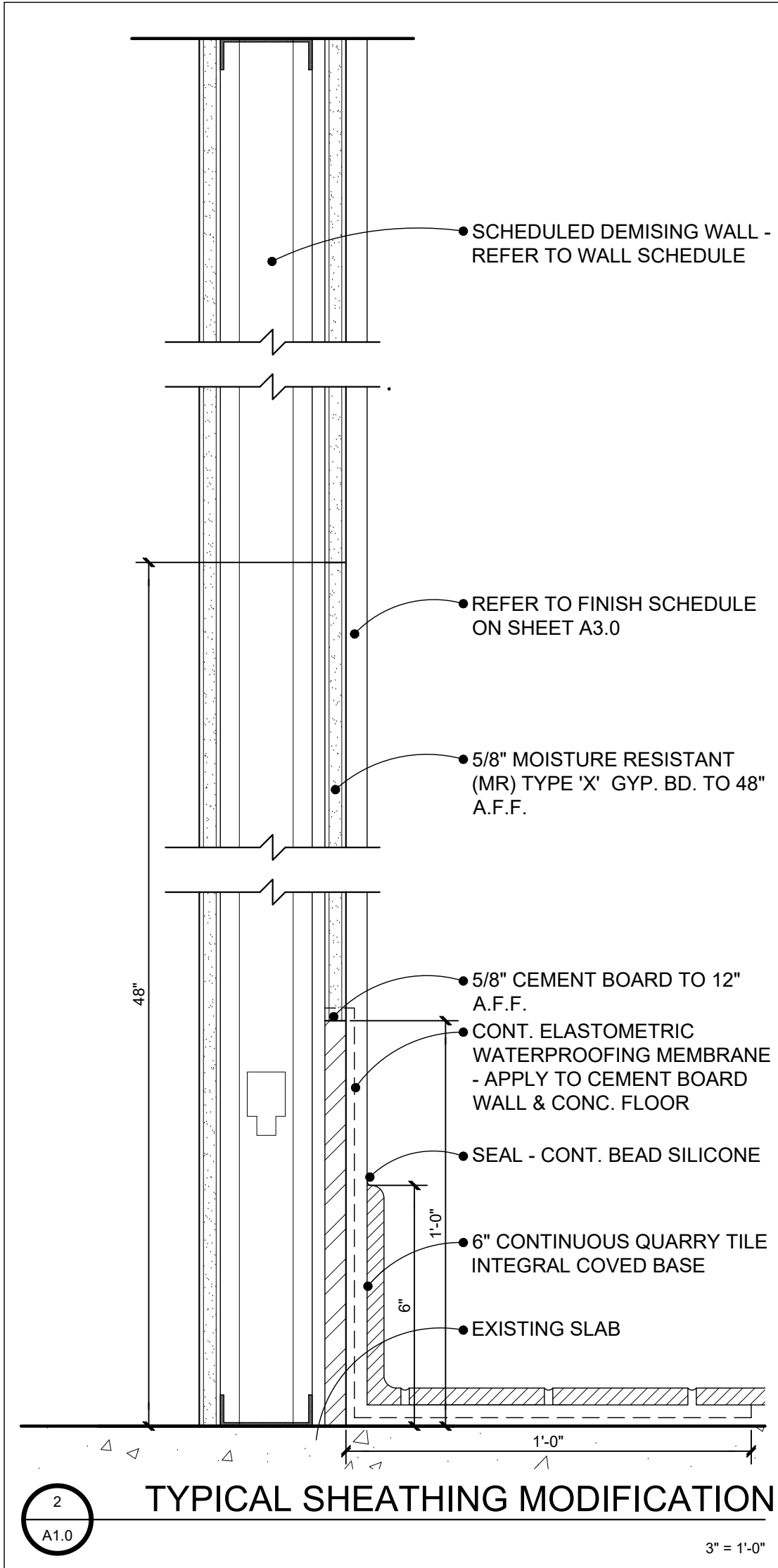
A-2019000244

06-16-21

DATE

MATTHEW M. WILKUS, ARCHITECT  
LICENSE NUMBER: 2019000244  
EXPIRATION DATE: 12-31-21

PROJECT NO.: 2021-0158  
DRAWN BY: NAV  
CHECKED BY: JSS  
ISSUE: DATE:  
PERMIT & BID SET 06-16-21  
REVISION: DATE:  
PROJECT LOCATION:  
LEE'S SUMMIT, MO  
SHEET NUMBER / TITLE:  
A0.1  
DEMOLITION PLAN



CONSULTANT:

**WILKUS ARCHITECTS**

15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952-941-8950 / www.wilkusarch.com

CLIENT:

**WING-STOP**

15505 WRIGHT BROTHERS DRIVE  
ADDISON, TX 75001  
TELEPHONE: (972) 686-6500  
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PROJECT INFORMATION:

**WING-STOP**

STORE NUMBER: GL#Y175  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:

**MATTHEW MICHAEL WILKUS**  
A-2019000244  
EXPIRATION DATE: 12-31-21

06-16-21  
DATE

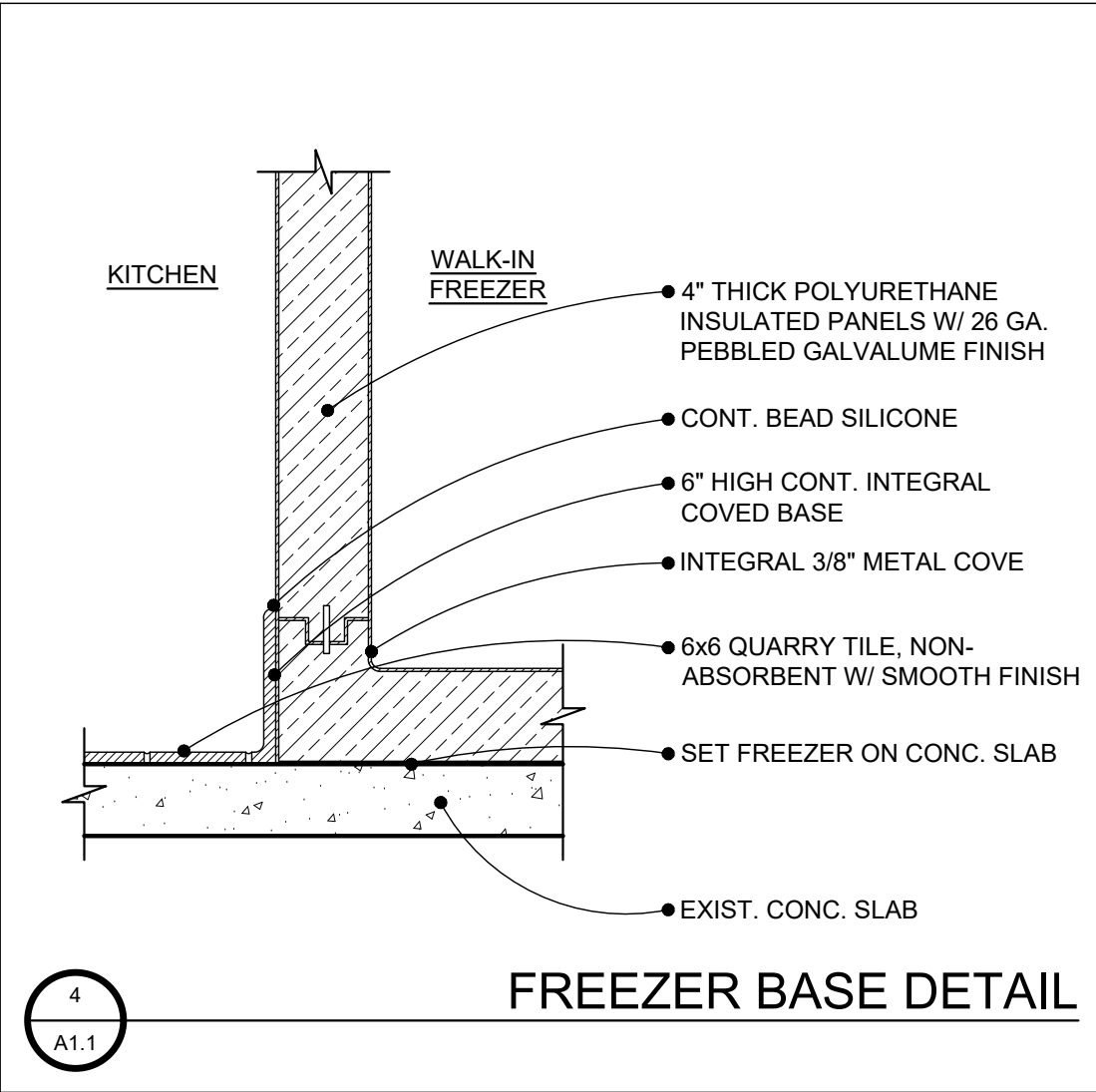
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DRAWN BY: NAV  
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ISSUE: DATE:  
PERMIT & BID SET 06-16-21

REVISION: DATE:

PROJECT LOCATION:  
**LEE'S SUMMIT, MO**

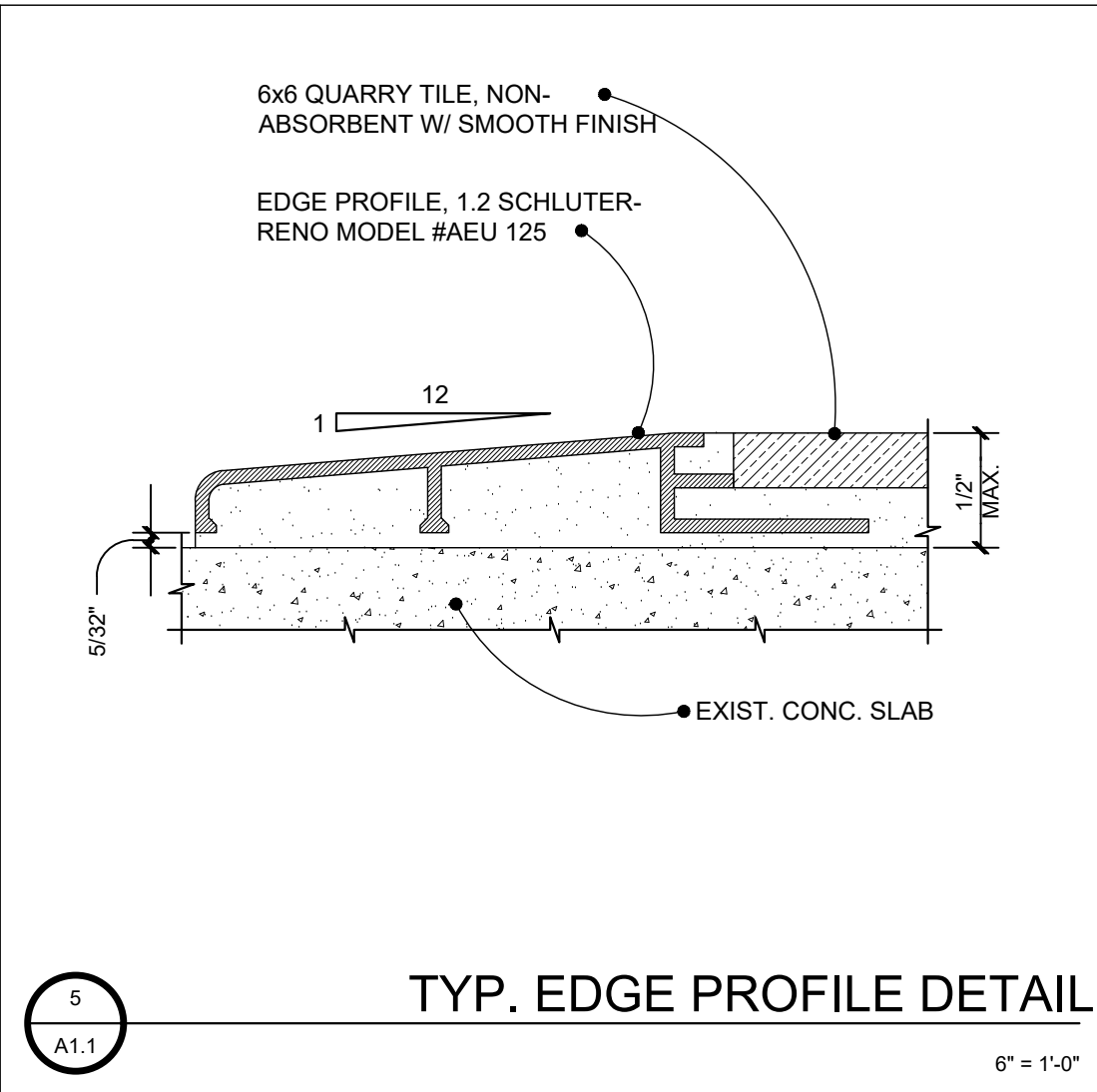
SHEET NUMBER / TITLE:  
**A1.0**  
ARCHITECTURAL FLOOR PLAN



FREEZER BASE DETAIL

FINISH FLOOR PLAN NOTES

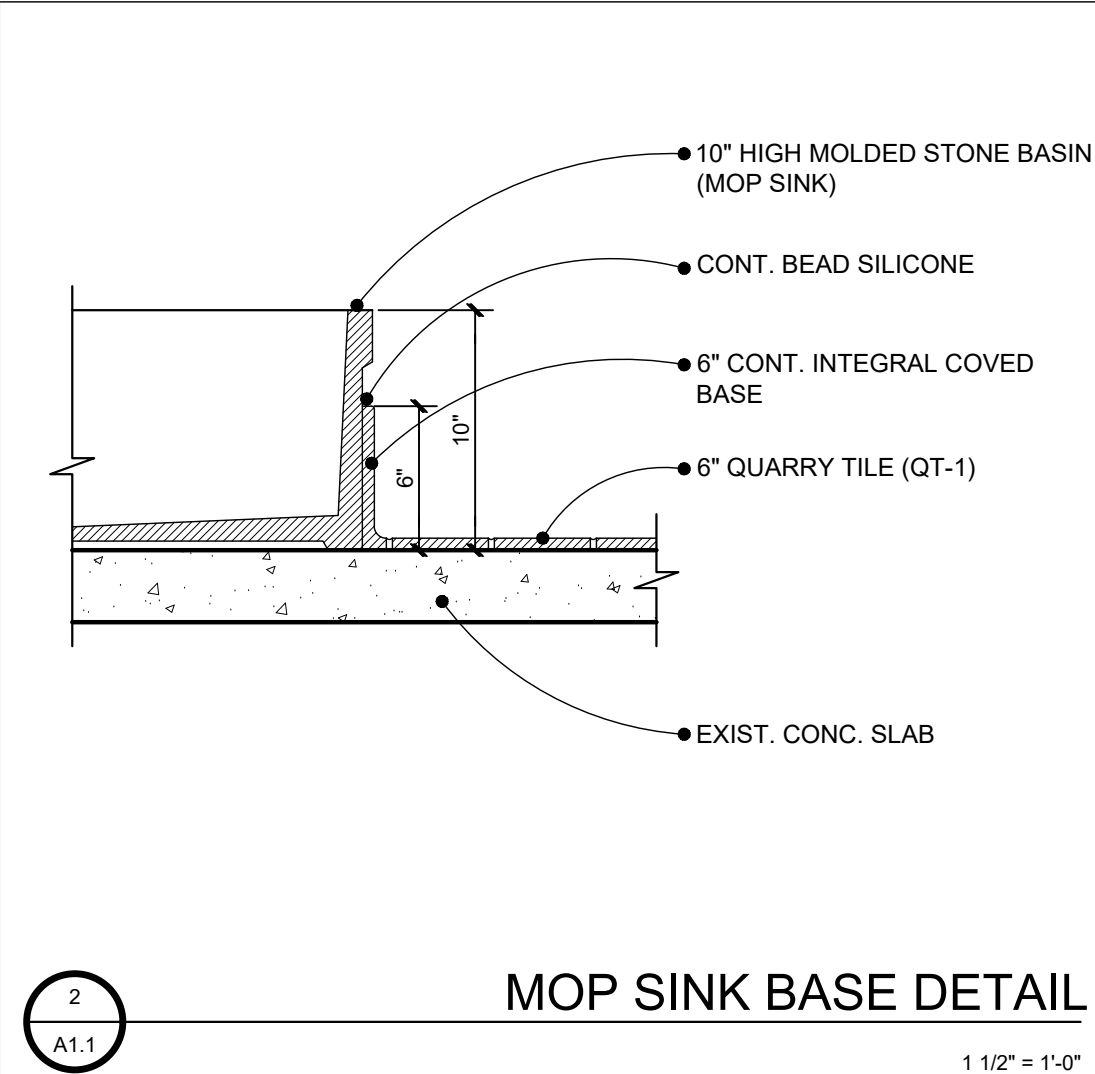
1. REFER TO FINISH SCHEDULE ON SHEET A4.0 FOR CONCRETE FLOOR.
2. EDGE PROFILE AT QUARRY TILE - REFER TO DETAIL 5/A1.1. SCHLUTER SYSTEMS: 1-800-472-4588
3. REFER TO PLUMBING DRAWINGS FOR ALL FLOOR SINK AND FLOOR DRAIN LOCATIONS - PREPARE AND INSTALL ALL FLOOR PENETRATIONS PER MANUFACTURER'S DETAILS - FIXTURES MUST BE CLAMPING-TYPE - USE APPROPRIATE WATERPROOF SEALANT AND FOAM BACKER TO SEAL SPACE AROUND PENETRATIONS.
4. PREPARE AND INSTALL ALL FLOOR PENETRATIONS PER MANUFACTURER'S DETAILS - FIXTURES MUST BE CLAMPING-TYPE - USE APPROPRIATE WATERPROOF SEALANT AND FOAM BACKER TO SEAL SPACE AROUND PENETRATIONS.



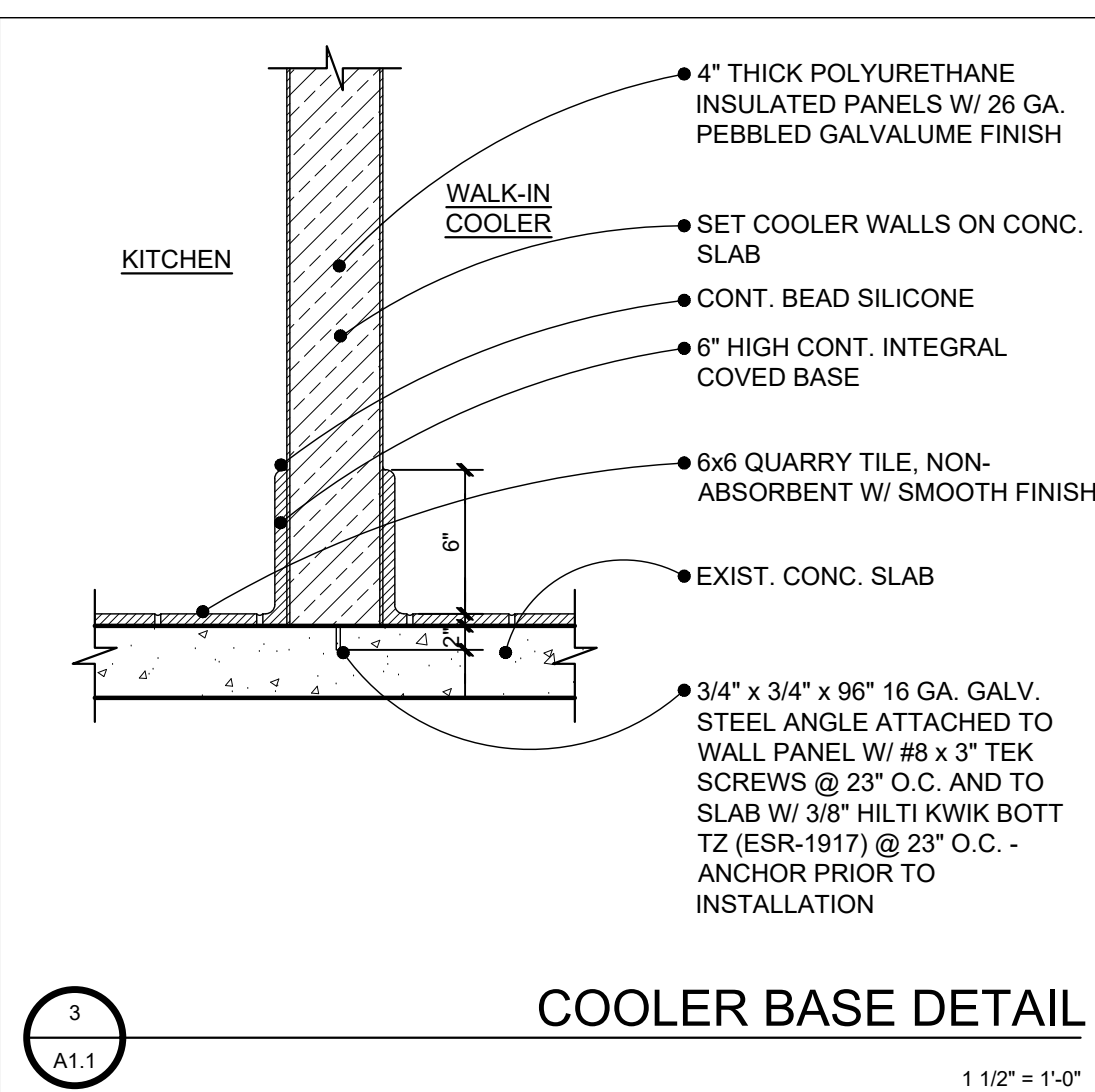
TYP. EDGE PROFILE DETAIL

FINISH FLOOR PLAN LEGEND

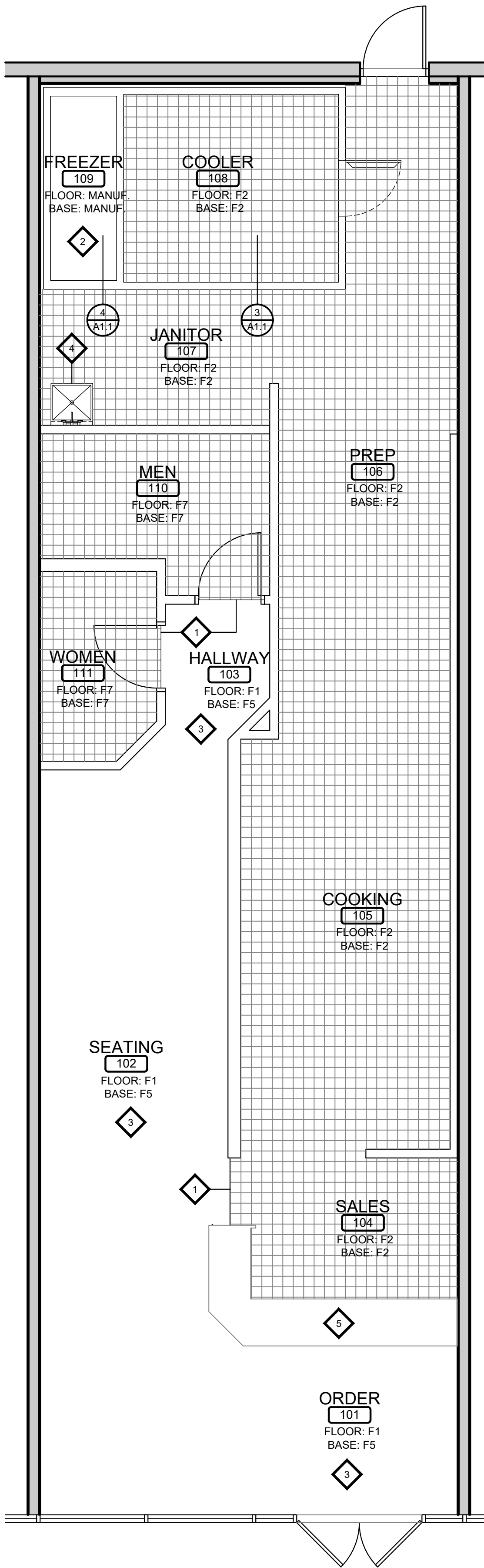
- 1 ALUMINUM EDGE PROFILE (TYP.) - REFER TO DETAIL 5/A1.1
- 2 NO QUARRY TILE BELOW FREEZER - COORDINATE EXACT LOCATION WITH MANUFACTURERS SHOP DRAWINGS
- 3 EXISTING CONCRETE - PROVIDE FLOOR DYE AND SEAL - REFER TO ADDITIONAL FLOOR FINISH NOTES ON THE FINISH SCHEDULE ON SHEET A4.0 FOR SUGGESTED FLOOR PREPARATION OF SEATING AREA
- 4 10" HIGH MOLDED STONE BASIN AROUND MOP SINK - REFER TO DETAIL 2/A1.1
- 5 SET ALL MILLWORK PRIOR TO COMPLETING Q.T. FLOORING



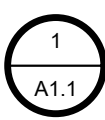
MOP SINK BASE DETAIL



COOLER BASE DETAIL



NOTE:  
REFER TO A0.0 FOR GENERAL NOTES  
AND NOTES TO BIDDERS



FINISH FLOOR PLAN

CONSULTANT:



15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952-941-8660 / www.wilkusarch.com

CLIENT:



15505 WRIGHT BROTHERS DRIVE  
ADDISON, TX 75001  
TELEPHONE: (972) 686-6500  
FAX: (972) 686-6502

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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: GL#Y175  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



06-16-21  
DATE

PROJECT NO.: 2021-0158  
DRAWN BY: NAV  
CHECKED BY: JSS

ISSUE: DATE:  
PERMIT & BID SET 06-16-21

REVISION: DATE:

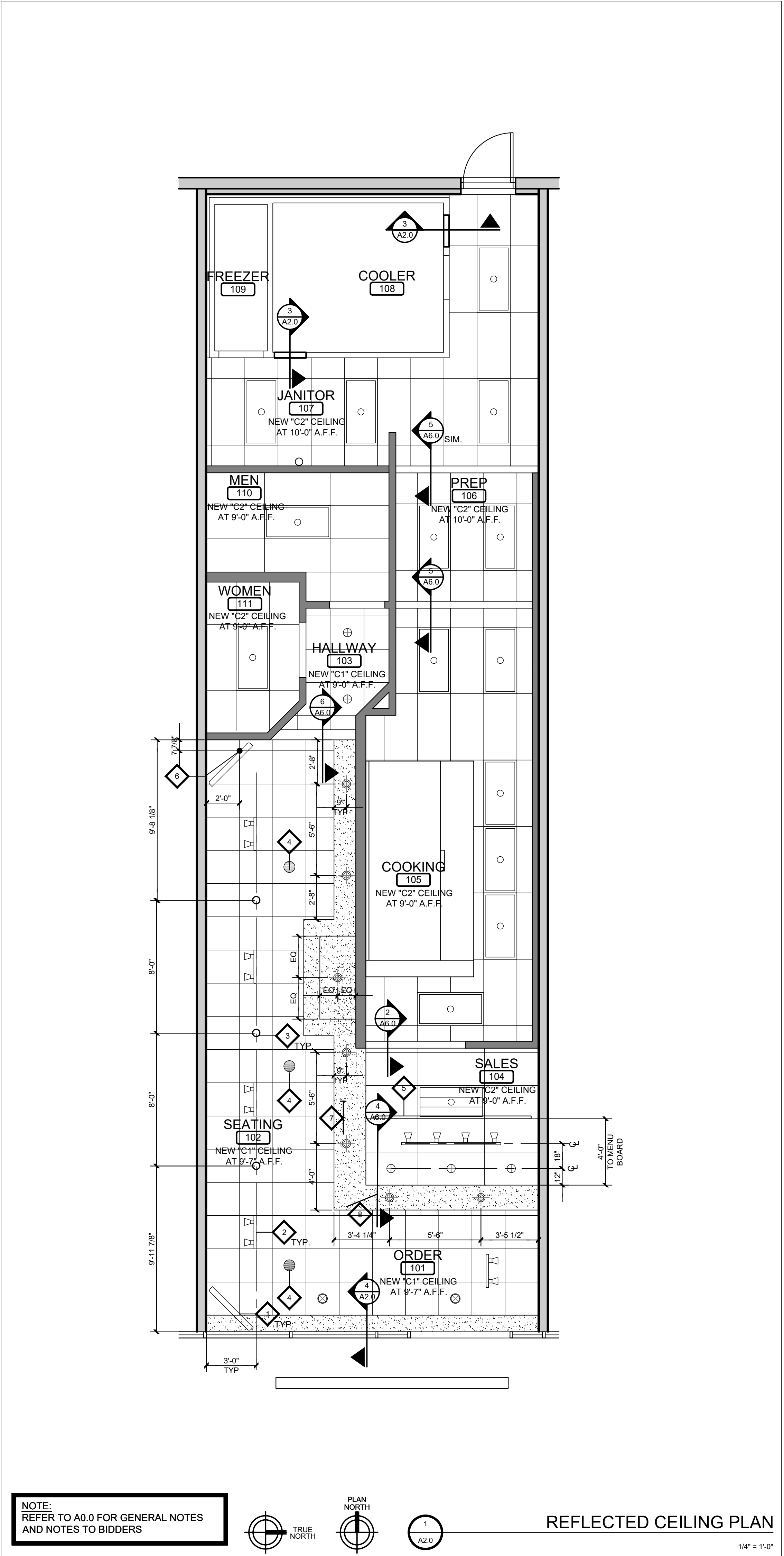
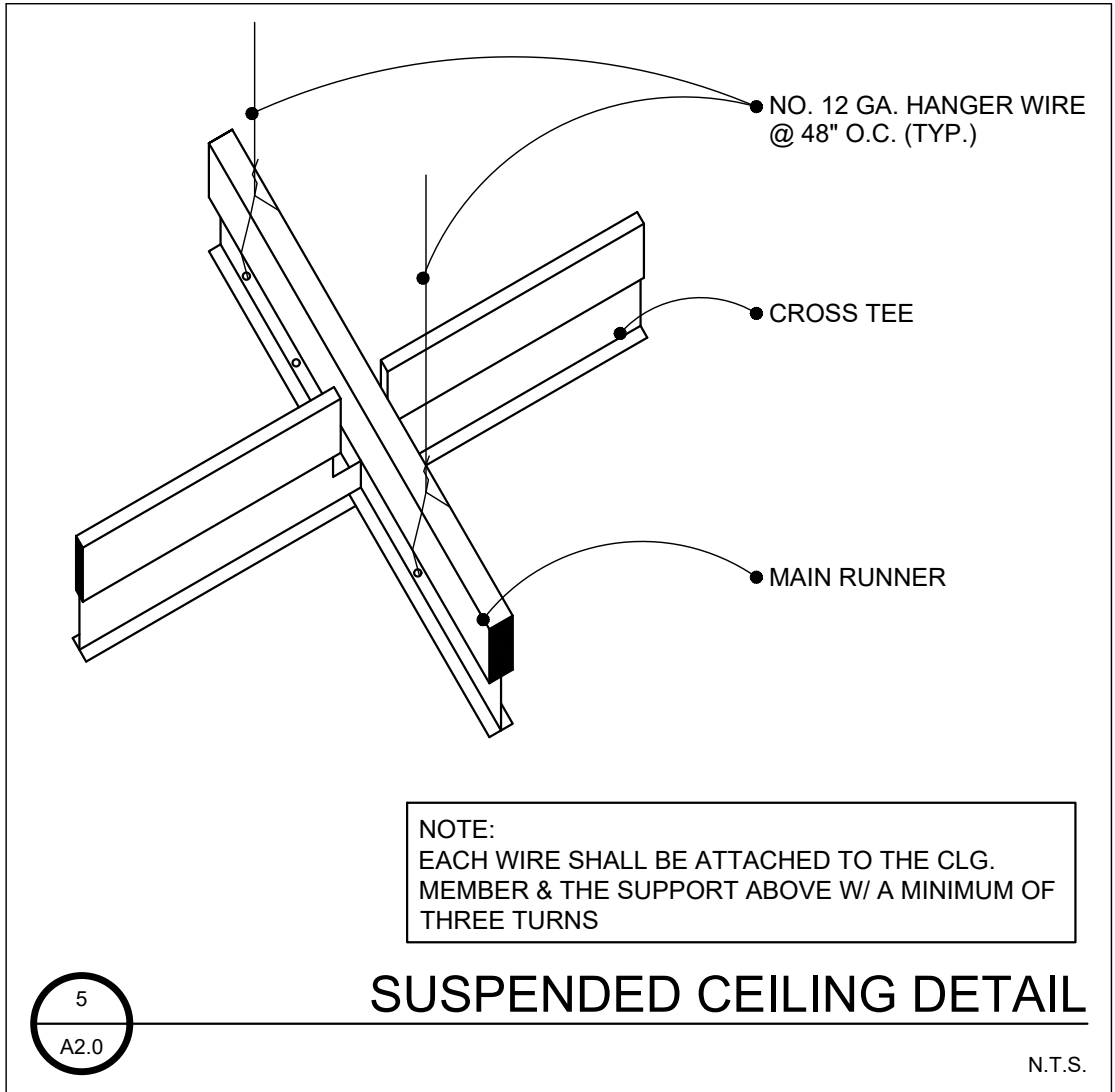
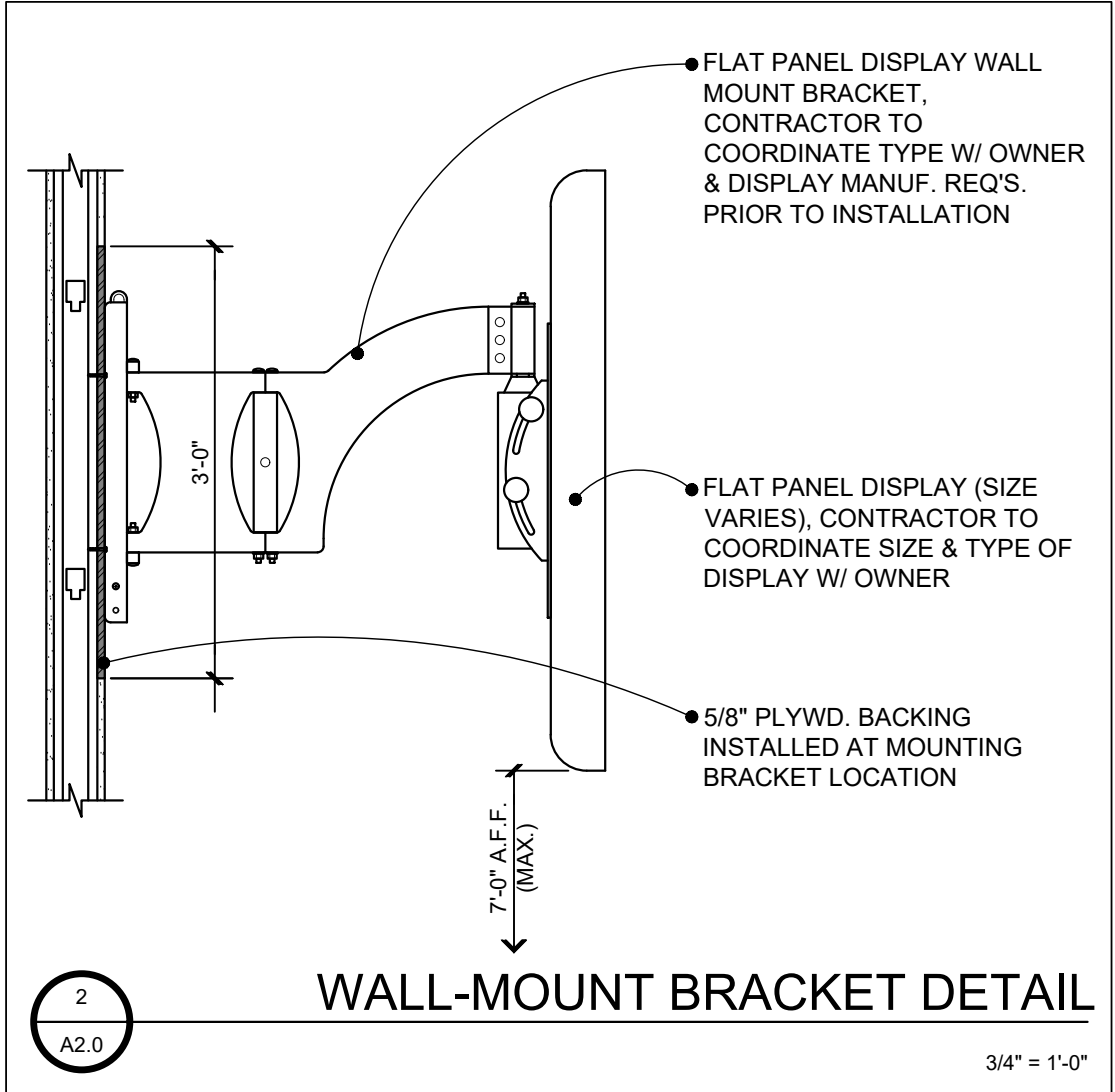
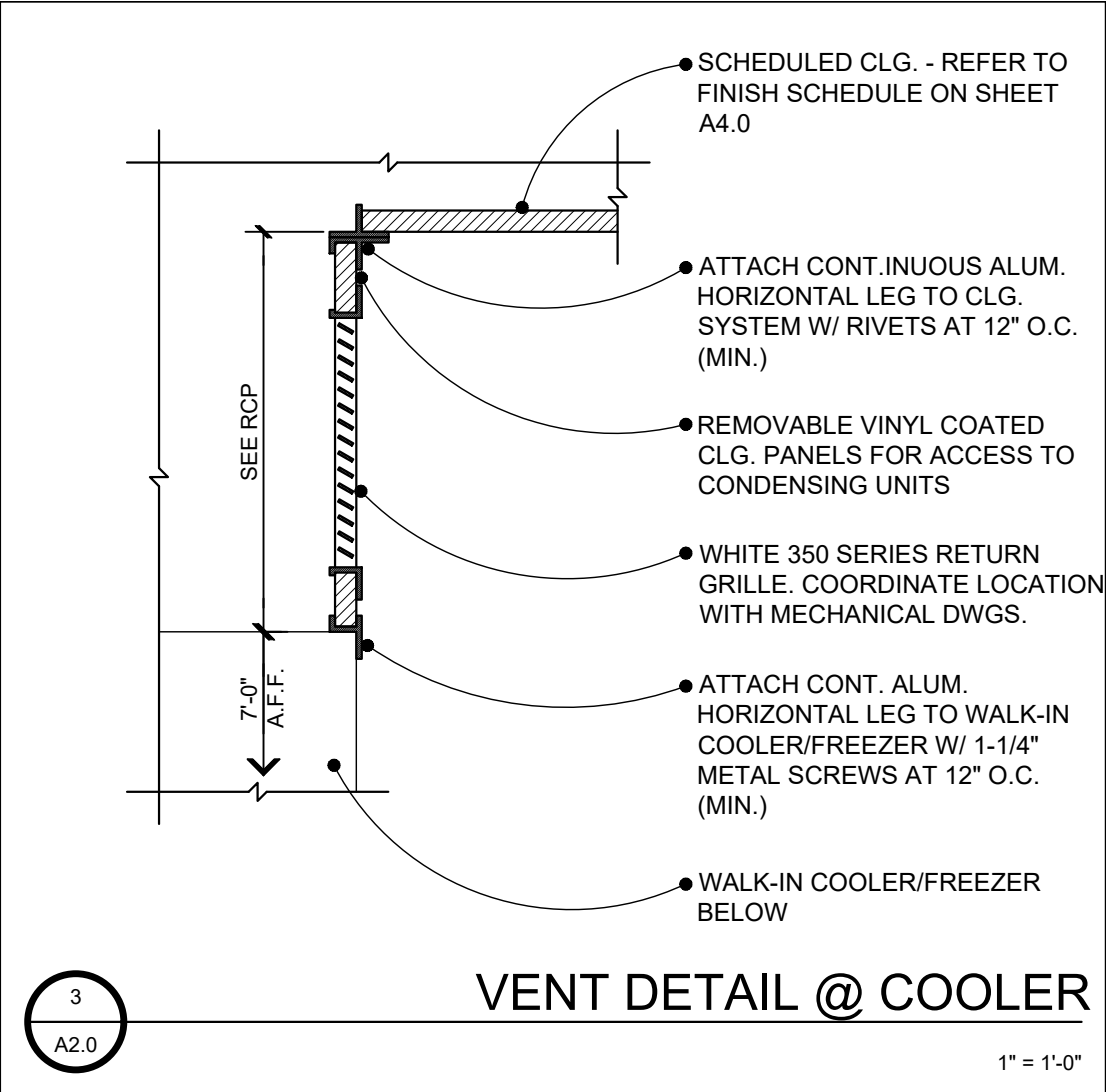
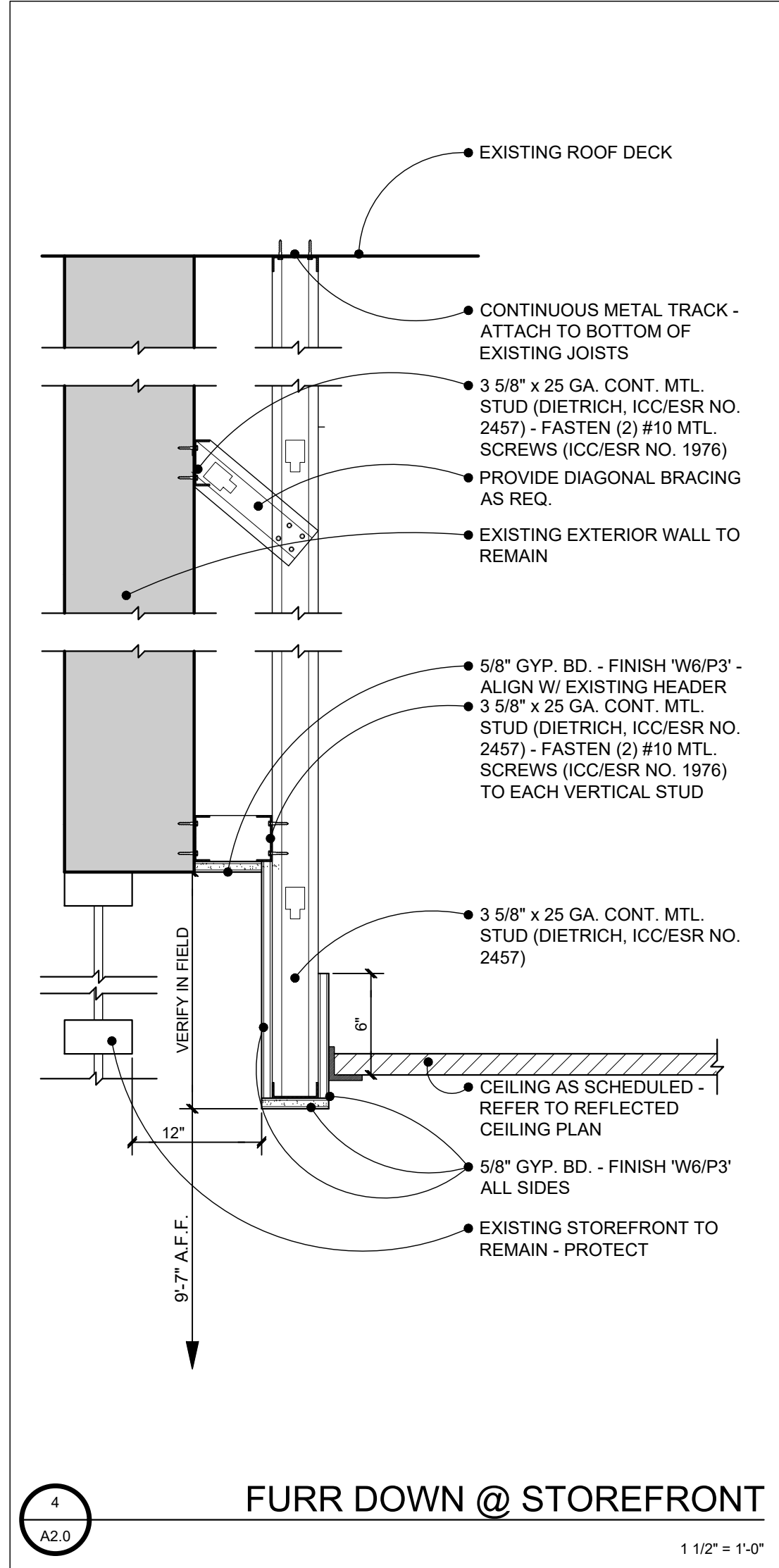
PROJECT LOCATION:  
LEE'S SUMMIT, MO

SHEET NUMBER / TITLE:  
**A1.1**  
FINISH FLOOR PLAN

LIGHTING, DIFFUSERS, & GRILLE SCHEDULE				
MK.	SYMBOL	SPECIFICATIONS	MOUNTING HEIGHT	NOTES
A		FIXTURE: 2'x2' TRACK W/ (2) FIXTURES (HEAD) SUPPLIER: MELETO ELECTRICAL SUPPLY	MOUNT TO BOTTOM OF SCHEDULED CLG., BOTTOM OF TRACK MOUNTED TO BOTTOM OF FRAMING AND 3'-0" FROM ADJACENT WALLS UNLESS NOTED OTHERWISE	SCHEDULE SHEET A4.0 SUSPEND FROM CLG. W/ 3/8" ALL-THREAD
B		FIXTURE: 16" ROUND PENDANT W/ 15'-0" CORD (BLACK) SUPPLIER: MELETO ELECTRICAL SUPPLY	MOUNT TO SCHEDULED CLG. AS FOLLOWS: ALL AREAS SUSPEND TO 8'-6" A.F.F. TO BOTTOM OF FIXTURE	N/A
BA		FIXTURE: 121 DC SERIES TYPE: 1-1, 6" D ROUND PENDANT 8 1/2" H (BLACK) REMOPT FT LIGHTING	MOUNT TO SCHEDULED CLG. AS FOLLOWS: ALL AREAS SUSPEND TO 8'-6" A.F.F. TO BOTTOM OF FIXTURE	N/A
C		FIXTURE: 2'x4" TROFFER W/ ACRYLIC LENS SUPPLIER: MELETO ELECTRICAL SUPPLY	MOUNT TO SCHEDULED ACOUSTICAL CLG.	N/A
CA		FIXTURE: 2'x4" TROFFER W/ ACRYLIC LENS SUPPLIER: MELETO ELECTRICAL SUPPLY	MOUNT TO SCHEDULED ACOUSTICAL CLG.	N/A
D		FIXTURE: 4" ROUND RECESSED CAN LIGHT SUPPLIER: MELETO ELECTRICAL SUPPLY	MOUNT TO SCHEDULED ACOUSTICAL CLG. NOTE: CLG. INSULATION MUST BE 3" AWAY ON ALL SIDES	N/A
DA		FIXTURE: 6" ROUND RECESSED CAN LIGHT SUPPLIER: MELETO ELECTRICAL SUPPLY	MOUNT TO SCHEDULED ACOUSTICAL CLG. NOTE: CLG. INSULATION MUST BE 3" AWAY ON ALL SIDES	N/A
DB		FIXTURE: 6" ROUND RECESSED CAN LIGHT SUPPLIER: MELETO ELECTRICAL SUPPLY	MOUNT TO SCHEDULED ACOUSTICAL CLG. NOTE: CLG. INSULATION MUST BE 3" AWAY ON ALL SIDES	N/A
F		FIXTURE: 6'-0" TRACK WITH AMP CURRENT LIMITER (4) WALL WASH TRACK HEADS (WHITE) SUPPLIER: MELETO ELECTRICAL SUPPLY	MOUNT TO SCHEDULED CLG.	CLG. INSULATION MUST BE 3" AWAY ON ALL SIDES
LCD		FIXTURE: WALL MOUNTED FLAT PANEL DISPLAY TV WALL MOUNTING BRACKET FOR FLAT SCREEN TV'S 32" TO 42" MODELS CONTRACTOR TO COORDINATE BRACKET WITH MANUFACTURER'S RECOMMENDATION AND OWNER SELECTION SUPPLIED BY OWNER	MOUNT TO SCHEDULED PARTITION WITH BOTTOM OF LCD PANEL AS INDICATED ON THE REFLECTED CLG. PLAN	N/A
S		8" CEILING RECESSED SPEAKER PROVIDED BY OWNER, SUPPLIED BY APPROVED VENDOR, COORDINATED BY GC. PROVIDE MIN. 6" ADDITIONAL WIRE PER SPEAKER AT J-BOX	MOUNT IN TILE	PROVIDE IN FACTORY FINISHED FLAT BLACK
SUPPLIER NOTE: MELETO ELECTRICAL SUPPLY: 10930 HARRY HINES, DALLAS, TEXAS 75220 CONTACT: JIM ELLIS (SALES MANAGER), PHONE 1-800-777-4993 EXT. 1143 OFFICE, 972-559-6943 DIRECT, 214-353-3425 FAX, JELLIS@MELETO.COM				

- ## CEILING PLAN NOTES
1. LIGHT FIXTURES SHALL BE PLACED AS DIMENSIONED AND SCHEDULED - ALL LIGHT FIXTURES SUPPLIED AS SCHEDULED WITH NO EXCEPTIONS
  3. REFER TO MECHANICAL DRAWINGS FOR RETURN AND DIFFUSER LOCATIONS - ALL RETURNS AND DIFFUSERS IN SALES, ORDER, AND SEATING AREAS TO BE FACTORY FINISHED IN FLAT BLACK
  4. VERIFY LOCATION AND QUANTITIES FOR EMERGENCY LIGHTING WITH ELECTRICAL DRAWINGS, LOCAL INSPECTION AGENCY, AND LOCAL FIRE MARSHALL - EXIT SIGNS SHALL BE CONNECTED TO AN EMERGENCY ELECTRICAL SYSTEM PROVIDED FROM STORAGE BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR - THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE ELECTRICAL CODE
  5. REFER TO DETAIL 5/A2.0 FOR SUSPENDED CEILING DETAIL
  6. REFER TO THE FINISH SCHEDULE ON SHEET A4.0 FOR CEILING FINISH INFORMATION

- ## CEILING LEGEND
1. INSTALL ALL WALL MOUNTED LCD/TV OUTLETS 7'-0" A.F.F. - REFER TO 2/A2.0 - TYP.
  2. TRACK LIGHTING (BLACK) MOUNTED TO BOTTOM OF THE CEILING TILE - TYP.
  3. PENDANT LIGHTING - REFER TO THE LIGHTING SCHEDULE FOR MOUNTING LOCATIONS - TYP.
  4. SPEAKER LOCATIONS - PROVIDED BY OWNER, SUPPLIED BY APPROVED VENDOR, AND COORDINATED BY GC
  5. MENU BOARD - MOUNT BOTTOM OF MENU BOARD AT 7'-0" A.F.F. - REFER TO A3.0 FOR ADD. INFO.
  6. CEILING GRID STARTING POINT
  7. DINE IN SIGN REFER TO A3.1 FOR ADD. INFO.
  8. ORDER AHEAD SIGN, ORIENTATE TO FRONT DOOR - REFER TO A3.1 FOR ADD. INFO.



CONSULTANT:

**WILKUS ARCHITECTS**

15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8850 / www.wilkusarch.com

CLIENT:

**WING-STOP**

15505 WRIGHT BROTHERS DRIVE  
ADDISON, TX 75001  
TELEPHONE: (972) 686-6500  
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PROJECT INFORMATION:

**WING-STOP**

STORE NUMBER: GL#Y175

HALLBUSTER SHOPS

1041 N.E. SAM WALTON LANE

LEE'S SUMMIT, MO 64086

SEAL:

**MATTHEW MICHAEL WILKUS**

A-2019000244

06-16-21

DATE

PROJECT NO.: 2021-0158

DRAWN BY: NAV

CHECKED BY: JSS

ISSUE: DATE:

PERMIT & BID SET 06-16-21

REVISION: DATE:

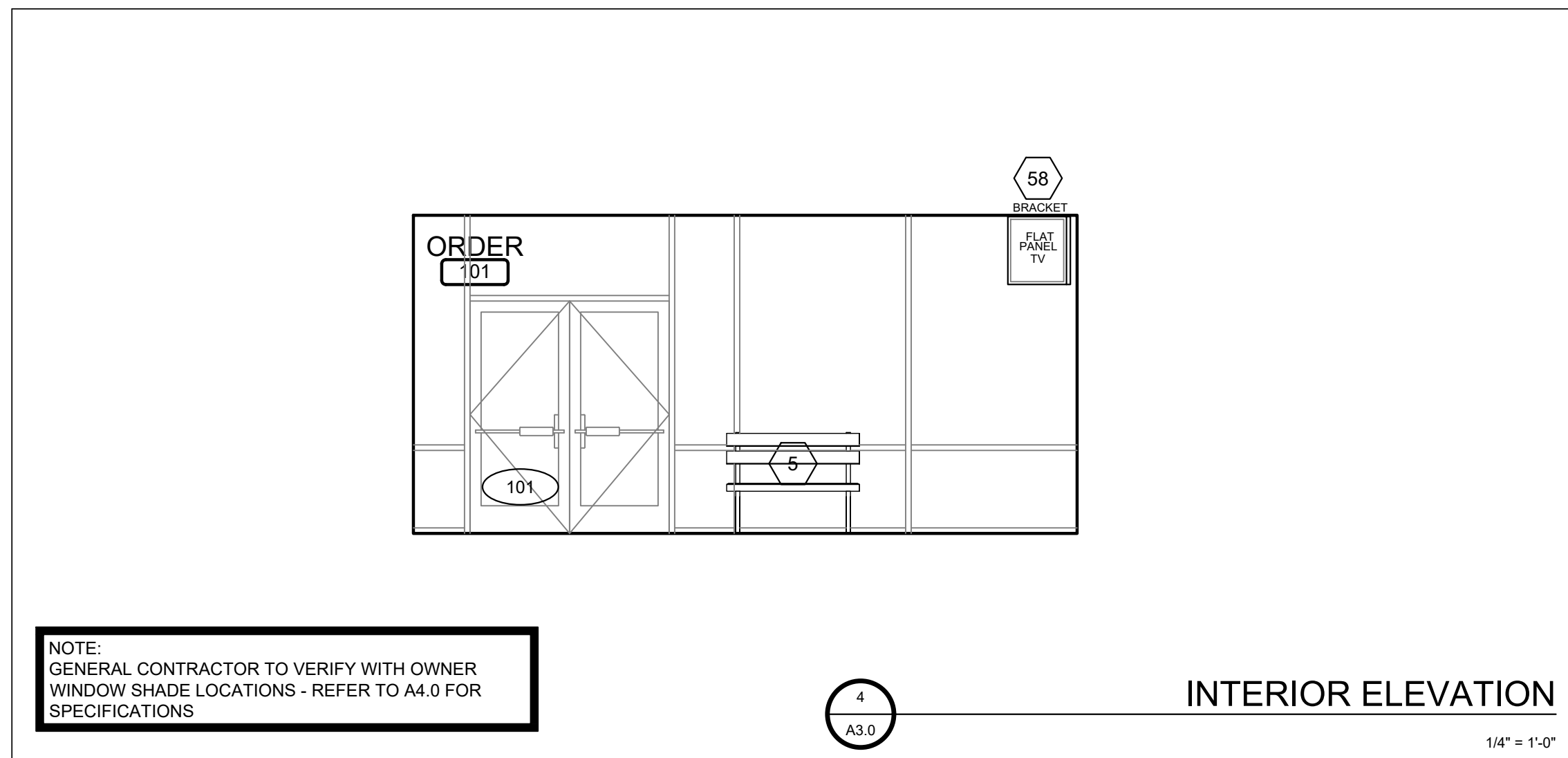
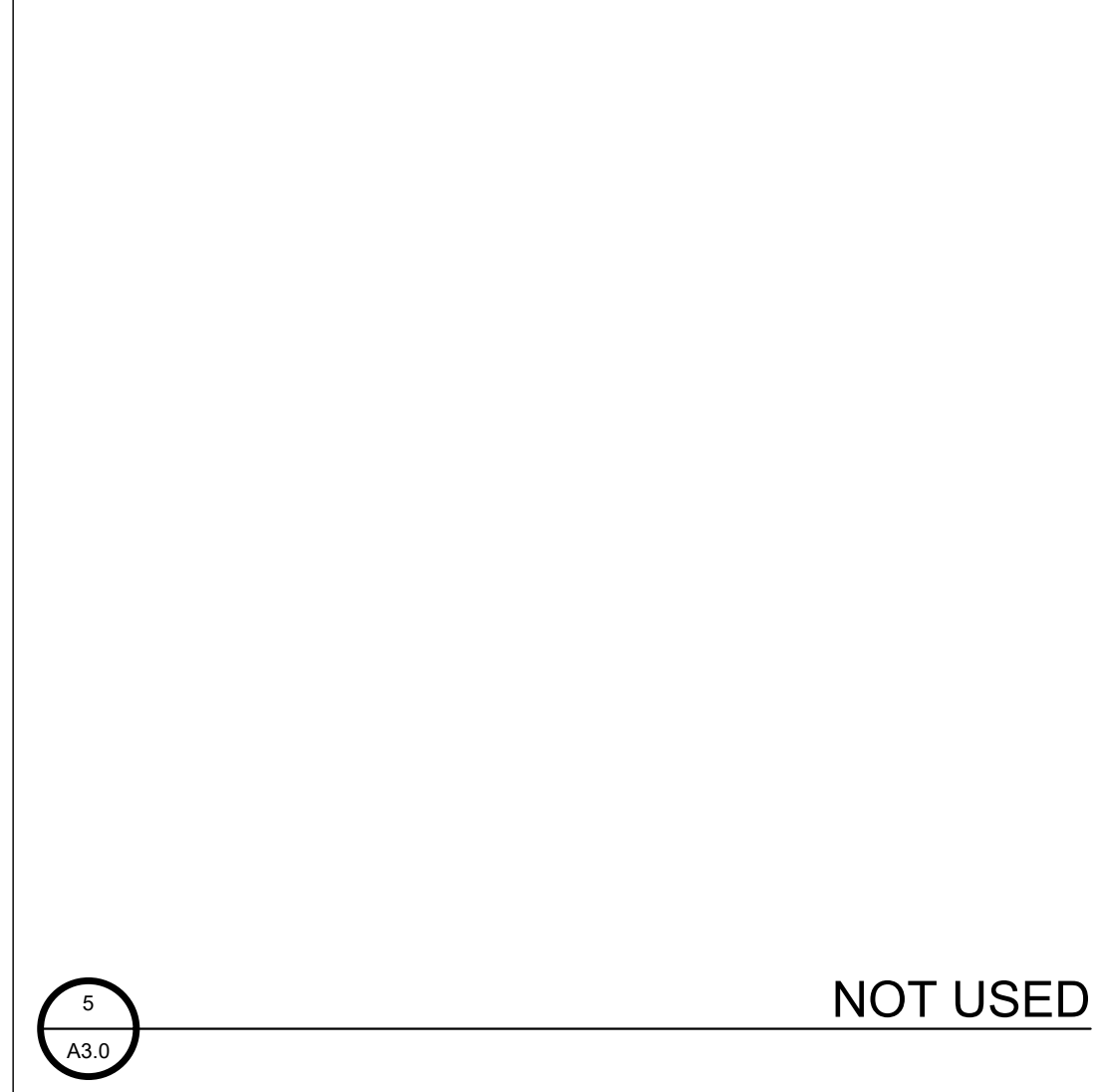
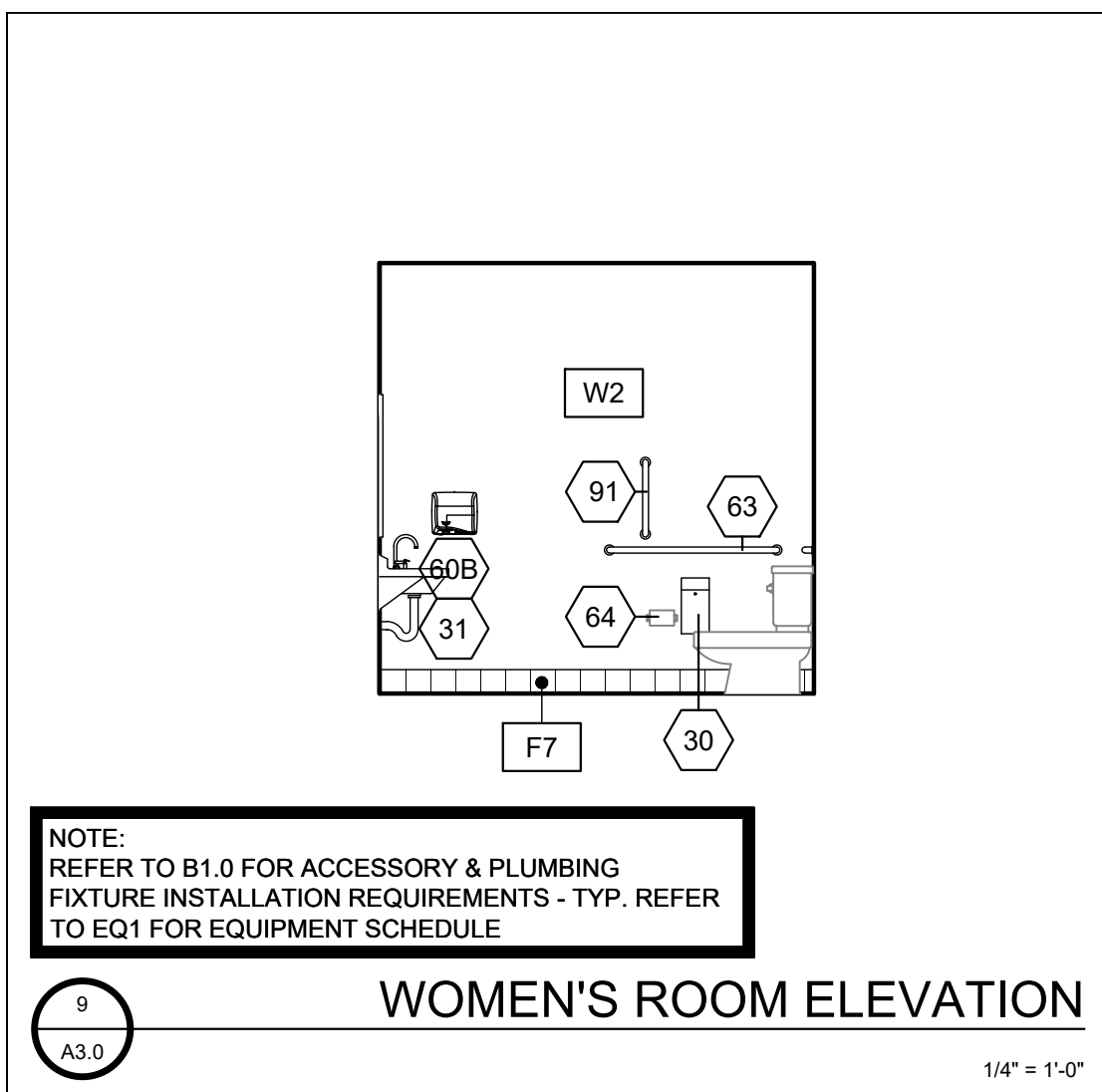
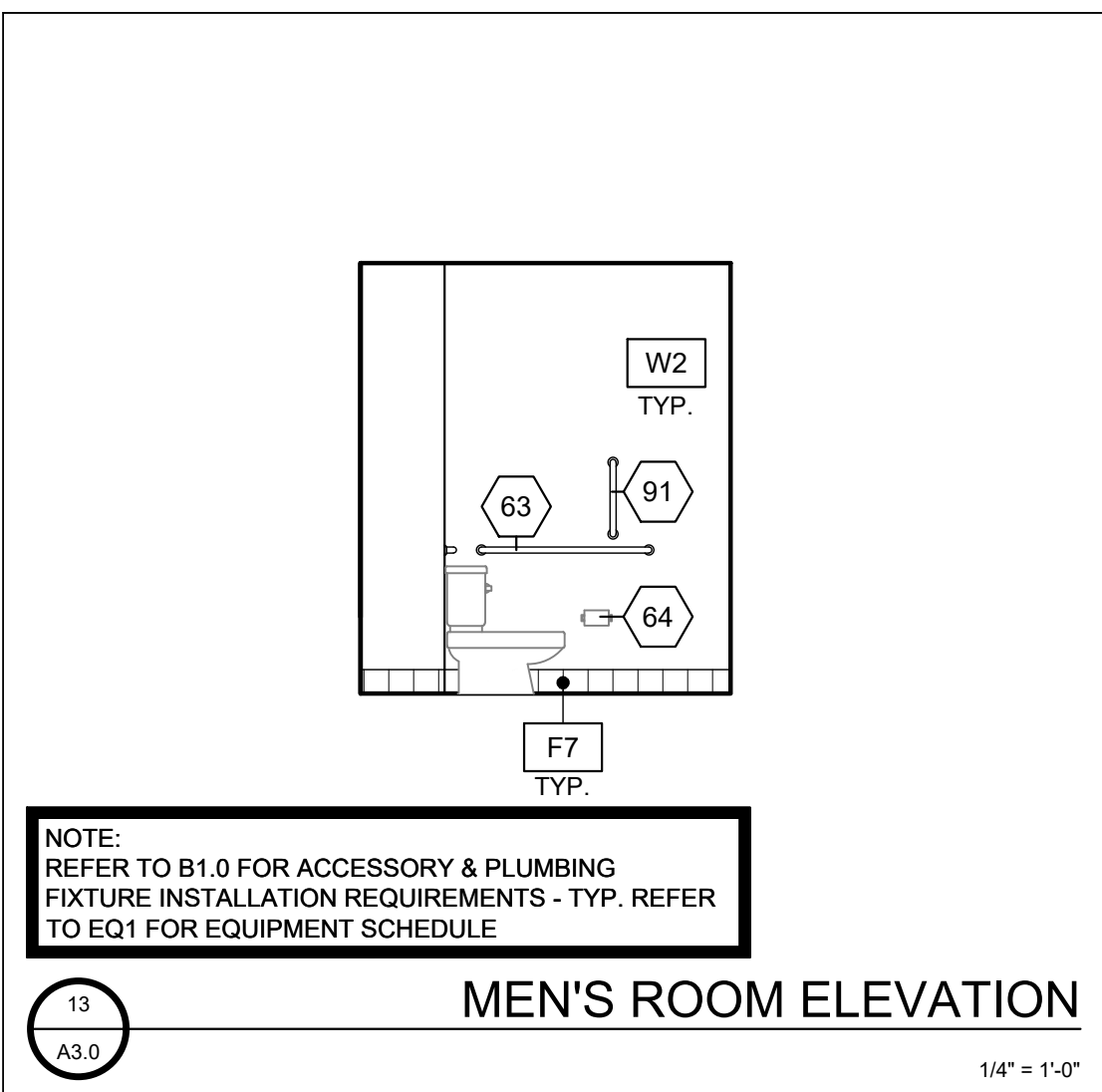
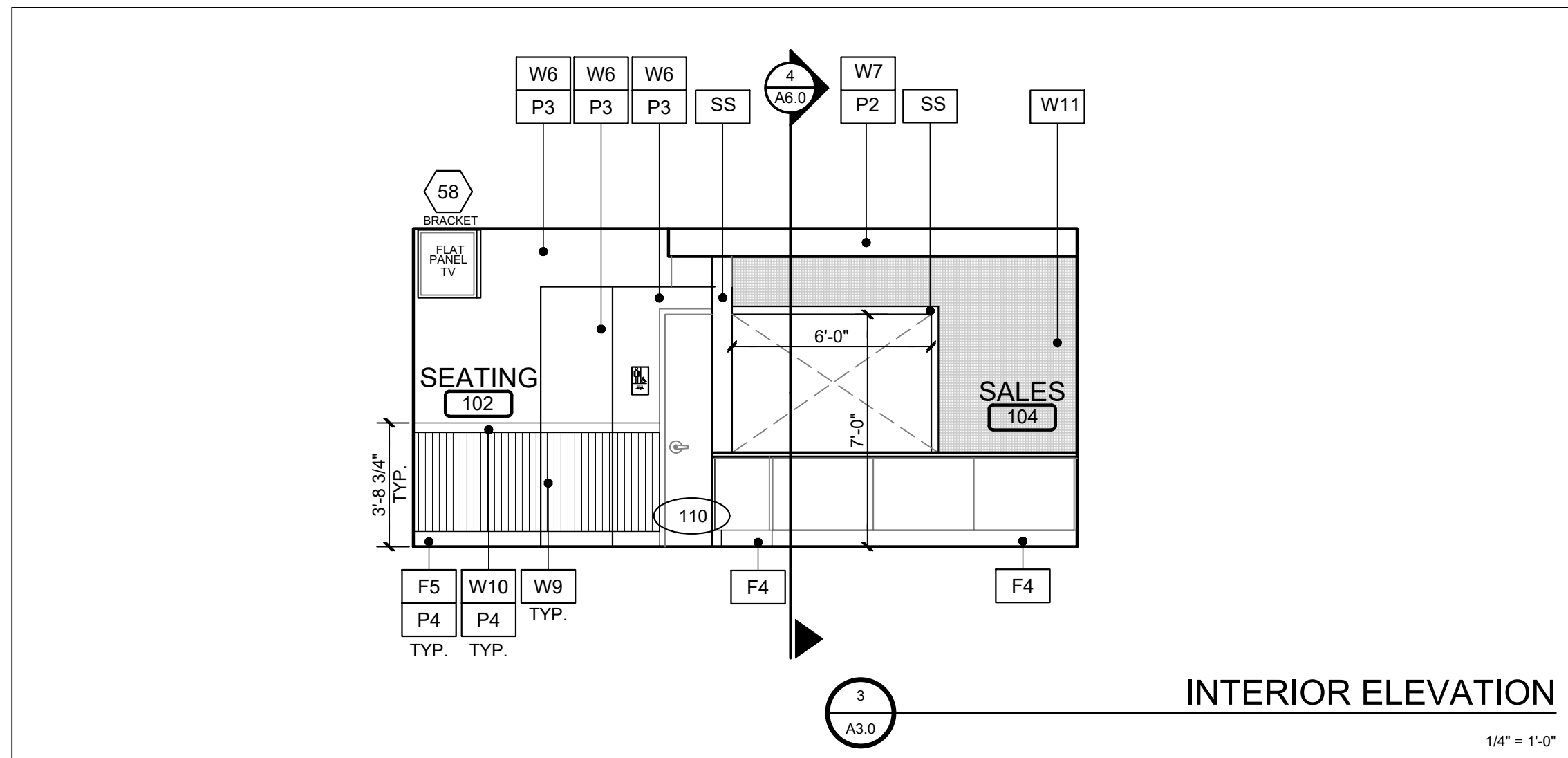
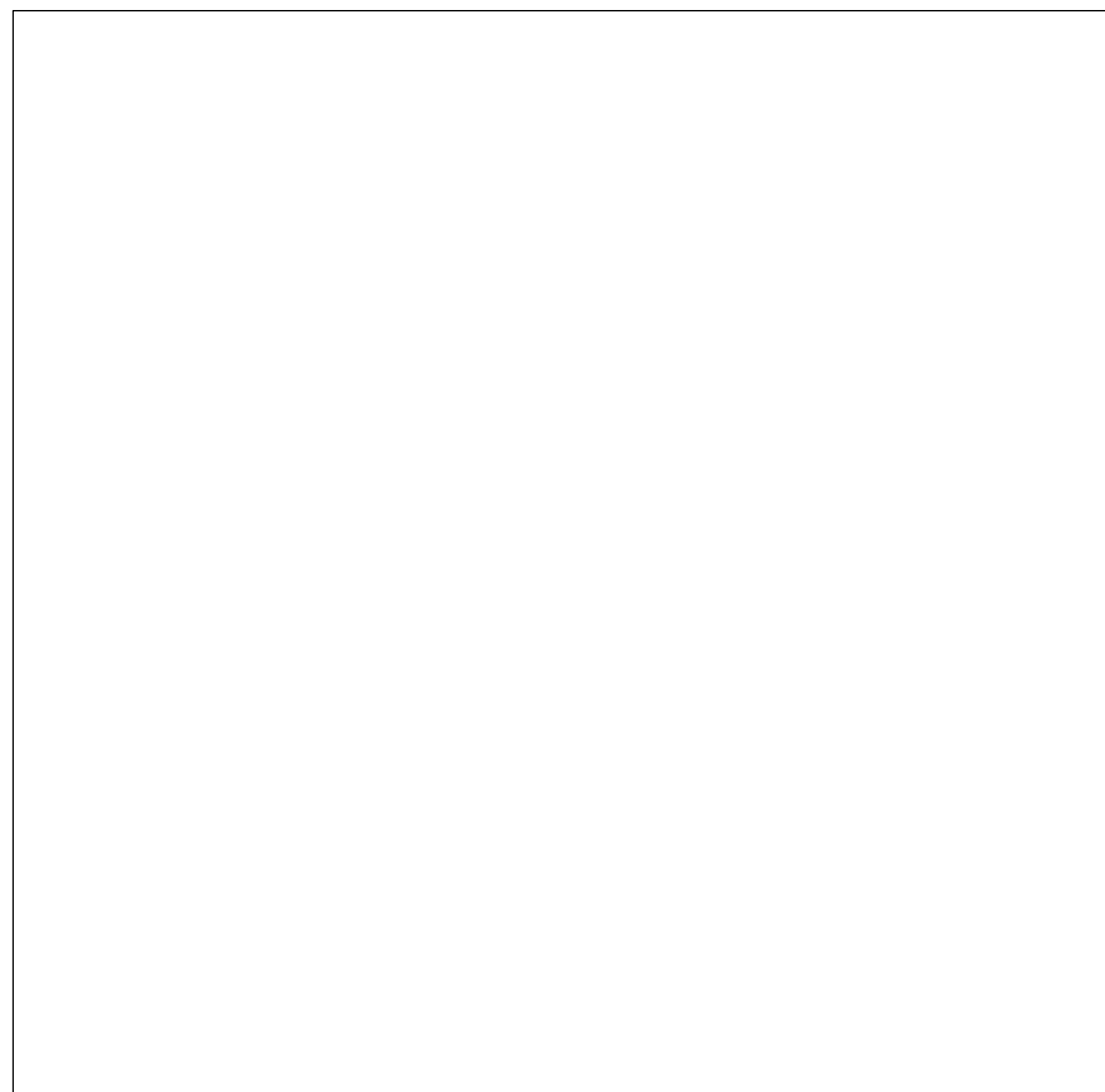
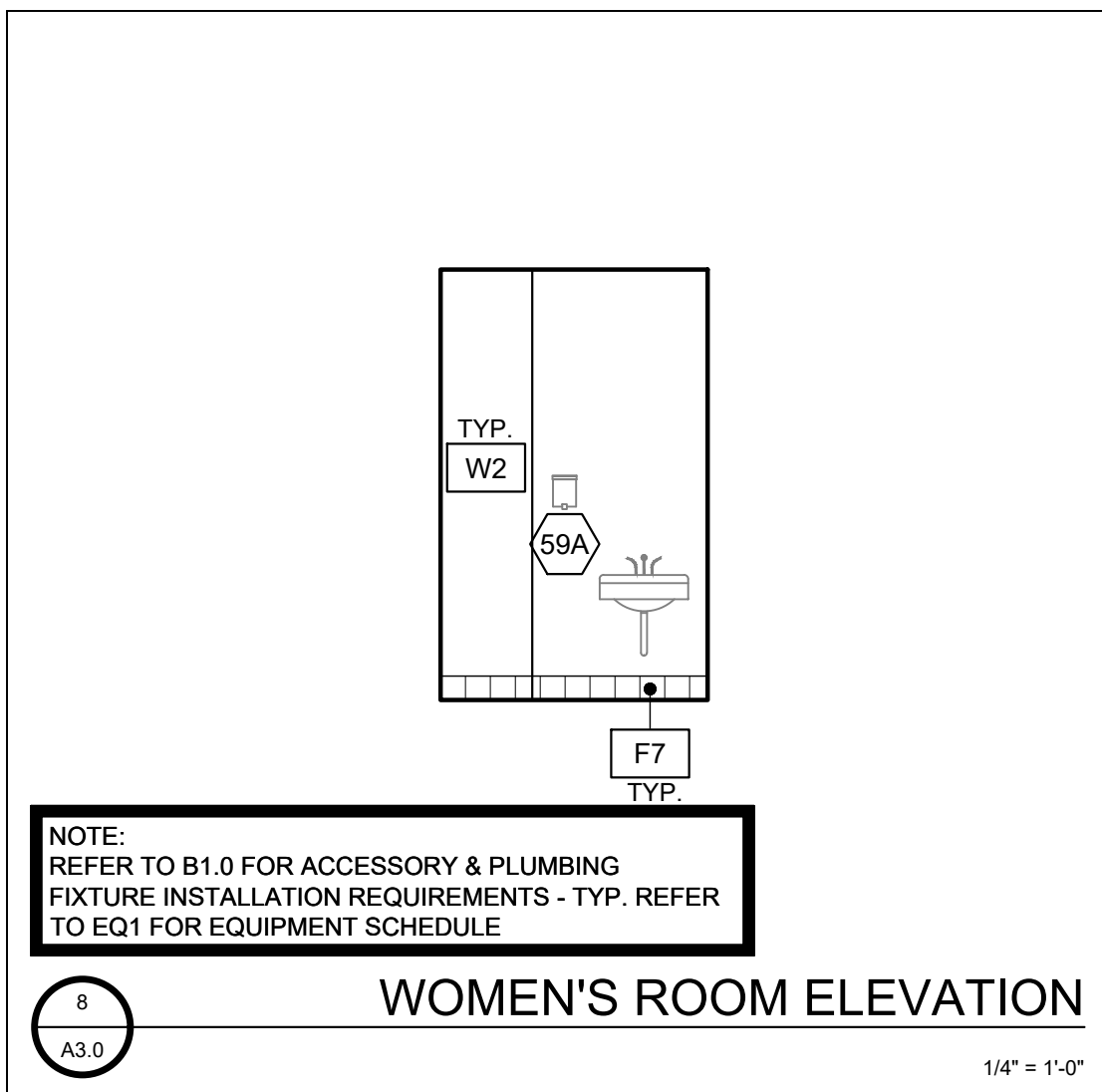
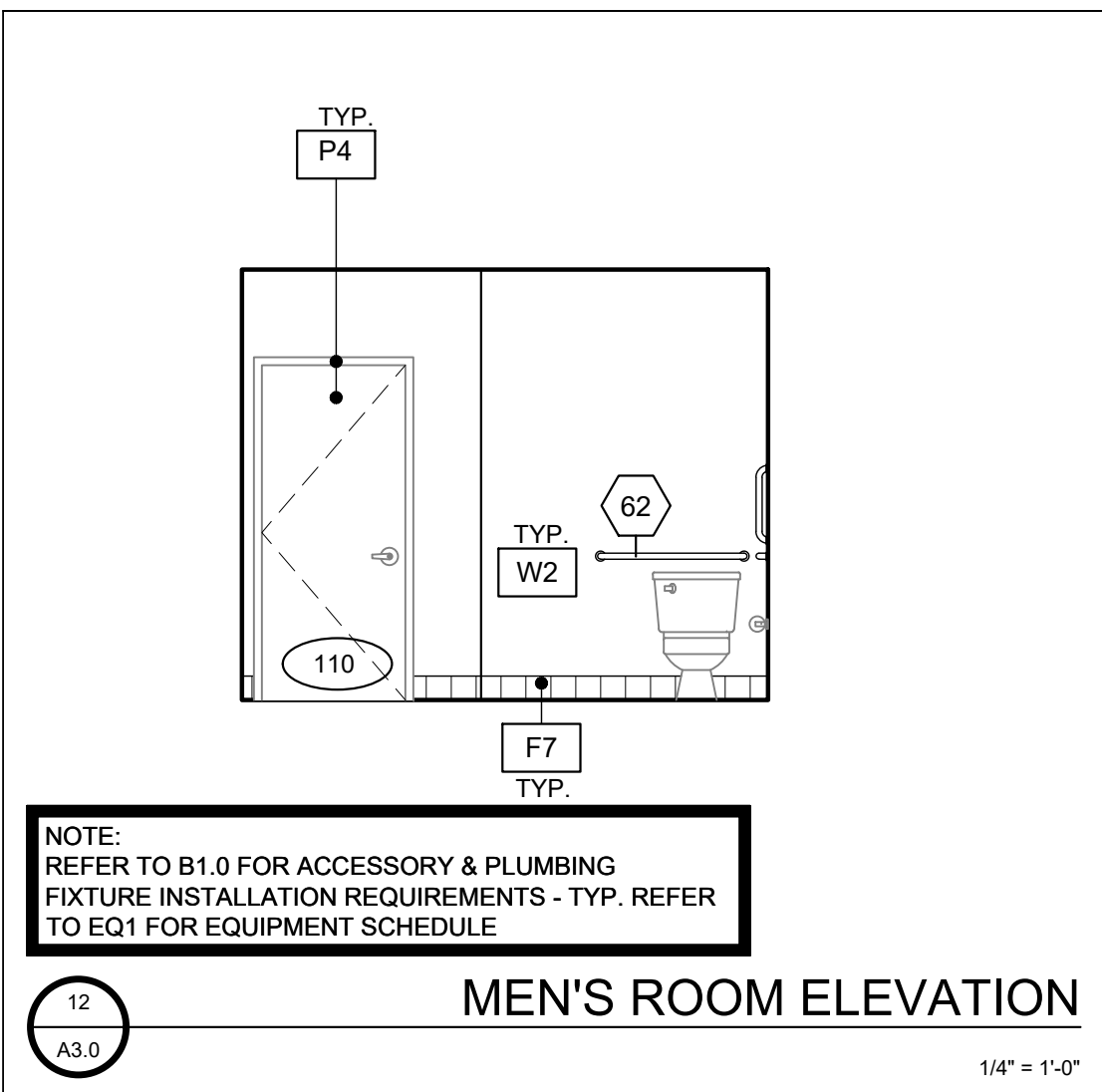
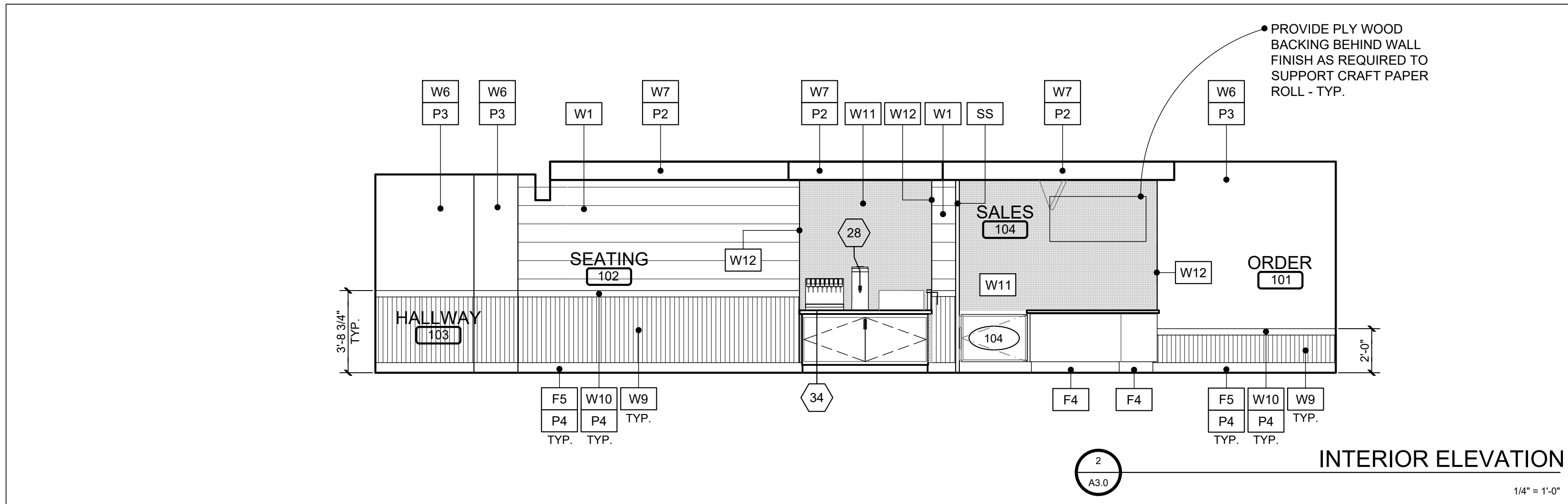
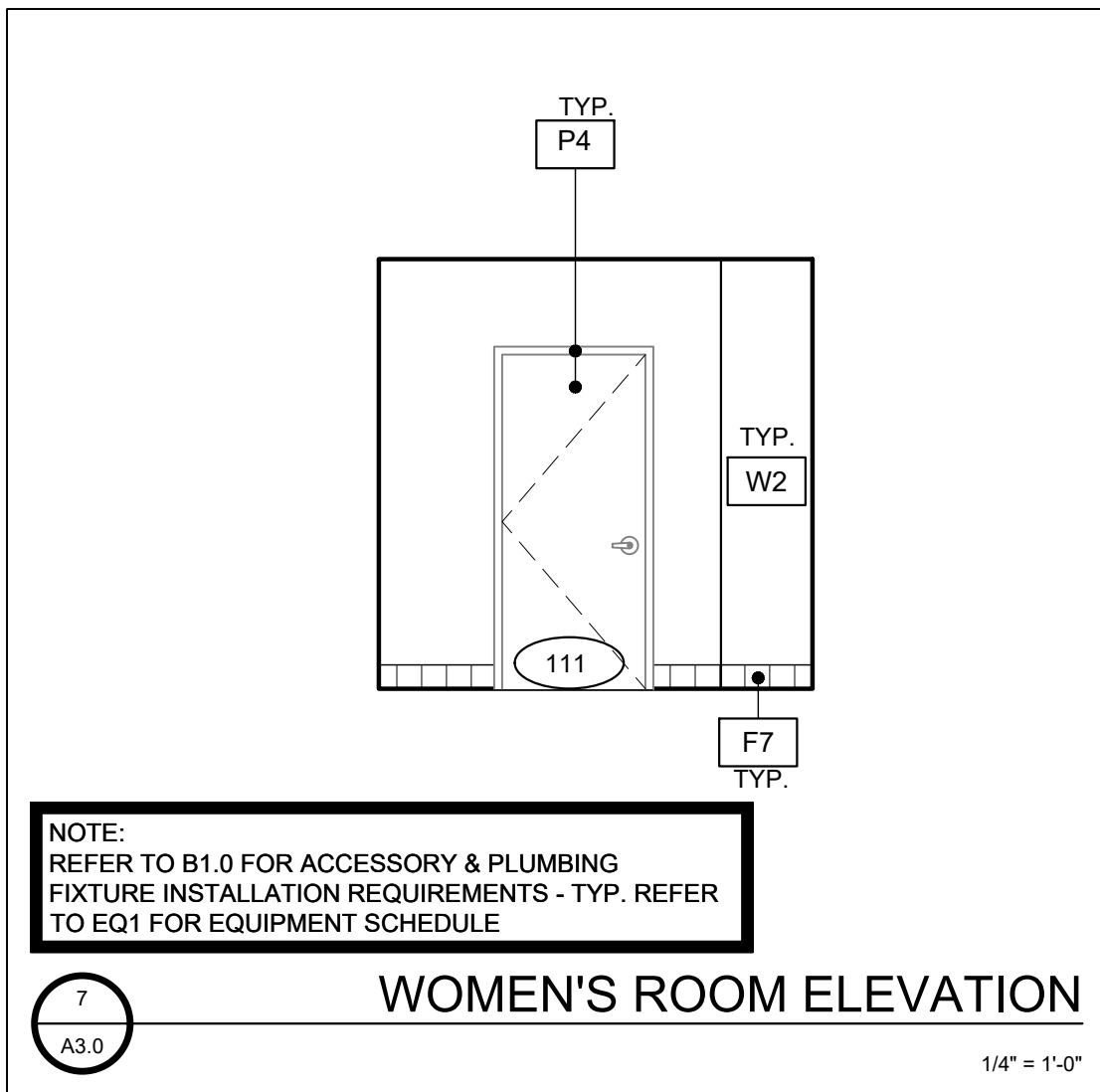
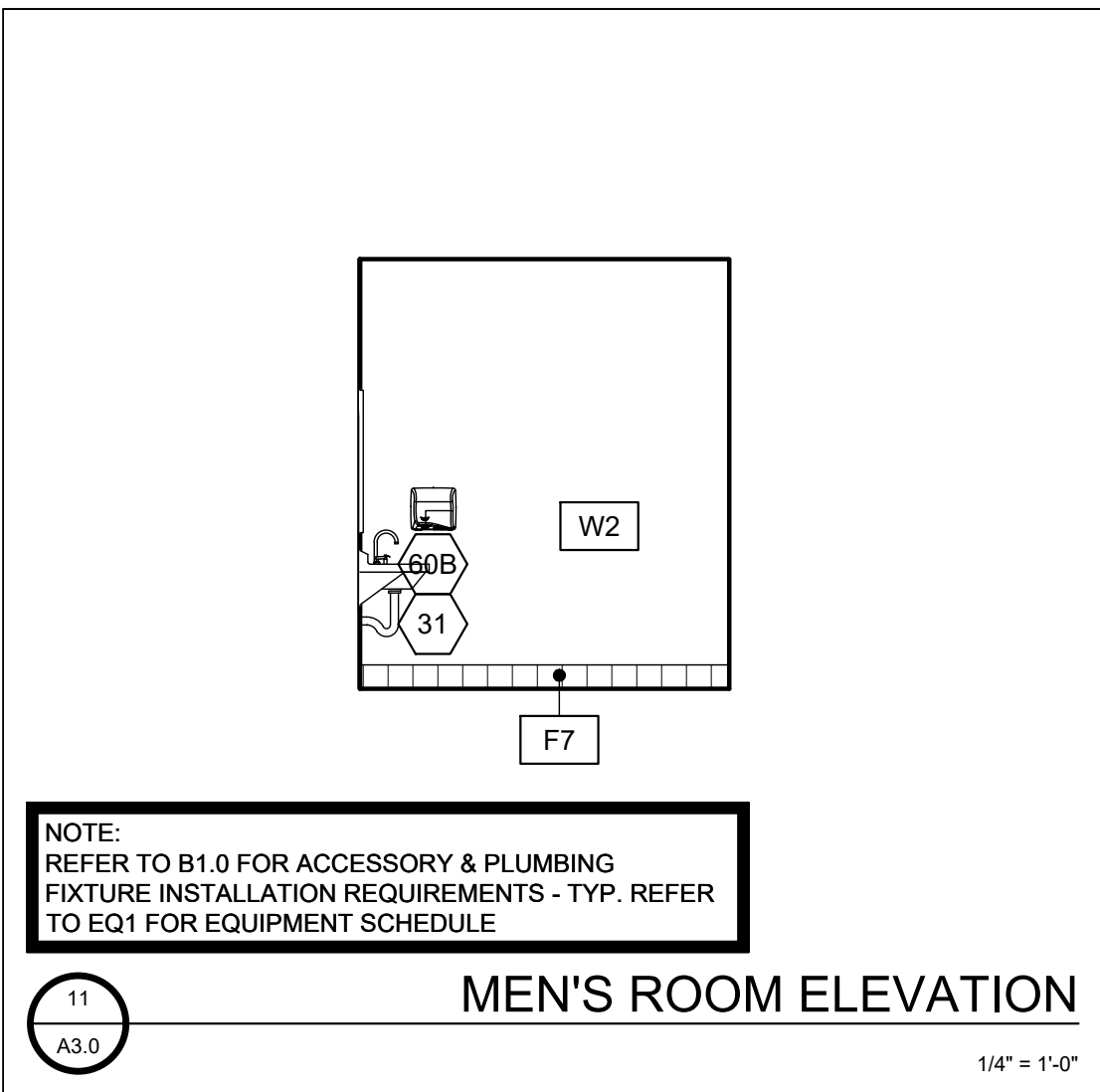
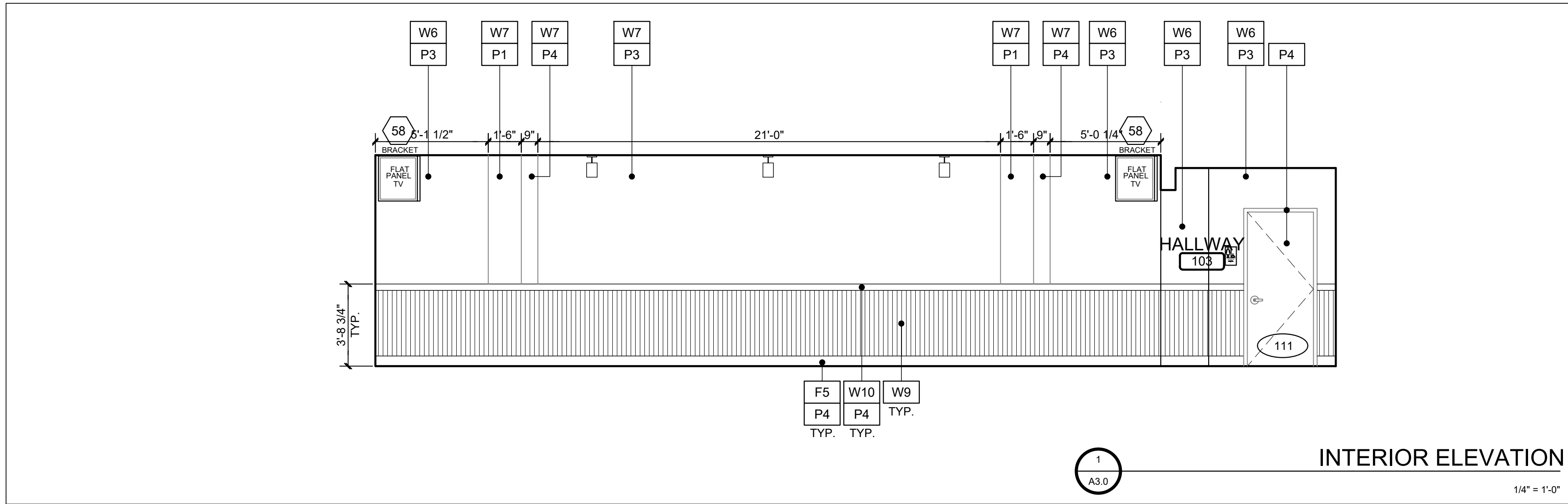
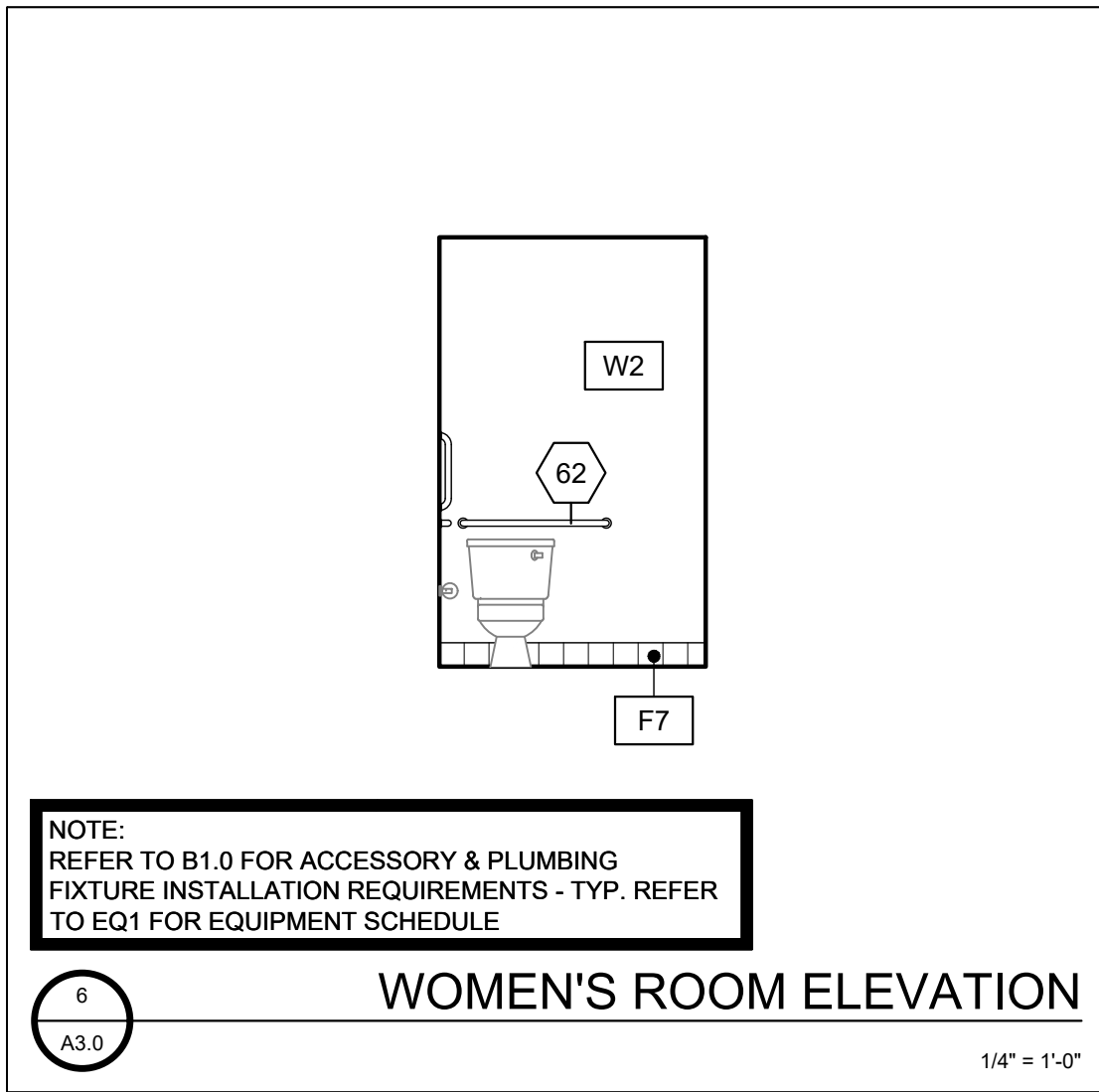
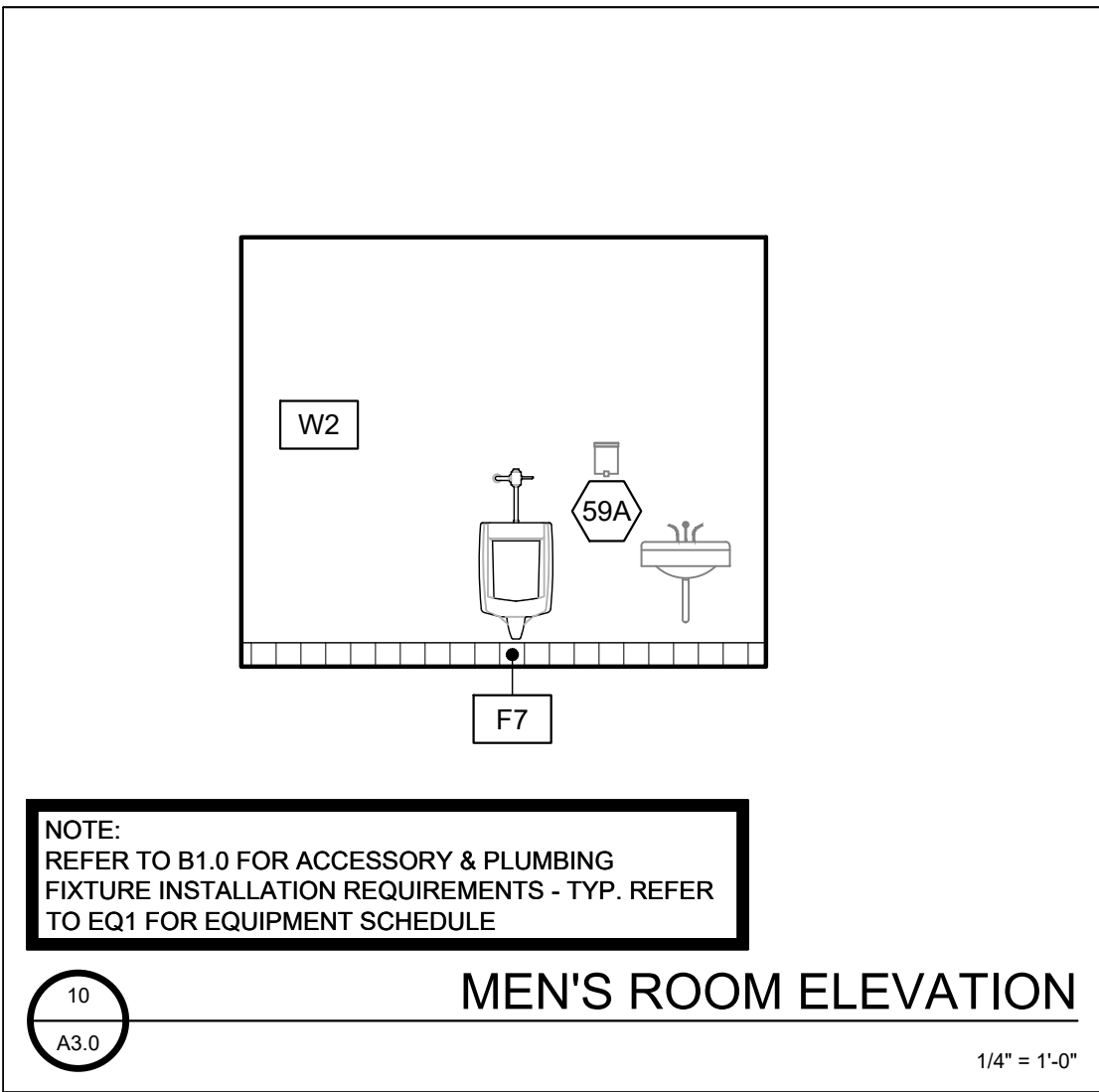
PROJECT LOCATION:

LEE'S SUMMIT, MO

SHEET NUMBER / TITLE:

**A2.0**

REFLECTED CEILING PLAN



CONSULTANT:

**WILKUS**  
ARCHITECTS

15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8850 / www.wilkusarch.com

CLIENT:

**WING-STOP**

15505 WRIGHT BROTHERS DRIVE  
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PROJECT INFORMATION:

**WING-STOP**

STORE NUMBER: GL#Y175  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:

**WILKUS**  
ARCHITECT

MATTHEW MICHAEL WILKUS  
A-2019000244  
EXPIRATION DATE: 12-31-21

06-16-21  
DATE

PROJECT NO.: 2021-0158  
DRAWN BY: NAV  
CHECKED BY: JSS

ISSUE: DATE:  
PERMIT & BID SET 06-16-21

REVISION: DATE:

PROJECT LOCATION:  
LEE'S SUMMIT, MO

SHEET NUMBER / TITLE:  
**A3.0**  
INTERIOR ELEVATIONS



HARDWARE SCHEDULE		
HARDWARE SET	DESCRIPTION	QTY.
1	NOTE: FIELD VERIFY EXISTING DOOR CONDITIONS AND REUSE IF ALLOWABLE  KEYED LOCK SIGN: "THESE DOORS TO REMAIN UNLOCKED WHILE BUSINESS IS OCCUPIED" CLOSER HINGES THRESHOLD PUSH/ PULL BAR WITH PADDLE HANDLE	1 EA  1 EA 1 EA 1 SET 1 EA 1 EA
2	DOUBLE ACTION KITCHEN HINGES REFER TO DETAIL 1/A4.0	1 SET
3	LOCKSET W/ LEVER HAND OR REPLACE CYLINDER EXTERIOR STRIKE GUARD PLATE VIEWER CLOSER THRESHOLD 36" HIGH 14 GA STEEL DIAMOND PLATE KICK PLATE ON INTERIOR SIDE	1 EA 1 EA 1 EA 1 EA 1 EA 1 EA
4	NOT USED	
5	HINGES PRIVACY LOCK SET LEVER HANDLE CLOSER SIGN "MEN" / "WOMEN" (DECOR BY OWNER) ACCESSIBLE SIGN "MEN" / "WOMEN" (BY CONTRACTOR) DOOR / WALL STOP - REFER TO A1.0 8" HIGH KICK PLATE (BRUSHED SS FINISH) ONE ON EACH SIDE	1 SET 1 EA 1 EA 1 EA 1 EA 1 EA

# HARDWARE NOTES

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1. ALL HARDWARE NEW AND EXISTING SHALL BE IN ACCORDANCE WITH LOCAL AND STATE ACCESSIBILITY STANDARDS, AND AMERICANS WITH DISABILITY STANDARDS.
2. A READILY VISIBLE, DURABLE SIGN IS POSTED ON THE EGRESS SIDE OR ADJACENT TO THE DOOR STATING, "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED".
3. EGRESS DOORS TO BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR ANY REQUIRED SPECIAL KNOWLEDGE OR EFFORT.
4. EGRESS DOOR LOCK AND LATCHES SHALL COMPLY WITH ALL LOCAL AND STATE CODE REQUIREMENTS.

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4. EGRESS DOOR LOCK AND LATCHES SHALL COMPLY WITH ALL LOCAL AND STATE CODE REQUIREMENTS.

NOT USED

MARK	SIZE	DESCRIPTION	FRAME	NOTES	RATING	HARDWARE
101	EXISTING	EXISTING ALUMINUM AND GLASS STOREFRONT	ALUM.	FIELD VERIFY EXISTING CONDITIONS	N/A	NUMBER 1
				USE EXISTING HARDWARE IF POSSIBLE		
104	CUSTOM	SALES COUNTER MILLWORK GATE	WOOD	SUPPLIED BY OWNER, INSTALLED BY G.C.	N/A	NUMBER 2
				-		
107	3'-0" x 7'-0" x 1 3/4"	NEW HOLLOW METAL (PAINTED)	METAL	PAINT INTERIOR SIDE P5	N/A	NUMBER 3
110	3'-0" x 7'-0" x 1 3/4"	NEW SOLID CORE WOOD (PAINT GRADE)	METAL	KNOCK-DOWN PRIMER GRADE FRAME	N/A	NUMBER 5
				PAINTED P4 ALL SIDES		
111	3'-0" x 7'-0" x 1 3/4"	NEW SOLID CORE WOOD (PAINT GRADE)	METAL	KNOCK-DOWN PRIMER GRADE FRAME	N/A	NUMBER 5
				PAINTED P4 ALL SIDES		

<p><b>FLOOR</b></p> <p>F1)    EXISTING CONCRETE SLAB TO BE   DYED: COLOR:DRIFTWOOD #1395</p> <p>F2)    ALTERNATE: 20"x20" CMC ANTWERP BROWN, W/ MAPEI ULTRACOLOR PLUS FA, 07 CHOCOLATE GROUT, TILE LAID DIAGONAL</p> <p>F3)    6x6 QUARRY TILE (HARD, SMOOTH UNDER ALL EQUIPMENT AND   WALKWAYS, NON ABSORBENT) CMC RED QUARRY TILE COVE BASE, CMC RED SMOOTH 6X6X1/2"QUARRY TILE, CMC RED ABRASIVE 6X6X1/2" QUARRY TILE,   W/ MAPEI KERAPOXY IEG (INDUSTRIAL EPOXY GROUT), 47 CHARCOAL GROUT</p> <p>F4)    CMC ANTWERP BROWN 6X12 COVE BASE, W/ MAPEI ULTRACOLOR PLUS FA 07 CHOCOLATE GROUT</p> <p>F5)    CMC RETRO BLACK 6X8 COVE BASE, W/ MAPEI ULTRACLOR PLUS FA 07 CHOCOLATE GROUT</p> <p>F6)    1X6 WOOD BASE - PAINT P4</p> <p>F7)    20"x20" CMC ANTWERP BROWN, W/ MAPEI ULTRACOLOR PLUS FA, 07 CHOCOLATE GROUT, TILE LAID DIAGONAL</p> <p>F7)    6x6 QUARRY TILE, CMC GRAY QUARRY TILE COVE BASE, W/ MAPEI KERAPOXY INDUSTRIAL EPOXY GROUT</p> <p><b>WALLS</b></p> <p>W1)    1X6 TONGUE &amp; GROOVE YELLOW PINE WITH CHAMFERED EDGES. 10'-12' LONG BOARDS - SANDED UP TO 220 GRIT. (1) COAT (MINWAX PERFORMANCE - SEMI TRANSPARENT STAIN FRUITWOOD SW3118 TO BE MIXED IN STORE) - (2) COATS OF MINWAX FAST DRYING POLYURETHANE CLEAR SATIN - PROVIDED &amp; INSTALLED BY CONTRACTOR - REFER TO 6/A3.1 FOR INSTALLATION DETAIL</p> <p>SATIN - PROVIDED &amp; INSTALLED BY CONTRACTOR</p> <p>* SEE BELOW FOR CALIFORNIA STAIN SPECS</p> <p>W2)    F.R.P. (FIBERGLASS REINFORCED PANELING) PEBBLED FINISH - #P199, COLOR: WHITE</p> <p>W3)    PLASTIC LAMINATE, MATTE SURFACE- #ES2003T, COLOR: SIENNA ESSENCE</p> <p>W4)    20x20 CMC ANTWERP BROWN - 07 CHOCOLATE GROUT</p> <p>W5)    NOT USED</p> <p>W6)    WALL SURFACE FINISH- LEVEL 03 TEXTURED FINISH- ORANGE PEEL</p> <p>W7)    WALL LEVEL 04 SMOOTH FINISH: SMOOTH SURFACE W/ NO TEXTURE</p> <p>W8)    STAINLESS STEEL WALL PANEL- CUSTOM PANEL: SMOOTH SURFACE, REFER TO SHEET EQ2 FOR LOCATION - PROVIDED BY HOOD VENDOR</p> <p>W9)    CORRUGATED METAL 1 1/4" X 1/4" PANEL PROFILE</p> <p>W10)    1X CHAIR RAIL- CUSTOM</p> <p>W11)    CMC MEZCALAS GREEN 1X1 GLOSSY MOSAIC, W/ MAPEI ULTRACOLOR PLUS FA, 93 WARM GRAY GROUT</p> <p>W12)    SCHLUTER STRIP: QUADEC-EB, BRUSHED STAINLESS STEEL</p> <p>* IN CALIFORNIA ONLY, THE STAIN SPECS ARE THE FOLLOWING:</p> <p>MINWAX WATER BASED WOOD FINISH, CLEAR TINT BASE, COLOR- COLONIAL PINE</p>	<p><b>FLOOR DYE</b></p> <p>SCOFIELD CONCRETE PRODUCTS/ 1-800-800-9900 FORMULA ONE LIQUID DYE CONCENTRATE SEALED WITH FINISH HARDENER: FORMULA ONE LITHIUM DENSIFIER. A CERTIFIED SCOFIELD INSTALLER IS RECOMMENDED. CONTACT CUSTOMER SERVICE FOR LOCAL INSTALLER AT THE NUMBER SPECIFIED ABOVE</p> <p>*        REFER TO THE ADDITIONAL CONCRETE FLOOR FINISH    NOTES.</p> <p><b>QUARRY TILE, WALL TILE &amp; TILE COVE BASE &amp; SETTING MATERIAL</b></p> <p>CREATIVE MATERIALS CORPORATION (CMC)</p> <p>MAPEI or equal</p> <p>AMY BURKE / 518-713-5386</p> <p>ABURKE@CREATIVEMATERIALSCORP.COM</p> <p><b>WOOD BASE TRIM</b></p> <p>LIGHTLY SAND W/ 220 GRIT SANDPAPER &amp; PAINT 'P4'</p> <p><b>FRP</b></p> <p>MARILITE / 330-343-6621</p> <p>FRP SHALL BE PROVIDED ON ALL WALLS AT FULL HEIGHT IN THE SALES, COOKING, PREPARATION, SCULLERY &amp; JANITOR AREAS. (ALSO IN OFFICE AREA IF APPLICABLE)</p> <p><b>WINDOW SHADES</b></p> <p>ROLL-A-SHADE</p> <p>TEL:951.245.5077    X 402</p> <p>ESTIMATES@ROLLASHADE.COM</p> <p>SHEER WEAVE 2390 (5%) V20 PEARL GRAY WITH DIGITALLY PRINTED WINGSTOP LOGO</p> <p><b>CORRUGATED METAL PANELS</b></p> <p>RANDAL RETAIL</p> <p>507 N. RADDANT RD.</p> <p>BATAVIA, IL 60510</p> <p>TYLER LOGAN</p> <p>tylerl@randalretail.com</p> <p>630-761-0400</p> <p>PANELS ARE TESTED FOR UL 790 CLASS A FIRE RESISTANCE    RATING AND UL 2218 CLASS 4 HAIL IMPACT RESISTANCE.</p> <p><b>PAINT</b></p> <p>SHERWIN WILLIAMS / 214-728-6696, REFERENCE PARENT CODE #3729</p> <p>REFER TO SHEET A3.0 FOR LOCATIONS</p> <p><b>WRI LIGHTING</b></p> <p>MELETIO LIGHTING</p> <p>JIM ELLIS</p> <p>JELLIS@METELIO.COM</p> <p>PH:    214-352-3900</p> <p><b>GREASE INTERCEPTOR - NATIONAL ACCOUNT INFORMATION</b></p> <p>SCHIER NATIONAL STRATEGIC PRICING AGREEMENT #001078</p> <p>PLEASE CONTACT :</p> <p>SEAN MOLEN - NATIONAL ACCOUNTS MANAGER</p> <p>SEAN.MOLEN@SCHIERPRODUCTS.COM</p> <p>PH:    816-506-3203</p>
<p><b>CEILING</b></p> <p>C1)    2X2 LAY-IN CEILING TILES W/ PRELUDE GRID SYSTEM- FINE FISSURED #1728 COLOR: BLACK W/ BLACK GRID; OR APPROVED EQUAL</p> <p>C2)    2X4 LAY-IN CEILING TILES W/ PRELUDE PLUS GRID SYSTEM- CLEAN ROOM VL #870, COLOR: WHITE; OR APPROVED EQUAL</p> <p>C3)    GYP. BD. - PAINTED W7, P5</p> <p><b>PAINT SCHEDULE</b></p> <p>P1)    COLOR: CRAFTSMAN BROWN , COLOR NO: SW 2835, PROMAR 200 ZERO VOC SEMI-GLOSS</p> <p>P2)    COLOR: WINGSTOP BRICK RED, COLOR NO: CUSTOM, PROMAR 200 ZERO VOC SEMI-GLOSS</p> <p>P3)    COLOR: PAVILION BEIGE, COLOR NO: SW 7512, PROMAR 200 ZERO VOC SEMI-GLOSS</p> <p>P4)    COLOR: 2016 WINGSTOP GREEN, PROMAR 200 ZERO VOC SEMI-GLOSS</p> <p>P5)    COLOR: EXTRA WHITE, COLOR NO: SW 7006, PROMAR 200 ZERO VOC SEMI-GLOSS</p>	
<p><b>ADDITIONAL MATERIAL FINISH NOTES:</b></p> <p>1. ALL FINISH MATERIALS TO COMPLY W/ THE FLAME SPREAD CLASSIFICATION RATING AS SPECIFIED IN THE BUILDING CODES INDICATED ON THE COVER SHEET, A0.0</p>	
<p><b>ADDITIONAL CONCRETE FLOOR FINISH NOTES:</b></p> <p>1.    THE G.C. SHALL INSPECT THE EXIST. FLOOR PRIOR TO ANY INSTALLATION PROCEDURES &amp; NOTIFY WINGSTOP OF ANY SERIOUS DEFECTS W/ THE EXIST. FLOOR THAT WOULD WARRANT THE INSTALLATION OF A FLOOR LEVELING COMPOUND. THE LEVELING COMPOUND SHALL BE NOTED AS AN ALTERNATE BID TO THE CONSTRUCTION CONTRACTOR.</p> <p>2.    MECHANICALLY GRIND FLOOR &amp; EDGES W/ 50-HYBRID DIAMONDS TO BEGIN PROCESS OF PROFILING THE CONC.</p> <p>3.    CLEAN &amp; PATCH FLOOR.</p> <p>4.    MECHANICALLY GRIND FLOOR &amp; EDGES W/ 100-HYBRID DIAMONDS TO BEGIN THE PROCESS OF PROFILING THE CONC.</p> <p>5.    MASK OFF WALLS AND APPLY SCOFIELD FORMULA ONE LIQUID DYE CONCENTRATE TO FLOOR.</p> <p>6.    APPLY SCOFIELD FORMULA ONE LITHIUM DENSIFIER TO FLOOR.</p> <p>7.    MECHANICALLY GRIND FLOOR &amp; EDGES W/ 400/800-HYBRID DIAMONDS TO BEGIN PROCESS OF POLISHING THE CONC.</p> <p>8.    APPLY (1) ONE COAT OF SCOFIELD CONCRETE GUARD - BURNISH FLOOR W/ 1500 GRIT DIAMOND PADS.</p> <p>9.    APPLY SECOND COAT OF SCOFIELD FORMULA ONE GUARD &amp; BURNISH W/ 3000 GRIT DIAMOND PADS.</p>	
<p><b>ADDITIONAL QUARRY TILE FINISH NOTES:</b></p> <p>1. EDGE PROFILE @ QUARRY TILE - REFER TO DETAIL 5/A1.1</p>	

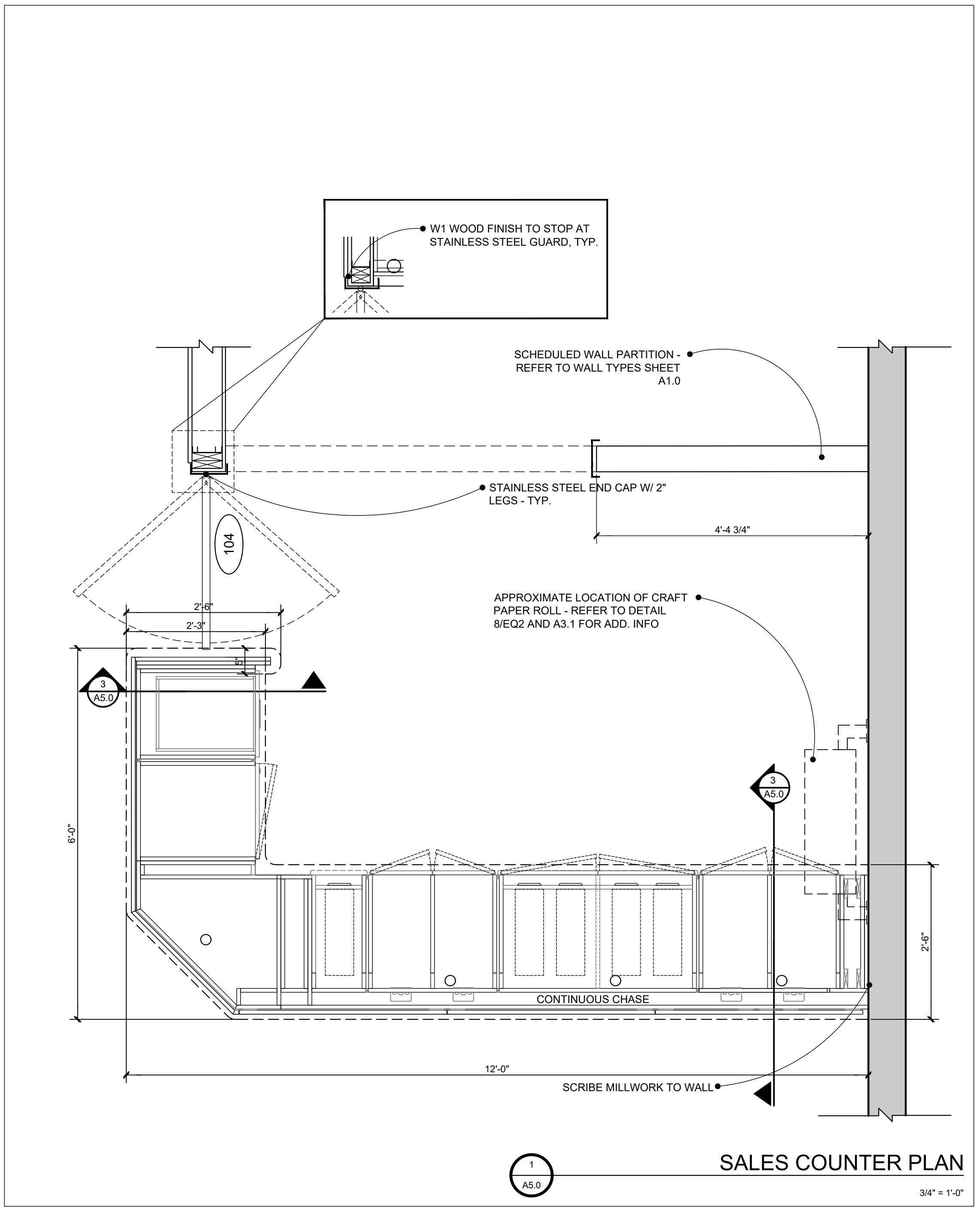
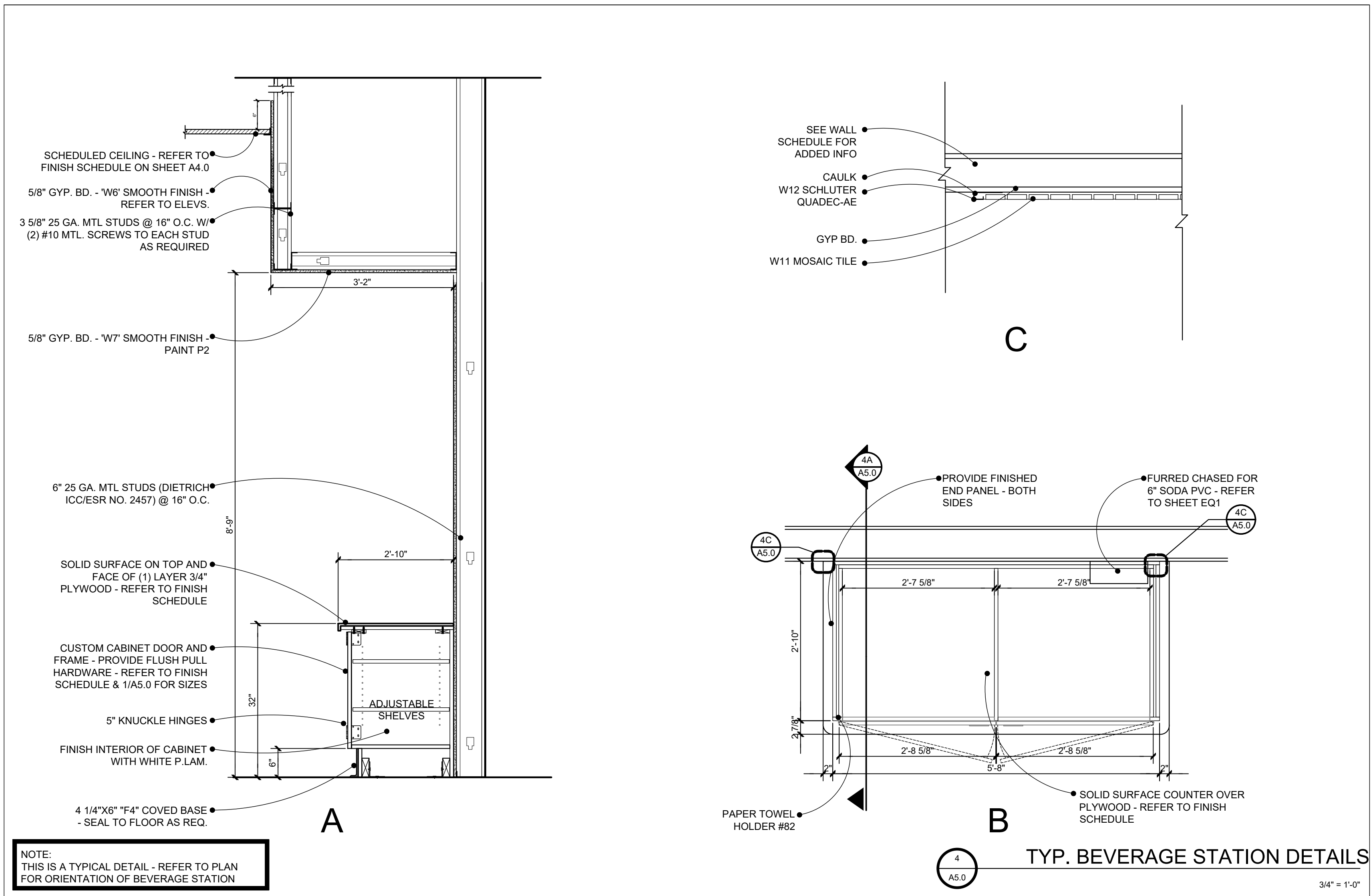
PAINT  
SHERWIN WILLIAMS / 214-728-6696, REFERENCE PARENT CODE #3729  
REFER TO SHEET A3.0 FOR LOCATIONS

WRI LIGHTING  
MELETIO LIGHTING  
JIM ELLIS  
JELLIS@METELIO.COM  
PH: 214-352-3900

GREASE INTERCEPTOR - NATIONAL ACCOUNT INFORMATION  
SCHIER NATIONAL STRATEGIC PRICING AGREEMENT #001078  
PLEASE CONTACT :  
SEAN MOLEN - NATIONAL ACCOUNTS MANAGER  
SEAN.MOLEN@SCHIERPRODUCTS.COM  
PH: 816-506-3203

# A4.0

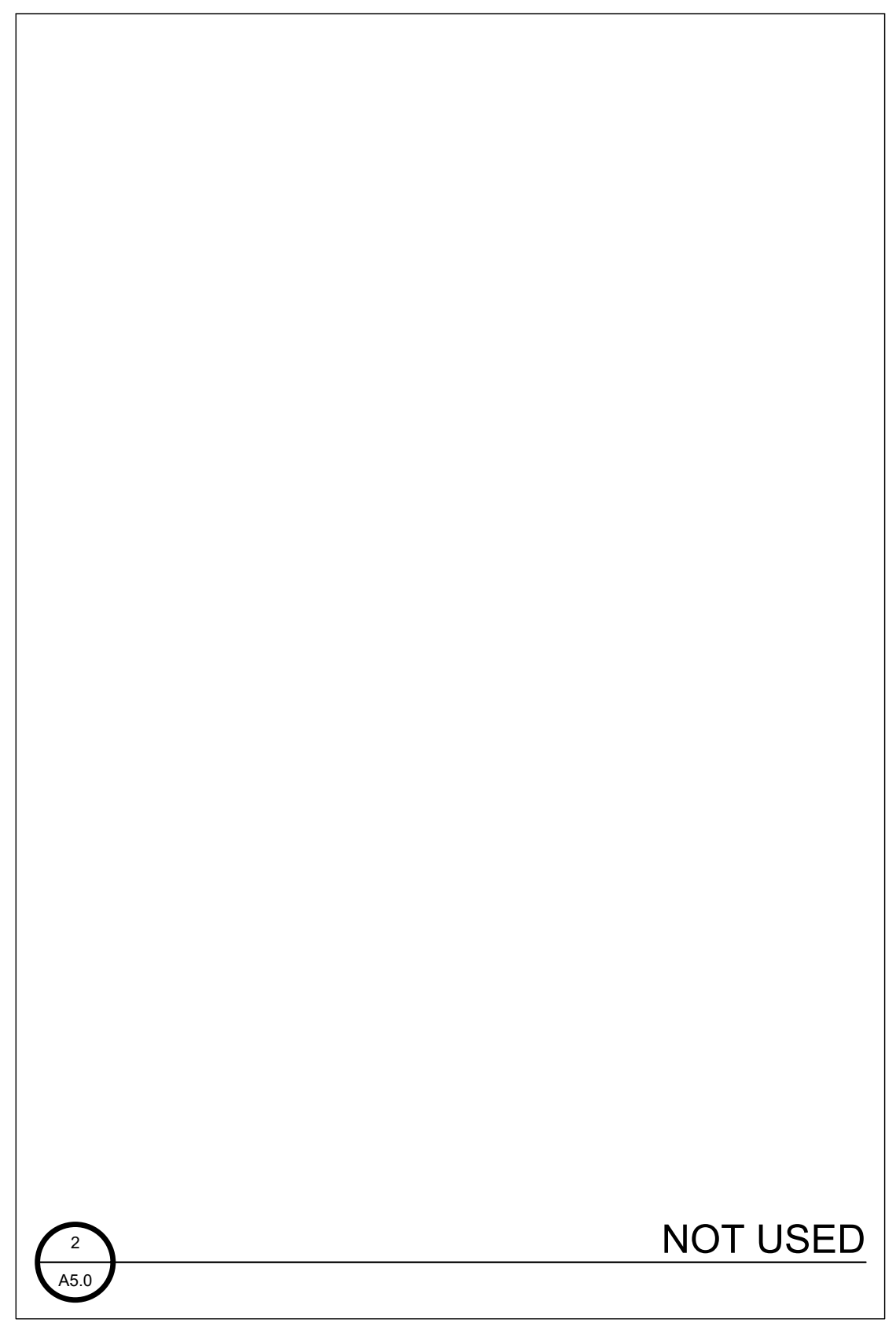
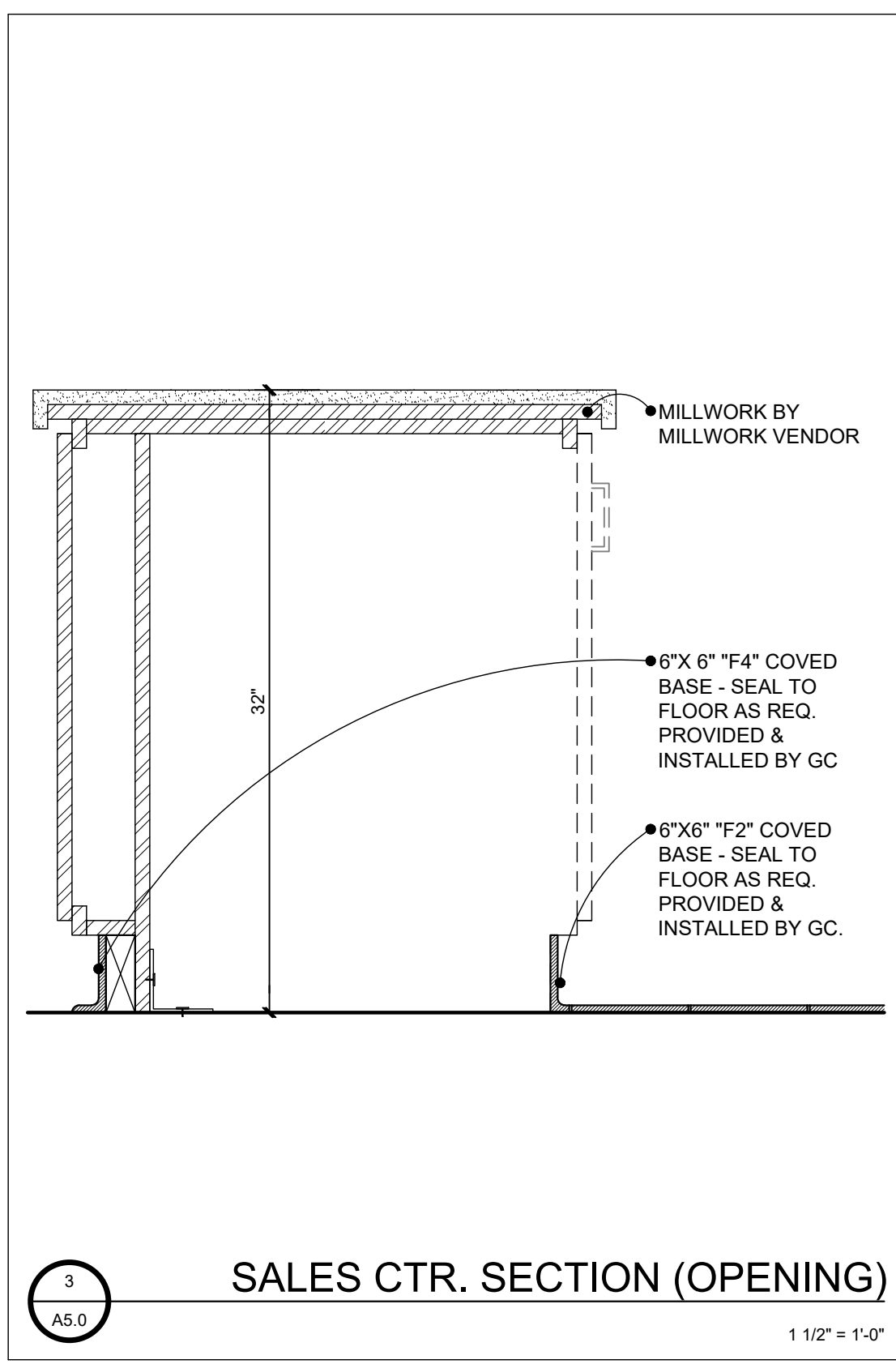
FINISH / DOOR / HARDWARE



### SALES COUNTER NOTES

1. REFER TO MANUFACTURER'S CUT-SHEETS FOR ALL EQUIPMENT PRIOR TO ANY CUT-OUTS FOR DATA, ELECTRICAL, SODA LINES, RECESSED CUP HOLDERS, OR ANY OTHER APPLICABLE ITEMS.

2. MILLWORK S.S. & SOLID SURFACE WILL BE PART OF THE MILWORK FIXTURE PACKAGE BY EQUIP VENDOR, GC TO ASSEMBLE, SEAM COUNTER TOP AND INSTALL



CONSULTANT:

**WILKUS ARCHITECTS**

15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8850 / www.wilkusarch.com

CLIENT:

**WING-STOP**

15505 WRIGHT BROTHERS DRIVE  
ADDISON, TX 75001  
TELEPHONE: (972) 686-6500  
FAX: (972) 686-6502

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PROJECT INFORMATION:

**WING-STOP**

STORE NUMBER: GL#Y175  
HALBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:

**WILKUS ARCHITECT**

MATTHEW MICHAEL WILKUS  
A-2019000244  
EXPIRATION DATE: 12-31-21

06-16-21  
DATE

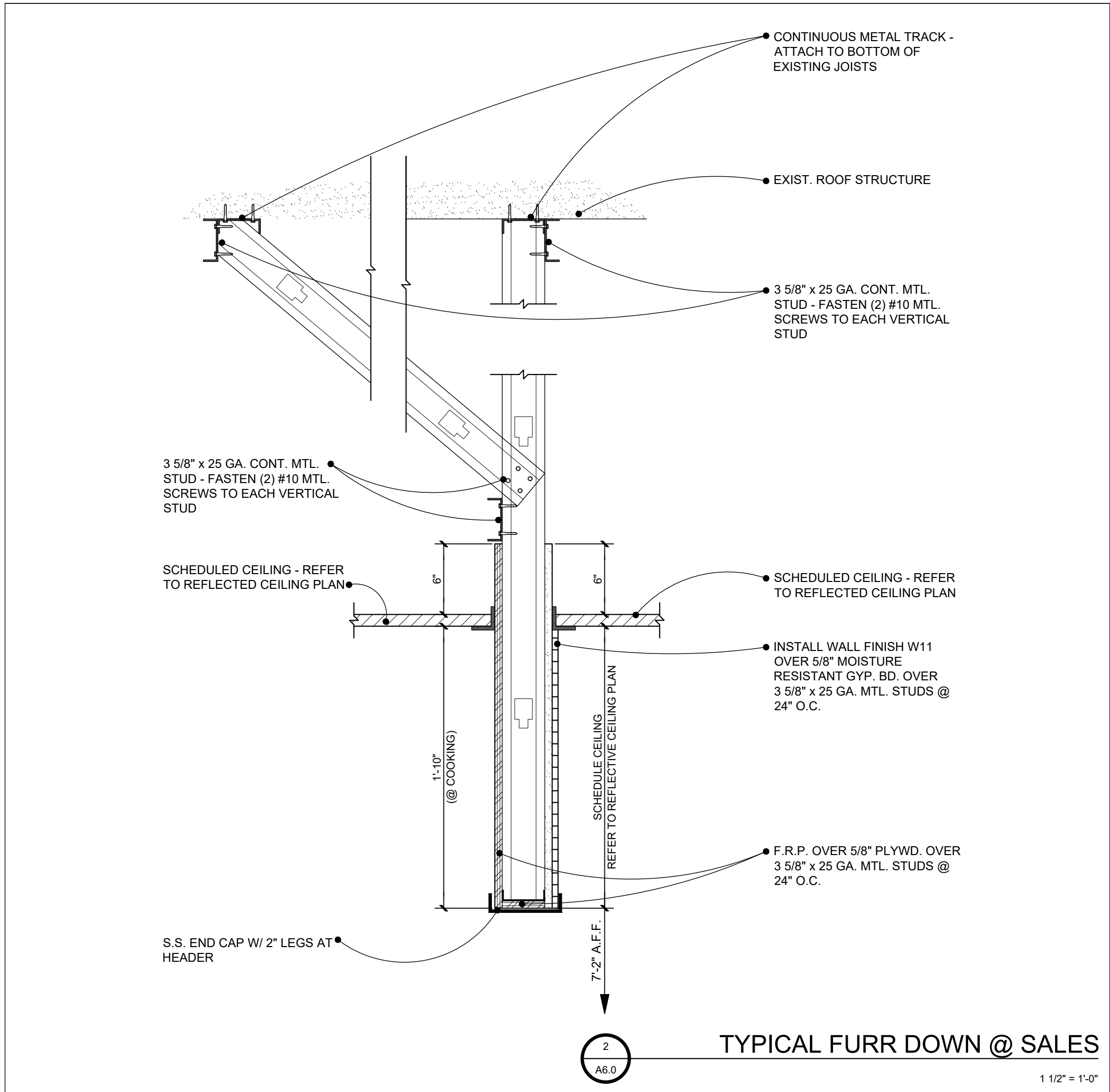
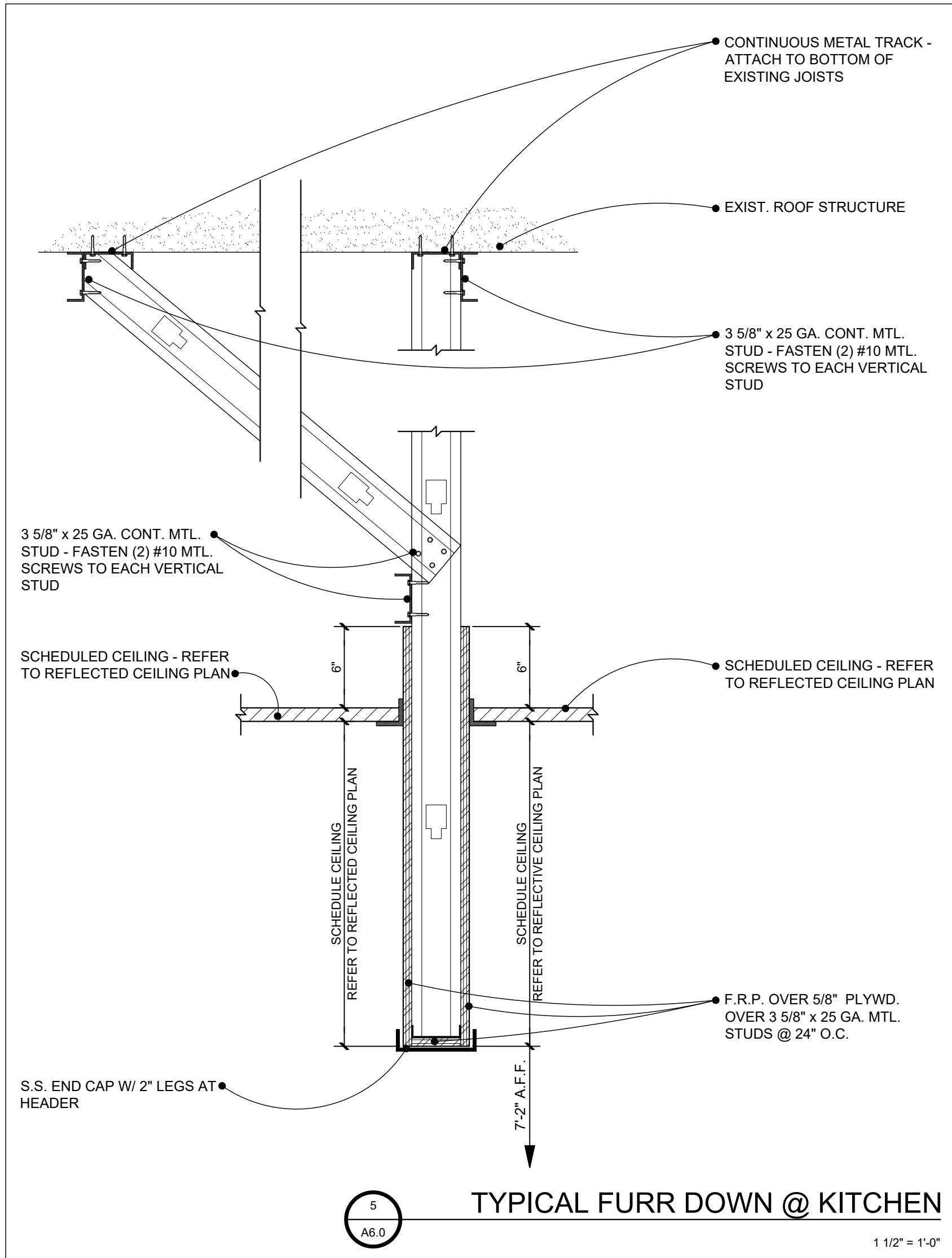
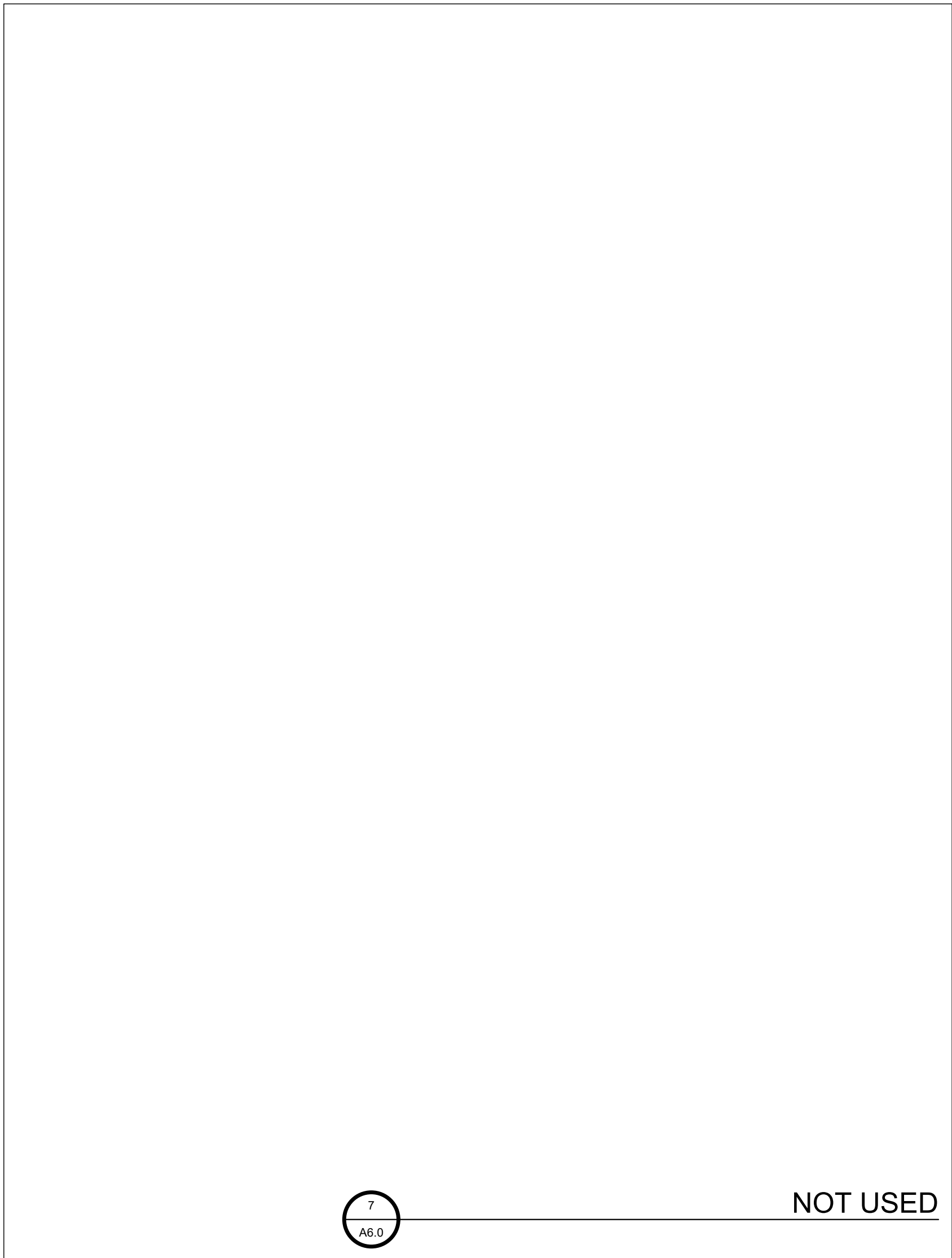
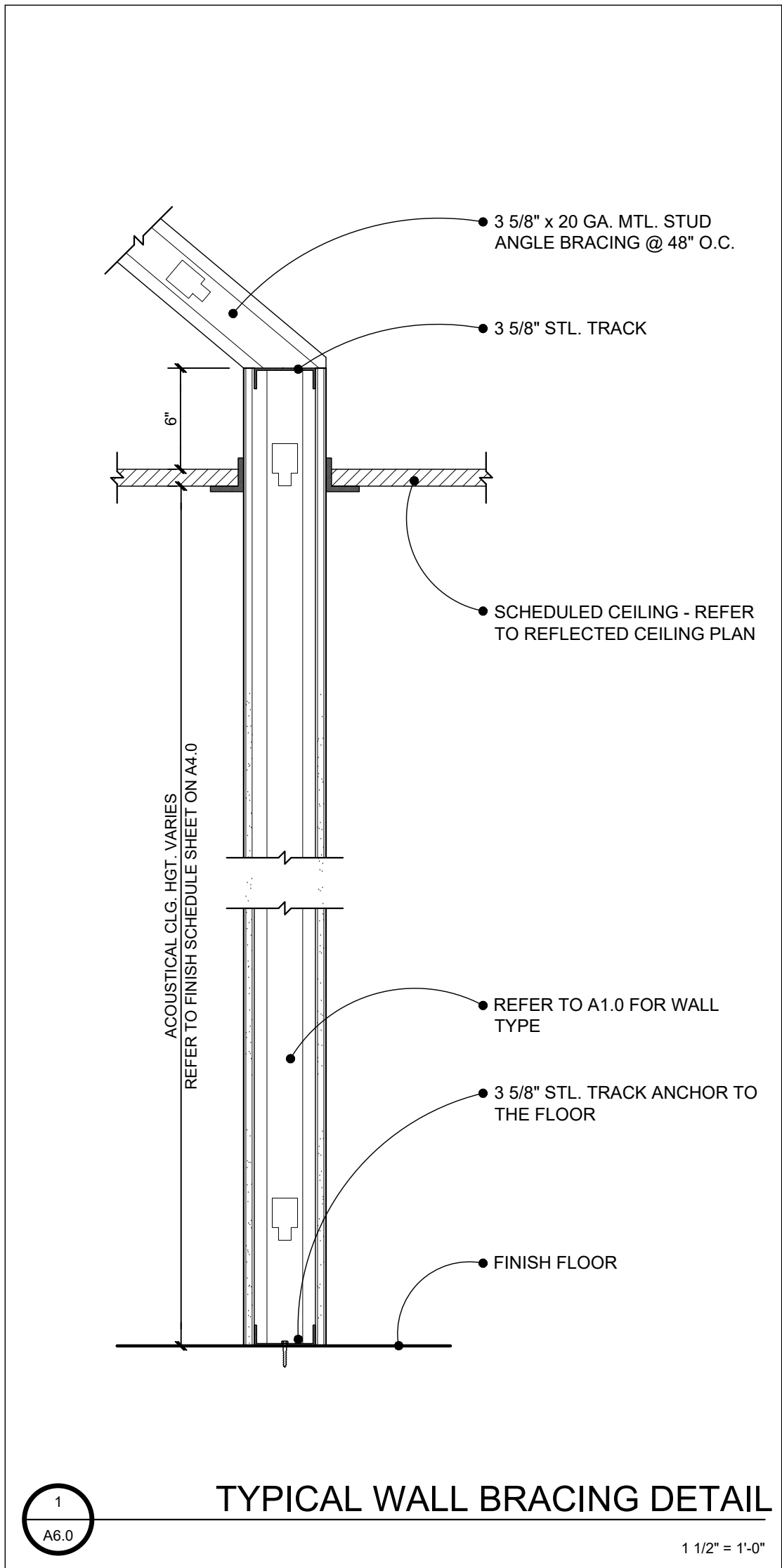
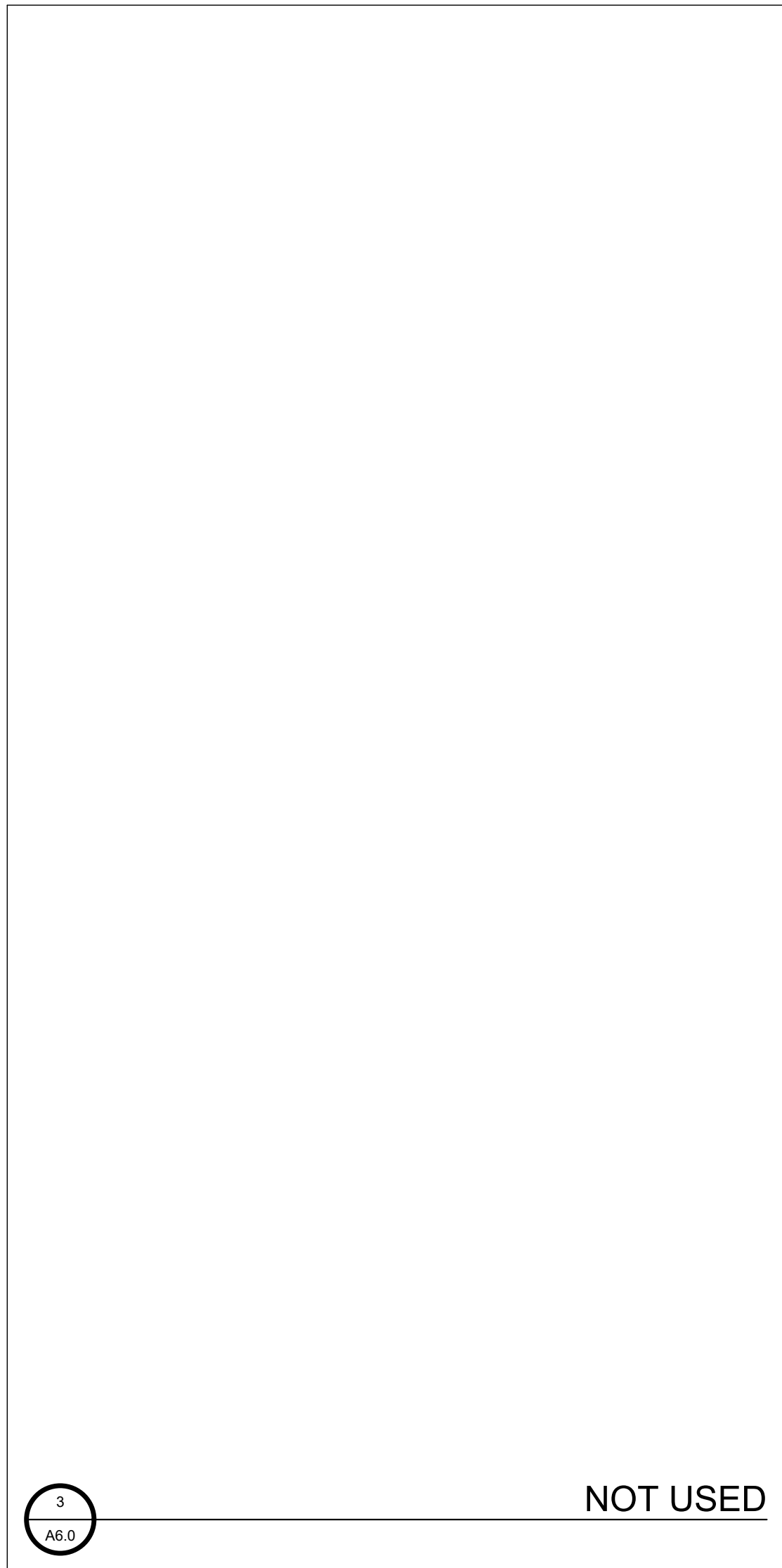
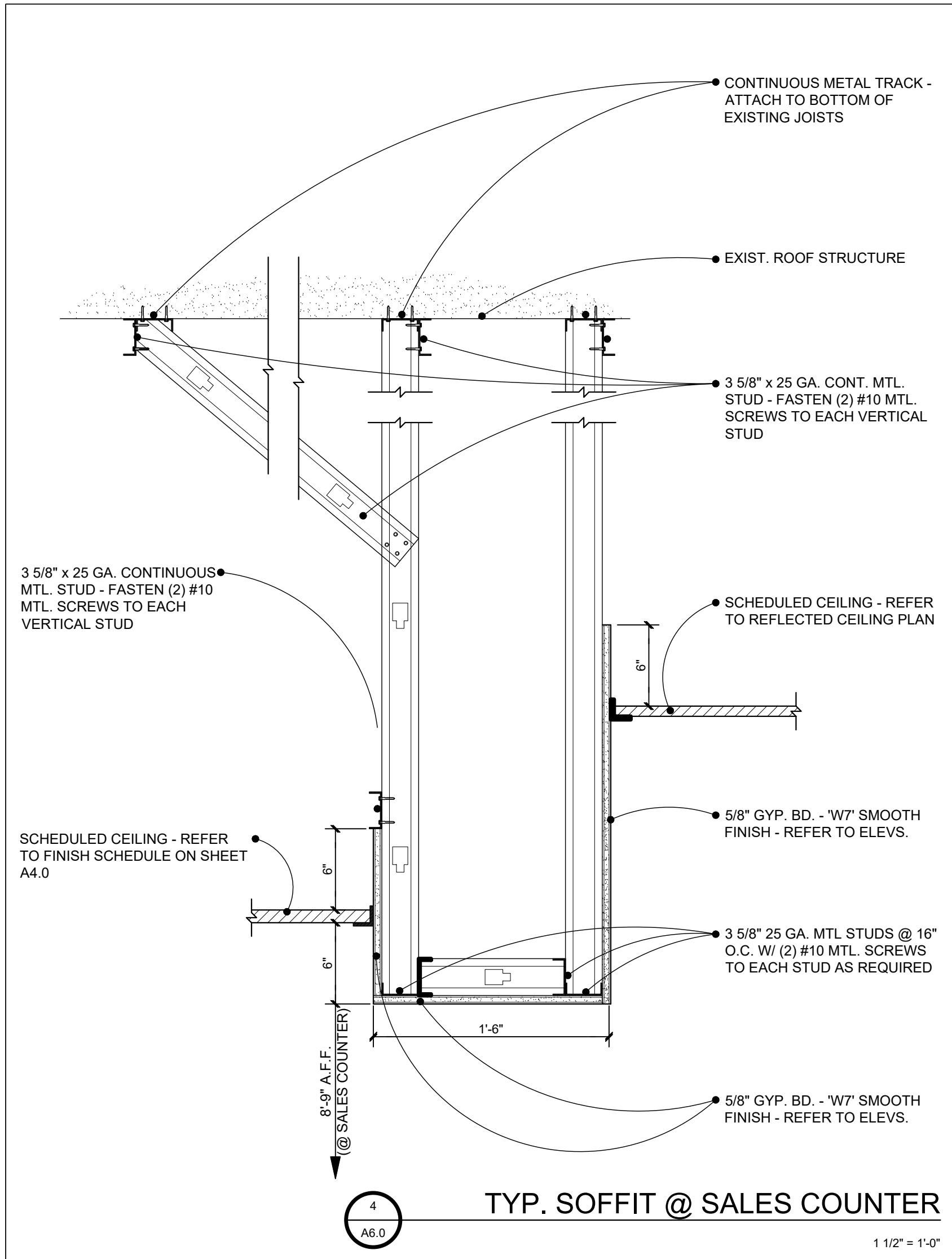
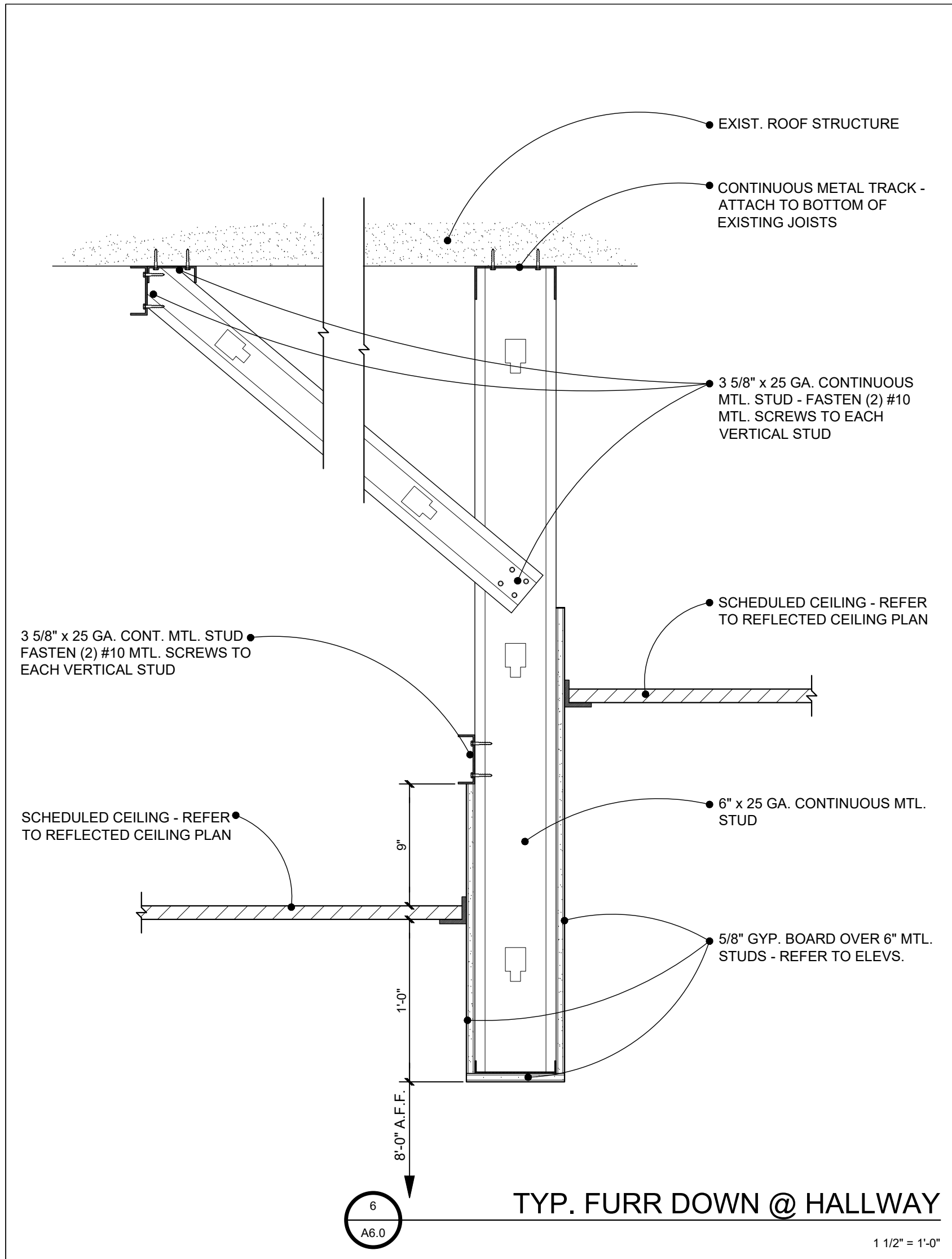
PROJECT NO.: 2021-0158  
DRAWN BY: NAV  
CHECKED BY: JSS

ISSUE: DATE:  
PERMIT & BID SET 06-16-21

REVISION: DATE:

PROJECT LOCATION:  
LEE'S SUMMIT, MO

SHEET NUMBER / TITLE:  
**A5.0**  
SALES COUNTER PLAN/DETAILS



CONSULTANT:



15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8850 / www.wilkusarch.com

CLIENT:



15505 WRIGHT BROTHERS DRIVE  
ADDISON, TX 75001  
TELEPHONE: (972) 686-6500  
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DISCLAIMER:

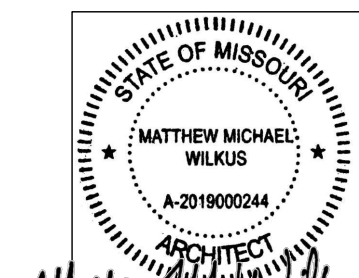
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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: GL#Y175  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



MATTHEW M. WILKUS, ARCHITECT  
LICENSE NUMBER: 2019000244  
EXPIRATION DATE: 12-31-21

06-16-21  
DATE

PROJECT NO.: 2021-0158  
DRAWN BY: NAV  
CHECKED BY: JSS

ISSUE: DATE:  
PERMIT & BID SET 06-16-21

REVISION: DATE:

PROJECT LOCATION:  
LEE'S SUMMIT, MO

SHEET NUMBER / TITLE:  
**A6.0**  
WALL SECTIONS & DETAILS

EQUIP. LEGEND & AREA OF RESPONSIBILITY									
ITEM	DESCRIPTION	MODEL	NSF	SUPPLIER	INSTALLATION	COORD./SUPERVISED	REMARKS		
				OWNER	CONT.	OWNER	CONT.		
01	DOUBLE GLASS DOOR MERCHANDISER	GDM-33-HC-LD	X	X	-	-	X	-	115 VOLTS, 6.3 AMPS / WITH CASTORS / NOTE 09
02	NOT USED	-	-	-	-	-	-	-	-
03	SANDWICH/SALAD UNIT	SR48A-8	X	X	-	-	X	-	115 VOLTS, 11.8 AMPS / WITH INTEGRAL SHELVING #38 / NOTE 09
04	1-DR. REACH-IN REFRIGERATOR	CR1S-FS	X	X	-	-	X	-	115 VOLTS, 4.0 AMPS / WITH CASTORS / NOTE 09
05	48" WOODEN BENCH	CUSTOM	N/A	X	-	X	-	-	-
06	HOOD FIRE ANSUL SUPPRESSION SYSTEM	CUSTOM	N/A	X	-	X	-	X	REF. TO HOOD DRAWINGS FIRE SUPPRESSION PERMITTED/ INSTALLED BY CAPTIVE AIRE
07	S.S. 3-COMPARTMENT SINK, 96"L.	CUSTOM	X	X	-	-	X	-	WITH (2) 18" DRAIN BOARDS, (2) 8" SIDE SPLASHES VERIFY W/ LOCAL JURISDICTIONS FOR DRAIN BOARD & BOWL SIZE.
08	MOP SERVICE BASIN	MSB-2424	X	-	X	-	X	-	WITH BUILT-IN ANTI SIPHON DEVICE
09	S.S. WORK TABLE 30"D. x 96"L.	CUSTOM	X	X	-	-	X	-	WITH DRAWER / WITH INTEGRAL SHELVING #38 / WITH CASTORS
10	S.S. WORK TABLE 30"D. x 96"L.	CUSTOM	X	X	-	-	X	-	WITH UNDERSHELF / WITH INTEGRAL SHELVING #38
11	S.S. WORK TABLE 30"D. x 18"L.	CUSTOM	X	X	-	-	X	-	24" TALL
12	HAND SINK W/ SIDE SPLASH (R & L)	7-PS-66	X	X	-	-	X	-	WITH (2) 8" HIGH SIDE SPLASHES
12B	HAND SINK W/ SIDE SPLASH (R & L)	PBHS-WK/VMB-SSP-X	X	X	-	-	X	-	WITH (2) 8" HIGH SIDE SPLASHES
13	POTATO SLICER	300 SERIES	X	X	-	-	X	-	WITH SHOVEL LEVER/INSTALL 2" ABOVE SINK BACK SPLASH
14	ICE MACH. W/ STORAGE BIN	KM-901MAH	X	X	-	-	X	-	208 VOLTS, 13 AMPS / S.B. MODEL: B-500 / WITH 6" HIGH LEGS
14A	ICE MACH. FILTER	CUSTOM	X	X	-	-	X	X	SUPPLIED BY EQUIPMENT VENDOR
15	TANKLESS WATERHEATER	RHEEM	X	-	X	-	X	-	REFER TO PLUMBING PLANS FOR SPECIFICATIONS
16	SWING GATE	CUSTOM	-	X	-	-	X	-	-
17	NOT USED	-	-	-	-	-	-	-	-
18	SOLSTICE SUPREME GAS FRYER	SSH75	X	X	-	-	X	-	105,000 BTU, 75 LBS (OIL CAPACITY) / WITH 6" CASTORS
19	SOLSTICE SUPREME GAS FRYER	SSH55	X	X	-	-	X	-	80,000 BTU, 40-50 LBS (OIL CAPACITY) / WITH 6" CASTORS
20	COOKING & HOLDING TIMER	U160DKB7503	X	X	-	-	X	-	-
21	SOLSTICE SUPREME FILTER	SFSH75	X	X	-	-	X	-	120 VOLTS, 6.2 AMPS / ITEM IS AN INTEGRAL PART OF THE FRYERS
22	STEAM TABLE PAN RACK & COVER	1509/PRC 12	X	X	-	X	-	X	QUANTITY: 02 / NOT INDICATED ON PLAN
23	NOT USED	-	-	-	-	-	-	-	-
24	NOT USED	-	-	-	-	-	-	-	-
25	24" x 30" TABLE & BASE	CUSTOM	N/A	X	-	-	X	-	-
26A	30" x 42" TABLE & BASE	CUSTOM	N/A	X	-	-	X	-	-
26B	ACCESSIBLE 30" x 42" TABLE & BASE	CUSTOM	N/A	X	-	-	X	-	-
27	WOOD CHAIR	6305P	N/A	X	-	-	X	-	-
28	ICED TEA BREWER & URNS	CUSTOM	X	X	-	X	-	X	120 VOLTS, 13.8 AMPS
28A	ICED TEA URNS	CUSTOM	X	X	-	X	-	X	-
29	SUM-JIM TRASH RECEPTACLE	832354	X	X	-	-	X	-	-
30	SANITARY NAPKIN RECEPTACLE	1102	X	X	-	-	X	-	-
31	TRASH RECEPTACLE	MODEL VARIES	X	X	-	-	X	-	-
32	BEVERAGE / CONDIMENTS COUNTER	CUSTOM	N/A	X	-	-	X	-	PROVIDED OWNER AND INSTALLED BY CONTRACTOR
33	SHORTENING SHUTTLE	SS-611-T	X	X	-	-	X	-	ITEM NUMBER NOT INDICATED ON EQUIPMENT PLAN
34	6-VALVE SELF-SERVE SODA SYSTEM	DURAFLEX 150	X	X	-	X	-	X	115 VOLTS, 3 AMPS / 6-VALVE
34A	LEGACY DISPENSER FILTER	N/A	N/A	X	-	X	-	X	SUPPLIED BY COCA COLA PRODUCTS
35	CARBONATOR	N/A	N/A	X	-	X	-	X	WITH 6" HIGH LEGS
36	BIB FLEX RACK SYSTEM	44239	X	X	-	-	X	-	-
37	CO2 SYSTEM	CARBO-MIZER 450	N/A	X	-	X	-	X	-
38	SOLID SHELVES	CUSTOM	X	X	-	-	X	-	2 ROWS INTEGRAL W/ #03 & 10 REFER TO EQ.2 FOR HEIGHT
39	DRY STORAGE SHELVING	EG01.00	X	X	-	-	X	-	REFER TO EQUIPMENT PLAN FOR SIZES AND NUMBER OF TIERS
40	DUNNAGE RACK (PRODUCE STAND)	DR362012	X	X	-	-	X	-	-
41	SCULLERY SHELVING (2 ROWS)	EG01.00	X	X	-	-	X	-	2 ROWS OF 18" x 48" (TOP), 2 ROWS OF 18" x 48" (BOTTOM)
42	12"-0" TYPE 1 EXHAUST HOOD	ND SERIES	X	X	-	-	X	-	NOTES 05, 06, 07- VERIFY TYPE, SIZE & SERIES AGAINST HOOD DRAWINGS
43	S.S. WORK TABLE 28" (FRY TABLE)	CUSTOM	X	X	-	-	X	-	-
44	BROOM & MOP RACK	40731	X	X	-	-	X	-	-
45	FIRE EXTINGUISHER	REFER NOTE 03	N/A	-	X	-	X	-	CLASS: K (AT HOOD), CLASS: 2A10BC (STANDARD)
46	POINT-OF-SALE SYSTEM	RZ-X750	N/A	X	-	X	-	X	-
47	SMARTRACK 1/2U WALL-MOUNT RACK	SRW9U	X	X	-	X	-	X	NOTE 11
48	POINT-OF-SALE EQUIPMENT	N/A	N/A	X	-	X	-	X	WALL MOUNTED MANAGER STATION
49	SAFE & STAND	P060413-03	N/A	X	-	X	-	X	MOUNTED ON BASE AS REQUIRED / COORDINATE TYPE WITH OWNER
50	STEREO (AMP.) RECEIVER	MODEL VARIES	N/A	X	-	X	-	X	PROVIDED AND INSTALLED BY OWNER
51	SATELLITE RECEIVER	MODEL VARIES	N/A	X	-	X	-	X	PROVIDED AND INSTALLED BY OWNER
52	NOT USED	-	-	-	-	-	-	-	-
53	NOT USED	-	-	-	-	-	-	-	-
54	POS COUNTER	CUSTOM	N/A	X	-	-	X	-	PROVIDED OWNER AND INSTALLED BY CONTRACTOR
55	POS SHROUD	CUSTOM	N/A	-	-	-	-	-	PROVIDED OWNER AND INSTALLED BY CONTRACTOR
56	NOT USED	-	-	-	-	-	-	-	-
57	EXTERIOR BUILDING SIGNAGE 'WINGSTOP'	CUSTOM	N/A	X	-	X	-	X	PROVIDED AND INSTALLED BY THE SIGN VENDOR.
58	T.V., WALL BRACKET & STAND	MODEL VARIES	N/A	X	-	-	X	-	-
59A	HAND SOAP DISPENSER	S4025	N/A	X	-	-	X	-	-
59B	NOT USED	-	-	-	-	-	-	-	-
60A	NOT USED	-	-	-	-	-	-	-	-
60B	PAPER TOWEL DISPENSER	T1290WS	N/A	X	-	-	X	-	-
61	NOT USED	-	-	-	-	-	-	-	-
62	36" x 1 1/2" GRAB BAR	B-6106	N/A	-	X	-	X	-	-
63	42" x 1 1/2" GRAB BAR	B-6106	N/A	-	X	-	X	X	-
64	TOILET PAPER DISPENSER	8735020	N/A	X	-	-	X	X	-
65	GREASE INTERCEPTOR	MODEL VARIES	N/A	-	X	-	X	-	REFER PLUMBING DRAWINGS FOR SPECIFICATIONS
66	NOT USED	-	-	-	-	-	-	-	-
67	WALL MOUNTED MIXING FAUCET	CUSTOM	X	X	-	-	X	-	-
68	WIRE WALL SHELVING	METRO	X	X	-	-	X	-	REFER TO EQ1 FOR SIZE
69	COOLER DUNNAGE RACK	DR362012	X	X	-	-	X	-	REFER TO EQUIPMENT PLAN FOR SIZES & MOUNTING HEIGHTS
70	COOLER SHELVING	EG01.00	X	X	-	-	X	-	5 TIERS HIGH, REFER TO EQUIPMENT PLAN FOR SIZES
71	WALK-IN COOLER	CUSTOM	X	X	-	-	X	-	NOTE 09 / WSPROTO-1
72	STOREFRONT VINYL GRAPHICS	CUSTOM	N/A	X	-	-	X	-	-
73	KNIFE HOLDER	2918P	X	X	-	-	X	-	-
74	TO-GO RACK	CUSTOM	X	X	-	-	X	-	18x36, 4 TIER WITH SOLID SHELVES AND 6" CASTERS
75	TICKET RAIL	X	X	-	-	-	X	-	-
76	HIGH CHAIR	CHH-104	N/A	X	-	-	X	-	-
77	S.S. 2-COMPARTMENT SINK, 60"L.	CUSTOM	X	X	-	-	X	-	WITH (1) 18" DRAIN BOARDS, (2) 8" SIDE SPLASHES WITH OPTIONAL LID COVERS. VERIFY W/ LOCAL JURISDICTIONS FOR DRAIN BOARD & BOWL SIZE.
78	DRY STORAGE WIRE SHELVING	EG01.00	X	X	-	-	X	-	SINGLE SHELF ABOVE PREP SINK
79	COMMERCIAL MOP BUCKET	7580-88	N/A	X	-	-	X	-	REFER TO EQUIPMENT PLAN FOR SIZES
80A	24" OFFICE BAR STOOL	4202P	N/A	X	-	-	X	-	ITEM NOT INDICATED ON EQUIPMENT PLAN
80B	NOT USED	-	-	-	-	-	-	-	-
81	CONDIMENT DISPENSER	CUSTOM	X	X	-	-	X	-	-
82	NOT USED	-	-	-	-	-	-	-	-
83	NOT USED	-	-	-	-	-	-	-	-
84	REACH-IN FREEZER	CF1S-FS	X	X	-	-	X	-	115 VOLTS, 9.0 AMPS / WITH CASTORS / NOTE 09
85	NOT USED	-	-	-	-	-	-	-	-
86	S.S. STAND	SK2731U	X	X	-	-	X	-	OVEN STAND WITH WHEELS
87	CONVECTION OVEN	E31D4	X	X	-	-	X	-	208V, 14 AMPS / NEMA 6-15P CORDSET FITTED / NOTE 10
88	NOT USED	-	-	-	-	-	-	-	-
89	NOT USED	-	-	-	-	-	-	-	-
90	NOT USED	-	-	-	-	-	-	-	-
91	VERTICAL GRAB BAR	B-6106	N/A	-	X	-	X	-	-
92	MANAGER'S DESK	CUSTOM	X	X	X	-	X	-	COORDINATE WITH EQUIPMENT MANUFACTURER
93	NOT USED	-	-	-	-	-	-	-	-
94	NOT USED	-	-	-	-	-	-	-	-
95	NOT USED	-	-	-	-	-	-	-	-
96	NOT USED	-	-	-	-	-	-	-	-
97	NOT USED	-	-	-	-	-	-	-	-
98	STAINLESS STEEL CORNER GUARD	N/A	-	X	-	-	X	-	-
99	STAINLESS STEEL END CAP	N/A	-	X	-	-	X	-	-
100	NOT USED	-	-	-	-	-	-	-	-
101	DARPRO COOKING OIL COLLECTION	B.O.S.S.	X	X	-	-	X	-	-

EQUIPMENT LEGEND NOTES:

1. FLAT PANEL TV DISPLAY WALL MOUNTING BRACKET & MONITOR BRAND SELECTION TO BE DETERMINED BY OWNER. CONTRACTOR TO COORDINATE ITEM #58 WITH OWNER FOR INSTALLATION.

2. THE OWNER SHALL PROVIDE WALL MOUNTED DECOR ITEMS. THESE ITEMS ARE TO BE INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE THE DELIVERY AND INSTALLATION OF ALL DECOR ITEMS WITH THE OWNER. REFER TO A3.1

3. THE CONTRACTOR SHALL VERIFY WITH ALL LOCAL AGENCIES QUANTITY AND LOCATION OF ALL FIRE EXTINGUISHERS.

4. ALL KITCHEN EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE NATIONAL SANITATION FOUNDATION (NSF).

5. THE EXHAUST HOOD, EXHAUST FAN, EXHAUST DUCT, EXHAUST DUCT FIRE WRAP AND MAKE-UP AIR FAN SHALL BE SUPPLIED BY THE OWNER AND INSTALLED BY THE CONTRACTOR. THE MAKE-UP AIR DUCT SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.

6. THE EXHAUST HOOD FIRE SUPPRESSION SYSTEM SHALL BE SUPPLIED AND INSTALLED BY THE OWNER. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE EMERGENCY GAS SHUT-OFF VALVE

7. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE THE DELIVERY OF ALL KITCHEN EQUIPMENT WITH THE EQUIPMENT VENDOR.

8. THE CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS REQUIRED FOR THE OWNER PROVIDED SIGNAGE.

9. ALL SPECIFIED REFRIGERATION UNITS SHALL BE SELF-CONTAINED AND SELF EVAPORATING.

10. NO GREASE LADEN FOODS SHALL BE PREPARED IN THE CONVECTION OVEN (ITEM #87), IT IS USED FOR BAKING ROLLS ONLY.

11. CONTACT SMARTRACK 9U WALL-MOUNT RACK SUPPLIER FOR ADDITIONAL INFORMATION: CHRIS IANNUZZI OF IT SAVVY (630) 396-6315

## EQUIP. PLAN NOTES

1. ALL SWITCHES, COVER PLATES, AND PLUGS SHALL BE "WHITE"

2. TELEPHONE SERVICE SHALL BE (3) THREE LINES OF SERVICE AS FOLLOWS:

- LINE 1 SHALL BE PRIMARY TELEPHONE LINE.
- LINE 2 SHALL BE FOR ROLL-OVER TELEPHONE LINE AND FAX LINE
- LINE 3 SHALL BE FAX AND DATA LINE.

3. THE GENERAL CONTRACTOR SHALL PROVIDE THE MOUNTING OF TRANSFORMERS AND FINAL ELECTRICAL CONNECTION OF THE OWNER PROVIDED AND INSTALLED INTERIOR AND EXTERIOR BUILDING SIGNAGE. ALL SIGNS SHALL BE ON INDIVIDUAL CIRCUITS WITH DEDICATED GROUNDS.

4. THE FLOOR SINK UNDER THE 3-COMPARTMENT SINK IS USED FOR THE PLUMBING HOSE BIB.

5. COOKING AREA PROTECTION SYSTEM SHALL BE SUBMITTED FOR PLAN REVIEW UNDER A SEPARATE PLAN CHECK AND PERMIT

NOTE: EXTERIOR SIGNAGE SHALL BE SUBMITTED UNDER A SEPARATE PLAN CHECK REVIEW AND PERMIT PROCESS.

## EQUIP. PLAN LEGEND

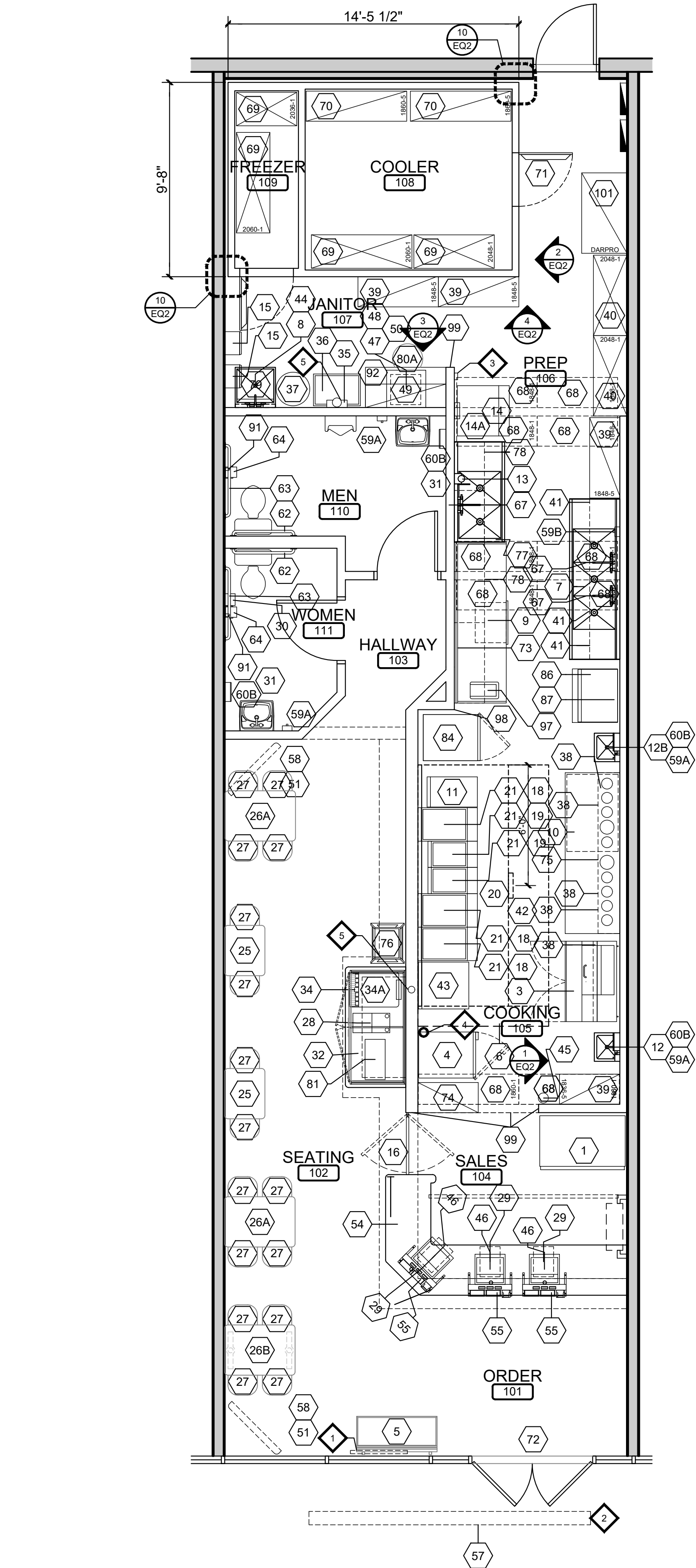
- PROVIDE DEDICATED CIRCUIT AND GROUND 12'-0" A.F.F. ABOVE SOFFIT FOR LED SIGNS - TYPICAL - REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION
- PROVIDE DEDICATED CIRCUIT AND GROUND WITH CIRCUIT TIMER FOR EXTERIOR BUILDING SIGN - TYPICAL - VERIFY LOCATION WITH SIGN VENDOR - REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION
- REMOTE ANSUL PULL STATION - VERIFY LOCATION WITH LOCAL FIRE MARSHAL
- GAS SERVICE CONNECTION - REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION
- 6" P.V.C. BEVERAGE CONDUIT RUN IN CEILING WITH 6" 90's AND 6" P.V.C. IN PARTITIONS - REFER TO DETAIL 7/EQ2 FOR ADD. INFO.

## WALK-IN COOLER/FREEZER SPECIFICATIONS

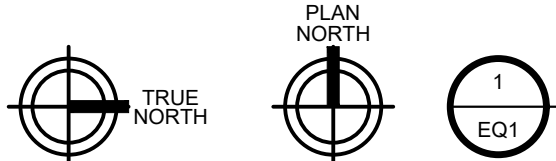
COMPONENT	DESCRIPTION
INSULATION:	FOAMED IN-PLACE U.L. LISTED, CLASS 1 URETHANE FOAM INSULATION WITH A FLAME SPREAD RATING OF LESS THAN 25, AND SMOKE DENSITY OF LESS THAN 450 - WGBE TESTED IN ACCORDANCE TO A.S.T.M. E84 (U.L. 723)
FLOOR:	FLOOR, WALL, AND CEILING PANELS: 4" THICK HIGH DENSITY PRE-FABRICATED FRAME - N.S.F. COVED, STEP-UP @ FREEZER FLOOR ONLY
FINISH:	INTERIOR: 26 GA. STUCCO EMBOSSED GALVALUM EXTERIOR: 26 GA. STUCCO EMBOSSED GALVALUM FLOOR FINISH: #10 SMOOTH ALUMINUM
DOORS:	(1) 34" x 78" FLUSH-IN FITTING COOLER DOOR (1) 30" x 72" FLUSH-IN FITTING FREEZER DOOR

1. INSTALLATION INSTRUCTIONS FOR THE WALK-IN COOLER/FREEZER SHALL BE ON THE JOBSITE FOR THE LOCAL BUILDING OFFICIAL

2. PROVIDE CP 25WB+ FIRE BARRIER SEALANT CAULK OR FB-3000 W/T FIRE BARRIER SEALANT FOR ANY PENETRATIONS INTO THE INSULATED PANELS



NOTE:  
REFER TO A0.0 FOR GENERAL NOTES  
AND NOTES TO BIDDERS



EQUIPMENT PLAN

1/4" = 1'-0"

CONSULTANT:



15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952-941.8850 / www.wilkusarch.com

CLIENT:



15505 WRIGHT BROTHERS DRIVE  
ADDISON, TX 75001  
TELEPHONE: (972) 686-6500  
FAX: (972) 686-6502

DISCLAIMER:

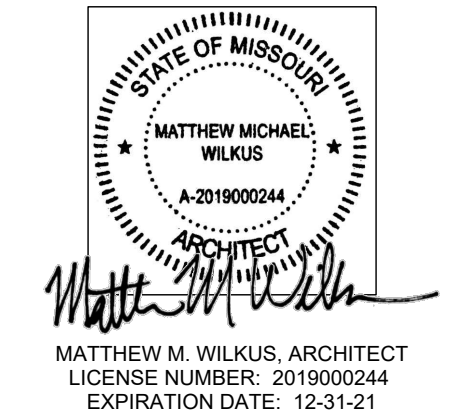
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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: GL#Y175  
HALBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



06-16-21  
DATE

PROJECT NO.: 2021-0158

DRAWN BY: NAV

CHECKED BY: JSS

ISSUE: DATE:

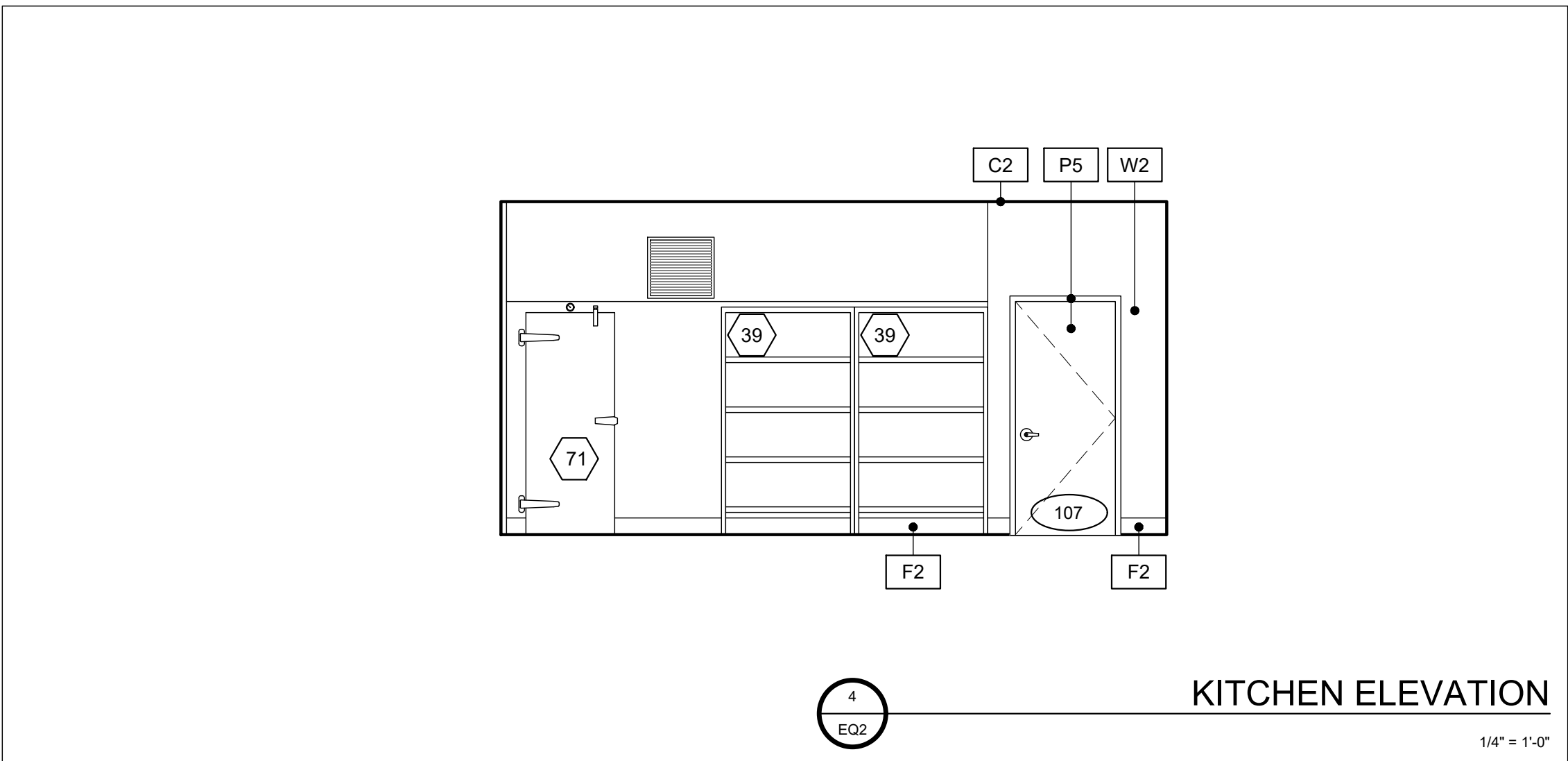
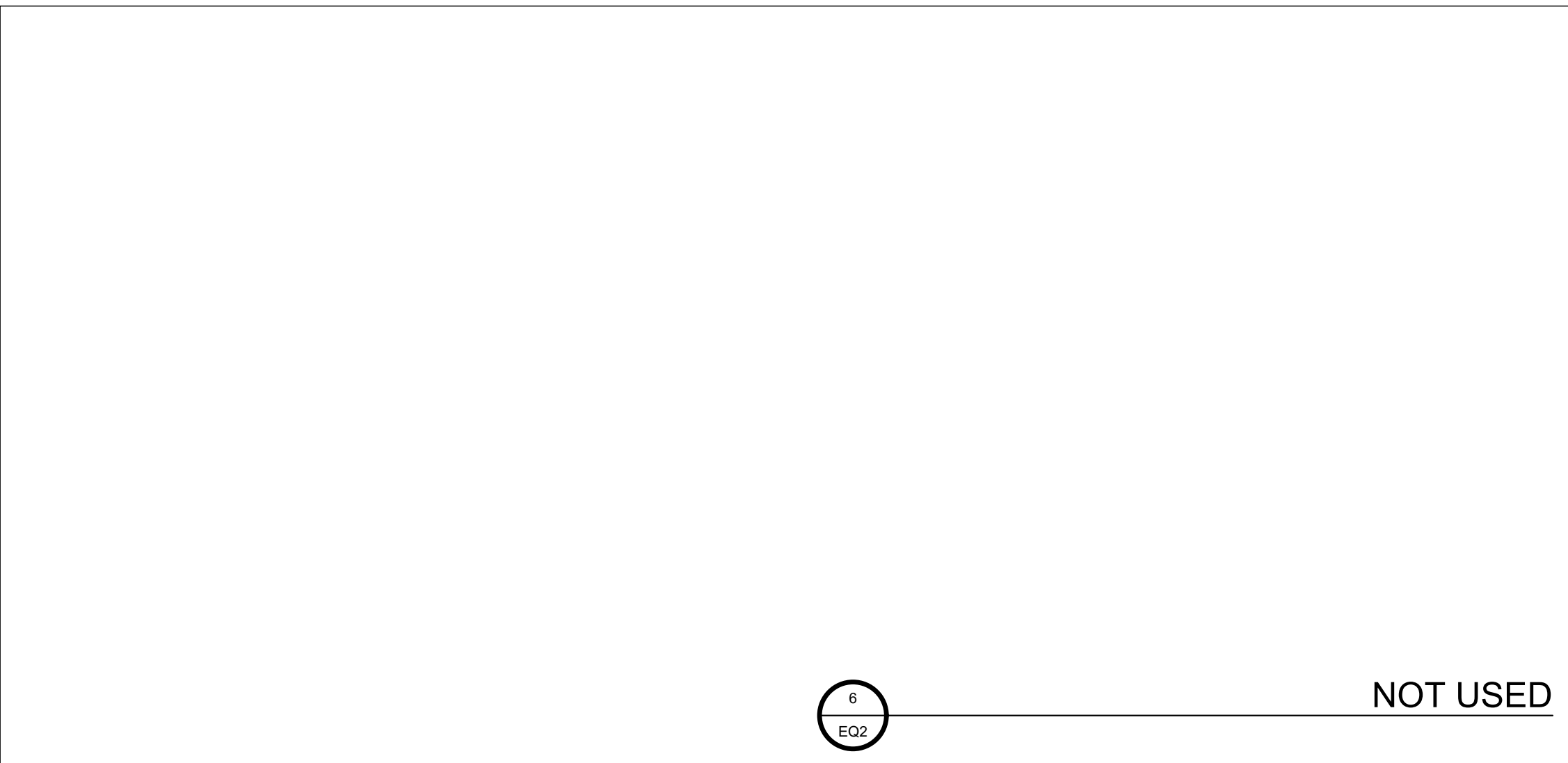
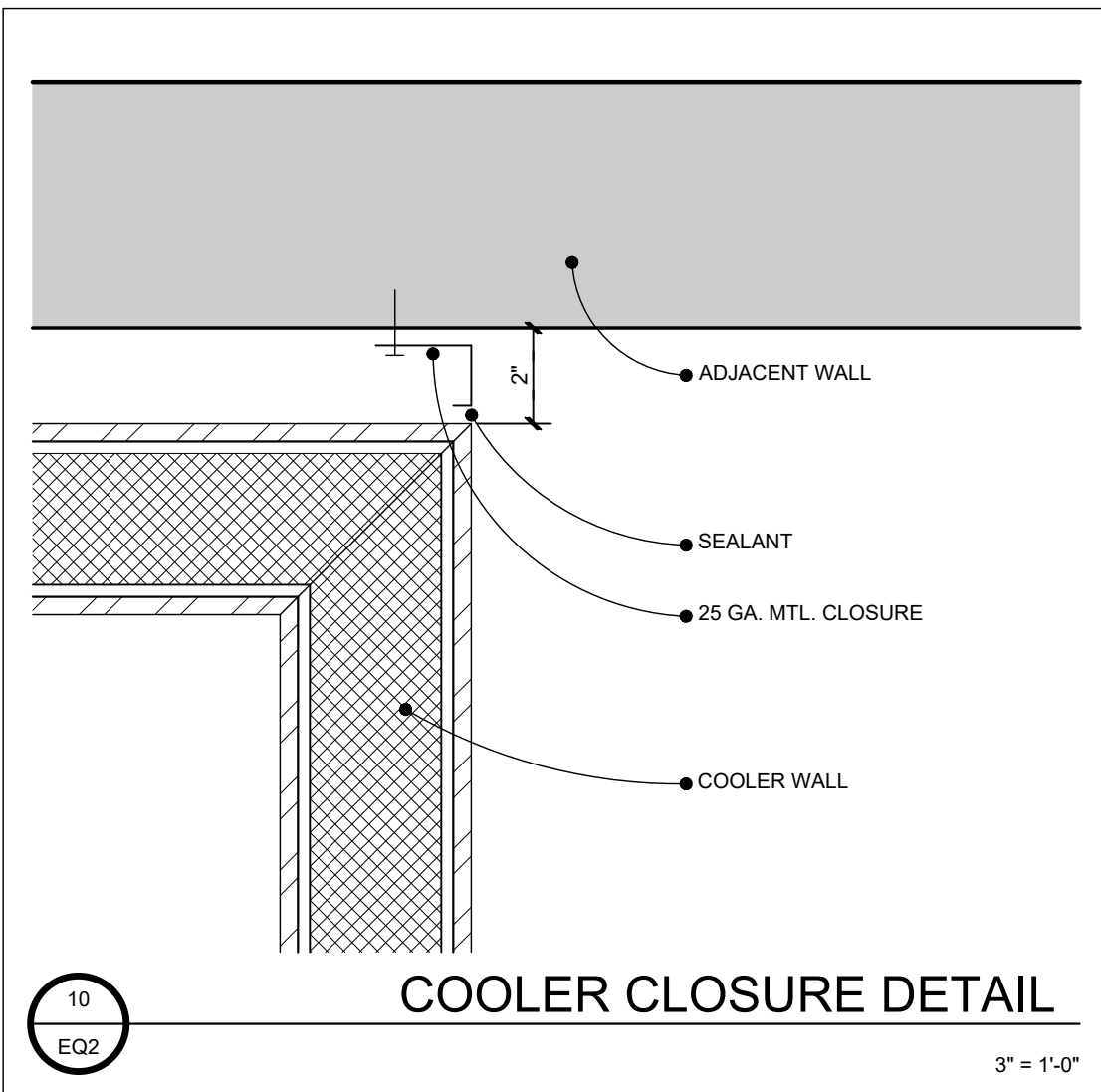
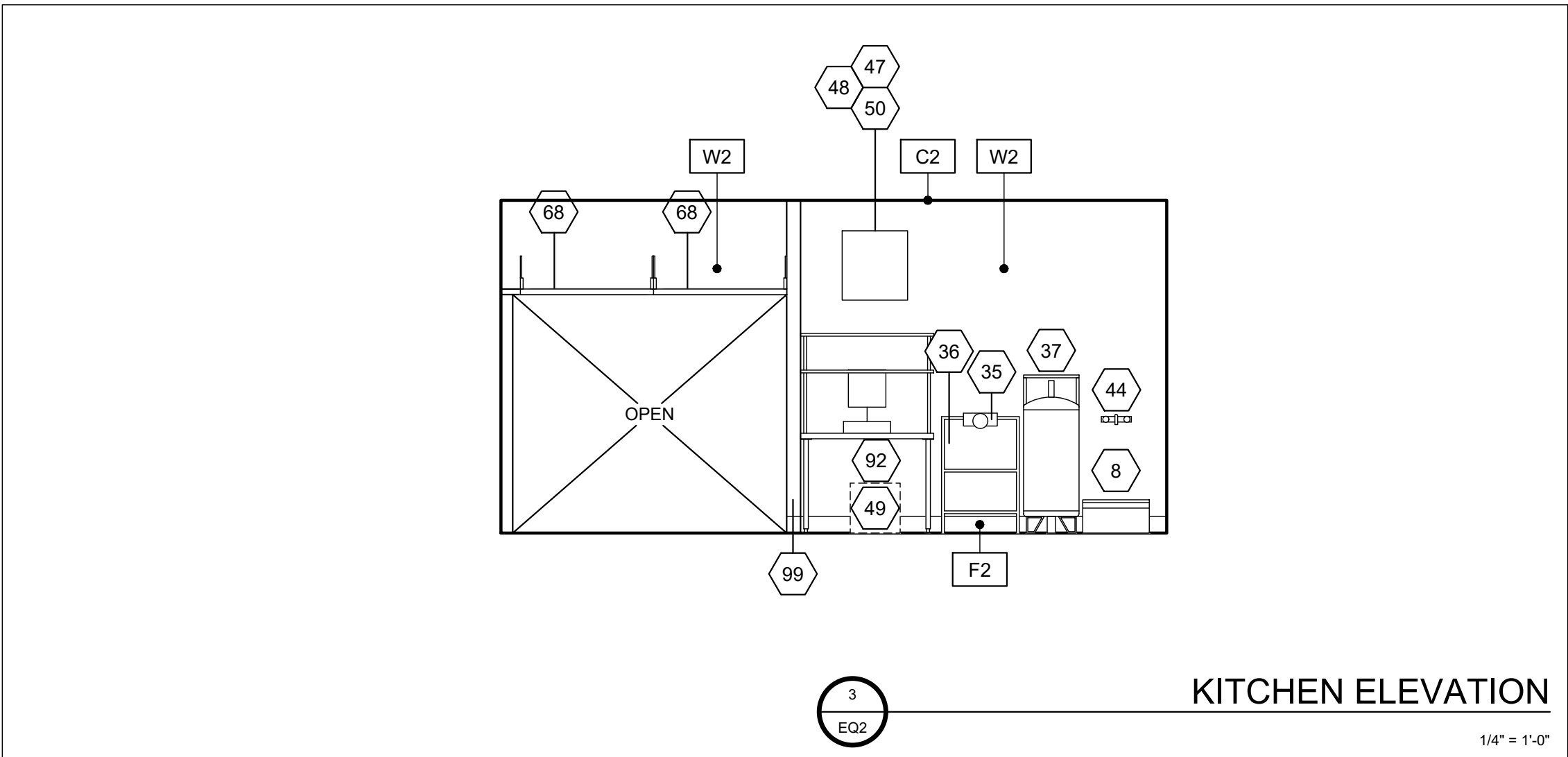
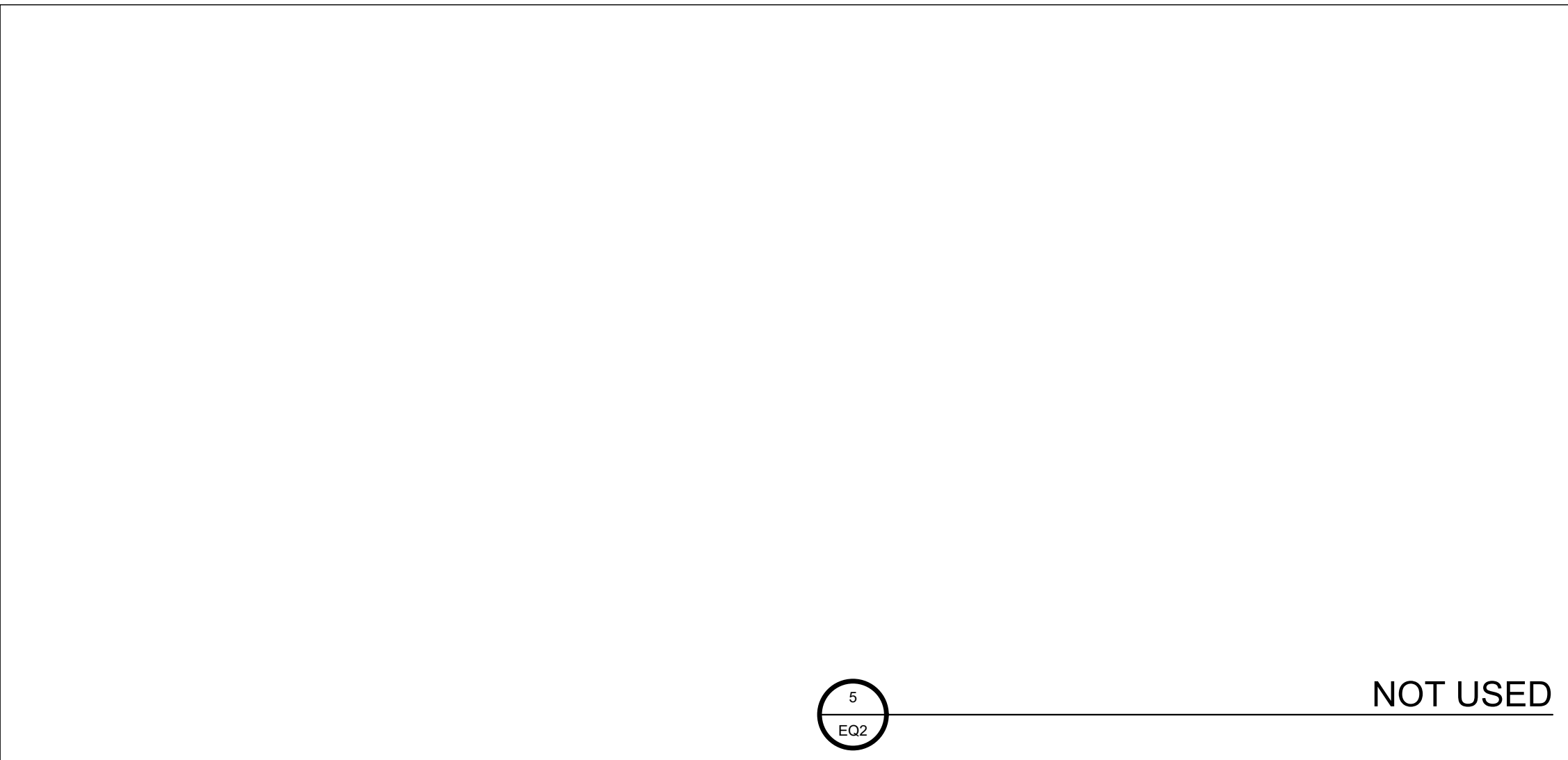
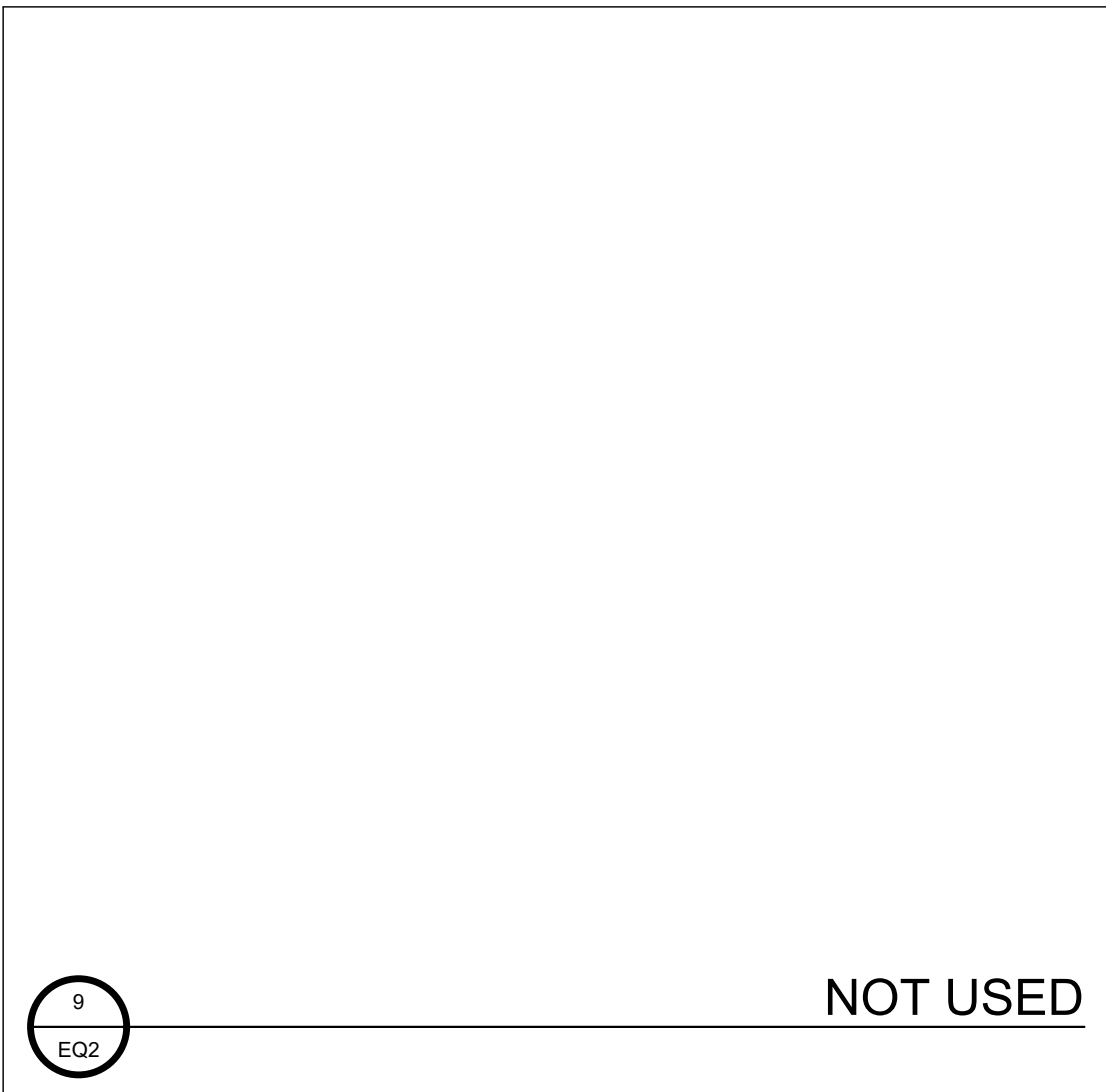
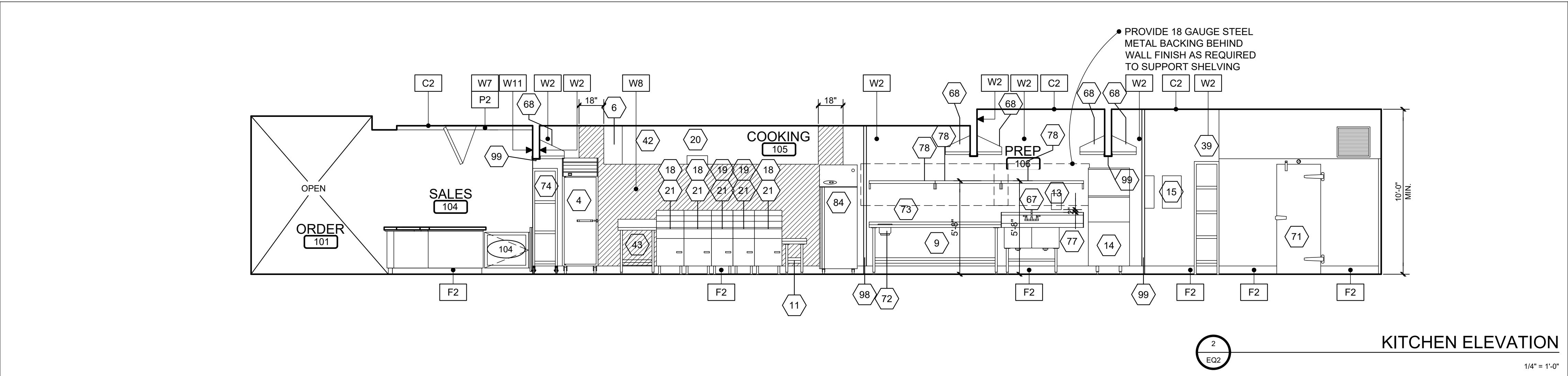
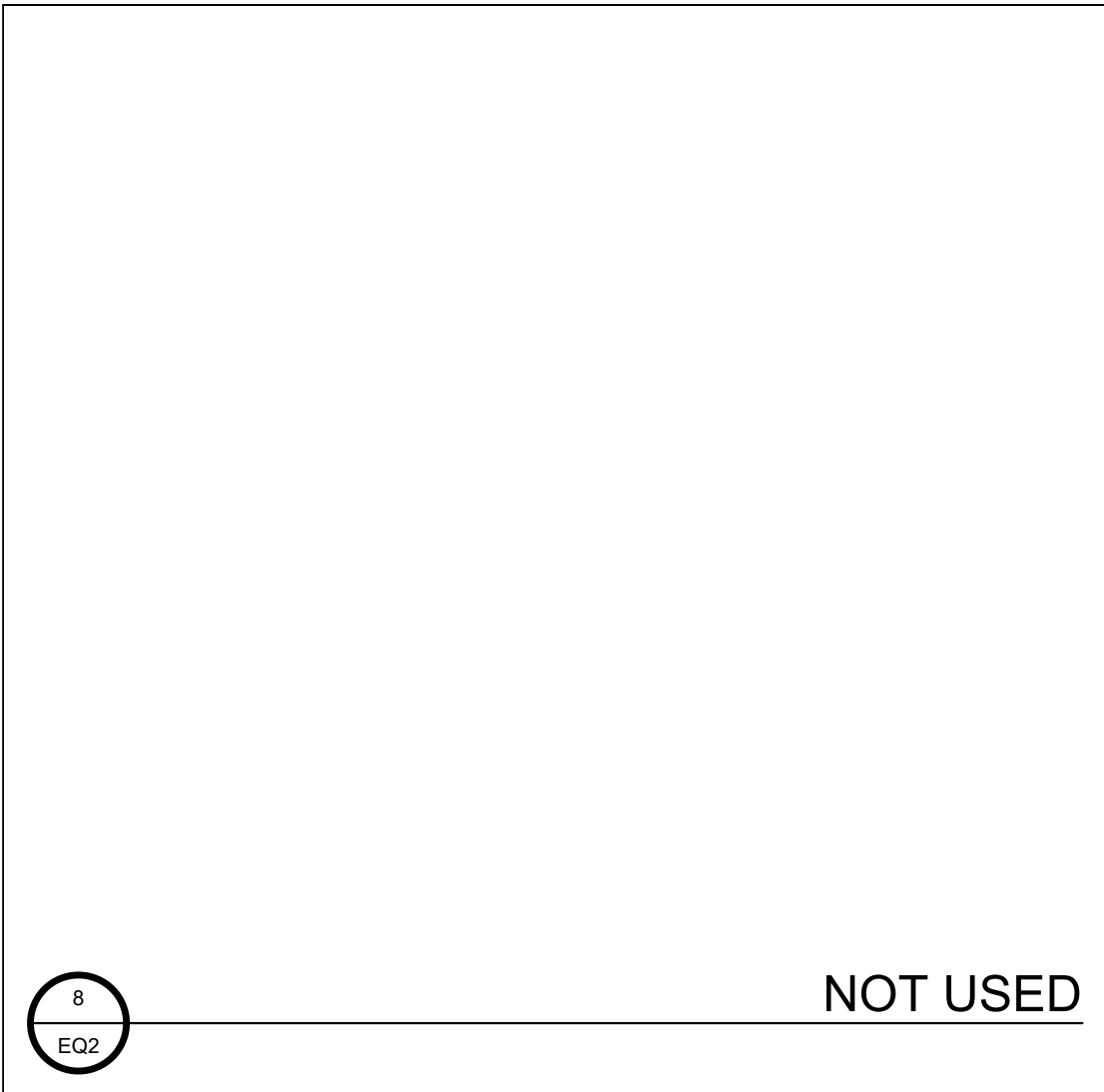
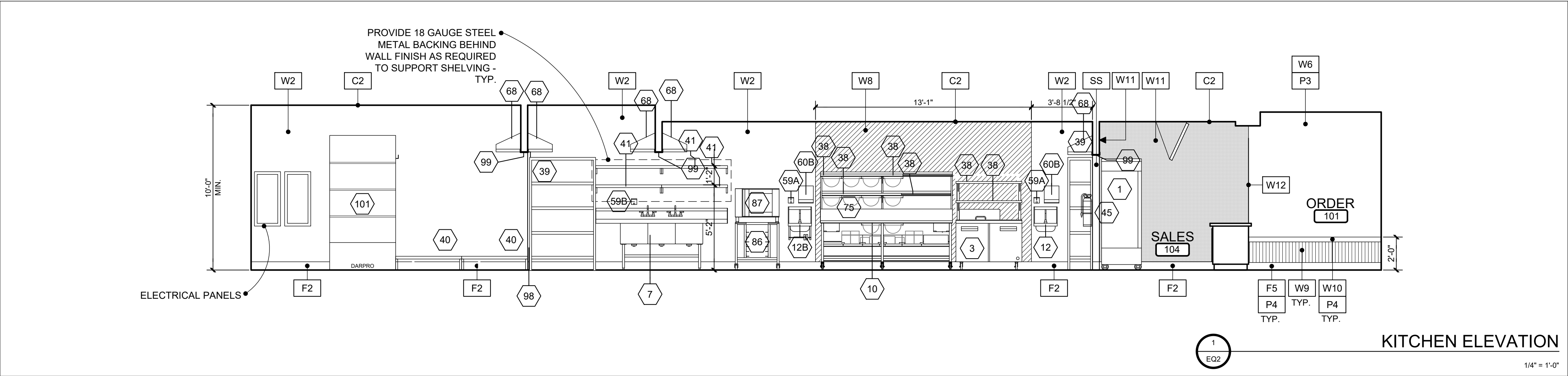
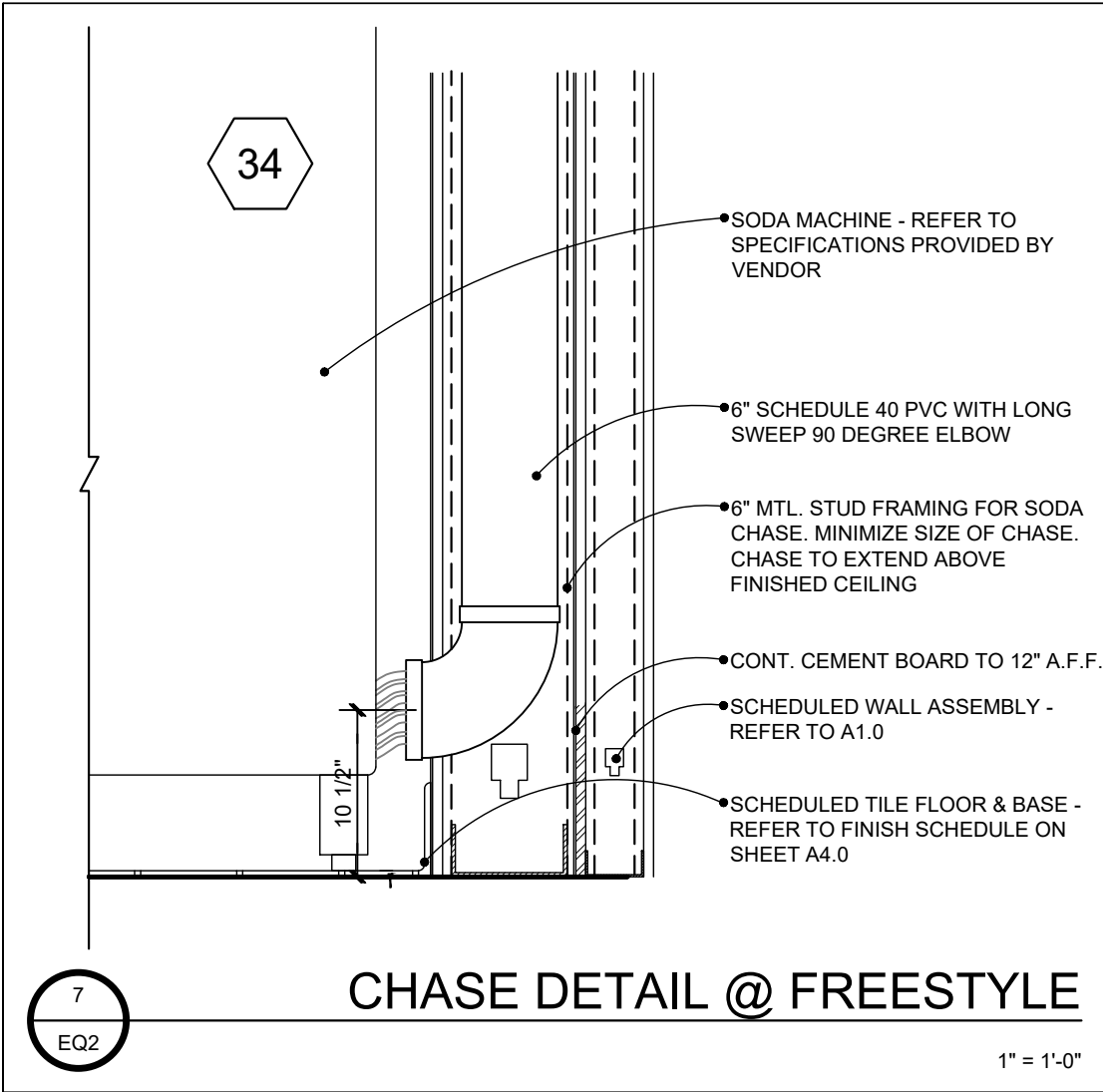
PERMIT & BID SET 06-16-21

REVISION: DATE:

PROJECT LOCATION:

LEE'S SUMMIT, MO

S



CONSULTANT:

**WILKUS**  
ARCHITECTS

15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8850 / www.wilkusarch.com

CLIENT:

**WING-STOP**

15505 WRIGHT BROTHERS DRIVE  
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PROJECT INFORMATION:

**WING-STOP**

STORE NUMBER: GL#Y175  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:

MATTHEW M. WILKUS, ARCHITECT  
LICENSE NUMBER: 2019000244  
EXPIRATION DATE: 12-31-21

06-16-21  
DATE

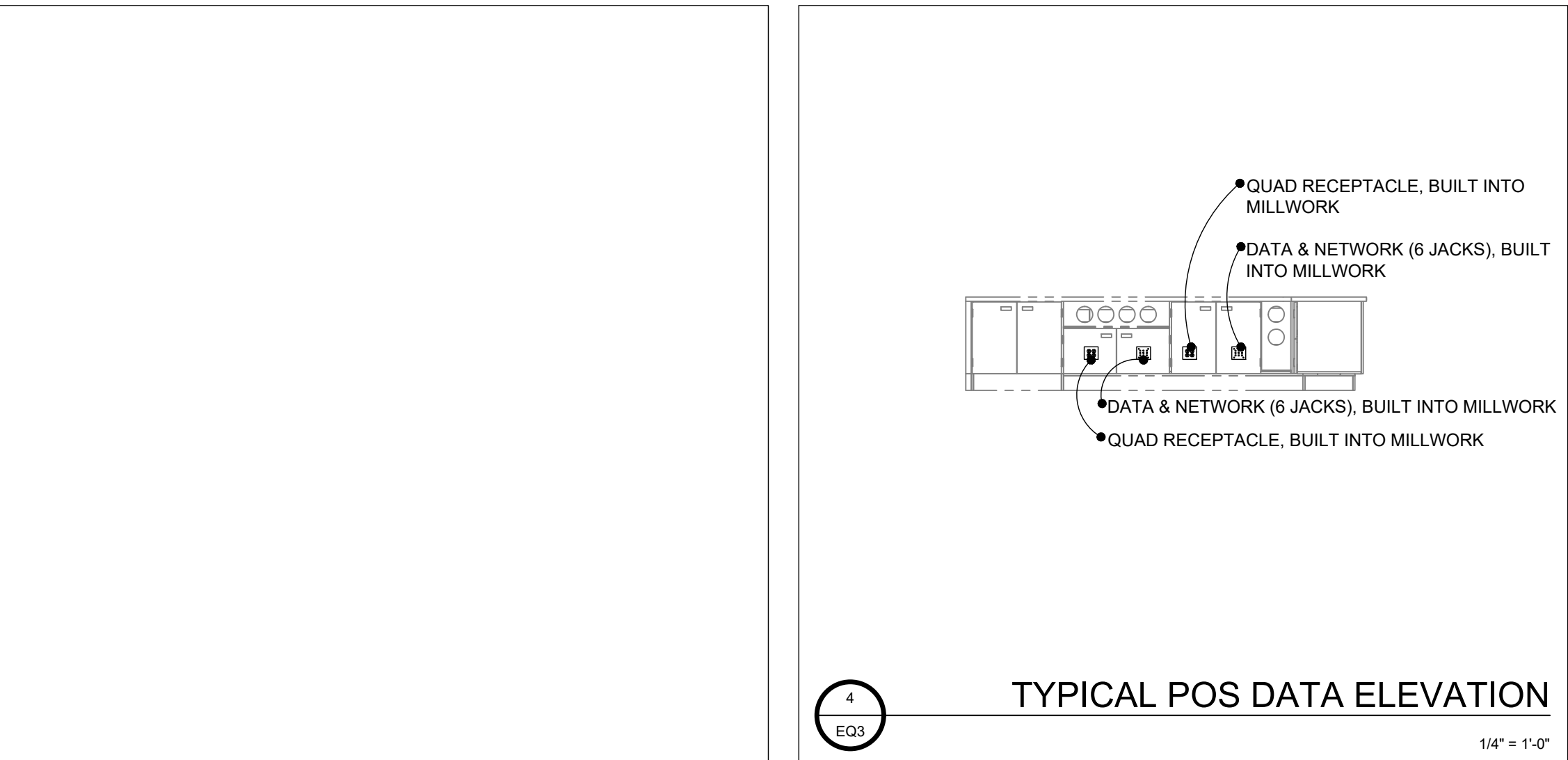
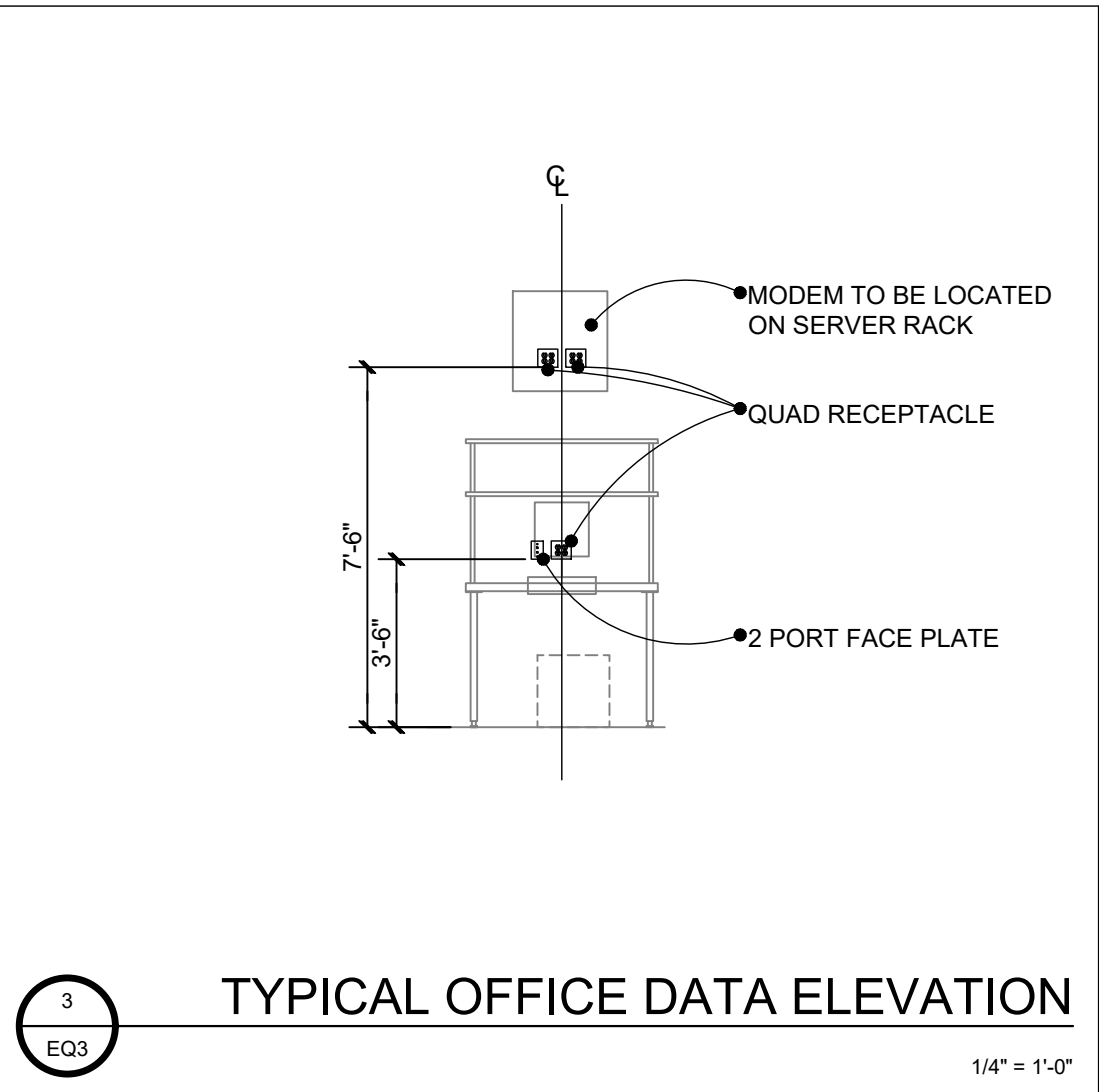
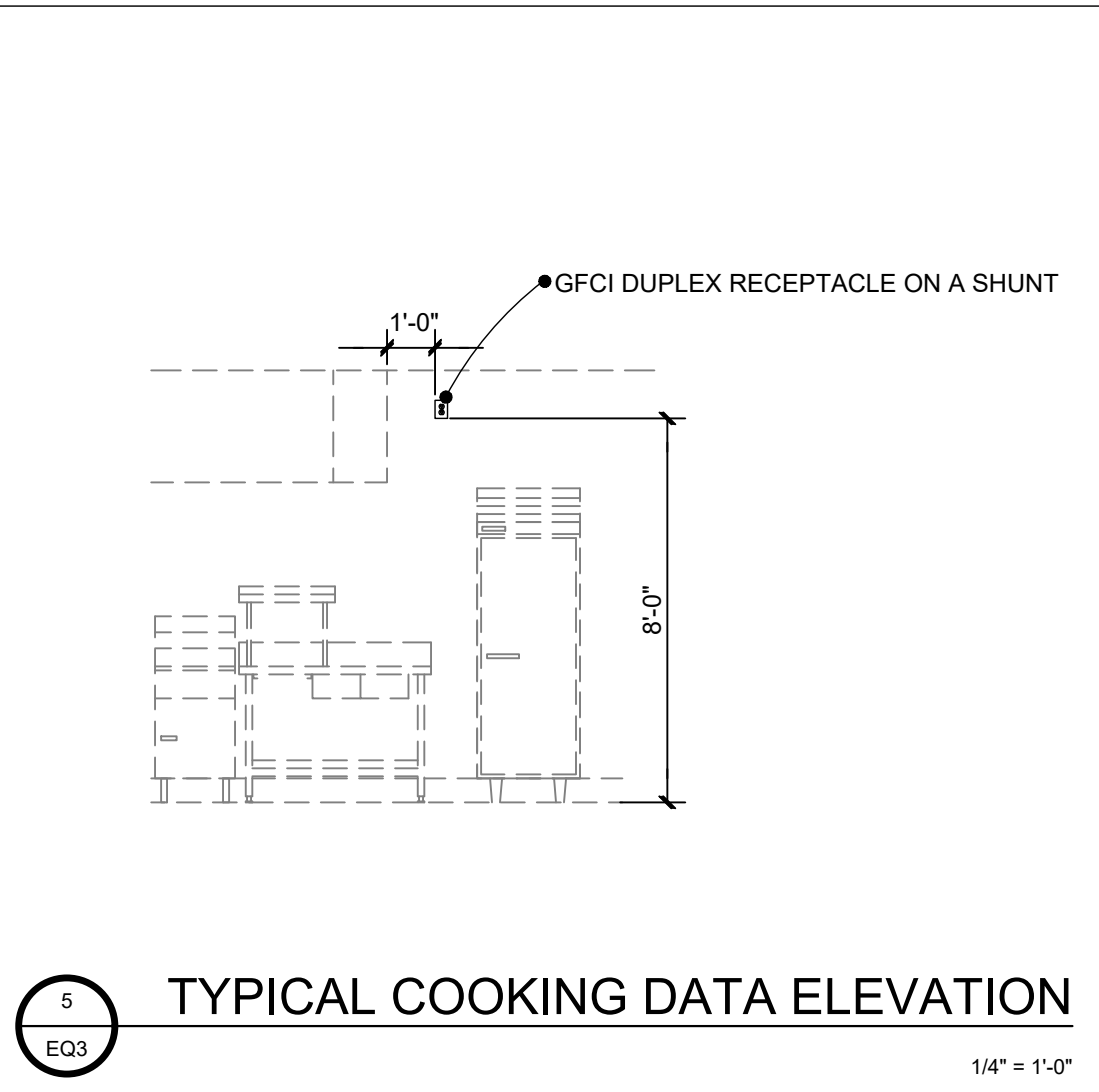
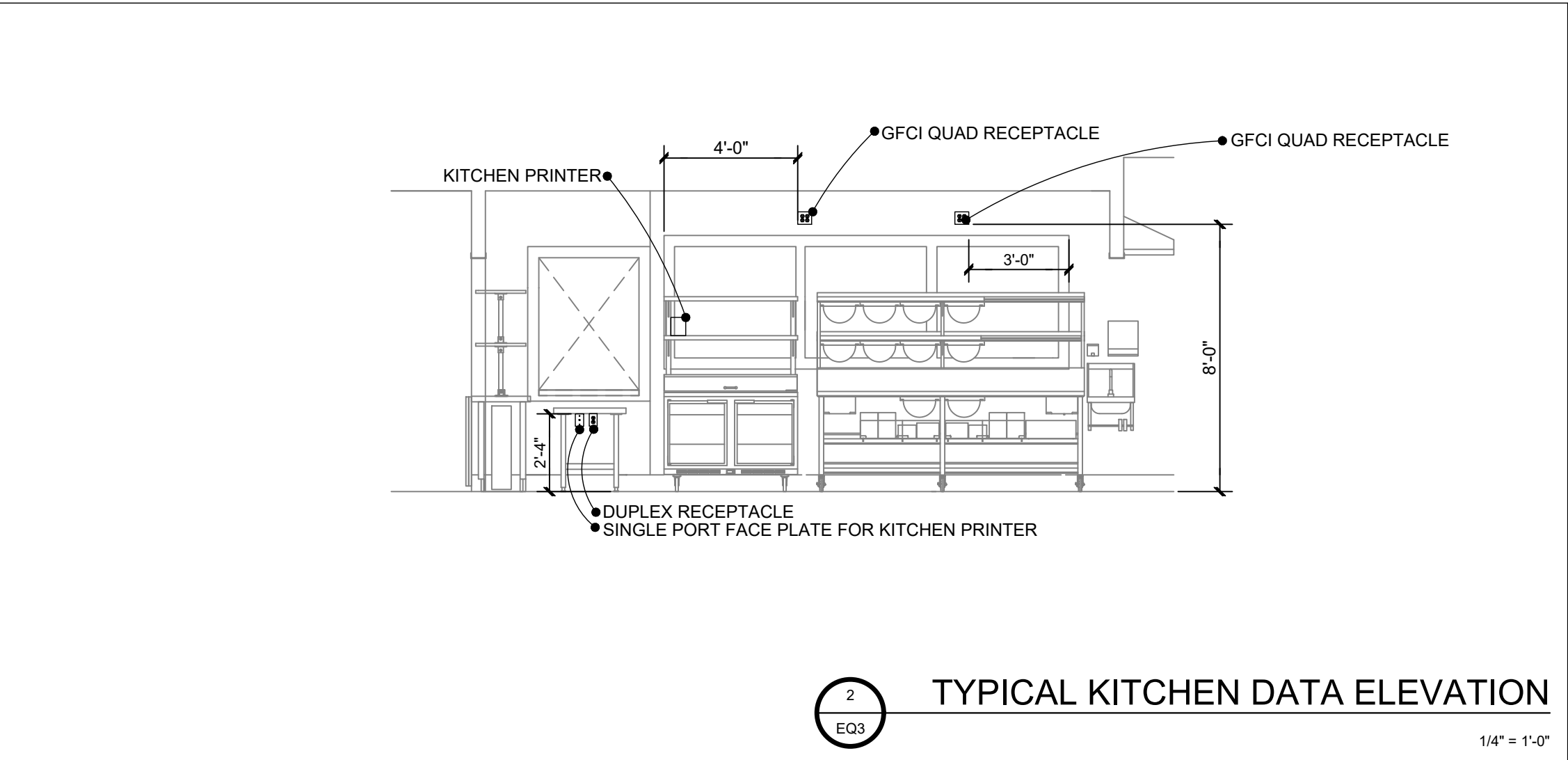
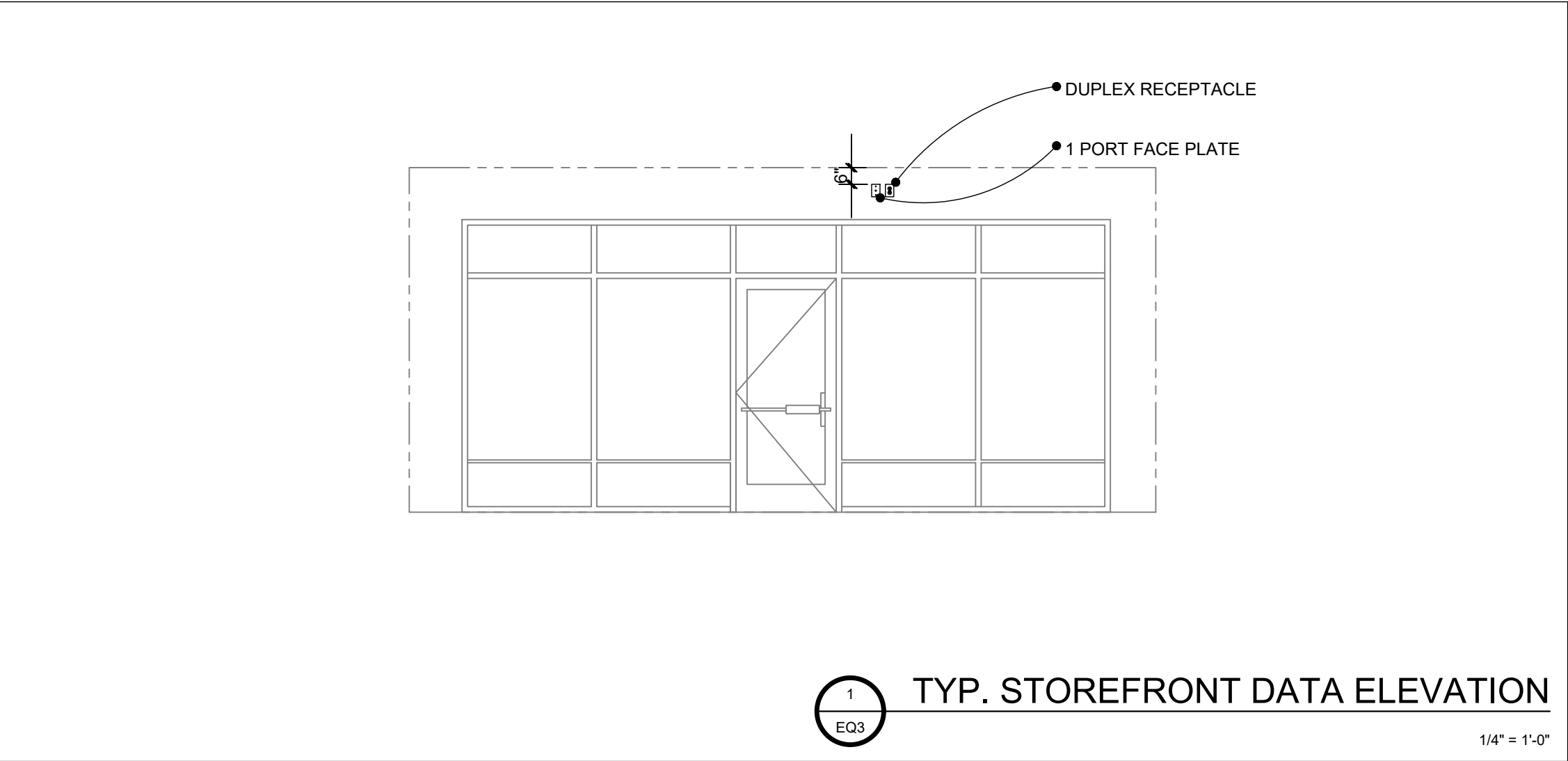
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CHECKED BY: JSS

ISSUE: DATE:  
PERMIT & BID SET 06-16-21

REVISION: DATE:

PROJECT LOCATION:  
LEE'S SUMMIT, MO

SHEET NUMBER / TITLE:  
**EQ2**  
INTERIOR EQUIP. ELEV.



CONSULTANT:

**WILKUS**  
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PROJECT INFORMATION:

**WING STOP**  
STORE NUMBER: GL#Y175  
HALBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:

STATE OF MISSOURI  
MATTHEW MICHAEL WILKUS  
A-2019000244  
MATTHEW M. WILKUS, ARCHITECT  
LICENSE NUMBER: 2019000244  
EXPIRATION DATE: 12-31-21  
06-16-21  
DATE

PROJECT NO.: 2021-0158  
DRAWN BY: NAV  
CHECKED BY: JSS

ISSUE: DATE:  
PERMIT & BID SET 06-16-21

REVISION: DATE:

PROJECT LOCATION:  
LEE'S SUMMIT, MO

SHEET NUMBER / TITLE:  
**EQ3**  
DATA EQUIP. ELEV.

HOOD INFORMATION – JOB#4921898

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM							MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG	
										RISER(S)										END TO END	ROW
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP					
1		5430 ND-2-ACPSP-F	CAPTIVEAIRE	12' 0"	600 DEG	I	HEAVY	225	2700			4'	16"	2700	1934	-1.008"	2160	650	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

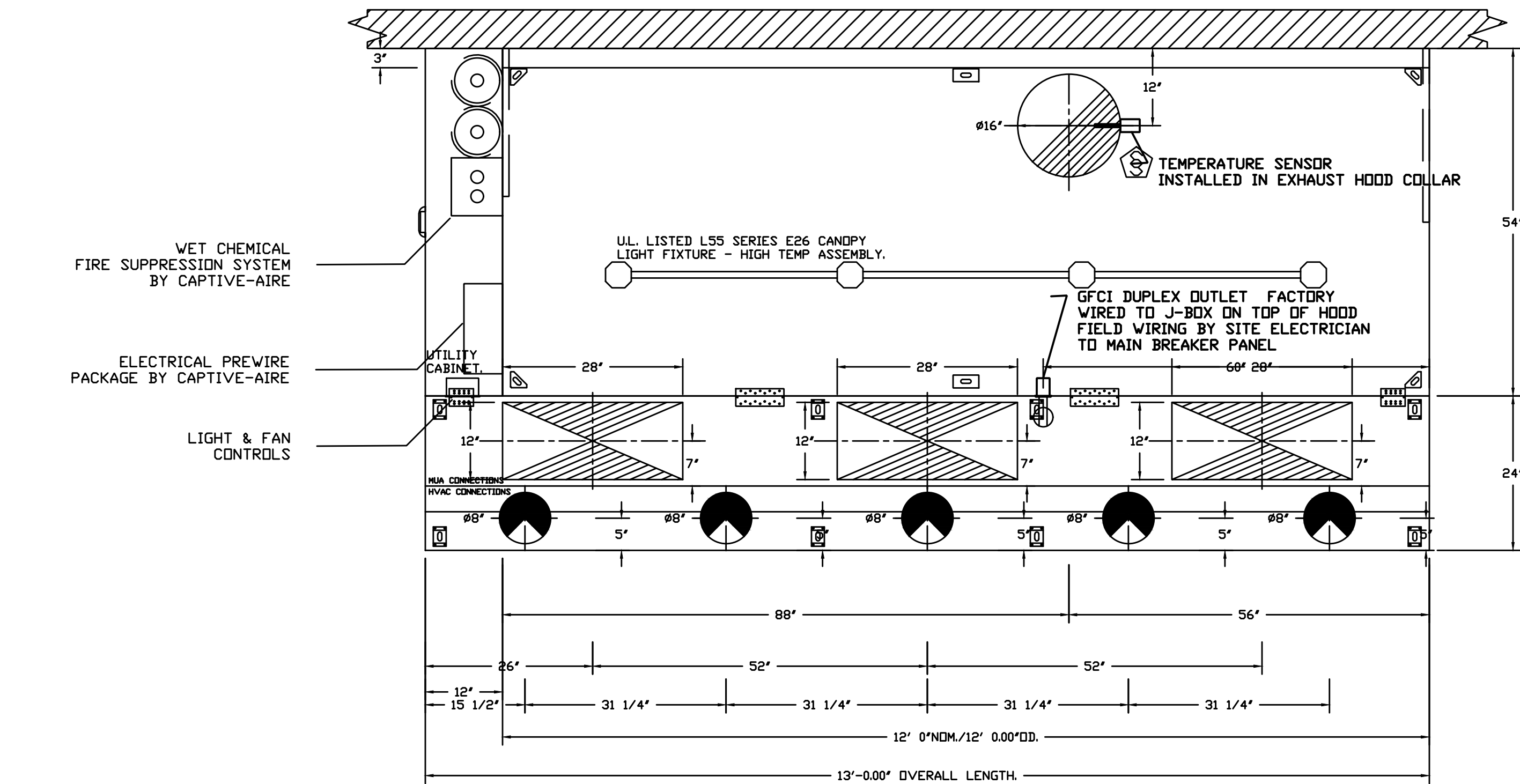
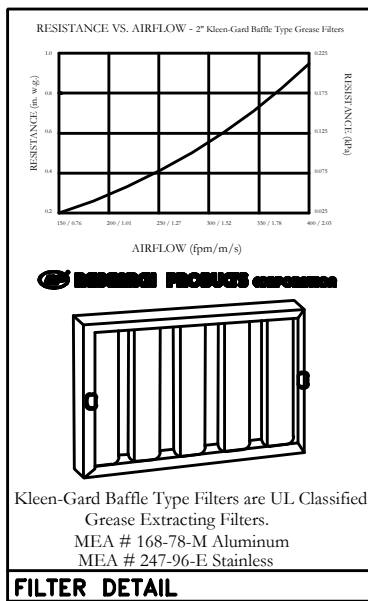
HOOD NO	TAG	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)					FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE	SIZE	MODEL #	QUANTITY	
1		CAPTRATE SOLD FILTER	9	20"	16"	85% SEE FILTER SPEC	4	L55 SERIES E26	NO	LEFT	12"x54"x30"	ANSUL R102	3.0/3.0	DCV-1111	1 LIGHT 1 FAN	YES 1002 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		BACKSPLASH 120.00" HIGH X 192.00" LONG 430 SS VERTICAL.
		BACKSPLASH 108.00" HIGH X 192.00" LONG 430 SS VERTICAL.
		LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS.
		STRUCTURAL FRONT PANEL.
		RISER SENSOR INSTALL 3IN DBL.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
		GFCI DUPLEX OUTLET, 20A 125V - HOOD FRONT RIGHT - VERTICAL - DIST FROM END: 60.00 DIST FROM BOTTOM: 4.75.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
1		Front	156"	24"	6"	MUA	12"	28"		720	0.195"
						MUA	12"	28"		720	0.195"
						MUA	12"	28"		720	0.195"
						AC			8"	130	0.053"
						AC			8"	130	0.053"
						AC			8"	130	0.053"
						AC			8"	130	0.053"
						AC			8"	130	0.053"



PLAN VIEW – HOOD #1  
12' 0.00" LONG 5430ND-2-ACPSP-F  
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.

ACPSP SHIPS LOOSE FOR FIELD INSTALLATION



2700 CFM IN 16" DIA. EXHAUST COLLAR = 1934 FPM  
HOOD CONSTRUCTION OF 18 GAUGE AND 20 GAUGE METAL

CALCULATIONS UTILIZED

Calculations utilized are based on the hood's ETL Listing  
Exhaust CFM = 12 foot X 225 CFM/lin. ft. (load) = 2700 cfm  
Supply CFM = 2700 Exhaust CFM X 80 percent = 2160 cfm

Total Duct Area = 144 X  $\frac{\text{CFM}}{\text{FPM (note 1)}}$   
Duct Length =  $\frac{\text{Total Duct Area}}{\text{Duct Depth (note 2)}}$

1) Captive-Aire ventilator duct sizes are calculated using an Exhaust velocity of 1500 - 1800 FPM and a Supply velocity of 800 - 1000 FPM.  
2) Please consult factory for maximum allowable duct sizes.

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH



NFPA #96  
NSF  
UL 710 & ULC710 STANDARDS  
E.T.L. LISTED 3054804-001

FOR QUESTIONS, EMAIL THE  
CaptiveAire Dallas Sales Office  
Colin Prewitt  
PHONE: (214) 220-3999  
EMAIL: reg45@captiveaire.com

ND-2 Specification

The model ND-2 is an exhaust only canopy hood rated for all types of cooking equipment. The hood shall have the size, shape and performance specified on drawings.

Construction shall be type 430 stainless steel with a #3 or #4 polish where exposed. Individual component construction shall be determined by the manufacturer and ETL. Construction shall be dependent on the structural application to minimize distortion and other defects. All seams, joints and penetrations of the hood enclosure to the lower outermost perimeter that directs and captures grease-laden vapor and exhaust gases shall have a liquid-tight continuous external weld in accordance with NFPA 96. Hood shall be wall type with a minimum of four connections for hanger rods. Corner hanging angles have a 5/8" x 1-1/2" slot pre-punched at the factory, allowing hanging rods to be used for quick and safe installation.

Ventilator shall be furnished with UL classified high efficiency stainless steel baffle filters, supplied in size and quantity as required by ventilator. The filters shall extend the full length of the hood and the filler panels shall not be more than 6' in width.

The hood manufacturer shall supply complete computer generated submittal drawings including hood sections view(s) and hood plan view(s). These drawings must be available to the engineer, architect and owner for their use in construction, operation and maintenance.

Exhaust duct collar to be 4' high with 1' flange. Duct sizes, CFM and static pressure requirements shall be as shown on drawings. Static pressure requirements shall be precise and accurate; air velocity and volume information shall be accurate within 1-ft increments along the length of the ventilator.

UL Incandescent light fixtures and globes shall be installed and pre-wired to a junction box. The light fixtures shall be installed with a maximum of 4' spacing on center and allow up to a 100 watt standard light bulb.

The hood shall have:  
A double wall insulated front to eliminate condensation and increase rigidity. The insulation shall have a flexural modulus of 475 EI, meet UL 181 requirements and be in accordance with NFPA 90A and 90B.  
An integral front baffle to direct grease laden vapors toward the exhaust filter bank.  
A built-in wiring chase provided for outlets and electrical controls on the hood face and shall not penetrate the capture area or require an external chaseaway.  
Removable grease cup for easy cleaning.

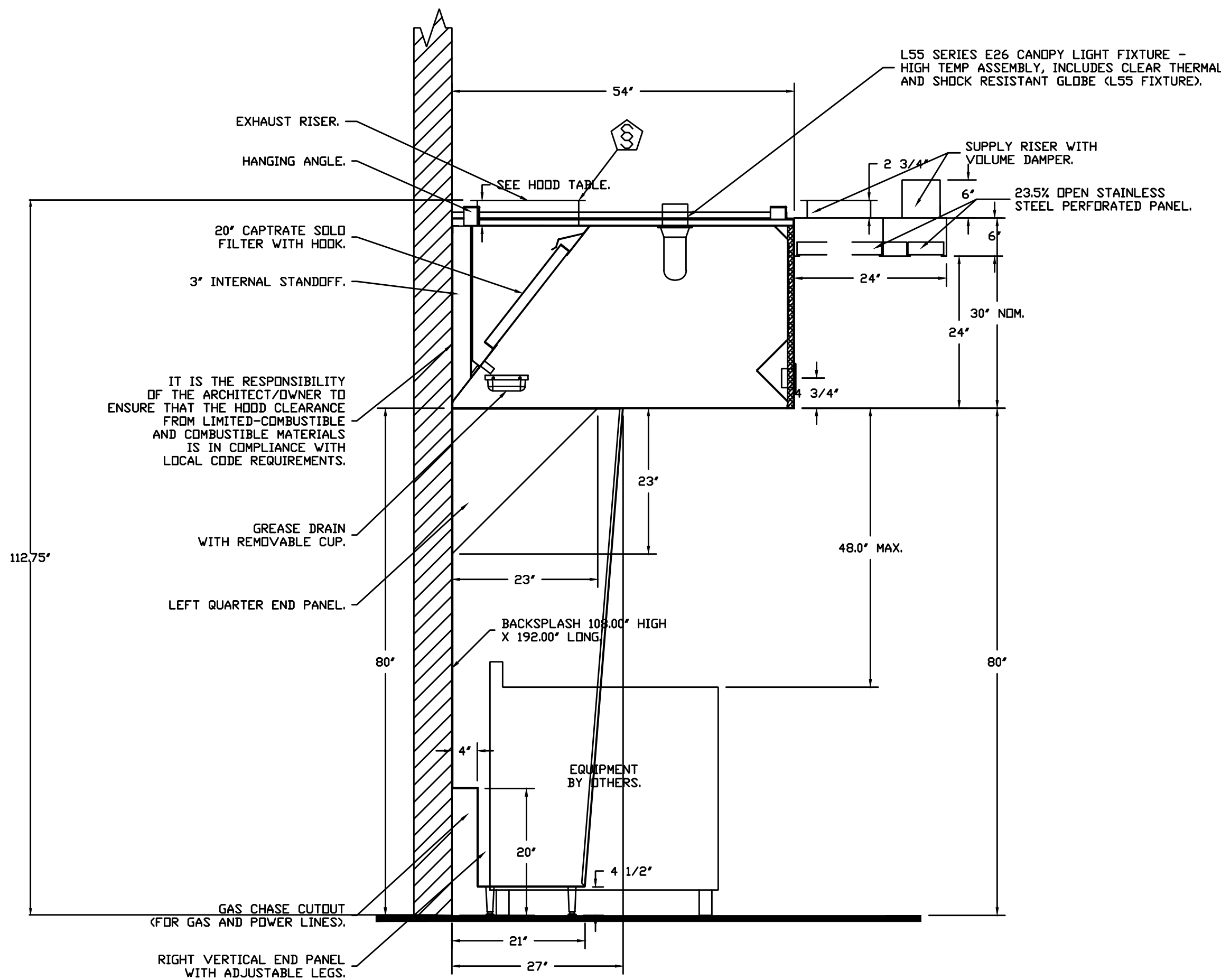
The hood shall be ETL Listed as 'Exhaust Hood Without Exhaust Damper', ETL Sanitation Listed and built in accordance with NFPA 96. The hood shall be listed for 450°F cooking surfaces at 150 CFM/ft, 600°F cooking surfaces at 200 CFM/ft, and 700°F cooking surfaces at 250 CFM/ft. The hood shall be ETL Listed as 'Exhaust Hood Without Exhaust Damper'.

Clearance to Combustibles: Standard built in 3' rear standoff to meet NFPA 96 requirements.  
The ND-2 Model has been certified by ITS. This certification mark indicates that the product has been tested to and has met the minimum requirements of a widely recognized (consensus) U.S. and Canadian products safety standard, that the manufacturing site has been audited, and that the applicant has agreed to a program of periodic factory follow-up inspections to verify continued performance.

AC-PSP Specification

The AC Perforated Supply Plenum (ACPSP) shall provide make-up air through a dual stream perforated stainless steel plenum. All seams shall be welded and have stainless steel on exposed surfaces. Unexposed surfaces shall be constructed of aluminized steel. Perforated diffuser plates shall be included in the design and to provide even air distribution. The air-conditioned portion of the plenum shall be insulated to prevent condensation. The make-up air plenum shall be located nearest the hood and the air-conditioned plenum away from the hood. The make-up air stream and the air-conditioned stream shall not be permitted to mix until leaving the dual plenum.

Air-conditioned stream should be supplied to the AC plenum up to 80 cfm per linear foot of plenum.



SECTION VIEW – MODEL 5430ND-2-ACPSP-F  
HOOD – #1

ALL HVAC SUPPLY DIFFUSERS WITHIN 10' OF THE EXHAUST HOOD MUST BE PERFORATED SCREEN STYLE WITH NO DIRECTIONAL VANES. HVAC AIR MUST NOT BLOW AT THE EXHAUST HOOD OR THE APPLIANCES.

ALL HVAC RETURN GRILLS MUST BE AT LEAST 10' FROM THE EXHAUST HOOD

THE BACK OF THE FRYERS SHOULD BE NO MORE THAN 6' FROM THE WALL

REFER TO HOOD MANUAL FOR PROPER INSTALLATION

CAPTIVE-AIRE HOOD PACKAGE AS SHOWN IS OWNER PROVIDED

CONSULTANT:

**CASE**  
Engineering Inc.  
796 Mens Court  
St. Louis, MO 63026  
T 636.449.6600  
F 636.449.1730  
CERTIFICATE OF AUTHORITY NO. 001098

CLIENT:



5501 LBJ FREEWAY, 5TH FLOOR  
DALLAS, TX 75240  
TELEPHONE: (972) 686-6500  
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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: GL#Y715  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



6/15/21  
DATE

PROJECT NO.: 2021-0158

DRAWN BY: JJV

CHECKED BY: DRC

ISSUE: DATE:

FOR PERMIT & BID 06-10-21

REVISION: DATE:

PROJECT LOCATION:

LEE'S SUMMIT, MO

SHEET NUMBER:

H1

FIRE SYSTEM INFORMATION – JOB#4921898

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		ANSUL R102	3.0/3.0	21	FIRE CABINET LEFT	LEFT, HOOD 1

HOOKUP, PERMITTING, AND FINAL TESTING OF ANSUL SYSTEM  
PROVIDED BY CAPTIVE-AIRE SYSTEMS  
HORN STROBE TO BE PROVIDED BY GC WHEN REQUIRED

NOTES

- FIELD PIPE DROPS AS SHOWN
- SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- MAXIMUM 9 ELBOWS IN SUPPLY LINE.
- MINIMUM 72 INCHES OF AGENT LINE FROM TANK TO FIRST NOZZLE.
- IF APPLICABLE, PRE-PIPED CHARBROILER DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS

LEGEND – FIRE CABINET ANSUL SYSTEM

- 1A 1.5 GALLON TANK  
1B 3 GALLON TANK  
2 OEM AUTOMAN RELEASE  
3 OEM REGULATED RELEASE  
4 OEM REGULATED ACTUATOR  
5 ANSULEX LIQUID AGENT (3 GAL.)  
6 ANSULEX LIQUID AGENT (1.5 GAL.)  
7 CARTRIDGE (101-20)  
8 CARTRIDGE (101-10)  
9 CARTRIDGE (101-30)  
9A CARTRIDGE (LT-A-101-30)  
9B DOUBLE TANK CARTRIDGE  
10 TEST LINK  
11 DOUBLE MICROSWITCH  
12 HOSE ASSEMBLY  
1100 DUCT NOZZLE (430913)  
2V DUCT NOZZLE (419337)  
1W NOZZLE ASSEMBLY (419336)  
1F NOZZLE ASSEMBLY (419333)  
1N NOZZLE ASSEMBLY (419335)  
1/2N NOZZLE ASSEMBLY (419334)  
3N NOZZLE ASSEMBLY (419338)  
245 NOZZLE ASSEMBLY (419340)  
230 NOZZLE ASSEMBLY (419339)  
2120 NOZZLE ASSEMBLY (419343)  
290 NOZZLE ASSEMBLY (419342)  
260 NOZZLE ASSEMBLY (419341)  
28 DETECTOR BRACKET  
29 LOW TEMP FUSIBLE LINK  
30 HIGH TEMP FUSIBLE LINK  
MGV MECHANICAL GAS VALVE  
EGV ELECTRICAL GAS VALVE  
34 REMOTE MANUAL PULL STATION  
S SWIVEL ADAPTOR

SPECIFICATIONS

THE RESTAURANT FIRE SUPPRESSION SYSTEM SHALL BE THE PRE-ENGINEERED TYPE WITH A FIXED NOZZLE AGENT DISTRIBUTION NETWORK. IT SHALL BE LISTED WITH UNDERWRITERS LABORATORIES, INC. (UL)

THE SYSTEM SHALL BE CAPABLE OF AUTOMATIC DETECTION AND ACTUATION WITH LOCAL OR REMOTE MANUAL ACTUATION. ACCESSORIES SHALL BE AVAILABLE FOR MECHANICAL OR ELECTRICAL GAS LINE SHUT-OFF APPLICATIONS.

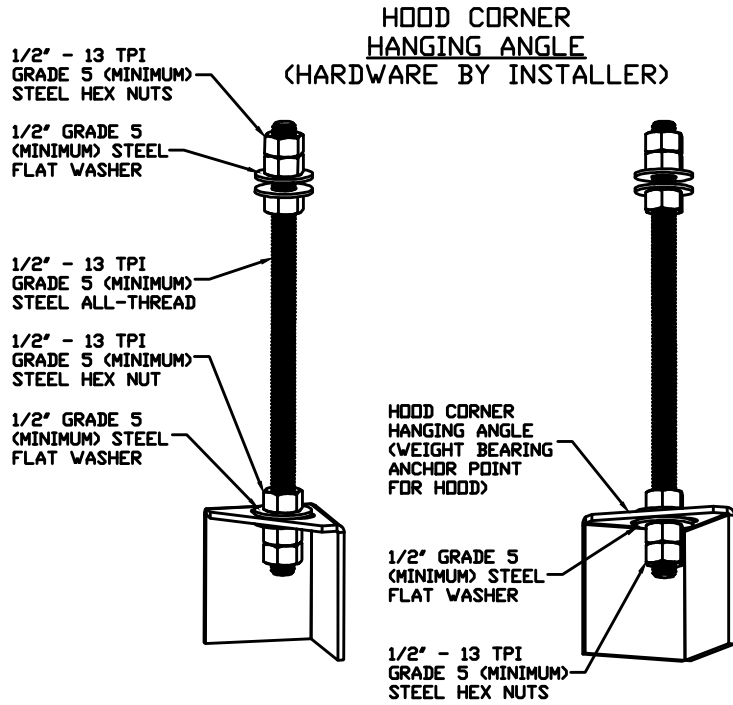
THE EXTINGUISHING AGENT SHALL BE A POTASSIUM CARBONATE, POTASSIUM ACETATE-BASED FORMULATION DESIGNED FOR FLAME KNOCKDOWN AND SECUREMENT OF GREASE RELATED FIRES. IT SHALL BE AVAILABLE IN PLASTIC CONTAINERS WITH INSTRUCTIONS FOR LIQUID AGENT HANDLING AND USAGE.

THE REGULATED RELEASE MECHANISM SHALL BE COMPATIBLE WITH A FUSIBLE LINK DETECTION SYSTEM. THE FUSIBLE LINK SHALL BE SELECTED AND INSTALLED ACCORDING TO THE OPERATING TEMPERATURE IN THE VENTILATING SYSTEM. THE FUSIBLE LINK SHALL BE SUPPORTED BY A DETECTOR BRACKET/ LINKAGE ASSEMBLY.

MANUFACTURER TRAINED PERSONNEL WILL TEST THE SYSTEM AND BE WITNESSED BY THE LOCAL AUTHORITY IF APPLICABLE  
MECHANICAL GAS VALVE SHALL BE MANUAL RESET TYPE.  
COMPLIES WITH NFPA STANDARD 17A AND 96.  
PIPING SHALL BE BLACK IRON.

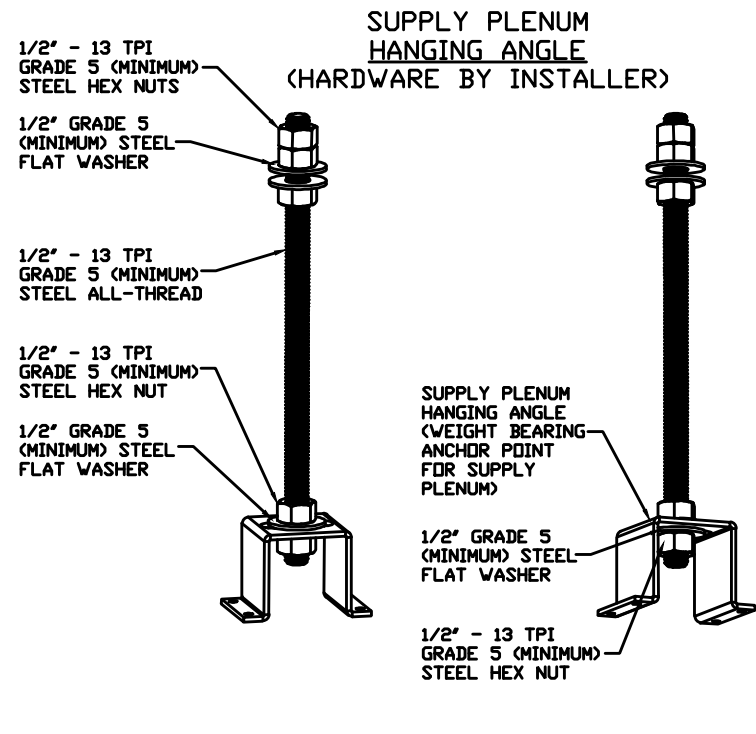
NOZZLE BLOW-OFF CAPS SHALL BE RUBBER  
"QUICK-SEAL" ADAPTORS AT HOOD AND DUCT PENETRATIONS PRODUCE A LIQUID-TIGHT FITTING

The system shall have been tested to the UL Standard for Fire Extinguishing Systems for Protection of Restaurant Cooking Area, UL300, and Listed by Underwriters Laboratories, Inc. It shall be installed in accordance with the National Fire Protection Association Standard No. 17A Wet Chemical Extinguisher Systems, and No. 96 Standard for the Installation of Equipment for the Removal of Smoke and Grease Laden Vapors from Commercial Cooking Equipment, and comply with all local and/or state codes and standards.



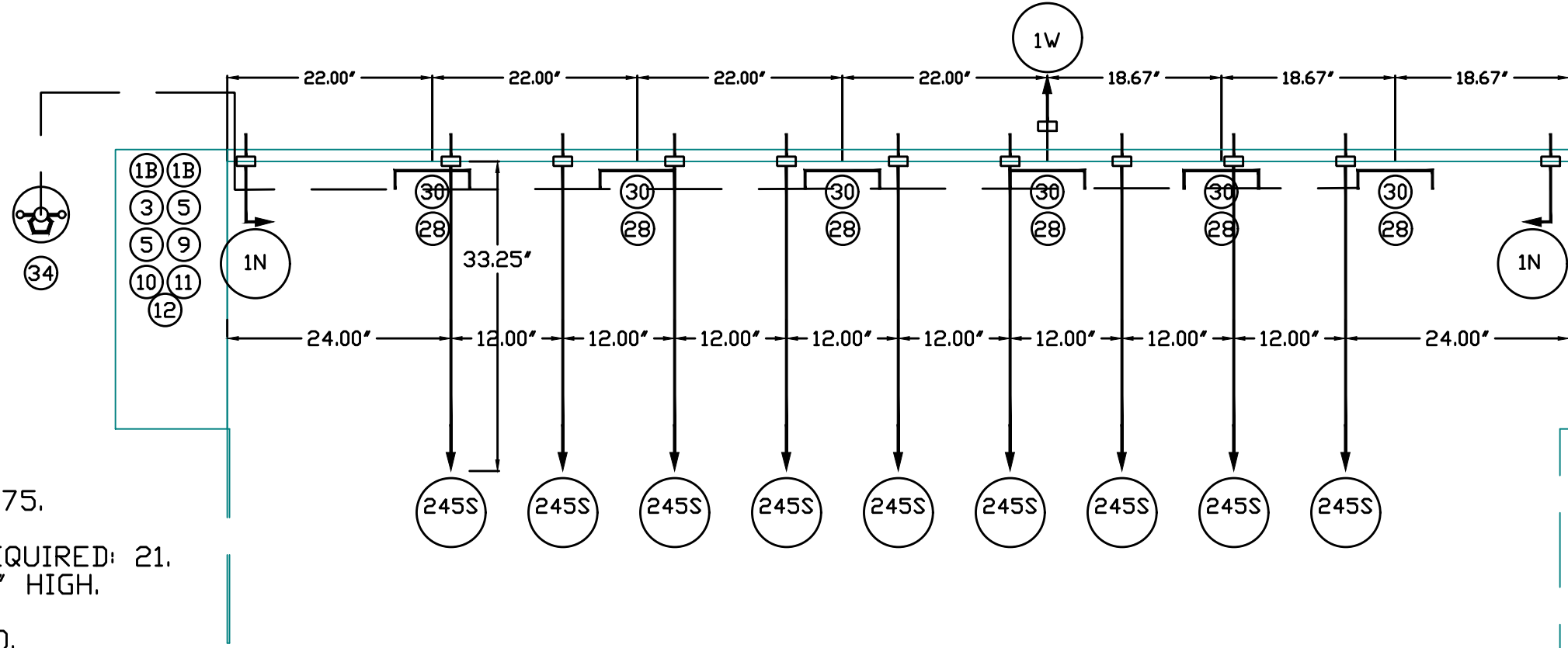
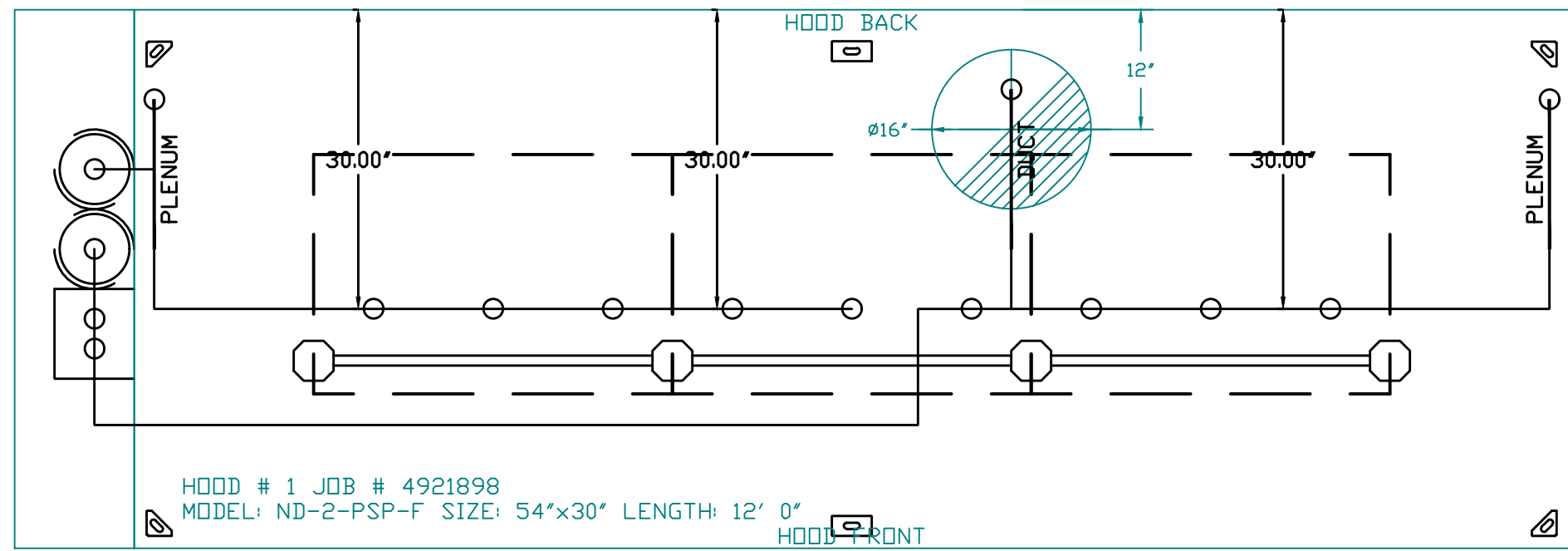
ASSEMBLY INSTRUCTIONS

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



ASSEMBLY INSTRUCTIONS

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

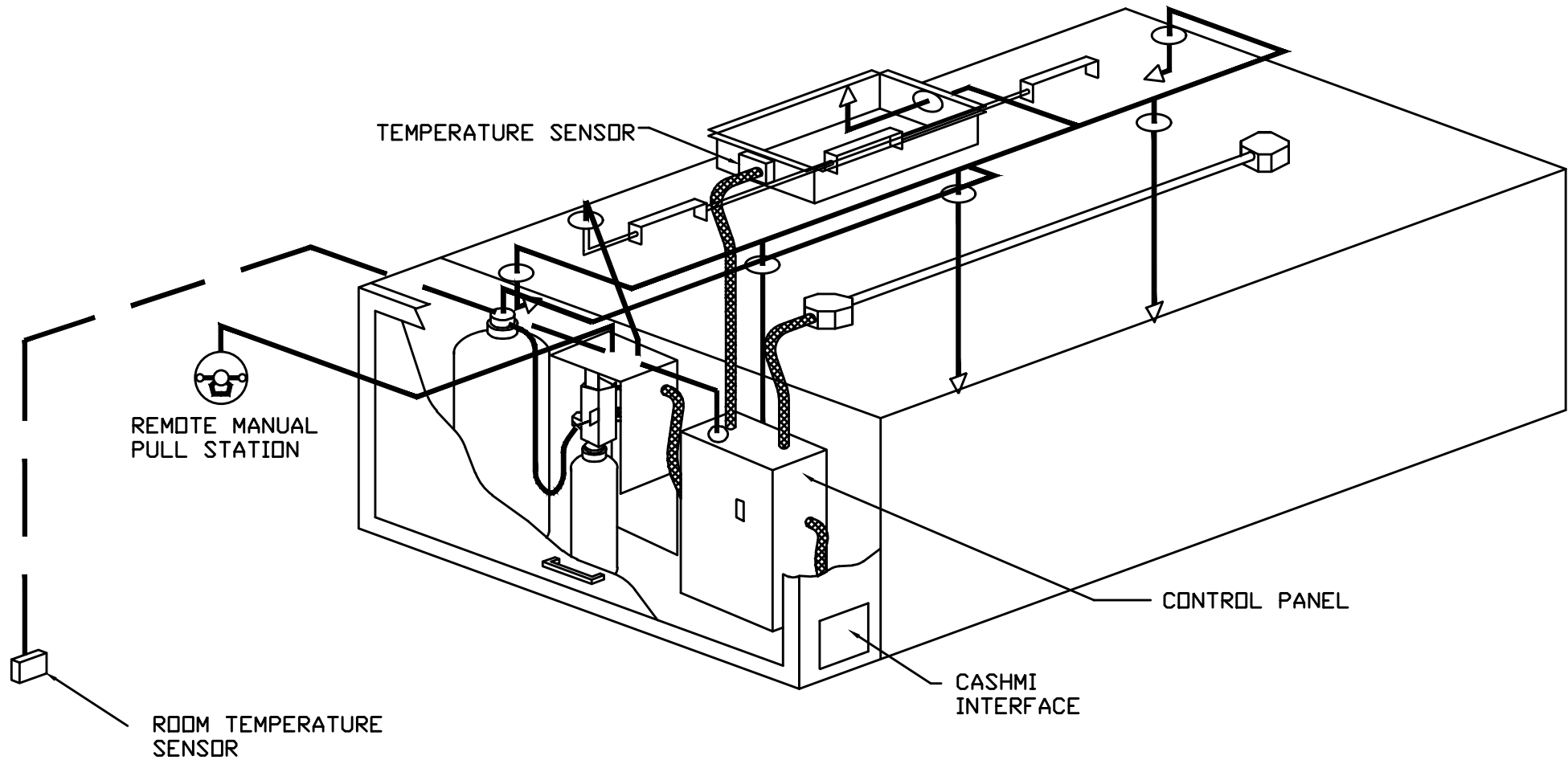


JOB #: 4921898.  
JOB NAME: WINGSTOP LEE'S SUMMIT MO #Y175.

SYSTEM SIZE: ANSUL-3.0/3.0 TOTAL FP REQUIRED: 21.  
HOOD # 1 12' 0.00' LONG x 54' WIDE x 30" HIGH.  
RISER # 1 SIZE: 16" DIA.  
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

ANSUL OVERLAPPING NOZZLE COVERAGE - OPTION 1  
ANSUL 2014 DESIGN MANUAL PAGES 4-53 THROUGH 4-56

HOOKUP, PERMITTING, AND FINAL TESTING OF ANSUL SYSTEM  
PROVIDED BY CAPTIVE-AIRE SYSTEMS



TYPICAL CONTROL CENTER INSTALLATION

CAPTIVE-AIRE HOOD PACKAGE AS SHOWN IS OWNER PROVIDED

CONSULTANT:

**CASE**  
Engineering Inc.

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St. Louis, MO 63026  
T 636.449.1600  
F 636.449.1730

CERTIFICATE OF AUTHORITY NO. 001498

CLIENT:



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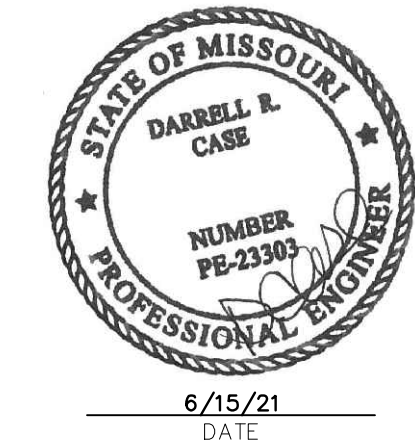
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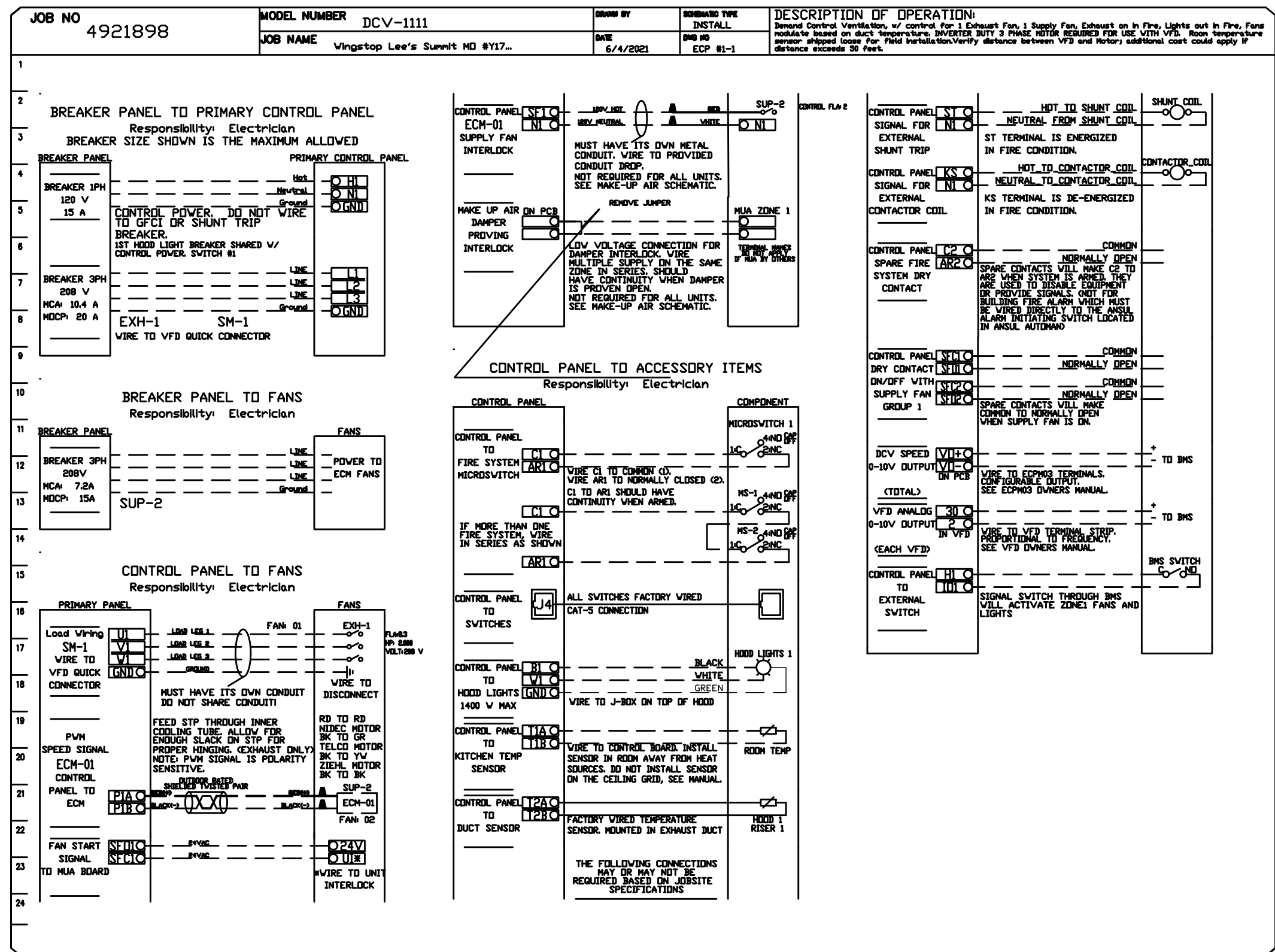
PROJECT LOCATION:

LEE'S SUMMIT, MO

SHEET NUMBER:

H2

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	φ	HP	VOLTS	FLA
				03 - UTILITY CABINET LEFT	1 LIGHT		EXHAUST	3	2,000	208	8.3
1		DCV-1111	UTILITY CABINET LEFT	HOOD # 1	1 FAN	SMART CONTROLS DCV	SUPPLY	3	2,500	208	5.7



The Electrical Control Panels Model has been certified by ITS. This certification mark indicates that the product has been tested to and has met the minimum requirements of a widely recognized (consensus) U.S. and Canadian products safety standard, that the manufacturing site has been audited, and that the applicant has agreed to a program of periodic factory follow-up inspections to verify continued performance. Models Electrical Control Panels are ETL Listed under file number 3054731-001 and complies with UL508A Standards and CSA C22.2, No. 14-M95 and CSA C22.2, No. 73-1953 Standards.

The OFP Electrical Package is designed to thermostatically activate the exhaust fan for an exhaust hood whenever elevated temperatures are sensed in the exhaust system. This option will meet the requirements of IMC 507.2.11 by providing a thermostat(s) mounted in the duct or hood riser to sense increased exhaust temperatures. Controls shall be listed by ETL (UL 508A). The control enclosure shall be NEMA 1 rated and listed for installation inside of the exhaust hood utility cabinet. The control enclosure may be constructed of stainless steel or painted steel.

A room temperature sensor is also provided for field installation in the kitchen space in order to start the fan(s) based on the temperature differential between the room and the exhaust air in the duct, rather than fixed set-points. The system is factory pre-set to activate the fans at 15 deg F° above the room temperature.

Once the duct temperature reaches the activation point, the exhaust fans will be activated. The controls also provide hysteresis to prevent cycling of the fans after the cooking appliances have been turned off and the heat in the exhaust system is reduced. The hysteresis is factory set 2 degrees and will keep the exhaust running until the temperature falls 2 degrees below the activation set point. A hysteresis timer also exists to keep the fans running for at least 30 min after being activated by the temperature rise.

The activation and hysteresis settings may be field adjusted on the board LCD interface located inside the control enclosure to meet application needs. The panel is factory configured to shut down supply fans, turn on the exhaust fans and turn off the hood lights in a fire condition.

Actuation of the fire extinguishing system shall automatically shut down the fuel and electric power supply to the cooking equipment. The fuel and electric reset shall be manual.

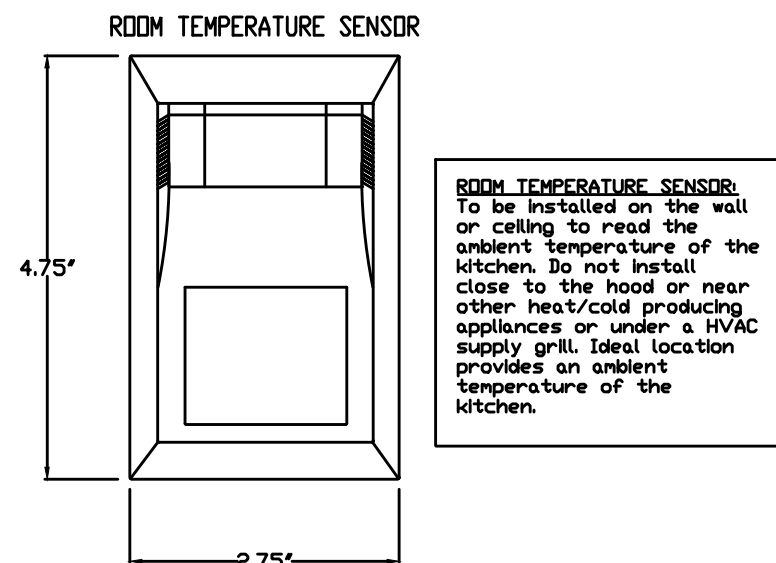
A manual activation device shall be located a minimum of ten feet (10') and a maximum of twenty feet (20') from the hood system.

## SYSTEM DESIGN VERIFICATION (SDV)

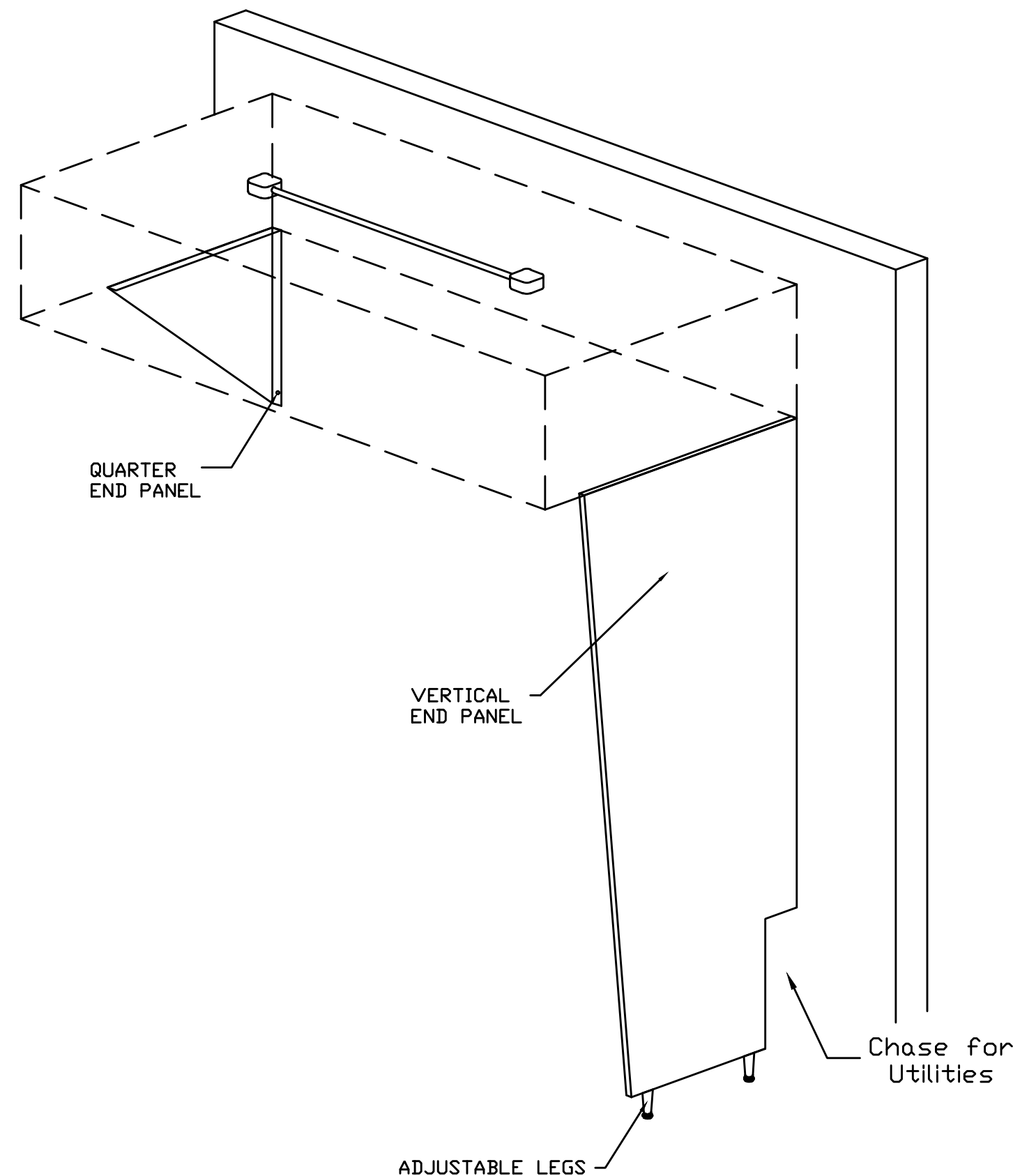
IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

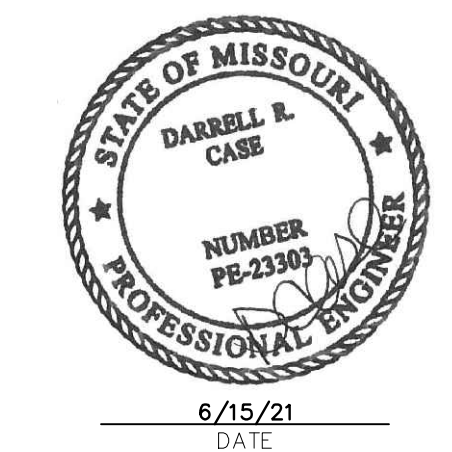
DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.



CAPTIVE-AIRE HOOD PACKAGE AS  
SHOWN IS OWNER PROVIDED



SEAL:



EXHAUST FAN INFORMATION - JOB#4921898

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1		1	DUI80HFA	CAPTIVEAIRE	2700	1.200	1148	DDP,PREMIUM	2.000	1.1570	3	208	8.3	624 FPM	207	14.2

MUA FAN INFORMATION - JOB#4921898

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MDCP	WEIGHT (LBS)	SONES
2		1	A1-D.250-16Z	16Z-1-MDD	A1-D.250	1000	2160	0.600	2376	DDP-ECM	2.500	1.6150	3	208	5.7	7.2A	15A	460	26

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2		161109	148220	66°F	7 IN. W.C. - 14 IN. V.C.	NATURAL	92

FAN OPTIONS

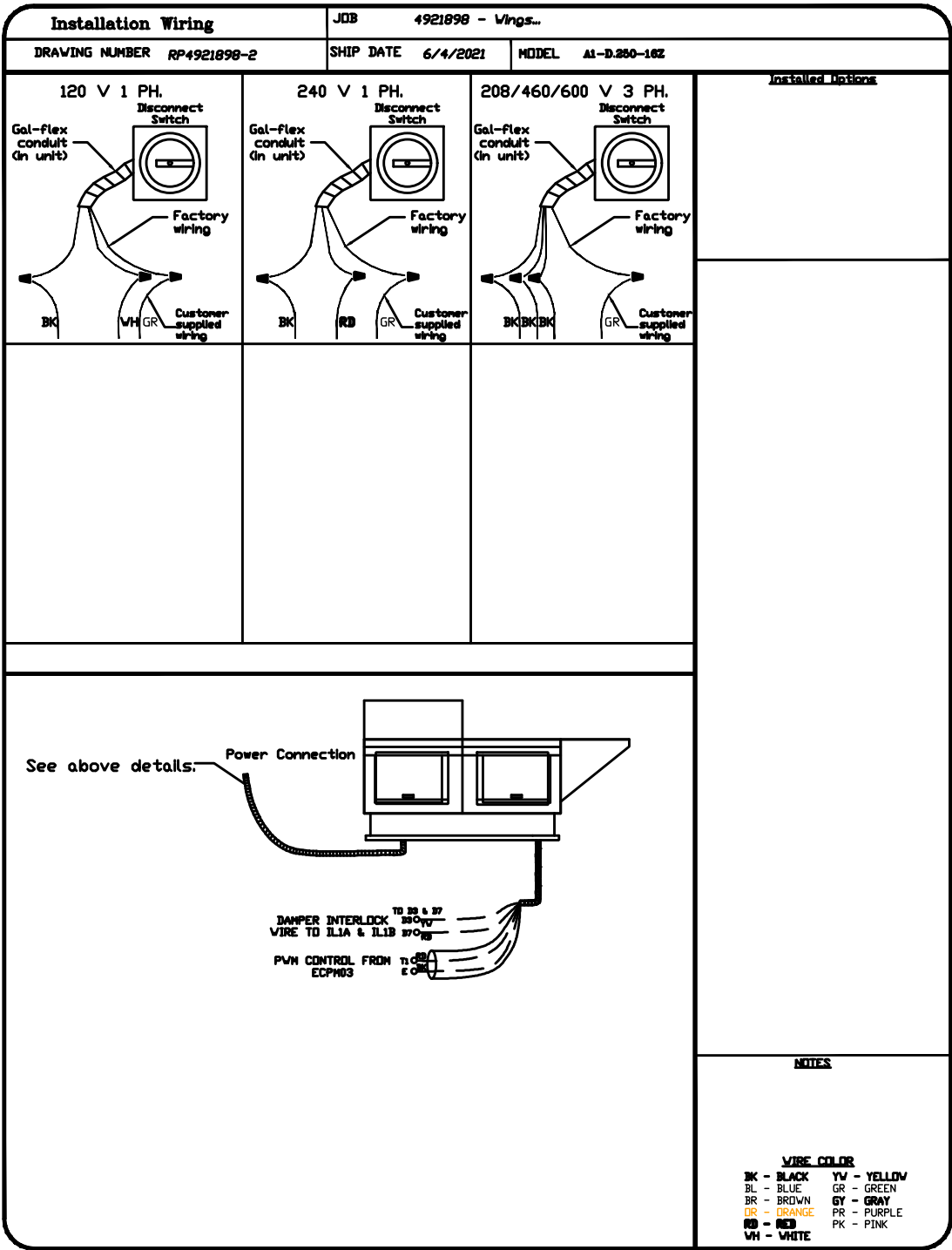
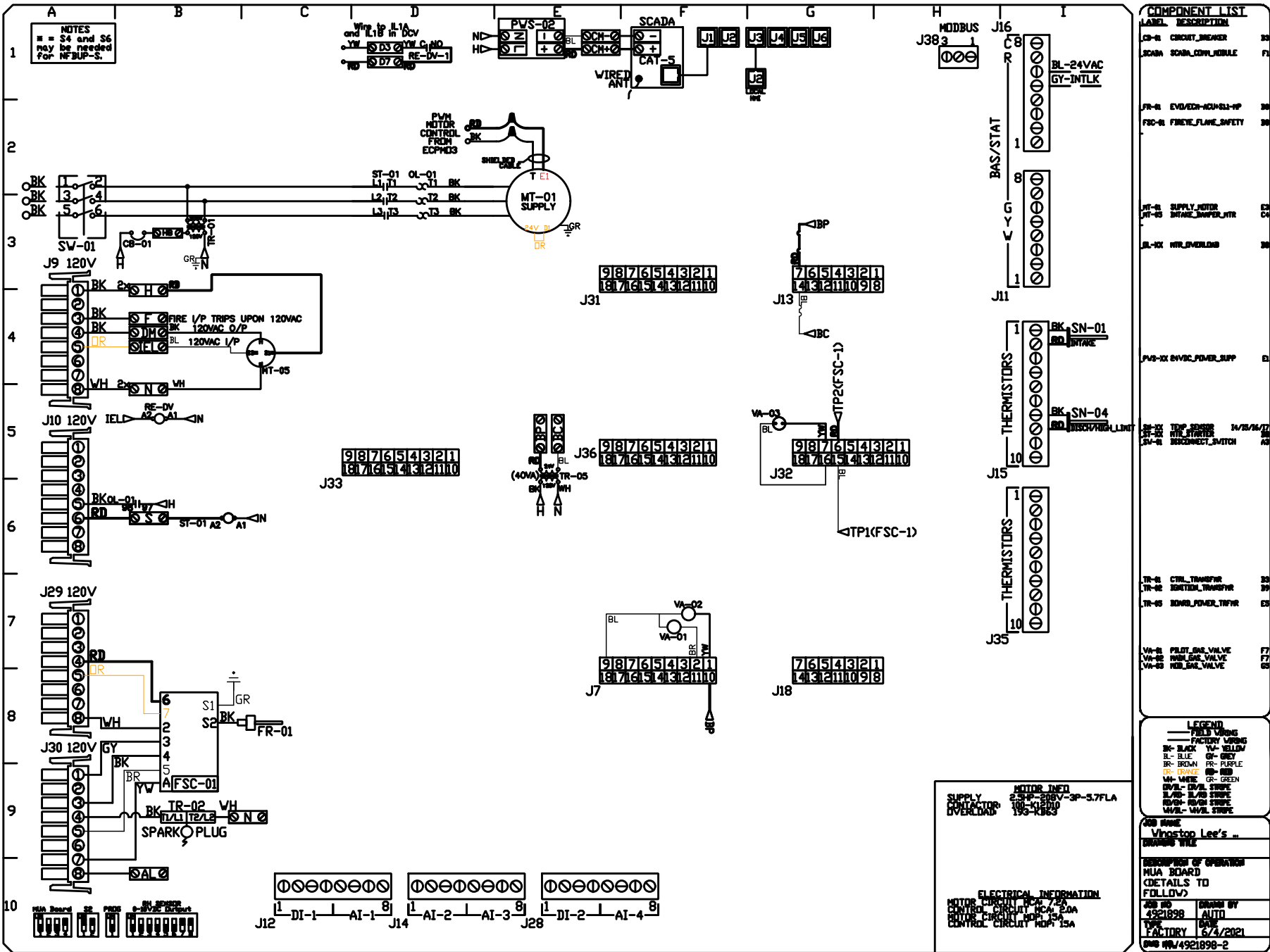
FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	GREASE BOX.
		1	24" TALL STRAIGHT WIND BAND EXTENSION 18/20 <SHIPS LOOSE>.
		1	2 YEAR PARTS WARRANTY.
2		1	MOTORIZED BACKDRAFT DAMPER FOR A1-D HOUSING. MEETS AMCA CLASS 1A RATING.
		1	LOW FIRE START.
		1	INLET PRESSURE GAUGE, 0-35".
		1	MANIFOLD PRESSURE GAUGE, -5 TO 15" W.C.
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED.
		1	ECM WIRING PACKAGE-SUPPLY - PWM SIGNAL FROM ECPM03 PREWIRE (3 - PHASE ZIEHL MOTOR).
		1	2 YEAR PARTS WARRANTY.

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST				SUPPLY		
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1		YES						
2							YES	

CURB ASSEMBLIES

NO	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	38 LBS	CURB	26.500"W X 26.500"L X 24.000"H VENTED HINGED.
2	# 2	65 LBS	CURB	21.000"W X 71.000"L X 20.000"H INSULATED.

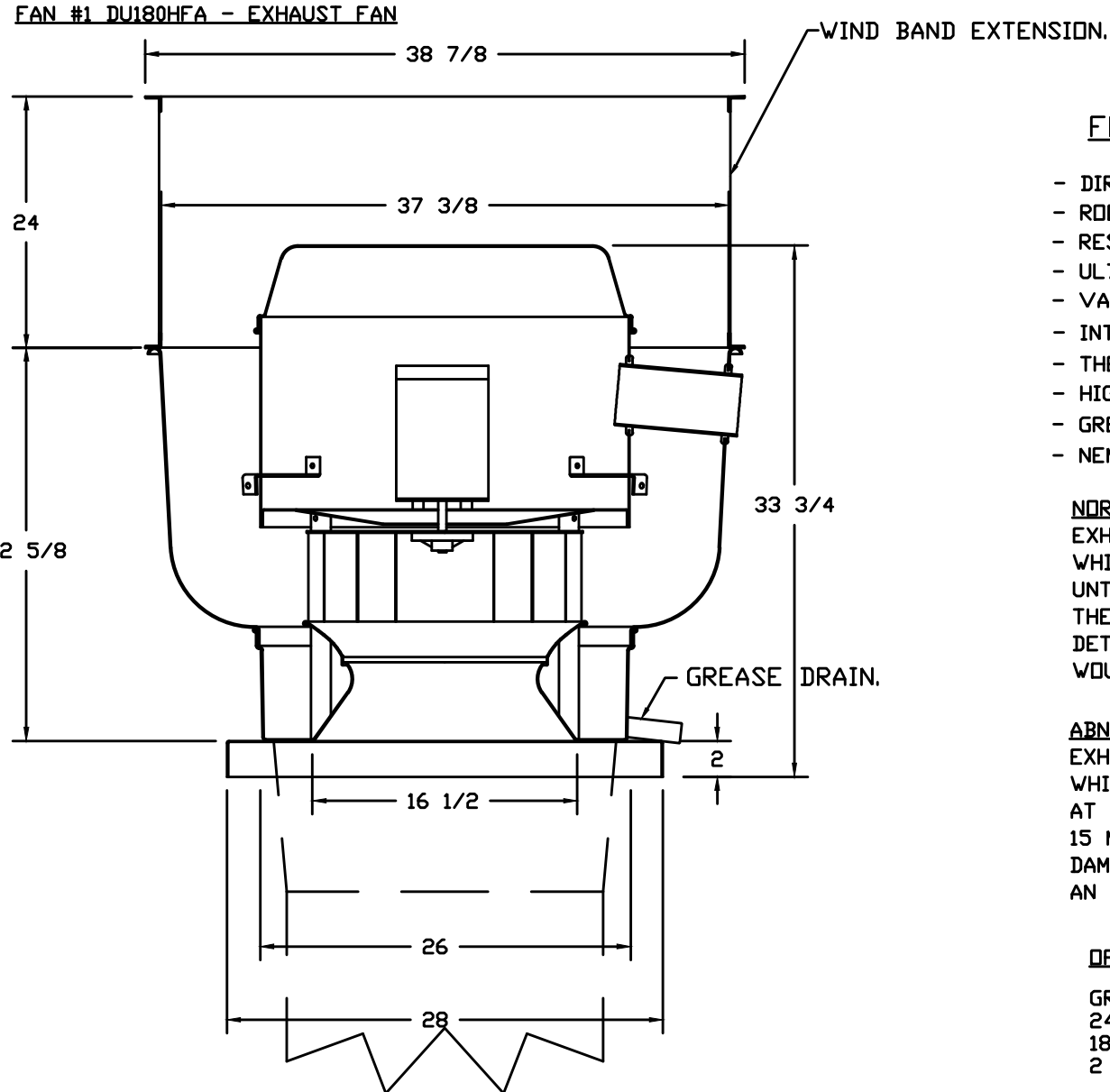


- FAN #2 A1-D.250-16Z - HEATER
- DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 16" DIRECT DRIVE FAN.
  - INTAKE HOOD WITH E2 FILTERS-LOW CFM.
  - DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
  - MOTORIZED BACK DRAFT DAMPER 16" X 18" FOR SIZE. 1 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, TFB20S ACTUATOR INCLUDED.
  - LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
  - GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
  - GAS PRESSURE GAUGE, -5 TO +15 INCHES W.C., 2.5" DIAMETER, 1/4" THREAD SIZE.
  - CASLINK BUILDING MONITORING SYSTEM COMMUNICATIONS MODULE. REQUIRES INTERNET & FIELD WIRED ETHERNET CONNECTION OR 3G CELLULAR SERVICE. INCLUDES REV 3 COMM MODULE, RJ45 TO MODBUS CONVERTER, 3 FT CAT5 CABLE, AND 1 FT OF SHIELDED TWISTED PAIR.
  - ECM WIRING PACKAGE FOR ZIEHL SUPPLY MOTORS WITH PWM SIGNAL FROM ECPM03 PREWIRE.
  - HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER SECTION).
  - 2 YEAR PARTS WARRANTY.

NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 14" X 14".

SUPPLY SIDE HEATER INFORMATION

WINTER TEMPERATURE = 9°F. TEMP. RISE = 66°F.  
BTUs CALCULATED OFF ACTUAL AIR DENSITY.  
OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 152303.  
INPUT BTUs AT ALTITUDE OF 0.0 FT. = 165546.  
OUTPUT BTUs AT ALTITUDE OF 750 FT. = 148220.  
INPUT BTUs AT ALTITUDE OF 750 FT. = 161109.



FEATURES:

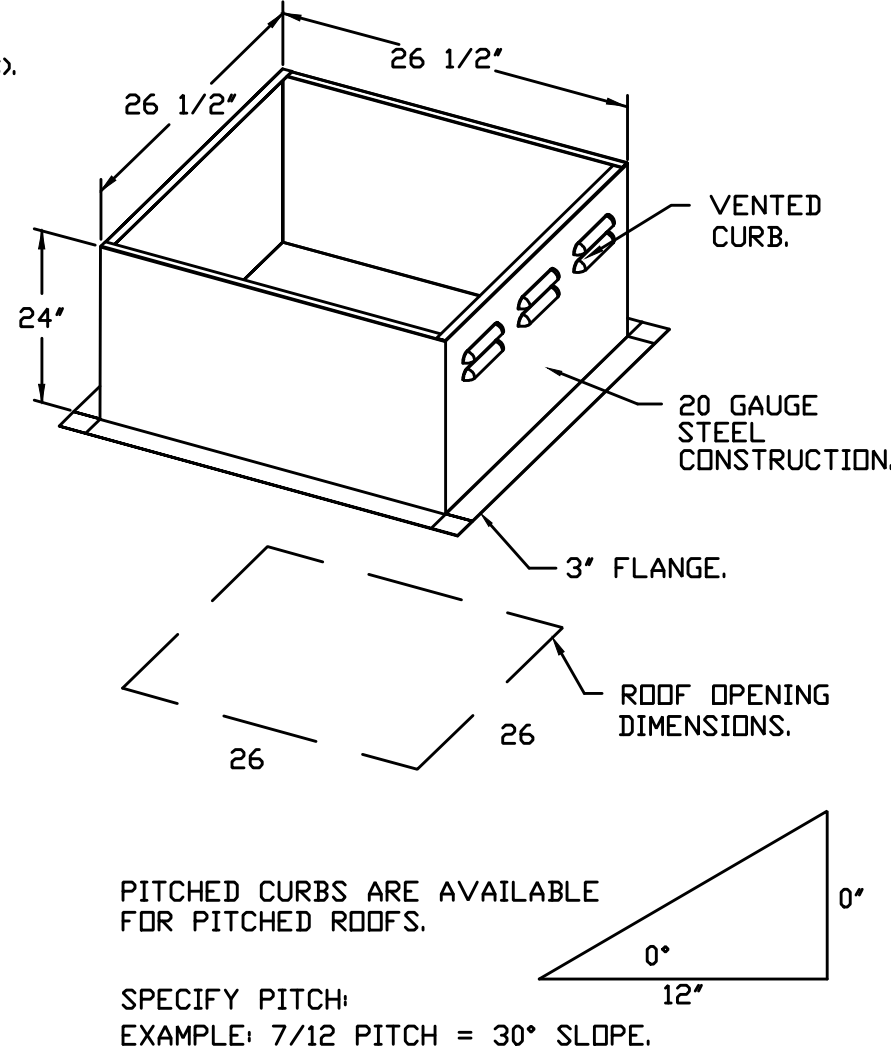
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT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

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

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

OPTIONS

- GREASE BOX.
- 24" TALL STRAIGHT WIND BAND EXTENSION 18/20 <SHIPS LOOSE>.
- 2 YEAR PARTS WARRANTY.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:  
EXAMPLE: 7/12 PITCH = 30° SLOPE.

REFER TO FAN MANUALS REGARDING PROPER STARTUP AND INSTALLATION

CAPTIVE-AIRE HOOD PACKAGE AS SHOWN IS OWNER PROVIDED

CONSULTANT:

**CASE**  
Engineering Inc.  
796 Main Court  
St. Louis, MO 63026  
T 636.449.6600  
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CERTIFICATE OF AUTHORITY NO. 001498

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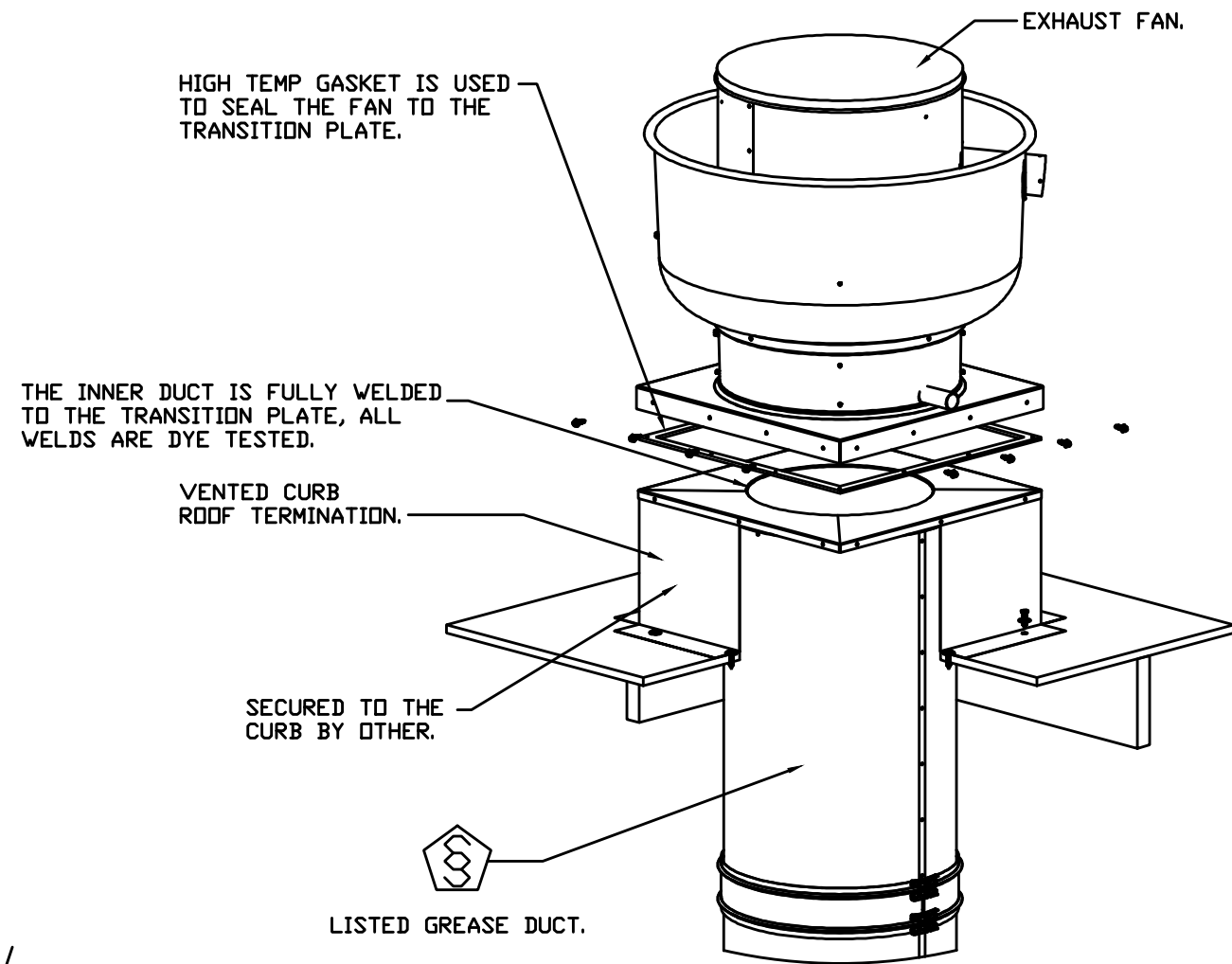
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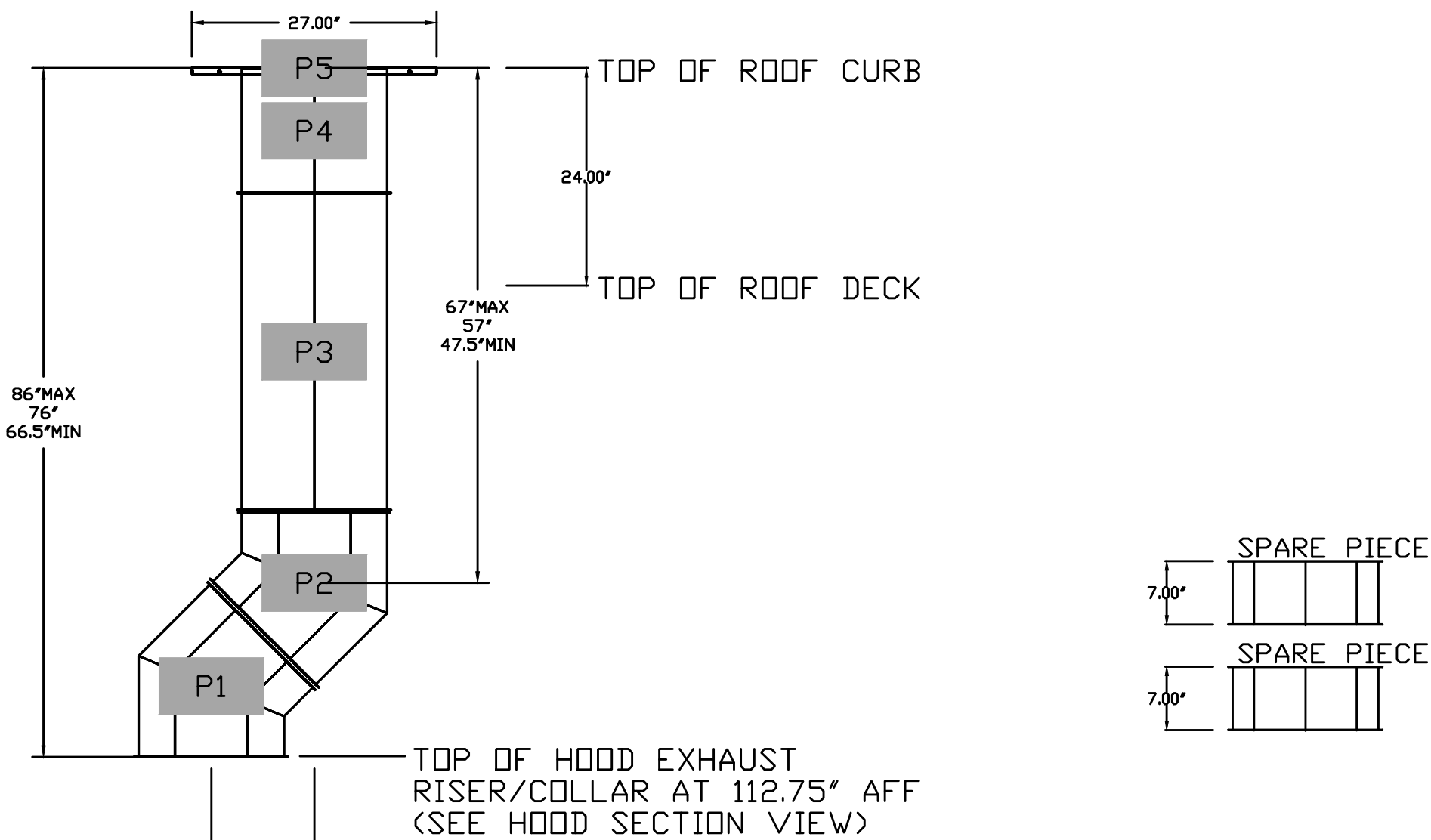
SHEET NUMBER:

H4

DUCTWORK #1 PARTS - JOB#4921898 FOR 13'-9" ROOF DECK										
TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1645ASY	2700				-0.0613	7.22	1933.73	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 16" DUCT, ASSEMBLY.
P2	DW1645ASY	2700				-0.0875	7.22	1933.73	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 16" DUCT, ASSEMBLY.
P3	DW1635LT	2700				-0.0173	18.67	1933.73	1	SINGLE WALL DUCT 16" DIAMETER, 35" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P4	DW1630AJDKIT	2700				-0.0067	20.06	1933.73	1	SINGLE WALL DUCT ADJUSTABLE, 16" DIAMETER, 29.5" LONG, FLANGE AT ONE END WITH A 16" ADJUSTABLE COLLAR - STAINLESS STEEL.
P5	DW2616TPDBEX	2700					9.00	1933.73	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 26 1/2" CURB TO 16" DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE DD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
SYSTEM AT P5						-1.1808	0.00			
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	735602000						52.00		3	DUCT - DUCT INSULATION FOR ZERO CLEARANCE TO COMBUSTIBLES - 300" X 24" X 1-1/2" ROLL. UNIFRAX FyreWRAP ELITE 1.5.
	BANDING.5						5.00		1	DUCT - FIRE BARRIER WRAP STAINLESS STEEL BANDING .5" WIDTH - 200 FT PER ROLL.
	DW16CLASY						1.18		4	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 16" DUCT, ASSEMBLY.
	SEAL.50-50						0.50		1	DUCT - FIRE BARRIER WRAP STAINLESS STEEL BANDING SEAL .5" WIDTH. QUANTITY OF 50.
	TAPEALUM						0.25		1	DUCT - FIRE BARRIER WRAP ALUMINUM FOIL TAPE - 3' X 150' ROLL.
ADDITIONAL PARTS										
EXTRA-1	DW1607LT						4.14		2	SINGLE WALL DUCT 16" DIAMETER, 7' LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
EXTRA-2	DW16CLASY						1.18		2	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 16" DUCT, ASSEMBLY.
TOTAL WEIGHT							240.88			



DUCTWORK #1 FRONT VIEW FOR 13'-9" ROOF DECK



GREASE DUCT SPECIFICATION

Furnish single-wall, factory built, grease duct for use with Type I kitchen hoods, which conforms to the requirements of NFPA-96. Products shall be ETL listed to UL-1978 for venting air and grease vapors from commercial cooking operations as described in NFPA-96. The duct wall shall be constructed of .036 thick type 430 stainless steel and be available in diameters 8" through 24". All supports, fan adapters, hood connections, fittings and expansion joints required to install grease duct shall be included. Roof penetrations shall comply with listed clearance to combustibles, see *Clearance to Combustibles* guide for details. The grease duct will terminate at the fan adapter plate, will be fully welded to the fan adapter plate and the fan adapter plate will be fastened to the curb using a suitably sized fastener provided by others; see page 12 of the *Installation, Operation and Maintenance Manual* for details. Grease duct joints shall be held together by means of formed vee clamps and sealed with *3M Fire Barrier 2000+*. Screws used to secure the vee clamps shall be of the hex-head type with flanged stops and tapered 'lead in' threads for easy starting. Nuts shall be retained by means of a free-floating cage to allow easy alignment. Single-Wall Grease Duct shall be installed in accordance with the manufacturer's *Installation, Operation and Maintenance Manual*, ETL listing and state and local codes. Grease duct installed outside of the building shall be protected against accidental damage or vandalism. Support vertically installed grease duct from the building structure using rigid structural supports. Anchor supports to the structure by welding or bolting steel expansion anchors or concrete inserts. Support horizontally installed grease duct from the building structure using above method or use *Duct Master Wire Rope & Clutchers*, part numbers WR20 & CL20. 1/2" Threaded rod and saddles may also be used for the support of horizontal grease duct. Fans shall be supported independently from the grease duct sections. Protect grease duct from twisting or movement caused by fan torque or vibration.

FIRE WRAP SPECIFICATION - Pyroscat

Thermal Ceramics' new Pyroscat® Duct Wrap XL is the thinnest and lightest flexible wrap material available that passes the ASTM E 2336 test standard required by the 2006 IMC and NFPA 96 for reduced clearance enclosure materials used to provide 1 or 2 hour fire rating for kitchen exhaust ducts. Duct Wrap XL is also UL Classified and Labeled per ISO 6944 as an alternative to a 1 or 2 hour rated enclosure for air ventilation ducts. The Duct Wrap XL core blanket is manufactured using Thermal Ceramics patented Superwool® fiber, a 2000°F rated, non-combustible, alkaline-earth silicate wool with low biopersistence. Duct Wrap XL is the product of extensive research and development resulting in break-through improvements in fiberization technology with significant enhancements in thermal properties beneficial to fire protection applications. Duct Wrap XL when used in combination with an approved firestop sealant provides an effective through penetration firestop in rated floor and wall assemblies. Duct Wrap XL is UL Classified and is part of UL's Listing and Follow-Up Service Program to ensure the consistent quality essential to the critical nature of this life-safety application.

FIRE WRAP SPECIFICATION - Unifrax

Unifrax's FyreWrap®Elite1.5 Duct Insulation is a two-layer flexible enclosure for two-hour rated commercial kitchen grease ducts. FyreWrap Elite 1.5 Duct Insulation is tested per ASTM E2336 and is acceptable as an alternate to a traditional fire-rated shaft. Installed as a two-layer system, FyreWrap Elite 1.5 complies with the International Mechanical Code (IMC) and Uniform Mechanical Code (UMC). FyreWrap Elite 1.5 Duct Insulation offers the following product features:

- 2-hour fire-resistance rating
- Alternate to shaft enclosure
- Complies with IMC and UMC
- Tested per ASTM E2336
- Two-layer system
- High-temperature, biosoluble insulation
- Zero clearance to combustibles, at any location

•GREENGUARD listed for Microbial Resistance

DUCT SEALANT & FIREWRAP PROVIDED BY CAPTIVE-AIRE

Model DW Series is ETL Listed under file number 3114021, and complies with UL-1978, as well as CAN/ULC-S662.

The DW Series has been certified by ITS. This certification mark indicates that the product has been tested to and has met the minimum requirements of a widely recognized (consensus) U.S. and Canadian products safety standard, that the manufacturing site has been audited, and that the applicant has agreed to a program of periodic factory follow-up inspections to verify continued performance.

UL 1978 -Standard for Grease Duct  
UL 2221 -Fire Resistive Grease Duct Enclosure Assemblies  
NFPA 96 -Installation Standard  
ASTM E2336 -Test Method for Fire Resistive Grease Duct Enclosure System

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

SINGLE WALL FACTORY BUILT DUCTWORK

- ADJUSTABLE PIECES OF DUCT MUST EXTENDED INTO THE DUCT BELOW BY AT LEAST 6" MINIMUM.
- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

DUCT DIAMETER	HORIZONTAL WALL SUPPORT (Ft)	VERTICAL WALL SUPPORT (Ft)	VERTICAL CURB SUPPORT (Ft)
8"	10'	10'	24'
10"	10'	10'	24'
12"	10'	10'	24'
14"	10'	10'	24'
16"	10'	10'	24'
18"	10'	10'	24'
20"	10'	10'	24'
22"	10'	10'	24'
24"	10'	10'	24'

CAPTIVE-AIRE HOOD PACKAGE AS SHOWN IS OWNER PROVIDED

MINIMUM CLEARANCE TO COMBUSTIBLES			
DUCT DIAMETER	COMBUSTIBLES	LIMITED COMBUSTIBLES	NON COMBUSTIBLES
8"	18"	3"	0"
10"	18"	3"	0"
12"	18"	3"	0"
14"	18"	3"	0"
16"	18"	3"	0"
18"	18"	3"	0"
20"	18"	3"	0"
24"	18"	3"	0"

CONSULTANT:

**CASE**  
Engineering Inc.

T 636.549.6000  
F 636.549.1730

796 Main Court  
St. Louis, MO 63026

CERTIFICATE OF AUTHORITY NO. 001098

CLIENT:



5501 LBJ FREEWAY, 5TH FLOOR  
DALLAS, TX 75240  
TELEPHONE: (972) 686-6500  
FAX: (972) 686-650

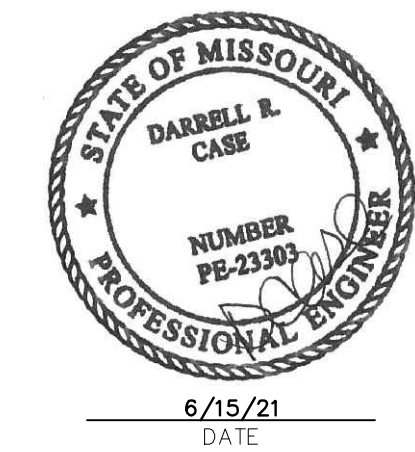
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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: GL#Y715  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



PROJECT NO.: 2021-0158

DRAWN BY: JJV

CHECKED BY: DRC

ISSUE: DATE:  
FOR PERMIT & BID 06-10-21

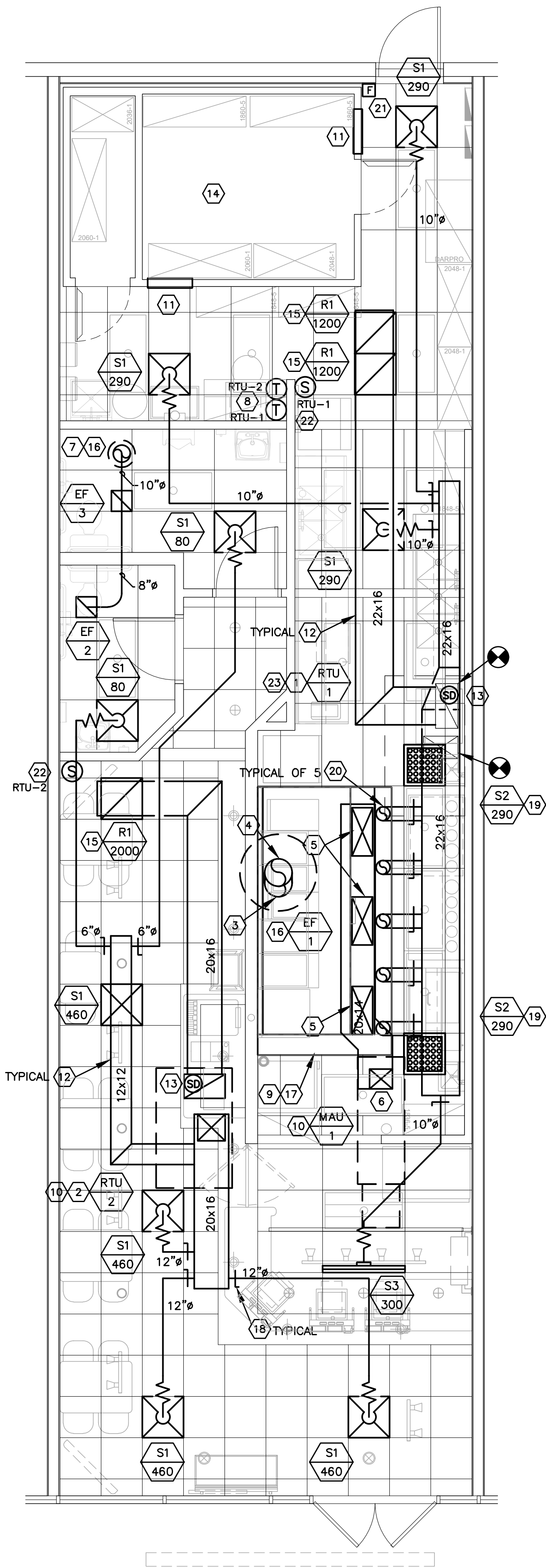
REVISION: DATE:

PROJECT LOCATION:

LEE'S SUMMIT, MO

SHEET NUMBER:

H5



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

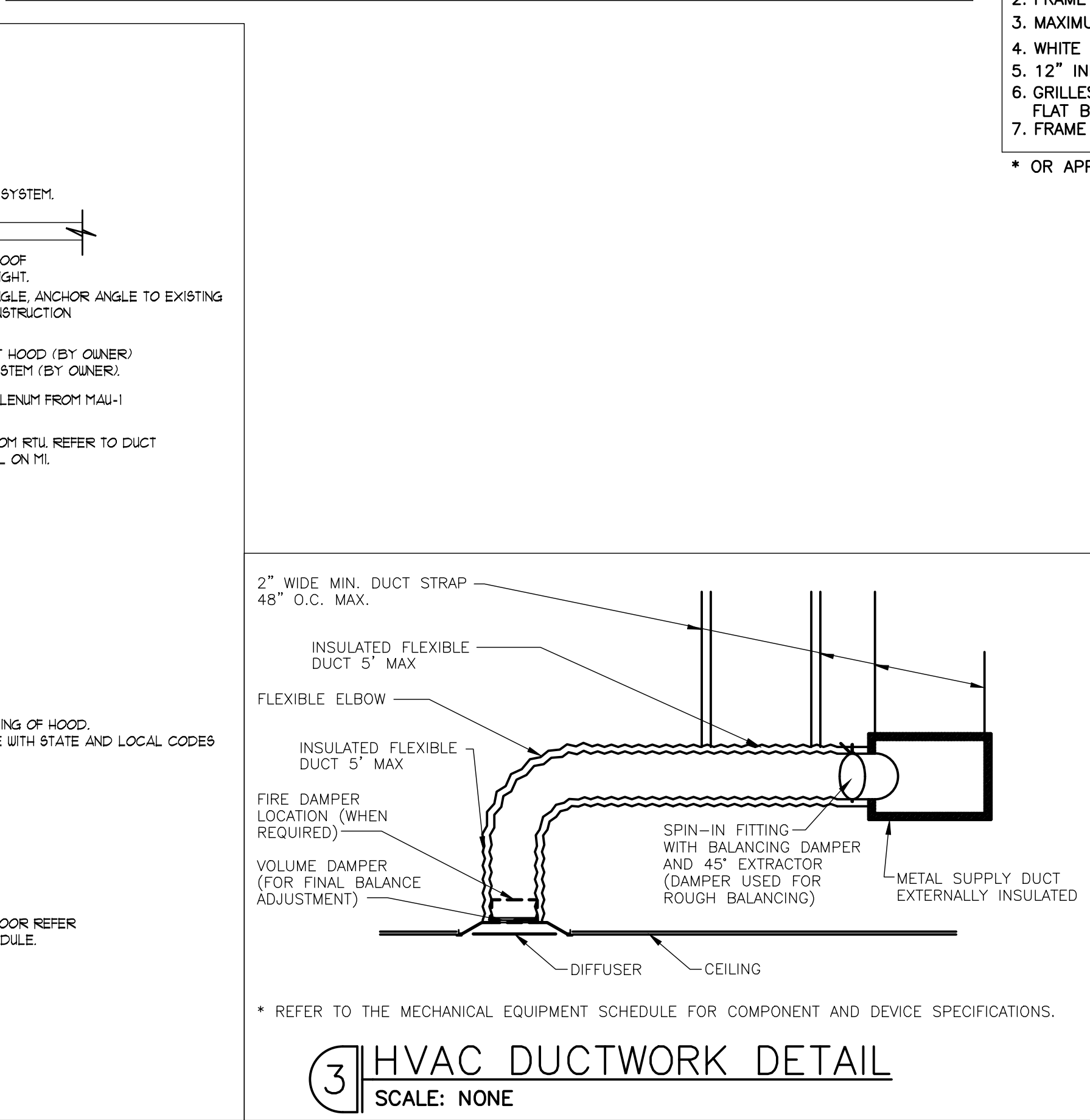
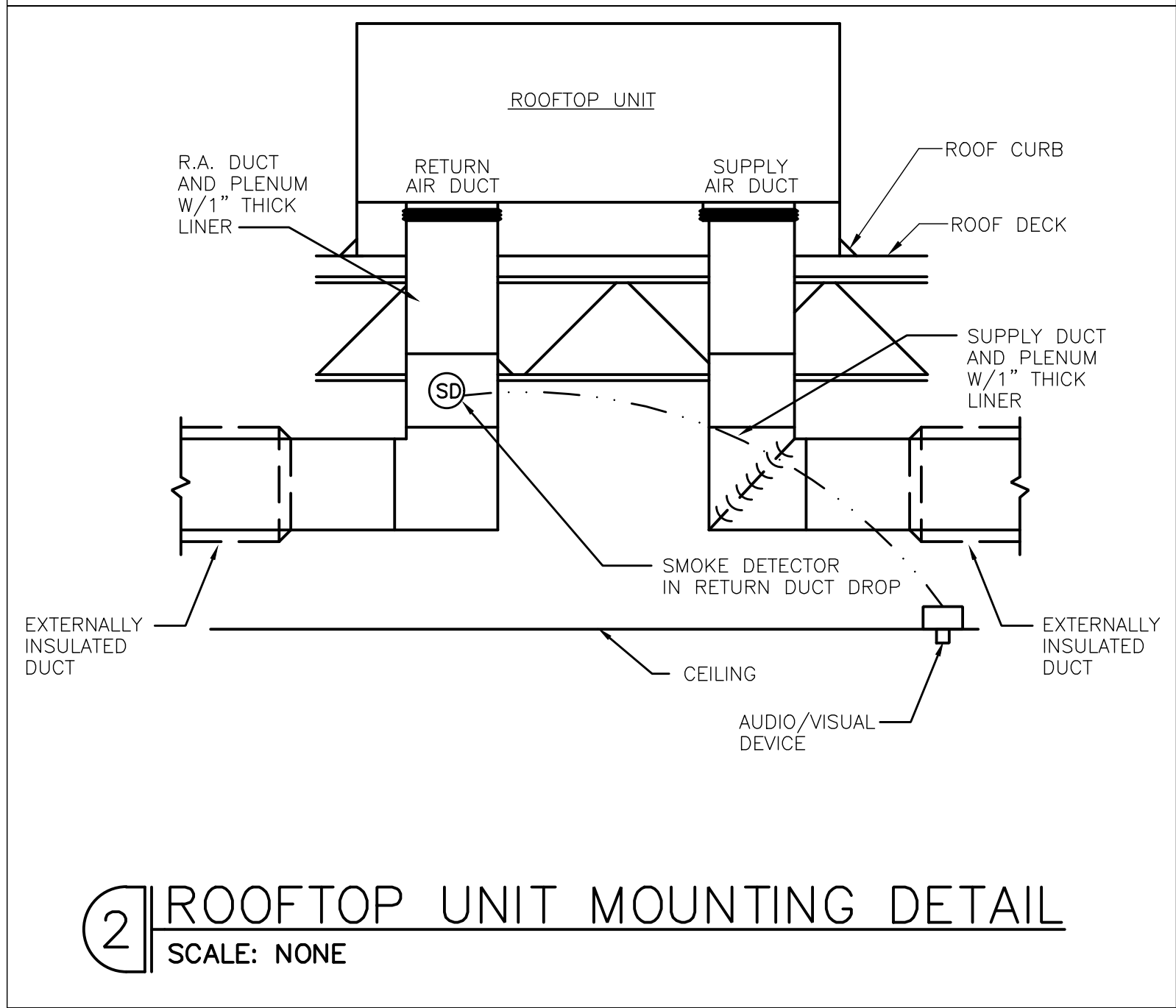
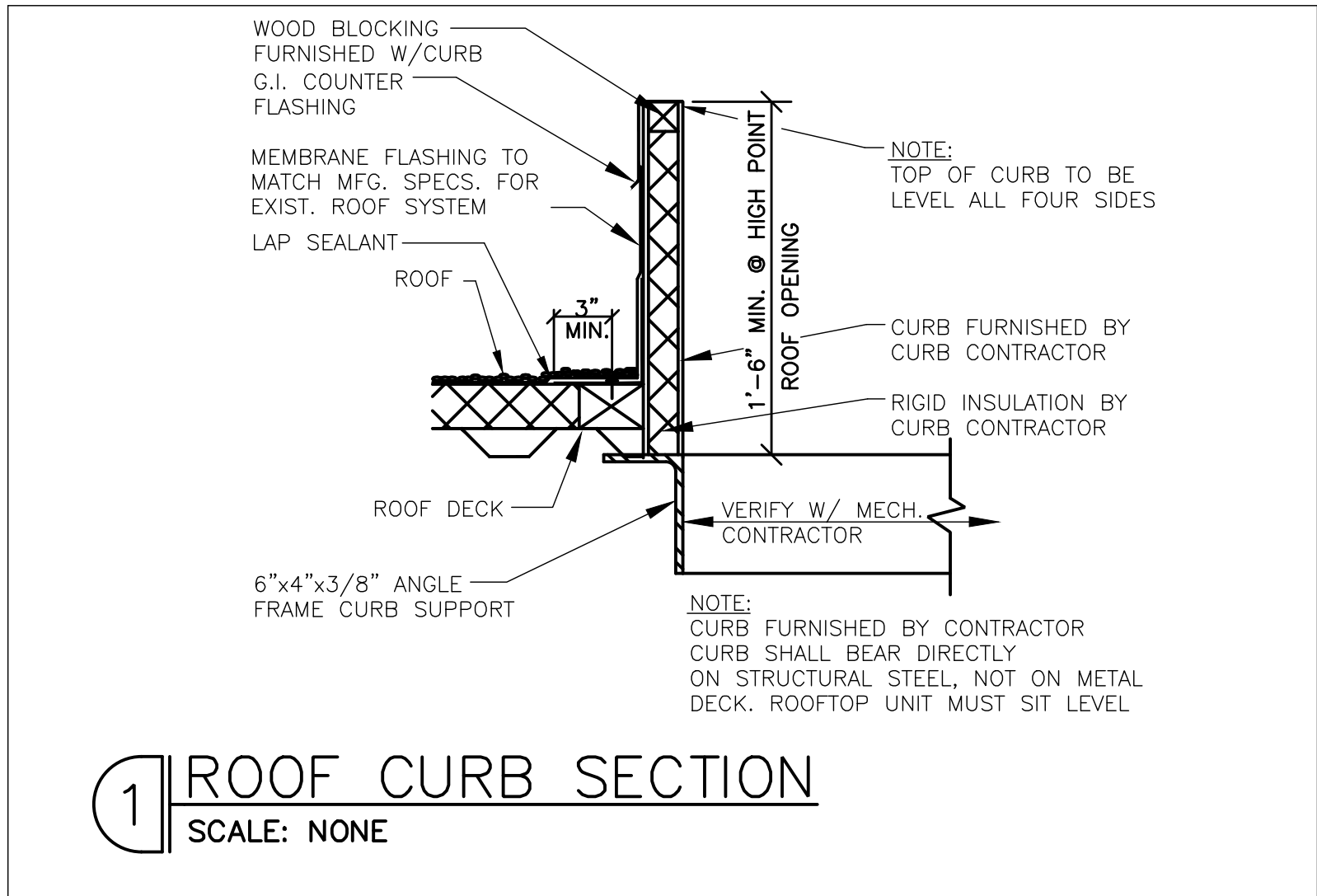
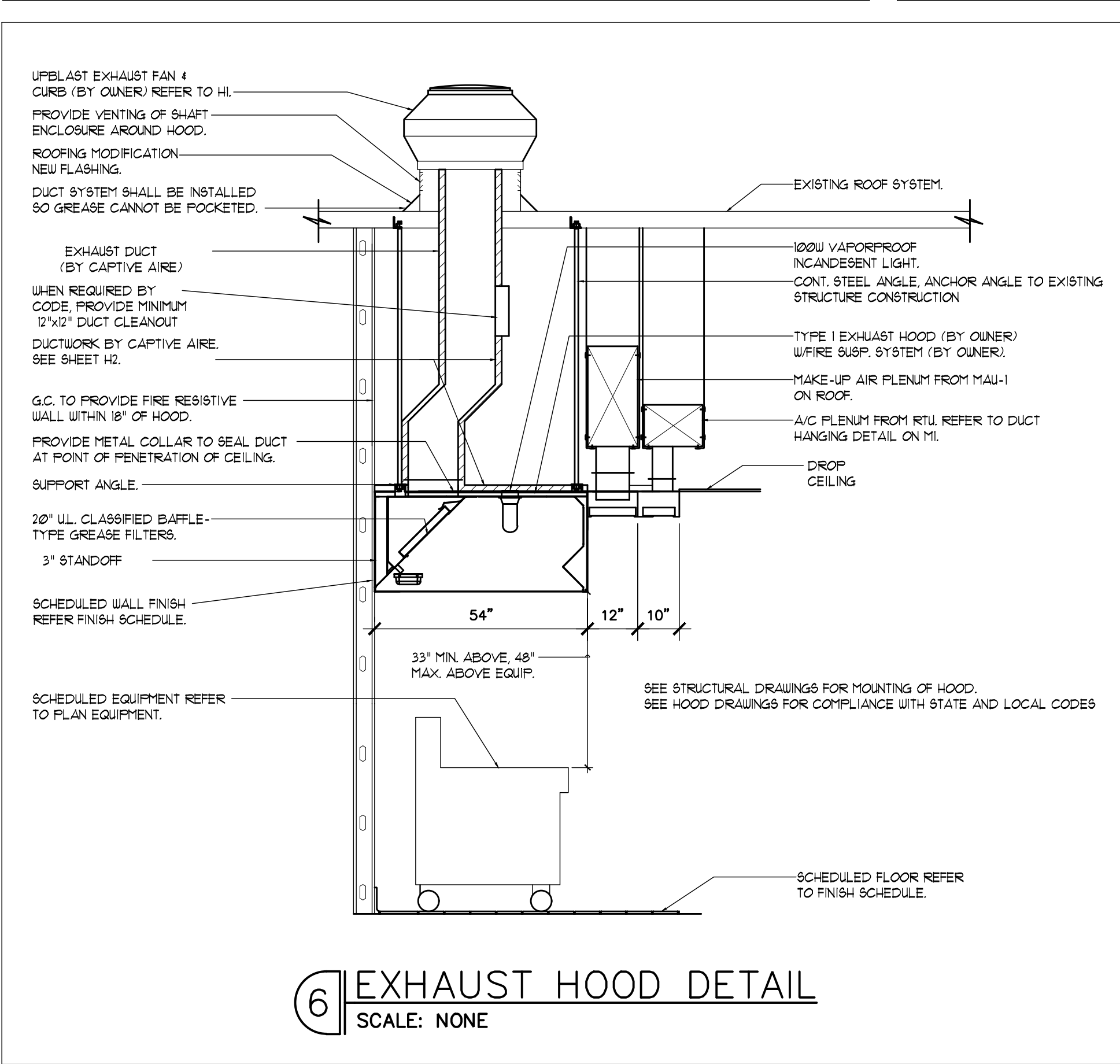
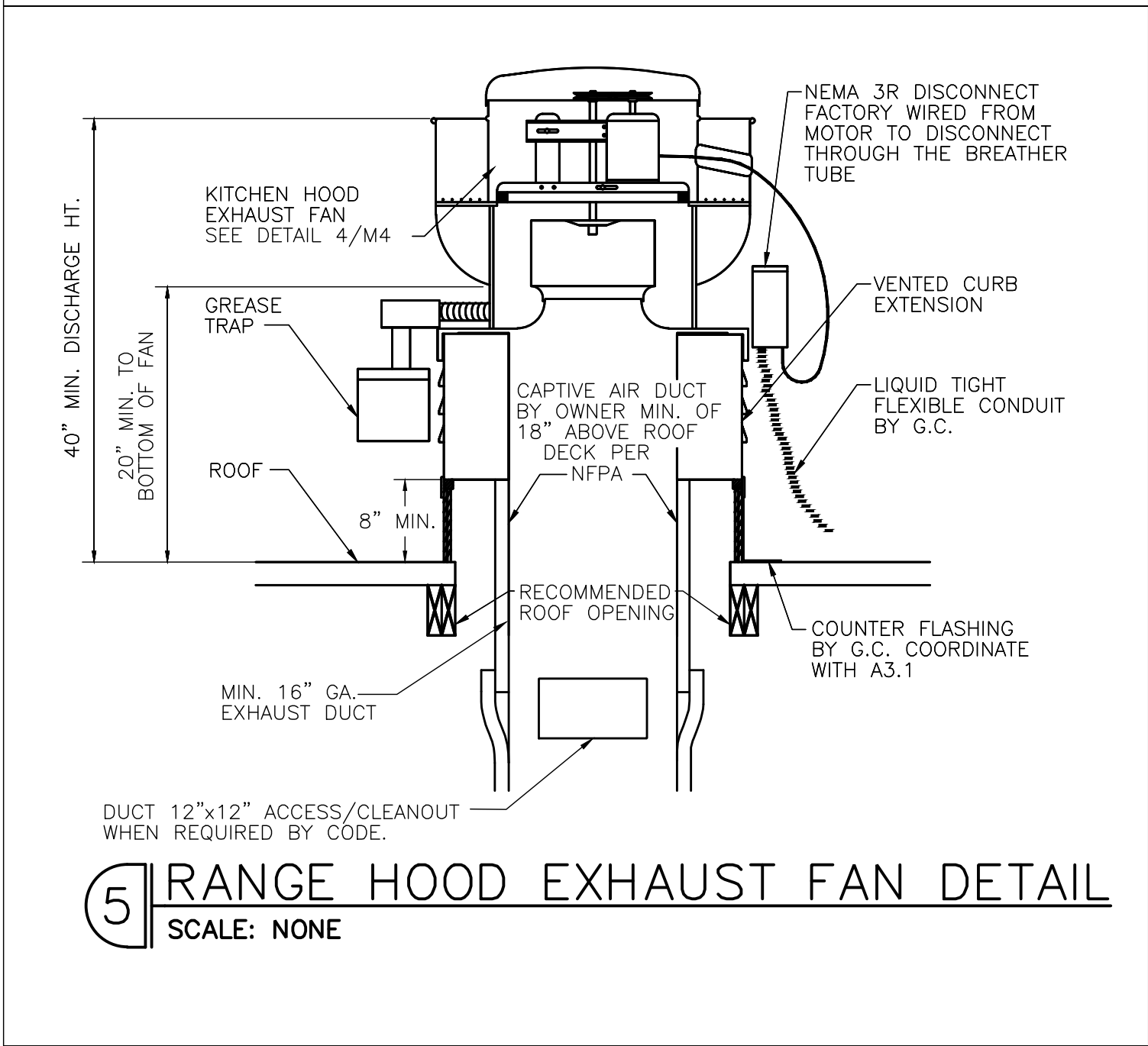
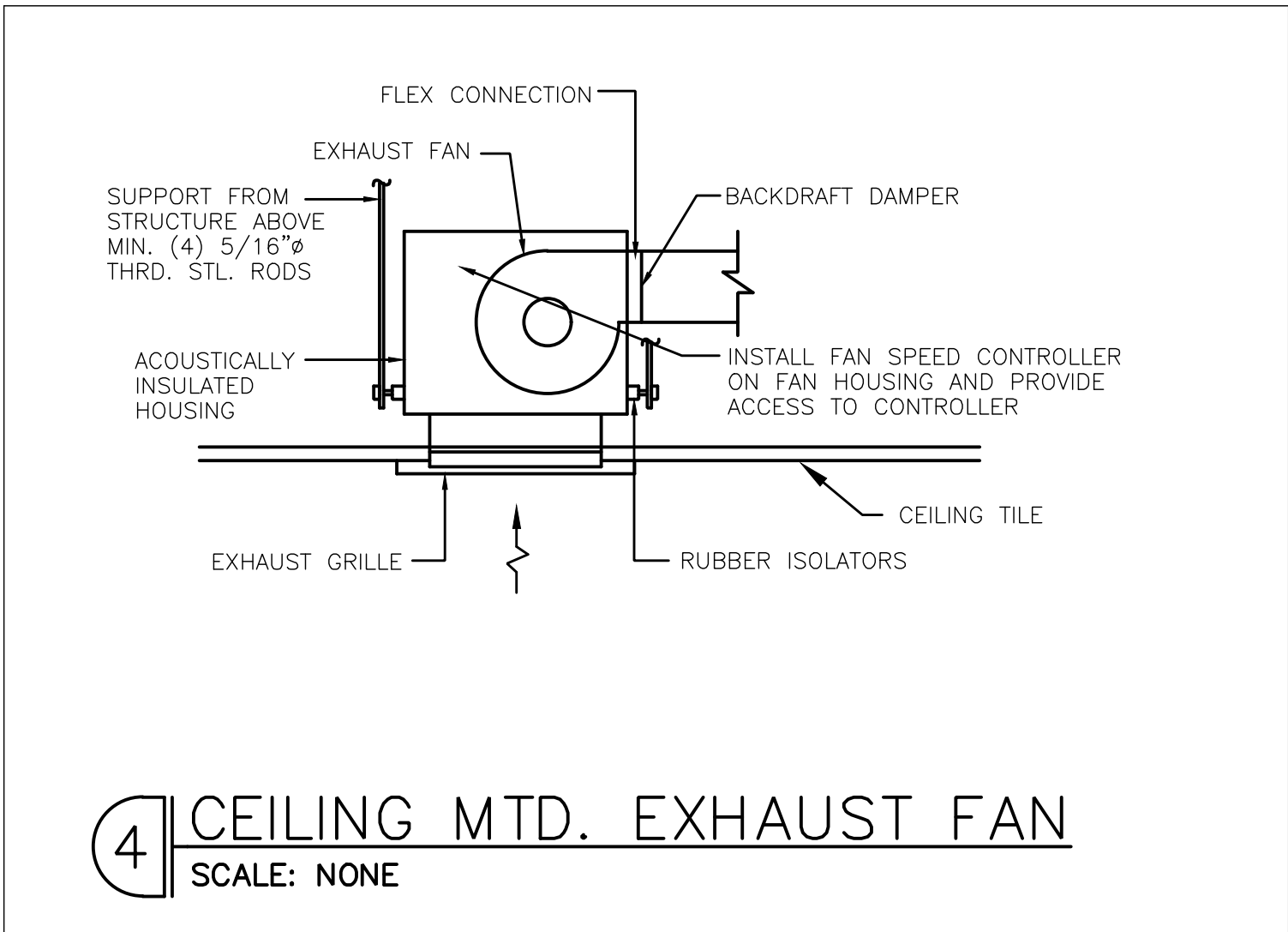
GENERAL INSTRUCTION TO BIDDERS

EQUIPMENT SHALL BE TRANE WITH MODELS AND CONFIGURATIONS AS SHOWN. NO SUBSTITUTIONS ALLOWED. PLEASE REFER TO THE TRANE NATIONAL ACCOUNT PROGRAM SCHEDULE BLOCK FOR DETAILS ON PRICING AND ORDERING OR CONTACT: CLINT MORGAN – NATIONAL ACCOUNTS MANAGER – TEXAS DISTRICT  
TRANE COMMERCIAL SYSTEMS  
1617 HUTTON DRIVE, CARROLLTON, TX 75006  
OFFICE: 469-758-3179 MOBILE: 469-597-4836  
EMAIL: CLINT.MORGAN@TRANETECHLOGIES.COM

- MECHANICAL KEYED NOTES
- EXISTING 6 TON ROOFTOP UNIT RTU-1. REFER TO EQUIPMENT SCHEDULE ON SHEET M2. PROVIDE FLEXIBLE CONNECTORS FOR THE SUPPLY AND RETURN AIR DUCT CONNECTIONS. TRANSITION TO DUCT SIZES SHOWN. PROVIDE DUCT WORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. REFER TO EQUIPMENT SCHEDULES FOR ADDITIONAL REQUIREMENTS.
  - HVAC CONTRACTOR SHALL SUPPLY AND INSTALL 5 TON ROOFTOP UNIT RTU-2, REFER TO EQUIPMENT SCHEDULE ON SHEET M2. PROVIDE FLEXIBLE CONNECTORS FOR THE SUPPLY AND RETURN AIR DUCT CONNECTIONS. TRANSITION TO DUCT SIZES SHOWN. PROVIDE DUCT WORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. REFER TO EQUIPMENT SCHEDULES FOR ADDITIONAL REQUIREMENTS.
  - 16" EXHAUST RISER UP FROM HOOD COLLAR. EXTEND DUCT UP TO FAN ON ROOF. REFER TO DETAILS ON SHEET M2 FOR EXHAUST DUCT FIRE BARRIER DUCT WRAP. EXHAUST DUCT AND FIRE BARRIER DUCT WRAP PROVIDED BY OWNER INSTALLED BY MECHANICAL CONTRACTOR. IF WELDED EXHAUST DUCT IS USED, MECHANICAL CONTRACTOR TO PROVIDE EXHAUST DUCT AND FIRE BARRIER DUCT WRAP.
  - 16" EXHAUST DUCT UP THROUGH ROOF TO EF-1 ON ROOF. ROOF MOUNTED KITCHEN EXHAUST FAN EF-1 AND CURB TO BE PROVIDED BY OWNER AND INSTALLED BY MECHANICAL CONTRACTOR. SEE EQUIPMENT SCHEDULE AND FAN/HOOD DETAILS FOR ADDITIONAL INFORMATION. ROOF CURB TO BE 20" REFER TO HOOD DRAWINGS.
  - 28"x12" SUPPLY DUCT RISER UP FROM 28"x12" DUCT COLLAR (TYPICAL OF 3). EXTEND DUCT UP TO MAIN SUPPLY DUCT.
  - 13"x11" UP THROUGH ROOF TO MUA-1 ON ROOF. ROOF MOUNTED KITCHEN MAKE-UP AIR UNIT MUA-1 AND CURB TO BE PROVIDED BY OWNER AND INSTALLED BY MECHANICAL CONTRACTOR. SEE EQUIPMENT SCHEDULE AND FAN/HOOD DETAILS FOR ADDITIONAL INFORMATION. PROVIDE EXTENSION AS REQUIRED FOR 10 FEET MINIMUM FROM EXHAUST VENT.
  - EXTEND DUCTS FROM EACH CEILING EXHAUST FAN TO 10" AT EXHAUST DUCT THROUGH ROOF. TERMINATE ROOF DUCT NO LESS THAN 10'-0" FROM ANY OUTSIDE AIR INTAKE. PROVIDE WEATHERPROOF CAP AND BIRDSCREEN.
  - PROVIDE AN EQUIPMENT COMPATIBLE PROGRAMMABLE THERMOSTAT WITH NIGHT SETBACK FEATURE AND LOCKING COVER. MOUNT AT 48" A.F.F. COORDINATE EXACT LOCATION WITH OWNER ON SITE. (TYPICAL OF 2).
  - EXHAUST HOOD TO BE PROVIDED BY OWNER AND INSTALLED BY MECHANICAL CONTRACTOR. SEE DRAWING SHEET H1 AND MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION. VOLUME OF EXHAUST PER U.L. LISTING FOR HOOD. SEE ARCHITECTURAL DRAWINGS FOR HOOD MOUNTING LOCATION AND DIMENSIONS.
  - COORDINATE NEW RTU-2 AND MAU-1 LOCATION WITH EXISTING ROOF JOIST, COORDINATE WITH STRUCTURAL ENGINEER.
  - PROVIDE TITUS 50F 26x18 TRANSFER AIR GRILLE IN SOFFIT ABOVE COOLER.
  - FURNISH AND INSTALL GALVANIZED STEEL DUCTWORK, SIZES AS NOTED ON DRAWINGS. DUCTWORK SIZES ARE SHEET METAL SIZES. ALL NEW DUCTWORK SHALL HAVE 1" INTERNAL LINER.
  - PROVIDE 120V SMOKE DETECTOR IN RETURN AIR DUCT TO MEET LOCAL CODE REQUIREMENTS. PROVIDE INTERLOCK WIRING TO DE-ENERGIZE ALL RTU'S UPON DETECTION OF SMOKE.
  - WALK-IN COOLER WITH R-404A REFRIGERANT AT 64 OZ. CAPACITY. VOLUME OF COOLER IS 690 CU. FEET, FLAME SPREAD IS 15, AND COMPRESSOR IS 1.5 H.P.
  - 1" EXTERNALLY INSULATED RETURN AIR DUCT. COORDINATE ROUTING WITH EXISTING STRUCTURE, PIPING, ETC.
  - CONTRACTOR SHALL ENSURE THAT EXHAUST FANS ARE AT LEAST 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKES FOR MAU-1, RTU-1, RTU-2, AND ADJOINING TENANT'S OUT SIDE AIR INTAKES.
  - PRE-PIPED FIRE SUPPRESSION SYSTEM SUPPLIED WITH HOOD AND PROVIDED BY OWNER. SEE SHEET H1 FOR DETAILS. MECHANICAL CONTRACTOR SHALL INSTALL OWNER PROVIDED FIRE SUPPRESSION GAS VALVE AND MAKE ALL ELECTRICAL CONNECTIONS. FIRE SYSTEM HOOKUP IS PROVIDED BY CAPTIVE AIRE.
  - VOLUME DAMPER AT DUCT CONNECTION TO MAIN SUPPLY AIR DUCT, TYPICAL.
  - SUPPLY AIR DIFFUSER CFM RATES SHALL BE ADJUSTED AS REQUIRED FOR PROPER AIR FLOW AROUND THE HOOD.
  - 8" SUPPLY AIR DUCT DOWN TO HOOD SUPPLY DIFFUSER. TRANSITION AS REQUIRED. BALANCE TO 130 CFM.
  - ANSUL SYSTEM PULL STATION, VERIFY EXACT LOCATION IN FIELD WITH LOCAL CODE OFFICIAL PRIOR TO INSTALLATION.
  - PROVIDE COMPATIBLE REMOTE TEMPERATURE SENSORS. CONNECT TO CORRESPONDING THERMOSTATS. MOUNT 48" A.F.F. COORDINATE EXACT LOCATION WITH OWNER ON SITE.
  - CONTRACTOR TO VERIFY ORIENTATION OF EXISTING ROOFTOP UNITS AND LOCATION OF SUPPLY AND RETURN DROPS. NOTIFY TENANT'S ENGINEER WITH ANY QUESTIONS PRIOR TO BIDDING. NO EXTRAS OR CHANGE ORDERS SHALL BE GIVEN FOR CONTRACTOR'S FAILURE TO VERIFY SITE CONDITIONS PRIOR TO BIDDING.

HVAC SYMBOLS			
<input checked="" type="checkbox"/>	SUPPLY AIR DUCT OR GRILLE	<input checked="" type="checkbox"/>	MOTORIZED DAMPER
CHS	CHILLED WATER SUPPLY	S	SMOKE DETECTION DEVICE
CHR	CHILLED WATER RETURN	T	THERMOSTAT
HS	HOT WATER SUPPLY	SD	DUCT SMOKE DETECTOR
HR	HOT WATER RETURN	R.A.G.	RETURN AIR GRILLE
R.D.	REFRIGERANT DISCHARGE LINE	DIFF.	DIFFUSER
R.S.	REFRIGERANT SUCTION LINE	M.D.	MANUAL DAMPER
O.A.	OUTDOOR AIR	F.D.	FIRE DAMPER
R.A.	RETURN AIR	F.C.	FLEXIBLE CONNECTION
S.A.	SUPPLY AIR	S.E.	SMOKE EXHAUST
<input checked="" type="checkbox"/>	RETURN AIR DUCT OR GRILLE		
—D—	CONDENSATE DRAIN LINE		
TE	TOILET EXHAUST		
ALL SYMBOLS MAY NOT BE USED			

- MECHANICAL GENERAL NOTES
- DUCTWORK SHALL BE RUN ABOVE CEILING AS HIGH AS POSSIBLE IN GENERAL LOCATIONS SHOWN, BUT SHALL CONFORM TO ALL STRUCTURAL AND FINISH CONDITIONS OF BUILDINGS. COORDINATE WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS PRIOR TO ANY INSTALLATION.
  - LOCATE EQUIPMENT AND FIXTURES APPROXIMATELY AS SHOWN CONFORMING TO ALL ARCHITECTURAL AND STRUCTURAL ITEMS. PROVIDE ALL SUPPORTS, HANGERS AND OPENINGS AS REQUIRED FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL COORDINATE WITH ALL TRADES FOR CLEARANCES, AND EXACT LOCATIONS OF EQUIPMENT. ALL EQUIPMENT AND FIXTURES SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND IN FULL ACCORDANCE WITH ALL APPLICABLE CODES.
  - CEILING MOUNTED AIR DEVICES SHALL BE APPROXIMATELY AS SHOWN. FOR EXACT LOCATION AND FRAME MOUNTING TYPES, REFER TO ARCHITECTURAL REFLECTED CEILING PLAN. ALL CEILING DIFFUSERS TO BE 4-WAY UNLESS NOTED OTHERWISE BY AIRFLOW ARROWS, ON FLOOR PLAN. EXTEND FLEX DUCTWORK FROM DIFFUSERS. INSTALL STRAIGHT AS POSSIBLE WITH LONG RADIUS BENDS AND CLAMPS TO BE USED AT BOTH ENDS.
  - DUCTWORK WITH TURNING VANES INSTALLED IN ALL ELBOWS OF SUPPLY AIR DUCTS, AIR EXTRACTORS AT ALL RECTANGULAR TAKE-OFFS, AND TWIST-IN TAP WITH MANUAL VOLUME DAMPER AT ALL ROUND BRANCH TAKE-OFFS TO AIR DEVICES.
  - DUCT SMOKE DETECTORS REQUIRED IN UNIT RETURN AIR PLENUM SHALL BE IONIZATION TYPE AND SHALL BE APPROVED AND LISTED BY UL OR FM FOR DUCT INSTALLATION. ACTIVATION OF A DUCT DETECTOR SHALL CAUSE SHUTDOWN OF RTU. CONTROL AND INTERLOCK WIRING SHALL RUN IN CONDUIT WHICH SHALL BE SIZED TO SUIT THE NUMBER, TYPE AND SIZE OF CONDUCTORS AND SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR. CONTROL AND INTERLOCK WIRING SHALL BE IN SEPARATE CONDUIT FROM POWER WIRING PER NEC. ALL WIRING SHALL BE IN ACCORDANCE WITH NEC. PROVIDE ALL APPROPRIATE ACCESS PANELS.
  - PROVIDE ELECTRONIC PROGRAMMABLE THERMOSTAT WITH SUB-BASE AS NOTED ON PLAN. TRANSFORMERS AND 24 VOLT CONTROL WIRING. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER WIRING. THERMOSTATS SHALL BE MOUNTED 48" A.F.F. AND SET POINT SHALL BE AS FOLLOWS: COOLING IN DINING 74°F; ALL OTHERS 78°F; HEATING 68°F FOR ALL. VERIFY FINAL LOCATION WITH OWNER.
  - BUILDING AIR SYSTEMS SHALL BE BALANCED PER DATA INCLUDED ON THE DRAWINGS TO ACHIEVE RELATIVE AIR VOLUMES AS INDICATED ON THE DRAWINGS AND SCHEDULED HEREIN.
  - ALL DUCT SIZES INDICATED ON DRAWINGS ARE CLEAR INTERNAL DIMENSIONS.
  - WHERE SHOWN ON THE DRAWINGS, PROVIDE VOLUME DAMPERS WITH LOCKING QUADRANTS OR SPLITTERS WITH HINGE AND ROD THRU SIDE OF DUCT WITH SET SCREW. VOLUME DAMPER HANDLES SHALL BE INSTALLED ON THE BOTTOM OF THE SPIN-IN FITTING AND SHALL HAVE RING SET IN FULL OPEN POSITION.
  - KITCHEN EXHAUST HOODS: EXTEND EXHAUST AND MAKE-UP AIR DUCT AS SHOWN AND TRANSITION AS REQUIRED TO HOOD TAPS. REFER TO HOOD DRAWINGS SHEET H1 FOR EXACT SIZES AND LOCATIONS. SLOPE EXHAUST DUCTS BACK TO KITCHEN EXHAUST HOOD. PROVIDE ACCESS DOORS AS REQUIRED FOR INSPECTION AND CLEANING. ENCLOSE KITCHEN EXHAUST DUCT IN FIRE BARRIER 15A FIRE RETARDANT DUCT WRAP AS REQUIRED BY CODE. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS. HEIGHT TO FAN OUTLET: 40" ABOVE ROOF. KITCHEN HOOD SUPPLY AND EXHAUST FANS SHALL BE INTERLOCKED WITH THE FIRE SUPPRESSION SYSTEM.
  - COORDINATE LOCATIONS OF EXHAUST FAN, MAKE-UP AIR UNIT, AND RTU'S WITH EXISTING STEEL BEAMS AND JOIST. COORDINATE WITH STRUCTURAL ENGINEER.
  - ALL EXHAUST OUTLETS WILL BE A MINIMUM OF 10'-0" FROM ANY AIR INTAKE.



FAN SCHEDULE													
MARK	TYPE	CFM	E.S.P. (IN. W.C.)	DRIVE	MOTOR DATA			SERVES	EQUAL TO		UNIT WT.	NOTES	
					HP	VOLTS	PH	STARTER		MFR	MODEL		
EF-1	ROOF	2700	1.20	DIRECT	2.0	208	3	X-LINE	KITCHEN HOOD	CAPTIVE AIR	DU180HFA	218	1,2,3,5,8,9
EF-2	CEILING	150	0.125	DIRECT	1.3	A	120	1	X-LINE	TOILET	BROAN	L150	35 2,4,6,7
EF-3	CEILING	150	0.125	DIRECT	1.3	A	120	1	X-LINE	TOILET	BROAN	L150	35 2,4,6,7
MAU-1	ROOF	2160	0.60	DIRECT	2.5	208	3	X-LINE	KITCHEN HOOD	CAPTIVE AIR	A1-D.250-16Z	525	1,2,8,9
NOTES: 1. CAPTIVE AIRE SHALL PROVIDE MOTOR STARTER IN CAPTIVE AIRE WALL MOUNTED ELECTRICAL PACKAGE. 2. VERIFY ELECTRICAL VOLTAGE WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING. 3. VENTED 20\"/>													

AIR BALANCE SCHEDULE						
UNIT MARK	SUPPLY AIR*	OUTSIDE AIR	MAKE-UP AIR	EXHAUST AIR	RETURN AIR	NOTES
RTU-1	2400 CFM	540 CFM	-	-	1860 CFM	
RTU-2	2000 CFM	500 CFM	-	-	1500 CFM	
MUA-1	-	-	2,160 CFM	-	-	
EF-1	-	-	-	2,700 CFM	-	
EF-2	-	-	-	150 CFM	-	
EF-3	-	-	-	150 CFM	-	
BLDG. TOTAL	4,400 CFM	1,040 CFM	2,160 CFM	3,000 CFM	3,360 CFM	NET 200 CFM
MAKE-UP: A/C UNITS OUTSIDE AIR INTAKE FAN MAKE-UP						
						+1040 +2160 3200 CFM.
EXHAUST: HOOD EXHAUST GENERAL EXHAUST						-2700 -300 -3000 CFM.
BALANCE RESULTS: MAKE-UP EXHAUST						+3200 -3000 +200 CFM.

AIR DEVICE SCHEDULE					
PLAN MARK	*TITUS MODEL NO.	FACE SIZE	NECK SIZE	TYPE	NOTES
S1	TMS	24"x24"	SEE DWG	DIFF.	1,2,3,4,6
S2	PAR	24"x24"	SEE DWG	DIFF.	1,2,4
S3	TBD-30	48"	SEE DWG	DIFF.	2,3,4,5,6
S4	TMS	24"x24"	SEE DWG	DIFF.	1,3,7
R1	50F	24"x24"	SEE DWG	R.G.	1,2,3,4,6
NOTES: 1. PROVIDE SQUARE NECK TO ROUND ADAPTER AS REQUIRED (FOR FLEX CONNECTION) 2. FRAME SHALL FIT LAY-IN CEILING MODULE 3. MAXIMUM NC = 30 4. WHITE FINISH UNLESS OTHERWISE SPECIFIED. 5. 12" INLET, 3 SLOT, 1" SLOT WITH, LAY-IN CEILING. 6. GRILLES IN SALES, ORDERING, SEATING AND CORRIDORS TO BE A FLAT BLACK FACTORY FINISH. 7. FRAME SHALL FIT HARD CEILING MODULE					
* OR APPROVED EQUAL					

EXISTING RTU SCHEDULE (RTU-1)													
MFR.	MODEL NO.	UNIT WT.	UNIT SIZE	VOLTS	HZ	PH	MCA	MOP	MIN. OUTSIDE AIR CFM				
RHEEM	RKKN-B072 12.9 EER	855	6.0 TONS	208	60	3	33	45	540				
TOTAL CFM	COOLING CAPACITY	HEATING MBH IN/OUT	EVAP. COIL SIZE	CONDENSER FAN MOTOR	NO.		FILTERS		SIZE	TYPE			
2400	70.3 MBH	135.0/110.7	8.15 SQ.FT.	-	-		-		-	T/A			

RTU SCHEDULE (RTU-2)													
MFR.	MODEL NO.	UNIT WT.	UNIT SIZE	VOLTS	HZ	PH	MCA	MOP	MIN. OUTSIDE AIR CFM				
TRANE	YSC060 14.0 SEER	785	5 TONS	208	60	3	29	40	500				
TOTAL CFM	COOLING CAPACITY	HEATING MBH IN/OUT	EVAP. COIL SIZE	CONDENSER FAN MOTOR	NO.		FILTERS		SIZE	TYPE			
2000	60.0 MBH	120/85	8.15 SQ.FT.	2	0.40		2		20x35x2	T/A			

1. PROVIDE & INSTALL 100% ECONOMIZER PACKAGE AT RTU-1,2.

2. CONTRACTOR SHALL PROVIDE UNITS w/PRE-FABRICATED (14") ROOF CURB.

3. PROVIDE UNIT WITH 7-DAY PROGRAMMABLE THERMOSTATS WITH NIGHT SET BACK CAPABILITIES.

4. PROVIDE UNITS WITH ANTICYCLE TIME DELAY AND HIGH AND LOW PRESSURE PROTECTION.

5. ADJUST O.A. DAMPERS AT RTU-1 AND RTU-2 TO CFM SCHEDULED.

6. INTERLOCK RTU-1 WITH EF-1 AND MUA-1. RTU-1 AND MUA-1 MUST BE OPERATING WHEN EF-1 IS OPERATING.

7. VERIFY ELECTRICAL VOLTAGE WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING.

8. EQUIPMENT SHALL BE TRANE WITH MODELS AND CONFIGURATIONS AS SHOWN. NO SUBSTITUTIONS ALLOWED. PLEASE REFER TO THE TRANE NATIONAL ACCOUNT PROGRAM SCHEDULE BLOCK FOR DETAILS ON PRICING AND ORDERING OR CONTACT:  
CLINT MORGAN - NATIONAL ACCOUNTS MANAGER - TEXAS DISTRICT TRANE COMMERCIAL SYSTEMS  
1617 HUTTON DRIVE, CARROLLTON, TX 75006  
OFFICE 469-758-3179 MOBILE: 469-597-4836  
EMAIL: CLINT.MORGAN@TRANETECHNOLOGIES.COM

CONSULTANT:

**CASE**  
Engineering Inc.  
796 Mens Court  
St. Louis, MO 63026  
T 636.449.1600  
F 636.449.1730

CLIENT:



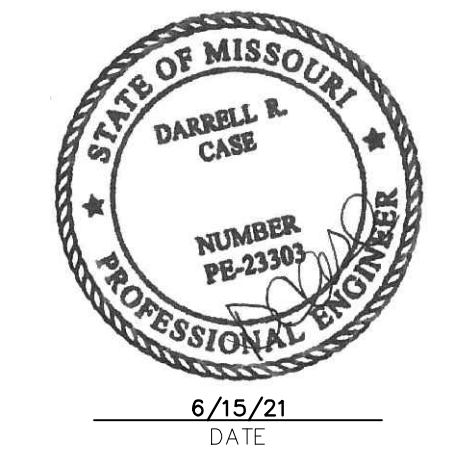
5501 LBJ FREEWAY, 5TH FLOOR  
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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: GL#Y715  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



PROJECT NO.: 2021-0158  
DRAWN BY: JJV  
CHECKED BY: DRC

ISSUE: DATE:  
FOR PERMIT & BID 06-10-21

REVISION: DATE:

PROJECT LOCATION:  
LEE'S SUMMIT, MO

SHEET NUMBER:

M2

DIVISION - 15 MECHANICAL SPECIFICATIONS

GENERAL

- A. THE GENERAL CONDITIONS OF THE GENERAL SPECIFICATIONS, ALONG WITH ALL APPLICABLE INSTRUCTIONS TO BIDDERS SHALL FORM A PART OF THIS SECTION OF THE SPECIFICATIONS.
- B. REFERENCE IS MADE TO REQUISITES FOR BIDDERS AND CONTRACTORS UNDER OTHER SECTIONS OF THESE SPECIFICATIONS, WHICH SHALL BE CONSIDERED BINDING, UNLESS OTHERWISE NOTED UNDER THIS SECTION.

SCOPE

EACH CONTRACTOR SHALL THOROUGHLY ACQUAINT HIMSELF WITH THE CONSTRUCTION DETAILS, BOTH AS ON TENANT CONSTRUCTION DRAWINGS AND LANDLORD'S AS REFERRED TO, BEFORE SUBMITTING HIS BID AS NO ALLOWANCES WILL BE MADE BECAUSE OF THE CONTRACTOR'S UNFAMILIARITY WITH THESE DETAILS. ALL PERFORMANCE OF CONSTRUCTION SHALL BE AS REQUIRED BY THE PACE OF THE GENERAL CONSTRUCTION.

INSPECTION OF SITE

ALL PROPOSALS SHALL PRECLUDE THAT CONTRACTOR IS FAMILIAR WITH JOB SITE CONDITIONS AND UTILITY LOCATIONS AND THE LACK OF SPECIFIC INFORMATION ON THE DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY.

PERMITS

ALL PERMITS AND LICENSES NECESSARY FOR THE PROPER EXECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE SUBCONTRACTOR INVOLVED.

CODE REQUIREMENTS

ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS, DRAWINGS OR AS DIRECTED BY THE OWNER, AND SHALL SATISFY ALL APPLICABLE CODES, ORDINANCES, OR REGULATIONS OF THE GOVERNING BODIES, WHETHER SO SHOWN OR NOT, AND ALL MODIFICATIONS REQUIRED BY SUCH AUTHORITIES SHALL BE MADE BY THE CONTRACTOR WITHOUT ANY ADDITIONAL COST TO THE OWNER.

MATERIALS AND WORKMANSHIP

- A. ALL MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURERS, AND UNLESS OTHERWISE SPECIFIED SHALL BE NEW, AND FREE FROM ANY DEFECTS. ALL LIKE MATERIALS USED SHALL BE OF THE SAME MANUFACTURE AND QUALITY UNLESS OTHERWISE SPECIFIED.
- B. ALL WORK UNDER THIS CONTRACT SHALL BE PERFORMED BY COMPETENT WORKMEN AND EXECUTED IN A NEAT AND WORKMANLIKE MANNER. WORK SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION, AND ON COMPLETION, THE INSTALLATION SHALL BE THOROUGHLY CLEANED AND ALL DEBRIS PRESENT AS A RESULT OF THIS CONTRACT SHALL BE REMOVED FROM THE PREMISES, DO NOT JUST ABANDON.

CODES AND REGULATIONS

EACH SUBCONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, RULES AND REGULATIONS BEARING ON THE CONDUCT OF THE WORK AS DRAWN OR SPECIFIED. IF A SUBCONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT A VARIANCE, HE SHALL PROMPTLY NOTIFY THE GENERAL CONTRACTOR AND THE TENANT IN WRITING. IF ANY SUBCONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO LAWS, ORDINANCES, RULES AND REGULATIONS AND WITHOUT GIVING SUCH NOTICE, THE SUBCONTRACTOR SHALL BEAR ALL COSTS ARISING THEREFROM.

PROTECTION OF WORK AND PROPERTY

- A. EACH SUBCONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL HIS WORK FROM DAMAGE AND SHALL PROTECT THE OWNER'S PROPERTY FROM INJURY OR LOSS ARISING FROM HIS WORK. HE SHALL MAKE GOOD ANY SUCH DAMAGE, INJURY, OR LOSS, EXCEPT SUCH AS MAY BE DIRECTLY DUE TO CAUSES BEYOND HIS CONTROL AND NOT TO HIS FAULT OR NEGLIGENCE. HE SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS WELL.
- B. EACH SUBCONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF THEIR EMPLOYEES ON THE WORK AND SHALL COMPLY WITH ALL PROVISIONS OF FEDERAL, STATE AND LOCAL BUILDING CODES AND SAFETY LAWS TO PREVENT ACCIDENTS OR INJURY TO PERSONS ON OR ADJACENT TO THE PREMISES WHERE THE WORK IS BEING PERFORMED. EACH SUBCONTRACTOR SHALL MAINTAIN ALL INSURANCE REQUIRED TO PROTECT HIMSELF, OWNER AND TENANT FOR THE DURATION OF THE WORK AGAINST PROPERTY DAMAGE AND PUBLIC LIABILITY.

CHANGES IN THE WORK

THE TENANT, WITHOUT INVALIDATING THE CONTRACT, MAY ORDER EXTRA WORK OR MAKE CHANGES BY ALTERING, ADDING TO OR DEDUCTING FROM THE WORK, THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY.

COOPERATION

ALL WORK UNDER THESE SPECIFICATIONS SHALL BE ACCOMPLISHED IN CONJUNCTION WITH OTHER CONTRACTORS AND TRADES OF THIS PROJECT IN A MANNER WHICH WILL ALLOW EACH CONTRACTOR AND TRADE ADEQUATE TIME AT THE PROPER STAGE OF CONSTRUCTION TO FULFILL HIS CONTRACTS. REFERENCE SHALL BE MADE TO THE OWNER FOR INSTRUCTIONS SHOULD ANY QUESTIONS ARISE BETWEEN TRADES AS TO THE PLACING OF LINES, DUCTS, CONDUITS, FIXTURES, OR EQUIPMENT, OR SHOULD IT APPEAR DESIRABLE TO REMOVE ANY GENERAL CONSTRUCTION WHICH WOULD AFFECT THE APPEARANCE OR STRENGTH OF THE STRUCTURE.

SUBSTITUTION OF MATERIALS

MANUFACTURER'S NAMES ARE LISTED HEREIN TO ESTABLISH A STANDARD. THE PRODUCTS OF OTHER MANUFACTURERS WILL BE ACCEPTABLE, IF IN THE OPINION OF THE TENANT, THE SUBSTITUTE MATERIAL IS OF A QUALITY AS GOOD OR BETTER THAN THE MATERIAL SPECIFIED, AND WILL SERVE WITH EQUAL EFFICIENCY AND DEPENDABILITY, THE PURPOSE FOR WHICH THE ITEMS SPECIFIED WERE INTENDED.

SHOP DRAWINGS

SHOP DRAWINGS AND CATALOG DATA ON ALL MAJOR ITEMS OF EQUIPMENT AND SYSTEMS, AND SUCH OTHER ILLUSTRATIVE MATERIAL AS MAY BE CONSIDERED NECESSARY BY THE TENANT, SHALL BE SUBMITTED BY THIS CONTRACTOR IN ADEQUATE TIME TO PREVENT DELAY AND CHANGES DURING CONSTRUCTION.

DRAWINGS AND SPECIFICATIONS

- A. THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS LINES, DUCTS, CONDUITS, FIXTURES, AND EQUIPMENT AND THE METHOD OF CONNECTING AND CONTROLLING THEM. IT IS NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL AND ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM.
- B. SHOULD ANY CHANGES BE DEEMED NECESSARY BY THE CONTRACTOR IN ITEMS SHOWN ON CONTRACT DRAWINGS, THE SHOP DRAWINGS, DESCRIPTIONS, AND THE REASON FOR THE PROPOSED CHANGES SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL.

RESPONSIBILITY

- A. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE SATISFACTORY AND COMPLETE EXECUTION OF ALL WORK INCLUDED IN HIS CONTRACT. HE SHALL PRODUCE COMPLETE FINISHED OPERATING SYSTEMS AND PROVIDE ALL INCIDENTAL ITEMS REQUIRED AS PART OF HIS WORK, REGARDLESS OF WHETHER SUCH ITEM IS PARTICULARLY SPECIFIED OR INDICATED.

- B. CONTRACTOR SHALL SUPPLY TO LANDLORD AND TENANT A CERTIFIED BALANCE REPORT AT COMPLETION OF PROJECT. THIS IS REQUIRED FOR BOTH REMODELED AND NEW STORES.

HEATING, VENTILATING AND AIR CONDITIONING

GENERAL

- A. THE WORK COVERED BY THIS SECTION OF THESE SPECIFICATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RESPECTIVE DRAWINGS, INFORMATION, OR INSTRUCTIONS TO BIDDERS, AND THE GENERAL CONDITIONS, ADDENDA, OR DIRECTIVES WHICH MAY BE ISSUED BY THE OWNER, HERewith, OR OTHERWISE, SHALL BE COMPLIED WITH IN EVERY RESPECT.
- B. THE LISTING HEREIN OF AN ARTICLE OR MATERIAL, OPERATION OR METHOD, REQUIRES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL EACH ITEM LISTED, UNLESS SPECIFICALLY NOTED TO THE CONTRARY. THE CONTRACTOR SHALL PERFORM EACH OPERATION PRESCRIBED OR LISTED ACCORDING TO THE CONDITIONS STATED.

EXAMINATION OF SITE

ALL CONTRACTORS SUBMITTING PROPOSALS FOR THIS WORK SHALL FIRST EXAMINE THE SITE AND ALL CONDITIONS THEREON AND/OR THEREIN. ALL PROPOSALS SHALL TAKE INTO CONSIDERATION ALL SUCH CONDITIONS AS MAY AFFECT THE WORK UNDER THIS CONTRACT.

SCOPE

FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY FOR A COMPLETELY FULLY OPERATIVE HEATING, VENTILATING, AND AIR CONDITIONING SYSTEM EXCEPT AS SPECIFICALLY EXCLUDED BY THE DRAWINGS, AND/OR TENANT'S DIRECTIONS.

EQUIPMENT

- A. 1. ROOFTOP UNITS: FURNISH HEATING AND AIR CONDITIONING AS SCHEDULED. UNIT TO BE COMBINED PACKAGED SYSTEM, ALL SEASON EQUIPMENT, CONSISTING OF GAS HEATING SECTION, BLOWER, DX COIL, COMPRESSOR(S), AND AIR COOLED CONDENSING SECTION. UNIT SHALL BE DESIGNED FOR DOWN FLOW ARRANGEMENT WITH ALL DUCT PENETRATIONS WITHIN FACTORY ROOF CURB.
2. FEATURES: UNITS TO BE WOUND FOR VOLTAGE AND PHASE AS SCHEDULED. HEAVY GAUGE ALUMINIZED STEEL, STAINLESS STEEL OR COATED HEAT EXCHANGER WILL BE ACCEPTABLE. UNIT MUST BE A.G.A. APPROVED FOR OUTDOOR APPLICATION. DIRECT EXPANSION COIL WITH FACTORY INSTALLED EXPANSION VALVE – BLOWER SHALL BE OF THE CENTRIFUGAL BELT DRIVEN OR MULTI-SPEED DIRECT DRIVE TYPE WITH FORWARD CURVED BLADES – BLOWER AND MOTOR ISOLATED FOR QUIET OPERATION – BUILT IN MOTOR STARTER WITH OVER VOLTAGE PROTECTION. HERMETICALLY SEALED COMPRESSOR WITH INHERENT OVERLOAD PROTECTION THERMOSTAT – NON-PRORATED 5-YEAR WARRANTY ON COMPRESSOR AND 10-YEAR WARRANTY ON HEAT EXCHANGER – CONDENSER COIL CONSTRUCTED OF COPPER TUBING WITH ALUMINUM FINS – CRANKCASE HEATERS – BUILT IN MOTOR STARTERS ELECTRIC IGNITION – HIGH, LOW PRESSURE CUTOFF ON COMPRESSOR – SHUTOFF VALVES ON LIQUID AND SUCTION LINES – SHORT CYCLE TIMER PROTECTION – FILTER – DRYER – VIBRATION ISOLATION. UNIT FACTORY CHARGED.
3. ACCESSORIES: SUPPLY AND RETURN FILTER CASING ASSEMBLY, TWO COMPLETE SETS OF THROWAWAY TYPE FILTERS. FILTERS SHALL BE 2" THICK. ONE SET TO BE REMOVED AND REPLACED JUST PRIOR TO FINAL INSPECTION – FULL ECONOMIZER PACKAGE WITH LOW LEAKAGE FRESH AIR STANDARD RETURN AIR DAMPERS AND DAMPER MOTOR, MINIMUM POSITION SETTING – PROVIDE MANUFACTURER'S INTERFACE AS REQUIRED FOR OPERATION WITH THERMOSTAT AS SPECIFIED. PROVIDE MOUNTING CURB APPROVED BY NATIONAL ROOF CONTRACTORS ASSOCIATION TO SUPPORT THE ENTIRE ASSEMBLY WITH NAILER STRIP AND AIR TIGHT GASKET.
- B. ALL SINGLE STAGE UNITS WILL BE EQUIPPED WITH PROGRAMMABLE THERMOSTAT.

DESIGN AND STANDARD CONDITIONS FOR THERMOSTAT OPERATION WILL BE AS FOLLOWS:

- COOLING: 75°F MAXIMUM OCCUPIED COOLING TEMPERATURE  
85°F COOLING NIGHT SETBACK.
- HEATING: 70°F MAXIMUM OCCUPIED HEATING TEMPERATURE  
60°F HEATING NIGHT SETBACK.
- FAN: CONTINUOUS IN OCCUPIED AND RECOVERY MODE AND WITH HEATING OR COOLING EQUIPMENT IN UNOCCUPIED MODE.
- DEADBAND: CAPABLE OF MAINTAINING A 5°F DEADBAND.
- CLOCK: 7 DAY CAPABLE OF 7 DIFFERENT DAY SCHEDULES.
- OVERNIGHT: HAVE A 2 HOUR OVERRIDE ACCESSIBLE TO MANAGER.
- BACKUP: CAPABLE OF MAINTAINING PROGRAMMED SETTING FOR AT LEAST 10 HOURS WITHOUT POWER.
- F. THE HVAC SUBCONTRACTOR SHALL IDENTIFY ALL ROOF MOUNTED HVAC EQUIPMENT AND APPARATUS WITH 2" HIGH PAINTED STENCILED STORE NAME ON ALL SIDES OF EQUIPMENT.

DUCTWORK

- A. SQUARE AND RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED OF NEW GALVANIZED PRIME GRADE SHEET STEEL OF THE FOLLOWING GAUGES:
- | DUCT SIZE    | GUAGE             |
|--------------|-------------------|
| 12" AND LESS | NO. 26 U.S. GAUGE |
| 13" TO 30"   | NO. 24 U.S. GAUGE |
| 31" TO 54"   | NO. 22 U.S. GAUGE |
| 55" TO 84"   | NO. 20 U.S. GAUGE |
| 85" AND OVER | NO. 18 U.S. GAUGE |
- B. SQUARE AND RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED AS FOLLOWS:
- | SIZE         | METHOD                                 |
|--------------|--|
| 17" AND LESS | "S" AND DRIVE CLEATS                   |
| 18" TO 30"   | "L" STANDING SEAMS ON 3'-0" CENTERS    |
| 31" TO 54"   | 1-1/4" STANDING SEAMS ON 3'-0" CENTERS |

GREASE DUCTS SHALL BE BLACK CARBON STEEL NOT LESS THAN 0.054" (16 GA.). ALL SEAMS, JOINTS, AND PENETRATIONS SHALL HAVE A LIQUID TIGHT, CONTINUOUS, EXTERNAL WELD.

1. THE KITCHEN HOOD EXHAUST DUCTWORK SHALL BE ENCLOSED IN A RATED ENCLOSURE PER CODE.
2. THE CONTRACTOR SHALL INCLUDE IN HIS PRICE:
- ALL NECESSARY TRANSITION AND CONNECTION FITTINGS TO THE HOOD AND EXHAUST FANS.
  - ALL CLEAN-OUT ACCESS PANELS AS REQUIRED BY CODE.
  - ALL ELBOW AND TRANSITION FITTINGS.
  - ALL HANGERS AND SUPPORTS.
  - SHOP DRAWINGS SHOWING PROPOSED FABRICATION AND INSTALLATION COORDINATED WITH EXISTING FIELD CONDITIONS AND OTHER TRADES.

ROUND LOW PRESSURE DUCTS SHALL BE SPIRAL WOUND AS MANUFACTURED BY UNITED SHEET METAL COMPANY OR SHOP FABRICATED ROUND DUCTS WITH PITTSBURGH LOCK LONGITUDINAL SEAMS. GAUGES FOR SHOP FABRICATED DUCTS SHALL BE AS FOLLOWS:

UP TO 12" IN DIAMETER	NO. 26 GAUGE
13" TO 30"	NO. 24 GAUGE
31" TO 42"	NO. 22 GAUGE
43" TO 60"	NO. 20 GAUGE

ELBOWS SHALL HAVE A CENTERLINE RADIUS OF 1-1/2 TIMES DUCT DIAMETER AND MAY BE SMOOTH ELBOWS OR 5 PIECE 90 DEGREE ELBOWS AND 3 PIECE 45 DEGREE ELBOWS. JOINTS OF ROUND DUCTS SHALL BE SLIP TYPE WITH A MINIMUM OF 3 SHEET METAL SCREWS.

1. ALL EXPOSED ROUND LOW PRESSURE DUCTWORK SHALL BE INTERNALLY LINED.
2. ALL LOW PRESSURE DUCTWORK SHALL BE EXTERNALLY SEALED USING UNITED SHEET METAL MMM EC-800, OR HARDCAST DUCT SEALER INSTALLED IN THE JOINTS PRIOR TO CLOSURE. ADDITIONALLY SEAL ALL EXTERNAL TRANSVERSE JOINTS AND FITTING CONNECTIONS EXTERNALLY.
- C. ALL SUPPLY AIR DUCTS (HEATING AND COOLING) AND RETURN AIR DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED STEEL WITH MIN. 1" (R-5) THICK EXTERNAL THERMAL INSULATION EXCEPT DUCT LINED FOR ACOUSTICAL PURPOSES. ALL EXHAUST AND RELIEF AIR DUCTS SHALL BE GALVANIZED STEEL.
- D. CONTRACTOR WILL INSTALL INSECT SCREENS ON ALL DUCT OPENINGS WHICH LEAD TO OR ARE OUTDOORS. INSECT SCREENS SHALL BE 10 GAUGE, ONE-HALF INCH (1/2") MESH IN REMOVABLE GALVANIZED STEEL FRAMES.
- E. ALL DUCTWORK SHALL BE DESIGNED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS GUIDE (ASHRAE) AND FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST METHODS RECOMMENDED IN THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) LOW VELOCITY DUCT MANUAL, LATEST EDITION.

HANGERS AND SUPPORTS

- A. ALL HORIZONTAL DUCTS HAVING A DIMENSION OF 40 INCHES AND LESS SHALL BE SUPPORTED BY MEANS OF BAND IRON HANGERS OF NO. 18 U.S. GAUGE ATTACHED TO THE DUCT BY MEANS OF RIVETS, SCREWS, OR CLAMPS, AND FASTENED TO STRUCTURE ABOVE BY TOGGLE BOLTS OR OTHER MEANS. EACH SECTION OF DUCTWORK SHALL HAVE AT LEAST ONE PAIR OF SUPPORTS. VERTICAL DUCTS SHALL BE SUPPORTED WITH 1-1/4" x 1-1/4" x 1-1/4" ANGLES WHERE THEY PASS THROUGH THE FLOOR LINES.
- B. ALL HORIZONTAL DUCTS HAVING A DIMENSION OF 40 INCHES AND MORE SHALL BE SUPPORTED BY MEANS OF ANGLE IRON TRAPEZE HANGERS. EACH SECTION OF DUCTWORK SHALL HAVE AT LEAST ONE PAIR OF SUPPORTS.

FLASHING

- A. CONTRACTOR WILL PROVIDE WATER TIGHT 24 GA. SHEET METAL FLASHINGS AT ALL EXTERIOR WALLS AND ROOF PENETRATIONS.
- B. ALL CUTTING OF ROOF OPENINGS, SUPPORTS FOR ROOF OPENINGS, PITCH PANS, ROOF CURBS, FLASHINGS, COUNTER FLASHINGS, REPAIR TO ROOF, ETC. ASSOCIATED WITH HVAC SUBCONTRACTOR SHALL BE THE RESPONSIBILITY AND PART OF THE CONTRACT HVAC SUBCONTRACTOR. HE SHALL EMPLOY THE LANDLORD'S ROOFERS FOR THIS WORK SO AS TO MAINTAIN THE ROOF BOND.

DAMPERS

- A. SPLITTER DAMPERS SHALL BE FABRICATED OF SHEET STEEL NOT LESS THAN NO. 16 U.S. GAUGE WITH THE LEADING EDGE HEMMED. EACH DAMPER SHALL BE LARGE ENOUGH TO COVER THE SMALLER OF THE TWO OPENINGS IT CONTROLS. DAMPERS SHALL BE CONTROLLED AS FOLLOWS:
- EXPOSED OR ACCESSIBLE DUCTWORK – LOCKING QUADRANTS EQUAL TO YOUNG REGULATOR NO. 1 WITH DAMPER ROD END BEARINGS ON OPPOSITE END.
- CONCEALED DUCTWORK – LOCKING QUADRANT EQUAL TO YOUNG REGULATOR NO. 315 (CHROMIUM PLATED WITH DAMPER ROD END BEARINGS ON BOTH ENDS).
- B. VOLUME DAMPERS SHALL BE OF THE OPPOSED INTERLOCKING TYPE AS MANUFACTURED BY AMERICAN FOUNDRY AND FURNACES CO. (AFFCO) OR EQUAL. BLADES SHALL BE OF NO. 16 GAUGE SHEET METAL AND SHALL NOT EXCEED 48" IN LENGTH OR 12" IN WIDTH. BLADES SHALL BE ON ONE-HALF INCH (1/2") DIAMETER RUSTPROOF AXLE. BEARINGS SHALL BE OF THE SELF-LUBRICATING FERRULE TYPE.
- C. FIRE DAMPERS SHALL BE SUPPLIED AND INSTALLED BY HVAC CONTRACTOR AT DUCT PENETRATIONS IN FIRE RATED WALLS, CEILINGS, AND ROOFS AS REQUIRED. COORDINATE WITH LANDLORD, LOCAL FIRE MARSHALL AND ALL CODES AND GOVERNING AUTHORITIES HAVING JURISDICTION.
- D. JOB FABRICATED TURNING VANES SHALL BE ACCEPTABLE IN SQUARE ELBOWS. PROVIDE AND INSTALL BARBER-COLEMAN AIR TURNS OR EQUAL. TURNING VANES SHALL BE OF THE SAME GAUGE METAL AS THE DUCT IN WHICH THEY ARE INSTALLED. RADIUS ELBOWS SHALL HAVE A CENTERLINE RADIUS OF ONE AND ONE-HALF (1-1/2) TIMES THE DUCT WIDTH.

DUCTWORK - EXCEPTIONS

DUCTWORK FOR EXHAUSTING AIR OR OUTSIDE SUPPLY AIR SHALL BE ALL METAL AND CONSTRUCTED ACCORDING TO RECOMMENDED PRACTICES AS FOUND IN THE LATEST ISSUE OF ASHRAE.

SUPPORT OF DUCT SYSTEM

HANGER DESIGN SHALL BE AS DESCRIBED IN THE LATEST EDITION OF THE "SMACNA" MANUAL. REINFORCEMENT MEMBERS MAY BE USED TO SUPPORT DUCT SYSTEM PROVIDED DETAILS OUTLINED IN THE AFOREMENTIONED MANUAL ARE ADHERED TO.

DUCTS SHALL BE SUPPORTED AT ALL TURNS AND TRANSITIONS AND NOT MORE THAN 8'-0" O.C. STRAIGHT DUCTS UP TO 59" MAX. DIMENSIONS SHALL BE SUPPORTED 6'-0" O.C. DUCTS OVER 60" MAX. DIMENSIONS SHALL BE SUPPORTED AT 4'-0" O.C.

REINFORCEMENT

ALL DUCTS REQUIRING REINFORCEMENT SHALL BE REINFORCED ACCORDING TO THE LATEST EDITION OF "SMACNA" MANUAL.

MATERIALS FOR REINFORCEMENT MEMBERS SHALL BE GALVANIZED STEEL. ALL SCREWS AND WASHERS SHALL BE PLATED OR GALVANIZED.

ACCESSORY ITEMS

ALL MANUAL DAMPERS, FIRE DAMPERS, TURNING VANES, REGISTER CONNECTIONS, ACCESS DOORS OR OTHER ASSOCIATED ACCESSORIES SHALL BE INSTALLED ACCORDING TO THE LATEST PUBLICATION OF "SMACNA" MANUAL.

TESTING AND ADJUSTING

CONTRACTOR WILL DEMONSTRATE OPERATION OF SYSTEM TO FULL SATISFACTION OF TENANT, WILL BALANCE AIR FLOW IN ACCORDANCE WITH AIR QUANTITIES ON DRAWINGS AND WILL RECORD VOLUME READINGS IN ACCORDANCE WITH ASHRAE AND PROVIDE SAME TO TENANT. ALL PIPING SHALL WITHSTAND AIR PRESSURE TESTING PER GOVERNING PLUMBING CODE.

- A. AIR DISTRIBUTION SYSTEMS:
1. INSPECT INSTALLATION AND VERIFY CONFORMITY TO DESIGN. VERIFY THAT SUPPLY, RETURN, AND EXHAUST DUCTS HAVE BEEN PRESSURE-TESTED FOR LEAKAGE AS RECOMMENDED IN THE APPROPRIATE SMACNA STANDARDS.
  2. VERIFY THAT VOLUME AND FIRE DAMPERS ARE PROPERLY LOCATED AND FUNCTIONAL.
  3. VERIFY THAT SUPPLY, RETURN, EXHAUST AND TRANSFER GRILLES, REGISTERS AND DIFFUSERS ARE INSTALLED AND OPERATING PROPERLY.

- B. VERIFY THAT CONTROL COMPONENTS ARE INSTALLED IN ACCORDANCE WITH PROJECT REQUIREMENTS AND ARE FUNCTIONING AS INTENDED, INCLUDING ELECTRICAL POWER, CONTROL AND INTERLOCK WIRING, DAMPER SEQUENCES, SMOKE DETECTORS, ETC.
- C. UPON COMPLETION OF THE INSTALLATION AND START-UP OF THE MECHANICAL EQUIPMENT, TEST, ADJUST AND BALANCE SYSTEM COMPONENTS TO OBTAIN OPTIMUM CONDITIONS IN EACH CONDITIONED SPACE IN THE BUILDING.
- D. BEFORE FINAL ACCEPTANCE IS MADE, FURNISH TO THE ARCHITECT THE FOLLOWING DATA:
1. SUMMARY OF MAIN SUPPLY, RETURN AND EXHAUST DUCT PILOT TUBE TRANSVERSES AND FAN SETTINGS.
  2. AIR QUANTITIES AT EACH SUPPLY, RETURN, RELIEF AND EXHAUST AIR HANDLING DEVICE.
  3. AIR PRESSURE READINGS ENTERING AND LEAVING EACH SUPPLY FAN AND EXHAUST FAN.
  4. MOTOR CURRENT AND VOLTAGE READINGS AT EACH EQUIPMENT MOTOR.
  5. TEST RESULTS SHALL BE RECORDED ON STANDARD FORMS CONFORMING TO AABC AND NEBB REQUIREMENTS. THE REPORT SHALL INCLUDE AIR FLOW SCHEMATIC DIAGRAMS INDICATING AND IDENTIFYING TEST LOCATIONS SUCH AS DUCT TRANSVERSE, OUTLET READINGS, PRESSURE READINGS AND TEMPERATURE READINGS, AND SHALL BE REFERENCED TO THE RECORDED DATA ON THE FORMS.
  - E. MAKE AN INSPECTION IN THE BUILDING DURING THE OPPOSITE SEASON FROM THAT IN WHICH THE INITIAL ADJUSTMENTS WERE MADE, AND AT THAT TIME MAKE ANY NECESSARY MODIFICATIONS TO THE INITIAL ADJUSTMENTS REQUIRED TO PRODUCE OPTIMUM OPERATION OF THE SYSTEM COMPONENTS, TO PRODUCE THE PROPER CONDITIONS IN EACH SPACE.
  - F. INSTRUCTION: THE CONTRACTOR SHALL INSTRUCT THE BUILDING OPERATING PERSONNEL IN THE CONSTRUCTION AND OPERATION OF ALL EQUIPMENT.

GUARANTEE

ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTANCE BY TENANT SHALL BE A CONDITION OF THIS CONTRACT. ALL WORK FOUND TO BE DEFECTIVE SHALL BE REPAIRED OR REPLACED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL CHARGE TO THE TENANT.

MECHANICAL

TEMPORARY SERVICES

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SPECIFIC ITEMS OF TEMPORARY SERVICES:

- A. TELEPHONE – THE TENANT'S GENERAL CONTRACTOR SHALL INSTALL A JOB SITE TELEPHONE AND NOTIFY TENANT AS LISTED ON SHEET A-1 OF THE TELEPHONE NUMBER AND THE NAME OF THE SUPERINTENDENT.
- B. TEMPORARY WATER – WATER REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE PROVIDED AND PAID FOR BY THE CONTRACTOR. WATER USED FOR HUMAN CONSUMPTION SHALL CONFORM TO REQUIREMENTS OF STATE AND LOCAL AUTHORITIES FOR POTABLE WATER.
- C. TEMPORARY ELECTRICITY – TEMPORARY ELECTRIC SERVICE REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE FURNISHED AND PAID FOR BY THE CONTRACTOR WHO SHALL FURNISH, INSTALL, AND MAINTAIN ALL TEMPORARY OVERHEAD CONSTRUCTION, METERS, DROPS, AND OTHER WIRING AND FITTINGS FOR BOTH LIGHT AND POWER AT LOCATIONS REQUIRED IN THE WORK AND SHALL BEAR THE COST OF MAKING THE SERVICE CONNECTIONS. BEFORE FINAL ACCEPTANCE, TEMPORARY ELECTRICAL SERVICE FACILITIES INSTALLED BY THE CONTRACTOR SHALL BE REMOVED AND THE SERVICE CONNECTIONS SEVERED IN ACCEPTABLE MANNER.
- D. TEMPORARY HEAT – WHEN REQUIRED FOR PROPER INSTALLATION OR PROTECTION OF ANY PORTION OF THE WORK, THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY HEATING UNITS AS APPROVED BY THE LANDLORD OR LOCAL AUTHORITY.
- E. COST OF LANDLORD PROVIDED UTILITY SERVICES – IF THE LANDLORD ELECTS TO PROVIDE TEMPORARY UTILITY SERVICES, THE CONTRACTOR WILL BE SO INFORMED BY THE TENANT. THE CONTRACTOR SHALL MAKE TO PAY THE COST OF SAID TEMPORARY CONSTRUCTION AND UTILITY SERVICES.

NOTE FOR TENANT GENERAL CONTRACTOR

IT IS THE RESPONSIBILITY OF THE TENANT'S GENERAL CONTRACTOR TO MAKE USE OF APPLICABLE NOTES AND SPECIFICATIONS LISTED ON THIS SHEET AS THEY MAY PERTAIN TO THE SPECIFIC JOB.

CONSULTANT:



CLIENT:



5501 LBJ FREEWAY, 5TH FLOOR  
DALLAS, TX 75240  
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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: **GL#Y715**  
**HALLBUSTER SHOPS**  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



PROJECT NO.: 2021-0158  
DRAWN BY: JJV  
CHECKED BY: DRC

ISSUE: DATE:  
FOR PERMIT & BID 06-10-21

REVISION: DATE:

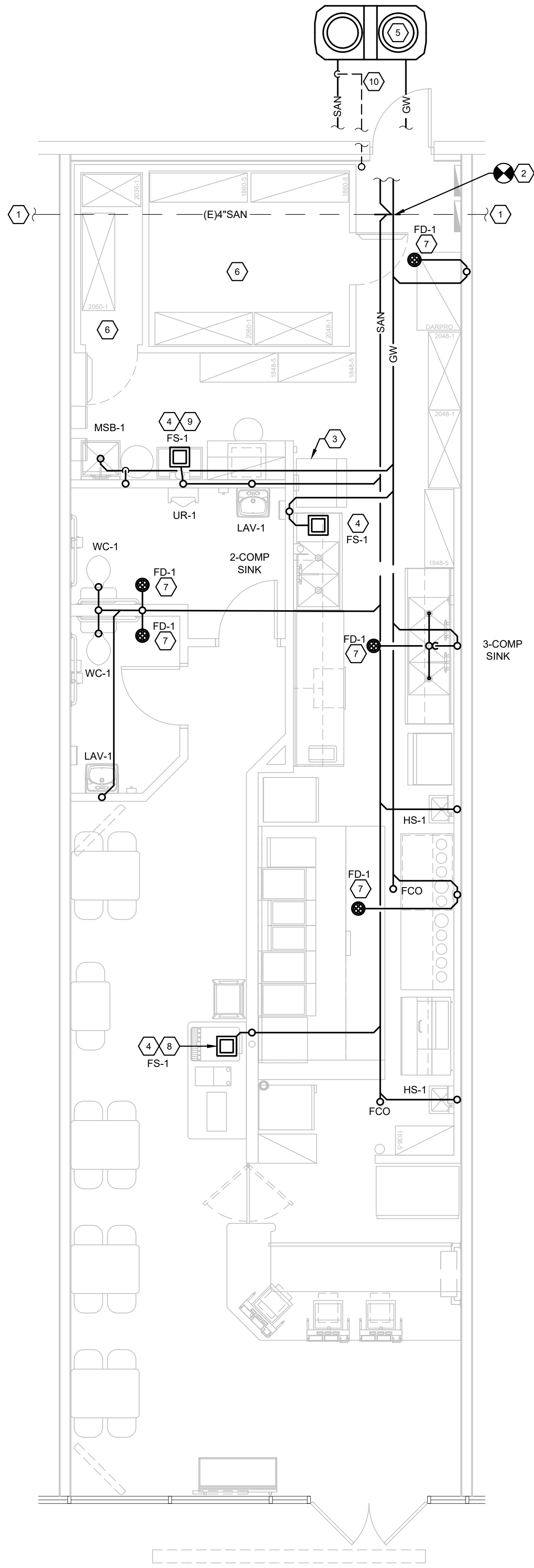
PROJECT LOCATION:

LEE'S SUMMIT, MO

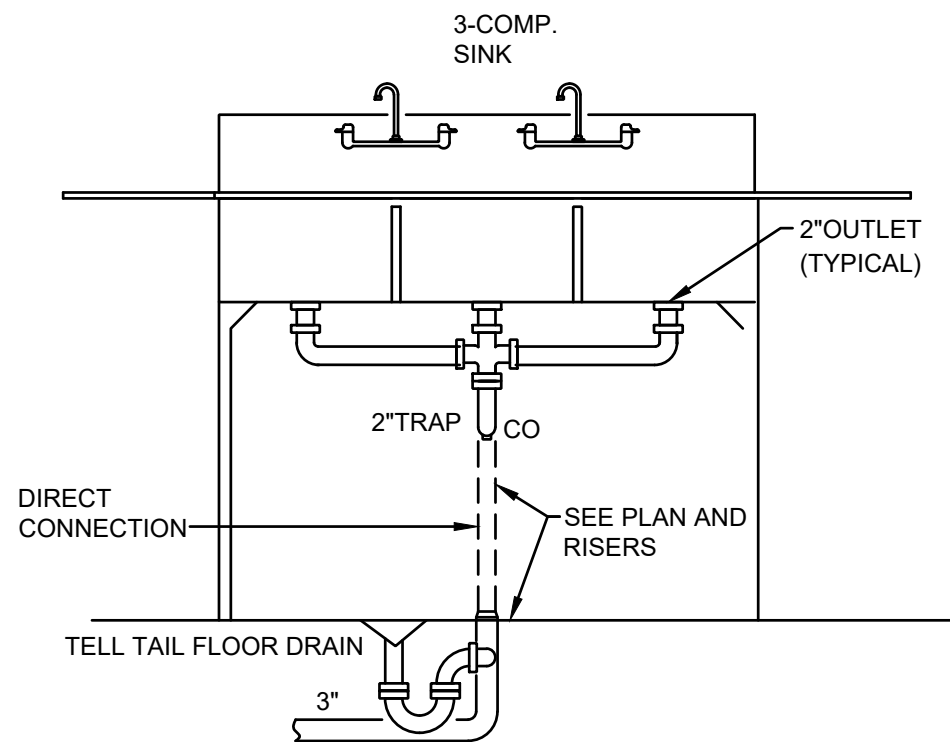
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M3

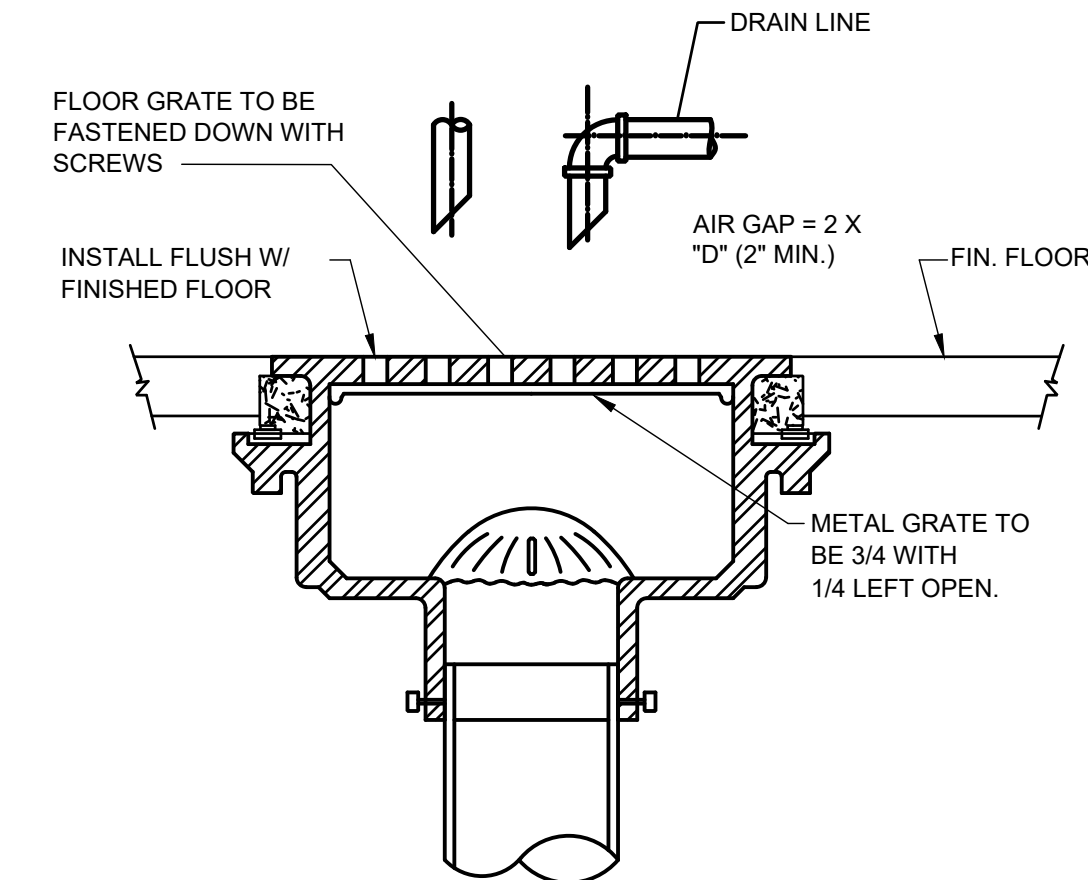




IN-FLOOR PLUMBING PLAN  
SCALE: 1/4" = 1'-0"



3-COMPARTMENT SINK DETAIL  
SCALE: NO SCALE



SANITARY FLOOR SINK DETAIL  
SCALE: NO SCALE

**NOTE:**  
VENTING ABOVE RIM HEIGHT, 6" MINIMUM

CONDENSATE OR SIMILAR LIQUID WASTES SHALL BE DRAINED INDIRECTLY TO A FLOOR SINK WITH A MINIMUM 1 INCH AIR GAP FROM THE LIP OF THE BASIN.

**NOTE:**  
THE LOCATION OF THE GREASE TRAP AS SHOWN IS FOR COORDINATION PURPOSES ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL SITE CONDITIONS DURING THE BIDDING PHASE OF THIS PROJECT AND ASSIGN ALL APPLICABLE COST. WHEN NOT INDICATED, VERIFY WITH LOCALITY IF ADDITIONAL SAMPLING PORT OR SAMPLE TEE IS REQUIREMENT.

PLUMBING SYMBOLS			
(E) SAN	EXISTING SANITARY SEWER LINE	F.D.	FLOOR DRAIN
SAN	SANITARY SEWER LINE	TPRV	TEMPERATURE PRESSURE RELIEF VALVE
GW	GREASE WASTE LINE	P.O.C.	POINT OF CONNECTION
V	VENT LINE	FS	FLOOR SINK
CD	CONDENSATE DRAIN	C.W.	CAN WASH
---	COLD WATER LINE	MS	MOP SINK
---	HOT WATER LINE	LAV.	LAVATORY
---	HOT WATER RETURN	UR.	URINAL
---	FILTERED WATER LINE	W.C.	WATER CLOSET
---	SHUT-OFF VALVE	A.F.F.	ABOVE FINISHED FLOOR
---	BACKFLOW PREVENTER	B.F.F.	BELOW FINISHED FLOOR
VTR	VENT THRU ROOF	WM	WATER METER
CI	CAST IRON	EW	ELECTRIC WATER HEATER
FCO	FLOOR CLEAN OUT	GCO	GRADE CLEANOUT
WCO	WALL CLEAN OUT	TWCO	TWO WAY CLEANOUT

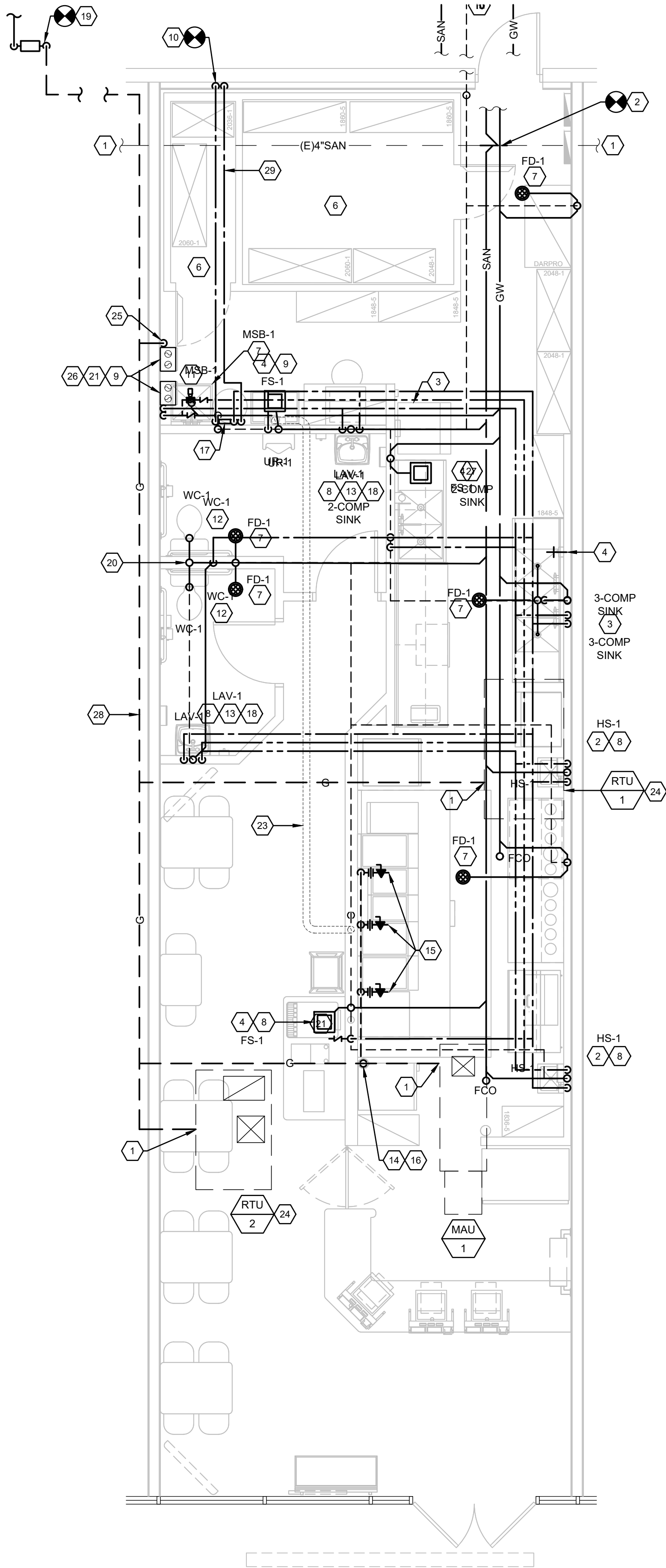
**NOTE:** 1. REFER TO RISER DIAGRAM ON SHEET P3 FOR PIPE SIZES.  
2. REFER TO PLUMBING FIXTURE SCHEDULE ON SHEET P5 FOR KEYED NOTES

TABLE TO CALCULATE DRAINAGE FIXTURES

PLUMBING FIXTURE	DRAINAGE FIXTURE UNITS	NUMBER OF FIXTURES	DFUS
WATER CLOSET (WC-1)	4	2	8
LAVATORIES (LAV-1)	1	2	2
FLOOR DRAINS (FD-1)	3	4	12
FLOOR SINK (FS-1)	5	4	20
TRENCH DRAIN (TD-1)	4	1	4
3 COMPARTMENT SINK	4	1	4
URINAL (UR-1)	2	1	2
HAND SINK (HS-1)	3	2	6
MOP SINK	3	1	3
TOTAL DRAINAGE FIXTURE UNITS			61

PLUMBING KEYED NOTES

- EXISTING SANITARY WASTE PIPING BELOW GRADE. VERIFY EXACT SIZE, INVERT ELEVATION, AND LOCATION IN FIELD PRIOR TO WORK.
- POINT OF CONNECTION TO EXISTING SANITARY PIPING BELOW GRADE. VERIFY EXACT SIZE, INVERT ELEVATION AND LOCATION IN FIELD PRIOR TO WORK. CONTACT ENGINEER WITH ANY DISCREPANCIES.
- ROUTE (2) 1-1/2" DRAINS AND (1) 1-1/4" DRAIN FROM ICE MACHINE TO FLOOR SINK. REFER TO ITEM 19 ON SCHEDULE SHEET P5. (NO TEE IN LINES.) DRAIN FROM ICE MACHINE AND ICE BIN MUST BE SEPARATELY ROUTED TO INDIRECTLY DISCHARGE TO FLOOR SINK.
- FLOOR SINK. REFER TO ITEM 6 ON SCHEDULE SHEET P5 AND RISER DIAGRAM ON SHEET P3 FOR ADDITIONAL INFORMATION.
- ROUTE TO GREASE INTERCEPTOR. COORDINATE WITH LANDLORD AND LOCAL AUTHORITIES FOR EXACT LOCATION. VERIFY WITH LOCAL AUTHORITIES ON EXACT TYPE, SIZE AND INSTALLATION OF GREASE INTERCEPTOR. REFER TO GREASE INTERCEPTOR DETAIL P4.
- SELF-EVAPORATING CONDENSATE AT COOLER AND FREEZER. DRAIN NOT REQUIRED BY MANUFACTURER.
- FLOOR DRAIN WITH SURE SEAL TRAP GUARD. ALTERNATE: PROVIDE 1/2" TRAP PRIMER LINE WHEN TRAP GUARD IS NOT ACCEPTED BY LOCAL CODE. REFER TO ITEM 4 AND 5 ON SCHEDULE SHEET P5 AND WATER SUPPLY PLAN P2 FOR TRAP PRIMER LOCATION. VERIFY PRIOR TO BID.
- (NOT SHOWN): 3/4" DRAIN FROM SODA SYSTEM, DRAIN INDIRECTLY INTO FLOOR SINK, MOUNT UNDER COUNTER. REFER TO ITEM 20 ON SCHEDULE SHEET P5 FOR ADDITIONAL INFORMATION.
- DRAIN CARBONATOR INDIRECTLY TO FLOOR SINK. REFER TO ITEM 24 ON SCHEDULE SHEET P5.
- VENT PIPING BELOW GRADE.



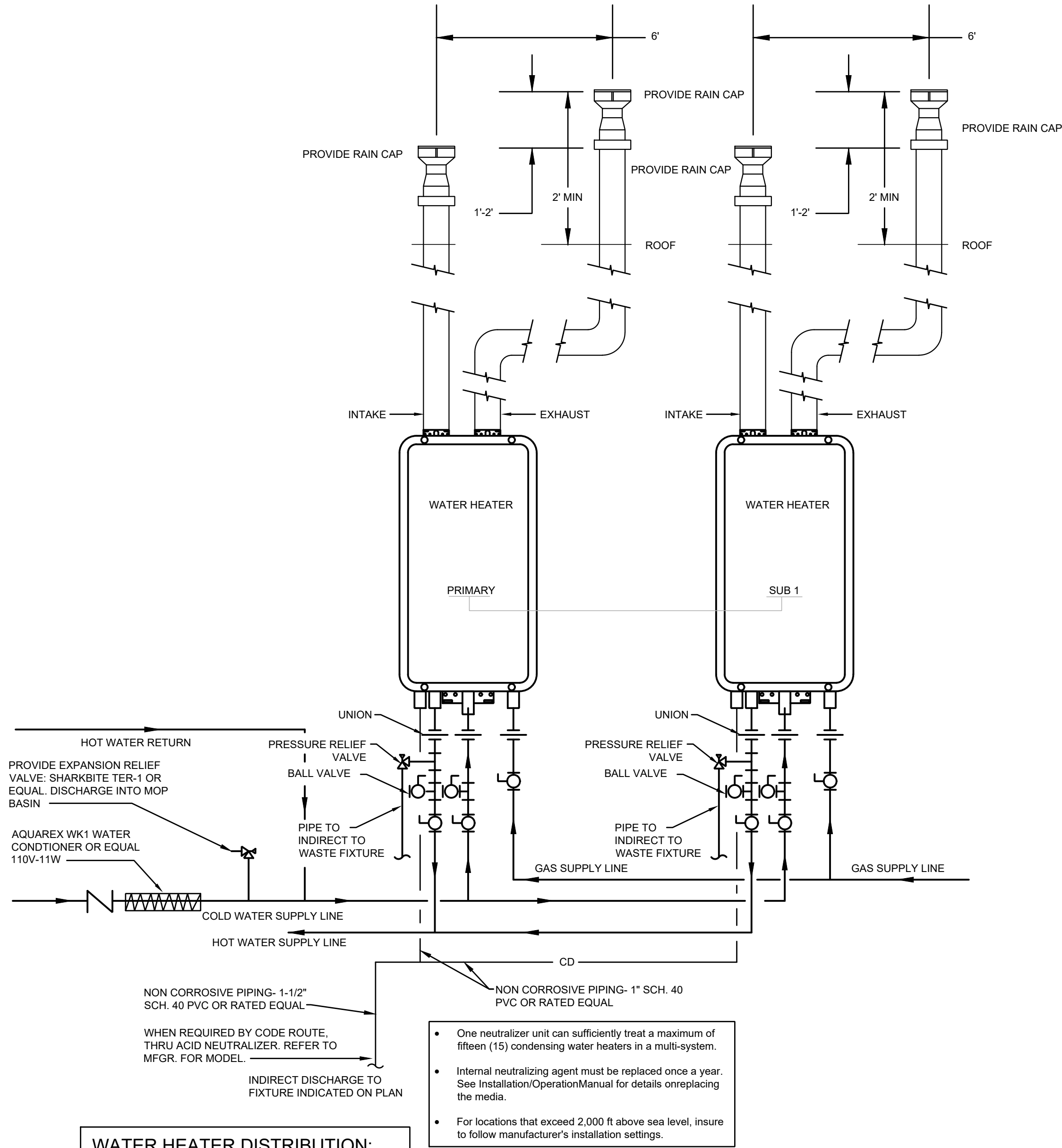
WATER/VENT/GAS PLUMBING PLAN

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

NOTE: REFER TO SHEET A0.0 FOR COMPLETE OCCUPANCY DATA

NOTE: VENTING ABOVE HIGH RIM, 6" MINIMUM

GAS LOAD SUMMARY			
SYSTEM	DESIGNATION	EQUIPMENT	MBH
DOMESTIC WATER HEATING	GWH	WATER HEATER	400
SUB-TOTAL			400
KITCHEN EQUIPMENT	"KEYNOTE" 15	FRYER	105
	"KEYNOTE" 15	FRYER	105
	"KEYNOTE" 15	FRYER	105
	"KEYNOTE" 15	FRYER	80
	"KEYNOTE" 15	FRYER	80
SUB-TOTAL			475
BUILDING HEATING	RTU-1	ROOF TOP UNIT	135
	RTU-2	ROOF TOP UNIT	120
	MAU-1	MAKE UP AIR	161
SUB-TOTAL			416
TOTAL NATURAL GAS CONNECTED LOAD			1291
GAS METER REQUIREMENTS	MBH CAPACITY		1291
	TOTAL DEVELOPED LENGTH INCLUDING EQUIVALENT PIPE LENGTH FOR FITTING AND VALVE FRICTION LOSSES TO GAS METER.		100 FT X 1.2 = 120 FT
	CONSULT GAS UTILITY COMPANY FOR REGULATOR RATING		



WATER HEATER DISTRIBUTION:

- EQUIPMENT REQUIRING 140° F WATER:
- (1) 3-COMPARTMENT SINK
  - (1) MOB SINK BASIN
  - (1) HOSE BIBB UNDER 3-COMPARTMENT SINK.
- EQUIPMENT REQUIRING 110° F WATER:
- (1) 2-COMPARTMENT SINK
  - (3) HAND SINKS
  - (2) LAVATORY

KATHY SHAW  
NATIONAL HOT WATER  
NATIONAL ACCOUNT SALES  
888-444-4435  
214-876-0938 CELL  
[www.nationalhotwater.com](http://www.nationalhotwater.com)

NORITZ NCC 199 CDV FLOW RATES PER UNIT												
TEMPERATURE RISE (°F)	30	40	45	50	60	70	80	90	100	110	120	130
FLOW RATE (GPM)	11.1	9.8	8.7	7.8	6.5	5.6	4.9	4.4	3.9	3.6	3.3	2.8

TABLE TO CALCULATE WATER FIXTURE UNITS

PLUMBING FIXTURE	WATER FIXTURE UNITS	NUMBER OF FIXTURES	SFUS
WATER CLOSET (WC-1)	4	2	8
URINAL (UR-1)	2	1	2
LAVATORIES (LAV-1)	2	2	4
3 COMPARTMENT SINK	4	1	4
2 COMPARTMENT SINK	4	1	4
HAND SINK (HS-1)	2	3	6
MOP SINK	3	1	3
BEVERAGE DISPENSORS	1	3	3
HOSE BIBB	2.5	1	2.5
TOTAL WATER FIXTURE UNITS			36.5
GPM			25.0
WATER SERVICE , TYPE L COPPER			1-1/4"

BACK FLOW PREVENTER ASSEMBLY REQUIREMENTS

TYPE OF EQUIPMENT ON SYSTEM	METHOD OF CROSS CONNECTION CONTROL	MANUFACTURE AND MODEL NUMBER	REMARKS
CARBONATOR SODA SYSTEM	ATMOSPHERIC CHECK VALVE	WATTS SD3LF ASSE 1022/1024 CERT.	STAINLESS STEEL BODY WITH QUARTER TURN VALVE SS STRAINER.
ICE MACHINE	REDUCED PRESSURE ZONE ASSEMBLY	WATTS LF-009-QT-S	STAINLESS STEEL BODY WITH QUARTER TURN VALVE BRONZE STRAINER.
TEA MACHINE	DOUBLE CHECK VALVE ASSEMBLY	WATTS SD3LF ASSE 1022/1024 CERT.	STAINLESS STEEL BODY WITH QUARTER TURN VALVE BRONZE STRAINER.
WATER SERVICE	REDUCED PRESSURE ZONE ASSEMBLY	WATTS LF-919-QT	LEAD FREE CAST COPPER WITH QUATER TURN
1. CONTRACTOR SHALL PROVIDE INDIVIDUAL BACKFLOW PREVENTERS FOR EACH PIECE OF EQUIPMENT. 2. EACH BACKFLOW PREVENTER MUST HAVE TESTING PORTS. 3. BRONZE BODIED BACKFLOW PREVENTERS ARE PERMISSABLE IF ALLOWED BY LOCAL CODES.			

PLUMBING KEYED NOTES

- ROUTE GAS PIPING TO ROOF TOP AIR UNITS. PROVIDE GAS COCK AND UNION PRIOR TO CONNECTION TO EQUIPMENT.
- HAND SINK. SEE ITEM 22 ON SCHEDULE SHEET P5 AND RISER ON P3 FOR ADDITIONAL INFORMATION.
- 3-COMPARTMENT SINK AND FAUCETS PROVIDED BY OWNER AND INSTALLED BY PLUMBING CONTRACTOR. SEE ITEM 17 ON SCHEDULE SHEET P5 AND RISER ON SHEET P3 FOR ADDITIONAL INFORMATION.
- 3/4" (140°F) HOT WATER HOSE BIB UNDER 3-COMPARTMENT SINK. SEE ITEM 23 ON SCHEDULE SHEET P5.
- 1/2" COLD WATER LINE TO ICE MACHINE, PROVIDE WATER FILTER AND BACKFLOW PREVENTER. SEE ITEM 19 ON SCHEDULE SHEET P5.
- 1/2" COLD WATER LINE TO CARBONATOR, PROVIDE BACKFLOW PREVENTER. THE PIPING MATERIAL DOWNSTREAM OF BACKFLOW DEVICE SHALL NOT BE AFFECTED BY CO2 GAS. PROVIDE 1/4" CONNECTION TO CARBONATOR. SEE ITEM 24 ON SCHEDULE SHEET P5.
- 3/4" (140°F) HOT AND COLD WATER TO MOP SINK. SEE ITEM 3 ON SCHEDULE SHEET P5.
- THERMOSTATIC MIXING VALVE (MV-1) SUPPLIED AND INSTALLED BY PLUMBING CONTRACTOR. SET WATER TEMPERATURE FOR 110°F MAXIMUM. SEE ITEM 7 ON SCHEDULE SHEET P5.
- GAS FIRED WATER HEATERS. SEE WATER HEATER DETAIL THIS SHEET AND EQUIPMENT SCHEDULE ITEMS 8 AND 9, SHEET P5. SET WATER TEMPERATURE FOR 140°F MAXIMUM.
- ROUTE TO CONNECT TO EXISTING 1" WATER SERVICE. VERIFY EXACT LOCATION AND SIZE IN FIELD PRIOR TO WORK. CONTACT ENGINEER IMMEDIATELY IF DISCREPANCIES ARE DISCOVERED. VERIFY WITH LANDLORD AND WATER COMPANY EXACT CONNECTION AND METER REQUIREMENTS PRIOR TO WORK. WATER ENTRANCE SHALL BE REWORKED INCLUDING RELOCATION OF IRRIGATION SUPPLY.
- CIRCULATION PUMP. ITEM 29 P5.
- 1/2" COLD WATER LINE TO WATER CLOSET. REFER TO ITEM 1 ON SCHEDULE SHEET P5 AND RISER DIAGRAM SHEET P3 FOR MORE INFORMATION, TYP. OF 2.
- 1/2" HOT & COLD WATER LINES TO LAVATORIES. REFER TO ITEM 2 ON SCHEDULE SHEET P5, AND RISER DIAGRAM SHEET P3 FOR MORE INFORMATION.
- GAS DOWN TO KITCHEN EQUIPMENT. PROVIDE AUTOMATIC EMERGENCY FUEL SHUT-OFF VALVE IN RISER. EMERGENCY SHUT OFF INTERLOCKED TO HOOD FIRE SUPPRESSION SYSTEM.
- GAS LINE TO FRYERS.
- PROVIDE MANUAL SHUT-OFF VALVE FOR GAS LINE ABOVE AUTOMATIC EMERGENCY FUEL SHUT-OFF VALVE IN RISER. SEE GAS RISER DIAGRAM ON SHEET P3.
- PROVIDE SCHEDULED BACKFLOW PREVENTER & PRV. ROUTE RELIEF PIPING TO DRAIN INDIRECTLY INTO MOP SINK. DISCHARGE INDIRECTLY INTO MOP BASIN.
- 1/2" CW TO WALL MOUNTED TRAP PRIMER. SEE ITEM 10, SCHEDULE SHEET P5 AND WATER RISER DIAGRAM SHEET P3 PROVIDE ONLY WHEN TRAP GUARD IS NOT PERMITTED.
- POINT OF CONNECTION TO NEW GAS METER. VERIFY WITH GAS COMPANY EXACT CONNECTION AND METER INSTALLATION REQUIREMENTS PRIOR TO WORK.
- 4" VENT UP THROUGH ROOF, MAINTAIN MINIMUM 10'-0" FROM OUTSIDE AIR INTAKES.
- 1/2" COLD WATER BREWER, REDUCE TO 1/4" AND PROVIDE CONNECTION.
- 5" PVC INTAKE PIPE THROUGH ROOF FOR WATER HEATER. REFER TO DETAIL THIS SHEET. INSTALL PER MANUFACTURERS RECOMMENDATION.
- 6"Ø SODA LINE CONDUIT ABOVE CEILING, SEE SHEETS A1.1 AND EQ. 1.
- ROUTE 1" A/C CONDUIT TO DISCHARGE INTO ROOF GUTTER/DRAIN
- GAS DOWN TO GWH.
- 5" CPVC OR PVDF FLUE PIPE THROUGH ROOF FOR WATER HEATER, REFER TO DETAIL THIS SHEET, OFFSET FOR MINIMUM 10'-0" CLEARANCE FROM OUTSIDE AIR INTAKE. MOUNT AS HIGH AS POSSIBLE.
- 1/2" COLD AND HOT WATER LINES TO TWO COMPARTMENT SINK. SINK AND FAUCETS PROVIDED BY OWNER AND INSTALLED BY PLUMBING CONTRACTOR. REFER TO ITEM 18 ON SCHEDULE SHEET P5 AND RISER ON SHEET P3 FOR ADDITIONAL INFORMATION.
- LOW PRESSURE GAS PIPING RUN ON ROOF TOP.
- REWORKED IRRIGATION SUPPLY. COORDINATE WITH LANDLORD AND OWNER.

CONSULTANT:

**CASE**  
Engineering Inc.

796 Menz Court  
St. Louis, MO 63026  
T 636.549.6000  
F 636.549.1730

CERTIFICATE OF AUTHORITY NO. 001098

CLIENT:



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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: GL#Y715  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



6/16/21  
DATE

PROJECT NO.: 2021-0158

DRAWN BY: JJV  
CHECKED BY: DRC

ISSUE: DATE:  
FOR PERMIT & BID 06-10-21

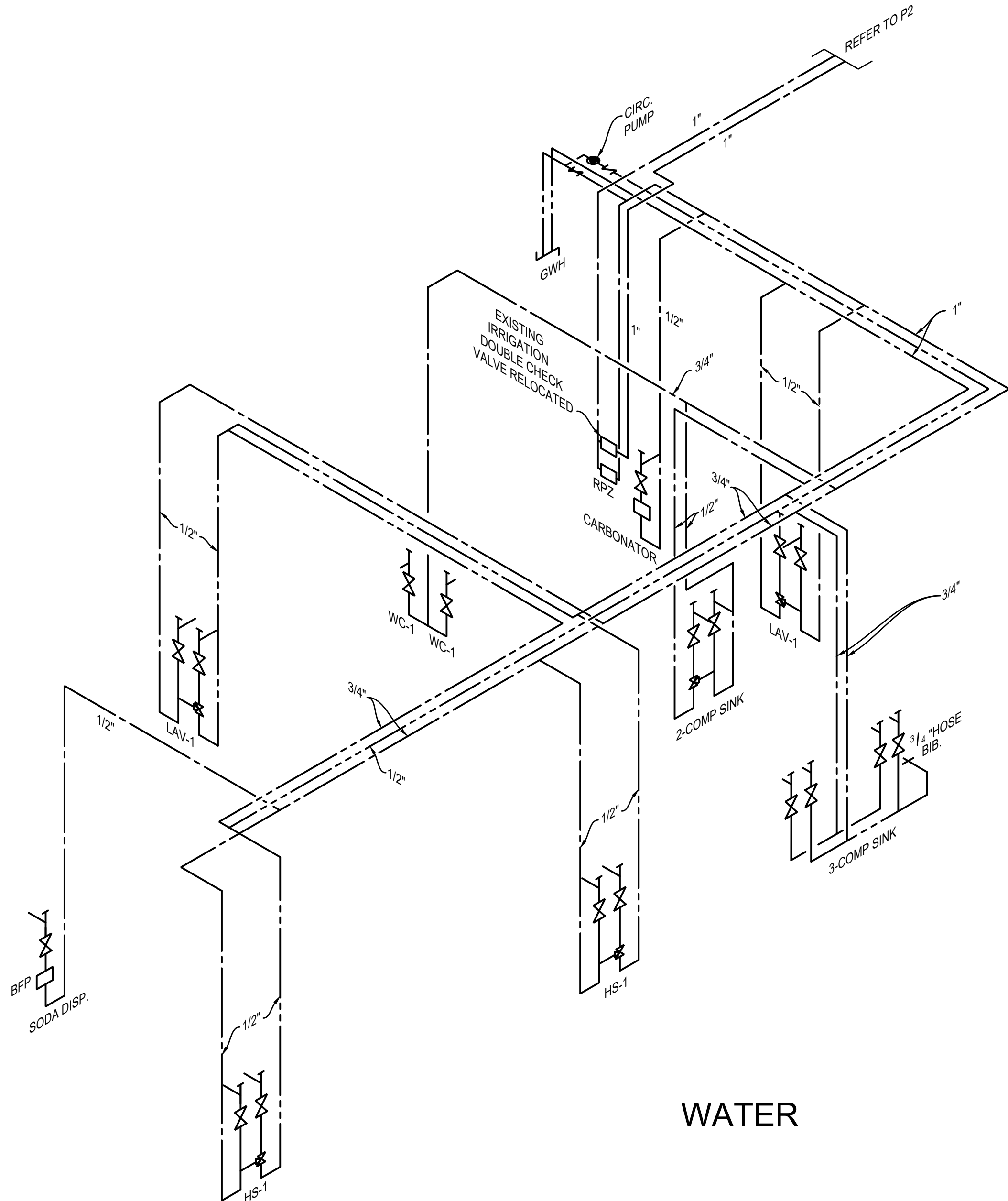
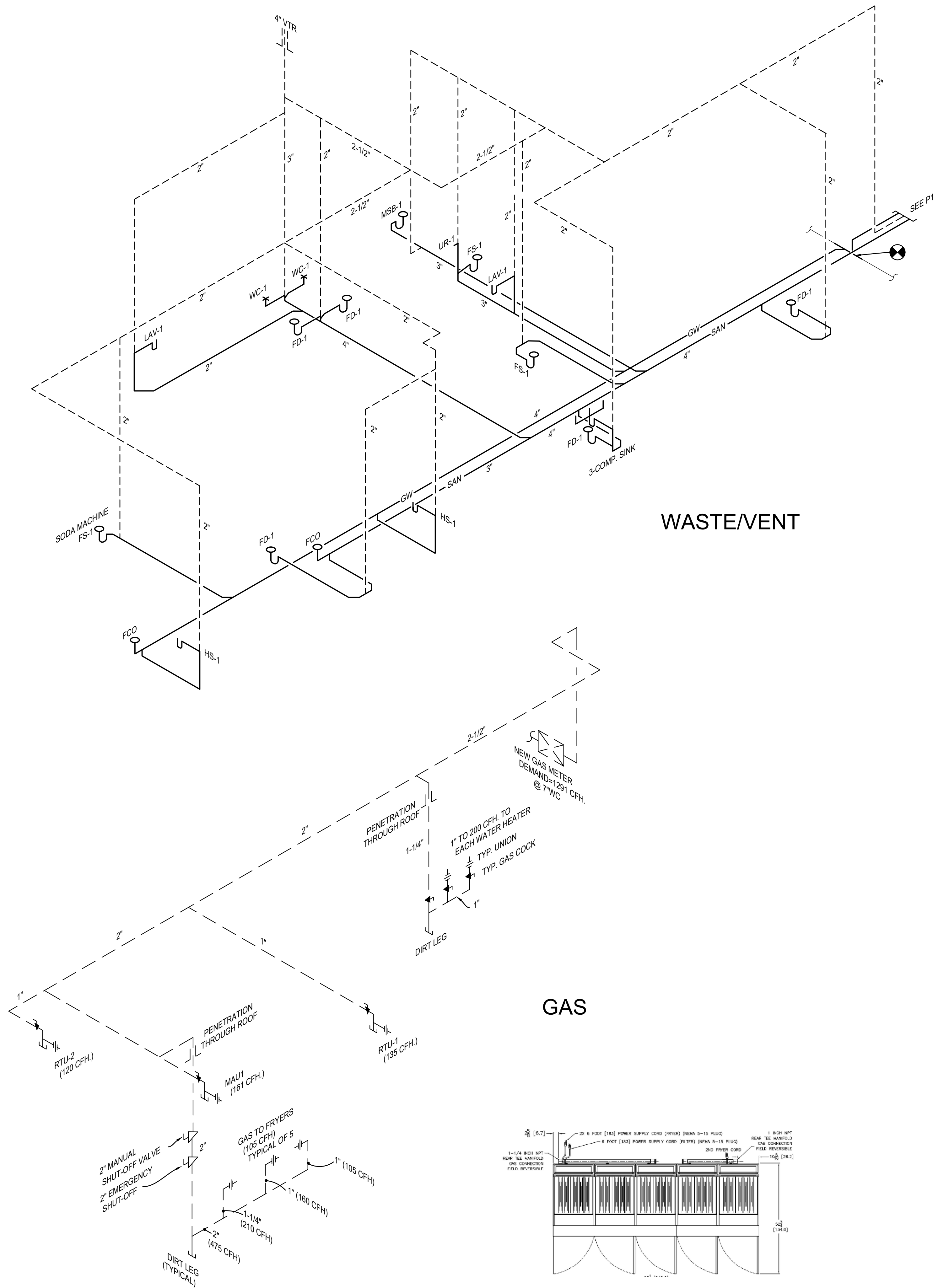
REVISION: DATE:

PROJECT LOCATION:

LEE'S SUMMIT, MO

SHEET NUMBER:

P2



PLUMBING RISER DIAGRAMS  
SCALE: NONE

CONSULTANT:

CASE

Engineering Inc.

796 Menz Court  
St. Louis, MO 63026  
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CERTIFICATE OF AUTHORITY NO. 001498

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PROJECT INFORMATION:

WING-STOP

STORE NUMBER: GL#Y715  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:

STATE OF MISSOURI

DARRELL R. CASE

NUMBER  
PE-23303

PROFESSIONAL ENGINEER

6/16/21  
DATE

PROJECT NO.: 2021-0158

DRAWN BY: JJV

CHECKED BY: DRC

ISSUE:

DATE:

FOR PERMIT & BID

06-10-21

REVISION:

DATE:

PROJECT LOCATION:

LEE'S SUMMIT, MO

SHEET NUMBER:

P3



DIVISION 15 - PLUMBING SPECIFICATIONS

GENERAL

- A. THE GENERAL CONDITIONS OF THE GENERAL SPECIFICATIONS, ALONG WITH ALL APPLICABLE INSTRUCTIONS TO BIDDERS SHALL FORM A PART OF THIS SECTION OF THE SPECIFICATIONS.
- B. REFERENCE IS MADE TO REQUISITES FOR BIDDERS AND CONTRACTORS UNDER OTHER SECTIONS OF THESE SPECIFICATIONS, WHICH SHALL BE CONSIDERED BINDING, UNLESS OTHERWISE NOTED UNDER THIS

SCOPE

EACH CONTRACTOR SHALL THOROUGHLY ACQUAINT HIMSELF WITH THE CONSTRUCTION DETAILS, BOTH AS ON TENANT CONSTRUCTION DRAWINGS AND LANDLORD'S AS REFERRED TO, BEFORE SUBMITTING HIS BID AS NO ALLOWANCES WILL BE MADE BECAUSE OF THE CONTRACTOR'S UNFAMILIARITY WITH THESE DETAILS. ALL PERFORMANCE OF CONSTRUCTION SHALL BE AS REQUIRED BY THE PACE OF THE GENERAL CONSTRUCTION.

INSPECTION OF SITE

ALL PROPOSALS SHALL PRECLUDE THAT CONTRACTOR IS FAMILIAR WITH JOB SITE CONDITIONS AND UTILITY LOCATIONS AND THE LACK OF SPECIFIC INFORMATION ON THE DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY.

PERMITS

ALL PERMITS AND LICENSES NECESSARY FOR THE PROPER EXECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE SUBCONTRACTOR INVOLVED.

CODE REQUIREMENTS

ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS, DRAWINGS OR AS DIRECTED BY THE OWNER, AND SHALL SATISFY ALL APPLICABLE CODES, ORDINANCES, OR REGULATIONS OF THE GOVERNING BODIES, WHETHER SO SHOWN OR NOT, AND ALL MODIFICATIONS REQUIRED BY SUCH AUTHORITIES SHALL BE MADE BY THE CONTRACTOR WITHOUT ANY ADDITIONAL COST TO THE OWNER.

MATERIALS AND WORKMANSHIP

- A. MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURERS, AND UNLESS OTHERWISE SPECIFIED SHALL BE NEW, AND FREE FROM ANY DEFECTS. ALL LIKE MATERIALS USED SHALL BE OF THE SAME MANUFACTURE AND QUALITY UNLESS OTHERWISE SPECIFIED.
- B. WORK UNDER THIS CONTRACT SHALL BE PERFORMED BY COMPETENT WORKMEN AND EXECUTED IN A NEAT AND WORKMANLIKE MANNER. WORK SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION, AND ON COMPLETION, THE INSTALLATION SHALL BE THOROUGHLY CLEANED AND ALL DEBRIS PRESENT AS A RESULT OF THIS CONTRACT SHALL BE REMOVED FROM THE PREMISES. DO NOT JUST ABANDON.

CODES AND REGULATIONS

EACH SUBCONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, RULES AND REGULATIONS BEARING ON THE CONDUCT OF THE WORK AS DRAWN OR SPECIFIED. IF A SUBCONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT A VARIANCE, HE SHALL PROMPTLY NOTIFY THE GENERAL CONTRACTOR AND THE TENANT IN WRITING. IF ANY SUBCONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO LAWS, ORDINANCES, RULES AND REGULATIONS AND WITHOUT GIVING SUCH NOTICE, THE SUBCONTRACTOR SHALL BEAR ALL COSTS ARISING THEREFROM.

PROTECTION OF WORK AND PROPERTY

- A. EACH SUBCONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL HIS WORK FROM DAMAGE AND SHALL PROTECT THE OWNER'S PROPERTY FROM INJURY OR LOSS ARISING FROM HIS WORK. HE SHALL MAKE GOOD ANY SUCH DAMAGE, INJURY, OR LOSS, EXCEPT SUCH AS MAY BE DIRECTLY DUE TO CAUSES BEYOND HIS CONTROL AND NOT TO HIS FAULT OR NEGLIGENCE. HE SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS WELL.
- B. EACH SUBCONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF THEIR EMPLOYEES ON THE WORK AND SHALL COMPLY WITH ALL PROVISIONS OF FEDERAL, STATE AND LOCAL BUILDING CODES AND SAFETY LAWS TO PREVENT ACCIDENTS OR INJURY TO PERSONS ON OR ADJACENT TO THE PREMISES WHERE THE WORK IS BEING PERFORMED. EACH SUBCONTRACTOR SHALL MAINTAIN ALL INSURANCE REQUIRED TO PROTECT HIMSELF, OWNER AND TENANT FOR THE DURATION OF THE WORK AGAINST PROPERTY DAMAGE AND PUBLIC LIABILITY.

CHANGES IN THE WORK

THE TENANT, WITHOUT INVALIDATING THE CONTRACT, MAY ORDER EXTRA WORK OR MAKE CHANGES BY ALTERING, ADDING TO OR DEDUCTING FROM THE WORK, THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY.

COOPERATION

ALL WORK UNDER THESE SPECIFICATIONS SHALL BE ACCOMPLISHED IN CONJUNCTION WITH OTHER CONTRACTORS AND TRADES OF THIS PROJECT IN A MANNER WHICH WILL ALLOW EACH CONTRACTOR AND TRADE ADEQUATE TIME AT THE PROPER STAGE OF CONSTRUCTION TO FULFILL HIS CONTRACTS. REFERENCE SHALL BE MADE TO THE OWNER FOR INSTRUCTIONS SHOULD ANY QUESTIONS ARISE BETWEEN TRADES AS TO THE PLACING OF LINES, DUCTS, CONDUITS, FIXTURES, OR EQUIPMENT, OR SHOULD IT APPEAR DESIRABLE TO REMOVE ANY GENERAL CONSTRUCTION WHICH WOULD AFFECT THE APPEARANCE OR STRENGTH OF THE STRUCTURE.

SUBSTITUTION OF MATERIALS

MANUFACTURER'S NAMES ARE LISTED HEREIN TO ESTABLISH A STANDARD. THE PRODUCTS OF OTHER MANUFACTURERS WILL BE ACCEPTABLE, IF IN THE OPINION OF THE TENANT, THE SUBSTITUTE MATERIAL IS OF A QUALITY AS GOOD OR BETTER THAN THE MATERIAL SPECIFIED, AND WILL SERVE WITH EQUAL EFFICIENCY AND DEPENDABILITY, THE PURPOSE FOR WHICH THE ITEMS SPECIFIED WERE INTENDED.

SHOP DRAWINGS

SHOP DRAWINGS AND CATALOG DATA ON ALL MAJOR ITEMS OF EQUIPMENT AND SYSTEMS, AND SUCH OTHER ILLUSTRATIVE MATERIAL AS MAY BE CONSIDERED NECESSARY BY THE TENANT, SHALL BE SUBMITTED BY THIS CONTRACTOR IN ADEQUATE TIME TO PREVENT DELAY AND CHANGES DURING CONSTRUCTION.

DRAWINGS AND SPECIFICATIONS

- A. THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS LINES, DUCTS, CONDUITS, FIXTURES, AND EQUIPMENT AND THE METHOD OF CONNECTING AND CONTROLLING THEM. IT IS NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL, AND ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM.
- B. ANY CHANGES BE DEEMED NECESSARY BY THE CONTRACTOR IN ITEMS SHOWN ON CONTRACT DRAWINGS, THE SHOP DRAWINGS, DESCRIPTIONS, AND THE REASON FOR THE PROPOSED CHANGES SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL.

RESPONSIBILITY

- A. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE SATISFACTORY AND COMPLETE EXECUTION OF ALL WORK INCLUDED IN THE CONTRACT AND SHALL PRODUCE COMPLETE FINISHED OPERATING SYSTEMS AND PROVIDE ALL INCIDENTAL ITEMS REQUIRED AS PART OF HIS WORK, REGARDLESS OF WHETHER SUCH ITEM IS PARTICULARLY SPECIFIED OR INDICATED.
- B. CONTRACTOR SHALL SUPPLY TO LANDLORD AND TENANT A CERTIFIED BALANCE REPORT AT COMPLETION OF PROJECT. THIS IS REQUIRED FOR BOTH REMODELED AND NEW STORES.

GENERAL PROVISIONS

1. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT IN ACCORDANCE WITH THESE SPECIFICATIONS AND THE ACCOMPANYING DRAWINGS TO PROVIDE A COMPLETE AND PROPERLY OPERATING PLUMBING SYSTEM FOR THE BUILDING.
2. OBTAIN WATER, SEWER, GAS TAPS, AND ANY OTHER REQUIRED UTILITIES AND EXTEND SERVICE FROM SAID LOCATIONS AS SHOWN ON DRAWINGS. VISIT THE SITE FOR UNDERSTANDING OF THE WORK TO BE DONE BEFORE SUBMITTING BID.
3. COORDINATE THIS WORK WITH THE WORK OF THE OTHER TRADES ON THE PROJECT. ALL PLUMBING IS TO BE ROUGHED IN WHILE THE BUILDING IS BEING CONSTRUCTED AT SUCH TIMES AS NOT TO DELAY THE GENERAL CONTRACTOR ON THE BUILDING.
4. GENERAL REQUIREMENTS: COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS, CODES, RULES, AND ORDINANCES GOVERNING WORK OF THIS CHARACTER. PAY FOR AND OBTAIN NECESSARY CONSTRUCTION PERMITS AND CERTIFICATES OF INSPECTION.
5. THE LOCATION OF THE PIPING RUNS ARE APPROXIMATE AND THE CONTRACTOR MUST MAKE ANY NECESSARY CHANGES IN THE PIPING RUNS, ETC., AT NO ADDITIONAL COST TO THE OWNER. OUTLET LOCATIONS ARE CRITICAL AND MUST BE LOCATED EXACTLY ACCORDING TO THE PLUMBING PLAN. COORDINATE THIS WORK WITH THE INSTALLERS OF EQUIPMENT FURNISHED AND INSTALLED BY OTHERS. REFER TO THE OTHER DRAWINGS FOR DETAILS OF THE BUILDING CONSTRUCTION AND THE OTHER MECHANICAL, ELECTRICAL, AND EQUIPMENT FEATURES.
6. COORDINATION AND WORKMANSHIP: SCHEDULE THIS WORK SO THAT IT WILL BE PROPERLY COORDINATED WITH ALL OTHER TRADES. WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE BEST PRACTICE FOR THE CLASS OF WORK INVOLVED. WORKMANSHIP SHALL ALLOW THE APPLIANCE TO OPERATE AS INTENDED AND BE INSTALLED TO BEST PROTECT THE PUBLIC AND OPERATORS FROM INJURY OR DAMAGE, AND TO PRESENT A NEAT, PLEASING, AND ORDERLY APPEARANCE.

MATERIALS AND PERFORMANCE

1. MATERIALS: ALL MATERIALS SHALL BE NEW AND OF THE QUALITY INDICATED BY THE SPECIFIED BRAND NAMES. SUBSTITUTIONS OF MATERIAL OF EQUAL QUALITY BY OTHER FIRST-LINE MANUFACTURERS MAY BE ACCEPTABLE PROVIDED A LIST OF SUCH SUBSTITUTIONS IS APPROVED IN WRITING. A SUBSTITUTIONS LIST SHALL BE SUBMITTED IN TRIPLICATE WITHIN FIVE (5) DAYS AFTER THE CONTRACT IS LET.
2. BACKFILLING: PERFORM ALL NECESSARY EXCAVATING AND BACKFILLING REQUIRED FOR THIS INSTALLATION. PREPARE A PROPER BED OF SAND OR GRAVEL OR EQUIVALENT IN ROCK SCREENINGS SO AS TO ELIMINATE SHIMMING AND VOID SPACES UNDER ANY OF THE UTILITY SERVICE PIPES. BENDING OF ANY HARD PIPE WILL NOT BE PERMITTED, WHERE A CHANGE IN DIRECTION IS NECESSARY ON PRESSURE PIPES, "COMPATIBLE" COUPLINGS OR EQUAL SHALL BE USED AND BENDS MAY NOT EXCEED 90 DEGREES. ALL EXCAVATION BELOW THE BOTTOM OF FOOTINGS SHALL BE BACKFILLED WITH 2000 PSI CONCRETE. OTHER BACKFILL SHALL CONSIST OF 2-3" OF SAND OR ROCK SCREENINGS AND EARTH TO A FINAL LEVEL EQUAL TO ITS ORIGINAL CONDITION. IN THE EVENT THE BACKFILL SHOULD SETTLE BEFORE THE FINAL TOP SURFACE IS APPLIED, APPLY ADDITIONAL BACKFILL TO SUSTAIN THE ORIGINAL LEVEL. CARE SHOULD BE TAKEN TO MINIMIZE THE DUST LEVEL WHEN EXCAVATING AND BACKFILLING SO AS TO COMPLY WITH FEDERAL AND STATE E.P.A. REGULATIONS RELATING TO THIS TYPE OF WORK (FUGITIVE DUST).
3. PIPING INSTALLATION: CLEANOUTS MUST BE INSTALLED ON MINIMUM DROP LINES EVEN THOUGH NOT SHOWN ON THE BLUEPRINTS. USE REDUCING FITTINGS IN MAKING REDUCTIONS IN SIZE OF PIPE. REAM ALL PIPE AFTER CUTTING, THEN TURN PIPES ON END AND KNOCK OUT ALL LOOSE DIRT AND SCALE BEFORE INSTALLING. MAKE CHANGES IN HORIZONTAL DIRECTION OF SOIL AND WASTE PIPES WITH LONG RADIUS FITTINGS OR WITH "Y" BRANCHES AND 1/8 OR 1/16 BENDS. CONNECT SOIL STACKS AT BASE TO HORIZONTAL RUNS WITH "Y" CONNECTIONS.
- A. WATER SUPPLY PIPES TO FIXTURES AND WASTE PIPES FROM FIXTURES SHALL BE CENTERED IN THE PROPER PLACE RELATIVE TO THE CENTER LINE OF THE FIXTURE. NO OFFSETS WILL BE ALLOWED. ALL PIPES SHALL BE RUN MECHANICALLY STRAIGHT AND SQUARE WITH BUILDING LINES, EXCEPT FOR REQUIRED PITCH ON HORIZONTAL LINES, AND ALL CHANGES IN DIRECTION SHALL BE MADE WITH FITTINGS. WATER PIPING TO BE ROUTED IN WALLS, UNDER THE FLOOR SLAB, AND ABOVE SUSPENDED CEILINGS AS NOTED. WHERE WATER LINES ARE ROUTED UNDER THE FLOOR SLAB, NO MECHANICAL JOINTS SHALL BE MADE UNDER THE SLAB EXCEPT AS LISTED BELOW. WATER PIPING SHALL BE INSTALLED NOT TO EXERT VERTICAL NOR HORIZONTAL STRESSES ON THE SEATING OF UNIONS. UNIONS SHALL BE COPPER TYPE NIBCO #733 OR EQUAL.
- B. NO WAX, PUTTY, OR VARNISH WILL BE PERMITTED. CRACKED FITTINGS SHALL BE REMOVED AND REPLACED WITH NEW FITTINGS. MAKE THREADED JOINTS IN BRASS PIPE AND FITTINGS WITH PIPE THREADING TO THE SHOULDER OF THE FITTINGS. NO SLIP JOINTS OR COUPLING JOINTS IN BRASS PIPE WILL BE PERMITTED, EXCEPT ON THE FIXTURE SIDE OF THE TRAP.
- C. GAS PIPING FOR ABOVE GROUND INSTALLATIONS: ALL FITTINGS TO BE OIL, THREAD CUTTINGS AND RESIDUALS TO ACCEPT ENAMEL PAINT. ROUGH OR SHARP JOINED WITH TEFLON TAPE SEAL OR OTHER SUITABLE SEAL AND MADE IN CONFORMANCE EXPOSED THREAD SURFACES SHALL BE FILED SMOOTH. TESTING SHALL BE AS OUTLINED WITH THE BEST PRACTICES OF AGA AND NFPA 54. UNIONS SHALL BE CAST BLACK IRON AND INSTALLED IN A MANNER SUCH THAT NO STRESS WILL BE PLACED ON THE MALE-FEMALE SEALING SURFACES. PROPER ALIGNMENT WILL BE MADE AT TIME OF INSTALLATION. ALL JOINTS AND CONNECTIONS SHALL BE THOROUGHLY CLEANED OF

WASTE PIPE

JOINTS SHALL BE CLEANED AND DEBURRED AS RECOMMENDED BY THE MANUFACTURER AND FEDERAL, STATE, AND LOCAL CODES AND SOLDERED AS LISTED BELOW. FLUX SHALL BE NON-CORROSIVE.

ABOVE GRADE - WHERE FITTINGS ARE SOLDERED BOTH FITTINGS AND TUBING SHALL BE CLEANED AS DESCRIBED ABOVE. UNDER NO CIRCUMSTANCES SHALL DISSIMILAR METALS COME INTO DIRECT CONTACT WITH COPPER TUBING; E.G., GALVANIZED STRAPPING, HANGERS, OR CLAMPS TO SECURE THE TUBING.

BELOW GRADE, OR FLOOR SLAB ON EARTH OR STONE FILL-UPONOR PEX, NO JOINTS PERMITTED UNDER GRADE.

NOTE: WATER PIPE TO BE PROPERLY SECURED AND ALIGNED SO AS NOT TO EXERT VERTICAL OR HORIZONTAL STRESSES ON THE SEATING OF THE MATING (MALE AND FEMALE) SURFACES OF THE UNIONS.

- A. MATERIALS - UNDERGROUND: TYPE "K" COPPER TUBE, SOFT TEMPER
- B. MATERIALS - ABOVEGROUND: TYPE "L" COPPER TUBE, HARD DRAWN.
- C. MATERIALS - PEX PIPING, IF APPROVED BY LOCAL CODE. (NOTE: WHEN PEX IS USED, CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING PROPER INSTALLATION AND BALANCING FOR HOT WATER RECIRCULATION WHEN APPLICABLE).
- D. INSULATION: INSULATION FOR COLD WATER PIPING SHALL BE 1/2" HOT WATER & HOT WATER RETURN MUST BE AT LEAST THE THICKNESS OF THE PIPE DIAMETER. ACCEPTABLE MATERIALS: ARMAFLEX UL LABELED OR FIBERGLASS. INSULATE ALL PIPING AND FITTINGS.

GAS PIPE

- A. GAS PIPING ABOVE GROUND: ASTM A53, SCHEDULE 40 BLACK STEEL WITH 125 POUND BLACK MALLEABLE IRON SCREWED FITTINGS. INSTALL. MOISTURE TRAPS ON HVAC UNITS AND KITCHEN EQUIPMENT.
- B. GAS PIPING COMPOUND AT JOINTS: IN COMPLIANCE WITH NFPA BULLETIN #54 AND LOCAL APPLICABLE CODES AND SUITABLE FOR NATURAL GAS SERVICE.
- C. PRIME AND PAINT EXPOSED PIPING: ONLY WHEN REQUIRED BY LOCAL CODES.

WASTE PIPE

- A. INSTALL HORIZONTAL DRAIN AND WASTE PIPES WITH MIN. 1/8"/FT. SLOPE FOR 3" OR GREATER 1/4"/FT FOR 2" AND LESS. (NOTE: CERTAIN JURISDICTIONS MANDATE 1/4" REGARDLESS OF PIPE SIZE. VERY IF WITH LOCAL PLUMBING AUTHORITY IF NOT SURE.)
- B. MATERIALS: PVC SCH. 40, WITH CHEMICALLY FUSED JOINTS OR CAST IRON - (HUB TYPE WITH NEOPRENE JOINTS -WITH STAINLESS STEEL CONNECTORS WHEN PVC IS NOT ALLOWED PER LOCAL CODE.
- C. FOR CAST IRON BELOW GRADE OPTION :
1. COMPRESSION GASKET JOINTS - SANITARY PIPE & STORM PIPE: 1. JOINT SHALL BE ONE PIECE DOUBLE SEAL COMPRESSION TYPE GASKET MADE SPECIFICALLY FOR JOINING CAST IRON SOIL PIPE. GASKET SHALL BE NEOPRENE, PERMITTING JOINT TO FLEX AS MUCH AS 5 DEGREES WITHOUT LOSS OF SEAL. GASKET SHALL BE EXTRA HEAVY WEIGHT CLASS, CONFORMING TO ASTM C-564. .
2. LEAD AND OAKUM JOINTS - SANITARY PIPE AND STORM PIPE: 1. PACK JOINT WITH OAKUM MADE OF VEGETABLE FIBER, COTTON, OR HEMP. POUR JOINT WITH MOLTEN LEAD UP TO TOP OF HUB, ENSURE LEAK-FREE JOINTS BY WORKING JOINT WITH INSIDE AND OUTSIDE CAULKING IRONS.

TESTS & CLOSEOUT PROCEDURES

- A. DRAINAGE AND VENT PIPING - DRAINAGE AND VENT PIPING SHALL BE TESTED BEFORE THE PLUMBING FIXTURES ARE INSTALLED BY CAPPING THE OPENINGS AND FILLING THE ENTIRE SYSTEM WITH WATER AND ALLOWING IT TO STAND THUS FILLED NOT LESS THAN ONE (1) HOUR. INSPECT WATER LEVEL TO DETERMINE IF PIPING IS TIGHT.
- B. PIPING - THE WATER SUPPLY PIPING LINES SHALL BE TESTED BEFORE THE PLUMBING FIXTURES ARE CONNECTED BY FILLING THE ENTIRE SYSTEM WITH POTABLE WATER AND APPLYING HYDROSTATIC PRESSURE OF 100 PSI AND ALLOWING TO STAND FOR NOT LESS THAN FOUR (4) HOURS AT THIS PRESSURE TO PROVE PLUMBING INTEGRITY.
- C. GAS PIPING - IN LIEU OF LOCAL REQUIREMENTS, GAS PIPING SHALL BE FILLED WITH COMPRESSED AIR TO 150 PSI AND HELD FOR A PERIOD OF FOUR (4) HOURS. EACH JOINT SHALL BE CHECKED BY LIQUID SOAP OR SPECIAL LIQUID CHEMICAL FOR LEAKS. NOTE: REMOVE ALL GAS VALVES AND PROTECT FROM DAMAGE BEFORE TESTING SYSTEM.
- D. DISINFECTION OF POTABLE WATER SYSTEM: UPON COMPLETION OF INSTALLATION DISINFECT THE WATER SYSTEM BY FILLING IT WITH SOLUTION CONTAINING 50 PARTS PER MILLION OF CHLORINE AND ALLOW IT TO STAND FOR NOT LESS THAN SIX (6) HOURS BEFORE FLUSHING THOROUGHLY AND RETURNING TO SERVICE. FURNISH CLEAN WATER SAMPLES TO THE LOCAL AUTHORITY FOR TESTING AFTER THE LINES HAVE BEEN DISINFECTED. THIS PROCEDURE TO BE IN ACCORDANCE WITH STATE PLUMBING CODE.
- E. CLEANUP: CLEAN ALL PLUMBING FIXTURES AND EQUIPMENT THOROUGHLY BEFORE FINAL INSPECTION, LEAVING ALL READY FOR USE.
- F. GUARANTEE: MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. DEFECTIVE WORK AND ALL DAMAGES CAUSED THEREBY WHICH MAY OCCUR DURING THE TERM OF THE AFOREMENTIONED GUARANTEE WILL BE REPAIRED AND/OR REPLACED AT NO EXPENSE TO THE OWNER.
- G. OWNER'S MANUAL: PROVIDE THE OWNER, AT THE COMPLETION OF THIS CONTRACT, WITH AN "OWNER'S MANUAL" SO LABELED. THE MANUAL SHALL CONSIST OF A THREE-RING LOOSE-LEAF BINDER CONTAINING ALL PRINTED MATTER SUCH AS: GUARANTEE CARDS, CLEANING INSTRUCTIONS, NOTICES TO OWNER, OPERATING MANUALS, AND MAINTENANCE INSTRUCTIONS THAT MAY BE CONTAINED IN THE SHIPPING CARTONS OR EQUIPMENT HOUSINGS.

PLUMBING FIXTURE SCHEDULE													
FIXTURE DATA				CONNECTION DATA								DESCRIPTION	
PLAN TAG	FIXTURE	MFG.	MODEL NO.	SOIL SIZE	VENT SIZE	TRAP	INDIRECT WASTE	WATER					
								COLD	HOT	T.W.	FILTER		
①	HANDICAPPED WATER CLOSET ADA WC-1	AMERICAN STANDARD	CADET 215CA 104.020	4"	2"	-	-	½"	-	-	-	HANDICAPPED VITREOUS CHINA TANK TYPE WATER CLOSET WITH ELONGATED SIPHON JET BOWL PRESSURE ASSISTED 1.28 GPF WITH SEAT MIN 17" AND MAX 19" AFF. FURNISH COMPLETE WITH CHURCH #295C OPEN FRONT TOILET SEAT AND LOOSE KEY ANGLE STOPS	
②	HANDICAPPED LAVATORY ADA L-1	AMERICAN STANDARD	LUCERNE 0355.012	2"	1½"	1½"	-	½"	-	½"	-	VITREOUS CHINA WALL HUNG LAVATORY WITH CONCEALED ARM SUPPORT. FURNISH COMPLETE WITH AMERICAN STANDARD 1340.225 SELF-CLOSING METERING LAVATORY FAUCET, OFFSET TAILPIECE MCGUIRE CHROME SUPPLIES AND LOOSE KEY ANGLE STOPS, 1½"x½" C.P. 17 GAUGE ADJUSTABLE P-TRAP WITH CLEANOUT AND CHROME SET SCREW ESCUTCHEONS THROUGH WALL. INSULATE ALL EXPOSED PIPING WITH "TRUBRO LAV-GAURD" INSULATION KIT NO. 101. INSTALLATION SHALL COMPLY WITH ALL ADA REQUIREMENTS FOR MOUNTING HEIGHTS AND CLEARANCES.	
③	1-COMPT. MOP SINK MSB-1	FIAT	MSB-2424	3"	2"	3"	-	½"	½"	-	-	PRECAST MOLDED STONE MOP SERVICE BASIN, 24"x24"x12" HIGH STAINLESS STEEL THRESHOLD AND #830-AA FAUCET WITH VACUUM BREAKER AND HOSE END, #832-AA HOSE AND HOSE BRACKET, #1453-BB STAINLESS STEEL STRAINER AND #889-CC MOP HANGER.	
④	REST ROOM FLOOR DRAIN FD-1	SIOUX CHIEF	842	2"	2"	2"	-	-	-	-	-	ABS, 2-PIECE BODY WITH DOUBLE DRAINAGE FLANGE, FLASHING COLLAR WEEP HOLES, ADJUSTABLE 7" ROUND SATIN NICKALOY STAINER, BOTTOM OUTLET.	
⑤	FLOOR DRAIN FD-1	SIOUX CHIEF	842-UM	2"	2"	2"	-	-	-	-	-	ABS, 2-PIECE BODY WITH DOUBLE DRAINAGE FLANGE, FLASHING COLLAR WEEP HOLES WITH SEDIMENT BUCKET, ½"TRAP PRIMER CONNECTION, BOTTOM OUTLET AND INSIDE CAULK CONNECTION.	
⑥	FLOOR SINK FS-1	SIOUX CHIEF	861-23-N2	3"	2"	2"	-	-	-	-	-	CAST IRON FLOOR SINK WITH 12" SQUARE TOP AND ALUMINUM DOME STRAINER WITH ½"GRATE TOP.	
⑦	THERMOSTATIC MIXING VALVE - MV	ACORN	ST-70	-	-	-	-	-	-	-	-	THERMOSTATIC MIXING VALVE FOR SMALL APPLICATIONS.	
⑧	EXPANSION TANK	AMTROL	ST-12	-	-	-	-	-	-	-	-	MAXIMUM WORKING PRESSURE 150 PSI, TOTAL VOLUME 6.7 GALLONS TO BE INSTALLED ON WATER HEATER PER WATER HEATER MANUFACTURES GUIDE LINES.	
⑨	WATER HEATER (GWH) TYPICAL OF 2	NORITZ	SEE WATER HEATER DETAIL P2	-	-	-	TO FLOOR SINK	-	-	-	-	PROVIDE WITH INSTALLATION KIT, DIRECT VENT CONVERSION KIT WITH REMOTE, WITH CONDENSATE DRAIN WITH BACKFLOW PREVENTER.	
⑩	TRAP PRIMER (ALTERNATE)	PRECISION PLUMBING PRODUCTS	PRO1-500	-	-	-	-	½"	-	-	-	ALL BRONZE TRAP PRIMER WITH VACUUM BREAKER, CONTAINS NO SPRINGS, DIAPHRAGMS, OR PLASTIC. PROVIDE PRIMERS IN RESTROOMS AND LOW USE FLOOR DRAINS..	
⑪	BACKFLOW PREVENTER	WATTS	REFER TO SCHED. ON P2	-	-	-	-	-	-	-	-	EXIST. BUILDING BACKFLOW PREVENTER	
⑫	BACKFLOW PREVENTER	WATTS	REFER TO SCHED. ON P2	-	-	-	-	¾"	-	-	-	STAINLESS STEEL BACKFLOW PREVENTER FOR CARBONATED BEVERAGE DISPENSER, WATER FILTERS, ICE TEA BREWERS AND ICE MACHINES.	
⑬	ACCESS PANEL	ELMDOR	PW SERIES	-	-	-	-	-	-	-	-	10"x10" SQUARE STAINLESS STEEL ACCESS PANEL.	
⑭	WALL CLEANOUT -WCO	JOSAM	58600-COT	2"	2"	-	-	-	-	-	-	CAST IRON CAULKING FERRULE WITH BRASS RAISED HEAD PLUS POLISHED NIKALOY OR STAINLESS STEEL COVER PLATE. SECURE WITH SCREW SPIGOT CONNECTION.	
⑮	FLOOR CLEANOUT-FCO	JOSAM	57000	4"	-	-	-	-	-	-	-	LEVELIZE COATED CAST IRON BODY WITH ADJUSTABLE HOUSING, SATIN NIKALOY TOP AND INSIDE CAULK CONNECTION.	
⑯	SHOCK ABSORBER-WHA-A	JOSAM	75000	-	-	-	-	-	-	-	-	STAINLESS STEEL HYDRO-PNEUMATIC SHOCK ABSORBER WITH ELASTOMER BELLOWS.	
⑰	3-COMPARTMENT SINK 3-COMP	-	-	-	-	-	INDIRECT	¾"	¾"	-	-	OWNER SUPPLIED AND CONTRACTOR TO INSTALL.	
⑱	2-COMPARTMENT SINK 2-COMP	-	-	-	-	-	TO F.S.	¾"	¾"	-	-	OWNER SUPPLIED AND CONTRACTOR TO INSTALL.	
⑲	ICE MACHINE W/STORAGE BIN	-	-	-	-	-	TO F.S.	½"	-	-	-	OWNER SUPPLIED AND GENERAL CONTRACTOR TO INSTALL. PROVIDE TYPE 'A' HAMMER ARRESTOR.	
⑳	SODA SYSTEM	-	-	-	-	-	TO F.S.	¾"	-	-	-	OWNER SUPPLIED AND INSTALLED.	
㉑	TEA BREWER	-	-	-	-	-	-	¾"	-	-	-	OWNER SUPPLIED AND INSTALLED.	
㉒	HAND SINK HS-1	-	-	2"	1½"	1½"	-	½"	-	½"	-	OWNER SUPPLIED AND CONTRACTOR TO INSTALL.	
㉓	HOSE BIBB (140°F. HW)	-	-	-	-	-	-	-	¾"	-	-	T & S BRASS B-0737- 001802-45T-HANDLE, CONTRACTOR SUPPLIED AND INSTALLED.	
㉔	CARBONATOR	-	-	-	-	-	TO F.S.	½"	-	-	-	OWNER SUPPLIED AND INSTALLED. PC TO PROVIDE & INSTALL CODE COMPLIANT BACKFLOW PROTECTION.	
㉕	SPACE	-	-	-	-	-	TO F.S.	-	-	-	-	OWNER SUPPLIED AND INSTALLED. PC TO PROVIDE & INSTALL CODE COMPLIANT BACKFLOW PROTECTION.	
㉖	GREASE INTERCEPTOR	-	-	4"	2"	-	-	-	-	-	-	SUPPLIED AND INSTALLED BY CONTRACTOR. REFER TO GREASE INTERCEPTOR DETAIL ON SHEET P4 FOR MORE INFORMATION.	
㉗	EXTERIOR GRADE CLEANOUT GCO	JOSAM	57000-Z-LT	4"	-	-	-	-	-	-	-	CAST IRON BODY WITH FLANGE, WITH STRAIGHT BODY FOR CAULKING INTO SOIL PIPE. HUB WITH COUNTERSUNK TAPERED THREADED BRONZE PLUG. PROVIDE "T" HANDLE WRENCH. (ALTERNATE JOSAM NO. 58190-22)	
㉘	HANDICAPPED URINAL ADA UR-1	AMERICAN STANDARD	WASH BROOK 6501.010	2"	2"	-	-	¾"	-	-	-	HANDICAPPED WALL HUNG, FLUSHING RIM, WASHOUT ACTION, 3/4" TOP SPUD, 0.5 GALLONS PER FLUSH. VALVE: SLOAN ROYAL-186-0.5 YBYC CARRIER: J.R.SMITH-0637 FLOOR MTD. WITH BEARING PLATE. MOUNTING HEIGHT: 17" FROM RIM TO FLOOR.	
㉙	RE-CIRCULATING PUMP CIRC. PUMP	BELL AND GOSSETT	NRF-22	-	-	-	-	1/2"	-	-	-	PROVIDE WITH AQUASTAT AND TIMER	
㉚	KITCHEN TRENCH DRAIN TD-1 (ALTERNATE BY OWNERS DIRECTION)	JOSAM	100C	3"	2"	2"	-	-	-	-	-	MEA - JOSAM 100C SERIES CHANNELS SHALL BE 39.4" (1000) LONG WITH 4" (102) INTERNAL WIDTH AND RADIUSD BOTTOM. MATERIAL AND AVAILABLE WITH AND WITHOUT SLOPE. CHANNEL SUPPORT BRACKETS CAPABLE OF ACCEPTING RE-BAR, END OUTLETS, BOTTOM OUTLETS, ENDCAPS, AND CORNER/ CONNECTORS SHALL BE AVAILABLE. ORDER WITH STAINLESS STEEL GRATE AND BOTTOM OUTLET STRAINER	

FIRE STOPPING

WHEN REQUIRED BY LOCAL CODES OR ORDINANCES. CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:

- 1.1 SYSTEM DESCRIPTION
- A. SPECIFIED FIRESTOPPING SYSTEMS ARE BASED ON A SOLID SEALANT ONLY, OR COMBINATIONS OF SOLID SEALANT, FOAM SEALANT, AND REFRACTORY FIBERS OF THICKNESS REQUIRED TO ATTAIN HOUR RATINGS.
- B. SYSTEMS SHALL:
1. PROVIDE A FLEXIBLE SEAL TO PREVENT PASSAGE OF FIRE, SMOKE, TOXIC GASES AND WATER THROUGH OPENINGS, AND PREVENT TRANSMISSION OF SOUND AND VIBRATION FROM THE PENETRATING ELEMENT TO THE STRUCTURE.
2. PROVIDE HOUR RATINGS INDICATED AND IN ACCORDANCE WITH ASTM E 814 OR UL 1479.
- C. REGULATORY REQUIREMENTS:
1. PRODUCTS SHALL BE 100% ASBESTOS AND PCB FREE.
- 1.5 PROJECT CONDITIONS
- A. EXISTING CONDITIONS: VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. CORRECT UNSATISFACTORY CONDITIONS BEFORE PROCEEDING. PROCEED WITH INSTALLATION ONLY AFTER PENETRATIONS OF SUBSTRATES HAVE BEEN COMPLETED AND SUPPORTING BRACKETS INSTALLED.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. MANUFACTURERS: 3M, HILTI, NELSON, OR UL LISTED EQUALS.

PART 3 - EXECUTION

3.1 CONDITION OF SURFACES

- A. UNLESS OTHERWISE PERMITTED BY MANUFACTURER, DO NOT APPLY FIRESTOPPING MATERIALS TO POLYCARBONATES, MATERIALS THAT BLEED OILS, PLASTICIZERS OR SOLVENTS; ORGANO-METALIC COMPOUNDS; SILICONE RUBBER CONTAINING ORGANO-TIN COMPOUND; SULFUR, POLYSULFIDES, POLYSULFONES AND OTHER SULFUR CONTAINING MATERIALS; AMINES, URETHANES AND AMINE-CONTAINING MATERIALS; AND UNSATURATED HYDROCARBON PLASTICIZERS.
- B. 3.2 PREPARATION
- C. THOROUGHLY CLEAN SURFACES AND SPACES TO RECEIVE FIRESTOPPING MATERIALS. REMOVING FOREIGN MATTER SUCH AS DIRT, DUST, MOISTURE, RUST, DO NOT USE CLEANING SOLVENTS WHICH LEAVE RESIDUE. WIPE JOINTS FREE OF SOLVENT USING CLEAN, DRY WHITE CLOTHS OR WHITE LINTLESS PAPER. DO NOT USE ALCOHOL OR ALCOHOL BASED MATERIALS. DO NOT PERMIT SOLVENT TO AIR DRY. DO NOT USE DETERGENTS OR SOAP AND WATER SOLUTIONS FOR CLEANING UNLESS SPECIFICALLY RECOMMENDED BY THE SEALANT MANUFACTURER.
- D. FOLLOW MANUFACTURER'S DIRECTIONS FOR SPECIFIC PRODUCTS AND SURFACES.

3.4 INSTALLATION

- A. INSTALL SYSTEMS IN ACCORDANCE WITH UL SYSTEMS, AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS, USING APPROVED EQUIPMENT AND SO AS TO ACHIEVE THE REQUIRED FIRE RATING.

CONSULTANT:



CLIENT:



5501 LBJ FREEWAY, 5TH FLOOR  
DALLAS, TX 75240  
TELEPHONE: (972) 686-6500  
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PROJECT INFORMATION:

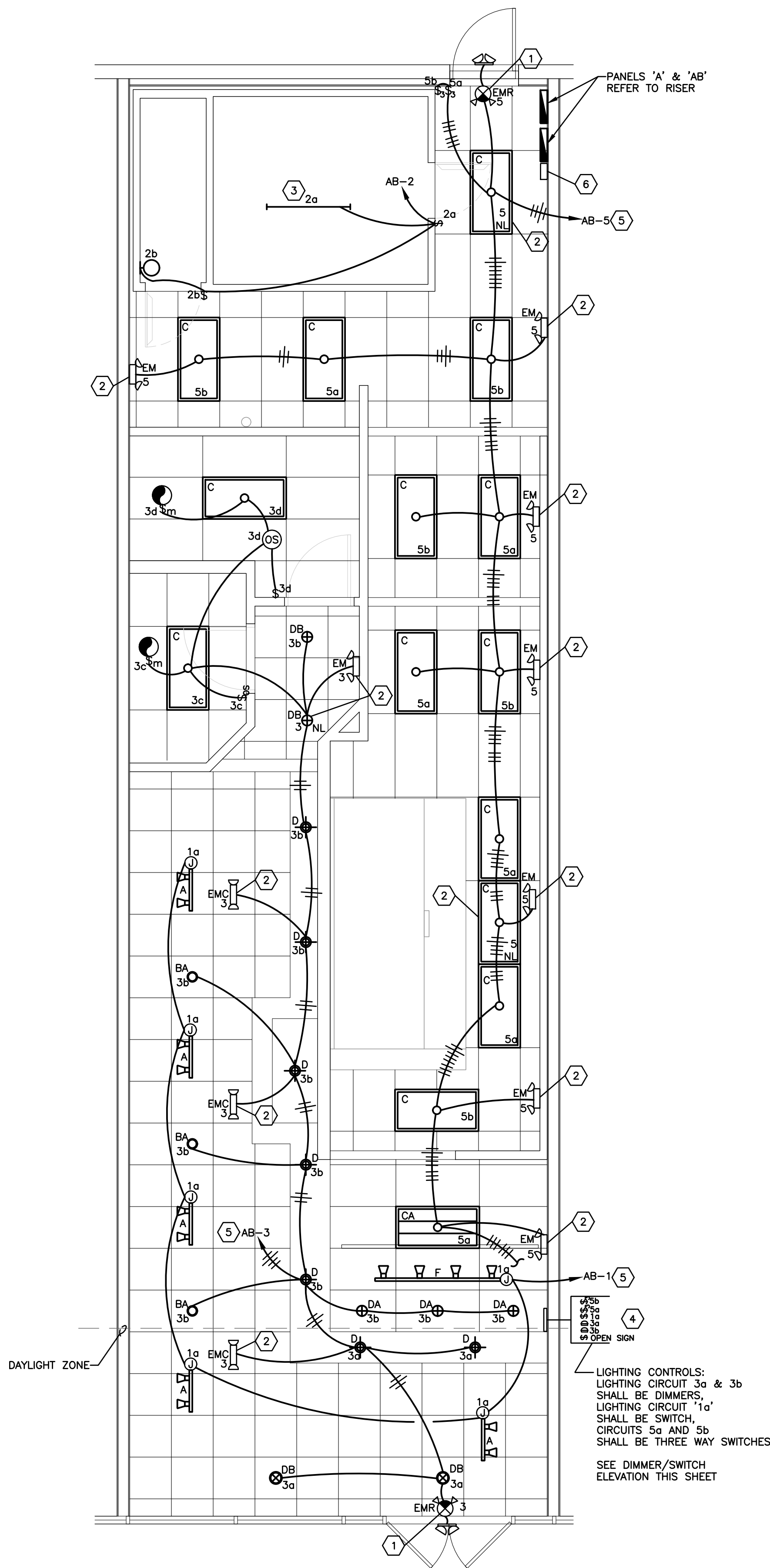
WING-STOP  
STORE NUMBER: GL#Y715  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



PROJECT NO.: 2021-0158

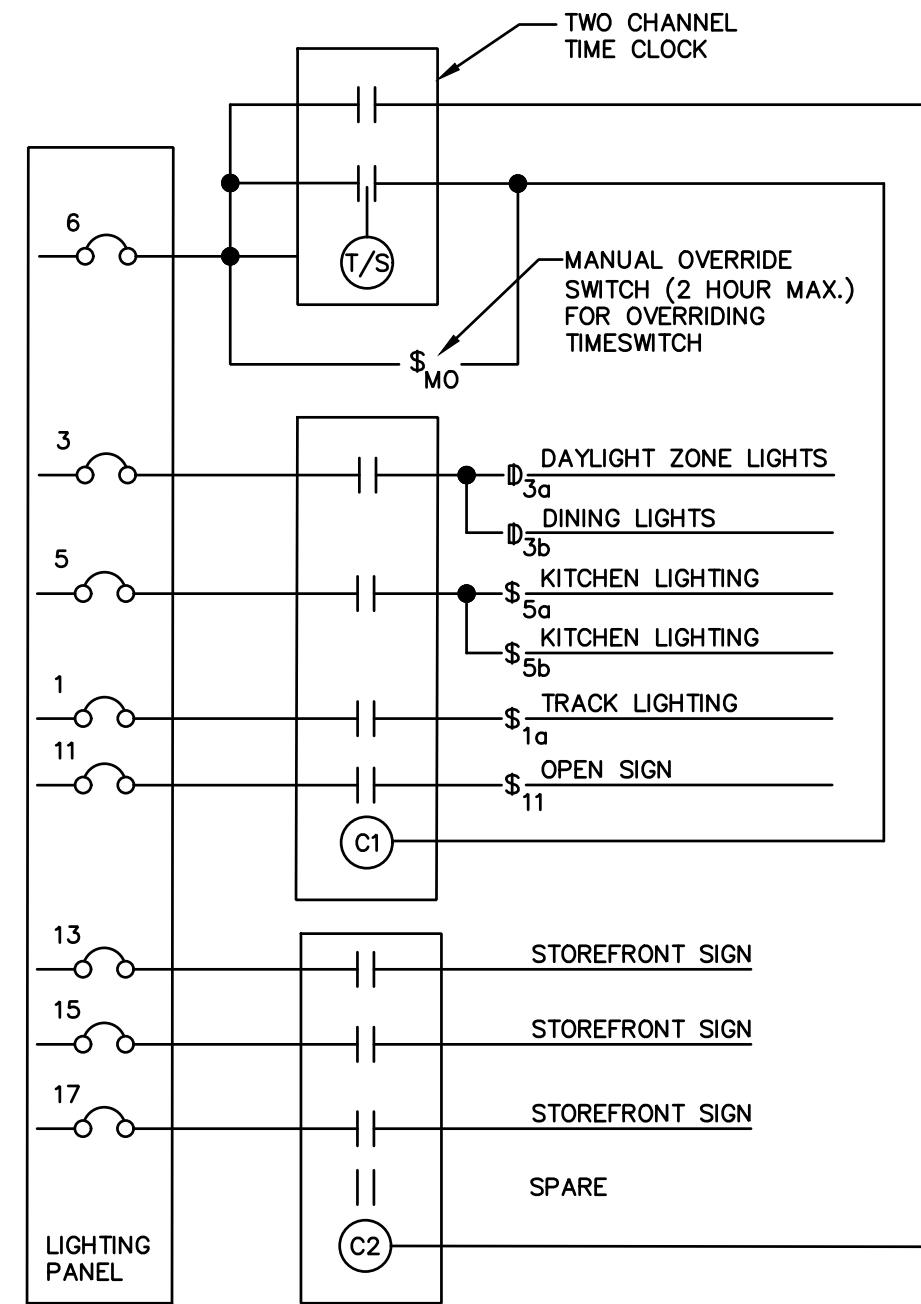
DRAWN BY: JJV



### ELECTRICAL CEILING PLAN

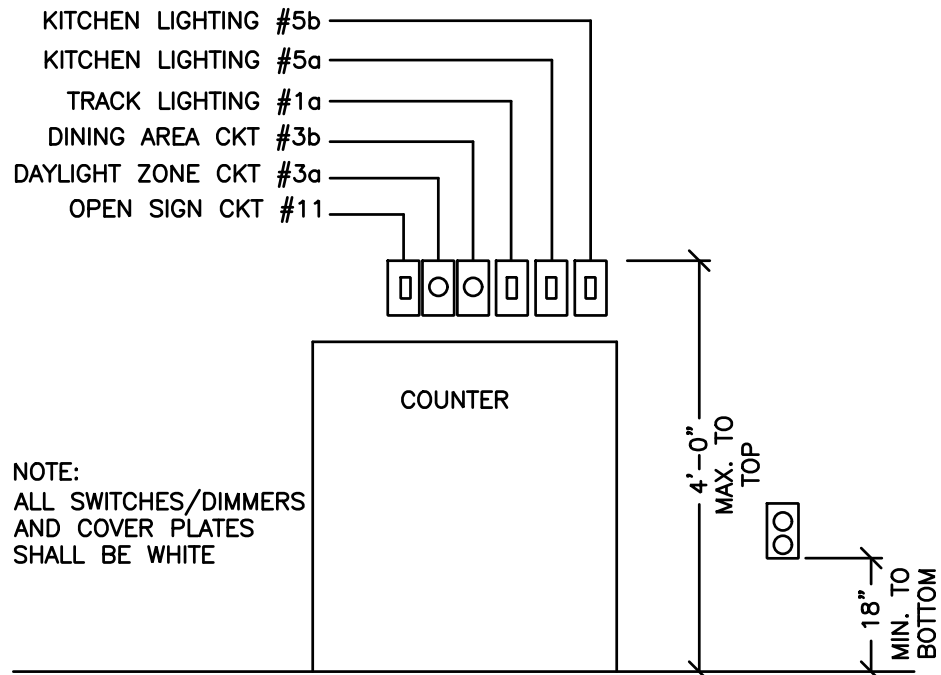
SCALE: 1/4" = 1'-0"

PER IECC 2018 SECTION 405.2.3  
SPACES WITH LESS THAN 150  
WATTS OF GENERAL LIGHTING IN  
DAYLIGHT ZONE DO NOT REQUIRE  
DAYLIGHT CONTROLS



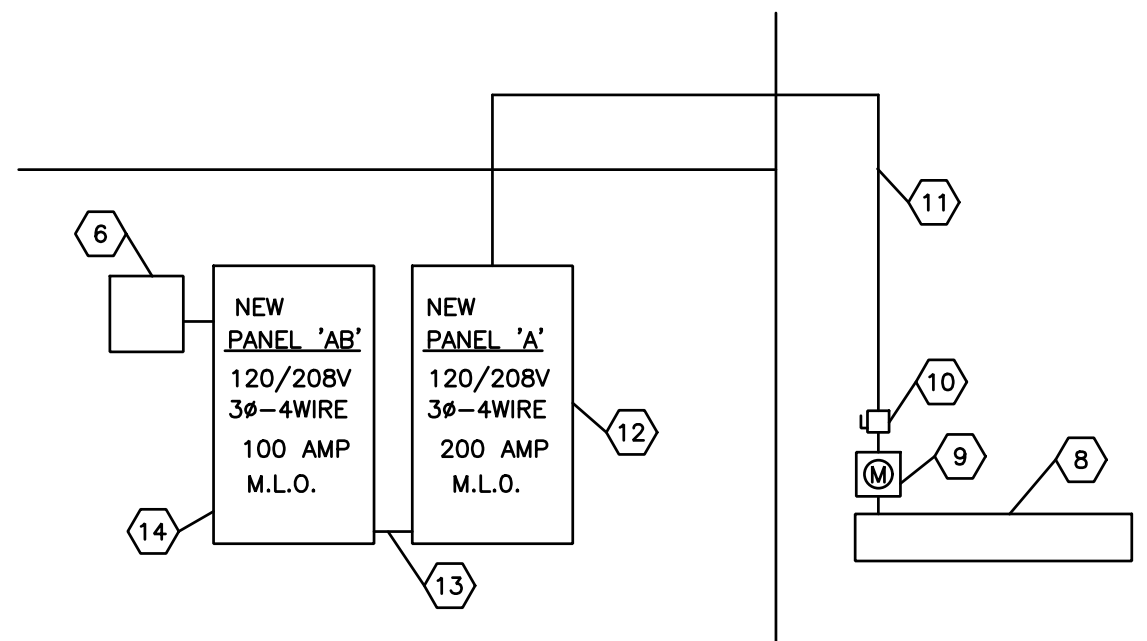
### LIGHTING CONTROLS DIAGRAM

SCALE: NONE



### DIMMER/SWITCH ELEVATION

SCALE: NONE



### POWER RISER DIAGRAM

SCALE: NONE

### GENERAL NOTES:

1. PLACEMENT OF LIGHT FIXTURES SHALL BE SET AS DIMENSIONED & AS SCHEDULED.
2. LIGHT FIXTURES SHALL BE SUPPLIED AS SCHEDULED WITH NO EXCEPTIONS.
3. MINIMUM WIRE SIZE SHALL BE NO. 12 COPPER.
4. ALL EMERGENCY AND EXIT LIGHTING SHALL BE WIRED AHEAD OF THE SWITCHING. EMERGENCY LIGHTING SHALL BE ON THE SAME CIRCUITRY AS THE GENERAL LIGHTING IN THE AREA THEY SERVE. EMERGENCY LIGHTING WIRING SHALL BE IDENTIFIED (MARKED) PER NEC 700.9. PROVIDE GENERAL LIGHTING CIRCUITS, WHICH HAVE EMERGENCY LIGHTING CONNECTIONS, WITH LOCK-OUT ON BREAKER.
5. ALL LIGHTING FIXTURES IN FOOD AND BEVERAGE PREP AREA SHALL BE SHATTERPROOF.

LIGHTING FIXTURE SCHEDULE							
TYPE	MANUFACTURER	CATALOG NUMBER	LAMPS	VOLTAGE	MOUNTING	WATTS PER FIXTURE	FIXTURE DESCRIPTION
A	JUNO	TRACK: R2BL FIXTURE: R600L-3KN-BL	10W LED	120	SUSPENDED	20	2'-0" TRACK WITH (2) TRACK HEADS (BLACK)
BA	RAMCRAFT LIGHTING	SERIES 110 - 10 WATT MAX LABEL	10W PAR38	120	SUSPENDED	10	5-3/4" ROUND PENDANT W/ 15'-0" BLACK CORD
C	RAB INDOOR	EZPAN2x4-50YN/D10	50W 5300 LUMEN LED	120	RECESSED	50	2'X4' LED TROFFER WITH ACRYLIC LENS WITH 0-10V DIMMING DRIVER
CA	RAB INDOOR	SWISH2x4-49YN/D10	49W 6200 LUMEN LED	120	RECESSED	49	2'X4' LED LENSED TROFFER WITH 0-10V DIMMING DRIVER
D	HALO	H245ICAT/LT460WH6930	8W LED	120	RECESSED	8	4" ROUND LED CAN WITH WHITE TRIM
DA	HALO	H750ICAT-LT560WH6930	10W LED	120	RECESSED	10	6" ROUND LED CAN WITH WHITE TRIM
DB	HALO	H750ICAT-RLD6069301	10W LED	120	RECESSED	10	6" ROUND LED CAN WITH BLACK TRIM
F	JUNO	TRACK: R6WH FIXTURE: R600L-3KN-WH	10W LED	120	SURFACE	40	6'-0" TRACK WITH (4) TRACK HEADS (WHITE)
X	SURE-LITE	APX7-R	WITH UNIT	120	SURFACE	3	EXIT LIGHT WITH LED LAMPS
EM	SURE-LITE	CU2-LED	WITH UNIT	120	SURFACE	3	LED EMERGENCY LIGHT
EMC	EXITRONIX	LED90BL	WITH UNIT	120	SURFACE	3	CEILING MOUNTED LED EMERGENCY LIGHT (BLACK)
EMR	SURE-LITE	APCH7-R WITH APWR2 BASE & (2) REMOTE HEADS	WITH UNIT	120	SURFACE	3	COMBINATION EXIT/EMERGENCY LIGHT WITH (2) REMOTE EGRESS HEADS
EMX	SURE-LITE	APC7-R	WITH UNIT	120	SURFACE	3	COMBINATION EXIT LIGHT WITH DUAL LAMP EMERGENCY LIGHT

SUPPLIER NOTE:  
ALL LIGHTING TO BE PURCHASED THROUGH:  
MELETO ELECTRICAL SUPPLY, 10830 HARRY HINES, DALLAS, TEXAS 75220 JIM ELLIS (SALES MANAGER)  
DIRECT LINE (972)-559-6943, JELLIS@MELETO.COM

### LIGHT FIXTURE SCHEDULE NOTES:

1. MOUNT TO SCHEDULED CEILING BOTTOM OF TRACK MOUNTED TO OF BOTTOM OF FRAMING AND 3'-0" FROM ADJACENT WALLS UNLESS NOTED OTHERWISE. SUSPEND TRACK ON 3/8" ALL-THREAD.
2. MOUNT TO SCHEDULED CEILING: ALL AREAS SUSPEND TO 8'-0" A.F.F.
3. PROVIDED WITH FACTORY INSTALLED MAX LABEL NOTED.
4. MOUNT TO SCHEDULED CEILING.
5. CEILING INSULATION MUST BE 3" AWAY ALL SIDES
6. EMERGENCY AND EXIT LIGHTS SHALL HAVE MINIMUM 90 MINUTE BATTERY BACKUP.
7. PROVIDED WITH SHATTERPROOF LAMP.
8. MOUNT TO BOTTOM OF SCHEDULED CEILING. FURR-DOWN AS REQUIRED.
9. MOUNT TO SCHEDULED PARTITION AT 8" BELOW FINISHED CEILING.
10. VERIFY QUANTITY OF CURRENT LIMITERS WITH DRAWING, NOT REQUIRED ON ALL TYPE 'A' TRACK.

### KEYED NOTES

1. CONNECT EXIT SIGN WITH REMOTE EGRESS DUAL HEAD FIXTURE AHEAD OF ALL LIGHTING CONTROLS OF GENERAL LIGHTING CIRCUIT SERVING THIS AREA.
2. CONNECT NIGHT/EXIT/EMERGENCY LIGHT AHEAD OF ALL LIGHTING CONTROLS OF GENERAL LIGHTING CIRCUIT SERVING THIS AREA.
3. LIGHTING FIXTURE AND LIGHT SWITCH FOR COOLER AND FREEZER SHALL BE FURNISHED BY EQUIPMENT SUPPLIER. EC TO MAKE FINAL ELECTRICAL CONNECTION. SEE KEYED NOTE 8 ON SHEET E2.
4. EC TO PROVIDE OVERRIDE SWITCHES, SEE DIMMER/SWITCH ELEVATION.
5. ROUTE CIRCUIT THRU SWITCH/DIMMER AT SALES COUNTER AND BACK THRU TIME SWITCH CONTROLLED CONTACTOR. EC TO PROVIDE UNSWITCHED HOT LEG TO ALL EMERGENCY AND EXIT LIGHTS ON CIRCUIT AS NOTED.
6. EC TO PROVIDE ASTRONOMIC INTERMATIC ET2825C TIME SWITCH AND CONTACTORS AS REQUIRED TO CONTROL LIGHTS AND SIGNAGE.
7. NOT USED.
8. EXISTING ELECTRICAL DISTRIBUTION GUTTER. VERIFY EXACT LOCATION IN FIELD PRIOR TO BIDDING.
9. EXISTING 200 AMP, 120/208 VOLT, 3 PHASE, 4 WIRE, METER SOCKET AT DISTRIBUTION GUTTER. EC TO ARRANGE FOR THE INSTALLATION OF PROPERLY SIZED METER WITH THE LOCAL UTILITY.
10. EXISTING 200 AMP, 208 VOLT, 3 PHASE, NEMA 3R, DISCONNECT SWITCH, AND EC TO PROVIDE 200 AMP FUSES. VERIFY ALL REQUIREMENTS WITH LANDLORD'S REPRESENTATIVE AND NOTIFY TENANT'S REPRESENTATIVE OF ANY DIFFERENCES PRIOR TO BIDDING. NO EXTRAS OR CHANGE ORDERS SHALL BE GIVEN FOR CONTRACTOR'S FAILURE TO VERIFY SITE CONDITIONS PRIOR TO BIDDING.
11. EC TO PROVIDE (4) #3/0-CU FEEDERS AND (1) #6 GND IN 2" CONDUIT. EC TO VERIFY ALL LOCATIONS AND ROUTING IN FIELD PRIOR TO BIDDING.
12. EC TO PROVIDE 200 AMP, 120/208 VOLT, 3 PHASE, 4 WIRE PANEL 'A'. SEE PANEL SCHEDULE ON SHEET E2.
13. EC TO PROVIDE (4) #3-CU FEEDERS AND (1) #8 GND IN 1-1/2" CONDUIT.
14. EC TO PROVIDE 100 AMP, 120/208 VOLT, 3 PHASE, 4 WIRE PANEL 'AB'. SEE PANEL SCHEDULE ON SHEET E2.

### ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
GC	GENERAL CONTRACTOR
EC	ELECTRICAL CONTRACTOR
MC	MECHANICAL CONTRACTOR
WP	WEATHERPROOF
NL	NIGHT LIGHT (CONNECT TO UNSWITCHED LEG OF CIRCUIT NOTED)
GFI	GROUND FAULT CURRENT INTERRUPTER PROTECTED DEVICE
ST	SHUNT TRIP CIRCUIT
AF	ABOVE FINISHED FLOOR
UNO	UNLESS NOTED OTHERWISE
PRS	PROJECT RESOURCE SOLUTIONS
PROVIDE	FURNISH AND INSTALL COMPLETE
①	JUNCTION BOX, MOUNTING HEIGHT
⊕	20A, 1P, 125V, GROUNDING TYPE DUPLEX RECEPTACLE (+18" AFF UNO)
⊕	20A, 1P, 125V, GROUNDING TYPE DOUBLE DUPLEX RECEPTACLE
⊕	250 VOLT WALL OUTLET BY EC.
⊕	CEILING MOUNTED EXHAUST FAN WITH MANUAL DISCONNECT
⊕	DISCONNECT SWITCH: 30 AMP, NON-FUSED, 3 POLE
\$	LIGHT SWITCH
\$3	LIGHT SWITCH (3 WAY)
\$4	LIGHT SWITCH (4 WAY)
\$OS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH AT 3'-6" AFF TO CENTERLINE (WATT STOPPER #DW100-WH OR EQUAL)
⊕	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH (WATT STOPPER #DT-355 OR EQUAL)
⊕	DIMMER SWITCH: LUTRON NOVA SERIES DIMMERS COMPATIBLE WITH LOW VOLTAGE LIGHTING FIXTURES AND RATED FOR LOAD NOTED IN PANEL SCHEDULE. REFER TO LOADS AT PANELBOARD SCHEDULE. MOUNTING HEIGHT AS INDICATED PER PLAN.
P	COMMUNICATIONS JUNCTION BOX FOR DATA/COMM. DEVICE PLATE. EC TO ROUTE 3/4" CONDUIT WITH PULL STRING TO 6" ABOVE ACCESSIBLE CEILING AND BEND AT 90° TOWARDS TTIB. EC TO PROVIDE PLASTIC BUSHING ON END OF CONDUIT. F=VOICE, D=DATA
CTV	JUNCTION BOX FOR CABLE TV/DATA DEVICE PLATE. EC TO ROUTE 3/4" CONDUIT WITH PULL STRING TO 6" ABOVE ACCESSIBLE CEILING AND BEND AT 90° TOWARDS CD/SAT UNIT. EC TO PROVIDE PLASTIC BUSHING ON END OF CONDUIT.
→	CONDUIT RUN CONCEALED IN CEILING OR WALL. NUMBER OF HASH MARKS INDICATE NUMBER OF #12 WIRES WHEN MORE THAN TWO ARE REQUIRED UNLESS NOTED OTHERWISE. ALL CIRCUITS SHALL INCLUDE EQUIPMENT GROUND SIZED PER NEC. HASH MARK AHEAD OF NEUTRAL INDICATES UNSWITCHED LEG. CURLED HASH MARK INDICATES DEDICATED GROUND WIRE REQUIRED.
+12"	12" ABOVE FINISHED FLOOR TO CENTERLINE
▬	PANELBOARD
⊕	LIGHTING FIXTURE SWITCHING DESIGNATION - LETTER 'F' INDICATES THE FIXTURE TYPE (SEE FIXTURE SCHEDULE) THE NUMBER '5' INDICATES THE CIRCUIT IN THE PANEL NOTED AND THE LOWER CASE LETTER 'a' INDICATES THE SWITCH LEG TO CONNECT THE FIXTURE TO.

- NOTES:
1. ALL SWITCHES, COVER PLATES, RECEPTACLES SHALL BE "WHITE".
  2. TELEPHONE SERVICE SHALL BE THREE (3) LINE SERVICE AS FOLLOWS:
    - A. LINE 1 SHALL BE PRIMARY TELEPHONE LINE.
    - B. LINE 2 SHALL BE ROLLOVER TELEPHONE LINE & FAX LINE.
    - C. LINE 3 SHALL BE FAX & DATA LINE.
  3. SIGNAGE INSTALLATION:
    - THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE MOUNTING OF THE TRANSFORMERS AND FINAL ELECTRICAL CONNECTION OF THE OWNER PROVIDED EXTERIOR BUILDING AND INTERIOR SIGNAGE. ALL SIGNS SHALL BE ON INDIVIDUAL DEDICATED CIRCUITS W/DEDICATED GROUNDS.

CONSULTANT:

**CASE**  
Engineering Inc.  
796 Mens Court  
St. Louis, MO 63026  
T 636.549.1600  
F 636.549.1730  
CERTIFICATE OF AUTHORITY NO. 001498

CLIENT:



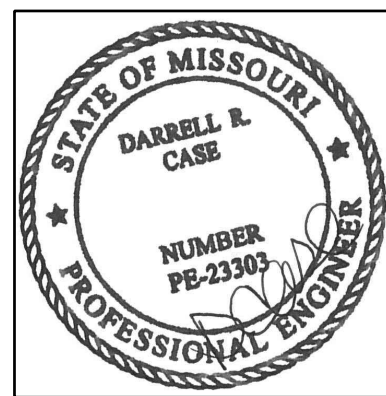
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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: GL#Y715  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



6/14/21  
DATE

PROJECT NO.: 2021-0158  
DRAWN BY: JJV  
CHECKED BY: DRC

ISSUE: DATE:  
FOR PERMIT & BID 06-10-21

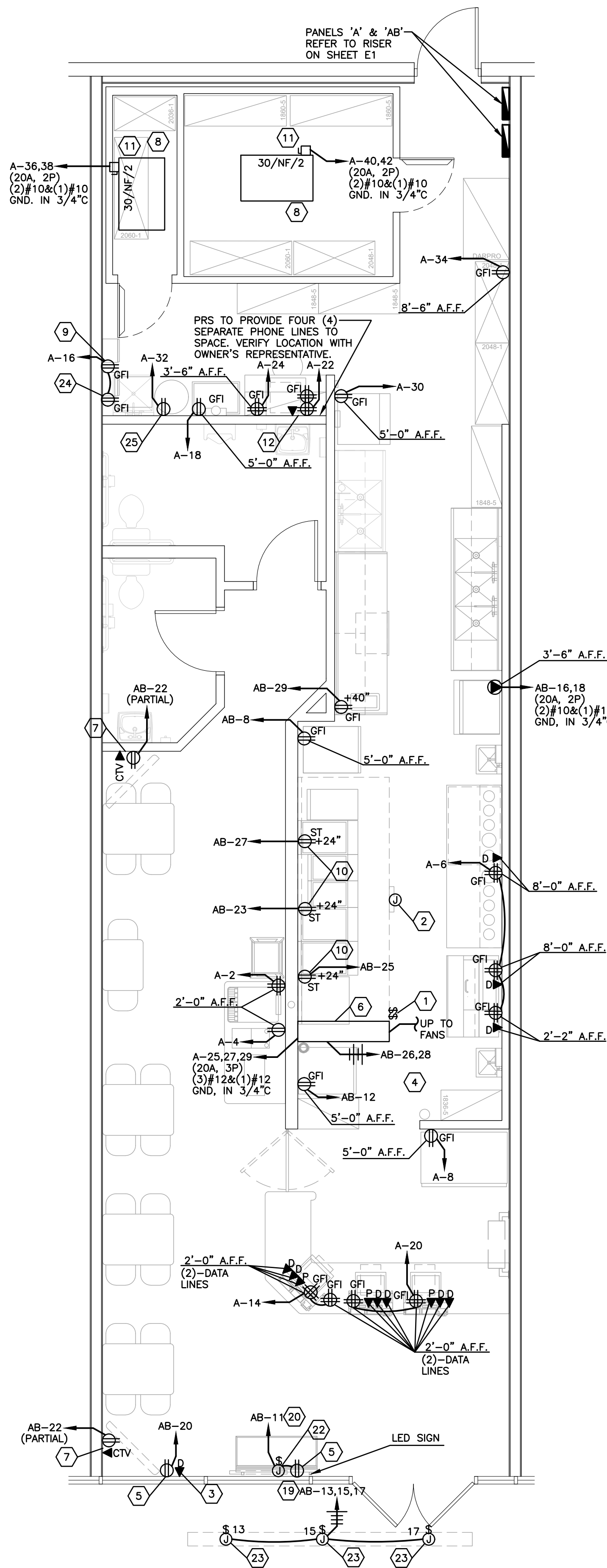
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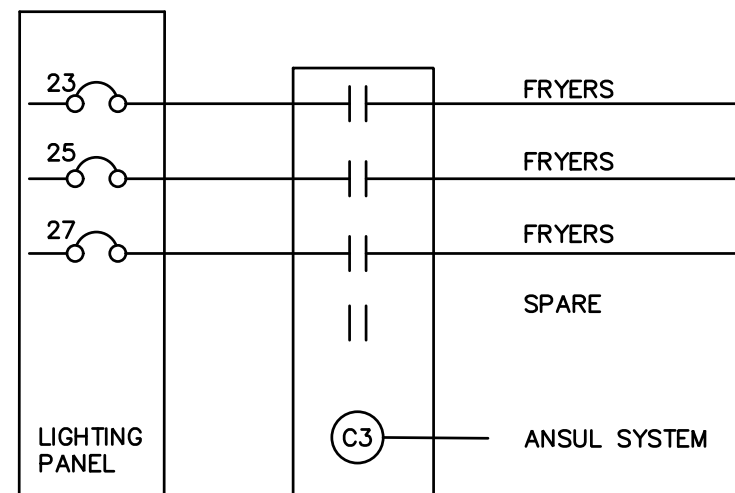
LEE'S SUMMIT, MO

SHEET NUMBER:

E1

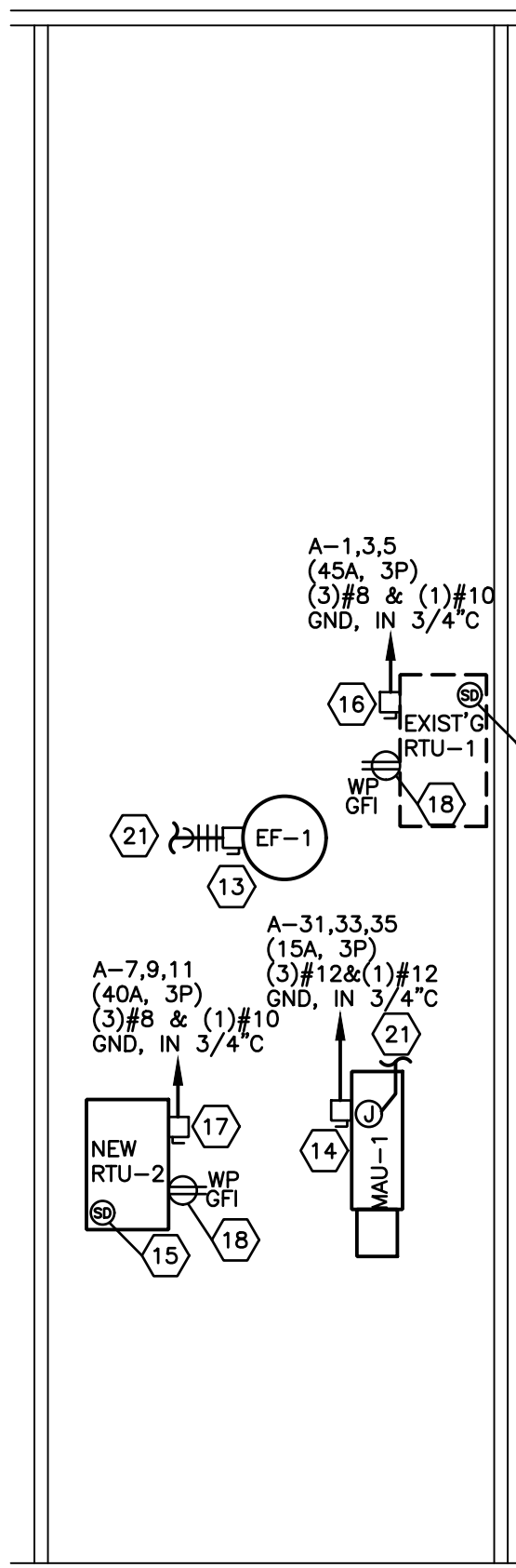


**ELECTRICAL FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



EC TO PROVIDE CONTACTOR, SIZE AS REQUIRED, TO SHUTDOWN CIRCUITS NOTED UPON ACTIVATION OF ANSUL SYSTEM. EC TO VERIFY CONTROL COIL VOLTAGE WITH HOOD SYSTEM SUPPLIER

**ANSUL SYSTEM SHUTDOWN**  
SCALE: NONE



**ELECTRICAL ROOF PLAN**  
SCALE: 1/8" = 1'-0"

## GENERAL NOTES

- EC TO PROVIDE HANDLE TIE ON ALL MULTIWIRED BRANCH CIRCUITS PER NEC 210.4(B).
- ALL SPARE CIRCUIT BREAKERS AND DISCONNECT SWITCHES SHALL BE LEFT IN THE OFF POSITION.
- EC SHALL VERIFY THE VOLTAGE AND AMPERAGE REQUIREMENTS OF ALL EQUIPMENT DELIVERED TO THE SITE PRIOR TO CONNECTION. EC SHALL NOTIFY OWNER OF ANY DIFFERENCE.
- CIRCULATION OF AIR FROM WARMER TO COLDER SECTIONS OF INTERIOR RACEWAY SYSTEM EXPOSED TO WIDELY DIFFERENT TEMPERATURES SHALL BE PREVENTED. SEAL AS REQUIRED PER NEC 300.7(A). PROVIDE EXPANSION JOINTS FOR CONDUIT AS REQUIRED TO COMPENSATE FOR THERMAL EXPANSION AND CONTRACTION.

## ANSUL SYSTEM CONTROL WIRING NOTE:

EC SHALL BE RESPONSIBLE FOR ALL LINE VOLTAGE CONTROL WIRING FROM ANSUL SYSTEM TO SHUNT TRIP BREAKER AND GAS VALVE. COORDINATE ALL WORK WITH HVAC CONTRACTOR.

## KITCHEN RECEPTACLE NOTES

- ALL KITCHEN SINGLE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 50 AMPERES OR LESS AND THREE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL PER NEC SECTION 210.8 (B) (1)-(10).
- ALL GFCI RECEPTACLES SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION OR A GFCI CIRCUIT BREAKER SHALL USED TO FEED THE CIRCUIT NOTED.
- ALL 125V, 15A AND 20A CIRCUITS TO KITCHEN EQUIPMENT SHALL BE FED WITH A DEDICATED NEUTRAL WIRE.

## KEYED NOTES

- EC TO PROVIDE CONDUIT AND FEEDERS FROM HOOD CONTROLS TO (2) SWITCHES FURNISHED ON HOOD FOR HOOD LIGHTS AND EXHAUST/MAKE-UP AIR FANS.
- GFI RECEPTACLE PROVIDED WITH HOOD FOR FRYER TIMER PANEL - EC TO CONNECT TO PRE-WIRED JUNCTION BOX MOUNTED ON TOP OF HOOD. CONNECT TO SHUNT TRIP CONTROLLED CIRCUIT NOTED.
- EC TO PROVIDE JUNCTION BOX, ADJACENT TO SHOW WINDOW RECEPTACLE, WITH 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING FOR 4G GRADLE POINT.
- ALL 15 AND 20 AMP 120V OUTLETS IN KITCHEN AND PREP AREA SHALL BE GFI PER NEC.
- EC TO PROVIDE DUPLEX RECEPTACLE MOUNTED IN SOFFIT A MAXIMUM OF 18" ABOVE WINDOW OR 4" BELOW CEILING WHICHEVER IS LOWER FOR SHOW WINDOW REQUIREMENTS. FIELD VERIFY LOCATION.
- HOOD CONTROL PANEL PROVIDED BY HOOD MANUFACTURER. ROUTE HOOD LIGHTS, FIRE SUPPRESSION, MAKEUP AIR AND EXHAUST FAN CIRCUITS THROUGH CONTROL PANEL AND EXTEND TO HOOD AND FANS, AS REQUIRED. EXTEND CONTROLS FEEDERS FROM CONTROLLER TO FANS AS REQUIRED. SEE HOOD DRAWINGS FOR WIRING SCHEMATIC. CONTROL PANEL SHALL SHUT DOWN ALL REQUIRED CIRCUITS UPON ACTIVATION OF FIRE SUPPRESSION SYSTEM.
- EC TO PROVIDE DUPLEX RECEPTACLE AND COAXIAL OUTLET FOR TV MONITOR AT 8'-0" AFF.
- CIRCULATION OF AIR FROM WARMER TO COLDER SECTIONS OF INTERIOR RACEWAY SYSTEM EXPOSED TO WIDELY DIFFERENT TEMPERATURES SHALL BE PREVENTED. SEAL AS REQUIRED PER NEC 300.7(A). PROVIDE EXPANSION JOINTS FOR CONDUIT AS REQUIRED TO COMPENSATE FOR THERMAL EXPANSION AND CONTRACTION.
- GAS WATER HEATER ON WALL. EC TO PROVIDE GFI RECEPTACLE FOR CONNECTION OF WATER HEATER CONTROLS.
- EC TO PROVIDE RECEPTACLE FOR EQUIPMENT BELOW HOOD AND ROUTE THROUGH CONTACTOR, BY EC, CONTROLLED BY ANSUL SYSTEM TO SHUTDOWN CIRCUITS UPON ACTIVATION. EC TO PROVIDE GFCI CIRCUIT BREAKER IN PANEL NOTED.
- EC TO PROVIDE DISCONNECT SWITCH AND MAKE FINAL CONNECTION TO SELF EVAPORATING COOLER/FREEZER CONDENSER UNIT MOUNTED ABOVE COOLER/FREEZER.
- APPROXIMATE LOCATION OF SERVER RACK. ALL DATA IS TO TERMINATE AT THIS LOCATION. TWO DOUBLE DUPLEX RECEPTACLES AND DATA FOR SERVER RACK SHOULD BE MOUNTED AT 7'-6" AFF AND A MINIMUM 12" AWAY FROM ELECTRICAL PANELS.
- MANUFACTURER PROVIDED, NEMA 3R, DISCONNECT SWITCH ON HOOD EXHAUST FAN, UNIT IS INTERLOCKED WITH HOOD MAKEUP AIR FAN BY HOOD CONTROLS.
- MANUFACTURER PROVIDED, NEMA 3R, DISCONNECT SWITCH ON HOOD MAKEUP AIR FAN. UNIT IS INTERLOCKED WITH HOOD EXHAUST FAN BY HOOD CONTROLS. EC SHALL INSTALL DEDICATED CONTROL CABLES, BY CAPTIVE AIRE, FOR FAN SPEED CONTROL IN DEDICATED CONDUIT FROM HOOD CONTROL PANEL TO CONTROLLER ON MAKEUP AIR UNIT.
- EC TO PROVIDE DUCT SMOKE DETECTOR IN RETURN AIR DUCT TO SHUT DOWN UNIT UPON ACTIVATION. PROVIDE TEST/RESET SWITCH AND PIEZO ALARM SOUNDER AND REMOTE ANNUNCIATOR ALARM LED MOUNTED AS DIRECTED BY LOCATION AHI. EC TO PROVIDE ALL REQUIRED INTERLOCK WIRING. MAKE FINAL CONNECTIONS TO CIRCUIT #12 IN PANEL 'A'.
- EXISTING 208V, 3P/60AMP, NON-FUSED, NEMA 3R, DISCONNECT AT RTU-1. EC TO PROVIDE NEW FEEDERS AND CONDUIT TO PANEL AS REQUIRED.
- EC TO PROVIDE 208V, 3P/60AMP, NON-FUSED, NEMA 3R, DISCONNECT AT RTU-2. EC TO PROVIDE NEW FEEDERS AND CONDUIT TO PANEL AS REQUIRED.
- EC TO PROVIDE WEATHER RESISTANT TYPE, GFI RECEPTACLE IN WEATHERPROOF WHILE IN USE COVER AT HVAC EQUIPMENT, COVER SHALL BE EXTRA DUTY RATED PER SECTION 406.9(B). CONNECT TO CIRCUIT #4 IN PANEL 'AB'.
- ROUTE CIRCUIT THROUGH TIME SWITCH CONTROLLED CONTACTORS.
- ROUTE THROUGH LIGHT SWITCH ADJACENT TO CASH COUNTER, SEE SHEET E.1.
- EC TO ROUTE ROOF MOUNTED EQUIPMENT THROUGH TERMINAL BLOCK AT HOOD CONTROL PANEL. SEE SHEET HOOD DRAWING FOR WIRING DIAGRAM.
- EC TO PROVIDE DISCONNECT SWITCH ABOVE ACCESSIBLE CEILING FOR CONNECTION OF SHOW WINDOW SIGN. CONNECT TO SAME CIRCUIT AND CONTROLS TO SHOW WINDOW RECEPTACLE. FIELD VERIFY LOCATION WITH SIGN SUPPLIER.
- EC TO PROVIDE NEMA 3R, DISCONNECT SWITCHES AND CIRCUITS FOR THREE EXTERIOR SIGNS. EC SHALL VERIFY EXACT QUANTITY AND LOCATION OF SIGNAGE WITH FRANCHISEE PRIOR TO ROUGH-IN.
- HOT WATER RECIRCULATION PUMP (1/25HP) AND TIMER BY PLUMBING CONTRACTOR. EC TO PROVIDE GFI RECEPTACLE FOR CONNECTION AS DIRECTED BY PLUMBING CONTRACTOR.
- EC TO PROVIDE CO2METER.COM MODEL #RAD-0102 REMOTE CO2 SENSOR ADJACENT TO CO2 TANK. VERIFY ALL LOCATIONS WITH EQUIPMENT SUPPLIER.

PANEL BOARD A										SURFACE MOUNTED									
120/208VOLTS 3 PHASE 4 WIRE 200 AMP. BUS										22,000 A.I.C. RATED									
CIRCUIT BREAKER TYPE 200 AMP. MAIN LUGS ONLY										CIRCUIT BREAKER TYPE 100 AMP. MAIN LUGS ONLY									
CKT. NO.	TRIP NO.	NO. POLE	LOAD SERVED	LOAD - V. A.	NO. TRIP	TRIP NO.	NO. POLE	LOAD SERVED	LOAD - V. A.	CKT. NO.	TRIP NO.	NO. POLE	LOAD SERVED	LOAD - V. A.	NO. TRIP	TRIP NO.	NO. POLE	LOAD SERVED	LOAD - V. A.
1				3960	1	20		SODA SYSTEM	1200	1	20		COOLER/FREEZER LIGHTS	1200	1	20		COOLER/FREEZER LIGHTS	1200
3	45	3	EXISTING RTU-1	3960	1	20		TEA MACHINE	475	1	20		HVAC GFI RECEPTACLES	475	1	20		HVAC GFI RECEPTACLES	475
5				3960	1	20		SANDWICH/SALAD	640	1	20		LIGHTING CONTROLS	640	1	20		LIGHTING CONTROLS	640
7				3480	1	20		2 DOOR MERCHANDISER	860	1	20		REACH-IN REFRIGERATOR	860	1	20		REACH-IN REFRIGERATOR	860
9	40	3	RTU-2	3480	1	20		SPARE	860	1	20		SPARE	860	1	20		SPARE	860
11				3480	1	20		HVAC SMOKE DETECTOR	500	1	20		REACH-IN FREEZER	500	1	20		REACH-IN FREEZER	500
13	20	1	SPARE	800	1	20		POS/PRINTER RECEPTACLES	1460	1	20		SPARE	1460	1	20		SPARE	1460
15	20	1	SPARE	400	1	20		WATER HEATER CONTROLS AND RECIRCULATION PUMP	500	1	20		CONVECTION OVEN	500	2	20		CONVECTION OVEN	500
17	20	1	SPARE	200	1	20		BOX'N BAG SYSTEM	1460	1	20		SHOW WINDOW RECEPTACLES	1460	1	20		SHOW WINDOW RECEPTACLES	1460
19	20	1	SPARE	800	1	20		POS/PRINTER RECEPTACLES	400	1	20		TV MONITORS (2)	400	1	20		TV MONITORS (2)	400
21	20	1	SPARE	720	1	20		SERVER RACK	900	1	20		SPARE	900	1	20		SPARE	900
23	20	1	SPARE	1250	1	20		DESK RECEPTACLES	1490	1	20		SPARE	1490	1	20		SPARE	1490
25				1250	1	20		SPARE	750	1	20		HOOD CONTROLS/LIGHTS	750	1	15		HOOD CONTROLS/LIGHTS	750
27	20	3	EXHAUST FAN EF-1	1250	1	20		SPARE	1490	1	20		HOOD GFI RECEPTACLE	1490	1	15		HOOD GFI RECEPTACLE	1490
29				1250	1	20		ICE MACHINE	200	1	20		SHUNT TRIP SPACE	200	1	15		SHUNT TRIP SPACE	200
31				865	1	20		CO2 MONITORING SYSTEM	360	1	20			360	1	20			360
33	15	3	MAKE UP AIR FAN MAU-1	865	1	20		OIL SAVER SYSTEM	5110	1	20			5110	1	20			5110
35				865	1	20		FREEZER CONDENSER	5385	2	20			5385	2	20			5385
37				5110	1	20		COOLER CONDENSER	1150	2	20			1150	2	20			1150
39	100	3	PANEL AB	19015	19370	20865			5910	2	20			5910	2	20			5910

LOAD DESCRIPTION	DEMAND FACTOR D.F.	CONNECTED	DEMAND
LIGHTING & FRONT SIGN RECEPTACLES	1.25	5215	6520
	1st 10KVA @ 100% REMAINDER @ 50%	760	760
MOTORS	ALL @ 100% PLUS 25% OF LARGEST	10745	11680
MISC. EQUIPMENT	1.00	2800	2800
KITCHEN EQUIPMENT	NEC TABLE (220.56) 0.65	14690	9550
HVAC EQUIPMENT	1.00	22320	22320
TOTAL		59230	56350

PANELBOARD LOAD = 56350 V.A.  
FULL LOAD AMPS = 156.5 A.

(LO PROVIDE LOCK-ON DEVICE) (TS CIRCUIT VIA TIMESWITCH) (GFI GFCI TYPE CIRCUIT BREAKER)  
\* HVAC LOAD BASED ON UNIT MCA WHICH INCLUDES 25% OF LARGEST MOTOR

PANEL BOARD AB										SURFACE MOUNTED									
120/208VOLTS 3 PHASE 4 WIRE 100 AMP. BUS										22,000 A.I.C. RATED									
CIRCUIT BREAKER TYPE 100 AMP. MAIN LUGS ONLY										CIRCUIT BREAKER TYPE 100 AMP. MAIN LUGS ONLY									
CKT. NO.	TRIP NO.	NO. POLE	LOAD SERVED	LOAD - V. A.	CKT. NO.	TRIP NO.	NO. POLE	LOAD SERVED	LOAD - V. A.	CKT. NO.	TRIP NO.	NO. POLE	LOAD SERVED	LOAD - V. A.	CKT. NO.	TRIP NO.	NO. POLE	LOAD SERVED	LOAD - V. A.
LO 1	20	1	TRACK LIGHTING (16'-0")	1200	LO 1	20	1	TRACK LIGHTING (16'-0")	1200	LO 1	20	1	TRACK LIGHTING (16'-0")	1200	LO 1	20	1	TRACK LIGHTING (16'-0")	1200
LO 3	20	1	FRONT AREA LIGHTS AND RESTROOM LIGHTS & FANS	475	LO 3	20	1	FRONT AREA LIGHTS AND RESTROOM LIGHTS & FANS	475	LO 3	20	1	FRONT AREA LIGHTS AND RESTROOM LIGHTS & FANS	475	LO 3	20	1	FRONT AREA LIGHTS AND RESTROOM LIGHTS & FANS	475
LO 5	20	1	KITCHEN/STOCKROOM LIGHTS	640	LO 5	20	1	KITCHEN/STOCKROOM LIGHTS	640	LO 5	20	1	KITCHEN/STOCKROOM LIGHTS	640	LO 5	20	1	KITCHEN/STOCKROOM LIGHTS	640
7	20	1	SPARE	860	7	20	1	SPARE	860	7	20	1	SPARE	860	7	20	1	SPARE	860
9	20	1	SPARE	860	9	20	1	SPARE	860	9	20	1	SPARE	860	9	20	1	SPARE	860
TS 11	20	1	SHOW WINDOW (SIGN)	500	TS 11	20	1	SHOW WINDOW (SIGN)	500	TS 11	20	1	SHOW WINDOW (SIGN)	500	TS 11	20	1	SHOW WINDOW (SIGN)	500
TS 13	20	1	MAIN EXTERIOR SIGN	1460	TS 13	20	1	MAIN EXTERIOR SIGN	1460	TS 13	20	1	MAIN EXTERIOR SIGN	1460	TS 13	20	1	MAIN EXTERIOR SIGN	1460
TS 15	20	1	EXTERIOR SIGN	500	TS 15	20	1	EXTERIOR SIGN	500	TS 15	20	1	EXTERIOR SIGN	500	TS 15	20	1	EXTERIOR SIGN	500
TS 17	20	1	EXTERIOR SIGN	1460	TS 17	20	1	EXTERIOR SIGN	1460	TS 17	20	1	EXTERIOR SIGN	1460	TS 17	20	1	EXTERIOR SIGN	1460
19	20	1	SPARE	400	19	20	1	SPARE	400	19	20	1	SPARE	400	19	20	1	SPARE	400
21	20	1	SPARE	900	21	20	1	SPARE	900	21	20	1	SPARE	900	21	20	1	SPARE	900
GFI 23	20	1	FRYER CONTROLS AND GREASE FILTER	1490	GFI 23	20	1	FRYER CONTROLS AND GREASE FILTER	1490	GFI 23	20	1	FRYER CONTROLS AND GREASE FILTER	1490	GFI 23	20	1	FRYER CONTROLS AND GREASE FILTER	1490
GFI 25	20	1	FRYER CONTROLS AND GREASE FILTER	750	GFI 25	20	1	FRYER CONTROLS AND GREASE FILTER	750	GFI 25	20	1	FRYER CONTROLS AND GREASE FILTER	750	GFI 25	20	1	FRYER CONTROLS AND GREASE FILTER	750
GFI 27	20	1	FRYER CONTROLS AND GREASE FILTER	1490	GFI 27	20	1	FRYER CONTROLS AND GREASE FILTER	1490	GFI 27	20	1	FRYER CONTROLS AND GREASE FILTER	1490	GFI 27	20	1	FRYER CONTROLS AND GREASE FILTER	1490
GFI 29	20	1	NACHOS CHEESE DISPENSER	360	GFI 29	20	1	NACHOS CHEESE DISPENSER	360	GFI 29	20	1	NACHOS CHEESE DISPENSER	360	GFI 29	20	1	NACHOS CHEESE DISPENSER	360
				5110					5110					5110					5110

PANELBOARD LOAD = 14655 V.A.  
FULL LOAD AMPS = 40.7 A.

(LO PROVIDE LOCK-ON DEVICE) (TS CIRCUIT VIA TIMESWITCH) (GFI GFCI TYPE CIRCUIT BREAKER)  
\* HVAC LOAD BASED ON UNIT MCA WHICH INCLUDES 25% OF LARGEST MOTOR

DIVISION 16 - ELECTRICAL SPECIFICATIONS

SECTION 16100  
ELECTRICAL SPECIAL CONDITIONS

1. GENERAL

- A. APPLICABLE PROVISIONS OF AIA DOCUMENT A201, "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AND DIVISION 1 GENERAL CONDITIONS GOVERN WORK UNDER THIS SECTION AND ALL OTHER SECTIONS OF DIVISION 16.
- B. APPLICABLE PROVISIONS OF THIS SECTION GOVERN WORK UNDER ALL OTHER SECTIONS OF DIVISION 16. WORK COVERED BY THIS SECTION SHALL CONSIST OF PROVIDING ALL MATERIAL, LABOR, EQUIPMENT AND SERVICES NECESSARY FOR A COMPLETE, TESTED AND ADJUSTABLE ELECTRICAL INSTALLATION READY FOR OPERATION AS SPECIFIED HEREIN AND AS SHOWN ON THE DRAWINGS.
- C. THE TERM CONTRACTOR AS USED IN THIS SECTION SHALL MEAN ANY CONTRACTOR OR SUBCONTRACTOR WHO HAS CONTRACTED TO PERFORM WORK INCLUDED IN AND DEFINED BY THIS SECTION AND ALL OTHER SECTIONS OF DIVISION 16.
- D. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND TOOLS TO PERFORM ELECTRICAL WORK SHOWN, NOTED OR SCHEDULED FOR A COMPLETE AND FINISHED INSTALLATION. ALL MATERIALS AND EQUIPMENT SHALL BE COMMERCIAL GRADE AND SHALL CARRY A U.L. LABEL.
- E. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING COMPONENTS THEREOF SHALL BE NEW AND SUCH AS APPEARS ON THE UNDERWRITER'S LABORATORY LIST OF APPROVED ITEMS AND SHALL MEET THE REQUIREMENTS OF RECOGNIZED STANDARDS. EQUIPMENT SHALL BE SIZED IN CONFORMITY WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (N.E.C.) AND OTHER APPLICABLE CODES.

2. EXISTING CONDITIONS

- A. THESE DRAWINGS ARE BASED ON INFORMATION PROVIDED TO OUR OFFICE AT THE TIME OF DESIGN. THEREFORE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO, SERVICE LOCATION, SERVICE LAYOUTS, SECONDARY FEEDER LENGTH, TELEPHONE SERVICE LOCATION, ETC., AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO BID. FAILURE TO DO SO MAY CONSTITUTE THAT THE CONTRACTOR PROVIDE ANY AND ALL ADDITIONAL EQUIPMENT, LABOR, ETC., TO MEET THE INTENDED DESIGN PARAMETERS.
- B. CONTRACTORS SHALL VISIT THE SITE PRIOR TO BIDDING. BIDS SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS.

3. CONTRACTOR'S RESPONSIBILITY

- A. PRIOR TO SUBMITTING HIS BID, CONTRACTOR SHALL CAREFULLY EXAMINE THESE CONSTRUCTION DOCUMENTS, THE DEVELOPER'S EXHIBITS, AND THE SITE, TO INQUIRE FULLY INTO DIFFICULTIES AND COSTS OF WORK, AND TO DETERMINE THE SCOPE AND CHARACTER OF WORK TO BE DONE. CONTRACTOR SHALL INCLUDE ALL NECESSARY COSTS TO LOCATE AND/OR EXTEND ALL UTILITIES INCLUDING LIGHTING PANELS, POWER PANELS, ELECTRICAL SERVICE, PHONE SERVICE AND/OR MODIFY EQUIPMENT TO MEET THE INTENT OF THE CONTRACT DOCUMENTS. THE OWNER, OWNER'S AGENT, ARCHITECT, ENGINEER OR DESIGNER SHALL NOT BE RESPONSIBLE FOR FAILURE OF THE CONTRACTOR TO DETERMINE DIFFICULTIES AND COSTS IN THE PROJECT OR FOR HIS OVERLOOKING OF THE REQUIREMENTS.
- B. IF THIS CONTRACTOR DOES NOT CLEARLY UNDERSTAND THE PLANS AND SPECIFICATIONS, OR IF THERE ARE ANY REQUIREMENTS WHICH ARE AMBIGUOUS IN THE CONTRACTOR'S OPINION, HE SHOULD CALL THIS TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING. SINCE THIS CONTRACTOR WILL BE HELD RIGIDLY TO THE INTERPRETATIONS OF THE ARCHITECT AND ENGINEER.
- C. CONTRACTOR SHALL SCHEDULE HIS WORK IN COOPERATION WITH OTHER TRADES INSTALLING INTERRELATED WORK. ALL WORK SHALL BE SCHEDULED TO MAINTAIN SERVICE TO ALL REQUIRED AREAS DURING THE COURSE OF THE CONSTRUCTION EXCEPT FOR SHORT TERM PLANNED SHUTDOWNS, ANY OF WHICH SHALL BE PRE-SCHEDULED WITH THE OWNERS AGENT AND THE LANDLORD.

4. WORKMANSHIP AND GUARANTEE

- A. IN ENTERING INTO A CONTRACT COVERING THIS WORK, THE CONTRACTOR ACCEPTS THE SPECIFICATIONS, AND GUARANTEES THAT THE WORK WILL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONTRACTOR FURTHER GUARANTEES THAT THE WORKMANSHIP AND MATERIAL WILL BE OF THE BEST PROCURABLE AND THAT NONE BUT EXPERIENCED WORKMEN EXPERIENCED IN EACH PARTICULAR CLASS OF WORK WILL BE EMPLOYED. CONTRACTOR FURTHER GUARANTEES TO REPLACE AND MAKE GOOD AT HIS OWN EXPENSE ANY DEFECTS DUE TO FAULTY WORKMANSHIP OR MATERIAL WHICH MAY DEVELOP WITHIN ONE (1) YEAR AFTER FINAL PAYMENT AND ACCEPTANCE BY THE ARCHITECT.

5. CODES AND STANDARDS

- A. CONTRACTOR WILL COMPLY IN ALL RESPECTS WITH THE ADOPTED BUILDING CODES, APPLICABLE LAWS, ORDINANCES, AND REGULATIONS AS MAY APPLY ACCORDING TO THE RULING OF THE CONTROLLING PUBLIC OFFICIAL. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE LAWS, ORDINANCES AND REGULATIONS, OR WHICH DOES NOT RECEIVE THE APPROVAL OF THE CONTROLLING PUBLIC OFFICIAL, HE SHALL BEAR ALL COSTS ARISING IN CORRECTING THE DEFICIENCIES. ALL ELECTRICAL EQUIPMENT SHALL BEAR THE UNDERWRITER'S LABORATORY LABEL.

6. FEES ON PERMITS

- A. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND MAKING PAYMENT FOR ALL FEES, PERMITS AND INSPECTIONS RELATING TO HIS WORK.

7. CONTRACT DRAWINGS

- A. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT AND INTENT OF THE DESIGN AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONDITIONS AND THE WORK OF OTHER TRADES WILL PERMIT. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES WHICH MAY BE REQUIRED, NOR IS IT IMPLIED THAT ALL CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE SYSTEMS OR BUILDING COMPONENTS HAVE BEEN INDICATED. THE CONTRACTOR SHALL INVESTIGATE ALL EXISTING CONDITIONS AFFECTING THE WORK AND ARRANGE HIS WORK ACCORDINGLY, PROVIDING SUCH FITTINGS, OFFSETS, ACCESSORIES AND DEVICES AS MAY BE REQUIRED. THE DRAWINGS AND SPECIFICATIONS ARE MUTUALLY COMPLEMENTARY, AND ANY WORK REQUIRED BY ONE BUT NOT BY THE OTHER SHALL BE PERFORMED BY BOTH. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIALS AND SERVICES REQUIRED FOR A COMPLETE AND WORKING PROJECT AT NO ADDITIONAL COST EVEN THOUGH EACH AND EVERY NECESSARY ELEMENT THEREOF IS NOT SPECIFICALLY IDENTIFIED HEREIN EACH AND EVERY NECESSARY ELEMENT THEREOF IS NOT SPECIFICALLY IDENTIFIED HEREIN.
- B. CONTRACTOR SHALL NOT SCALE FROM THE DRAWINGS BUT SHALL FOLLOW THE ARCHITECTURAL DRAWINGS OR EXISTING BUILDING CONDITIONS WHERE APPLICABLE. IN ESTABLISHING DIMENSIONS AND LINES OF RUN, SINCE DIMENSIONS ON THE FINAL ARCHITECTURAL DRAWINGS OR AT THE SITE MAY NOT COINCIDE WITH THOSE SHOWN ON THE ELECTRICAL DRAWINGS, THE CONTRACTORS SHALL VERIFY WITH THE DIMENSIONED ARCHITECTURAL DRAWINGS OR THE SITE CONDITIONS THE EXACT MATERIAL QUANTITIES AND LENGTHS NECESSARY.
- C. SIGNIFICANT DEVIATIONS OR CHANGES FROM THE DRAWINGS WHICH ARE REQUIRED TO ACCOMPLISH THE INTENT OF THE CONTRACT DOCUMENTS MUST BE REVIEWED WITH THE ARCHITECT AND APPROVED BEFORE PROCEEDING.

8. SHOP DRAWINGS

- A. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, FOUR (4) COPIES MINIMUM, FOR ALL MANUFACTURED PRODUCTS. EACH SHOP DRAWING SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO ASSURE THAT ALL DIMENSIONS, QUANTITIES, CONNECTIONS, CAPACITIES AND ACCESSORIES SHOWN ARE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS, AND SHALL BE MARKED OR STAMPED TO CONFIRM THAT SUCH REVIEW WAS MADE AND COMPLIANCE WAS CONFIRMED.
- B. APPROVAL OF SHOP DRAWINGS BY THE OWNER, OWNER'S AGENT, ARCHITECT, ENGINEER OR DESIGNER, WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLYING WITH ALL TERMS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PERFORMANCE OF ALL EQUIPMENT PURCHASED, FOR PROPER FIT, AND OTHER DIMENSIONAL REQUIREMENTS.

9. RECORD DRAWINGS

- A. CONTRACTOR SHALL MAINTAIN AT THE JOB SITE ONE SET OF DOCUMENTS AS "RECORD DRAWINGS" FOR THE PURPOSE OF DAILY MARKING OF ALL SUBSTANTIAL REVISIONS TO THE DOCUMENTS INCLUDING BUT NOT LIMITED TO ELECTRICAL CHANGES, AND LOCATIONS OF UTILITIES, PANELBOARDS, DISCONNECTS, STARTERS AND OTHER DEVICES REQUIRING PERIODIC OPERATIONAL ATTENTION, ADJUSTMENT, OR SERVICE INCLUDING ACCESS THERETO, AT THE COMPLETION OF THE PROJECT, THIS SET SHALL BE RETURNED TO THE ARCHITECT FOR THE PURPOSE OF MAKING FINAL "AS-BUILT DRAWINGS".

10. EQUIPMENT SUBSTITUTION

- A. SPECIFIC MANUFACTURERS AND MODELS OF EQUIPMENT HAVE BEEN USED IN THE DEVELOPMENT OF THE DRAWINGS AND DESIGNS. THIS CONTRACTOR MUST SUBMIT TO THE OWNER ANY CHANGES AND/OR SUBSTITUTIONS FOR APPROVAL PRIOR TO INSTALLATION OR EXECUTION. ANY CHANGES WHICH DO NOT RECEIVE THE OWNER'S APPROVAL MAY BE SUBJECT TO REMOVAL OR REPLACEMENT AS ORIGINALLY SPECIFIED, AND WILL BE AT THE CONTRACTOR'S EXPENSE.
- B. IF THIS CONTRACTOR SUBSTITUTES FOR SPECIFIED EQUIPMENT ANY OTHER EQUIPMENT WHICH REQUIRES ANY CHANGES TO THE DESIGN, ALL COST OF REDESIGN AND RECONFIGURATION RESULTING FROM SAID SUBSTITUTION SHALL BE BORNE BY THE SUBMITTING CONTRACTOR.

11. EQUIPMENT INSTALLATION AND SUPPORT

- A. CONTRACTOR SHALL SUPPORT PLUMB, RIGID AND TRUE-TO-LINE ALL WORK AND EQUIPMENT INSTALLED. THIS CONTRACTOR SHALL DETERMINE HOW EQUIPMENT, FIXTURES, ETC., ARE TO BE SUPPORTED, MOUNTED, OR SUSPENDED AND SHALL PROVIDE ACCESSORIES REQUIRED FOR PROPER SUPPORT WHETHER SHOWN ON THE DRAWINGS OR NOT. IF SUPPORTS ARE REQUIRED, CONTRACTOR SHALL SUBMIT DRAWINGS TO THE ARCHITECT FOR APPROVAL.
- B. PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS PRINTED INSTALLATION AND MAINTENANCE LITERATURE. COMPONENTS REQUIRING PERIODIC MAINTENANCE OR ADJUSTMENTS SHALL BE LOCATED OR INSTALLED AS TO PERMIT ACCESS WITHOUT DAMAGE TO STRUCTURE, FINISHES OR OTHER EQUIPMENT.

- C. ALL CONDUIT CONNECTING TO SWITCHGEAR, PANELS, MOTORS, AND OTHER EQUIPMENT SHALL BE INSTALLED WITHOUT STRAIN AT THE CONNECTIONS. THE CONTRACTOR MAY BE REQUIRED, AS DIRECTED, TO DISCONNECT CONDUITS TO DEMONSTRATE THAT THEY HAVE BEEN SO CONNECTED.

12. DEMOLITION

- A. ALL EXISTING EQUIPMENT, NOT INDICATED TO BE INCORPORATED INTO THE NEW SYSTEM SHALL BE DISCONNECTED BY THIS CONTRACTOR FOR REMOVAL BY OTHERS FROM THE JOB SITE. CARE SHALL BE USED SO THAT NO DAMAGE IS DONE TO EXISTING BUILDING, PIPING, DUCTWORK, AND/OR ELECTRICAL EQUIPMENT. ANY DAMAGE ATTRIBUTED TO THIS CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THIS CONTRACTOR.

13. CUTTING AND PATCHING

- A. ALL CUTTING THAT MAY BE NECESSARY FOR THE INSTALLATION OF THE WORK OR ANY REQUIRED PATCHING THAT RESULTS THEREFROM SHALL BE DONE BY THE PROPER TRADE INVOLVED AND SHALL BE INCLUDED AS PART OF THIS CONTRACT. PATCH TO DUPLICATE UNDISTURBED ADJACENT FINISHES, COLORS, TEXTURES AND PROFILES. COLUMNS, BEAMS, GIRDERS OR JOISTS SHALL NOT BE CUT.
- B. ALL WORK AFFECTING ROOF OR STRUCTURES SHALL BE PERFORMED BY LANDLORD'S CONTRACTOR AT TENANT'S EXPENSE.

14. CLEANING

- A. COMPLETION AS IT PERTAINS TO THE CONTRACT COMPLETION DATE IS DEFINED AS THE DAY THE PROJECT IS TURNED OVER TO THE OWNER IN THOROUGHLY CLEAN CONDITION, READY FOR THE OWNER TO TAKE POSSESSION. ALL FIXTURES, MOTORS, EQUIPMENT AND ALL OTHER ELECTRICAL EQUIPMENT FURNISHED OR INSTALLED BY THE CONTRACTOR SHALL BE THOROUGHLY CLEANED.

15. TESTS

- A. PROVIDE THE TESTS AS OUTLINED HEREINAFTER AND OTHER TESTS NECESSARY TO ESTABLISH THE ADEQUACY, QUALITY, SAFETY, COMPLETED STATUS AND SUITABLE OPERATION OF EACH SYSTEM. CORRECT PROMPTLY ANY FAILURE OR DEFECTS REVEALED BY THESE TESTS AND RECONDUIT TEST ON THE CORRECTED ITEMS.
- B. TEST THE GROUNDS WITH A GROUND RESISTANCE DIRECT READING SINGLE-TEST MEGGER.
- C. INSULATION RESISTANCE BETWEEN PHASE CONDUCTORS AND GROUND NOT LESS THAN 1,000,000 OHMS.
- D. THE PANELBOARDS SHALL HAVE PHASE CURRENTS BALANCED TO WITHIN +/- 10% VARIATION BETWEEN AVERAGE PHASE CURRENT AND MEASURED INDIVIDUAL PHASE.
- E. AN OPERATIONAL TEST OF THE EMERGENCY LIGHTS AND THE EXIT LIGHTS SHALL BE PERFORMED FOR THE OWNER TO DEMONSTRATE CONFORMANCE TO THE SPECIFICATIONS.

16. TEMPORARY ELECTRICAL SERVICE

- A. TEMPORARY ELECTRICAL SERVICE SHALL BE IN ACCORDANCE WITH THE BUILDING CODE. TEMPORARY LIGHTING SHALL BE PROVIDED BY A LAMP LOCATED FOR EVERY 625 SQUARE FEET OF BUILDING AREA WITH A MINIMUM OF ONE PER ROOM. THE LAMP TO BE 100 WATT AND SHALL BE MAINTAINED BY THE GENERAL CONTRACTOR.
- B. TEMPORARY POWER DISTRIBUTION SHALL BE SUFFICIENT TO ACCOMMODATE THE TEMPORARY LIGHTING AND CONSTRUCTION OPERATIONS, INCLUDING THE USE OF POWER TOOLS (BUT NOT INCLUDING HEAVY-DUTY ELECTRICAL WELDING TOOLS), ELECTRICAL HEATING UNITS, AND START-UP OF SPECIFIED BUILDING EQUIPMENT, WHICH IS TO BE TESTED, STARTED OR PLACED INTO OUR USE PRIOR TO COMPLETION OF ITS PERMANENT POWER CONNECTIONS.

17. EXCAVATION AND BACKFILL

- A. CONTRACTOR SHALL DO ALL EXCAVATION REQUIRED AS SHOWN ON PLANS OR REQUIRED FOR PROPER OPERATION. EXCESS EXCAVATION BELOW THE REQUIRED LEVEL SHALL BE BACKFILLED WITH EARTH AND THOROUGHLY TAMPED. UTILITY SERVICES, SHALL BE INSPECTED AND APPROVED BY THE PROPER INSPECTION AUTHORITY BEFORE BACKFILLING.

18. WEATHERPROOFING

- A. CONTRACTOR SHALL ENSURE ALL PENETRATIONS THROUGH EXTERIOR ENVELOPE ARE COMPLETELY SEALED AGAINST ALL AIR AND WATER INFILTRATION.

SECTION 16200  
ELECTRICAL POWER AND LIGHTING

1. RELATED DOCUMENTS

- A. APPLICABLE PROVISIONS OF AIA DOCUMENT A201, "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", DIVISION 1 GENERAL CONDITIONS AND SECTION 16100 ELECTRICAL SPECIAL CONDITIONS GOVERN WORK UNDER THIS SECTION.
- B. REFER TO SECTION 16100 ELECTRICAL SPECIAL CONDITIONS REGARDING REGULATIONS AND REQUIREMENTS AFFECTING ALL WORK DESCRIBED IN THIS SECTION.

2. POWER SERVICE

- A. POWER SERVICE FOR THIS PROJECT SHALL BE PROVIDED FROM THE UTILITY CO. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH TO INSURE THAT ALL WORK AND MATERIALS ARE IN CONFORMANCE WITH THE UTILITY CO'S REQUIREMENTS.

3. NAMEPLATES

- A. ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO, PANELBOARDS, DISCONNECTS TRANSFORMERS, CONTROLS, ETC., SHALL BE IDENTIFIED WITH THREE PLY LAMINATED PLASTIC. THE OUTSIDE LAMINATIONS SHALL BE BLACK. ENGRAVING SHALL EXTEND THROUGH THE FRONT LAMINATION SO THAT THE BLACK LETTERS APPEAR ON A WHITE BACKGROUND. NAMEPLATES SHALL BE PERMANENTLY ATTACHED WITH SCREWS.
- B. CIRCUIT DIRECTORY SHALL BE TYPEWRITTEN (HANDWRITTEN IS NOT ACCEPTABLE) AND SHALL IDENTIFY CIRCUIT AS TO TYPE AND LOCATION AS FOLLOWS:
- "LTG" - FOR LIGHTING CIRCUIT FOLLOWED BY AREA IN WHICH CIRCUIT APPEARS, I.E., "STOCKROOM", "CASH WRAP", ETC.
- "RECEPT" - FOR RECEPTACLE CIRCUIT FOLLOWED BY AREA IN WHICH RECEPTACLE APPEARS, "STOREFRONT", "CASH REGISTER", ETC.
- "MOTOR" - FOR MOTOR FOLLOWED BY THE EQUIPMENT IDENTIFICATION AND AREA IN WHICH MOTOR IS LOCATED, I.E. "EXH FAN TOILET", "AHU-ROOF", ETC.

4. CONDUIT

- A. CONDUIT SHALL BE STANDARD STEEL, RIGID IMC OR EMT (THIN WALL). CONDUIT SHALL BE CONCEALED IN FINISHED AREAS, EXCEPT AS OTHERWISE APPROVED BY OWNER'S REPRESENTATIVE. INDOOR EMT CONNECTIONS SHALL BE SET SCREW TYPE FITTING WHERE ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION. EXTERIOR EMT CONNECTIONS SHALL BE COMPRESSION TYPE.
- B. MINIMUM SIZES OF CONDUIT SHALL BE 3/4" EXCEPT 1/2" FOR SWITCH LEGS. EMT SHALL BE GALVANIZED OR ELECTRO-GALVANIZED. EMT SHALL BE USED FOR FEEDERS AND BRANCH CIRCUITS RUN ABOVE SUSPENDED CEILINGS OR CONCEALED IN INTERIOR PARTITIONS. EMT SHALL NOT BE CONCEALED IN POURED CONCRETE FLOOR OR WALLS.
- C. USE HEAVY WALL CONDUIT OR PVC FOR UNDER SLAB INSTALLATIONS.
- D. THE USE OF NONMETALLIC-SHEATHED CABLE, TYPE NM, IS NOT ACCEPTABLE.

1. THE USE OF METAL CLAD CABLES, TYPE MC, IS ACCEPTABLE WHERE APPROVED BY THE LOCAL A.H.J. ALL BRANCH CIRCUIT HOME RUNS TO PANELBOARDS AND DEDICATED BRANCH CIRCUITS SHALL BE IN EMT.
2. ALL METAL CLAD CABLES, SHALL BE PROVIDED WITH A GROUND WIRE.

- E. ALL OPENINGS IN FIRE AND SMOKE WALLS, PARTITIONS, FLOORS AND OTHER SIMILAR PENETRATIONS FOR ELECTRICAL CONDUITS, CABLE OR EQUIPMENT, WHETHER CUT OR IN PLACE, SHALL BE CLOSED WITH A UL APPROVED FIRE RESISTANT SILICONE FOAM SEALANT TO MAINTAIN THE FULL RATING AND INTEGRITY OF THE PARTITIONS, WALLS OR FLOOR.

- F. CONDUIT BENDS FOR POWER AND LIGHTING CIRCUITS SHALL NOT BE LESS THAN STANDARD RADIUS BENDS. CONDUIT BENDS FOR FEEDERS, TELEPHONE AND COMMUNICATION CIRCUITS SHALL NOT BE LESS THAN LONG RADIUS BENDS.

- G. O.2 TYPE DX, TX, OR AX CONDUIT EXPANSION DEFLECTION FITTINGS ARE REQUIRED IN ALL CONDUIT RUNS WHERE MOVEMENT MAY BE ENCOUNTERED. ALL EMT COUPLINGS SHALL BE COMPRESSION TYPE.

- H. EXPOSED CONDUIT SHALL BE SECURELY SUPPORTED IN PLACE PER CODE BUT ON A MAXIMUM OF 10 FOOT INTERVALS. WITHIN THREE FEET OF EACH BEND, AT EVERY OUTLET OR JUNCTION BOX AND AT THE END OF EACH STRAIGHT RUN TERMINATING AT A BOX OR CABINET, CONDUIT SHALL NOT BE SUPPORTED FROM DUCTWORK OR PIPE WORK. CONDUITS SHALL BE RUN PARALLEL TO AND AT RIGHT ANGLES TO THE BUILDING LINES. GENERALLY, CONDUIT SHALL BE RUN IN CONTACT WITH STRUCTURAL PARTS OF THE BUILDING SO AS TO AVOID SUSPENDED LENGTHS OF CONDUIT. CONDUIT SHALL BE INSTALLED AS TO BE ACCESSIBLE FOR REPLACEMENT AND MAINTENANCE AND GENERALLY CONDUIT SHALL BE INSTALLED TO PERMIT DRAINAGE.

5. WIRE AND CABLE

- A. ALL WIRE AND CABLE SHALL BE COPPER AND RUN IN CONDUIT. ALL WIRE AND CABLE FEEDERS AND BRANCH CIRCUITS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE CURRENT EDITION OF THE N.E.C. AND SHALL MEET ALL ASTM SPECIFICATIONS. WIRE AND CABLE SHALL BE NEW, SHALL HAVE SIZE, GRADE OF INSULATION VOLTAGE AND MANUFACTURER'S NAME PERMANENTLY MARKED ON OUTER COVERING AT REGULAR INTERVAL AND SHALL BE DELIVERED IN COMPLETE COILS OR REELS WITH IDENTIFYING SIZE AND INSULATION TAGS.

- B. THE ELECTRICAL CONTRACTOR SHALL CALCULATE VOLTAGE DROP ON CONDUCTORS WITH LENGTHS GREATER THAN 75 FEET FROM THE PANELBOARD AND PROPERLY SIZE THE CONDUCTORS PER N.E.C.

- C. POWER CONDUCTORS: NO WIRE LESS THAN NO. 12 SHALL BE USED EXCEPT FOR CONTROL CIRCUITS OR LOW VOLTAGE WIRING. WIRE SIZES NO. 12 TO NO. 10 SHALL BE SOLID EXCEPT WHERE OTHERWISE INDICATED. WIRE SIZES NO. 8 AND LARGER SHALL BE STRANDED. ALL WIRE SIZES SHOWN ARE AMERICAN WIRE GAUGE SIZES. SIZES NO. 12 AWG THROUGH NO. 8 AWG SHALL BE "THIN-" SIZE 4 AWG AND LARGER SHALL BE "THW."

- D. CONTINUITY: ALL WIRES SHALL BE CONTINUOUS FROM OUTLET TO OUTLET.

- E. ACCEPTABLE MANUFACTURERS: CABLE AND WIRE SHALL BE STANDARD TYPE AS MANUFACTURED BY GENERAL CABLE COMPANY, CAROL, ANACONDA, ROM OR ITT ROYAL.

6. COLOR CODING

- A. A COLOR CODING SYSTEM AS LISTED BELOW SHALL BE FOLLOWED THROUGHOUT FOR FEEDERS AND BRANCH CIRCUITS AND USED AS A BASIS FOR BALANCING LOAD.

- 120/208V: PHASE A-BLACK, PHASE B-RED, PHASE C-BLUE, NEUTRAL-WHITE, GROUND-GREEN
- 277/480V: PHASE A-BROWN, PHASE B-ORANGE, PHASE C-YELLOW, NEUTRAL-GRAY, GROUND-GREEN

7. BOXES AND FITTINGS

- A. ALL OUTLETS SHALL BE PROVIDED WITH GALVANIZED OR SHERARDIZED BOXES SUITABLE IN DESIGN TO THE SPACE THEY OCCUPY AND THE PURPOSE THEY SERVE. WALL MOUNTED OUTLET BOXES, EXCEPT FOR 2" PARTITIONS SHALL BE AT LEAST 1 1/2" DEEP AND/OR DEEPER IF REQUIRED BY THE DEVICE THEY HOLD OR THE NATIONAL ELECTRICAL CODE.
- B. ALL PULLBOXES SHALL BE MADE OF GALVANIZED STEEL, OF METAL GAUGE AND PHYSICAL SIZE AS REQUIRED BY THE N.E.C. FOR THE NUMBER AND SIZE OF RACEWAYS AND CONDUCTORS INVOLVED.
- C. FIXTURE OUTLET BOXES IN OR ON CEILINGS SHALL NOT BE LESS THAN 1-1/2" DEEP OR LESS THAN 4" SQUARE. ALL OUTLET BOXES INTENDED TO SUPPORT FIXTURES SHALL BE EQUIPPED WITH 3/8" FIXTURE STUDS FASTENED THROUGH THE BOTTOM OF THE BOX WITH FOUR BOLTS.

8. CIRCUIT BREAKER PANELBOARDS

- A. PANELS SHALL BE DEAD FRONT, SAFETY TYPE, FURNISHED WITH BRANCH CIRCUIT PROTECTING DEVICES, EQUIPMENT GROUNDING BOX, MAIN BUS AND CABLE LUGS FACTORY ASSEMBLED, WITH ALL COMPONENTS IN PLACE, READY FOR INSTALLATION.
- B. CURRENT CARRYING CONTACT SURFACES SHALL BE SILVER OR TIN PLATED. THE CIRCUIT BREAKERS SHALL BE OF THE MOLDED CASE, PLUG-IN TYPE SUITABLE FOR VOLTAGE AND AMPERE RATINGS INDICATED ON DRAWINGS AND IN SCHEDULES AND SHALL HAVE A MINIMUM INTERRUPTING CAPACITY OF 22,000 AMPERES FOR 120/208V AND 25,000 AMPERES AT 277/480V.
- C. MAIN BUSES AND CONNECTORS SHALL BE HARD DRAWN COPPER OF 98% CONDUCTIVITY, WITH CURRENT CARRYING CAPACITY TO MAINTAIN ESTABLISHED RISE TESTS AS DEFINED IN UL STANDARD UL 87.
- D. CABINET SIZES ARE BASED UPON A 20" WIDE BY 6" DEEP PANEL UNLESS OTHERWISE NOTED. PANELBOARDS SHALL BE EQUIPPED WITH FLUSH TYPE LOCK AND CATCH. ALL LOCKS SHALL BE KEYED ALIKE, AND TWO KEYS ARE TO BE SUPPLIED WITH EACH LOCK.
- E. BREAKERS SERVING LIGHTING CIRCUITS SHALL BE RATED FOR SWITCH DUTY.
- F. BREAKERS SERVING COOLER, FREEZER AND HVAC EQUIPMENT SHALL BE HACR RATED.
- G. ALL LUGS SHALL BE OF THE SOLDERLESS TYPE AND RATED AT A MINIMUM OF 75 DEGREES.
- H. PROVIDE PANEL DIRECTORY, TYPED AND INSTALLED BEHIND CLEAR PLASTIC COVER ON INSIDE OF THE DOOR.
- I. PANELBOARDS TO BE BY SQUARE D, GENERAL ELECTRIC, SIEMENS OR EATON.

9. TRANSFORMERS

- A. DRY-TYPE TRANSFORMERS (DOE 2016) SHALL BE OF THE ENCLOSED VENTILATED TYPE WITH KVA AND VOLTAGE RATING AS CALLED FOR ON THE DRAWINGS AND WITH 150" CLASS H INSULATION AND MINIMUM OF SIX STANDARD FULL CAPACITY TAPS. SOUND LEVEL SHALL BE LOW AND INSTALLATION SHALL INCLUDE KORFUND OR EQUAL VIBRATION DAMPENING MOUNTS AND FLEXIBLE STEEL CONDUIT FOR PRIMARY AND SECONDARY. (MOUNT TRANSFORMER ON VIBRATION ISOLATORS). LOCATE TRANSFORMER AS NOT TO CAUSE SERVICING OR CLEARANCE DIFFICULTIES OF VIOLATIONS WITH OTHER EQUIPMENT.
- B. COMPARABLE EQUIPMENT AS MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, SIEMENS OR EATON.

10. TOGGLE SWITCHES

- A. TOGGLE SWITCHES SHALL BE WHITE AND SHALL BE RATED 20 AMPERES 120/277 VOLT AC TYPE AS MANUFACTURED BY HUBBELL AND SHALL BE AS FOLLOWS:
- SINGLE POLE - 1221-W
- THREE WAY - 1223-W
- B. TOGGLE SWITCHES SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR TO TOP OF MOUNTING PLATE AND, AT DOORS, INSTALLED ADJACENT TO THE TRIM ON THE STRIKING SIDE OF THE DOOR, REGARDLESS OF THE LOCATION INDICATED ON THE DRAWINGS; THEREFORE, CHECK ALL DOOR SWINGS BEFORE INSTALLATION OF CONDUIT OUTLETS.
- C. COMPARABLE EQUIPMENT AS MANUFACTURED BY COOPER WIRING, SLATER, LEVITON, AND BRYANT WILL BE ACCEPTABLE.

11. RECEPTACLES

- A. RECEPTACLES SHALL BE WHITE AS MANUFACTURED BY HUBBELL AND SHALL BE AS FOLLOWS:
- "STOREFRONT", "CASH REGISTER", ETC.
- DUPLEX RECEPTACLE - 20A-125 VOLT 5362-W
- GFCl DUPLEX RECEPTACLE - 20A-125 VOLT GF5362-W
- B. RECEPTACLES SHALL BE MOUNTED 18" ABOVE THE FINISHED FLOOR TO BOTTOM OF BOX UNLESS OTHERWISE NOTED.

- C. COMPARABLE EQUIPMENT AS MANUFACTURED BY COOPER WIRING, SIERRA ELECTRIC CORPORATION, SLATER, BRYANT AND LEVITON WILL BE ACCEPTABLE.

12. DEVICE PLATES

- A. DEVICE PLATES SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED. COMPARABLE EQUIPMENT AS MANUFACTURED BY COOPER WIRING, SIERRA ELECTRIC CORPORATION, HARVEY HUBBLE INC., BRYANT AND LEVITON WILL BE ACCEPTABLE. PAINT MATCH ADJACENT FINISH COLOR.

13. DISCONNECT SWITCHES

- A. FURNISH AND INSTALL DISCONNECT SWITCHES AS REQUIRED BY CODE. DISCONNECT SWITCHES SHALL BE NEMA HEAVY DUTY TYPE AND UNDERWRITERS LABORATORIES LISTED, MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, EATON OR SIEMENS.

14. GROUNDING

- A. CONTRACTOR SHALL INSTALL GROUNDING PER N.E.C. ARTICLE 250 EQUIPMENT GROUNDING SHALL USE ONLY APPROVED GROUNDING CLAMPS AND CONNECTORS AS MANUFACTURED BY PENN-UNION, BURNDY, OR O-Z MFG. COMPANY.

- B. GROUNDING SHALL BE INSTALLED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250 AND THE UTILITY COMPANY REGULATIONS. CONTRACTOR SHALL CONNECT THE GROUNDING ELECTRODE CONDUCTORS TO THE NEUTRAL BAR INSIDE THE MAIN PANEL.

- C. THE EQUIPMENT GROUNDING SYSTEM SHALL CONSIST OF A CONTINUOUS CONDUIT INSTALLATION AND A GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR. THIS GROUNDING CONDUCTOR SHALL BE INSTALLED IN EVERY CONDUIT OR RACEWAY WITH THE FEEDER OR BRANCH CIRCUIT CONDUCTORS. THIS GROUNDING SHALL BE EXTENDED FROM THE HOUSING OF EVERY ELECTRICAL LOAD, THROUGH PANELBOARD STATIC GROUNDING BUSES, TO THE STATIC GROUNDING BUS IN THE MAIN PANEL. THE GROUNDING BUS SHALL BE BONDED TO THE GROUNDING NEUTRAL BAR INSIDE THE MAIN PANEL.

15. LIGHTING FIXTURES

- A. ALL LIGHTING FIXTURES AND LAMPS SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR, UNLESS NOTED OTHERWISE. THIS CONTRACTOR SHALL INSTALL LIGHTING FIXTURES AND LAMPS AS INDICATED ON THE DRAWINGS AND AS SPECIFIED BELOW, COMPLETE WITH HANGERS, PLASTER FRAMES AND ALL OTHER NECESSARY ACCESSORIES.
- B. LED LUMINAIRES

1. LED FIXTURES SHALL COMPLY WITH IES LM-79-08 APPROVED METHOD FOR MEASURING LUMEN MAINTENANCE OF LED LIGHT SOURCES, COMPLY WITH IES LM-80-08 APPROVED FOR ELECTRICAL AND PHOTOMETRIC MEASUREMENT OF SSL PRODUCT, COMPLY WITH IN-SITU TESTING FOR MORE RELIABLE RESULTS.

2. LED'S SHALL BE RESTRICTED OF HAZARDOUS SUBSTANCES DIRECTIVE (ROHS) COMPLIANT.
3. LED ARRAYS SHALL BE SEALED, HIGH PERFORMANCE, LONG LIFE TYPE; MINIMUM 70% RATED OUTPUT AT 50,000 HOURS.
4. LUMINAIRES SHALL BE FULLY ACCESSIBLE FROM BELOW CEILING PLANE FOR CHANGING DRIVERS, POWER SUPPLIES AND ARRAYS.
5. DRIVERS SHALL BE SOLID STATE AND ACCEPT 120 THROUGH 277 VAC AT 60 HZ INPUT.
6. THE LED LIGHT SOURCE SHALL BE FULLY DIMMABLE WITH USE OF COMPATIBLE DIMMERS SWITCH DESIGNATED FOR LOW VOLTAGE LOADS.
7. LED COLOR TEMPERATURES: SHALL BE AS NOTED ON DRAWING.
8. LUMINAIRES SHALL HAVE INTERNAL THERMAL PROTECTION.
9. INDOOR LUMINAIRES SHALL HAVE A MINIMUM CRI OF 85.
- C. LED POWER SUPPLIES AND DRIVERS
1. SHALL HAVE A POWER FACTOR: 0.90 OR HIGHER.

D. CONTROLLER AND CONTROL SYSTEMS

1. THE CONTRACTOR SHALL ENSURE THAT EXTERNAL CONTROL EQUIPMENT IS COMPATIBLE WITH LED CONTROL REQUIREMENTS.
2. PROVIDE CONNECTOR TYPES AND WIRING AS APPROPRIATE FOR UN-INTERRUPTED COMMUNICATION BETWEEN DEVICES, CONSIDERING DISTANCE MAXIMUMS, FIELD OBSTRUCTIONS, AND ACCESSIBILITY.
3. ENSURE THAT CONNECTION POINTS ARE OPTICALLY ISOLATED FOR SYSTEM NOISE REDUCTION. FOR CONTROL COMPONENTS THAT ARE PART OF THE OVERALL AREA CONTROL SYSTEM, SEE DIMMING CONTROLS SPECIFICATIONS. COMPATIBILITY: CERTIFIED BY MANUFACTURE FOR USE WITH INDIVIDUALLY SPECIFIED LUMINAIRE AND INDIVIDUALLY SPECIFIED POWER SUPPLIES AND/OR DRIVERS.
- E. THIS CONTRACTOR SHALL VERIFY THE FINAL CEILING AND FINISH SCHEDULES TO INSURE THE PROPER INSTALLATION AND MOUNTING OF FIXTURES AND SHALL COORDINATE BEFORE MAKING SUBMITTALS.

16. LIGHTING CONTROLS

- A. TIME SWITCHES SHALL BE 24 HOUR, 7 DAY, DAY SKIPPER 365 DAYS AND HOLIDAYS TYPE EQUAL TO INTERMATIC ET125C TIME SWITCH. CONTRACTOR SHALL BE SQUARE D LXG-xx IN NEMA 1 ENCLOSURE.
- B. PANEL #GR1408LTENC-XMMN1-GR1408-DTCMOD WITH 8 RELAYS AND BUILT-IN TIME CLOCK AND AS MANUFACTURED BY LC8D.

17. TELEPHONE SERVICE

- A. THIS CONTRACTOR SHALL INSTALL A TELEPHONE SERVICE CONDUIT AS SHOWN ON THE DRAWINGS AND FURNISH AND INSTALL (1) 3" x 4" x 3/4" PLYWOOD PANEL MOUNTED ON THE WALL AT LOCATION SHOWN ON PLANS.

18. SURFACE METAL RACEWAY

- A. SURFACE METAL RACEWAY SHALL BE TWO PIECE #2100 AS MANUFACTURED BY WIROMOLD. ALL NECESSARY ACCESSORIES REQUIRED TO FIT THE CONFIGURATION SHOWN SHALL BE PROVIDED. RECEPTACLES SHALL BE 120 VAC, 23 APMS, CATALOG NUMBER #2127GT.

SECTION 16700  
FIRE ALARM SPECIAL CONDITIONS (WHERE REQUIRED)

1. GENERAL

- A. WINGSTOP'S GC TO COORDINATE ALL LOCAL FIRE ALARM REQUIREMENTS WITH LOCAL FIRE MARSHALL AND PROVIDE FULLY ENGINEERED DRAWINGS SHOWING ALL DEVICES REQUIRED FOR A COMPLETE SYSTEM. GC SHALL INCLUDE THE COST IN THE BASE BID AS A LINE ITEM.
- B. WINGSTOP'S GC SHALL VERIFY MANUFACTURER AND MODEL OF LANDLORD'S EXISTING FIRE ALARM SYSTEM.
- C. WINGSTOP'S GC SHALL COORDINATE REQUIREMENTS WITH LANDLORD'S FIRE ALARM VENDOR.
- D. WINGSTOP'S GC SHALL VERIFY ALL FIRE ALARM DEVICES THAT ARE EXISTING TO REMAIN ARE IN PROPER WORKING CONDITION. REPLACE ANY FAULTY DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
- E. ALL FIRE ALARM WORK SHALL BE PERFORMED BY A LANDLORD APPROVED FIRE ALARM CONTRACTOR.
- F. WINGSTOP'S GC IS RESPONSIBLE FOR FIRE ALARM PERMIT. IT IS THE TENANTS CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL REQUIREMENTS PRIOR TO SUBMISSION FOR PERMIT.

END OF DIVISION 16

CONSULTANT:



CLIENT:



5501 LBJ FREEWAY, 5TH FLOOR  
DALLAS, TX 75240  
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PROJECT INFORMATION:

WING-STOP  
STORE NUMBER: GL#Y715  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



6/14/21  
DATE

PROJECT NO.: 2021-0158  
DRAWN BY: JJV  
CHECKED BY: DRC

ISSUE: DATE:  
FOR PERMIT & BID 06-10-21

REVISION: DATE:

PROJECT LOCATION:  
LEE'S SUMMIT, MO

SHEET NUMBER:

BUILDING CODES AND STANDARDS USED FOR DESIGN

1. 2018 INTERNATIONAL BUILDING CODE  
OCCUPANCY CATEGORY: II
- DESIGN LOADS**
1. DESIGN LOADS  
ROOF LIVE LOAD: 20 psf  
ROOF DEAD LOAD: 15 psf
2. WIND LOAD DESIGN CRITERIA  
WIND IMPORTANCE FACTOR, I: 1.0  
BASIC WIND SPEED: 109 MPH (3 SEC GUST)  
WIND EXPOSURE CATEGORY: B  
Gcpi: +/- 0.18
3. SNOW LOAD DESIGN CRITERIA  
SNOW LOAD IMPORTANCE FACTOR, I: 1.0  
GROUND SNOW LOAD, Pg: 20 psf  
FLAT ROOF SNOW LOAD, Pf: 14 psf  
THERMAL FACTOR, Ct: 1.0  
EXPOSURE FACTOR, Ce: 1.0
4. SEISMIC LOAD DESIGN CRITERIA  
SEISMIC IMPORTANCE FACTOR, I: 1.0  
SITE CLASS: D  
SPECTRAL RESPONSE ACCELERATION: Ss=0.100g, S1=0.068g  
Sds=0.106g, Sd1=0.109g
- SEISMIC DESIGN CATEGORY: B

GENERAL STRUCTURAL NOTES

1. THIS DRAWING SET IS TO BE VIEWED AS A WHOLE AND COORDINATED WITH ARCHITECTURAL, MECHANICAL AND OTHER DISCIPLINES. ALL WORK PERTAINING TO A SPECIFIC CONTRACTOR MAY OR MAY NOT BE SHOWN ON SPECIFIC DRAWING SECTIONS. IT IS EACH SUBCONTRACTOR'S RESPONSIBILITY TO PREPARE HIS BID FROM A COMPLETE SET OF PLANS.
2. THE CONTRACTOR SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS. DIMENSIONS NOT SHOWN ON PLAN TO BE COORDINATED WITH ARCHITECTURAL PLANS.
3. WHERE INFORMATION PROVIDED IN THESE STRUCTURAL DRAWINGS CONTRADICTS INFORMATION PROVIDED IN PROJECT SPECIFICATIONS, THE SPECIFICATIONS SHALL TAKE PRECEDENCE.
4. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY AT ANY SIMILAR SITUATION ELSEWHERE ON THE JOB, EXCEPT WHERE A DIFFERENT DETAIL OR SECTION IS SHOWN.
5. THE STRUCTURE SHALL BE ADEQUATELY BRACED AND SHORED DURING ERECTION AGAINST WIND AND ERECTION LOADS. STRUCTURAL MEMBERS ARE DESIGNED FOR "IN-PLACE" LOADS ONLY.
6. THE GENERAL CONTRACTOR SHALL VERIFY ALL OPENING SIZES, PAD SIZES, AND LOCATIONS WITH THE RESPECTIVE CONTRACTORS.
7. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL FIELD CONDITIONS.
8. SEE ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS AND INFORMATION.
9. WHERE GENERAL NOTES OR TYPICAL DETAILS CONTRADICT INFORMATION PROVIDED IN BUILDING SECTIONS, THE BUILDING SECTIONS TAKE PRECEDENCE.
10. ALL HOLES THROUGH CONSTRUCTION SHALL BE CORE DRILLED OR SAWCUT.
11. ALL REINFORCEMENT AND SUBFRAMING INDICATED ON PLAN SHALL BE INSTALLED PRIOR TO PLACING EQUIPMENT.
12. EQUIPMENT WEIGHING LESS THAN 100LBS NOT SHOWN ON PLAN. SEE MECHANICAL DRAWINGS.
13. WEIGHTS SHOWN ON DRAWING INCLUDE WEIGHTS OF UNIT, CURB, AND ALL ACCESSORIES. DO NOT PLACE UNIT WHEN OPERATING WEIGHT EXCEEDS THAT INDICATED. NOTIFY STRUCTURAL ENGINEER.
14. VERIFY LOCATIONS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS.
15. FV = FIELD VERIFY  
(E) = EXISTING

EXISTING CONSTRUCTION NOTES

1. ALL DIMENSIONS AND ELEVATIONS TO EXISTING CONSTRUCTION ARE FOR REFERENCE ONLY. FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO PREPARING SHOP DRAWINGS, FABRICATING MEMBERS (STRUCTURAL ITEMS), AND INSTALLATION.
2. ALL HOLES THROUGH EXISTING CONSTRUCTION SHALL BE CORE-DRILLED OR SAWCUT. DO NOT CUT ANY REINFORCING STEEL WHILE DRILLING INTO EXISTING CONCRETE. DO NOT TORCH CUT.
3. PRIOR TO SUBMITTING SHOP DRAWINGS TO ARCHITECT AND ENGINEER OF RECORD FOR APPROVAL, CONTRACTOR SHALL VERIFY DIMENSIONS BETWEEN NEW CONSTRUCTION AND EXISTING CONSTRUCTION, AND FORWARD TO FABRICATOR FOR THEIR REFERENCE.
4. NOTIFY STRUCTURAL ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND STRUCTURAL DRAWINGS.
5. FOR ALL EXISTING CONSTRUCTION: DUE TO LIMITED OBSERVATION, OR NOT BEING ABLE TO VISIT THE EXISTING BUILDING DURING THE PREPARATION OF THESE DOCUMENTS, CASE ENGINEERING HAS ASSUMED THE EXISTING STRUCTURE IS IN LIKE-NEW CONDITION WITH NO CORROSION, DETERIORATION, OR DAMAGE, AND WAS CONSTRUCTED PER ANY ORIGINAL CONSTRUCTION DOCUMENTS PROVIDED (IF ANY EXIST). CONTRACTOR SHALL VERIFY THESE ASSUMPTIONS TO THE BEST OF THEIR ABILITY AND NOTIFY THE ENGINEER OF ANY CONCERNS, ISSUES, OR DISCREPANCIES.
6. CONTRACTOR TO VERIFY TOP OF ROOF SLOPE IS AT LEAST 1/4" PER FOOT AFTER PLACEMENT OF ANY NEW LOADS APPLIED TO ROOF OR HUNG FROM ROOF FRAMING. LOADS FROM NEW OR REPLACED ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO, ROOF TOP MECHANICAL UNITS (RTUS) AND ASSOCIATED DUCTWORK, HUNG HOODS, MAKE-UP AIR UNITS, CONDENSERS, COMPRESSORS, EXHAUST FANS, HUNG TRANSFORMERS, ROOFTOP GENERATOR(S), RE-ROOF MATERIALS, NEW CEILINGS, HUNG SIGNAGE, HUNG SPRINKLER PIPING, ETC. ALSO VERIFY THAT ALL ROOF DRAINS INCLUDING INTERIOR PRIMARY AND SECONDARY EMERGENCY OVERFLOW DRAINS AND ANY WALL SCUPPERS ARE CLEAR AND FREE-DRAINING. REPORT RESULTS IN WRITING TO ARCHITECT AND STRUCTURAL ENGINEER AS SOON AS PRACTICAL DURING THE CONSTRUCTION PROCESS.

STRUCTURAL STEEL NOTES

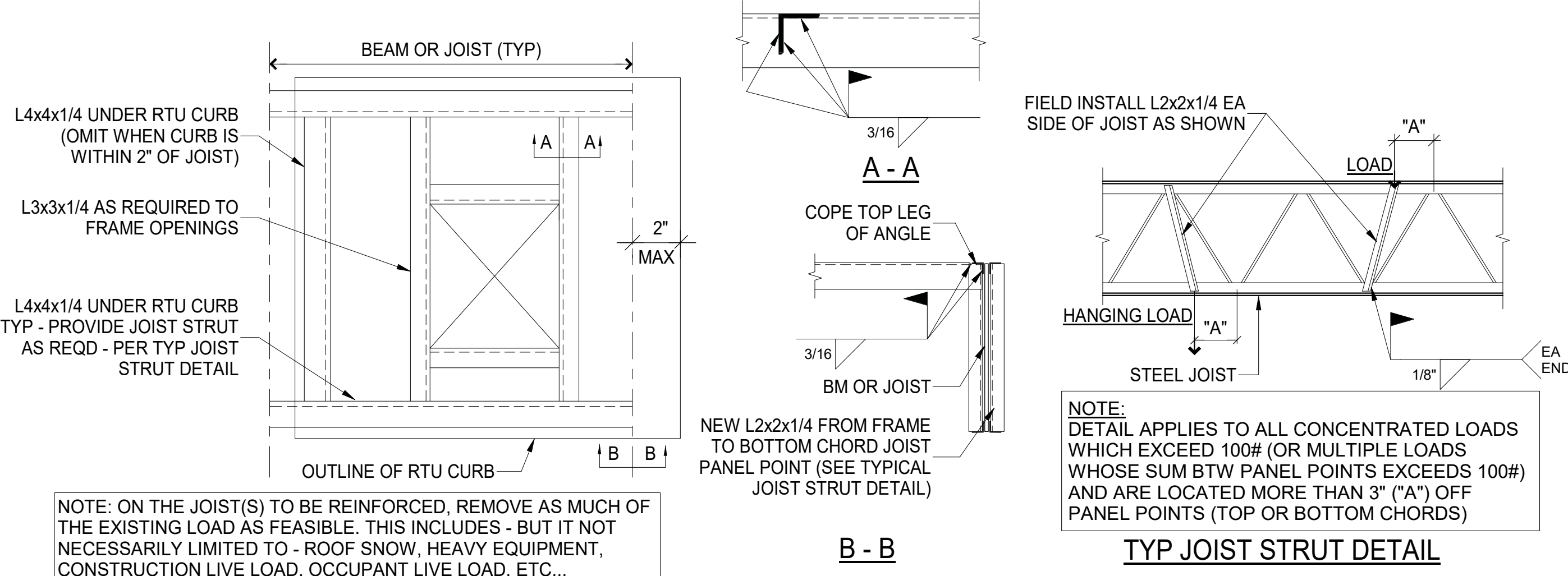
1. BOLT HOLES SHALL BE 1/16" OVERSIZE UNLESS OTHERWISE NOTED ON THE DRAWINGS. FIELD BURNING OF BOLT HOLES SHALL NOT BE PERMITTED.
2. WELDING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS IN CONFORMANCE WITH AWS D1.1, USING E70 SERIES ELECTRODES, UNLESS OTHERWISE NOTED ON THE DRAWINGS. ADDITIONALLY, WELDING IN LOS ANGELES, CA SHALL BE PERFORMED BY LADBS CERTIFIED WELDERS.
3. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS AND GRADES:
- ANGLES, CHANNELS, PLATES, BARS, AND RODS = A36, fy = 36ksi

SPECIAL INSPECTIONS

1. REFER TO THE SPECIAL INSPECTION TABLES FOR THE LIST OF ELEMENTS OF CONSTRUCTION THAT SHALL REQUIRE SPECIAL INSPECTION. THIS SHALL BE CONSIDERED A GUIDE, AND THE CONTRACTOR AND INSPECTOR SHALL REFER TO THE IBC FOR COMPLETE REQUIREMENTS, QUALIFICATIONS, EXCEPTIONS, AND SUBMITTALS. REFER TO IBC SECTION 1704 FOR 2003-2009 CODES, AND SECTION 1705 FOR 2012-2018 CODES. THE OWNER SHALL BE RESPONSIBLE FOR EMPLOYING THE SPECIAL INSPECTION AGENCY. ANY "OBSERVATIONS" BY THE EOR WILL NOT BE TO PERFORM SPECIAL INSPECTIONS AND SHALL NOT BE INTERPRETED AS SUCH.
2. COPIES OF ALL INSPECTION REPORTS THAT REPORT COMPLIANCE SHALL BE SUBMITTED TO THE ARCHITECT OF RECORD, STRUCTURAL ENGINEER OF RECORD, AND BUILDING INSPECTOR WITHIN 7 CALENDAR DAYS OF COMPLETION OF THAT PORTION OF WORK. A MINIMUM OF ONE (1) PROGRESS REPORT PER MONTH FOR EACH TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD.
3. SPECIAL INSPECTOR SHALL INFORM ENGINEER OF RECORD IMMEDIATELY OF NON-COMPLIANCE WITH CONSTRUCTION DOCUMENTS OR APPROVED SUBMITTALS. CONTACT ENGINEER OF RECORD THE SAME DAY NON-COMPLIANCE IS DISCOVERED AND FOLLOW UP WITH AN OFFICIAL REPORT WITHIN 2 BUSINESS DAYS.
4. THE SPECIAL INSPECTIONS IDENTIFIED ON THE PLANS ARE IN ADDITION TO, AND NOT A SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY A BUILDING INSPECTOR.
5. SPECIAL INSPECTIONS ARE NOTED AS EITHER "CONTINUOUS" OR "PERIODIC". A "CONTINUOUS" INSPECTION REQUIRES THE PRESENCE OF A QUALIFIED INSPECTOR IN THE VICINITY OF THE WORK BEING PERFORMED FOR 100% OF THAT WORK. A "PERIODIC" INSPECTION REQUIRES PART-TIME OBSERVATION OF THE WORK BEING PERFORMED. THE INSPECTOR SHALL ALSO OBSERVE THE FINAL CONDITION OF THE WORK BEFORE IT IS CLOSED FROM VIEW.
6. WHEN WORK IN MORE THAN ONE CATEGORY OF WORK REQUIRING SPECIAL INSPECTION IS TO BE PERFORMED SIMULTANEOUSLY, OR THE GEOGRAPHIC LOCATION OF THE WORK IS SUCH THAT IT CANNOT BE CONTINUOUSLY OBSERVED, IT SHALL BE THE RESPONSIBILITY OF THE AGENT TO EMPLOY A SUFFICIENT NUMBER OF SPECIAL INSPECTORS TO ASSURE THAT ALL WORK IS CONTINUOUSLY INSPECTED IN ACCORDANCE WITH THOSE PROVISIONS.

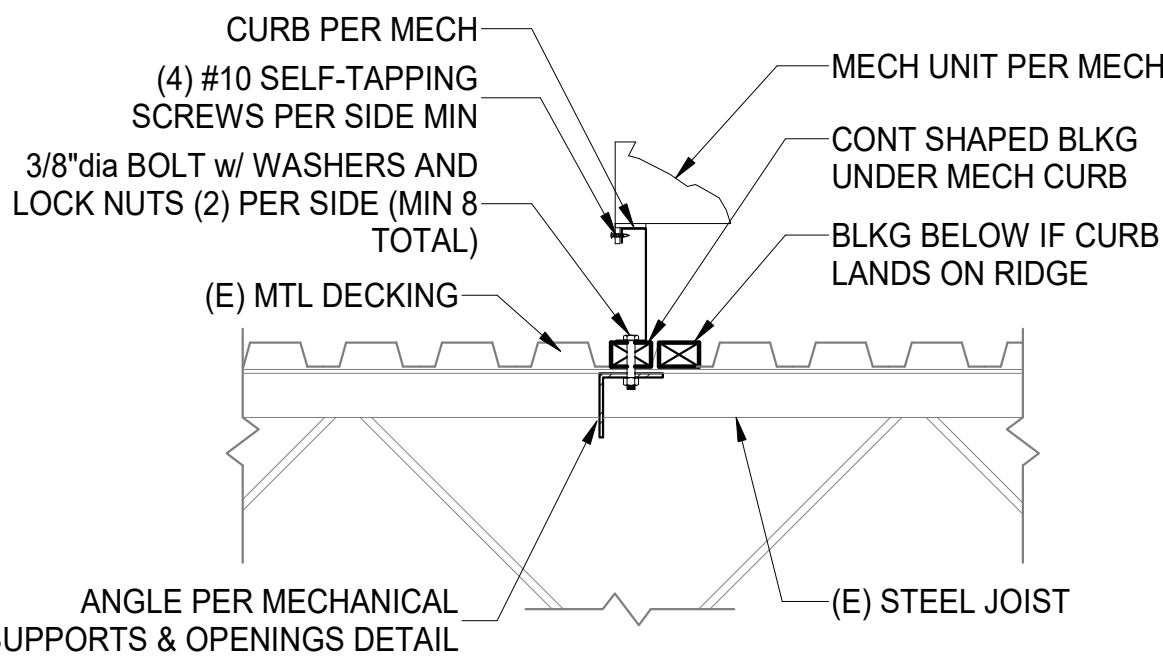
SPECIAL INSPECTIONS - STEEL TABLE		
ITEM	INSPECTION FREQUENCY	SCOPE
WELDING	PERIODIC	SINGLE PASS FILLET WELDS NOT GREATER THAN 5/16"
STRUCTURAL DETAILS	PERIODIC	INSPECT STEEL FRAME FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS FOR MEMBER SIZES AND LOCATIONS, BRACING, AND CONNECTIONS

SPECIAL INSPECTIONS - MASONRY - LEVEL 1 INSPECTION (LEVEL B QUALITY ASSURANCE) FOR OCCUPANCY CATEGORY I, II, III STRUCTURES		
ITEM	INSPECTION FREQUENCY	SCOPE
REINFORCEMENT	PERIODIC	LAPPING AND SPlicing OF REBAR; LOCATION, PLACEMENT, GRADE, SIZE, AND TYPE OF REINFORCEMENT AND CONNECTORS
INSTALLATION OF MASONRY, GROUT, AND MORTAR	PERIODIC	CONSTRUCTION OF MORTAR JOINTS; SIZE AND LOCATION OF STRUCTURAL ELEMENTS; PROTECTION OF MASONRY IN COLD WEATHER (BELOW 40°F) OR HOT WEATHER (ABOVE 90°F); CLEAN GROUT SPACE
INSTALLATION OF MASONRY, GROUT, AND MORTAR	CONTINUOUS	GROUT PLACEMENT IN CELLS WITH STEEL REINFORCEMENT
MIXING OF MORTAR AND GROUT	PERIODIC	PROPORTIONS OF SITE-PREPARED MORTAR AND GROUT
MISCELLANEOUS	PERIODIC	COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED



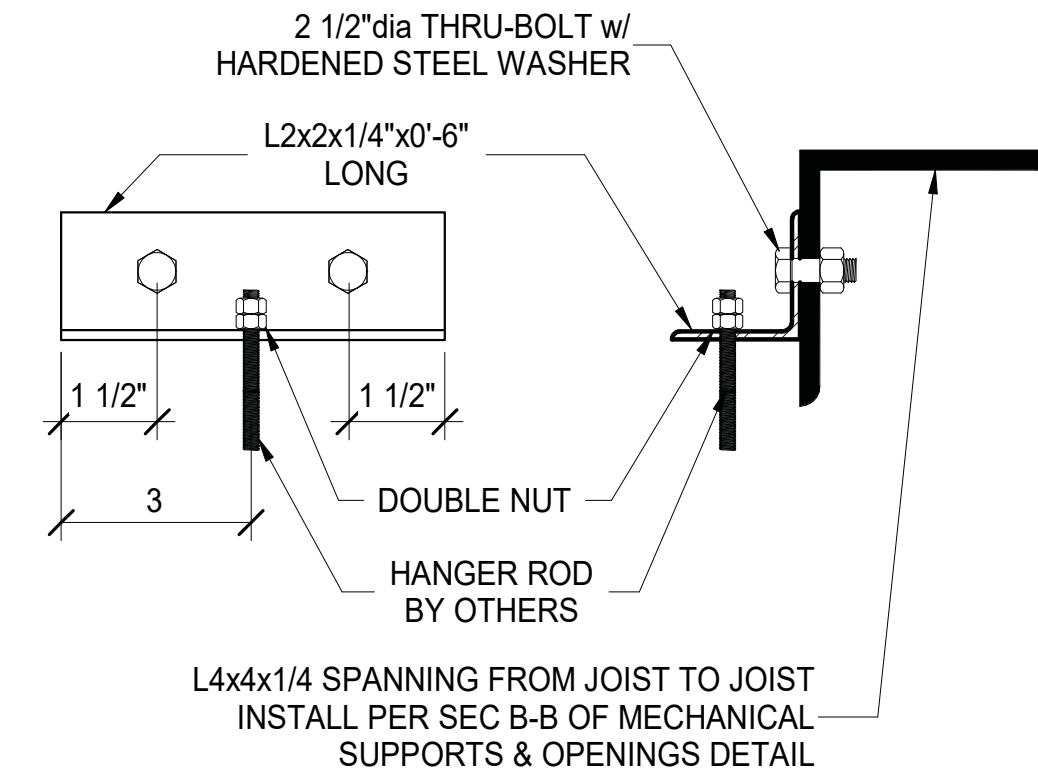
MECHANICAL SUPPORTS & OPENINGS

A S1 N.T.S.



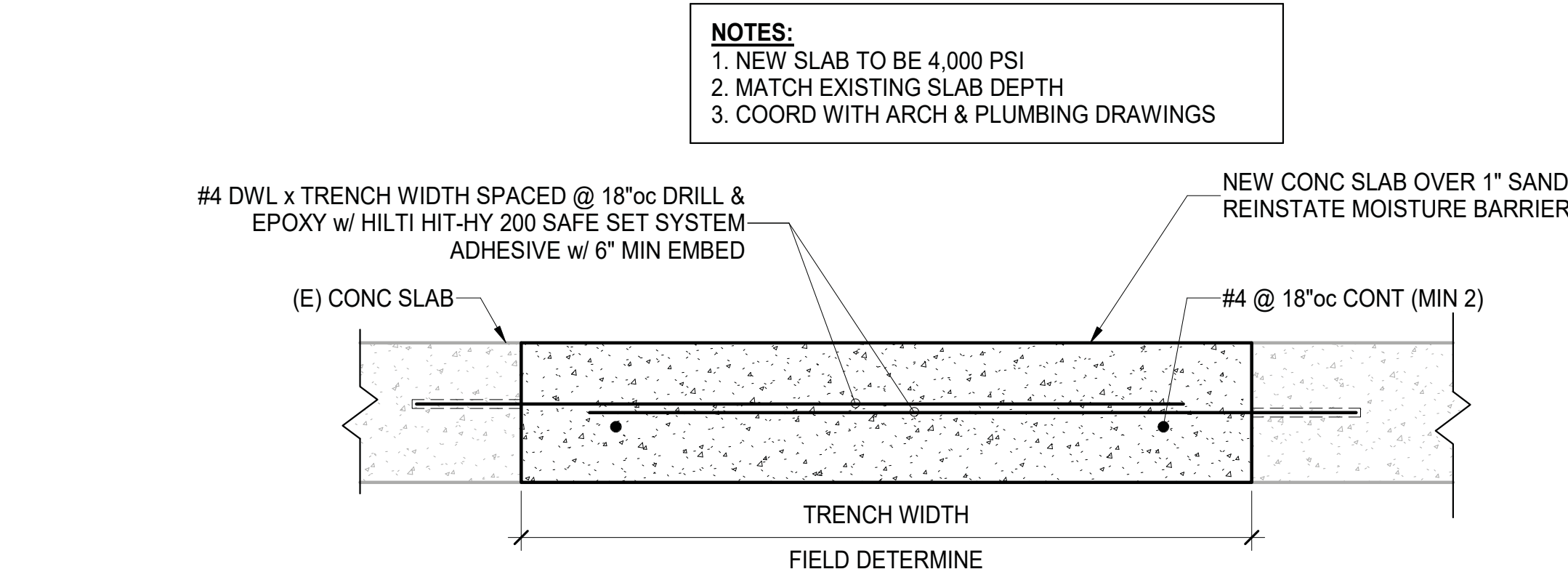
CURB ATTACHMENT DETAIL

B S1 N.T.S.



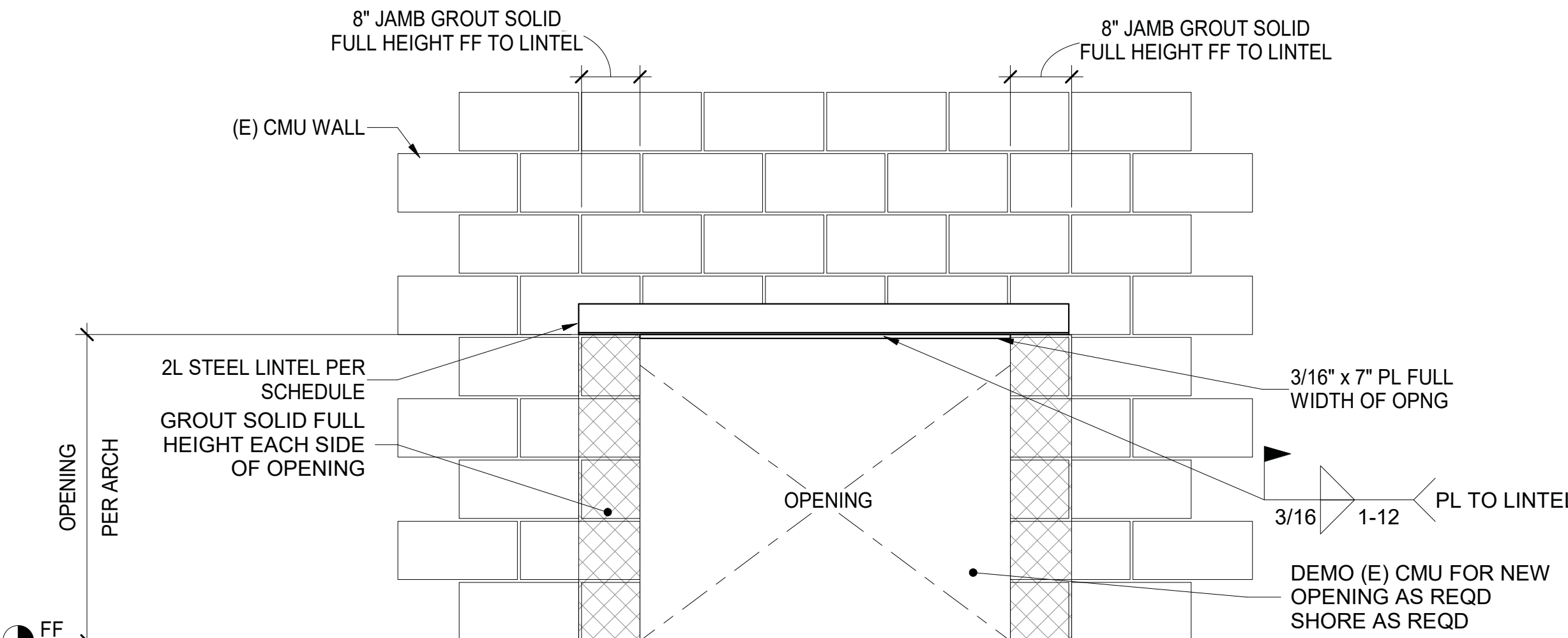
HANGER ROD AT HOOD DETAIL

C S1 N.T.S.



TYPICAL TRENCH REPAIR DETAIL

D S1 N.T.S.



TYPICAL CMU WALL OPENING w/ 2L STEEL LINTEL IN (E) CMU

E S1 N.T.S.

CONSULTANT:



CLIENT:



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PROJECT INFORMATION:

**WING-STOP**  
STORE NUMBER: GL#Y715  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



6/16/2021  
DATE

PROJECT INFO: WIL-MO-04-21

DRAWN BY: JS

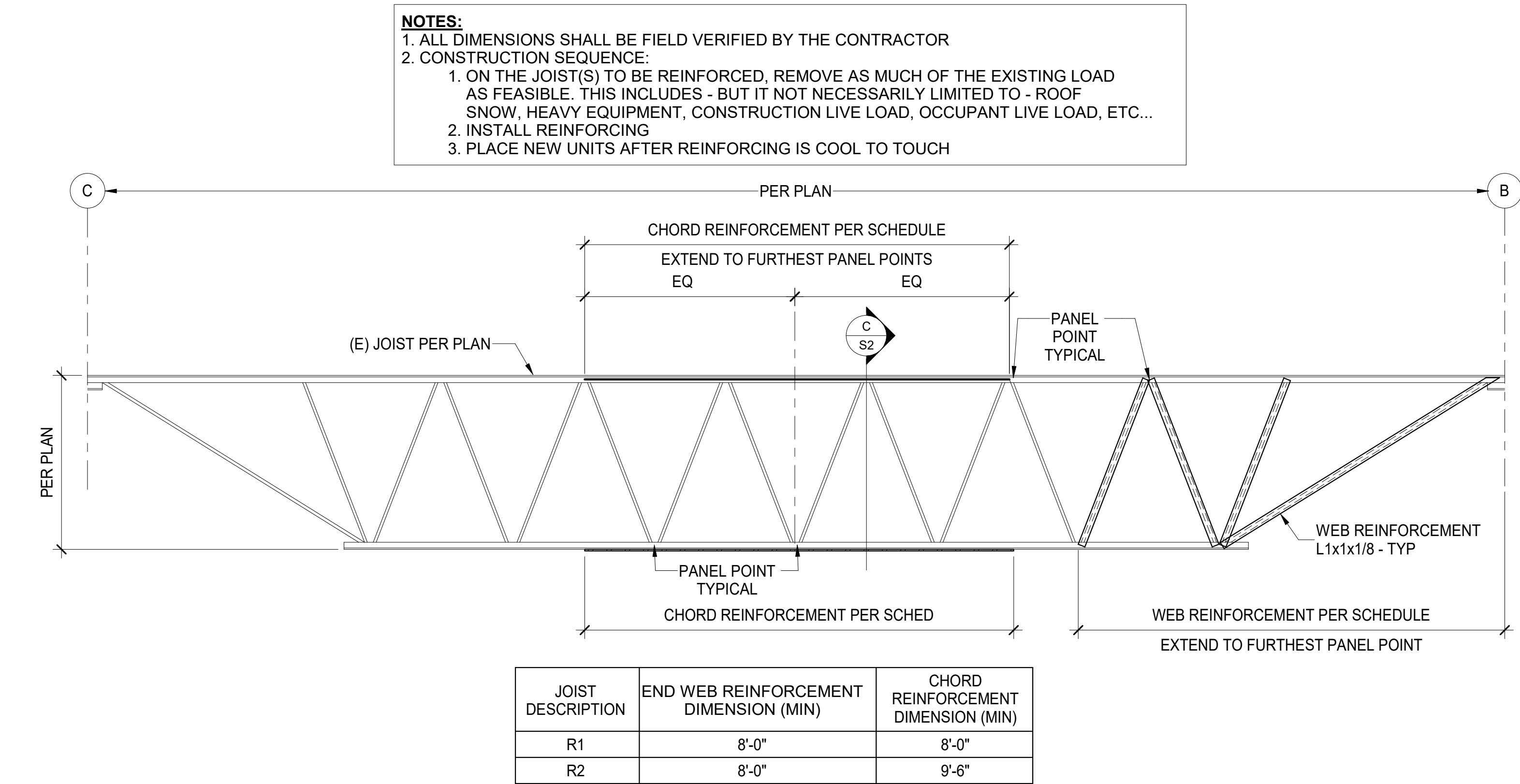
CHECKED BY: KW

ISSUE: DATE:  
FOR PERMIT & BID 06-10-21

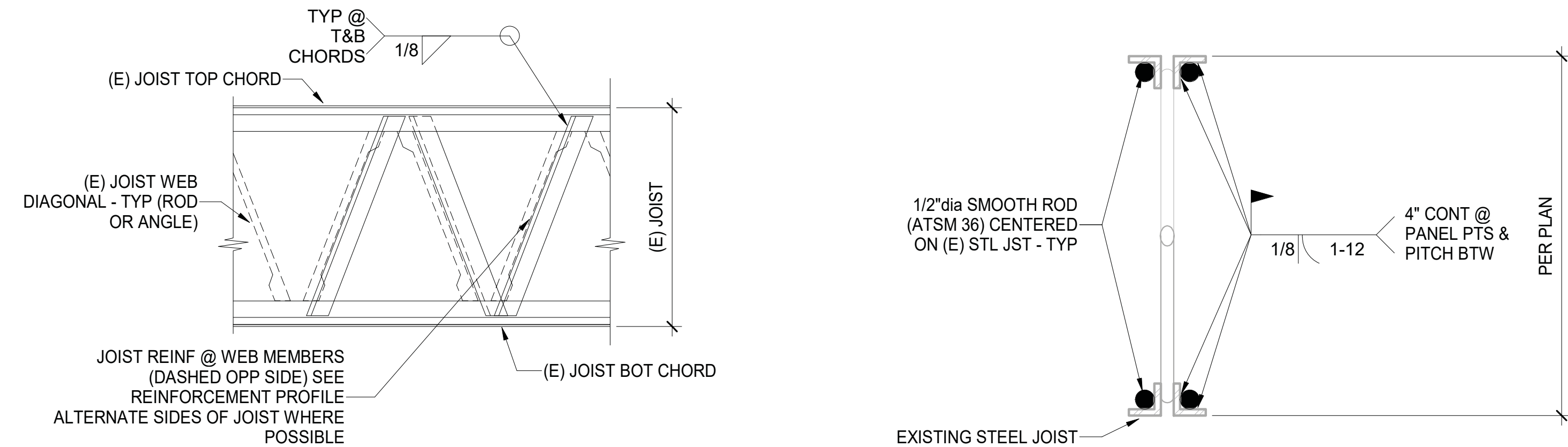
REVISION: DATE:

PROJECT LOCATION:  
LEE'S SUMMIT, MO

SHEET NUMBER / TITLE:  
S1  
GENERAL NOTES AND TYP  
DETAILS


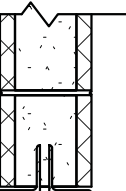
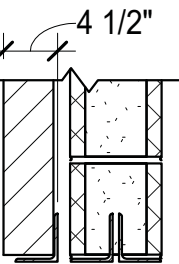



**A** **TYPICAL BAR JOIST REINFORCEMENT PROFILE**  
S2 N.T.S.



**B** **JOIST WEB REINFORCEMENT DETAIL**  
S2 N.T.S.

**C** **JOIST CHORD REINFORCEMENT DETAIL**  
S2 N.T.S.

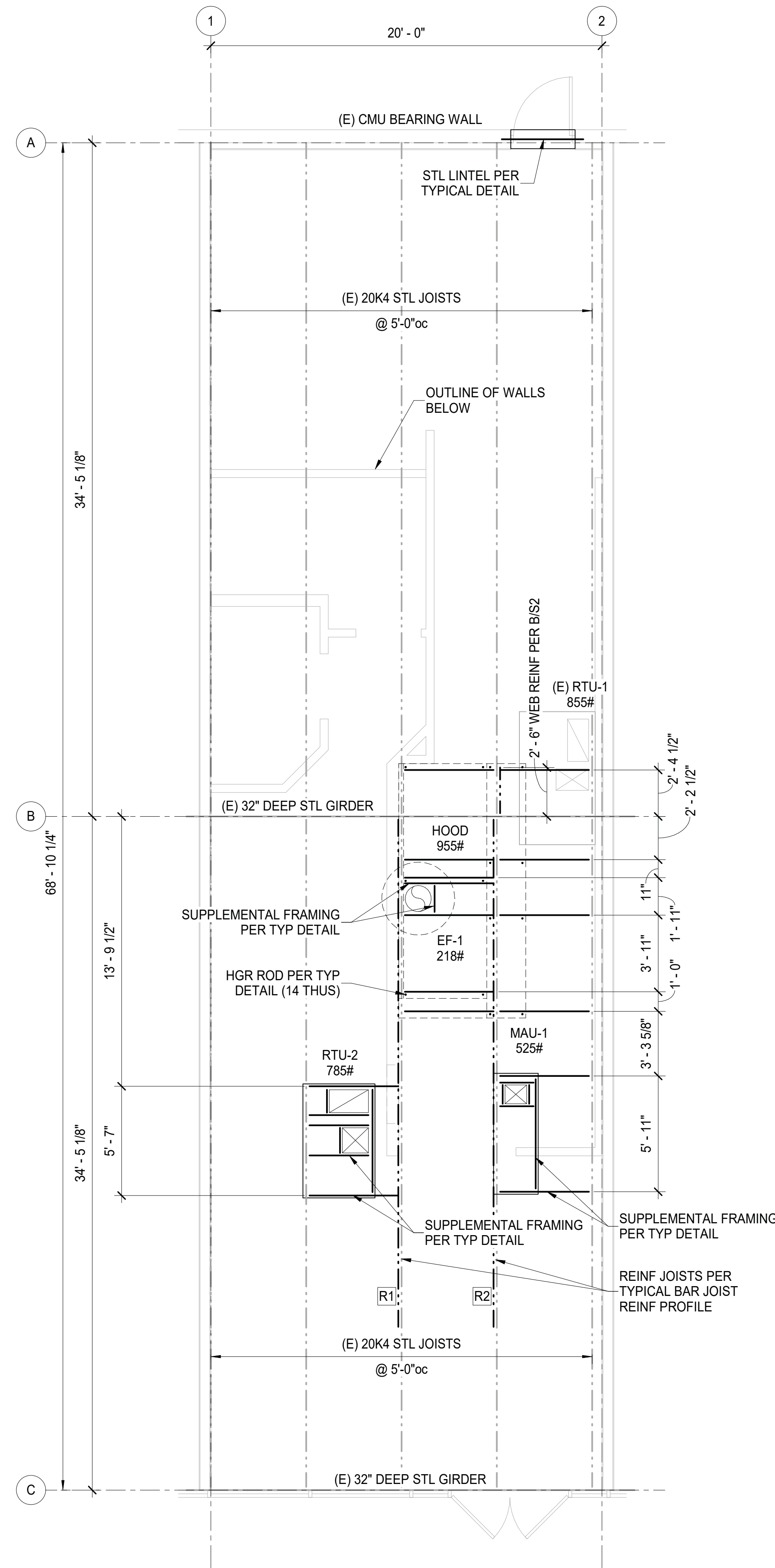
STEEL LINTEL SCHEDULE					KEY
FOR LINTELS NOT SHOWN IN THE DOOR OR WINDOW SCHEDULE OR ON THE ARCHITECT'S DRAWINGS, USE THE ANGLE SIZE SHOWN IN THE TABLE BELOW.					 <b>ONE ANGLE</b>
OPENING SIZE	BRICK VENEER	8" MASONRY WALL	10" MASONRY WALL	12" MASONRY WALL	
	ANGLE SIZE	ANGLE SIZE	ANGLE SIZE	ANGLE SIZE	 <b>TWO ANGLES</b>
UP TO 1'-0"	N/A	N/A	N/A	N/A	
1'-1" TO 3'-4"	L 4"x4"x1/4"	L 3 1/2"x3 1/2"x1/4"	L 4"x3 1/2"x1/4" LLH	L 5"x3 1/2"x1/4" LLH	 <b>THREE ANGLE</b>
3'-5" TO 4'-8"	L 4"x4"x1/4"	L 4"x3 1/2"x1/4" LLV	L 4"x4"x1/4"	L 5"x3 1/2"x1/4" LLH	
4'-9" TO 6'-8"	L 4"x4"x1/4"	L 6"x3 1/2"x5/16" LLV	L 4"x4"x5/16"	L 5"x5"x5/16"	 * 10"x3/8" PLATE
6'-9" TO 10'-0"	L 6"x4"x3/8" LLV	L 6"x3 1/2"x3/8" LLV	L 6"x4"x3/8" LLV	L 5"x5"x5/8"	
10'-1" TO 12'-0"	L 7"x4"x3/8" LLV	L 6"x3 1/2"x1/2" LLV	L 6"x4"x3/4" LLV	L 6"x4"x7/8" LLV w/ PLATE *	
<b>NOTES</b> 1. ALL ANGLES MUST HAVE 8" OF BEARING AT EACH END. 2. THIS SCHEDULE DOES NOT INCLUDE EFFECT OF FLOOR OR ROOF FRAMING LOADS. 3. ALL ANGLES TO BE GALVANIZED. 4. WELD ANGLES TOGETHER, BACK-TO-BACK, w/ 3/16" WELDS , 2" EVERY 12", TOP & BOTTOM.					

## PARTIAL EXISTING ROOF FRAMING PLAN

### PLAN NOTES:

- SEE SHEET S1 FOR GENERAL NOTES AND TYPICAL DETAILS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO BEGINNING CONSTRUCTION.
- REFERENCE MECHANICAL DRAWINGS FOR EXACT WEIGHTS AND LOCATIONS OF MECHANICAL EQUIPMENT.
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, SECTIONS, AND ELEVATIONS NOT SHOWN HEREON.
- ALL NEW AND EXISTING MECHANICAL EQUIPMENT MOUNTED TO OR HUNG FROM EXISTING ROOF FRAMING STRUCTURE THAT HAS BEEN ACCOUNTED FOR IN STRUCTURAL CAPACITY ANALYSIS IS SHOWN ON FRAMING PLAN. GENERAL CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER OF RECORD IMMEDIATELY IF EQUIPMENT EXISTS THAT IS NOT SHOWN ON PLAN.

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



CONSULTANT:

**CASE**  
Engineering Inc.

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F 636.349.1730  
796 Menus Court  
St. Louis, MO 63026  
CERTIFICATE OF AUTHORITY NO. 001498

CLIENT:



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PROJECT INFORMATION:

**WING•STOP**  
STORE NUMBER: GL#Y715  
HALLBUSTER SHOPS  
1041 N.E. SAM WALTON LANE  
LEE'S SUMMIT, MO 64086

SEAL:



6/16/2021  
DATE

PROJECT INFO: WIL-MO-04-21

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CHECKED BY: KW

ISSUE: DATE:  
FOR PERMIT & BID: 06-10-21

REVISION: DATE:

**PROJECT LOCATION:**  
LEE'S SUMMIT, MO

**SHEET NUMBER / TITLE:**

**S2**

ROOF FRAMING PLAN &  
TYPICAL DETAILS