

OCCUPANT LOAD CALCULATIONS				
ROOM NAME	USE *	AREA (SF)	LOAD FACTOR *	OCCUPANCY
101: SEATING AREA	UNCONCENTRATED ASSEMBLY	829	15	56
102: CIRCULATION	N/A	41	N/A	
103: ORDER AHEAD	KITCHEN	48	200	1
104: OUTDOOR SEATING AREA	UNCONCENTRATED ASSEMBLY	362	N/A	
105: BARISTA STATION	KITCHEN	224	200	2
106: OPERATION	OFFICE	41	100	1
107: SCULLERY/SERVICE	KITCHEN	197	200	1
108: HALLWAY	N/A	89	N/A	
109: TOILET ROOM	N/A	68	N/A	
110: TOILET ROOM	N/A	62	N/A	
TOTAL:		1961		61

NOTES:
* OCCUPANT USE AND LOAD FACTOR IS BASED ON CBC TABLE 1004.1.2.

EGRESS CALCULATIONS *				
EXIT #	NUMBER OF OCCUPANTS	WIDTH FACTOR	REQUIRED WIDTH **	PROVIDED WIDTH
EXIT 1	31	0.2	7'	72'
EXIT 2	30	0.2	7'	72'
REQUIRED EXITS				
NUMBER OF EXITS REQUIRED	2 **			
NUMBER OF EXITS PROVIDED	2			

NOTES:
ACCESSIBLE MEANS OF EGRESS (1007) (EXCEPTIONS)
* OCCUPANT LOADS FROM OUTDOOR PATIO AREA NOT INCLUDED IN EGRESS CALCULATIONS
** MINIMUM WIDTH REQUIRED IS 32" PER CBC 1008.1.1.
*** 2ND EXIT IS REQUIRED PER CBC 1015.1 DUE TO OCCUPANCY GREATER THAN 49.

PLUMBING OCCUPANCY CALCULATIONS				
ROOM NAME	USE *	AREA (SF)	LOAD FACTOR *	OCCUPANCY
101: SEATING AREA	GROUP A.2	829	30	28
102: CIRCULATION	N/A			
103: ORDER AHEAD	GROUP B ***	48	200	1
104: OUTDOOR SEATING AREA	N/A			
105: BARISTA STATION	GROUP B ***	224	200	2
106: OPERATION	GROUP B ***	41	200	1
107: SCULLERY/STORAGE	GROUP B ***	197	200	1
108: HALLWAY**	N/A			
109: TOILET ROOM	N/A			
110: TOILET ROOM	N/A			
TOTAL:				33
			FEMALE	17
			MALE	16

NOTE:
* OCCUPANT USE AND LOAD FACTOR CPC OCCUPANT LOAD FACTOR TABLE A
** PER CBC OCCUPANT LOAD FACTOR TABLE A NOTE ** ACCESSORY AREAS ARE EXCLUDED FROM OCCUPANCY
*** PER CBC OCCUPANT LOAD FACTOR TABLE A NOTE * AREAS NOT SPECIFICALLY LISTED SHALL BE BASED ON SIMILAR USES (COMMERCIAL KITCHEN AND BUSINESS ARE SIMILAR TO GROUP B)

PLUMBING FIXTURE QUANTITY				
	REQUIRED FIXTURES		PROVIDED FIXTURES	
	FEMALE	MALE	FEMALE	MALE
WATERCLOSETS	1*	1	1**	1
URINALS	N/A	1	N/A	0**
LAVATORIES	1	1	1	1
DRINKING FOUNTAINS	1		0***	
SERVICE SINK	1		1	

NOTES:
* THE TOTAL NUMBER OF WATER CLOSETS FOR WOMEN SHALL EQUAL TO OR GREATER THAN TOTAL WATER CLOSET AND URINALS FOR MEN PER NOTE 3 OF CPC TABLE 422.1
** IF THE OCCUPANCY IS LESS THAN 50, THE URINAL CAN BE OMITTED WHICH THEN REDUCES THE NUMBER OF REQUIRED FEMALE WATER CLOSETS, PER NOTE 3 OF CPC TABLE 422.1
*** DRINKING FOUNTAIN IS NOT REQUIRED PER CPC 415.2

PLUMBING / OCCUPANCY LOAD CALCULATIONS		NTS	10
SITE INFO		NTS	5
EXISTING USE		SQUARE FEET	
RETAIL	167,032		
2ND FLOOR OFFICE	5,867		
2ND FLOOR RESIDENTIAL (30 UNITS)	37,732		
TOTAL BUILDING	210,631		
PROPOSED USE			
(N) COMMERCIAL: A-2	2,082		
(E) RETAIL	164,970		
(E) 2ND FLOOR OFFICE	5,867		
(E) 2ND FLOOR RESIDENTIAL (30 UNITS)	37,732		
TOTAL BUILDING	210,631		
TOTAL SITE AREA	671,669		

NOTE:
THIS PROPOSED PROJECT DOES NOT CHANGE ANY BUILDING AREA OR PARKING STALLS WITHIN THE EXISTING PROPERTY LINES.

THE PROPOSED PROJECT PROVIDES THE FOLLOWING:
(1) WASTE STORAGE AREA ACCOMMODATING TRASH / RECYCLING BINS.
(2) WASTE STORAGE IS LOCATED AT TRASH ENCLOSURE AT EXTERIOR.
(3) BARRIER FREE PATH OF TRAVEL FROM WASTE STORAGE AREA TO COMMON WASTE REMOVAL AREA FOR TRASH PICK-UP.

NOTE: PHILZ COFFEE IS NOT A FULL SERVICE RESTAURANT. FOOD IS LIMITED TO PREPACKAGED ITEMS AND BAKERY ITEMS PRODUCED OFFSITE. FOOD WASTE WILL BE LIMITED, AS SUCH, FULL ENCLOSURE OF THE SOLID WASTE AREA WAS NOT PROVIDED.

SOLID WASTE PLAN	NTS	14
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CODE REVIEW INFORMATION
APPLICABLE CODES: ALL WORK DONE UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS, DRAWINGS AND CONSTRUCTION CRITERIA OF THE LANDLORD, AND SHALL SATISFY ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS OF ALL GOVERNING BODIES INVOLVED. ANY MODIFICATIONS TO THE CONTRACT WORK REQUIRED BY SUCH AUTHORITIES SHALL BE PERFORMED BY THE TENANT'S CONTRACTOR. ALL PERMITS AND LICENSES NECESSARY FOR THE EXECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE OWNER.

CITY OF SAN DIEGO DEVELOPMENT SERVICES
1222 FIRST AVE., MS-302
SAN DIEGO, CA 92101
T: (619) 446-5000

COUNTY OF SAN DIEGO DEPARTMENT OF ENVIRONMENTAL HEALTH
FOOD AND HOUSING DIVISION
5500 OVERLAND AVE.
SAN DIEGO, CA 92123
T: (659) 505-6660

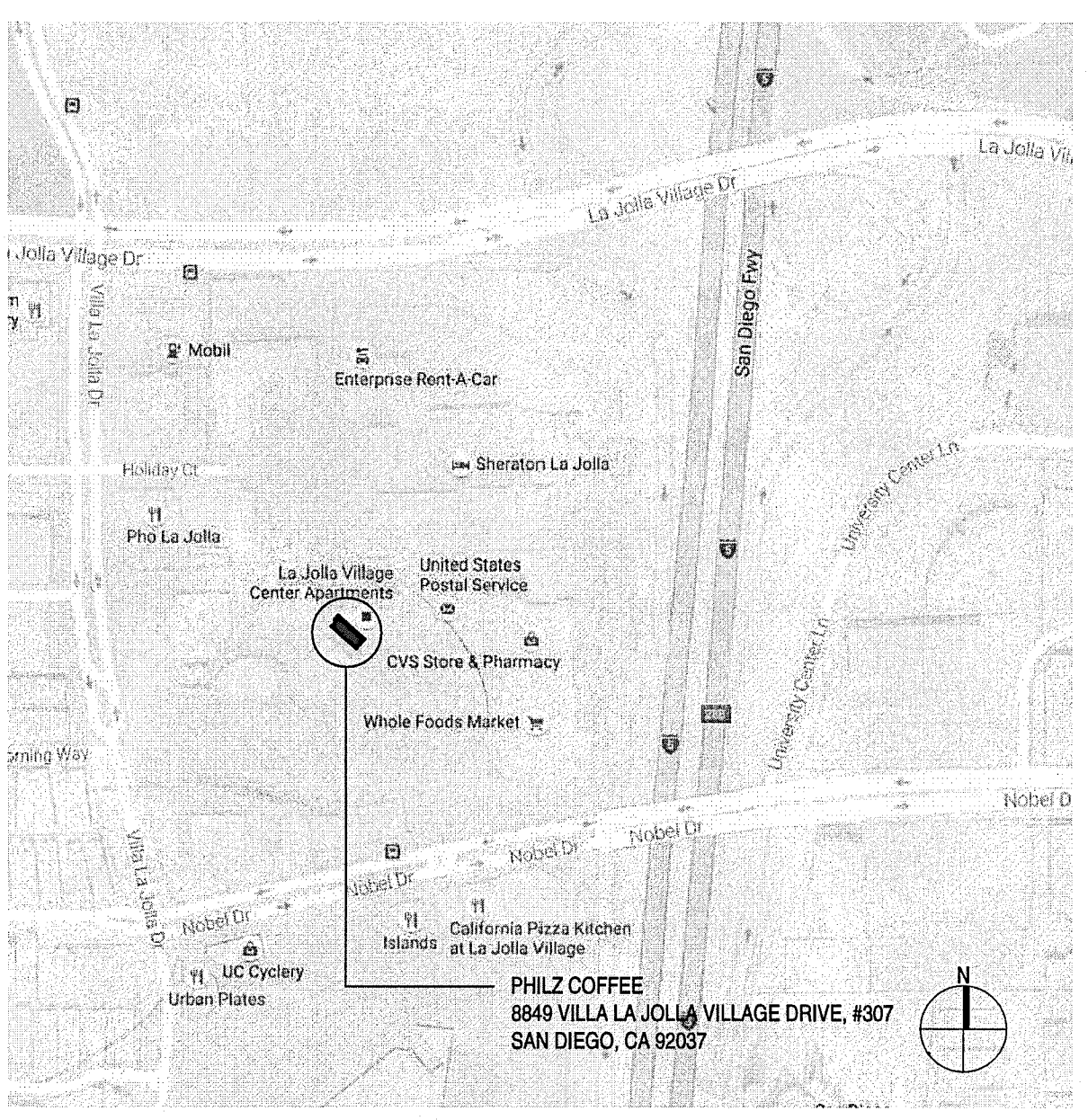
- PROJECT NAME: PHILZ COFFEE
- PROJECT DESCRIPTION: TENANT IMPROVEMENT
- PROJECT LOCATION: 8849 VILLA LA JOLLA VILLAGE DRIVE #307 SAN DIEGO, CA 92037
- TENANT NAME: PHILZ COFFEE
- LANDLORD: ALECTA REAL ESTATE USA, LLC
- TENANT'S ARCHITECT: MICHAEL JOHN MCCALL
- GOVERNING CODES / GUIDELINES:
BUILDING & STRUCTURAL: 2013 CALIFORNIA BUILDING CODE
ENERGY EFFICIENCY: 2013 CALIFORNIA ENERGY CODE
MECHANICAL: 2013 CALIFORNIA MECHANICAL CODE
ELECTRICAL: 2013 CALIFORNIA ELECTRICAL CODE
PLUMBING: 2013 CALIFORNIA PLUMBING CODE
FIRE PROTECTION: 2013 CALIFORNIA FIRE CODE
GREEN BUILDING STANDARDS: 2013 CALIFORNIA GREEN BUILDING CODE

COUNTY OF SAN DIEGO DEPARTMENT OF ENVIRONMENTAL HEALTH FOOD AND HOUSING DIVISION: CALIFORNIA RETAIL FOOD CODE 2013
- NET OCCUPIABLE AREA OF PREMISES: 1,961 SF
- LEASABLE TENANT AREA: 2,082 SF
- CONSTRUCTION TYPE: V-A
- OCCUPANCY TYPE: A-2
- SPRINKLER SYSTEM: FULLY SPRINKLERED
- RESTROOM REQUIREMENTS: 2 REQUIRED 2 PROVIDED
- MAXIMUM EXIT ACCESS TRAVEL DISTANCE: 250 LINEAR FEET WITH AUTOMATIC SPRINKLER SYSTEM
- ACTUAL TRAVEL DISTANCE TO EXIT: 50'-4" L.F.
- FIRE EXTINGUISHERS: PROVIDE PORTABLE FIRE EXTINGUISHERS WITH UL LABEL AND RATING OF NOT LESS THAN 2A10BC WITH IN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF SPACE
- EXIT SEPARATION: PROVIDED: 71'-11" L.F.
REQUIRED: 25'-9" L.F.
- BUILDING LEVEL: PROJECT LOCATED AT GROUND LEVEL OF AN EXISTING TWO-STORY MIXED-USE BUILDING
- ZONING: CC-1-3
- CURRENT USE: M - RADIO SHACK
PROPOSED USE: COMMERCIAL: A2, COFFEE SHOP
- MUNICIPAL WASTEWATER/WATER DISTRICT: CITY OF SAN DIEGO PUBLIC UTILITIES DEPARTMENT PO BOX 129020 SAN DIEGO, CA 92112
- APPROVED DEVELOPMENT PERMIT NUMBER: 89-0419
- REQUIRED SEPARATION OF OCCUPANCIES: PROVIDED: 1-HR
REQUIRED: 1-HR

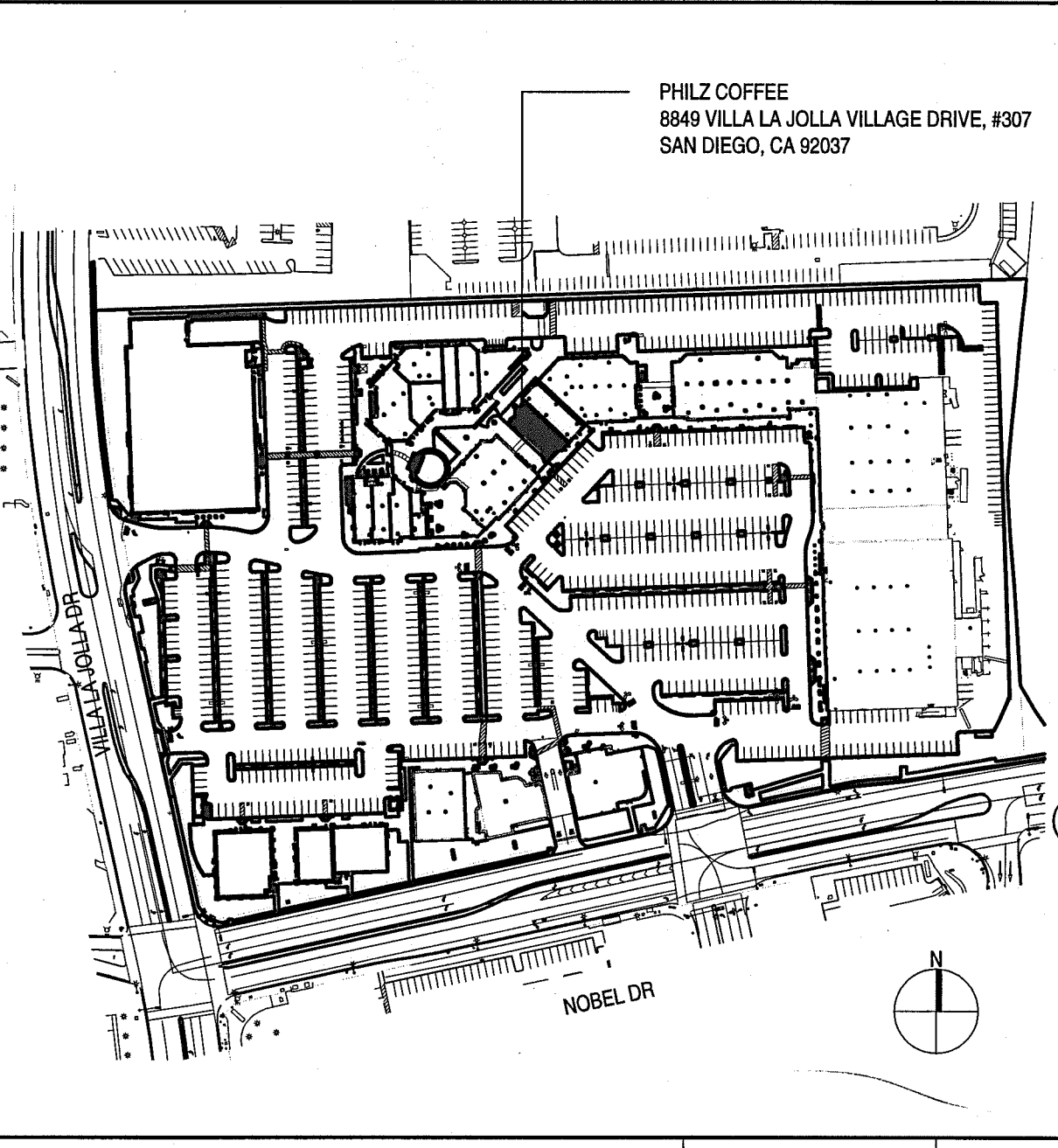
CODE DATA AND OVERVIEW	NTS	4
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PHILZ COFFEE

8849 VILLA LA JOLLA VILLAGE DRIVE, #307
SAN DIEGO, CA



VICINITY MAP	NTS	8
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SITE MAP	NTS	3
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OWNER
CONTACT: JOSEFINA GARCIA
PHILZ COFFEE
1259 MINNESOTA STREET
SAN FRANCISCO, CA 94107
415.834.5933 ext. 115
davidgrey@philzcoffee.com

LANDLORD
CONTACT: SHOPCORE PROPERTIES
17140 BERNARDO CENTER DR., SUITE 300
SAN DIEGO, CA 92128
D: 652.598.1468
C: 323.793.1225
sodish@shopcore.com

CONTACT: TED ANDERSON - REGIONAL PROPERTY MANAGER
SHOPCORE PROPERTIES
15 WEST SOUTH TEMPLE, SUITE 900
SALT LAKE CITY, UT 84101
D: 858.813.1800 x307
C: 801.634.2125
tanderson@shopcore.com
www.shopcore.com

CONTACT: JENNIFER M. LAGACE, CSM - PROPERTY MANAGER
2465 MOREHOUSE DRIVE, SUITE 260
SAN DIEGO, CA 92121
858.546.3000 x596
858.546.3009
jennifer@sdsupcorp.com

ARCHITECT
PROJECT CONTACT: STEVE NELSON, MEL YOO, JIMMY NG
ARCHITECT: MICHAEL JOHN MCCALL
MCCALL DESIGN GROUP
550 KEARNEY STREET, SUITE 950
SAN FRANCISCO, CA 94108
415.288.8176

MEP ENGINEER
CONTACT: PHONG LE, DANIEL YAU
ACIES ENGINEERING
111 W. EVELYN AVENUE, SUITE 4301
SUNNYVALE, CA 94086
(408) 522-5255
DANIEL@ACIES.NET

PROJECT DIRECTORY	NTS	7
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TENANT IMPROVEMENT PROJECT FOR CONSTRUCTION OF A COFFEE SHOP IN THE GROUND FLOOR LEVEL OF AN EXISTING TWO-STORY MIXED-USE BUILDING.

SCOPE OF WORK AT INTERIOR OF SPACE INCLUDES INSTALLATION OF GYPSUM BOARD WALLS & CEILINGS, CABINETS, FOOD SERVICE EQUIPMENT, MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS.

SCOPE OF WORK AT EXTERIOR INCLUDES SIGNAGE ONLY. UNDER SEPARATE PERMIT. TENANT SHALL SUBMIT ONE COLOR COPY OF THE PROPOSED SIGNAGE PLAN FOR REVIEW AND APPROVAL TO SODISH@SHOPCORE.COM

Deferred submittal for fire sprinkler & fire alarm

SCOPE OF WORK	NTS	2
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ARCHITECTURAL	
△ A0.0	COVER SHEET
△ A0.1	NOTES
△ A0.2A	CALGREEN CHECKLIST
△ A0.2B	CALGREEN CHECKLIST
△ A0.3	NOTES AND SCHEDULES
△ A0.4	DOOR & HARDWARE SCHEDULES
△ A0.5	SIGNAGE & MOUNTING HEIGHT DETAILS
△ A0.6	TOILET ROOM DETAILS
△ A0.7A	SITE PLAN
△ A0.7B	SITE ACCESSIBILITY DETAILS
△ A0.7C	ALLOWABLE FLOOR AREA CALCULATION
△ A0.8	EXISTING FLOOR PLAN
△ A0.9	EGRESS PLAN
△ A1.0	FLOOR PLAN
△ A2.0	DIMENSIONED FLOOR PLAN
△ A3.0	REFLECTED CEILING PLAN
△ A4.0	INTERIOR ELEVATIONS
△ A4.1	INTERIOR ELEVATIONS
△ A6.0	CONSTRUCTION DETAILS
△ A6.1	CONSTRUCTION DETAILS
△ A6.2	CONSTRUCTION DETAILS
△ A6.3	CONSTRUCTION DETAILS
△ A7.0	EQUIPMENT PLAN
△ A8.0	MILLWORK ELEVATIONS
△ A8.1	MILLWORK ELEVATIONS
△ A8.2	MILLWORK ELEVATIONS
△ A8.4	MILLWORK DETAILS
△ A8.5	MILLWORK DETAILS

MECHANICAL	
M0.1	MECHANICAL SCHEDULE AND NOTES
M0.2	MECHANICAL SPECIFICATIONS
M0.3	T-24 FORMS
M0.4	T-24 FORMS
△ M2.1	MECHANICAL PLAN
M6.1	MECHANICAL DETAILS

ELECTRICAL	
△ E0.1	LEGEND, NOTES, & SCHEDULES
E0.2A	ELECTRICAL SPECIFICATIONS
E0.2B	ELECTRICAL SPECIFICATIONS
△ E0.3	SINGLE LINE AND PANEL SCHEDULES
△ E0.4A	TITLE 24 FORMS
△ E0.4B	TITLE 24 FORMS
E0.4C	TITLE 24 FORMS
E0.4D	TITLE 24 FORMS
E0.4E	TITLE 24 FORMS
E0.4F	TITLE 24 FORMS
△ E0.5	LIGHTING CONTROL
△ E1.1	LIGHTING PLAN
△ E2.1	POWER PLAN
E3.0	DETAILS

PLUMBING	
△ P0.1	PLUMBING FIXTURE SCHEDULE
P0.2	GENERAL NOTES AND SPECIFICATIONS
△ P0.3	PLUMBING T-24 FORM
P0.4	PLUMBING T-24 FORM
△ P2.1	PLUMBING PLAN - WASTE AND VENT
△ P2.2	PLUMBING PLAN - DOMESTIC WATER
△ P3.1	PLUMBING ISOMETRICS
△ P6.1	PLUMBING DETAILS

SEAL/SIGNATURE	
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DRAWING DESCRIPTION

CITY OF SAN DIEGO APPROVED
539996 1860537
Construction Project Number Construction Approval Number

 Construction Change Project Number
 Deferred Document Project Number
 This set of plans and specifications shall be kept on the site of the structure or work at all times during which work authorized by these plans is in progress, and shall be made available to City officials upon request. It is unlawful to change, modify or alter the approved plans and specifications without authorization of the Building Official. The stamping of these plans and specifications SHALL NOT be held to permit nor approve the violation of any City, County, State or Federal laws, nor restrictions.
 Issued by: [Signature] Date: 5/24/17

**STORM WATER QUALITY NOTES
CONSTRUCTION BMP'S**

This project shall comply with all current requirements of the State Permit; California Regional Water Quality Control Board (SDRWQCB), San Diego Municipal Storm Water Permit, The City of San Diego Land Development Code, and the Storm Water Standards Manual.

Notes below represent key minimum requirements for construction BMP's.

1. The contractor shall be responsible for cleanup of all silt and mud on adjacent street(s), due to construction vehicles or any other construction activity, at the end of each work day, or after a storm event that causes a breach in installed construction BMP's which may compromise Storm Water Quality within any street(s). A stabilized construction exit may be required to prevent construction vehicles or equipment from tracking mud or silt onto the street.
2. All stockpiles of soil and/or building materials that are intended to be left for a period greater than seven calendar days are to be covered. All removable BMP devices shall be in place at the end of each working day when five day rain probability forecast exceeds 40%.
3. A concrete washout shall be provided on all projects which propose the construction of any concrete improvements which are to be poured in place on site.
4. The contractor shall restore all erosion/sediment control devices to working order after each run-off producing rainfall or after any material breach in effectiveness.
5. All slopes that are created or disturbed by construction activity must be protected against erosion and sediment transport at all times.
6. The storage of all construction materials and equipment must be protected against any potential release of pollutants into the environment.

Updated 9/9/15

Environmental Health Notes

The following Environmental Health notes are to be placed on your plans to assist in providing clear direction between those involved in the actual construction of a food facility including contractors and Environmental Health Specialists. These notes will encompass most food facilities but are not meant to be comprehensive for all food facilities or situations:

1. A concrete slab is provided for trash, garbage, and grease container. If walls enclose area, the interior wall surfaces will be smooth, sealed and washable (e.g., plastered smooth and painted, etc.).
2. All food-related and utensil-related equipment shall meet or be equivalent to sanitation standards established by an American National Standards Institute (ANSI) accredited program.
3. All floor mounted equipment will be installed on minimum 6" sanitary legs, castors, or completely sealed in position on a 4" high curb with continuously coved base. Countertop equipment will be on 4-inch sanitary legs or sealed to the counter unless readily movable.
4. If soft drink, ice or other dispensers are self-service, or if refills are provided they must be push button types, or lever types where the lever contacts the container at least one inch below the rim.
5. Any openable windows vent openings or other similar openings must be provided with tight fitting screens of minimum 16-mesh to the inch. Windows to be fixed at food prep, utensil-washing, open food and utensil storage areas.
6. All exterior doors open outward and are self-closing and tight fitting.
7. Bi-fold, French, accordion style and roll-up doors cannot open into the food prep, utensil washing or unpackaged food service areas.
8. Toilet room and dressing room doors must be self-closing, tight fitting.
9. Delivery doors to have air curtain fans that span the width over the door. The fan must activate via a microswitch providing a minimum velocity of 1600 fpm measured 3 feet above the ground.
10. A minimum of 10 foot-candles of light measured 30" off floor is provided in walk-in refrigerated storage and dry storage rooms and at least 20-foot candles is provided where food is provided for consumer self-service, where fresh produce or prepackaged foods are sold or offered for consumption; inside equipment such as reach-in and under-counter refrigerators; in areas used for handwashing, warewashing, equipment and utensil storage, and in toilet rooms.
11. A minimum of 50 foot-candles of light measured 30" off floor is provided when working with food or working with utensils or equipment such as knives, slicers, grinders, or saws where employee safety is a factor and in all areas during periods of cleaning.
12. Shattershields for all lights above food preparation, work, and storage areas will be provided.
13. All warewashing sinks to have 3 compartments that are a minimum size of at least 18"x18"x12" deep (or 16"x20"x12" deep) with a minimum 18" drainboard at each end. If against a wall, it must have an 8" integral backsplash. However, it must be capable of accommodating the largest utensil to be washed. A warewashing machine does not substitute for the sink requirement.
14. Sinks to have spout(s) capable of reaching each compartment.
15. Food prep sink compartment(s) to be at least 18"x18"x12" deep (or 16"x20"x12" deep) with a minimum 18" drainboard. Separate food prep sinks to be provided for meats and produce.
16. The 3 or 4 compartment bar sink to be at least 12"x12"x10" deep (or 10"x14"x10" deep) with a minimum 18" drainboard at each end.
17. A separate wet waste dump fixture shall be provided for disposal of drink or waste ice or coffee waste.
18. Each handwashing sink must have permanently mounted single-service soap and paper towel dispensers.

19. The hot water heater will be a commercial type capable of constantly supplying hot water at a temperature of 120°F to all sinks. In sizing the water heater, the peak hourly demand for all sinks, etc., are added together to determine the minimum required recovery rate.
20. All lavatories or hand sinks will have a combination faucet or premixing faucet capable of supplying water tempered to 100°F. Self-closing or metered faucet to provide at least 15 seconds of water without reactivation.
21. All plumbing, electrical and gas lines shall be concealed within the building structure to as great an extent as possible. All exposed conduits, plumbing, etc. shall be installed at least 6" off floor and 3/4" from walls using standoff brackets.
22. Conduits, plumbing or piping cannot be installed across any aisle way, traffic area or door opening.
23. Multiple runs or clusters of conduit or pipelines shall be furred in or encased in an approved sealed enclosure.
24. All liquid waste shall be drained by means of indirect waste pipes into a floor sink. Floor sinks are to be installed flush with the finished floor surface and have suitable easily removable safety cover grates.
25. Floor sink to be 50% exposed when no access is provided for cleaning or be in line with the front face of elevated freestanding equipment.
26. Approved backflow prevention devices shall be properly installed upstream of any potential hazard between the potable water supply and a source of contamination. Hoses shall not be attached to a faucet or hose bibb unless an approved backflow preventer is provided.
27. Water supply to carbonators shall be protected by an approved reduced pressure principle backflow preventer. The relief valve shall drain indirectly to sewer with a legal air gap.
28. For cleaning floor mats, the janitorial sink to be a minimum 24" by 36" floor-mounted type. Mops shall be placed in a position that allows them to air-dry without soiling walls, equipment, or supplies.
29. The janitorial sink faucet will have a threaded outer lip for hose attachment and an approved backflow prevention device. No chemical dispensing systems or shutoff valves to be attached to mop sink faucet outlet (unless a "sidekick" plumbing device is installed).
30. No condensate or wastewater including HVAC will drain into the janitorial sink.
31. Grease trap to be located outside the food service activity area, flush with the finished floor when indoors. Local wastewater district or building department to be contacted for grease removal requirements.
32. Floor drains shall be installed in floors that are water-flushed for cleaning and in areas where pressure spray methods for cleaning equipment are used, in restrooms, janitorial rooms, sculleries, and at bars with warewashing. Floor surfaces in areas pursuant to this shall be sloped 1:50 to the floor drains.
33. Adequate ventilation is to be provided to all toilet rooms, janitor closets with mop sinks, and indoor trash rooms and in dressing/change room(s).
34. The floor finish will have a smooth surface under all equipment and walkways will have a light texture only.
35. The paint used on walls and ceilings of all kitchen, food preparation, work, and storage areas will be a gloss or semi-gloss enamel. Finish material shall be a light color in food prep areas for easy cleaning.
36. Prior to installation, samples of finishes to be submitted to Environmental Health for approval as needed.
37. Cold storage rooms shall be provided with a section of shelving installed to hold shallow cool down pans—not to exceed 4" in height. Space between shelving to be at least 8" high.
38. Backup dry storage shelving shall be a minimum of 96 linear feet (measured with tiers) or 25% of kitchen, food prep, and work areas, whichever is greater. Shelving shall be at least 18 inches deep and start a minimum six inches off the floor surface.
39. Shelving over wet areas (sinks, mop sinks etc.) and food prep surfaces will be metal.
40. All seams, gaps, openings to be properly sealed.

PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA

JOB NUMBER:
216808

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

NOTES

SCALE

A0.1

INSPECTOR SIGNOFF

ABBREVIATION DEFINITIONS:

HCD Department of Housing and Community Development
BSC California Building Standards Commission
DSA-SS Division of the State Architect, Structural Safety
CSHPD Office of Statewide Health Planning and Development
OSHPD Low Rise
HR High Rise
AA Additions and Alterations
N New

CHAPTER 3 GREEN BUILDING

SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC] The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

A code section will be designated by a banner to indicate where the code section only applies to newly constructed building [N] or to additions and alterations [AA]. When the code section applies to both, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES

DIVISION 5.1 PLANNING AND DESIGN

SECTION 5.101 GENERAL

5.101.1 SCOPE

The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

SECTION 5.102 DEFINITIONS

5.102.1 DEFINITIONS. The following terms are defined in Chapter 2 (and are included here for reference)

CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES

Eligible vehicles are limited to the following:

- 1. Zero emission vehicle (ZEV), including neighborhood electric vehicles (NEV), partial zero emission vehicle (PZEV), advanced technology PZEV (AT PZEV) or CNG fueled (original equipment manufacturer only) regulated under Health and Safety Code section 43800 and CCR, Title 13, Sections 1961 and 1962.
2. High-efficiency vehicles, regulated by U.S. EPA, bearing High-Occupancy Vehicle (HOV) car pool lane stickers issued by the Department of Motor Vehicles.

NEIGHBORHOOD ELECTRIC VEHICLE (NEV). A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the Vehicle Code or in 49CFR571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.

TENANT-OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purpose of ride-sharing.

ZEV. Any vehicle certified to zero-emission standards.

SECTION 5.106 SITE DEVELOPMENT

5.106.1 STORM WATER POLLUTION PREVENTION. Newly constructed projects and additions which disturb less than one acre of land shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures:

5.106.1.1 LOCAL ORDINANCE. Comply with a lawfully enacted storm water management and/or erosion control ordinance.

5.106.1.2 BEST MANAGEMENT PRACTICES (BMP). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMP.

- 1. Soil loss BMP that should be considered for implementation as appropriate for each project include, but are not limited to the following:
a. Scheduling construction activity.
b. Preservation of natural features, vegetation and soil.
c. Drainage swales or lined ditches to control stormwater flow.
d. Mulching or hydroseeding to stabilize disturbed soils.
e. Erosion control to protect slopes.
f. Protection of storm drain inlets (gravel bags or catch basin inserts).
g. Perimeter sediment control (perimeter silt fence, fiber rolls).
h. Sediment trap or sediment basin to retain sediment on site.
i. Stabilized construction exits.
j. Wind erosion control.
k. Other soil loss BMP acceptable to the enforcing agency.

2. Good housekeeping BMP to manage construction equipment, materials and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
a. Material handling and waste management.
b. Building materials stockpile management.
c. Management of washout areas (concrete, paints, stucco, etc.).
d. Control of vehicle/equipment fueling to contractor's staging area.
e. Vehicle and equipment cleaning performed off site.
f. Spill prevention and control.
g. Other housekeeping BMP acceptable to the enforcing agency.

5.106.4 BICYCLE PARKING. For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2

5.106.4.1 BICYCLE PARKING. [BSC] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.

5.106.4.1.1 SHORT-TERM BICYCLE PARKING. [BSC] If the project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.

5.106.4.1.2 LONG-TERM BICYCLE PARKING. For new buildings with over 10 tenant-occupants or for additions or alterations that add 10 or more tenant vehicle parking spaces, provide secure bicycle parking for 5 percent of the tenant vehicle parking spaces being added, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and shall meet one of the following:
1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

NOTE: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

5.106.4.2 BICYCLE PARKING. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2

5.106.4.2.1 SHORT-TERM BICYCLE PARKING. Provide permanently anchored bicycle racks within 200 feet of the student entrance, readily visible to passers-by, for 5 percent of the student population based on the total occupant load of the campus, with a minimum of one two-bike capacity rack.

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5.106.4.2.2 LONG-TERM BICYCLE PARKING. Provide secure bicycle parking for 5% of employees, based on the total number of motorized vehicle parking capacity in the staff parking lot, with a minimum of one space. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

- 1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

5.106.5.2 DESIGNATED PARKING. In new projects or additions or alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:

Table with 2 columns: TOTAL NUMBER OF PARKING SPACES, NUMBER OF REQUIRED SPACES. Rows include 0-4, 5-9, 10-25, 26-50, 51-75, 76-100, 101-150, 151-200, and 201 and over.

5.106.5.2.1 - PARKING STALL MARKING. Paint, in the paint used for stall striping, the following characters such that the lower edge of the stall word aligns with the end of the stall striping and is visible beneath a parked vehicle:

CLEAN AIR / VAN POOL / EV

NOTE: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces.

5.106.8 LIGHT POLLUTION REDUCTION. [N] Outdoor lighting systems shall be designed and installed to comply with the following:

- 1. The minimum requirements in the California Energy Code for Lighting Zones 1-4 as defined in Chapter 10 of the California Administrative Code; and
2. Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11; and
3. Allowable BUG ratings not exceeding those shown in Table 5.106.8, or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

EXCEPTIONS: [N] 1. Luminaires that qualify as exceptions in Section 140.7 of the California Energy Code.

NOTE: [N] See also California Building Code, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.

5.106.10 GRADING AND PAVING. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

- 1. Swales.
2. Water collection and disposal systems.
3. French drains.
4. Water retention gardens.
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

EXCEPTION: Additions and alterations not altering the drainage path.

DIVISION 5.2 ENERGY EFFICIENCY

SECTION 5.201 GENERAL

5.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION

SECTION 5.301 GENERAL

5.301.1 SCOPE. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.

SECTION 5.302 DEFINITIONS

5.302.1 DEFINITIONS. The following terms are defined in Chapter 2 (and are included here for reference)

GRAYWATER. Pursuant to Health and Safety Code Section 17822.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthily bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). [HCD] The California model ordinance (California Code of Regulations, Title 23, Division 2, Chapter 2.7), regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least as effective as the MWELO.

POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.

POTABLE WATER. [HCD] Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.

RECYCLED WATER. Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [Water Code Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

SUBMETER. A meter installed subordinate to a site meter. Usually used to measure water intended for one purpose, such as landscape irrigation. For the purposes of CALGreen, a dedicated meter may be considered a submeter.

WATER BUDGET. Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MWELO).

SECTION 5.303 INDOOR WATER USE

5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections 503.1.1 and 503.1.2.

5.303.1.1 BUILDINGS IN EXCESS OF 50,000 SQUARE FEET. Separate submeters shall be installed as follows:
1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:
a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
c. Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW).

5.303.1.2 EXCESS CONSUMPTION. A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.

5.303.2 WATER REDUCTION. Plumbing fixtures shall meet the maximum flow rate values shown in Table 5.303.2.2 EXCEPTION: Building that demonstrate 20% overall water use reduction. In this case, a calculation demonstrating a 20% reduction in the building "water use baseline," as established in Table 5.303.2.2, shall be provided.

5.303.2.1 AREAS OF ADDITION OR ALTERATION. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.2 and Section 5.303.3 shall apply to new fixtures in additions or areas of alteration to the building.

5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

5.303.3.1 WATER CLOSETS. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type Toilets. NOTE: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

5.303.3.2 URINALS. The effective flush volume of urinals shall not exceed 0.5 gallons per flush.

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5.303.3.3 SHOWERHEADS.

5.303.3.3.1 SINGLE SHOWERHEAD. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for showerheads.

5.303.3.3.2 MULTIPLE SHOWERHEADS SERVING ONE SHOWER. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. NOTE: A hand-held shower shall be considered a showerhead.

5.303.4 WASTEWATER REDUCTION. [N] Each building shall reduce by 20 percent wastewater by one of the following methods:
1. [BSC, DSA-SS] The installation of water-conserving fixtures (water closets, urinals) meeting the criteria established in sections 5.303.2 or 5.303.3.
2. [BSC] Utilizing non-potable water systems (captured rainwater, graywater, and municipally treated wastewater (recycled water) complying with the current edition of the California Plumbing Code or other methods described in Section AS.304.8.

5.303.6 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1401.1 of the California Plumbing Code and in Chapter 6 of this code.

Table 5.303.2.2 WATER USE BASELINE. Columns: FIXTURE TYPE, FLOW RATE, DURATION, DAILY USES, OCCUPANTS. Rows include Shower heads, Lavatory faucets, Kitchen faucets, Replacement aerators, Wash fountains, Metering faucets, Metering faucets for wash fountains, Gravity tank-type water closet, Flushometer tank water closet, Flushometer valve water closet, Electromechanical hydraulic water closet, Urinals.

Fixture "Water Use" = Flow rate x Duration x Occupants x Daily uses
1. The daily use number shall be increased to three if urinals are not installed in the room.
2. Refer to Table A, Chapter 4, California Plumbing Code, for occupant load factors.

a. Shower use by occupants depends on the type of use of a building or portion of a building, e.g., total occupant load for a health club, but only a fraction of the occupants in an office building as determined by the anticipated number of users
b. Nonresidential kitchen faucet use is determined by the occupant load of the area served by the fixture.
3. Use Worksheet WS-1 to calculate baseline water use.

Table 5.303.2.3 WATER REDUCTION FIXTURE FLOW RATES. Columns: FIXTURE TYPE, MAX. FLOW RATE @ 20% REDUCTION. Rows include Kitchen faucets, Wash fountains, Metering faucets, Metering faucets for wash fountains.

SECTION 5.304 OUTDOOR WATER USE

5.304.1 WATER BUDGET. A water budget shall be developed for landscape irrigation use that installed in conjunction with a new building or an addition or alteration conforms to the local water efficient landscape ordinance or to the California Department of Water Resources Water Efficient Landscape Ordinance where no local ordinance is applicable.

NOTE: Prescriptive measures to assist in compliance with the water budget are listed in Sections 492.5 through 492.8, 492.10 and 492.11 of the ordinance, which may be found at: http://www.water.ca.gov/watersenseefficiency/docs/WaterOrdSeo492.cfm.

5.304.2 OUTDOOR POTABLE WATER USE. For new water service or for addition or alteration requiring upgraded water service for landscaped areas of at least 1,000 square feet but not more than 5,000 square feet (the level at which Water Code §535 applies), separate submeters or metering devices shall be installed for outdoor potable water use.

5.304.3 IRRIGATION DESIGN. In new nonresidential construction or building addition or alteration with at least 1,000 but not more than 2,500 square feet of cumulative landscaped area (the level at which the MWELO applies), install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.

5.304.3.1 IRRIGATION CONTROLLERS. Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:

- 1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.
NOTE: More information regarding irrigation controller function and specifications is available from the Irrigation Association.

DIVISION 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION 5.401 GENERAL

5.401.1 SCOPE. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.

SECTION 5.402 DEFINITIONS

5.402.1 DEFINITIONS. The following terms are defined in Chapter 2 (and are included here for reference)

ADJUST. To regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust a damper.

BALANCE. To proportion flows within the distribution system, including submain, branches and terminals, according to design quantities.

BUILDING COMMISSIONING. A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.

TEST. A procedure to determine quantitative performance of a system or equipment.

SECTION 5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT

5.407.1 WEATHER PROTECTION. Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1403.2 (Weather Protection) and California Energy Code Section 150, (Mandatory Features and Devices), manufacturer's installation instructions or local ordinance, whichever is more stringent.

5.407.2 MOISTURE CONTROL. Employ moisture control measures by the following methods.

5.407.2.1 SPRINKLERS. Design and maintain landscape irrigation systems to prevent spray on structures.

5.407.2.2 ENTRIES AND OPENINGS. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows:

- 5.407.2.2.1 EXTERIOR DOOR PROTECTION. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following:
1. An installed awning at least 4 feet in depth.
2. The door is protected by a roof overhang at least 4 feet in depth.
3. The door is recessed at least 4 feet.
4. Other methods which provide equivalent protection.

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5.407.2.2 FLASHING. Install flashings integrated with a drainage plane.

SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 50% of the non-hazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.

5.408.1.1 CONSTRUCTION WASTE MANAGEMENT PLAN. Where a local jurisdiction does not have a construction and demolition waste management ordinance that is more stringent, submit a construction waste management plan that:

- 1. Identifies the construction and demolition waste materials to be diverted from on-site by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identifies diversion facilities where construction and demolition waste material collected will be taken.
4. Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

5.408.1.2 WASTE MANAGEMENT COMPANY. Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section.

NOTE: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company.

EXCEPTIONS TO SECTIONS 5.408.1.1 AND 5.408.1.2:

- 1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets.

5.408.1.3 WASTE STREAM REDUCTION ALTERNATIVE. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 50% minimum requirement as approved by the enforcing agency.

5.408.1.4 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1, through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

NOTES:
1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located at www.bsc.ca.gov/Home/CALGreen.aspx may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS. [BSC] 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

EXCEPTION: Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation.

NOTES:
1. If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material. (www.cdffa.ca.gov/cevc/countycounty_contacts.html)
2. For a map of known pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdffa.ca.gov)

SECTION 5.410 BUILDING MAINTENANCE AND OPERATIONS

5.410.1 RECYCLING BY OCCUPANTS. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.

5.410.1.1 ADDITIONS. [A] All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30% or more in floor area, shall provide recycling areas on site.

EXCEPTION: Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area.

5.410.1.2 SAMPLE ORDINANCE. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the Public Resources Code. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

NOTE: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

5.410.2 COMMISSIONING. [N] For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. Commissioning requirements shall include:

- 1. Owner's or Owner representative's project requirements.
2. Basis of design.
3. Commissioning measures shown in the construction documents.
4. Commissioning plan.
5. Functional performance testing.
6. Documentation and training.
7. Commissioning report.

EXCEPTIONS:
1. Dry storage warehouses of any size.
2. Areas under 10,000 square feet used for offices or other conditioned accessory spaces within dry storage warehouses.
3. Tenant improvements under 10,000 square feet as described in Section 303.1.1.

4. Commissioning requirements for energy systems covered by the 2013 California Energy Code.

All building systems and components covered by Title 24, Part 6, as well as process equipment and controls, and renewable energy systems shall be included in the scope of the commissioning requirements.

5.410.2.1 OWNERS OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS (OPR). [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:

- 1. Environmental and sustainability goals.
2. Energy efficiency goals [refer to 2013 California Energy Code, Section 120.8(b)].
3. Indoor environmental quality requirements.
4. Project program, including facility functions and hours of operation, and need for after hours operation.
5. Equipment and systems expectations.
6. Building operation and maintenance (O&M) personnel expectations.

5.410.2.2 BASIS OF DESIGN (BOD). [A] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover the following systems:

- 1. Heating, ventilation, air conditioning (HVAC) systems and controls [refer to 2013 California Energy Code, Section 120.8(c)].
2. Indoor lighting system and controls [refer to 2013 California Energy Code, Section 120.8(c)].
3. Water heating system [refer to 2013 California Energy Code, Section 120.8(c)].
4. Renewable energy systems.
5. Landscape irrigation systems.
6. Water reuse systems.

5.410.2.3 COMMISSIONING PLAN. [N] Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:

- 1. General project information.
2. Commissioning goals.
3. Systems to be commissioned. Plans to test systems and components shall include:
a. An explanation of the original design intent.
b. Equipment and systems to be tested, including the extent of tests.
c. Functions to be tested.
d. Conditions under which the test shall be performed.
e. Measurable criteria for acceptable performance.

4. Commissioning team information.
5. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

5.410.2.4 FUNCTIONAL PERFORMANCE TESTING. [A] Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

5.410.2.5 DOCUMENTATION AND TRAINING. [N] A Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in California Code of Regulations (

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5.410.2.5.2 SYSTEMS OPERATIONS TRAINING. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissioning report and shall include the following:

1. System/equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces)
2. Review and demonstration of servicing/preventive maintenance.
3. Review of the information in the Systems Manual.
4. Review of the record drawings on the system/equipment.

5.410.2.6 COMMISSIONING REPORT. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.

5.410.4 TESTING AND ADJUSTING. Testing and adjusting of systems shall be required for buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.

5.410.4.2 SYSTEMS. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

1. HVAC systems and controls.
2. Indoor and outdoor lighting and controls.
3. Water heating systems.
4. Renewable energy systems.
5. Landscape irrigation systems.
6. Water reuse systems.

5.410.4.3 PROCEDURES. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

5.410.4.3.1 HVAC BALANCING. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is placed for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards, the National Environmental Balancing Bureau Procedural Standards, Associated Air Balance Council National Standards or as approved by the enforcing agency.

5.410.4.4 REPORTING. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

5.410.4.5 OPERATION AND MAINTENANCE (O & M) MANUAL. Provide the building owner or representative with detailed operating and maintenance instructions and copies of guarantees/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

5.410.4.5.1 INSPECTIONS AND REPORTS. Include a copy of all inspection verifications and reports required by the enforcing agency.

DIVISION 5.5 ENVIRONMENTAL QUALITY

SECTION 5.501 GENERAL

5.501.1 SCOPE. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

SECTION 5.502 DEFINITIONS

5.502.1 DEFINITIONS. The following terms are defined in Chapter 2 (and a partial list is included here for reference)

ARTERIAL HIGHWAY. A general term denoting a highway primarily for through traffic usually on a continuous route.

A-WEIGHTED SOUND LEVEL (dBA) The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectra to which A-weighting adjustments have been made.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A metric similar to the day-night average sound level (Ldn), except that a 5 decibel (dB) adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardwood, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 93120.1(a).

NOTE: See CCR, Title 17, Section 93120.1.

DAY-NIGHT AVERAGE SOUND LEVEL (Ldn). The A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10 pm to 7 am)

DECIBEL (db). A measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, sound intensity) with respect to a reference quantity.

ENERGY EQUIVALENT (NOISE) LEVEL (Leq). The level of a steady noise which would have the same energy as the fluctuating noise level integrated over the time period of interest.

EXPRESSWAY. An arterial highway for through traffic which may have partial control of access, but which may or may not be divided or have grade separations at intersections.

FREEWAY. A divided arterial highway with full control of access and with grade separations at intersections.

MERV. Filter minimum efficiency reporting value, based on ASHRAE 52.2-2007.

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture: per weight of compound added, expressed to hundredths of a gram (g O3/g ROG).

NOTE: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

PRODUCT-WEIGHTED MIR (PWMI). The sum of all weighted-MIR for all ingredients in a product subject to this article. PWMI is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

NOTE: PWMI is calculated according to equations found in CCR, Title 17, Section 94521(a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressure greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

NOTE: Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

SECTION 5.503 FIREPLACES

5.503.1 GENERAL. Install only a direct-vented sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

5.503.1.1 WOODSTOVES. Woodstoves and pellet stoves shall comply with U.S. EPA Phase II emission limits where applicable.

SECTION 5.504 POLLUTANT CONTROL

5.504.1.3 TEMPORARY VENTILATION. The permanent HVAC system shall only be used during construction if necessary to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

5.504.3 COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may collect in the system.

5.504.4 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.

5.504.4.1 ADHESIVES, SEALANTS AND CAULKES. Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:

1. Adhesives, adhesive bonding primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 2, below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.

INSPECTOR SIGNOFF

TABLE 5.504.4.1 ADHESIVE VOC LIMIT - Less Water and Less Exempt Compounds in Grams per Liter	
ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesives	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT & asphalt tile adhesives	50
Drywall & panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives not specifically listed	50
SPECIALTY APPLICATIONS	CURRENT VOC LIMIT
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top & trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	CURRENT VOC LIMIT
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District rule 1168, www.arb.ca.gov/drbs/cdr/mim/1168.pdf

TABLE 5.504.4.2 SEALANT VOC LIMIT Less Water and Less Exempt Compounds in Grams per Liter	
SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	CURRENT VOC LIMIT
Architectural	250
Nonporous	775
Porus	775
Modified bituminous	500
Marine deck	760
Other	750

NOTE: For additional information regarding methods to measure the VOC content specified in these tables, see south coast Air Quality Management District Rule 1168.

5.504.4.3 PAINTS AND COATINGS. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

5.504.4.3.1 AEROSOL PAINTS AND COATINGS. Aerosol paints and coatings shall meet the PWMI Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (c)(3) of California Code of Regulations, Title 17, commencing with Section 94507; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

5.504.4.3.2 VERIFICATION. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification
2. Field verification of on-site product containers

INSPECTOR SIGNOFF

TABLE 5.504.4.3 VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS - Grams of VOC Per Liter of Coating, Less Water & Less Exempt Compounds	
COATING CATEGORY	CURRENT VOC LIMIT
Flat coatings	50
Nonflat coatings	100
Nonflat high gloss coatings	150
SPECIALTY COATINGS	CURRENT VOC LIMIT
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High-temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings	120
Magnesium cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers, & undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs:	CURRENT VOC LIMIT
Clear	730
Opaque	550
Specialty primers, sealers & undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub & tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

1. Grams of VOC per liter of coating, including water & exempt compounds
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.
3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, Feb. 1, 2008. More information is available from the Air Resources Board.

5.504.4 CARPET SYSTEMS. All carpet installed in the building interior shall meet at least one of the testing and product requirements:

1. Carpet and Rug Institute's Green Label Plus Program
2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1, February 2010 (also known as CDPH Standard Method V1.1 or Specification 01350).
3. NSF/ANSI 140 at the Gold level or Higher;
4. Scientific Certifications Systems Sustainable Choice; or
5. Compliant with the California Collaborative for High Performance Schools (CA-CHPS) Criteria Interpretation for EQ 2.2 dated July 2012 and listed in the CHPS High Performance Product Database.

5.504.4.1 CARPET CUSHION. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program.

5.504.4.2 CARPET ADHESIVE. All carpet adhesive shall meet the requirements of Table 5.504.4.1.

5.504.4.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure (ACTM) for Composite Wood (17 CCR 93120 et seq.). These materials not exempted under the ACTM must meet the specified emission limits, as shown in Table 5.504.4.5.

TABLE 5.504.4.5 FORMALDEHYDE LIMITS: Maximum Formaldehyde Emissions in Parts per Million	
PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particle board	0.09
Medium density fiberboard	0.11
Thin medium density fiberboards	0.13

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E 1333. For additional information, see California Code of Regulations, Title 17, Sections 93120 through 93120.12.
2. Thin medium density fiberboard has a maximum thickness of 5/16 inches (8 mm).

5.504.4.6 RESILIENT FLOORING SYSTEMS. For 80 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following:

1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program;
2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010;
3. Compliant with the California Collaborative for High Performance Schools (CA-CHPS) Criteria Interpretation for EQ 2.2 dated July 2012 and listed in the CHPS High Performance Product Database; or
4. Compliant with CDPH criteria as certified under the Greenguard Children's & Schools Program.

INSPECTOR SIGNOFF

5.504.4.6 RESILIENT FLOORING SYSTEMS. For 80 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following:

1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program;
2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010;
3. Compliant with the California Collaborative for High Performance Schools (CA-CHPS) Criteria Interpretation for EQ 2.2 dated July 2012 and listed in the CHPS High Performance Product Database; or
4. Compliant with CDPH criteria as certified under the Greenguard Children's & Schools Program.

5.504.4.6.1 VERIFICATION OF COMPLIANCE. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

5.504.5.3 FILTERS. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 8. MERV 8 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

EXCEPTIONS:

1. An ASHRAE 10% to 15% efficiency filter shall be permitted for an HVAC unit meeting the 2013 California Energy Code having 80,000 Btu/h or less capacity per fan coil, if the energy use of the air delivery system is 0.4 W/cfm or less at design air flow.
2. Existing mechanical equipment.

5.504.5.3.1 LABELING. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.

5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations, or as enforced by ordinances, resolutions or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.

SECTION 5.505 INDOOR MOISTURE CONTROL

5.505.1 INDOOR MOISTURE CONTROL. Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1203 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures not applicable to low-rise residential occupancies, see Section 5.407.2 of this code.

SECTION 5.506 INDOOR AIR QUALITY

5.506.1 OUTSIDE AIR DELIVERY. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements For Ventilation) of the 2013 California Energy Code, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.

5.506.2 CARBON DIOXIDE (CO2) MONITORING. For buildings or floors equipped with demand control ventilation, CO2 sensors and ventilation controls shall be specified and installed in accordance with the requirements of the 2013 California Energy Code, Section 120(c)(4).

SECTION 5.507 ENVIRONMENTAL COMFORT

5.507.4 ACOUSTICAL CONTROL. Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E 413, or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.

EXCEPTION: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, studios, storage, enclosed parking structures and utility buildings.

EXCEPTION: [DSA-SS] For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.

5.507.4.1 EXTERIOR NOISE TRANSMISSION, PRESCRIPTIVE METHOD. Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:

1. Within the 65 CNEL or Ldn noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan.

EXCEPTIONS:

1. Ldn or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan.
2. Ldn or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.

5.507.4.1.1 NOISE EXPOSURE WHERE NOISE CONTOURS ARE NOT READILY AVAILABLE. Buildings exposed to a noise level of 65 Leq-1hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).

5.507.4.2 PERFORMANCE METHOD. For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq-1hr) of 50 dBA in occupied areas during any hour of operation.

5.507.4.2.1 SITE FEATURES. Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior.

5.507.4.2.2 DOCUMENTATION OF COMPLIANCE. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.

5.507.4.3 INTERIOR SOUND TRANSMISSION. Wall and roof-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

NOTE: Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: www.toolbase.org/PDF/CaseStudies/stc_lco_ratings.pdf.

**CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS**

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION (HCD). When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

NOTES:

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

NOTE: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.

McCall
McCall Design Group
550 Kearny Street, Suite 950
San Francisco, CA 94108
tel 415.288.8150
fax 415.288.8181
www.mccalldesign.com

PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA
JOB NUMBER:
216089

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE

DRAWING DESCRIPTION

CALGREEN CHECKLIST

SCALE

NTS

1

A0.2B

SUBMITTAL REQUIREMENTS			
SUBMITTAL ITEM	DESIGN / SPECIFIED	REVIEWED BY	COMMENTS
SIGNAGE	ARCHITECT	OWNER / ARCHITECT	SUBMIT SHOP DRAWINGS
DOOR / DOOR HARDWARE	ARCHITECT	ARCHITECT	SUBMIT CUT SHEETS
MILLWORK	ARCHITECT	ARCHITECT	SUBMIT SHOP DRAWINGS / SAMPLES
STRUCTURAL FRAMING	ARCHITECT	ARCHITECT	-
HVAC	MEP ENGINEER	MEP ENGINEER / ARCHITECT	-
PLUMBING FIXTURES & ACCESSORIES	MEP ENGINEER / ARCHITECT	MEP ENGINEER / ARCHITECT	SUBMIT CUT SHEETS
SPRINKLER	GENERAL CONTRACTOR	MEP ENGINEER / ARCHITECT	-
FINISHES	ARCHITECT	ARCHITECT	-
NOTE: SHOP DRAWINGS MUST BE SUBMITTED IN A TIMELY AND PROFESSIONAL MANNER AT ALL TIMES.			
G.C. & VENDORS SHALL SUBMIT (2) SETS OF SHOP DRAWINGS & (2) SAMPLES TO ARCHITECT. (ARCHITECT TO DISTRIBUTE TO MEP AND STRUCTURAL ENGINEERS)			
McCALL DESIGN GROUP 550 KEARNY STREET, SUITE 950 SAN FRANCISCO, CA 94108 415.288.8150			
SUBMITTAL REQUIREMENTS			NTS 12

LIST OF REQUIRED DOCUMENTS			
TENANT NAME:	PHILZ COFFEE	RECEIVED	DATE RECEIVED
CENTER NAME:	LA JOLLA VILLAGE	<input type="checkbox"/>	
TENANT ADDRESS:	8849 VILLA LA JOLLA VILLAGE DRIVE, #307, SAN DIEGO, CA 92037	<input type="checkbox"/>	
PRECONSTRUCTION MEETING MAY BE SCHEDULED AFTER ALL DOCUMENTS ARE PROVIDED TO THE LANDLORD AS ONE PDF FILE.			
PRECONSTRUCTION MEETING CONF CALL INFO - 858-613-1800 X850 PASSCODE: 123456			
PERMIT		<input type="checkbox"/>	
CONTRACTOR'S SCHEDULE		<input type="checkbox"/>	
LANDLORD-APPROVED PLANS		<input type="checkbox"/>	
LANDLORD-APPROVED COI FROM CONTRACTOR		<input type="checkbox"/>	
LIST OF SUBCONTRACTORS		<input type="checkbox"/>	
GC CONTACT INFO:			
COMPANY NAME			
PROJECT MANAGER NAME		PHONE	
SUPERINTENDENT NAME		PHONE	
GC LICENSE NUMBER			

- THE WORK DELINEATED IN THESE DRAWINGS AND DESCRIBED IN THE SPECIFICATION SHALL CONFORM TO ALL CODES AND STANDARDS THAT HAVE JURISDICTION IN THE SPECIFIED STATE AND CITY.
- ALL REQUIREMENTS AND REGULATIONS PERTAINING TO ACCESSIBILITY AND OSHA MUST BE INCORPORATED IN THE WORK EVEN THOUGH THEY MAY NOT BE LISTED INDIVIDUALLY AND SEPARATELY IN EITHER THE DRAWINGS OR SPECIFICATIONS.
- THESE GENERAL NOTES SHALL APPLY TO ALL DRAWINGS AND GOVERN UNLESS OTHERWISE NOTED OR SPECIFIED.
- VERIFY ALL EXISTING BUILDING DIMENSIONS AND FIELD CONDITIONS PRIOR TO SUBMISSION OF BIDS. COMPARE ARCHITECTURAL DRAWINGS WITH MECHANICAL, ELECTRICAL, PLUMBING, AND STRUCTURAL DRAWINGS. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.
- WRITTEN DIMENSIONS TAKE PRECEDENCE. DO NOT SCALE THE CONSTRUCTION DRAWINGS.
- UNLESS OTHERWISE SHOWN OR NOTED, ALL TYPICAL DETAILS SHALL BE USED WHERE APPLICABLE.
- ALL DETAILS SHALL BE CONSIDERED TYPICAL AT SIMILAR CONDITIONS.
- SAFETY MEASURES: AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF THE PERSONS & PROPERTY AND FOR ALL INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS. THE ARCHITECT'S OR ENGINEER'S JOB SITE REVIEW IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
- CONSTRUCTION WORK WILL NOT BLOCK HALLWAYS OR MEANS OF EGRESS.
- CONTRACTOR SHALL REFER TO GENERAL NOTES AS DESCRIBED ON EACH DRAWING SHEET AND INCORPORATE AS A PART OF THIS SCOPE OF WORK.
- ABSOLUTELY NO SUBSTITUTIONS WILL BE ALLOWED, UNLESS APPROVED BY THE OWNER IN WRITING.
- CONTRACTOR TO MAINTAIN PREMISES BROOM CLEAN AND FREE OF DEBRIS THROUGHOUT DURATION OF CONSTRUCTION.
- G.C. TO COORDINATE SHIPMENT AND DELIVERY AND NOTIFY OWNER OF DAMAGES AND SHORTAGES. SEE RESPONSIBILITY SCHEDULE FOR OTHER REQUIRED COORDINATION.
- G.C. TO PROVIDE PROTECTION FOR LANDLORD FLOOR AND FINISHED TENANT FLOOR.
- CONTRACTOR TO PROVIDE WASTE DIVERSION PLAN TO CITY OF SAN DIEGO DEVELOPMENT SERVICES FOR REVIEW & APPROVAL PRIOR TO ISSUANCE OF BUILDING PERMIT.
- ALL ROOF WORK IS TO BE PERFORMED BY OWNER'S ROOFING CONTRACTOR OR CONTRACTOR APPROVED BY OWNER, IN ORDER TO MAINTAIN ANY EXISTING WARRANTY.
- ANY ADJACENT TENANT ACCESS AND WORK HOURS TO BE COORDINATED WITH LANDLORD PRIOR TO ANY TENANT DISRUPTION.
- AS-BUILT DRAWINGS MUST BE DELIVERED TO LANDLORD 30 DAYS AFTER TENANT COMPLETES CONSTRUCTION.
- G.C. TO REPAIR ANY DAMAGE TO THE SHOPPING CENTER CAUSED BY CONSTRUCTION INCLUDING ANY WORK DONE IN COMMON AREAS WHICH MAY BE A RESULT OF ANY WORK DONE BY G.C. IN THE PREMISES.
- PRIOR TO COMMENCING CONSTRUCTION - G.C. MUCH PROVIDE IN ONE PDF AND SUBMIT ALL DOCUMENTS IN ORDER. ONCE THESE DOCUMENTS ARE SUBMITTED AND APPROVED BY SODISH@SHOPCORE.COM THEN TENANT MAY REQUEST A PRE-CONSTRUCTION MEETING.
- G.C. TO PROVIDE NOTICE OF CONSTRUCTION COMMENCEMENT 5 DAYS PRIOR TO START OF CONSTRUCTION ELECTRONIC TRANSFER TO SODISH@SHOPCORE.COM AND TANDERSON@SHOPCORE.COM
- COORDINATION OF WORK, REMOVAL OF CONSTRUCTION DEBRIS, MATERIAL DELIVERY, TEMPORARY CONSTRUCTION BARRICADE REQUIREMENTS, AND HOURS OF CONSTRUCTION OPERATION MUST ALL BE APPROVED BY THE PROPERTY MANAGER, SADBERRY PROPERTIES, (858) 546-3000, EXT. 566
- TENANT MUST OBTAIN LANDLORD AND LOCAL GOVERNMENTAL APPROVAL OF TENANT'S SIGNAGE PRIOR TO OPENING FOR BUSINESS.
- PRIOR TO COMMENCING ANY TENANT IMPROVEMENT WORK, TENANT/CONTRACTOR MUST:
 - CONTACT THE PROPERTY MANAGER FOR INSTRUCTIONS PRIOR TO INSTALLATION OF FIRE SPRINKLER EQUIPMENT SO SYSTEM MAY BE PUT ON TEST.
 - PROVIDE THE NAME AND CONTACT NUMBER OF THE GENERAL CONTRACTOR AS WELL AS PROPOSED START AND COMPLETION DATES OF CONSTRUCTION.
- SUBMIT A COPY OF THE GENERAL CONTRACTOR'S CERTIFICATE OF INSURANCE WITH APPROPRIATE LIMITS AND COVERAGES PER THE LEASE AGREEMENT AND LIST THE FOLLOWING AS ADDITIONALLY INSURED/BPP SHOPS AT LA JOLLA LLC, SHOPCORE PROPERTIES LP, BPP LOWER GROCERY RETAIL REIT INC
- OBTAIN AND POST ALL PERMITS AS REQUIRED BY THE APPROPRIATE GOVERNMENTAL AGENCY.

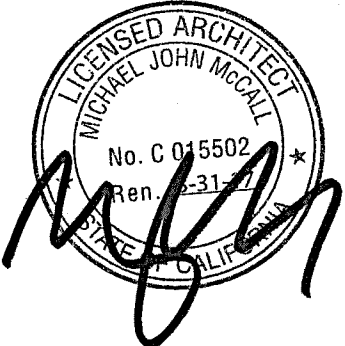
GENERAL NOTES

ITEMS	DESCRIPTION	LL		GC		O	
		EXISTING	UNLOAD	UNLOAD	UNLOAD	UNLOAD	UNLOAD
GENERAL	CONSTRUCTION BARRICADE						
	WINDOW GRAPHICS						NA
	TEMPORARY UTILITIES						
	TEMPORARY PHONE & FAX LINES						
	TEMPORARY POWER						
	TEMPORARY LIGHTING						
	DEBRIS BOXES						
	CLEANUP						
	FINAL CLEANUP						
	PERMITS AND APPROVAL						OWNER TO SECURE PERMITS
INSPECTION / COORDINATION						GENERAL CONTRACTOR TO COORDINATE AND OBTAIN APPROVALS	
SPECIAL INSPECTIONS						GENERAL CONTRACTOR TO COORDINATE INDEPENDENT INSPECTOR FOR SPECIAL INSPECTIONS	
SHOP DRAWINGS						REFER TO SHOP DRAWING REQUIREMENTS	
FLOOR PREP	CONCRETE SLAB SAW-CUTTING						
	CONCRETE SLAB TRENCHING & REPLACEMENT						
ROUGH FRAMING	EXTERIOR WALLS						
	EXTERIOR WALL GYPSUM BOARD						
	DEMISING WALL FRAMING						
	DEMISING WALL GYPSUM BOARD						GENERAL CONTRACTOR TO MODIFY DEMISING WALL TO MEET CODE FOR PROPOSED TENANT APPROVEMENTS
	INTERIOR WALL PARTITION FRAMING						
	INTERIOR WALL PARTITION GYPSUM BOARD						
CEILING	ACOUSTICAL INSULATION BATTS IN WALLS & CEILINGS						
	BLOCKING IN WALLS AND CEILINGS FOR SUPPORT OF EQUIPMENT & MILLWORK						
	SUSPENDED CEILING FRAMING						
	SUSPENDED CEILING GYPSUM BOARD						
DOORS	EXTERIOR DOORS						LANDLORD TO PROVIDE AS-IS
	EXTERIOR DOOR HARDWARE						LANDLORD TO PROVIDE AS-IS. REFER TO DOOR SCHEDULE FOR ADDITIONAL REQUIREMENTS
	INTERIOR DOORS						
FLOOR FINISHES	INTERIOR DOOR HARDWARE						
	SHEET VINYL FLOORING & COVERED BASE						
	CERAMIC TILE FLOOR & BASE						
	GROUND/SEALED CONCRETE FLOOR						OWNER TO PROVIDE CONCRETE; SLAB. GC TO PROVIDE GRIND & SEAL FINISH
	FLOOR TRANSITIONS						
WALL FINISHES	METAL BASE						
	CERAMIC TILE WALL FINISH						
	STAINLESS STEEL WALL FINISH						GENERAL CONTRACTOR TO COORDINATE WORK
	FIBER-REINFORCED PLASTIC (FRP) WALL FINISH						
	STAINLESS STEEL CORNER GUARDS						
SIGNAGE	PAINTS / COATINGS						
	EXTERIOR ILLUMINATED SIGNS						GENERAL CONTRACTOR TO COORDINATE POWER
MILLWORK & FIXTURES	EXTERIOR & INTERIOR EXIT & ACCESS SIGNAGE						GENERAL CONTRACTOR TO PROVIDE ANY MISSING REQUIRED SIGNAGE
	LIGHT FIXTURES						
	MILLWORK FIXTURES						
	OPERATIONS' DESK						GENERAL CONTRACTOR TO COORDINATE & PROVIDE BLOCKING IN WALL FOR SUPPORT OF MILLWORK
	FIRE EXTINGUISHERS						GENERAL CONTRACTOR TO RELOCATE PER PLAN
	TOILET ROOM ACCESSORIES						GENERAL CONTRACTOR PROVIDE AND INSTALL ANY MISSING ACCESSORIES AS INDICATED
	FOOD SERVICE ACCESSORIES						
	STAINLESS STEEL COUNTERS						GENERAL CONTRACTOR TO COORDINATE WORK
	FOOD SERVICES EQUIPMENT						
	FIXTURES & FURNISHINGS (TABLES & CHAIRS)						
FIXTURES, FURNISHING & EQUIPMENT	METAL RACKS & SHELVING						
	MENU BOARD						GENERAL CONTRACTOR TO PROVIDE BLOCKING IN WALL FOR SUPPORT OF MENU BOARD
	GARBAGE BINS						
	SOUND SYSTEM						GENERAL CONTRACTOR TO PROVIDE CONDUIT FOR SOUND SYSTEM WIRING
SYSTEMS	SECURITY SYSTEM						GENERAL CONTRACTOR TO PROVIDE CONDUIT FOR SECURITY SYSTEM WIRING
	ARTWORK						

RESPONSIBILITY SCHEDULE

PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA
JOB NUMBER: 216088

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE

DRAWING DESCRIPTION

NOTES AND SCHEDULES

SCALE
A0.3

KEY	MATERIAL	PRODUCT DESCRIPTION	GENERAL LOCATION	REMARKS
FLOOR FINISHES				
F-1	VINYL FLOORING	ECO-GRIP SLIP RESISTANT SAFETY FLOOR; SLATE	101 SEATING AREA, 102 CIRCULATION, 108 HALLWAY	REFER TO FLOOR PLAN
F-2	TILE FLOORING	BERKELEY TILESHOP, IMOLA CERAMICA IAKICE-1224, KOSHI, COLOR: CEMENTE 12X24, STACK BOND GROUT: CUSTOM BUILDING PRODUCTS, LIGHT SMOKE 145	103 ORDER AHEAD, 105 BARISTA STATION, 106 OPERATION, 107 SCULLERY/STORAGE	REFER TO FLOOR PLAN AND TOILET ROOM ELEVATIONS
F-3	CONCRETE FLOORING	CONCRETE STAIN SLR SB-1 GL. GRAY- INCRETE SYSTEM- C5SS G001 355	109 TOILET ROOM, 110 TOILET ROOM	REFER TO FLOOR PLAN
PAINT FINISHES				
P-1	KELLY MOORE	KMW51 WHALE BONE, EGGSHELL	101 SEATING AREA, 102 CIRCULATION, 103 ORDER AHEAD, 105 BARISTA STATION, 106 OPERATION, 107 SCULLERY/STORAGE, 118 HALLWAY	REFER TO INTERIOR ELEVATIONS
P-2	KELLY MOORE	KM4901 HUGH'S HUE, EGGSHELL	101 SEATING AREA, 102 CIRCULATION, 108 HALLWAY	REFER TO INTERIOR ELEVATIONS
P-3	KELLY MOORE	KM4959 FRENCH DIAMOND, EGGSHELL	108 HALLWAY	REFER TO INTERIOR ELEVATIONS
P-4	KELLY MOORE	KM5826 VOLCANIC ROCK, EGGSHELL	103 ORDER AHEAD, 105 BARISTA STATION	REFER TO INTERIOR ELEVATIONS
P-5	KELLY MOORE	KM5203 WAKE ME UP, EGGSHELL	108 HALLWAY	REFER TO INTERIOR ELEVATIONS
P-6	KELLY MOORE	KMW57 CLOUD WHITE, SEMI-GLOSS	107 SCULLERY/STORAGE, 109 TOILET ROOM, 110 TOILET ROOM	REFER TO INTERIOR ELEVATIONS AND TOILET ROOM ELEVATIONS
WALL BASE				
B-1	6" VINYL BASE	ECO-GRIP SLIP RESISTANT SAFETY FLOOR; SLATE	103 ORDER AHEAD, 105 BARISTA STATION, 106 OPERATION, 107 SCULLERY/STORAGE	REFER TO INTERIOR ELEVATIONS
B-2	6" CERAMIC BASE	IMOLA CERAMICA IAKICE-1224, KOSHI, COLOR: CEMENTE 6X12. GROUT: CUSTOM BUILDING PRODUCTS, LIGHT SMOKE 145, SEE 10/A6.0	109 TOILET ROOM, 110 TOILET ROOM	REFER TO TOILET ROOM ELEVATIONS
B-3	6" WOOD BASE	6" HIGH BY 1/2" SOLID STOCK WOOD BASE; PAINT GRADE	101 SEATING AREA, 102 CIRCULATION, 103 ORDER AHEAD, 105 BARISTA STATION, 108 HALLWAY	REFER TO INTERIOR ELEVATIONS
MISCELLANEOUS FINISHES				
CT-1	CERAMIC WALL TILE	DALTILE: SHOWSCAPE IN ALMOND CHEVRON SH10 GROUT: CUSTOM BUILDING PRODUCTS, 382 BONE	103 ORDER AHEAD, 105 BARISTA STATION	REFER TO INTERIOR ELEVATIONS
CT-2	CERAMIC WALL TILE	DALTILE: RITTENHOUSE SQUARE 3 X 6 ARCTIC WHITE 0190 (STACKED BOND) WITH BULLNOSE TRIM GROUT: BOSTIK H158 CLASSIC BONE	109 TOILET ROOM, 110 TOILET ROOM	REFER TO TOILET ROOM ELEVATIONS
CT-3	CERAMIC WALL TILE	EMSER TILE: VICE & VIRTUE GLAZED PORCELAIN, VIRTUE GRAY, VIRTUE IVORY, VIRTUE WHITE GROUT: CUSTOM BUILDING PRODUCTS, 301 ARCTIC ICE	108 BARISTA STATION	REFER TO INTERIOR ELEVATIONS
SS-1	STAINLESS STEEL	CORNER GUARDS, WALL CAPS, SHELVEING	103 ORDER AHEAD, 105 BARISTA STATION	BACK BARISTA MILLWORK, BACK SPLASH, CORNER GUARDS, COUNTERS
WD-1	WOOD	TERRAMAI MC WHITE OAK, PALE ALE	108 BARISTA STATION	RETAIL DISPLAY SHELVEING SYSTEM AND MENU BOARD FRAMING
WD-2	WOOD	TERRAMAI LOST COAST WEATHERED, WHITE OUT	101 SEATING AREA	REFER TO INTERIOR ELEVATIONS
STONE	STONE	PENTAL QUARTZ B08628P STATUARIO POLISHED, 1 1/4" THICKNESS	103 ORDER AHEAD, 105 BARISTA STATION	REFER TO INTERIOR ELEVATIONS
PL-1	PLASTIC LAMINATE	FORMICA, 837-58 GRAPHITE, MATTE FINISH	108 BARISTA STATION	POS MILLWORK, FOOD DISPLAY MILLWORK
FRP-1	MARLITE FRP WALL PANEL	FRP P100, WHITE - PEBBLE SURFACE, COLOR-INTEGRAL TRIM MOLD. AT TOP EDGE, CORNERS, BOTTOMS, SEAMS AND WALL LINING	108 BARISTA STATION, 107 SCULLERY/STORAGE	REFER TO INTERIOR ELEVATIONS

ROOM NUMBER	ROOM NAME	WALLS	BASE	FLOOR	CEILING			REMARKS
					MATERIAL	FINISH	HEIGHT	
101	SEATING AREA	P-1, P-2	B-3	F-3	EXPOSED	-	(E) 4'-13'-6"	SEE FLOOR PLAN, RCP & INT. ELEVATIONS
102	CIRCULATION	P-1, P-2	B-3	F-3	EXPOSED	-	(E) 4'-13'-6"	SEE FLOOR PLAN, RCP & INT. ELEVATIONS
103	ORDER AHEAD	P-1, P-4	B-1, B-3	F-1	GWB	P-1	10'-0"	SEE FLOOR PLAN, RCP & INT. ELEVATIONS
104	OUTDOOR SEATING	-	-	-	-	-	-	-
105	BARISTA STATION	P-1, P-4, FRP-1	B-1, B-3	F-1	GWB	P-1	10'-0"	SEE FLOOR PLAN, RCP & INT. ELEVATIONS
106	OPERATION	P-1	B-1	F-1	ACT	-	8'-0"	SEE FLOOR PLAN, RCP & INT. ELEVATIONS
107	SCULLERY/STORAGE	P-1, P-5, FRP-1	B-1	F-1	ACT	-	12'-0"	SEE FLOOR PLAN, RCP & INT. ELEVATIONS
108	HALLWAY	P-1, P-2, P-3, P-5	B-3	F-3	GWB	P-1	10'-0"	SEE FLOOR PLAN, RCP & INT. ELEVATIONS
109	TOILET ROOM	P-5, P-6	B-2	F-2	GWB	P-1	8'-0"	SEE FLOOR PLAN, RCP & TOILET ROOM ELEVATIONS
110	TOILET ROOM	P-5, P-6	B-2	F-2	GWB	P-1	8'-0"	SEE FLOOR PLAN, RCP & TOILET ROOM ELEVATIONS

NOTE: ALL SERVICE AREAS (INCL. SCULLERY, STORAGE & TRASH AREA) TO RECEIVE FRP TO 8'-0" AFF ON ALL WALLS.

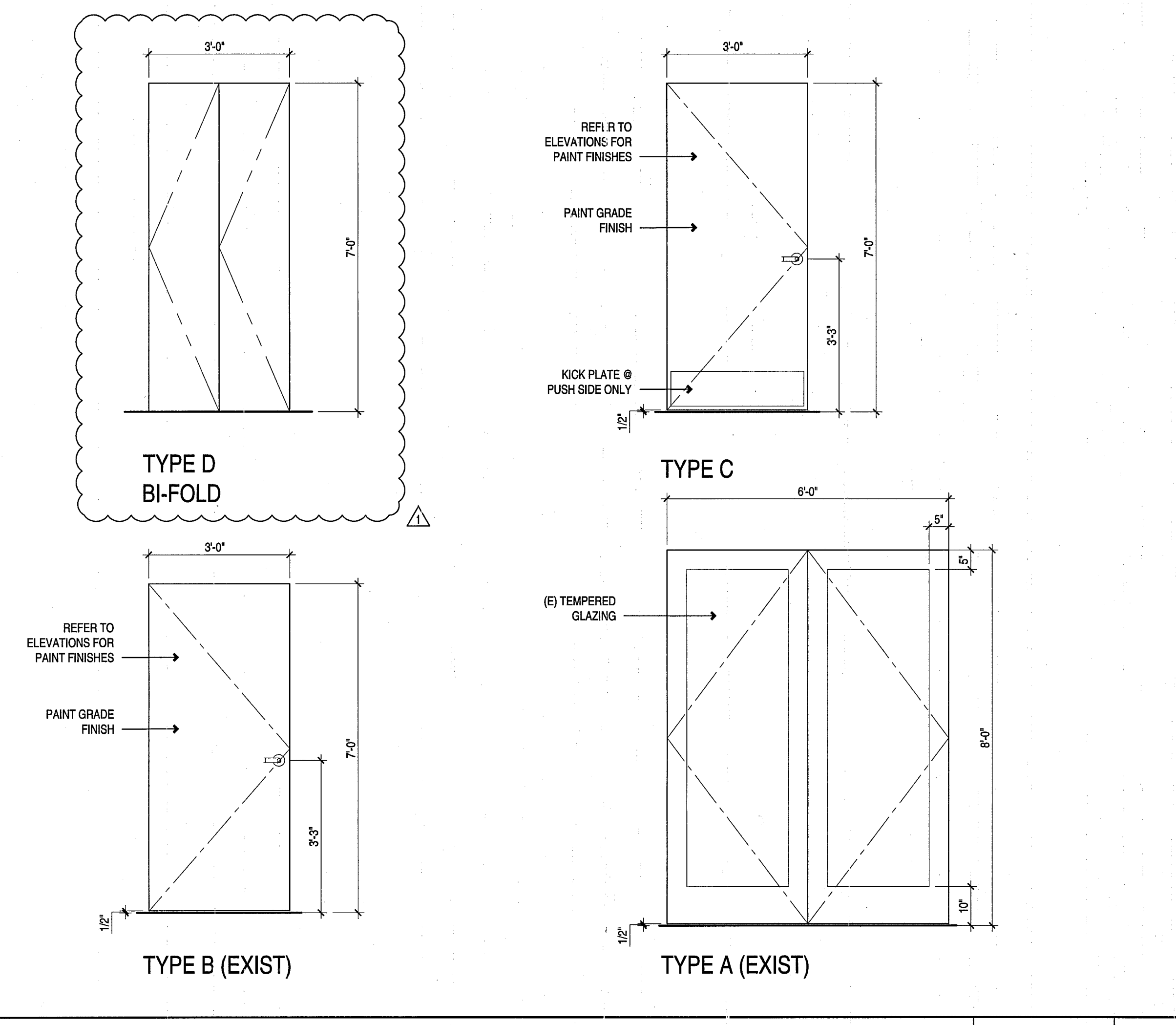
ROOM FINISH SCHEDULE	NTS	11
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DOOR NUMBER	ROOM NUMBER	ROOM NAME	DOOR				FRAME			SAFETY GLASS	FIRE RATING	STC	REMARKS
			SIZE	HW GROUP	TYPE	MATL	DETAIL	MATL					
1	-	ENTRY 1 (E)	6'-0" x 8'-0"	1	A	ALUM/TMPD GL	11/A6.3	7/A6.3	3/A6.3	ALUM	YES	-	ANODIZED ALUMINIUM FACTORY FINISH
2	110	TOILET ROOM	3'-0" x 7'-0"	3	C	SCW	9/A6.3	5/A6.3	1/A6.3	MTL	-	-	PAINT GRADE FINISH
3	109	TOILET ROOM	3'-0" x 7'-0"	3	C	SCW	9/A6.3	5/A6.3	1/A6.3	MTL	-	-	PAINT GRADE FINISH
4	-	REAR EXIT (E)	3'-0" x 7'-0"	2	B	HM	10/A6.3	SIM. TO HEAD	6/A6.3	STL FRMAE	-	-	PAINT FINISH TO MATCH ADJACENT PAINT COLOR
5	107	STORAGE/SCULLERY	3'-0" x 7'-0"	4	C	SCW	9/A6.3	5/A6.3	2/A6.3	MTL	-	-	PAINT GRADE FINISH
6	106	OPERATIONS	3'-0" x 7'-0"	4	C	SCW	9/A6.3	5/A6.3	-	MTL	-	-	PAINT GRADE FINISH
7	105	BARISTA STATION	3'-0" x 7'-0"	5	D	SCW	12/A6.3	8/A6.3	-	MTL	-	-	PAINT GRADE FINISH

FINISH AND MATERIAL SCHEDULE	NTS	8
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DOOR SCHEDULE	NTS	6
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- ALL DOORS SHALL BE 1 3/4" THICK, SOLID CORE WOOD, UNLESS NOTED OTHERWISE.
- ALL DOORS SHALL BE TRIMMED AT THRESHOLD TO PROVIDE 3/4" MINIMUM CLEARANCE ABOVE FLOOR FINISH MATERIAL.
- DIMENSIONS FOR UNDERCUT DOORS IF ANY SHALL BE MEASURED FROM TOP OF FINISH FLOORING MATERIAL.
- DOORS IN THE FULLY OPEN POSITION SHALL NOT REDUCE THE REQUIRED EXIT WIDTH BY MORE THAN 7 INCHES.
- EXIT DOORWAYS SHALL BE NO LESS THAN 36" IN WIDTH AND NO LESS THAN 7'-0" IN HEIGHT. PROJECTIONS, SHALL NOT REDUCE THE OPENING TO LESS THAN 36" CLEAR WIDTH.
- LATCHING AND LOCKING DOORS THAT ARE HAND-ACTIVATED SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT TIGHT GRASPING, PINCHING OR TWISTING THE WRIST TO OPERATE HARDWARE. LOCKED EXIT DOORS SHALL OPERATE AS ABOVE IN EGRESS DIRECTION.
- ACCESSIBLE HARDWARE SHALL BE INSTALLED BETWEEN 34" AND 44" ABOVE THE FLOOR.
- THERE SHALL BE A LEVEL AND CLEAR FLOOR OR LANDING ON EACH SIDE OF A DOOR. THE LEVEL AREA SHALL HAVE A LENGTH IN THE DIRECTION OF DOOR SWING OF AT LEAST 60" AND THE LENGTH OPPOSITE THE DIRECTION OF DOOR SWING OF 48" AS MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN THE CLOSED POSITION. THE FLOOR OR LANDING SHALL BE LESS THAN OR EQ. TO 1/2" LOWER THAN THE THRESHOLD.
- THE WIDTH OF THE LEVEL AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND A MINIMUM OF 18" PAST THE STRIKE EDGE FOR INTERIOR DOORS.
- THE BOTTOM 10" OF ALL DOORS SHALL HAVE A SMOOTH, UNINTERRUPTED SURFACE.
- MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAYBE INCREASED TO THE MAXIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 POUNDS.



GROUP	SET NUMBER	DESCRIPTION	MANUFACTURER	REMARKS
GROUP 1	3	HINGES		(E) EXTERIOR DOOR
	2	DOOR PULL		(E) HARDWARE BY L.L.
	2	DOOR THRESHOLD		(E) HARDWARE BY L.L.
	2	DOOR CLOSER		(E) HARDWARE BY L.L.
	2	PANIC HARDWARE		(E) HARDWARE BY L.L.
GROUP 2	1 1/2 PR	HINGES		(E) EXTERIOR DOOR
	1	DOOR PUSH/PULL		(E) HARDWARE BY L.L.
	1	DOOR THRESHOLD		(E) HARDWARE BY L.L.
	1	DOOR CLOSER		(E) HARDWARE BY L.L.
GROUP 3	1 1/2 PR	BUTT HINGES	McKINNEY 4 1/2" x 4 1/2" TA 2714 626	
	3	DOOR CLOSER	NORTON 8501BF 689 OR LCN 4031 689	
	1	DOOR LOCK	SCHLAGE - L LOCKS 03A A ROSE 2-1/8" DIA. WITH L9496 PRIVACY OCCUPIED INDICATOR	PRIVACY FUNCTION
	1	KICKPLATE	IVES KICKPLATE 10" x 34" BRUSHED ALUMINIUM	
	1	THRESHOLD	PEMCO 252A	
GROUP 4	1 1/2 PR	BUTT HINGES	McKINNEY 4 1/2" x 4 1/2" TA 2714 626	
	3	DOOR CLOSER	NORTON 8501BF 689 OR LCN 4031 689	
	1	SECURITY LOCK	ALARMLOCK T2 TRILOGY DL2700 626 DIGITAL LOCK	OFFICE FUNCTION
	1	SECURITY EYE VIEWER	HAGER 200-DEGREE DOOR VIEWER	
	1	KICKPLATE	IVES KICKPLATE 10" x 34" BRUSHED ALUMINIUM	
GROUP 5	1	THRESHOLD	PEMCO 252A	
	1	DOOR STOP	HAGER 236W WALL STOP	
	-	DOOR HWR PKG	JOHNSON 2000 PD SERIES COMMERCIAL GRADE POCKET / SLIDING DOOR HARDWARE WITH ALL MOUNTING & INSTALLATION ACCESSORIES	POCKET DOOR
	1	LOCKSET	ACCURATE 9559 PRIVACY LOCK 626 W/ 7200 ADA THUMB TURN LEVER, 7200 EFH EMERGENCY COIN RELEASE WITH OCCUPANCY INDICATOR AND SCHLAGE RHO LEVER	

DOOR NOTES	NTS	5
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DOOR TYPES	NTS	3
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DOOR HARDWARE SCHEDULE	NTS	1
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 8849 VILLA LA JOLLA VILLAGE DR, #307
 SAN DIEGO, CA
 JOB NUMBER: 216068

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



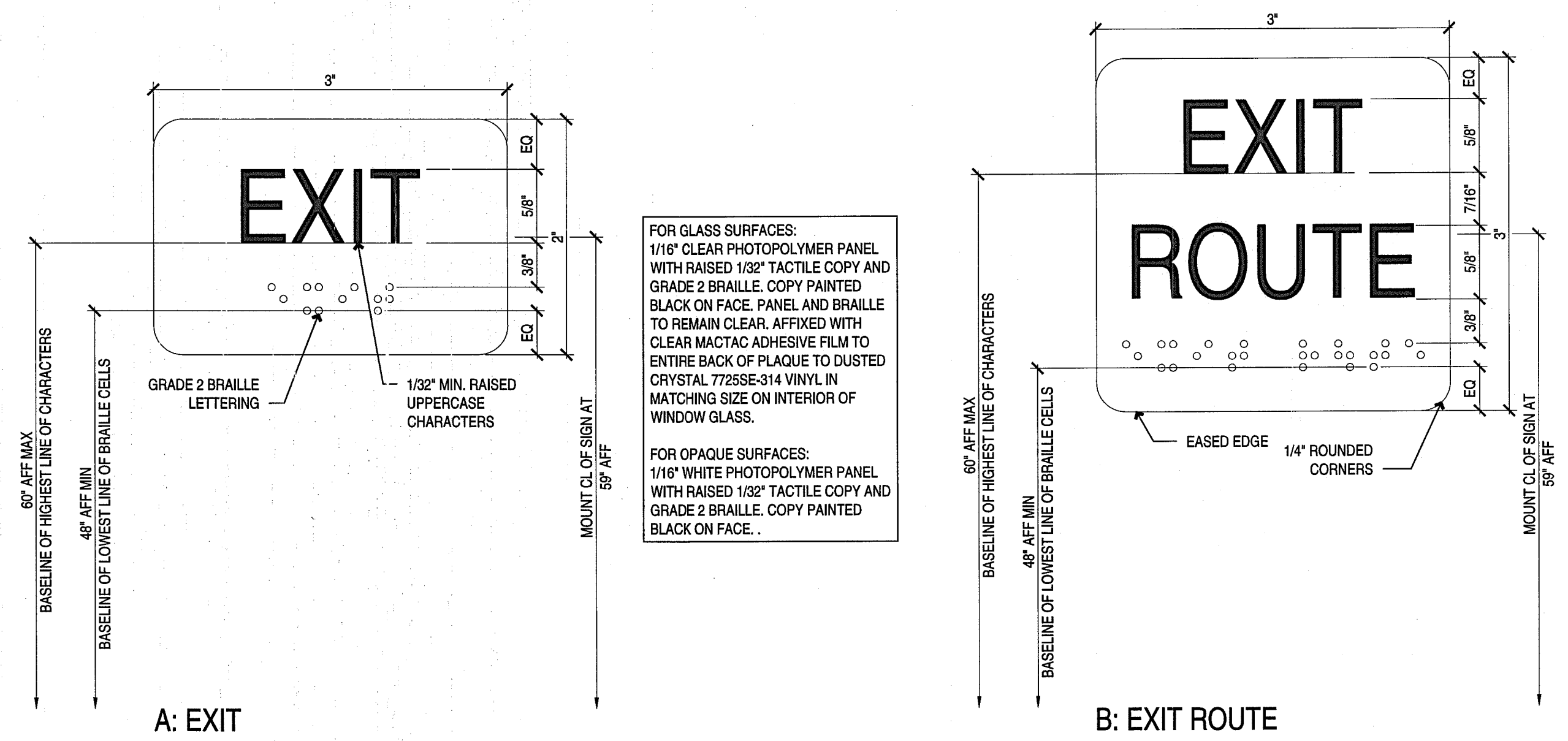
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DOOR HARDWARE & FINISH SCHEDULE

SCALE

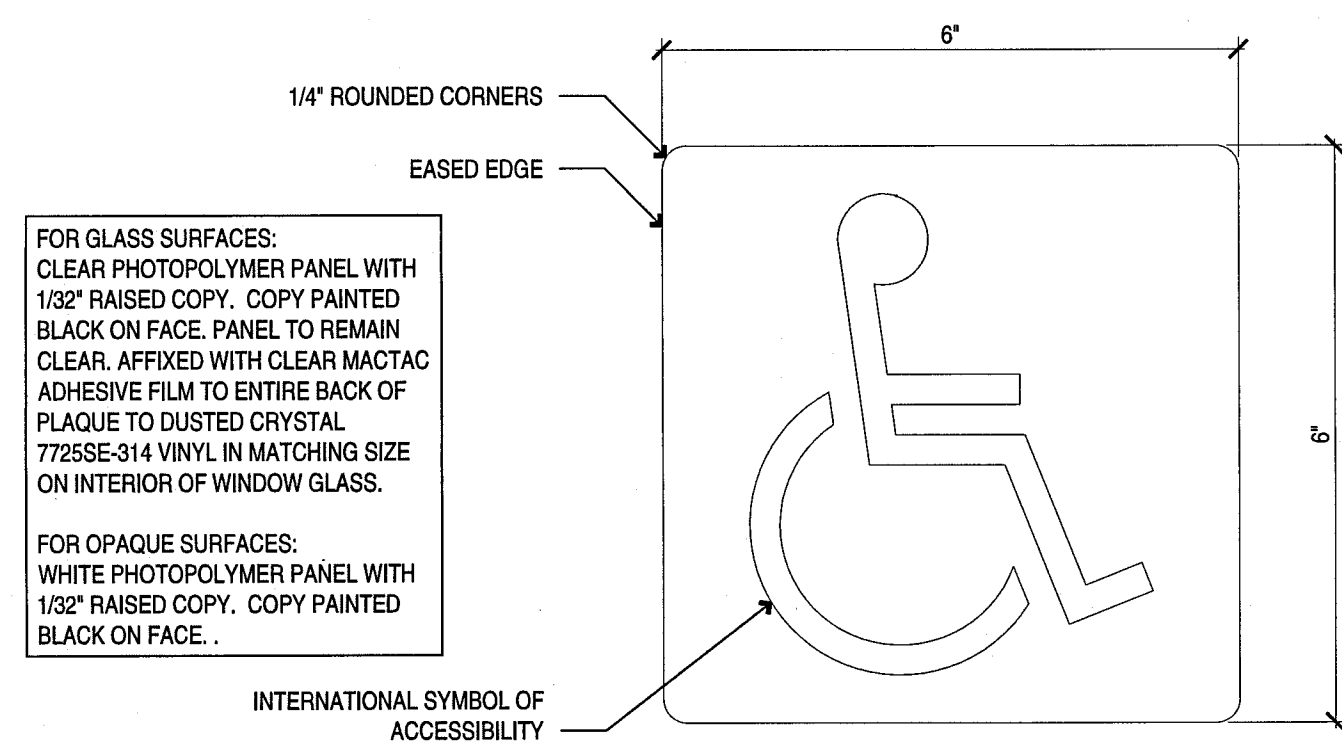
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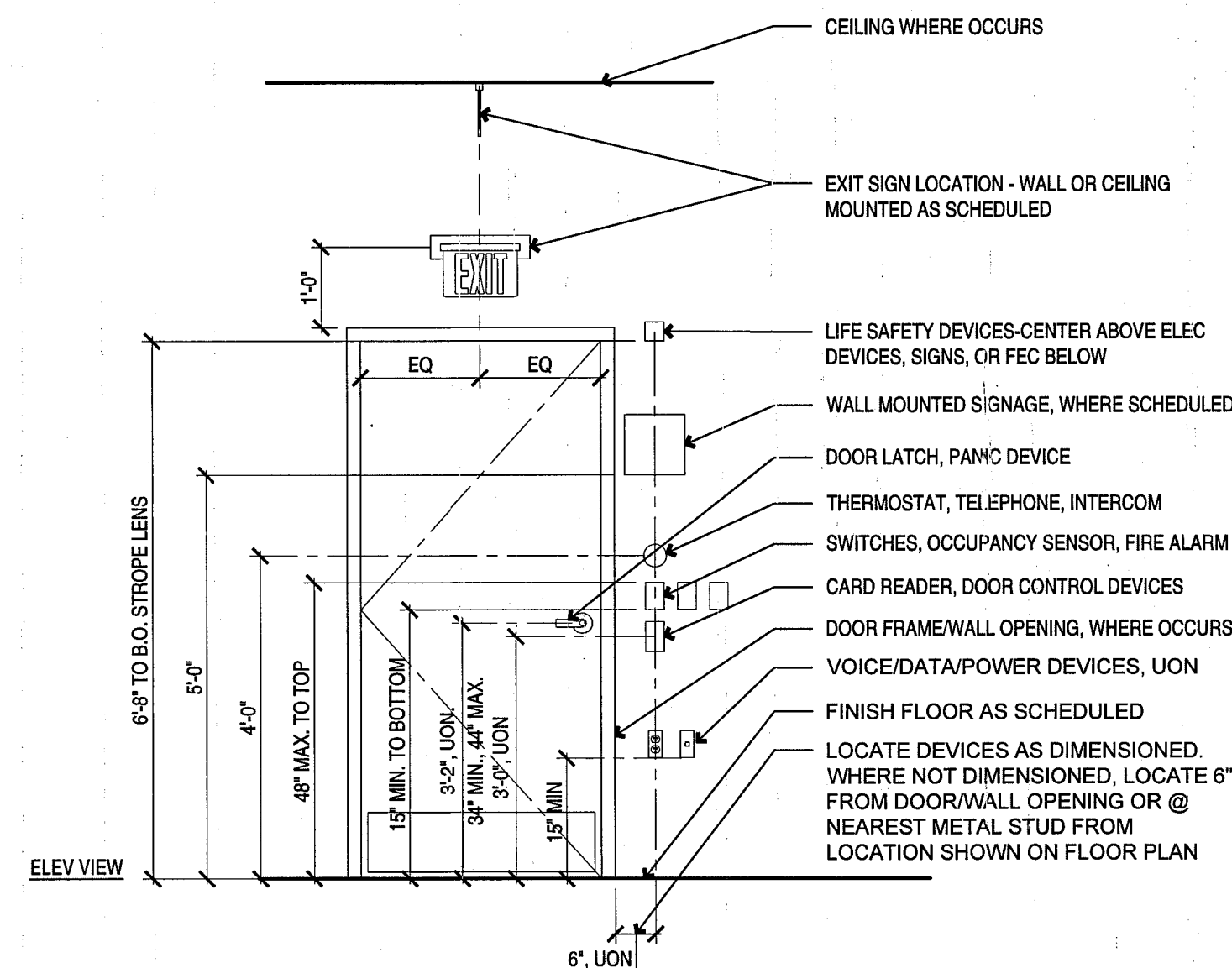
TACTILE EGRESS SIGNAGE

FULL 9



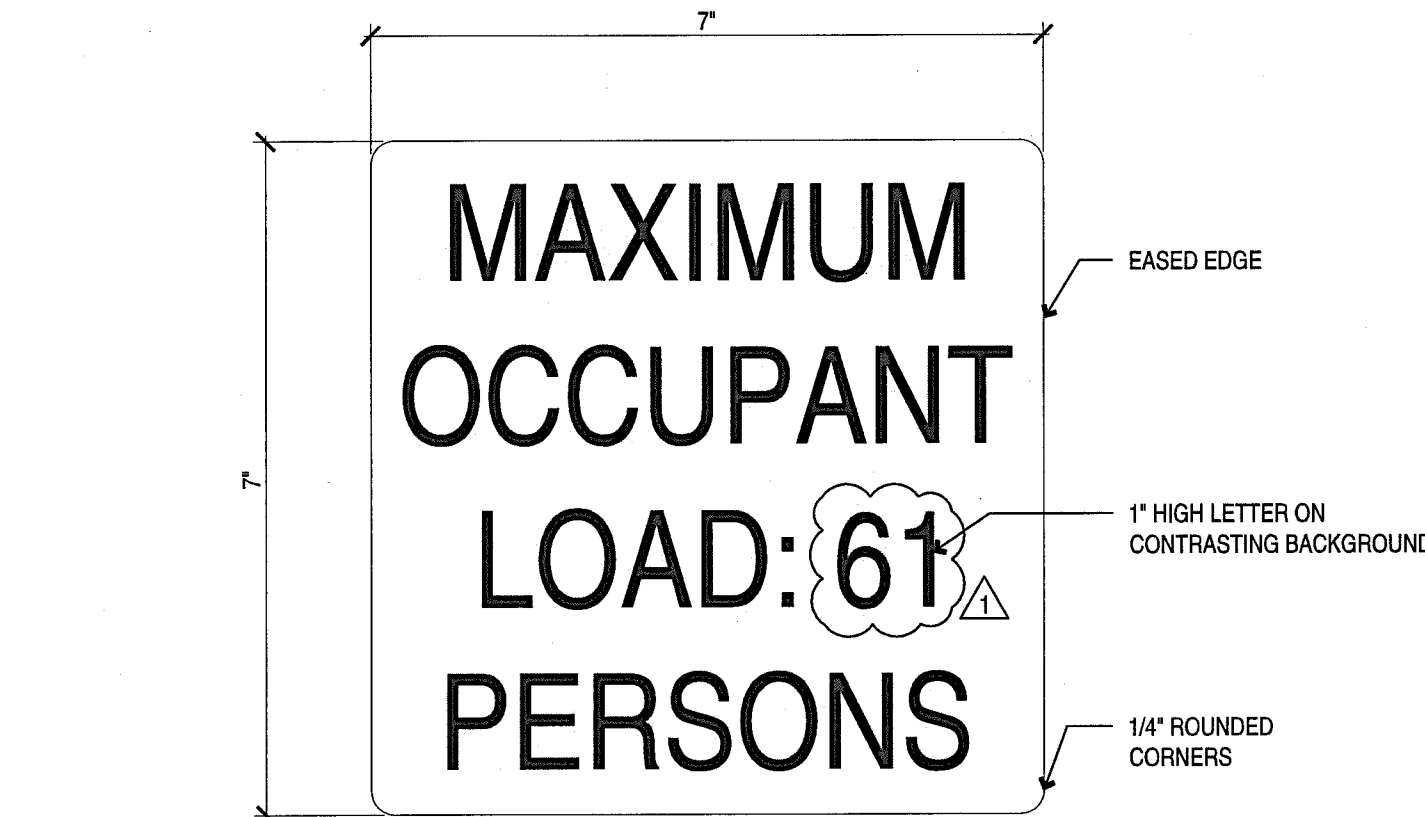
INTERNATIONAL SYMBOL OF ACCESSIBILITY

6" = 1'-0" 8



ELEV VIEW

PLAN VIEW



OCCUPANCY LOAD SIGN

6" = 1'-0" 4

SIGNAGE AND ELECTRICAL MOUNTING HEIGHTS

1/2" = 1'-0" 3

SIGNAGE NOTES

NTS

2

TOILET ROOM SIGNAGE

1/2" = 1'-0" 1

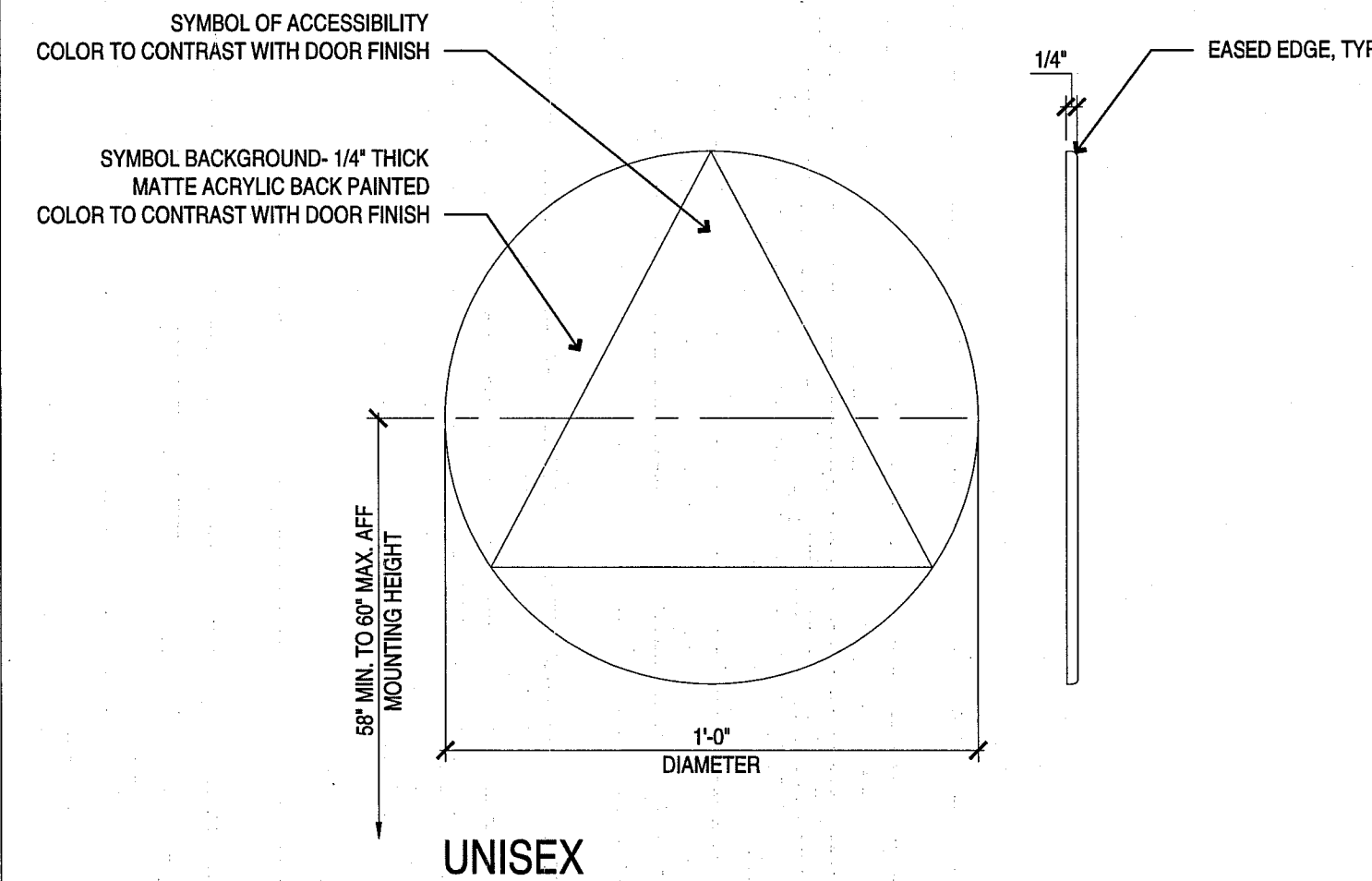
TOILET ROOM ACCESSIBLE DOOR SIGNAGE

3" = 1'-0" 5

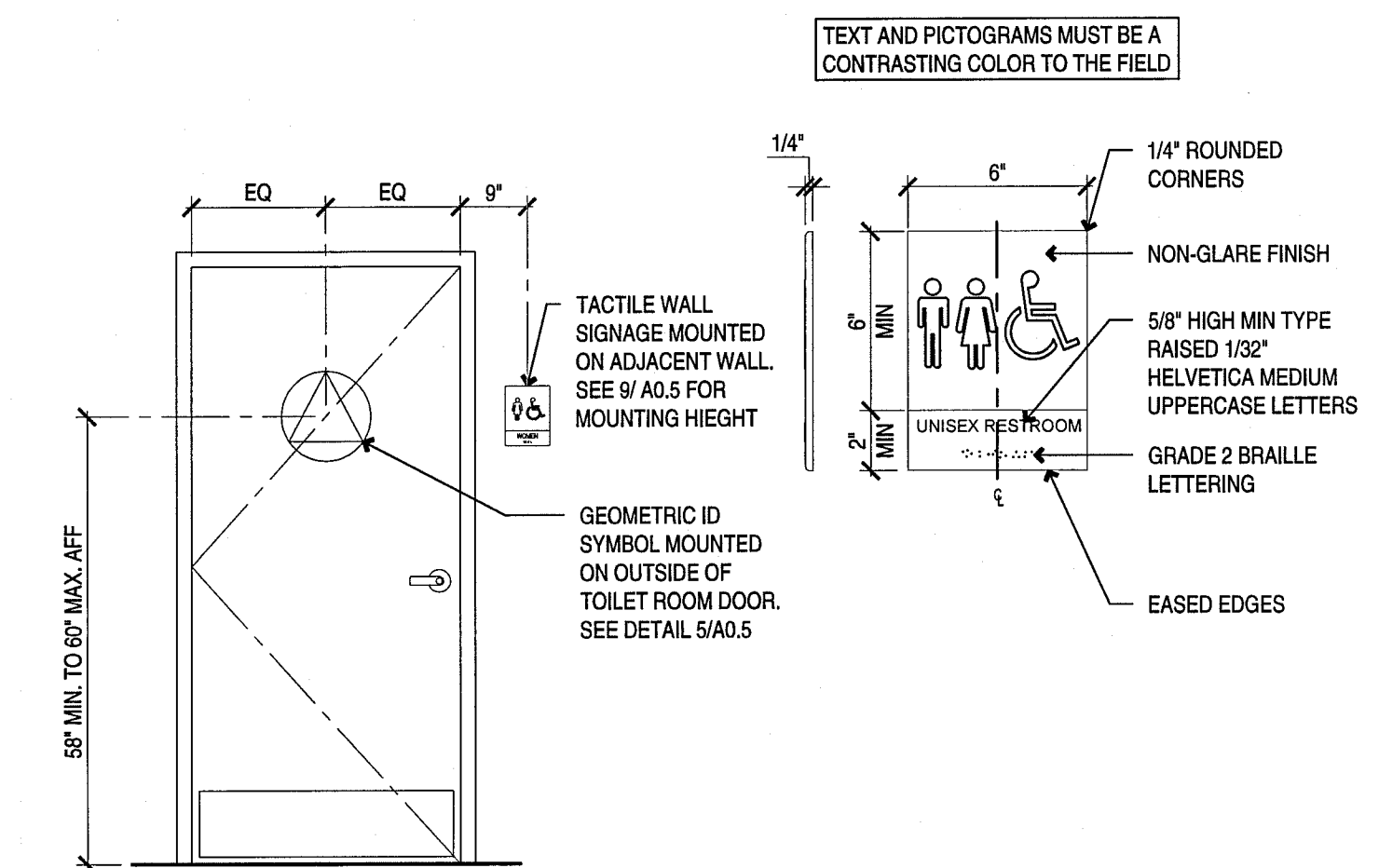
SIGNS SHALL COMPLY WITH CBC SECTION 11B-703.7.

1. RAISED CHARACTERS SHALL COMPLY WITH CBC SECTION 11B-703.2
2. BRAILLE TO BE CONTRACTED (GRADE 2) AND COMPLY WITH CBC SECTION 11B-703.3 AND 11B-703.4.
3. VISUAL CHARACTERS TO COMPLY WITH CBC SECTION 11B-703.5.
4. PICTOGRAMS TO COMPLY WITH CBC SECTION 11B-703.6.
5. SYMBOLS OF ACCESSIBILITY TO COMPLY WITH CBC SECTION 11B-703.7.

WHERE PERMANENT SIGNAGE IS PROVIDED FOR ROOMS AND SPACES, SIGNAGE AS DESCRIBED ABOVE SHALL BE PROVIDED ON THE LATCH SIDE OF THE DOOR.



TOILET ROOM ACCESSIBLE DOOR SIGNAGE



- NOTES:
1. SIGNS TO MEET ALL LOCAL AND STATE ACCESSIBILITY REQUIREMENTS.
 2. PROVIDE SIGNAGE SUBMITTAL FOR ARCHITECT'S REVIEW & APPROVAL PRIOR TO INSTALL OF TOILET ROOM SIGNAGE.

PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA

JOB NUMBER:
216087

DATE ISSUE

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03.03.17 PLAN CHECK COMMENTS

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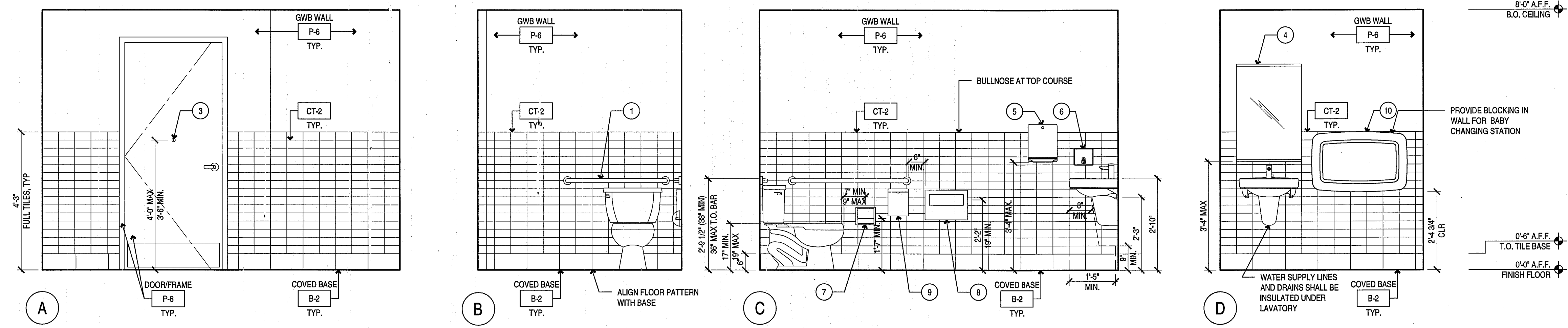
DRAWING DESCRIPTION

SIGNAGE AND MOUNTING HEIGHT DETAILS

SCALE

A0.5

ITEM	DESCRIPTION	MANUFACTURER	MODEL	QTY.
1	36" GRAB BAR	BOBRICK	B-5806 SERIES	2
2	42" GRAB BAR	BOBRICK	B-5806 SERIES	2
3	COAT HOOK	BOBRICK	B-542	2
4	MIRROR	BOBRICK	B-293 1830	2
5	PAPER TOWEL DISPENSER	BOBRICK	B-2620	2
6	SOAP DISPENSER	BOBRICK	B-4112	2
7	TOILET TISSUE DISPENSER	BOBRICK	B-4288	2
8	TOILET SEAT COVER DISPENSER	BOBRICK	B-221	2
9	FEMININE DISPOSAL	BOBRICK	B-270	2
10	DIAPER CHANGING STATION	KOALA KARE	KB200-00	2



ACCESSORY SCHEDULE

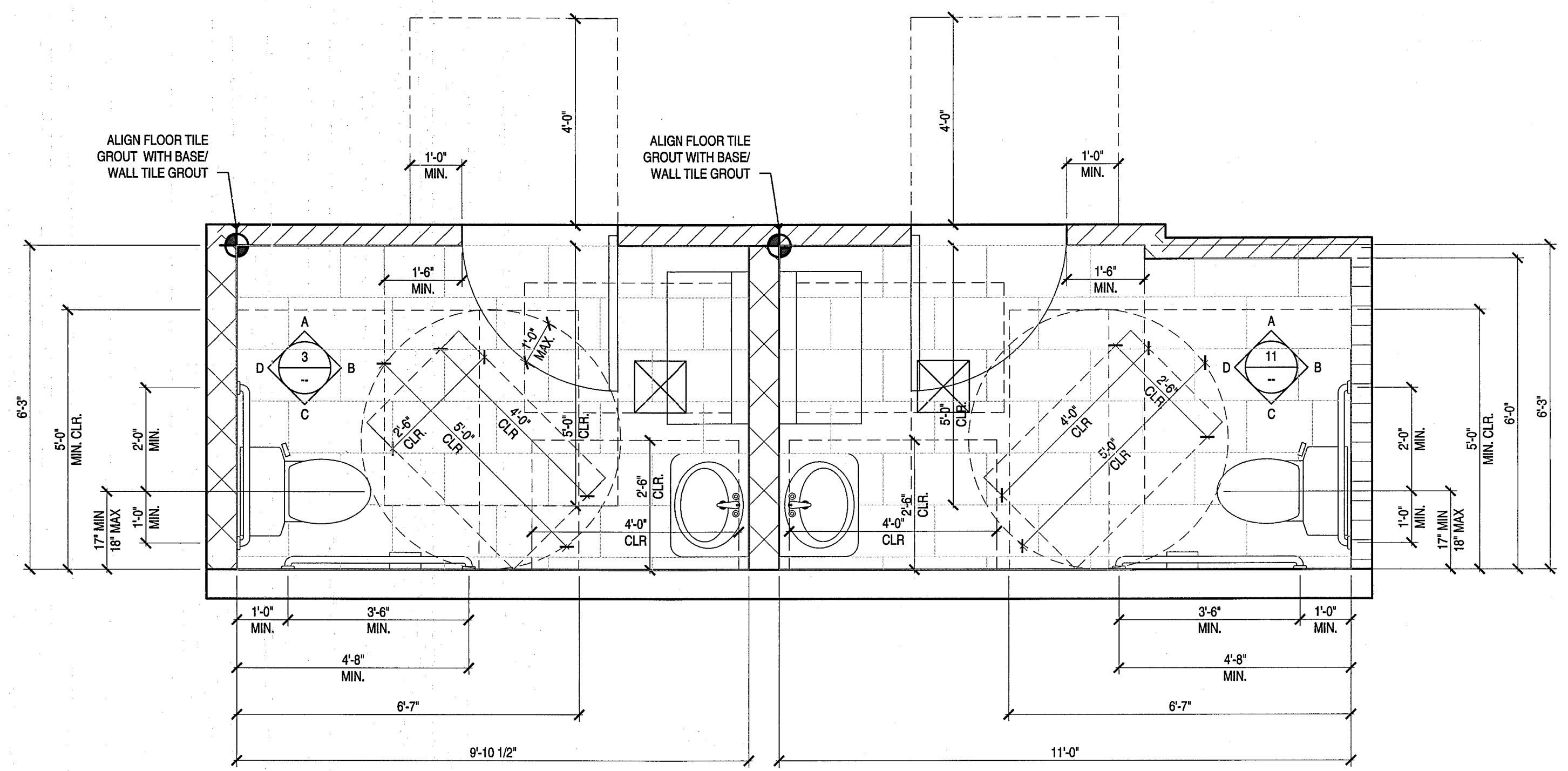
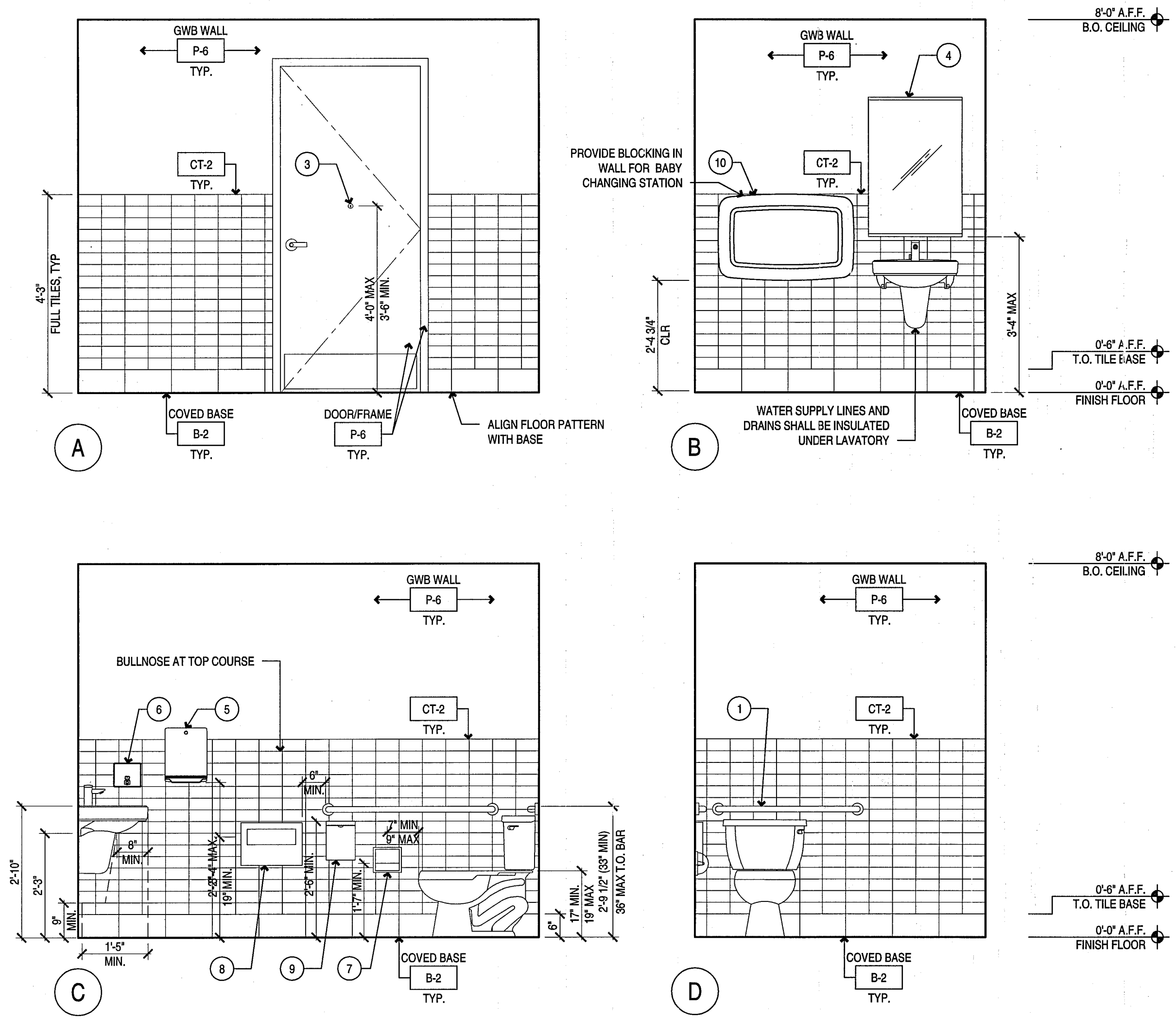
1/2"=1'-0"

15

109: UNISEX TOILET ROOM ELEVATIONS

1/2"=1'-0"

11



110: UNISEX TOILET ROOM ELEVATIONS

1/2"=1'-0"

3

RESTROOM ENLARGED FLOOR PLAN

1/2"=1'-0"

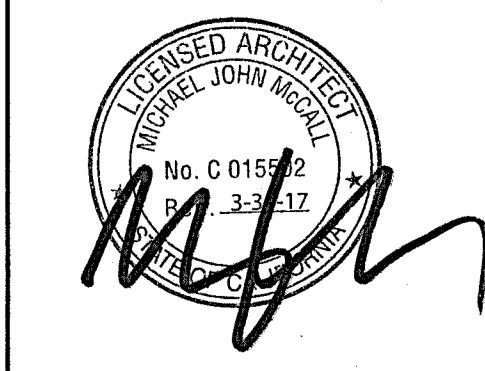
1

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PHILZ COFFEE
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 JOB NUMBER: 216085

DATE	ISSUE
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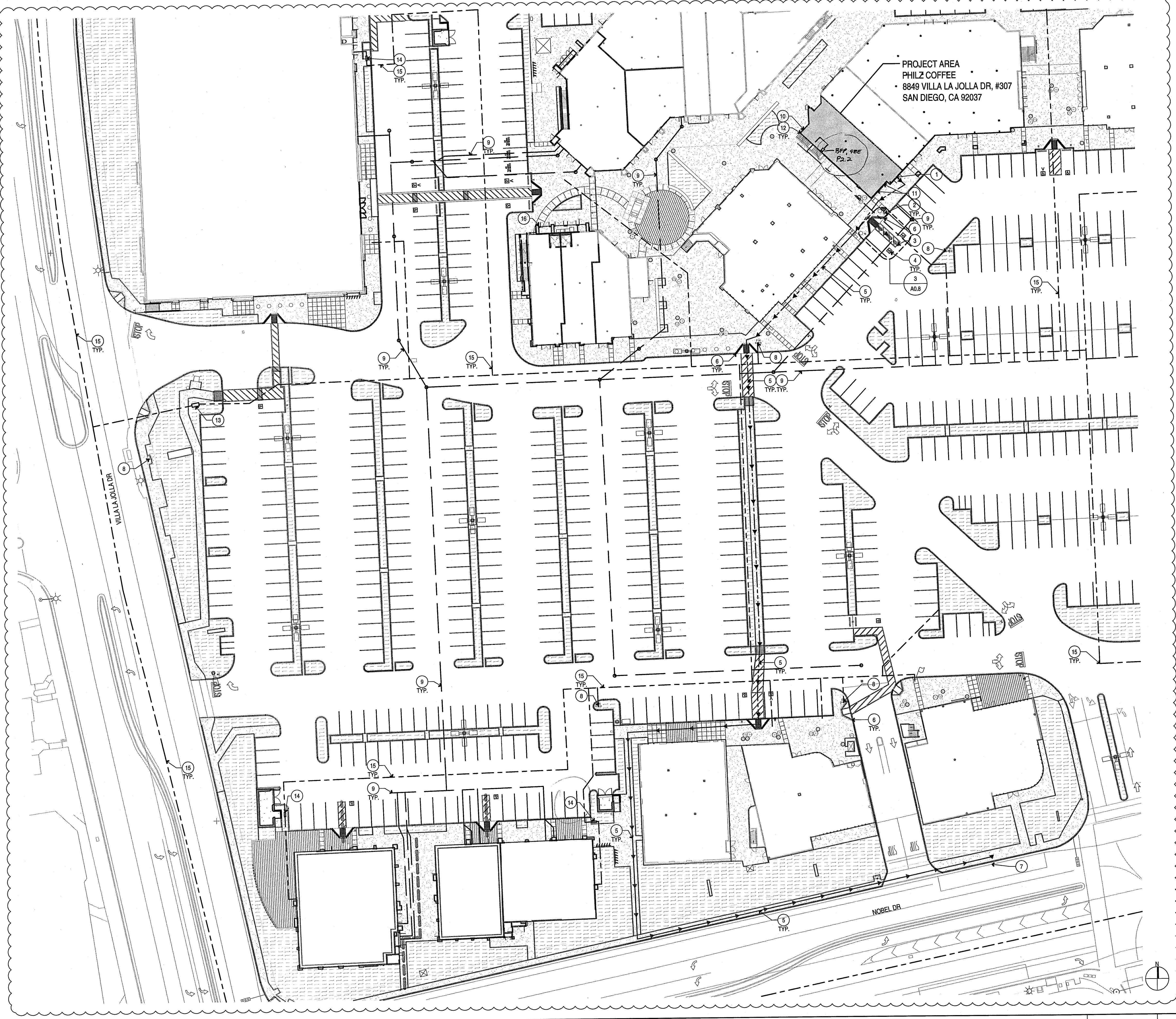
TOILET ROOM
 DETAILS

SCALE

A0.6

Plot Date: Mar 10, 2017 - 2:17pm Plotted by: jimmy Filename: lj06.dwg

Plot Date: Mar 13, 2017 - 2:49pm Plotted by: jimmy Filename: j07.dwg



PROJECT AREA
 PHILZ COFFEE
 8849 VILLA LA JOLLA DR, #307
 SAN DIEGO, CA 92037

City of San Diego
 Development Services Department
APPROVED
 Cross Connection Control Review

Domestic:
 Irrigation:
 Fire Service:
 Date: 4/12/17 Name: [Signature]

529296
 City of San Diego
 Structure: [Signature]
 Mechanical: [Signature] S.O. 1778A
 Wis. [Signature] Date: 4/12/17
 By: David Barron
 M4N
 300590405

CITY OF SAN DIEGO
 FACILITIES FINANCING
 APPROVED
 PTS #: 529296

Facilities Financing approves this project contingent upon the payment of all applicable development impact fees, facilities benefit assessments, RTCR, cost reimbursement district fees, housing trust funds fees, and any other applicable fees due prior to issuance of building permits. Fees are subject to change on July 1 and/or upon Council and Mayor's approval of a public facilities financing plan update or amendment.
 Revisions to these plans, which include increased square footage, change in use, or tenant improvements to shell buildings, must be re-routed to Facilities Financing for review.
 Date: 4/5/17 By: [Signature]

CONFORMS
 DEVELOPMENT SERVICES DEPARTMENT
 Land Development Review

Plan File/Work Order No. 529296
 Conforms ID: PLO 44-0419/6CR 347 010
 By: [Signature] Date: 4/4/17
 Date: 4/4/17 Phone: 619-515-1517
 Any Revision To These Plans Will Require Another Stamp of Conformity
 Transfer for [Signature]

NO.	DESCRIPTION
1	(E) ACCESSIBLE ENTRY DOOR IN (E) STOREFRONT
2	(E) ACCESSIBLE PARKING SIGN. REFER TO DETAIL 1 & 5(A0.7B)
3	(E) ACCESSIBLE AISLE. REFER DETAIL 6(A0.7B)
4	(E) 3 FT. SQUARE ISA SURFACE IDENTIFICATION. REFER TO DETAIL 2(A0.7B)
5	(E) 48 IN. MIN. WIDE ACCESSIBLE PATH OF TRAVEL
6	(E) ACCESSIBLE CURB RAMP. REFER TO DETAIL 0(A0.7B)
7	(E) BUS STOP
8	(E) FIRE HYDRANT
9	(E) SEWER LATERAL
10	(N) EXHAUST FAN OUTLET
11	(N) OUTSIDE AIR INTAKE
12	LEASE LINE
13	(E) 8" METER IN UNDERGROUND VAULT WITH ABOVE GROUND 8" BACKFLOW PREVENTER
14	(E) 2" BACKFLOW PREVENTER WITH SECURITY ENCLOSURE
15	(E) WATER MAIN
16	(E) TRASH ENCLOSURE

NOTES:
 1. IF THE CITY BUILDING INSPECTOR DETERMINS NON-COMPLIANCE WITH ANY ACCESSIBILITY PROVISIONS, A COMPLETE AND DETAILED REVISED PLANS CLEARLY SHOWING ALL EXISTING NON-COMPLYING CONDITIONS AND THE PROPOSED MODIFICATIONS TO MEET CURRENT ACCESSIBILITY REQUIREMENTS (INCLUDING SITE PLANS, FLOOR PLANS, DETAILS, ETC.) WILL BE SUBMITTED TO THE DEPARTMENT FOR REVIEW AND APPROVAL.
 2. I AM THE DESIGNER/ OWNER IN RESPONSIBLE CHARGE OF THIS TENANT IMPROVEMENT PROJECT. I HAVE INSPECTED THE SITE/ PREMISES AND DETERMINED THAT EXISTING CONDITIONS ARE IN FULL COMPLIANCE WITH CURRENT SITE ACCESSIBILITY REQUIREMENTS TO THE EXTENT REQUIRED BY LAW.
 MICHAEL JOHN McCall SIGNATURE: [Signature] DATE: 3.14.17
 PRINT NAME: MICHAEL JOHN McCall

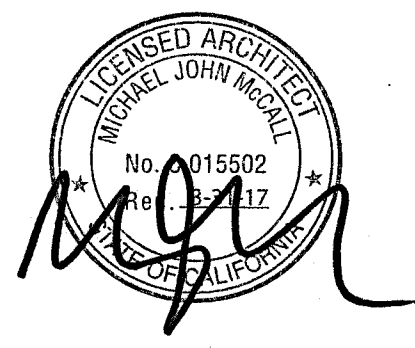
McCall
 McCall Design Group
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PHILZ COFFEE
 8849 VILLA LA JOLLA VILLAGE DR, #307
 SAN DIEGO, CA

JOB NUMBER:
 216088

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

SITE PLAN

SCALE

A0.7A

SITE PLAN

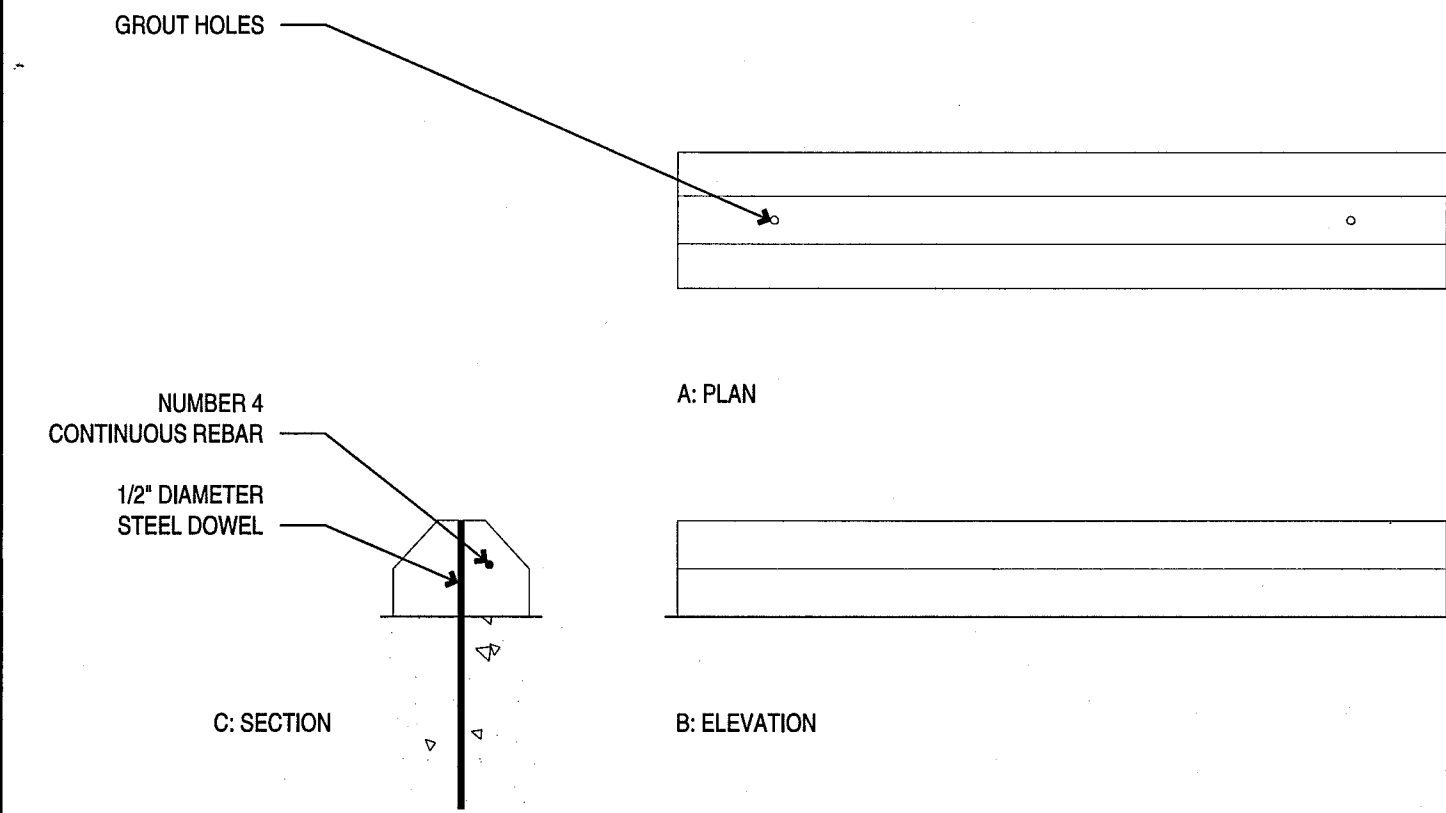
1/32" = 1'-0"

2

KEY NOTES

NTS

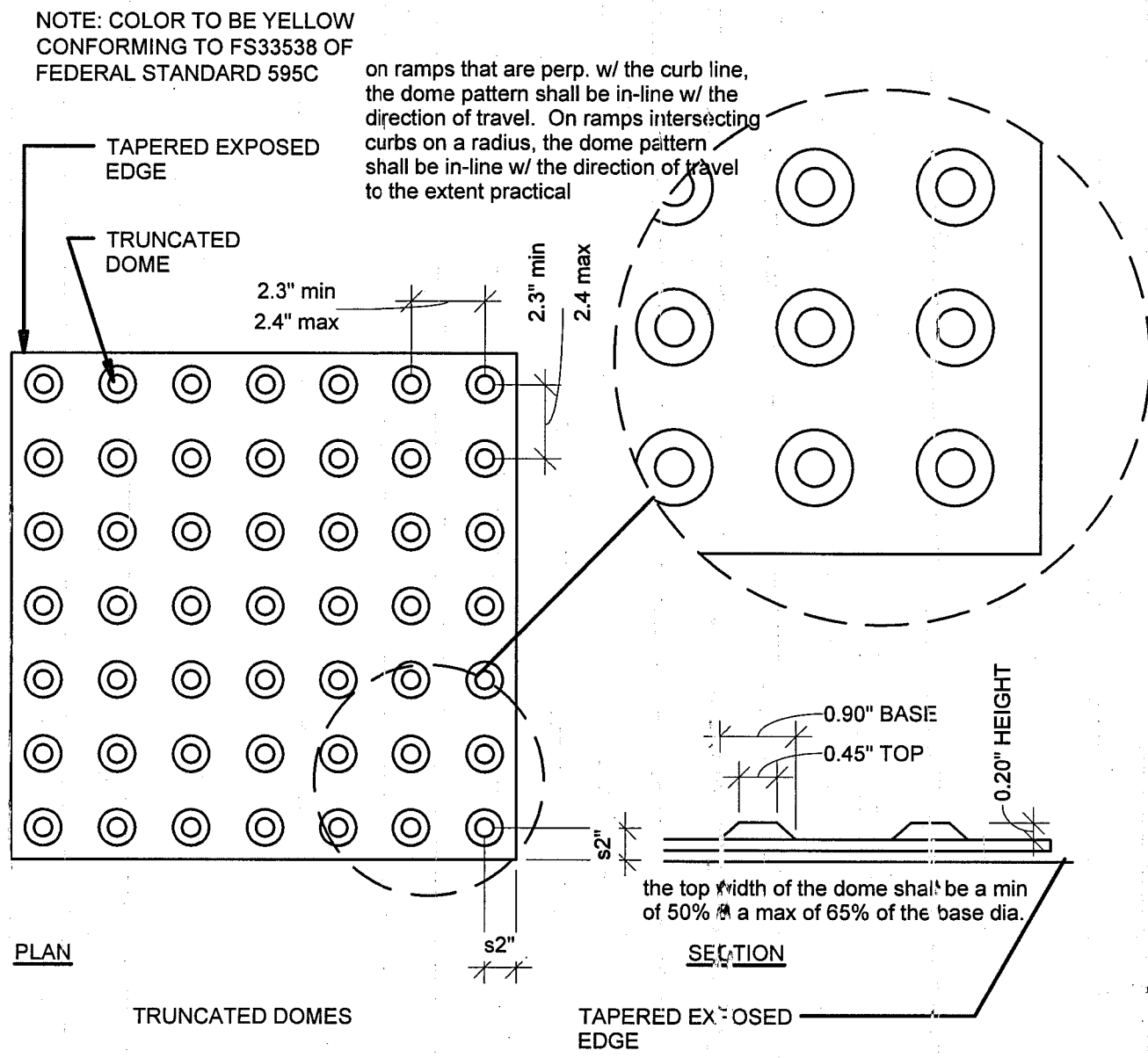
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(E) WHEEL STOP DETAIL

1"=1'-0"

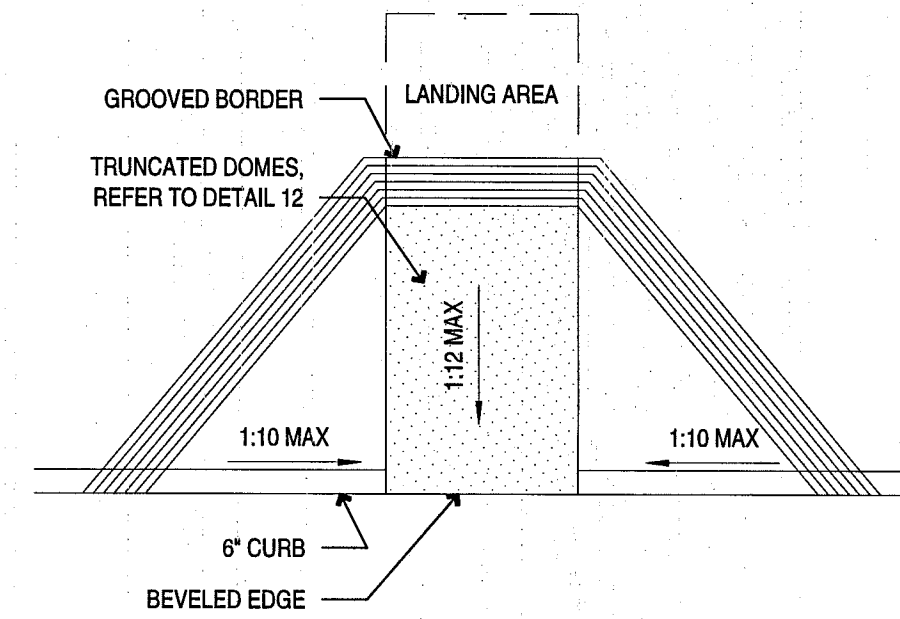
13



(E) TRUNCATED DOMES

NTS

12



(E) FLARED CURB RAMP

1/4"=1'-0"

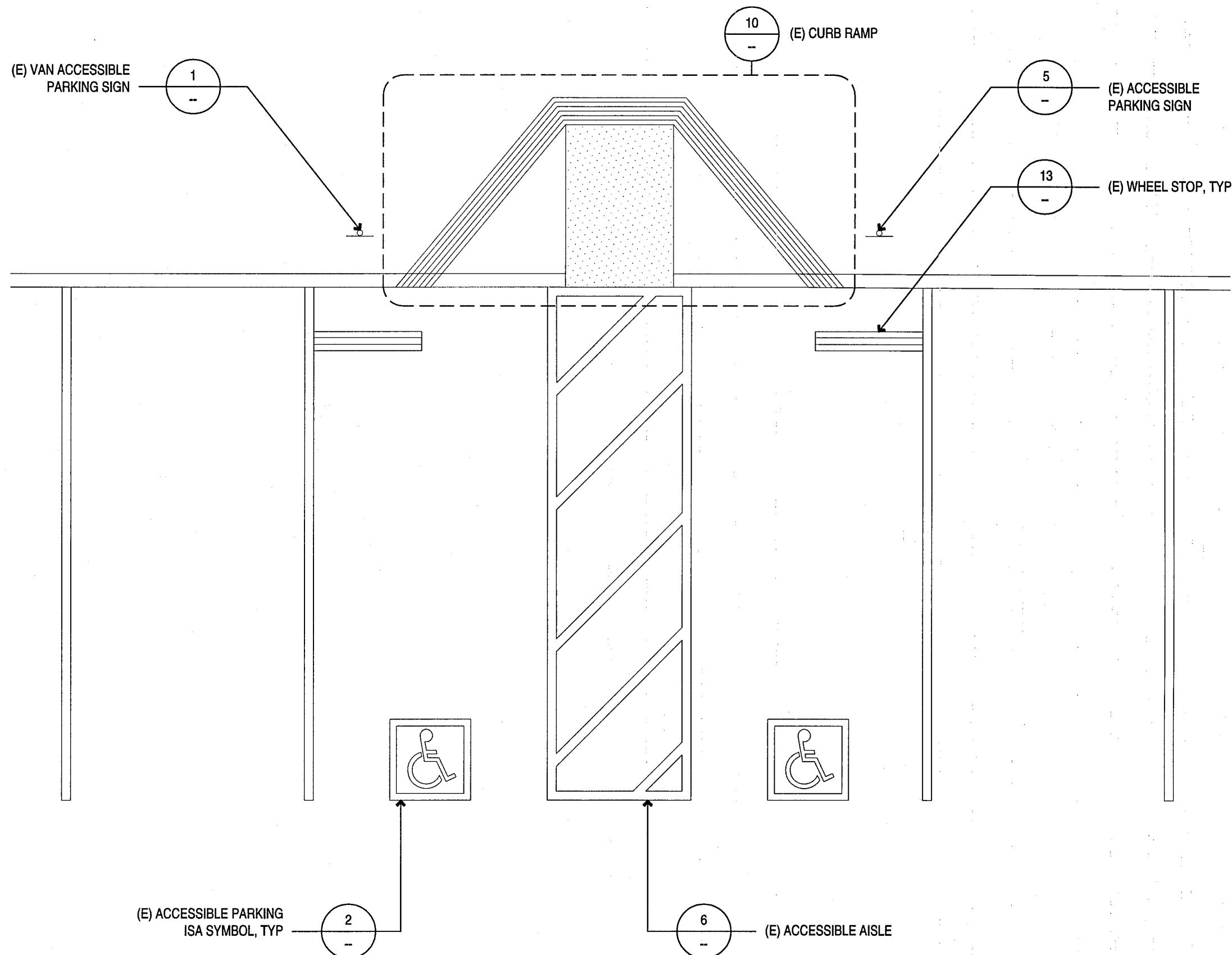
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(E) TOW AWAY SIGNAGE

1/4"=1'-0"

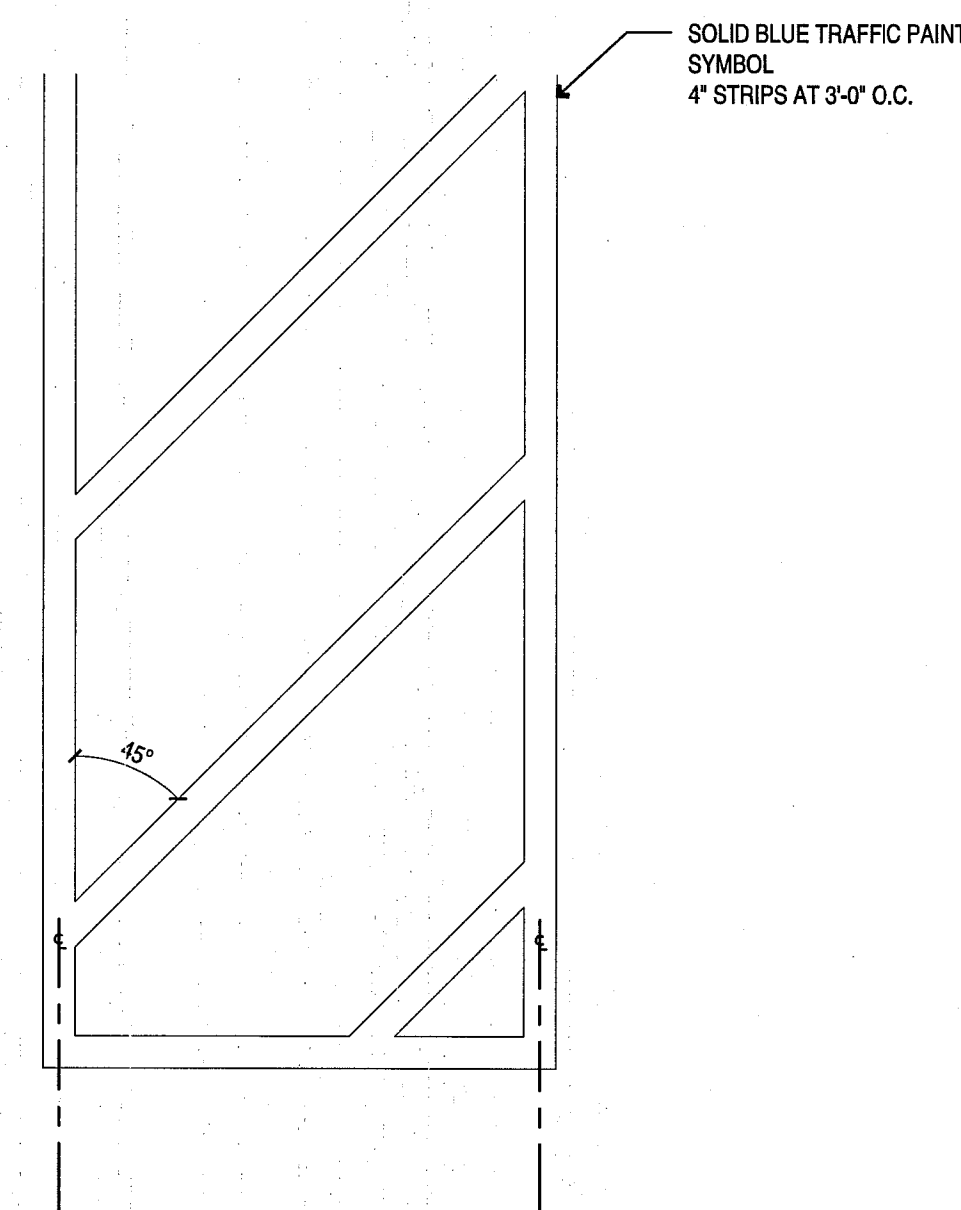
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(E) ACCESSIBLE PARKING SPACE

1/4"=1'-0"

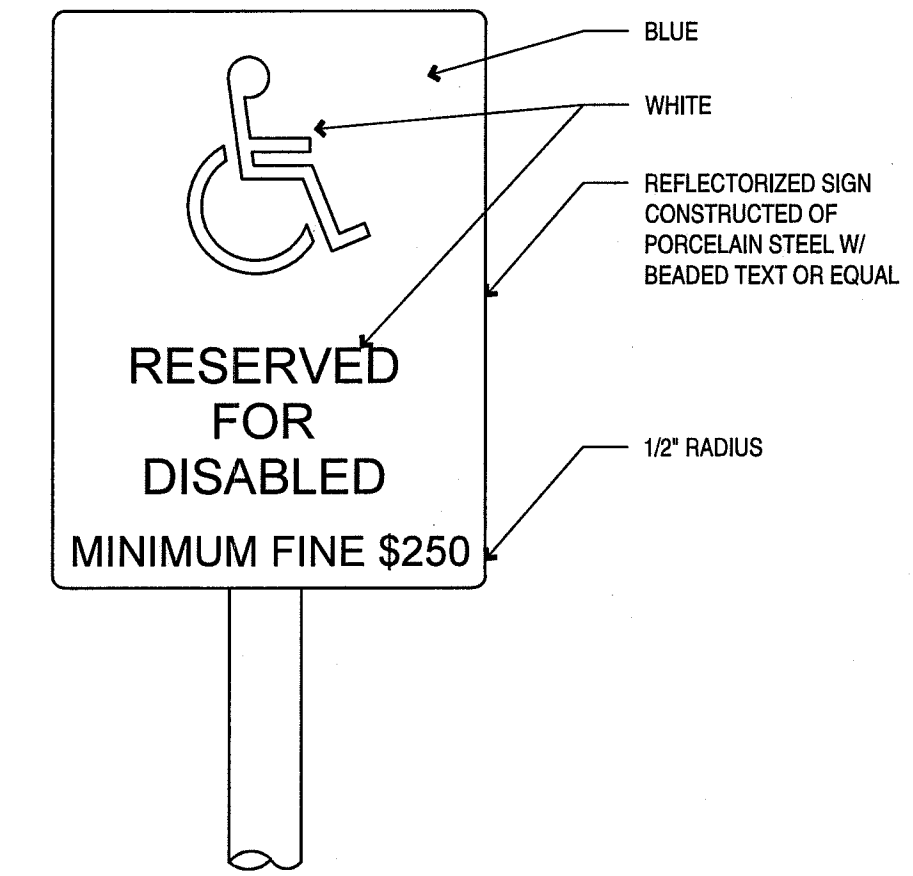
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(E) ACCESSIBLE AISLE

1/2"=1'-0"

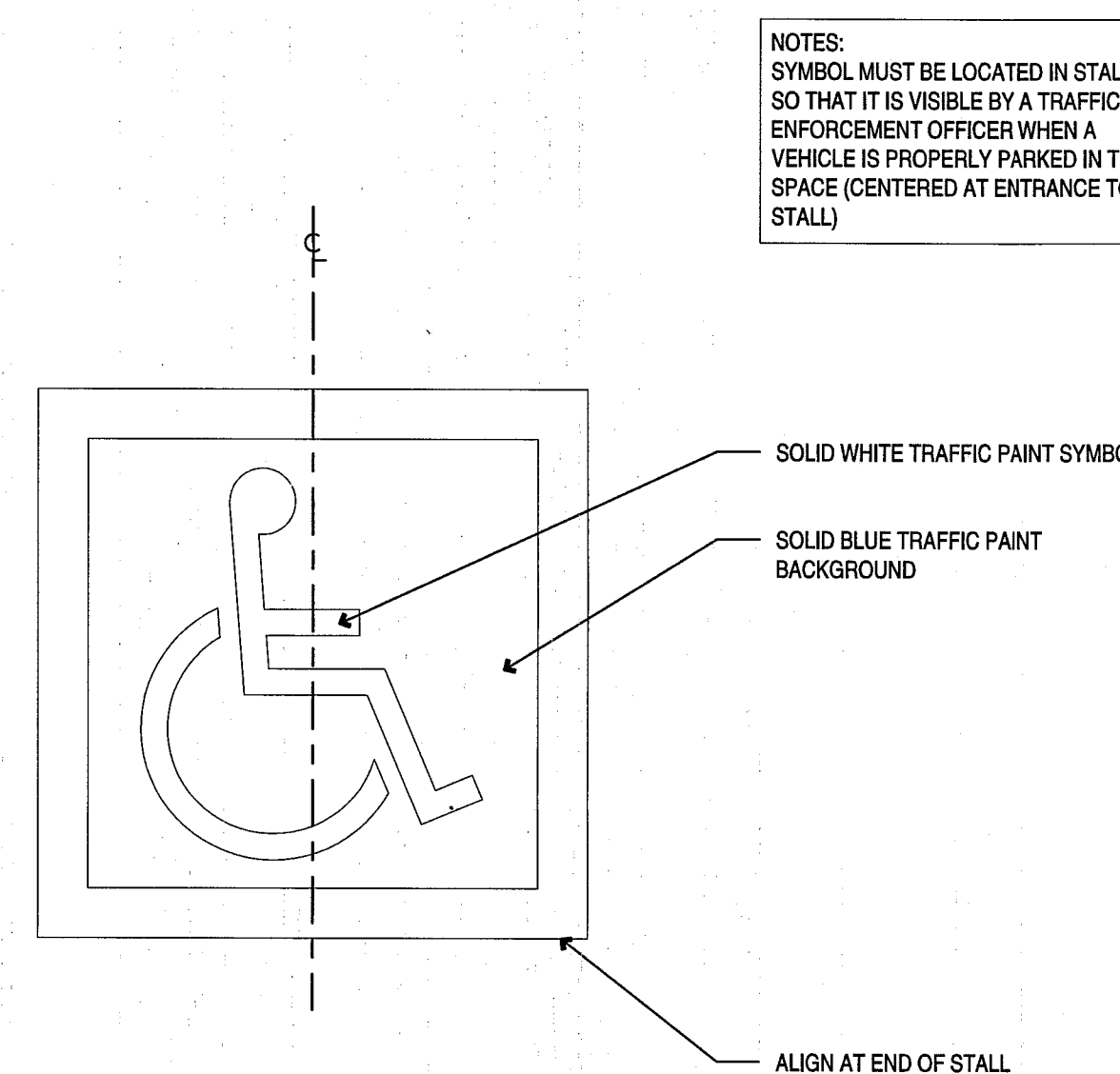
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(E) ACCESSIBLE PARKING SIGN

3"=1'-0"

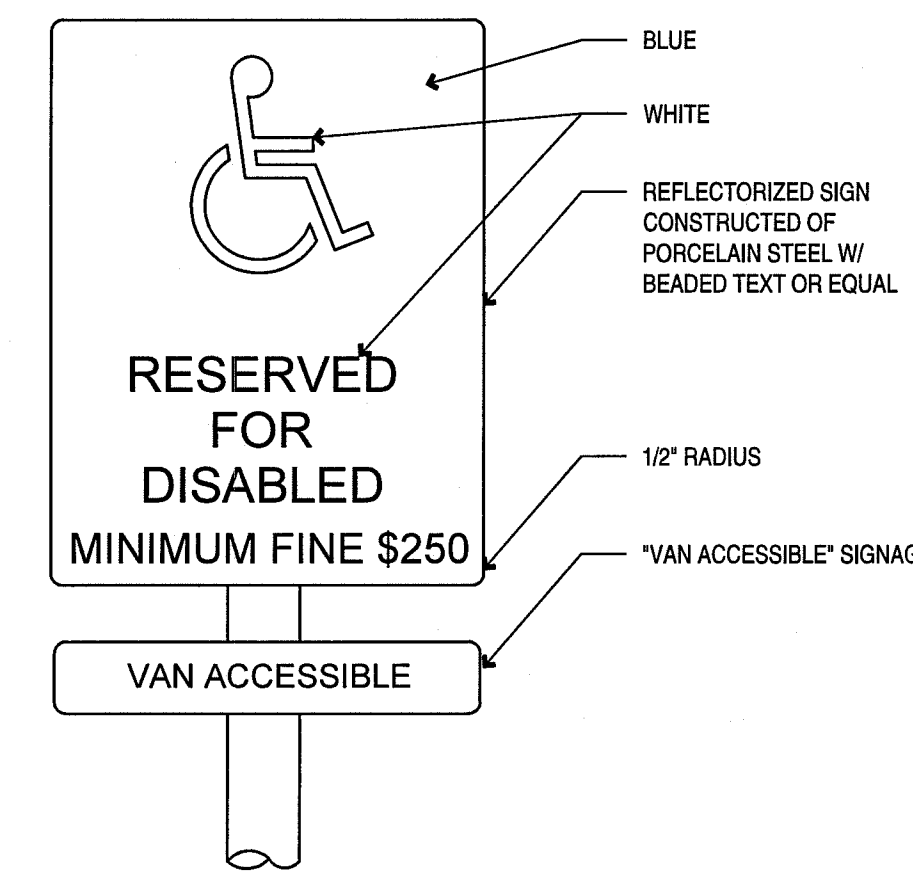
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(E) ACCESSIBLE PARKING ISA SYMBOL

1"=1'-0"

2



(E) VAN ACCESSIBLE PARKING SIGN

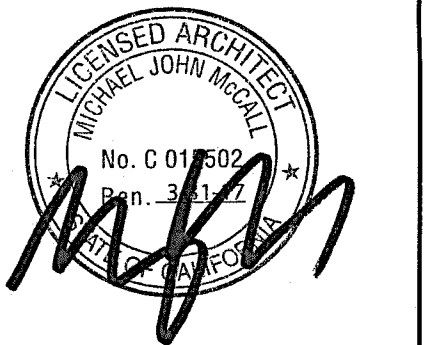
3"=1'-0"

1

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SAN DIEGO, CA
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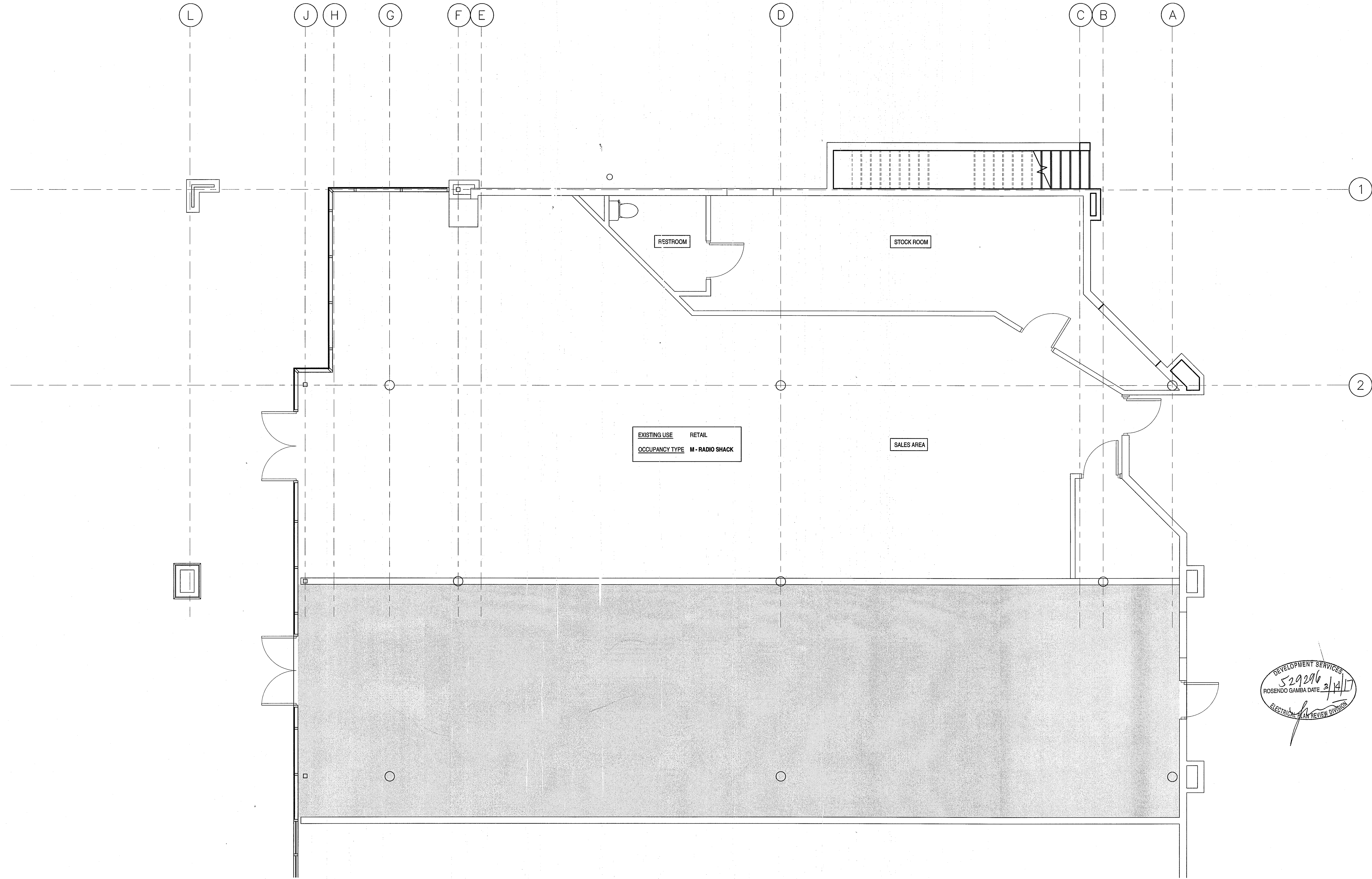


DRAWING DESCRIPTION

SITE ACCESSIBILITY DETAILS

SCALE

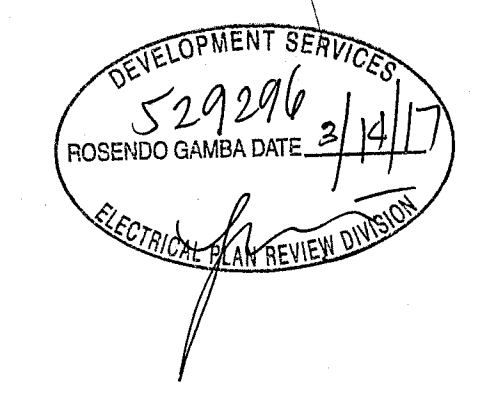
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SEAL/SIGNATURE



DRAWING DESCRIPTION

EXISTING FLOOR PLAN

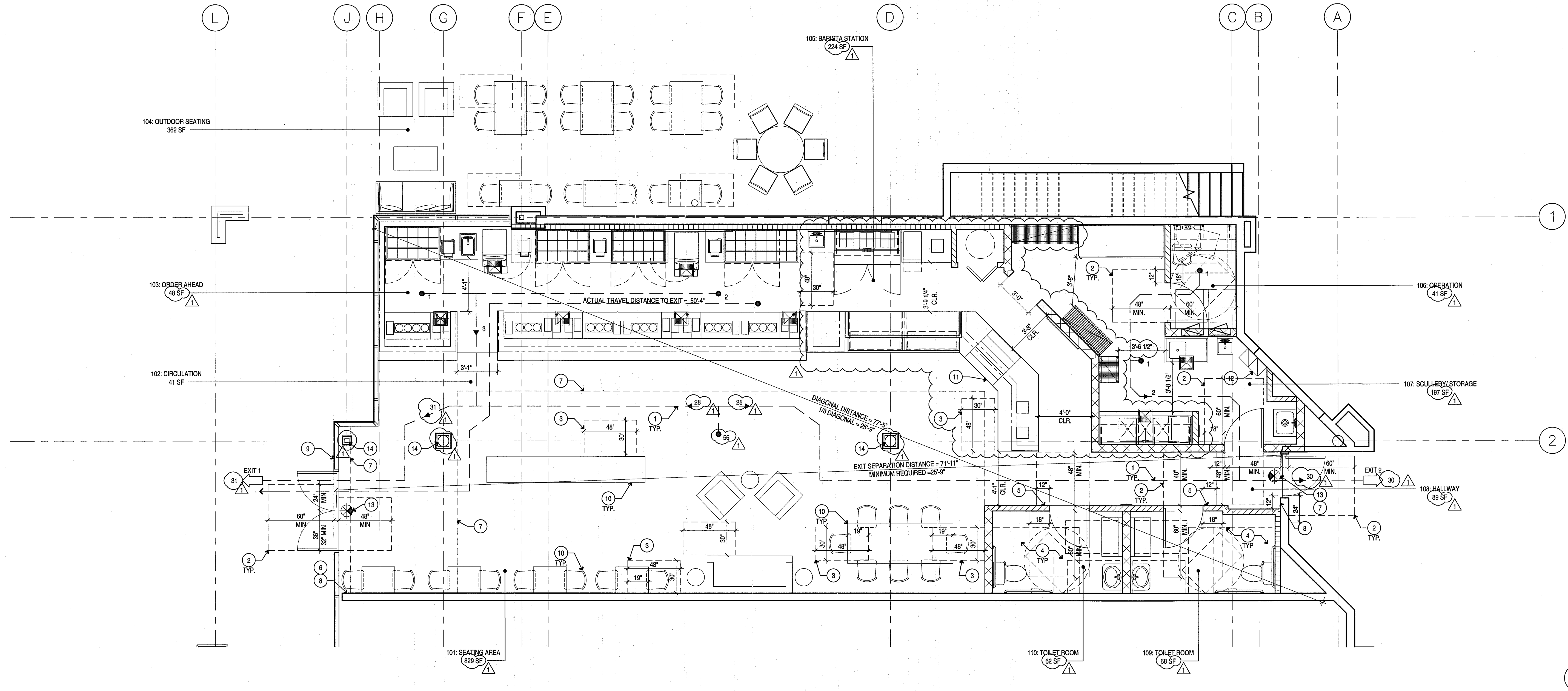
SCALE

A0.8

NOT IN CONTRACT

EXISTING FLOOR PLAN

1/4" = 1'-0"



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FLOOR PLAN

1/4" = 1'-0" 5

1	LINE OF 44" CLEAR EGRESS PATH
2	ACCESSIBLE MANEUVERING CLEARANCE AT DOOR INCLUDING PUSH / PULL CLEARANCES; G.C. TO VERIFY ALL (E) CONDITIONS AND VERIFY COMPLIANCE
3	30" x 48" CLEAR FLOOR SPACE FOR WHEELCHAIR ACCESS AT TABLE SEATING, 34" MAX HEIGHT, 27" H x 19" D x 30" W CLEAR SPACE BENEATH TABLE TOP
4	TOILET ROOM ACCESSIBLE MANEUVERING SPACE. REFER TO TOILET ROOM DETAIL A0.8
5	TOILET ROOM ACCESSIBLE DOOR SIGNAGE. REFER TO DETAIL 1/A0.5 FOR DETAILS
6	OCCUPANT LOAD SIGNAGE. REFER TO DETAIL 4/A0.5
7	LINE OF CEILING
8	TACTILE EXIT SIGNAGE WITH 18" x 18" CLEAR FLOOR SPACE CENTERED ON SIGN, TEXT TO READ "EXIT", G.C. TO PROVIDE IF NOT ALREADY EXISTING (REFER TO DETAIL 9/A0.5)
9	INTERNATIONAL SYMBOL OF ACCESSIBILITY, G.C. TO PROVIDE IF NOT ALREADY EXISTING (REFER TO DETAIL 8/A0.5)
10	FURNITURE FURNISHED BY OWNER
11	ACCESSIBLE POINT OF SALES COUNTER, 34" MAX HEIGHT WITH 30" x 48" CLEAR SIDE APPROACH
12	ACCESSIBLE EMPLOYEE LOCKERS, TYP OF 2.
13	ILLUMINATED EXIT SIGN
14	(E) COLUMN

NOTES:
1. REFER TO A.0 FOR PLUMBING & OCCUPANT LOAD CALCULATIONS
2. REFER TO A0.5 FOR ACCESSIBILITY DETAILS

KEY NOTES	NTS	3

ACCESSIBLE SEATING CALCULATIONS				
TYPE	SURFACE HEIGHT	PROVIDED	REQUIRED TO BE ACCESSIBLE (%)	PROVIDED THAT IS ACCESSIBLE
TABLE SEATING	30"-34"	16	1	3
SOFT SEATING	N/A	4	N/A	N/A
EXTERIOR SEATING (TABLE SEATING)	30"-34"	24	2	4
EXTERIOR SEATING (SOFT SEATING)	N/A	5	N/A	N/A
TOTAL		49	3	7

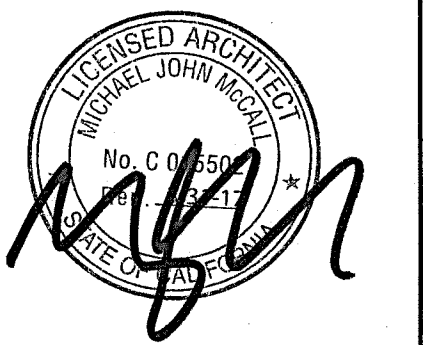
ACCESSIBLE SEATING CALCULATIONS	NTS	2

PATTERN	DESCRIPTION
[Solid Line]	EXISTING WALL, GC TO MAINTAIN ALL RATED COMPONENTS.
[Hatched]	(N) FULL HEIGHT PARTITION. 3 5/8" METAL STUDS AT 16" O.C. W/ 5/8" TYPE X GYPSUM BOARD ON BOTH SIDES; TERMINATE STUD AT BOTTOM OF DECK, TERMINATE GYP AT BOTTOM OF DECK. REFER TO DETAIL 9/A0.0
[Cross-hatched]	(N) FULL HEIGHT PARTITION. 6" NOM. METAL STUDS AT 16" O.C. W/ 5/8" TYPE X GYPSUM BOARD ON ONE OR BOTH SIDES, REFER TO DETAILS; TERMINATE STUD AT BOTTOM OF DECK, TERMINATE GYP AT BOTTOM OF DECK. REFER TO DETAIL 10/A0.0
[Dotted]	(N) PARTIAL HEIGHT PARTITION. 3 5/8" METAL STUDS AT 16" O.C. W/ 5/8" TYPE X GYPSUM BOARD ON ONE SIDE. REFER TO DETAILS. REFER TO DETAIL 9/A0.0
[Dashed]	(N) LOW KNEE WALL. 3 5/8" METAL STUDS AT 16" O.C. W/ 5/8" CEMENT BOARD ON BOTH SIDES. HEIGHT AS NOTED BY KEY NOTES. REFER TO DETAIL 1/A0.0

NOTES:
GYPSUM BOARD TO BE ATTACHED TO STEEL STUDS AT 16" O.C. MAX WITH 1" TYPE S BUGLE HEAD SCREWS. REFER TO USG "THE GYPSUM CONSTRUCTION HANDBOOK" SELECTOR GUIDE FOR SCREWS.

WALL LEGEND	1/4" = 1'-0"	1

SEAL/SIGNATURE

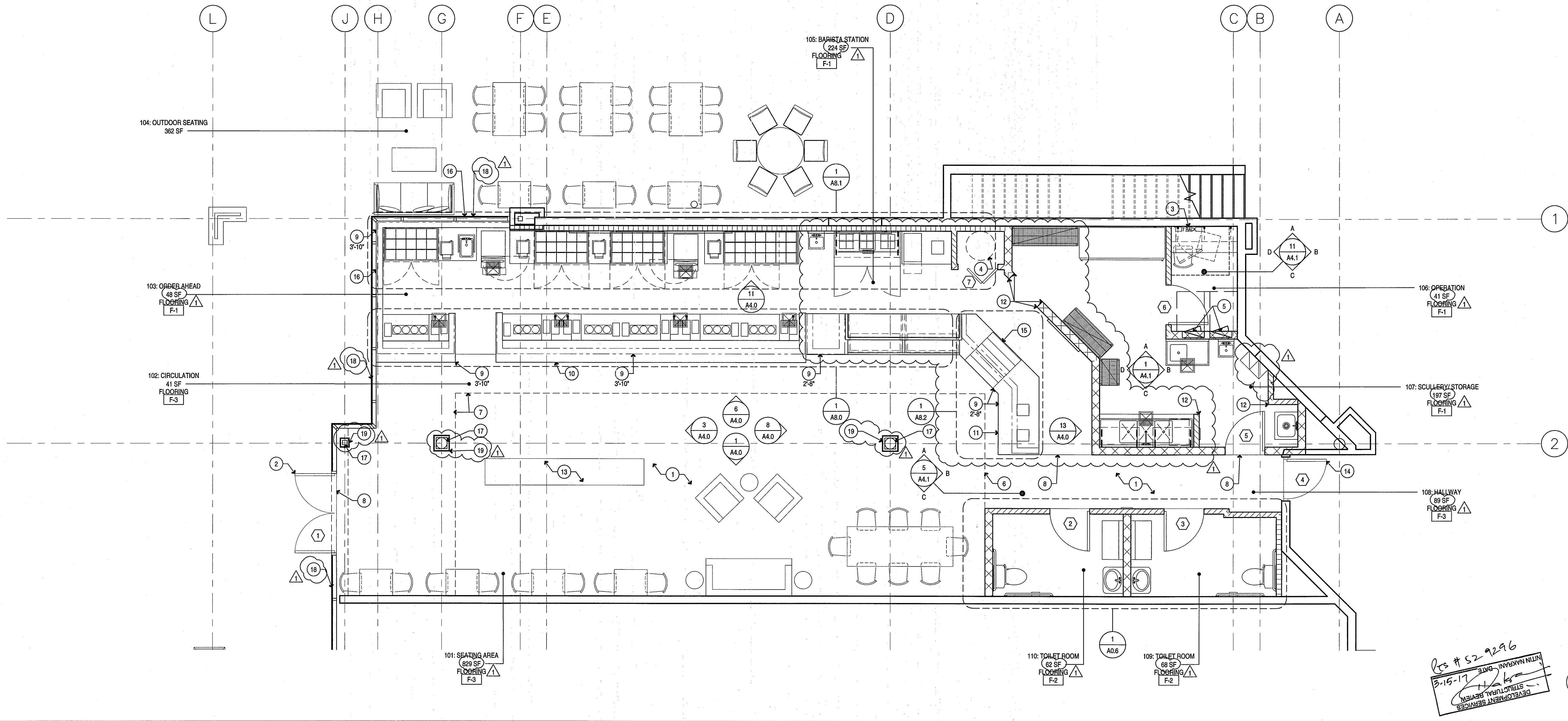


DRAWING DESCRIPTION

EGRESS PLAN

SCALE

A0.9



Rev # 529296
3-15-17
REVISED PER ARCHITECT'S COMMENTS

PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA

JOB NUMBER: 216088

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03.03.17	PLAN CHECK COMMENTS

FLOOR PLAN

1/4" = 1'-0" 5

1	EXISTING CONCRETE FLOOR TO BE GROUND SMOOTH, STAIN AND SEAL
2	EXISTING ACCESSIBLE ENTRY DOOR IN (E) STOREFRONT. REFER TO DOOR SCHEDULE 6/A0.4
3	(N) IT RACK (REFER TO 5/A6.1 AND ELECTRICAL DRAWINGS)
4	(N) ELECTRICAL PANELS (REFER TO ELECTRICAL DRAWINGS FOR SCHEDULE AND SPECIFICATIONS)
5	LINE OF SOFFIT ABOVE. REFER TO A3.0 REFLECTED CEILING PLAN
6	LINE OF SUSPENDED CEILING ABOVE. REFER TO A3.0 REFLECTED CEILING PLAN
7	FLOOR TRANSITION (SEE SHEET 2/ A6.3 CONSTRUCTION DETAILS)
8	LOW KNEE WALL, HEIGHT AS NOTED
9	BARISTA SERVICE COUNTER, BY MILLWORKER
10	ACCESSIBLE POS COUNTER, 34" A.F.F. TO TOP OF COUNTER
11	CORNER GUARD, REFER TO SHEETS A4.0 AND A4.1 INTERIOR ELEVATIONS AND 12/A6.0 FOR CORNER GUARD DETAILS
12	ACCESSIBLE BENCH FURNISHED BY OWNER
13	EXISTING ACCESSIBLE REAR EXIT. REFER TO DOOR SCHEDULE 6/A0.4
14	REMOVABLE COFFEE POUND BAG DISPLAY PLATFORM. REFER TO DETAIL 11/A6.4
15	APPLY (N) WHITE TRANSLUCENT FILM TO INSIDE FACE OF STOREFRONT GLAZING (4'-4" A.F.F.)
16	EXISTING STEEL COLUMN

18	(E) INOPERABLE WINDOWS
19	(N) COLUMN ENCLOSURE. REFER TO 283/ A6.0 CONSTRUCTION DETAIL

NOTES:
1. ALL DIMENSIONS, ALIGN, AND FLUSH NOTES ARE TO FACE OF GYPSUM BOARD UNLESS OTHERWISE NOTED
2. REFER TO A0.4 FOR DOOR AND FINISH SCHEDULES
3. REFER TO A7.0 FOR EQUIPMENT AND KITCHEN FIXTURES
4. ANY TRENCHING MUST BE COMPACTED, DOWELED AND EPOXIED ALTERNATING ON 18" SPACING

PATTERN	DESCRIPTION
[Pattern]	EXISTING WALL, GC TO MAINTAIN ALL RATED COMPONENTS.
[Pattern]	(N) FULL HEIGHT PARTITION. 3 5/8" METAL STUDS AT 16" O.C. W/ 5/8" TYPE X GYPSUM BOARD ON BOTH SIDES. TERMINATE STUD AT BOTTOM OF DECK, TERMINATE GYP AT BOTTOM OF DECK. REFER TO DETAIL 9/A6.0
[Pattern]	(N) FULL HEIGHT PARTITION. 6" NOM. METAL STUDS AT 16" O.C. W/ 5/8" TYPE X GYPSUM BOARD ON ONE OR BOTH SIDES. REFER TO DETAILS. TERMINATE STUD AT BOTTOM OF DECK, TERMINATE GYP AT BOTTOM OF DECK. REFER TO DETAIL 10/A6.0
[Pattern]	(N) PARTIAL HEIGHT PARTITION. 3 5/8" METAL STUDS AT 16" O.C. W/ 5/8" TYPE X GYPSUM BOARD ON ONE SIDE. REFER TO DETAILS. REFER TO DETAIL 5/A6.0
[Pattern]	(N) DIE WALL. 3 5/8" METAL STUDS AT 16" O.C. W/ 5/8" CEMENT BOARD ON BOTH SIDES. HEIGHT AS NOTED BY KEY NOTES. REFER TO DETAIL 1/A6.0

NOTES:
GYPSUM BOARD TO BE ATTACHED TO STEEL STUDS AT 16" O.C. MAX WITH 1" TYPE S BUGLE HEAD SCREWS. REFER TO USG 'THE GYPSUM CONSTRUCTION HANDBOOK' SELECTOR GUIDE FOR SCREWS.

KEYNOTES

1/4" = 1'-0"

2

WALL LEGEND

1/4" = 1'-0"

1

SEAL/SIGNATURE

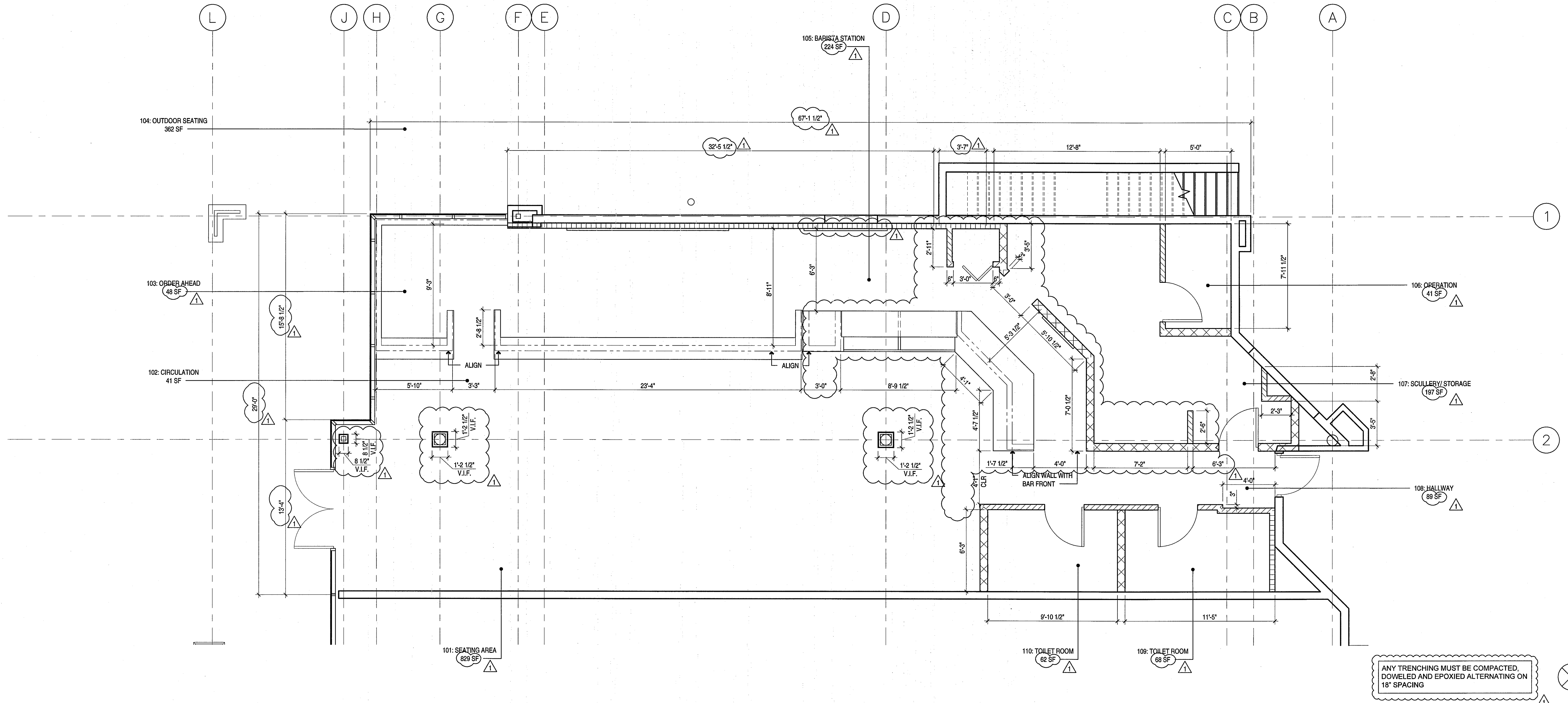
APPROVED ARCHITECT
MICHAEL JOHN REARD
No. C 01555
DATE: 3/17/17
STEVE SUKHENDRA

DRAWING DESCRIPTION

FLOOR PLAN

SCALE

A1.0



ANY TRENCHING MUST BE COMPACTED, DOWELED AND EPOXIED ALTERNATING ON 18" SPACING

PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
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216008

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FLOOR PLAN

1/4" = 1'-0" 5

PATTERN	DESCRIPTION
	EXISTING WALL, GC TO MAINTAIN ALL RATED COMPONENTS.
	(N) FULL HEIGHT PARTITION, 3 5/8" METAL STUDS AT 16" O.C. W/ 5/8" TYPE X GYPSUM BOARD ON BOTH SIDES; TERMINATE STUD AT BOTTOM OF DECK, TERMINATE GYP AT BOTTOM OF DECK. REFER TO DETAIL 9/A6.0
	(N) FULL HEIGHT PARTITION, 6" NOM. METAL STUDS AT 16" O.C. W/ 5/8" TYPE X GYPSUM BOARD ON ONE OR BOTH SIDES; REFER TO DETAILS; TERMINATE STUD AT BOTTOM OF DECK, TERMINATE GYP AT BOTTOM OF DECK. REFER TO DETAIL 10/A6.0
	(N) PARTIAL HEIGHT PARTITION, 3 5/8" METAL STUDS AT 16" O.C. W/ 5/8" TYPE X GYPSUM BOARD ON ONE SIDE. REFER TO DETAILS. REFER TO DETAIL 5/A6.0
	(N) DIE WALL, 3 5/8" METAL STUDS AT 16" O.C. W/ 5/8" CEMENT BOARD ON BOTH SIDES. HEIGHT AS NOTED BY KEY NOTES. REFER TO DETAIL 1/A6.0

NOTES:
GYPSUM BOARD TO BE ATTACHED TO STEEL STUDS AT 16" O.C. MAX WITH 1" TYPE S BUGLE HEAD SCREWS. REFER TO USG "THE GYPSUM CONSTRUCTION HANDBOOK" SELECTOR GUIDE FOR SCREWS.

SEAL/SIGNATURE

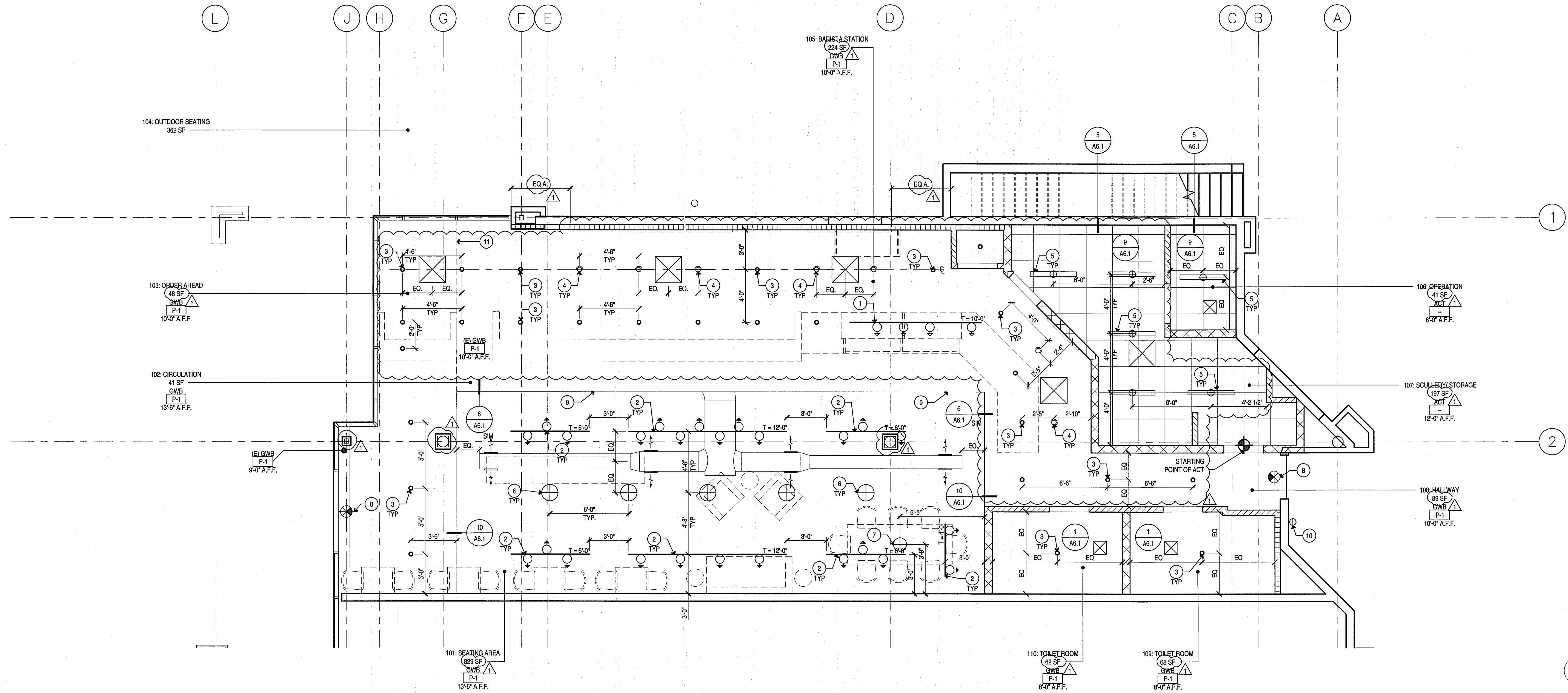
DRAWING DESCRIPTION

CONSTRUCTION FLOOR PLAN

SCALE

A2.0

WALL LEGEND 1/4" = 1'-0" 1



REFLECTED CEILING PLAN

1/4" = 1'-0"
5

SYMBOL	DESCRIPTION
①	(N) TRACK LIGHT, SURFACE MOUNTED 10'-0" A.F.F. @ UNDERSIDE OF (N) SUSPENDED CEILING
②	(N) TRACK LIGHT, CEILING MOUNTED @ UNDERSIDE OF DECK
③	RECESSED DOWN LIGHT FIXTURE (REFER TO ELECTRICAL DRAWING FOR SCHEDULE)
④	MONOPOINT WALL WASH FIXTURE (REFER TO ELECTRICAL DRAWING FOR SCHEDULE)
⑤	FLUORESCENT LIGHT FIXTURE, SURFACE MOUNTED. (REFER TO ELECTRICAL DRAWING FOR SCHEDULE)
⑥	SUSPENDED PENDANT LIGHT FIXTURE ABOVE BARISTA COUNTER 9'-0" A.F.F. (REFER TO ELECTRICAL DRAWING FOR SCHEDULE)
⑦	SUSPENDED PENDANT LIGHT FIXTURE 8'-0" A.F.F. AT SEATING AREA (REFER TO ELECTRICAL DRAWING FOR SCHEDULE)
⑧	EXIT SIGN, SURFACE MOUNTED, 0'-6" ABOVE OPENING
⑨	LINE OF SUSPENDED CEILING
⑩	EXTERIOR PITCH SINGLE SCONCE LIGHTING 6'-8" A.F.F.
⑪	LINE OF EXISTING CEILING AT STOREFRONT
⑫	LINE OF SOFFIT
●	RECESSED DOWNLIGHTS
⊕	PENDANT LIGHT FIXTURE
○	MONOPOINT WALL WASH LIGHT FIXTURE
⊗	EMERGENCY EXIT SIGN
⊠	SURFACE MOUNTED FLUORESCENT FIXTURE
EM	EMERGENCY LIGHTING FIXTURES
⊕	TRACK LIGHTS
⊗	SUPPLY AIR DIFFUSER
⊠	RETURN AIR GRILLE
⊠	EXHAUST FAN
□	CEILING ACCESS PANEL

NOTES: 1. DIMENSIONS, FLUSH, AND ALIGN NOTES ARE TO FACE OF FINISH UNLESS OTHERWISE NOTED
2. CONTRACTOR TO FIELD VERIFY HEIGHTS OF STRUCTURAL ELEMENTS, NOTIFY ARCHITECT OF CONFLICTS OR DISCREPANCIES

KEY NOTES	NTS	2	CEILING LEGEND	NTS	1
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8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA
JOB NUMBER:
216083

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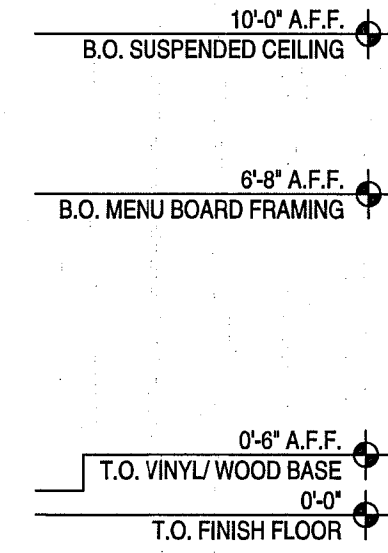
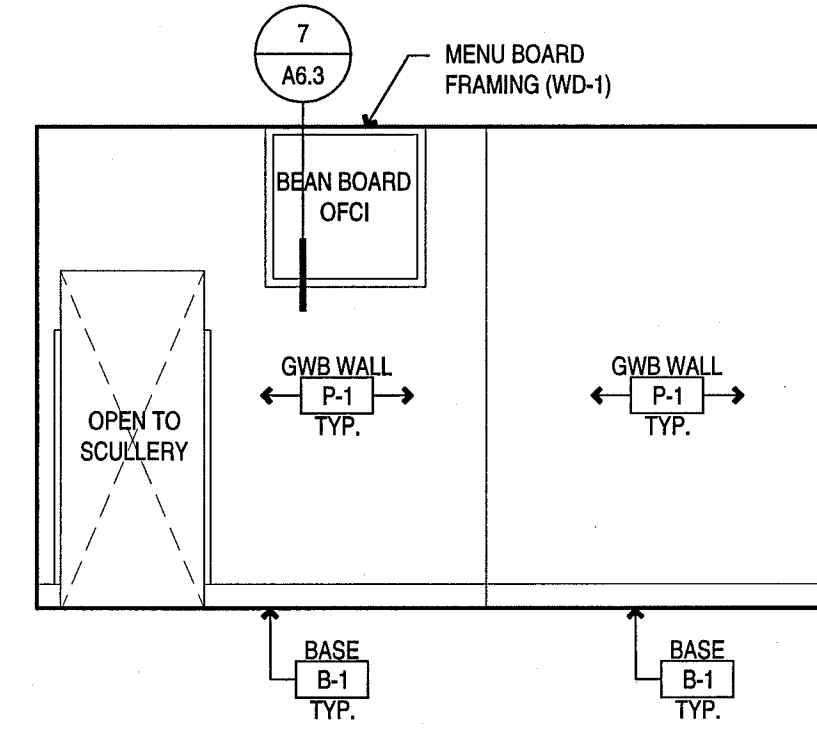


DRAWING DESCRIPTION

REFLECTED
CEILING PLAN

SCALE

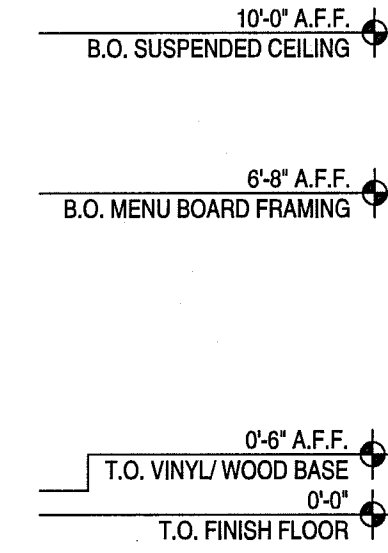
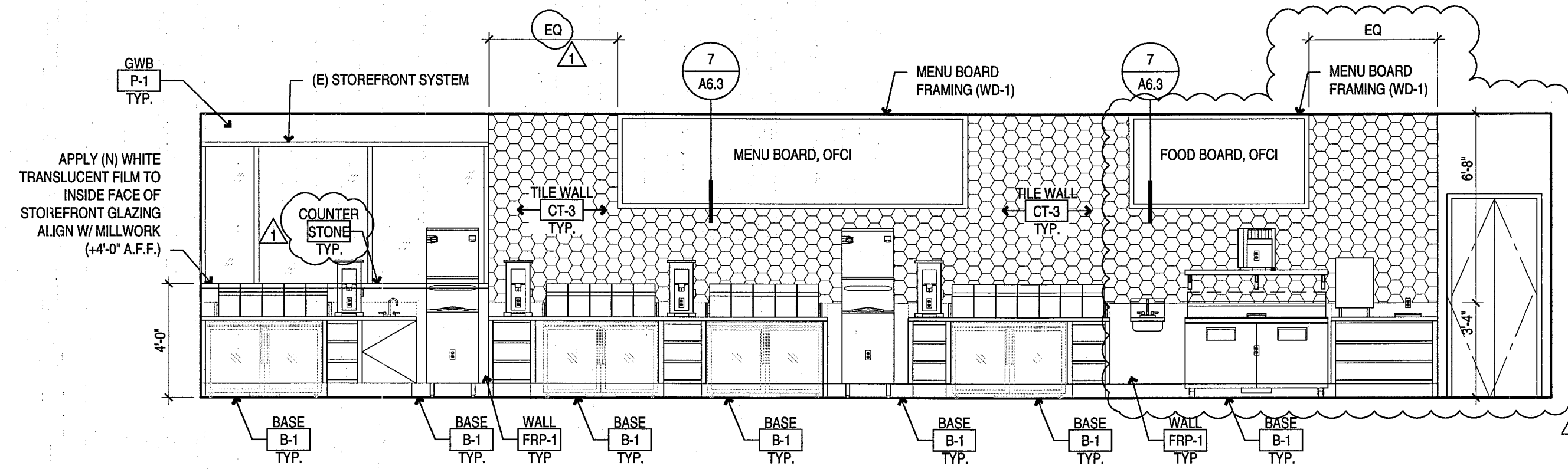
A3.0



POS - EAST ELEVATION

1/4" = 1'-0"

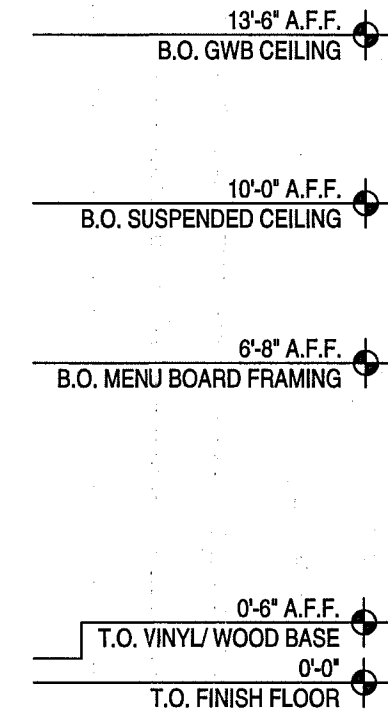
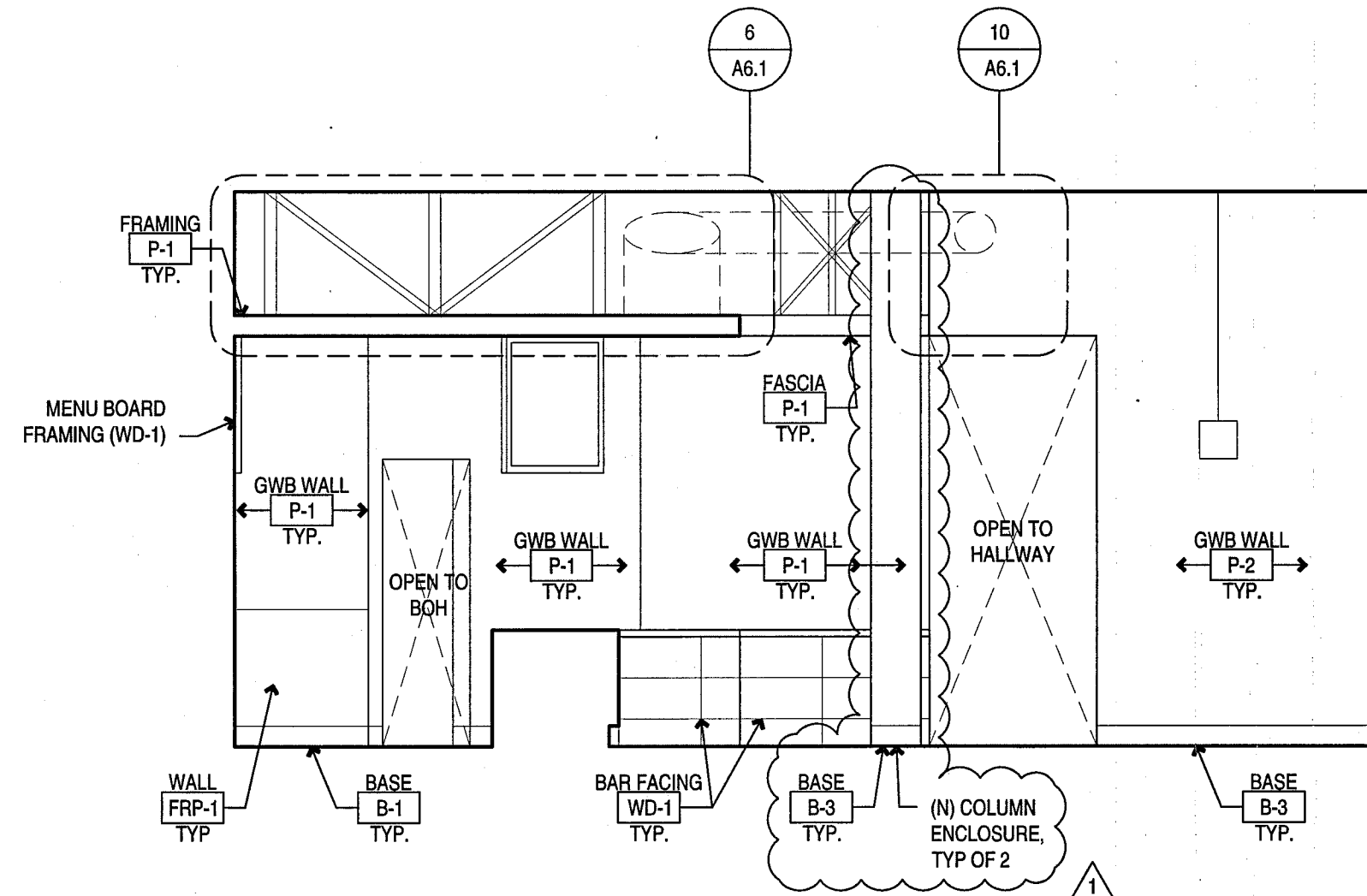
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BARISTA STATION - NORTH ELEVATION

1/4" = 1'-0"

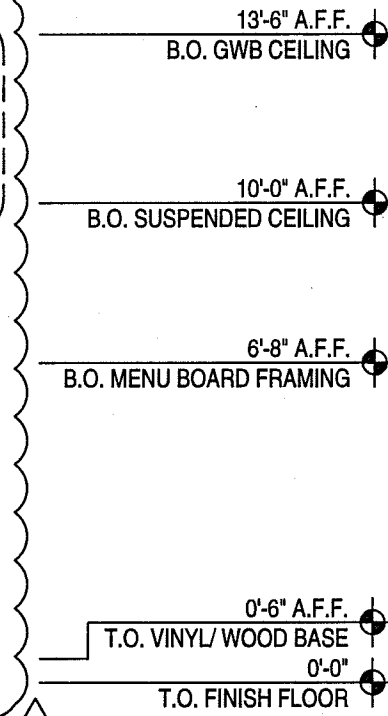
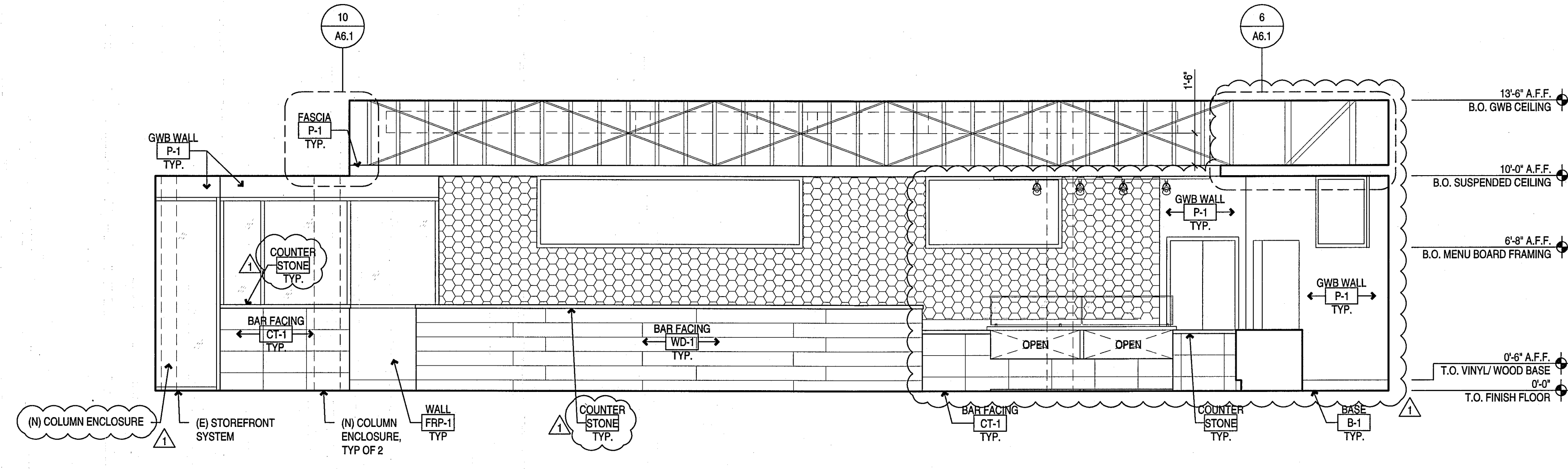
11



POS/ SEATING AREA - EAST ELEVATION

1/4" = 1'-0"

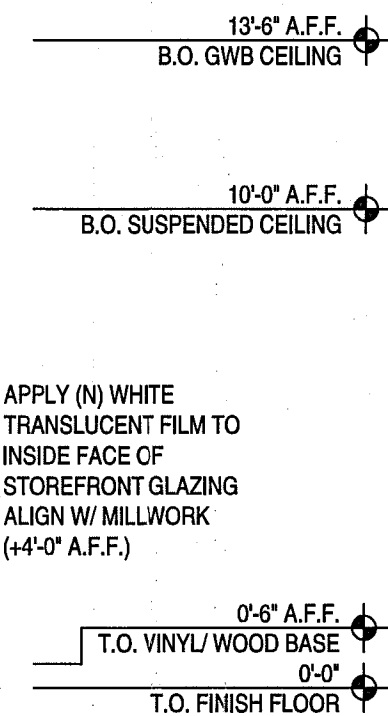
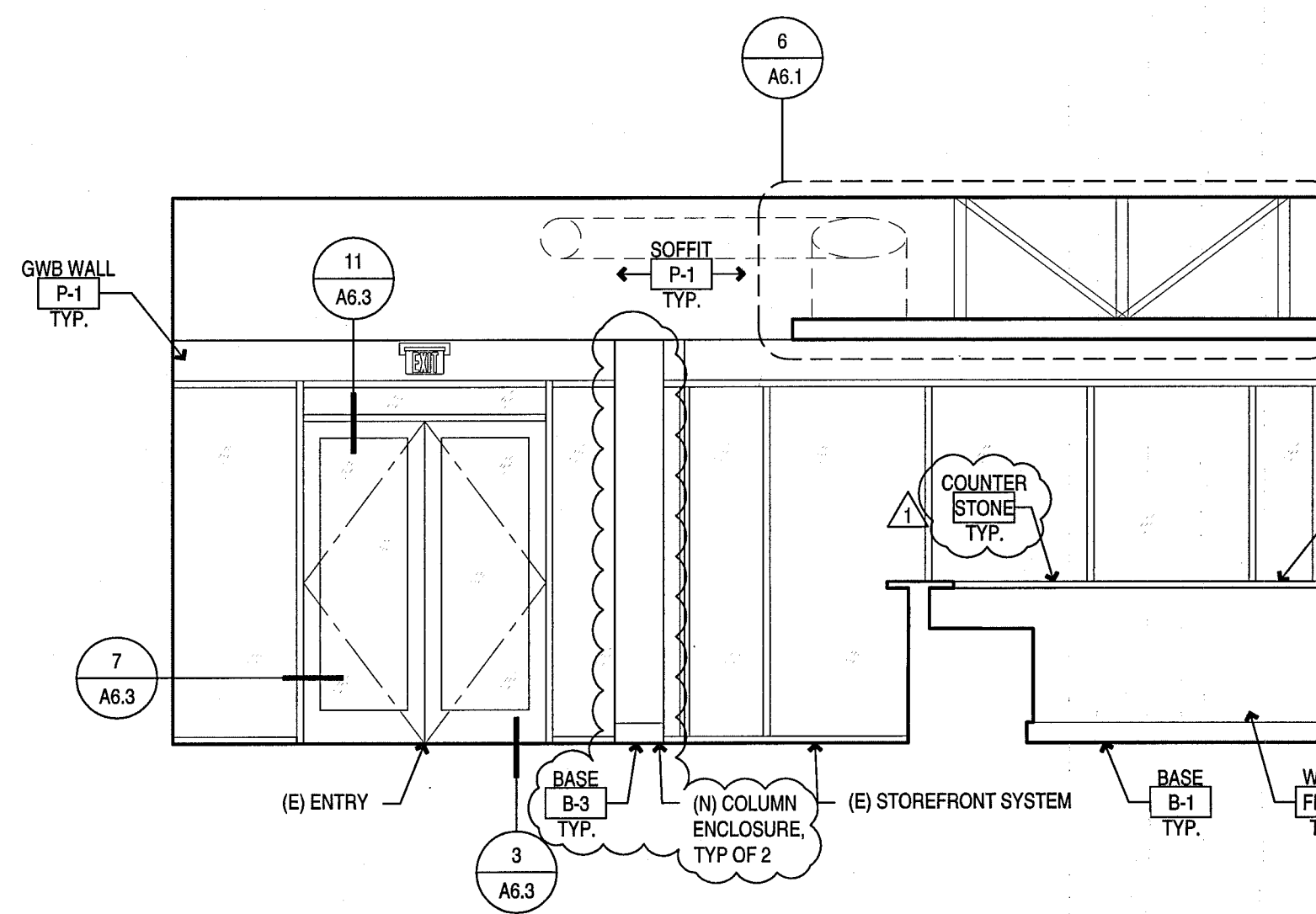
8



CIRCULATION/ SEATING AREA - NORTH ELEVATION

1/4" = 1'-0"

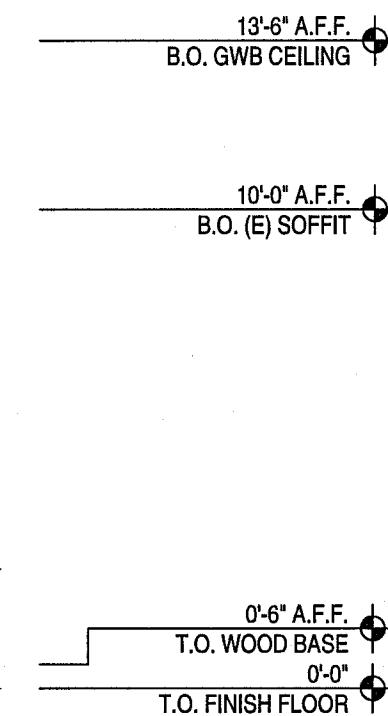
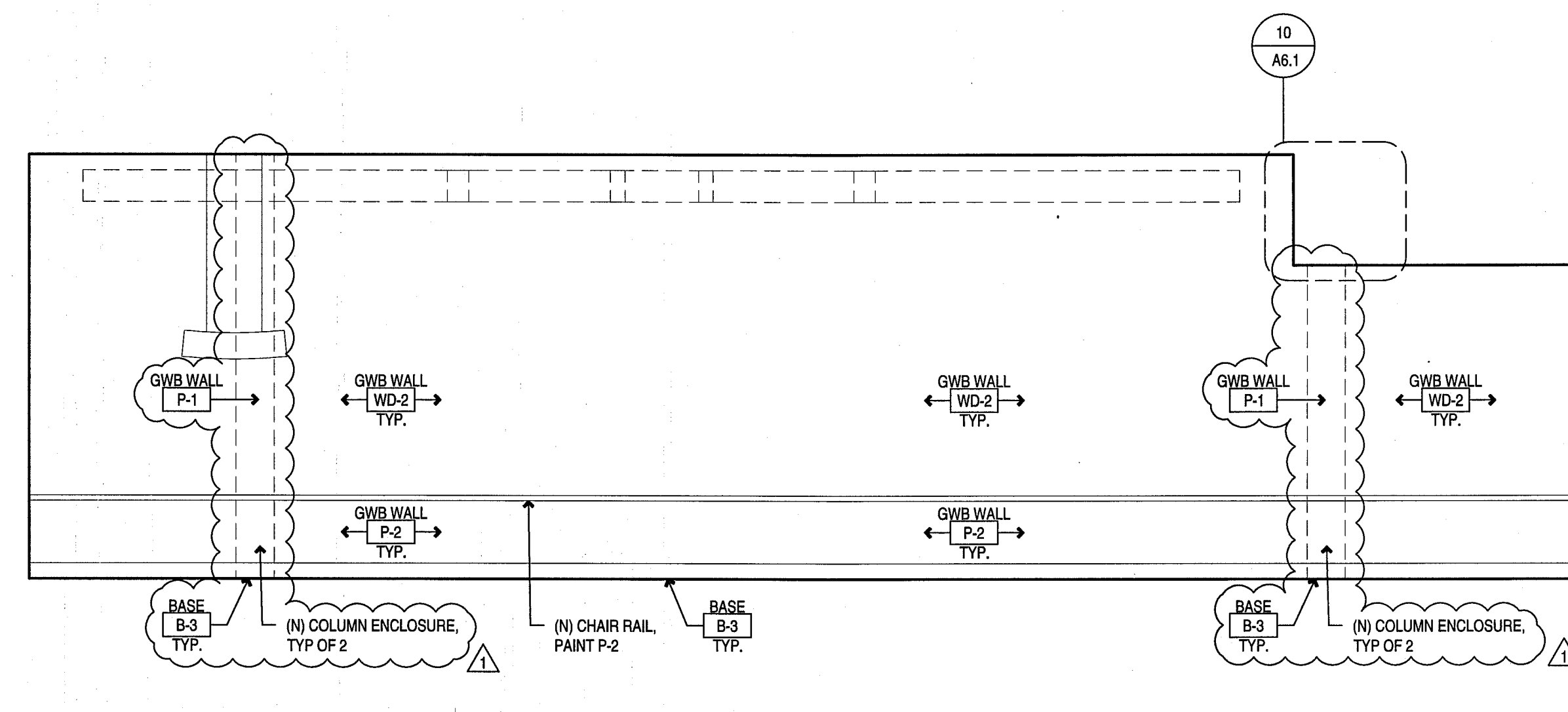
6



ORDER AHEAD/ SEATING AREA - WEST ELEVATION

1/4" = 1'-0"

3



SEATING AREA - SOUTH ELEVATION

1/4" = 1'-0"

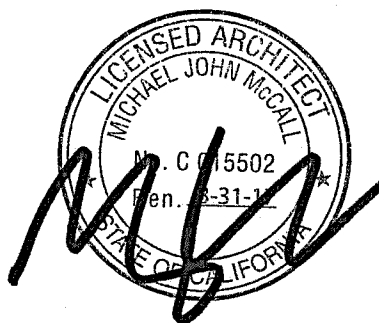
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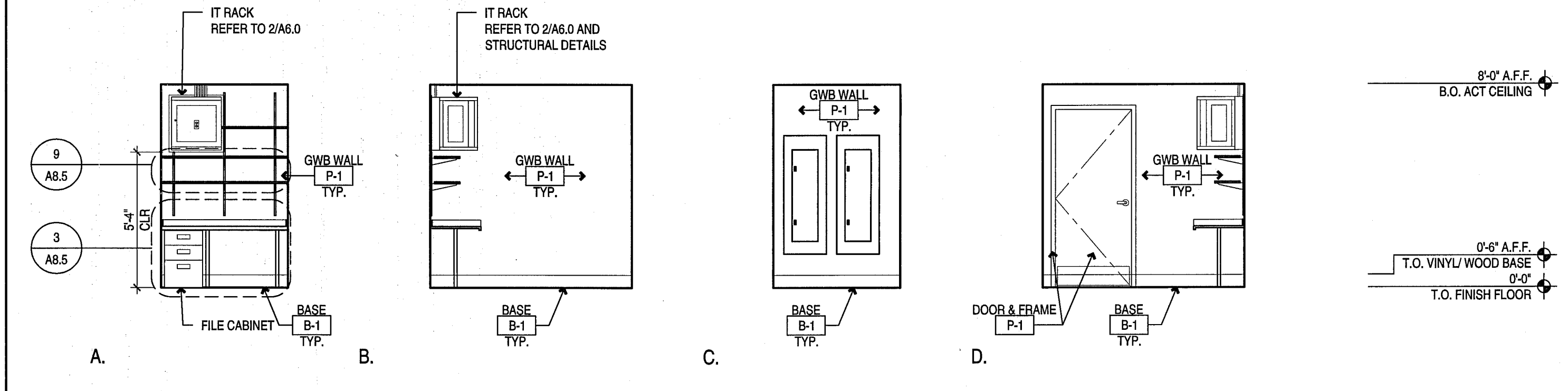


DRAWING DESCRIPTION

INTERIOR
 ELEVATIONS

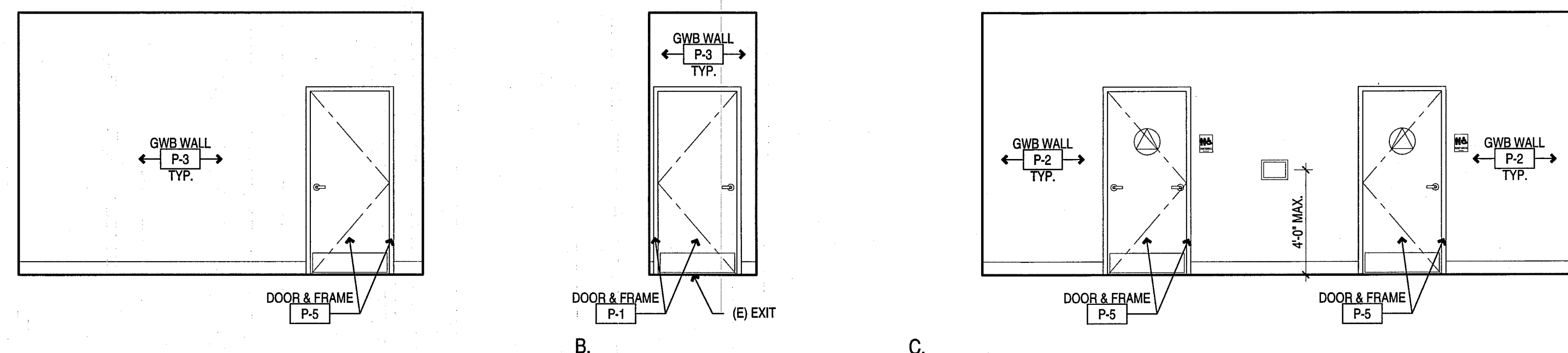
SCALE

A4.0



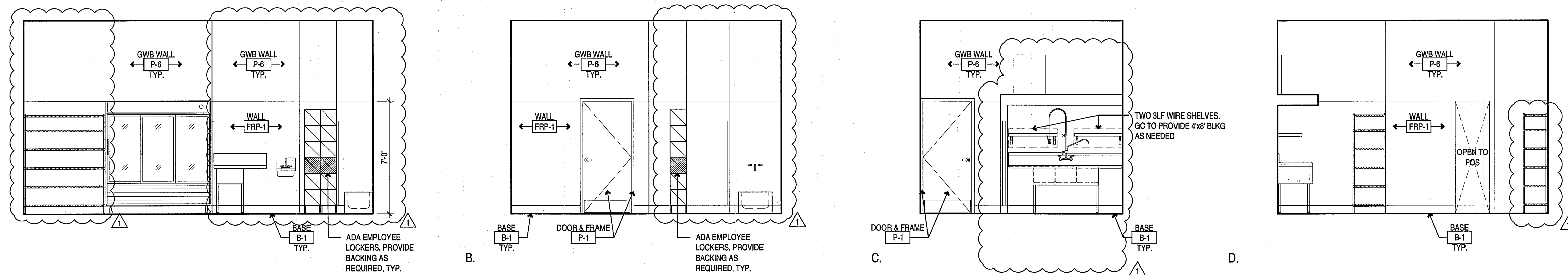
OPERATIONS ELEVATIONS

1/4" = 1'-0" 11



HALLWAY ELEVATIONS

1/4" = 1'-0" 5



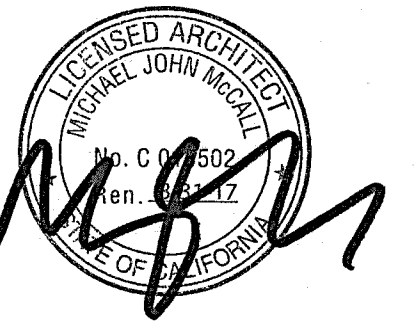
STORAGE/ SCULLERY ELEVATIONS

1/4" = 1'-0" 1

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DRAWING DESCRIPTION

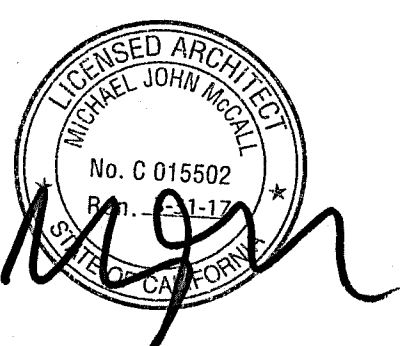
INTERIOR ELEVATIONS

SCALE

A4.1

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SEAL/SIGNATURE

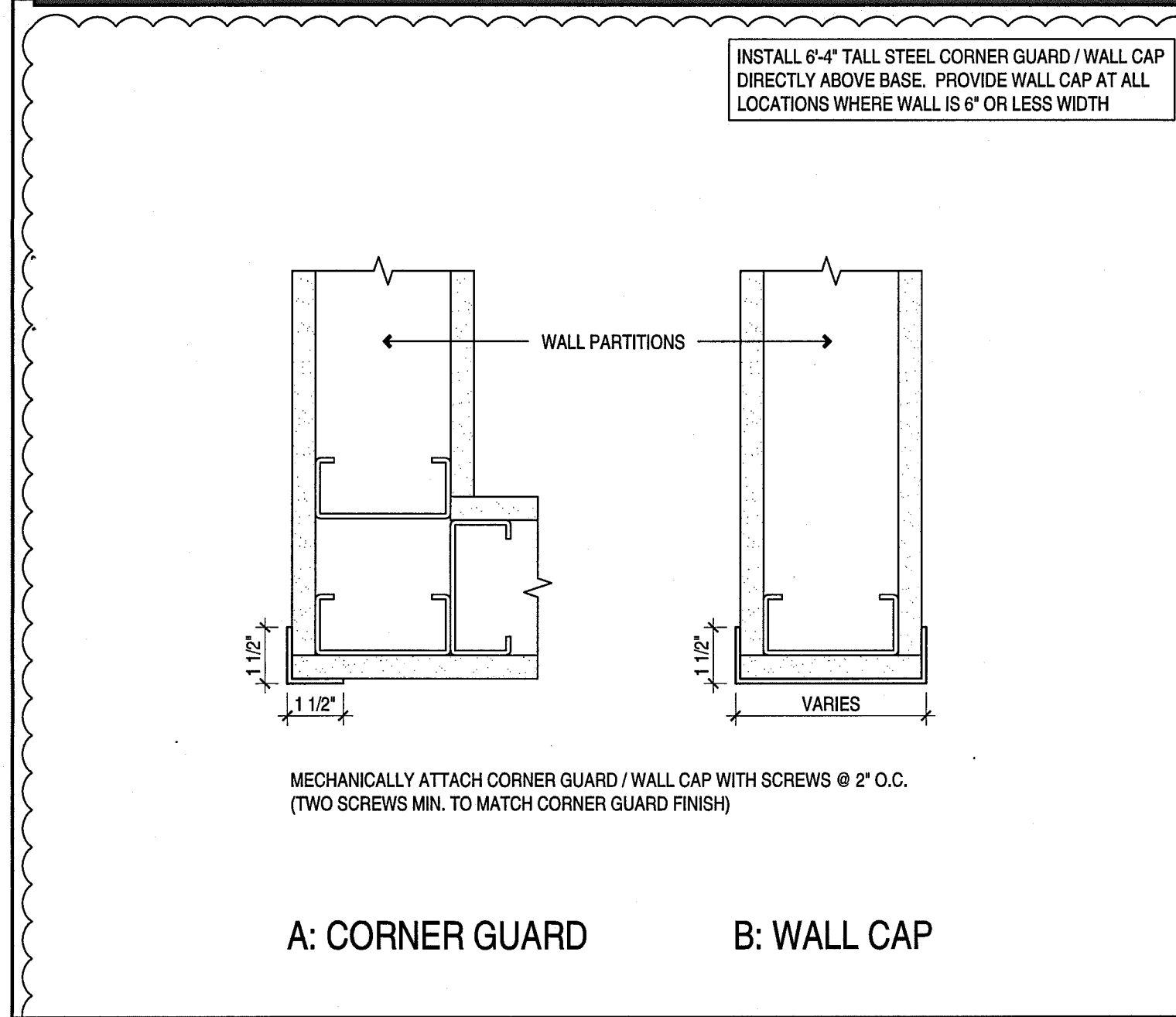


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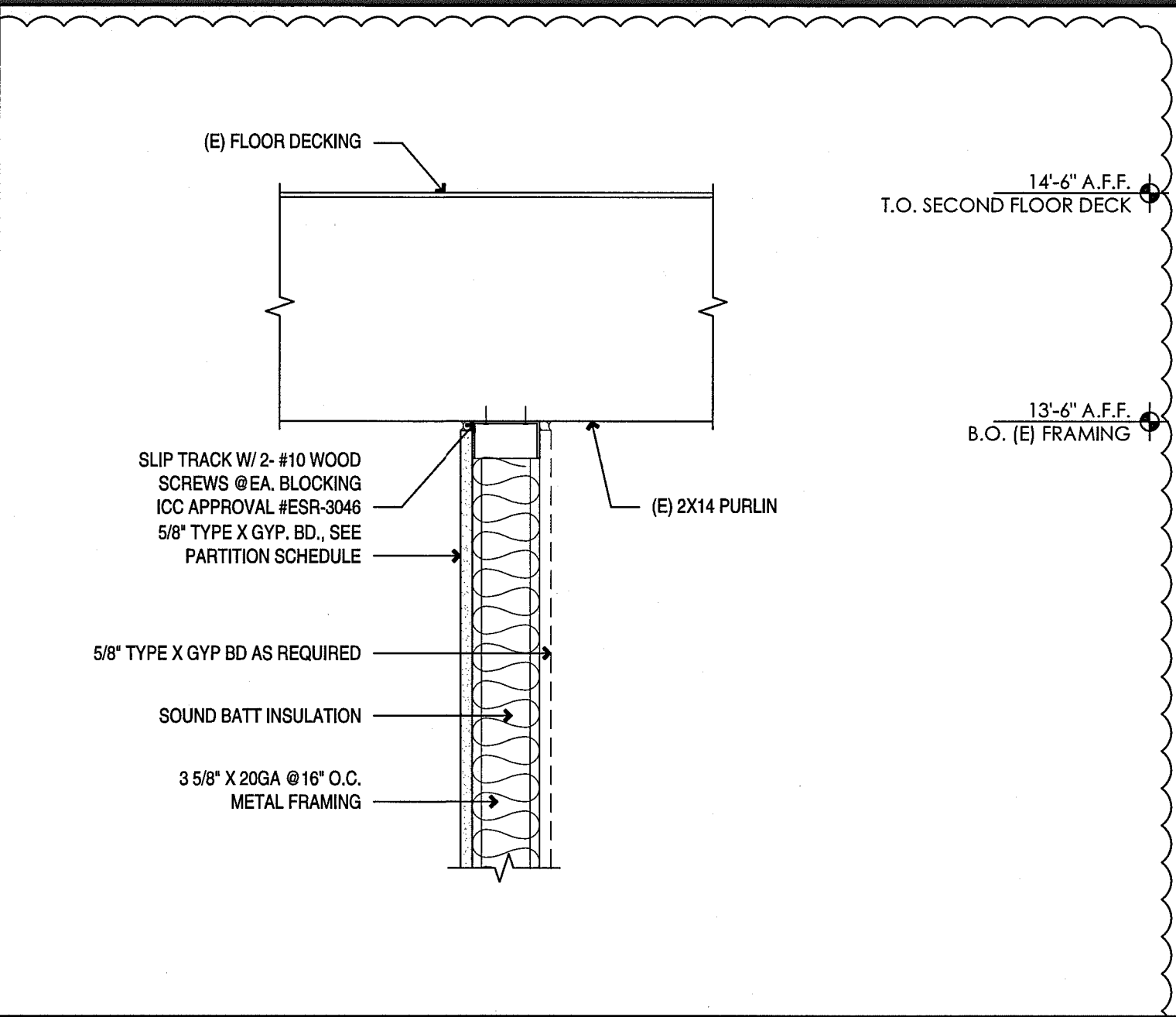
CONSTRUCTION DETAILS

SCALE

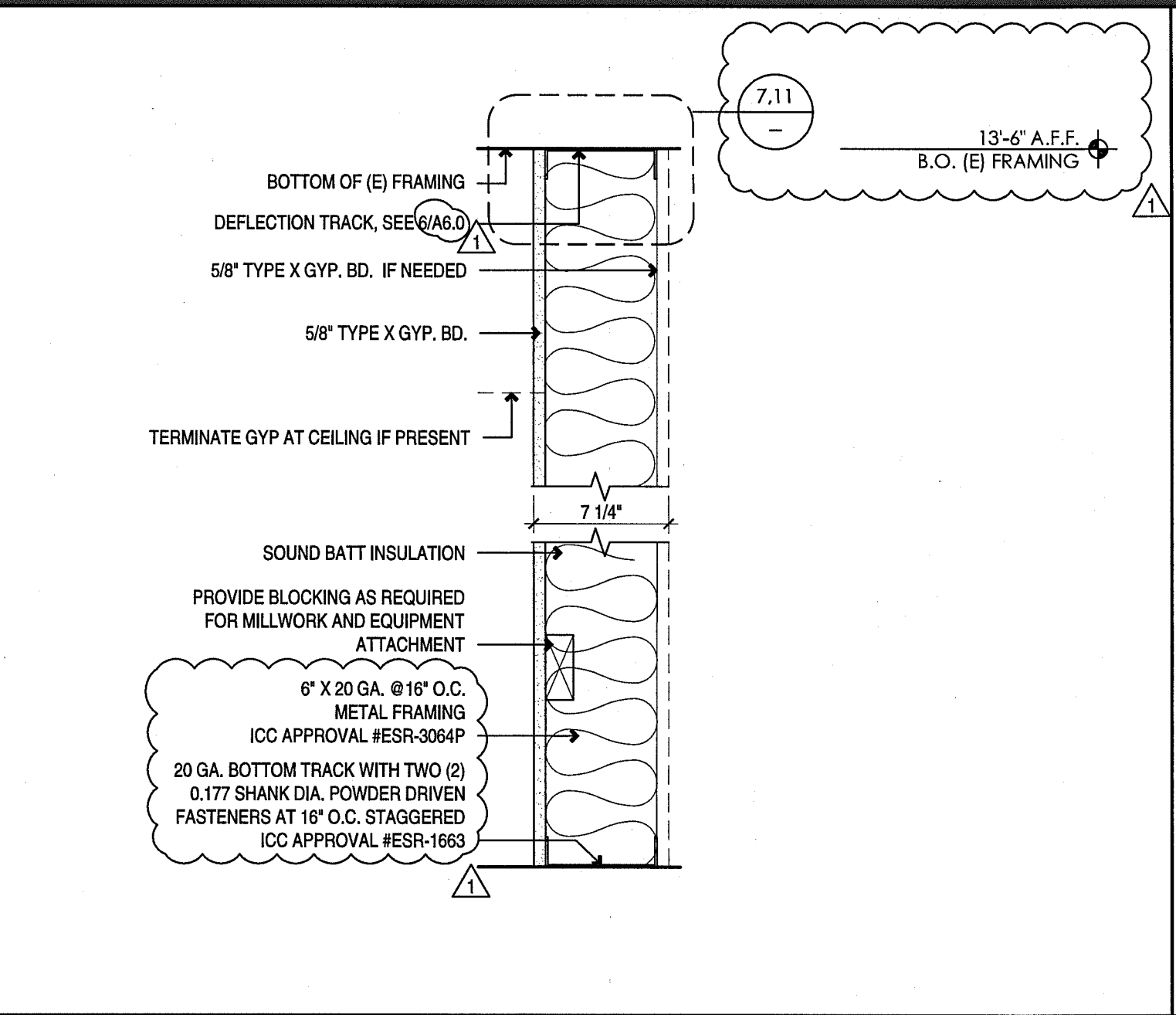
A6.0



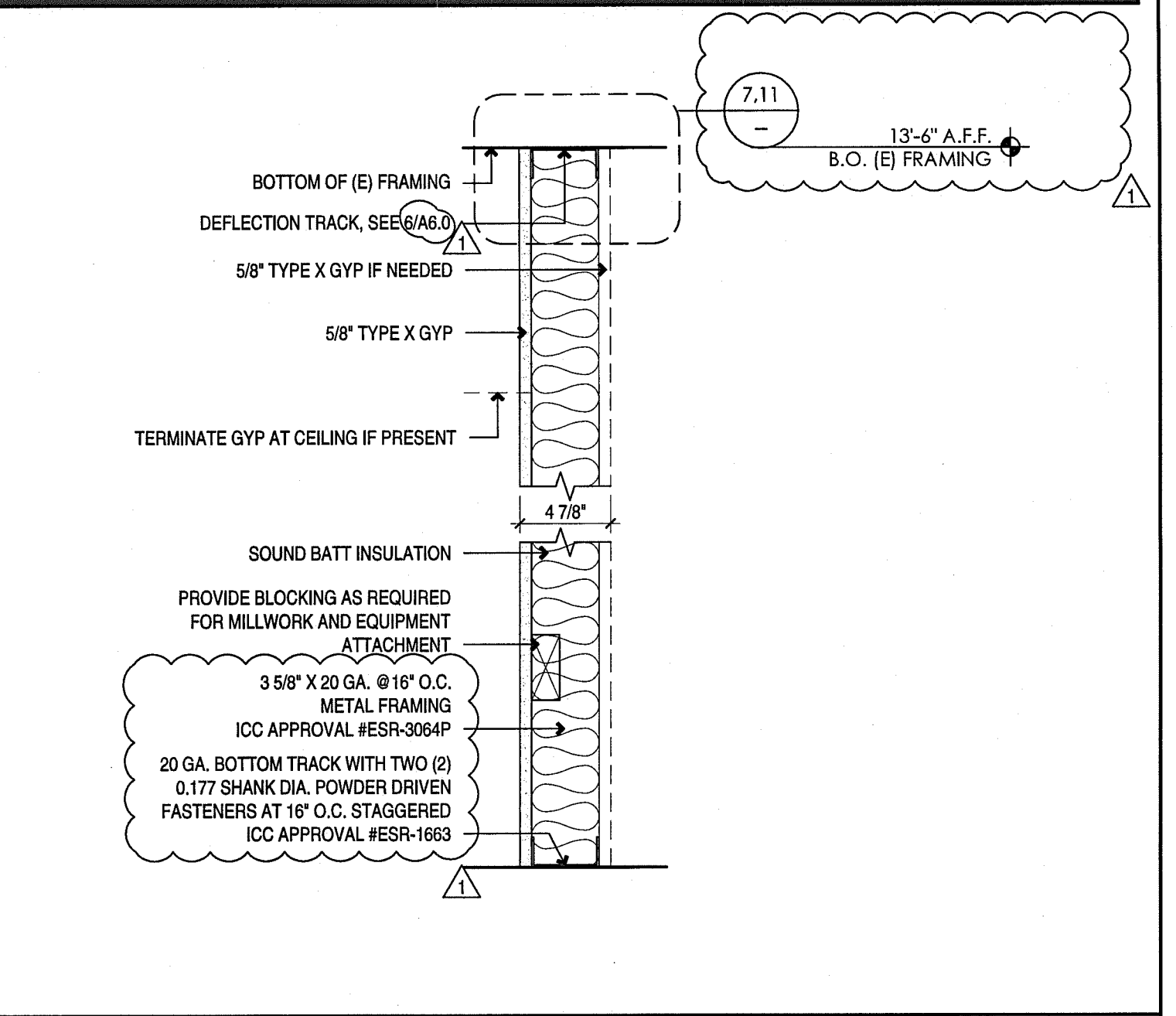
CORNER GUARD DETAIL 3" = 1'-0" 12



PARTITION CONNECTION DETAIL PERPENDICULAR TO B.O. (E) FRAMING 1 1/2" = 1'-0" 11



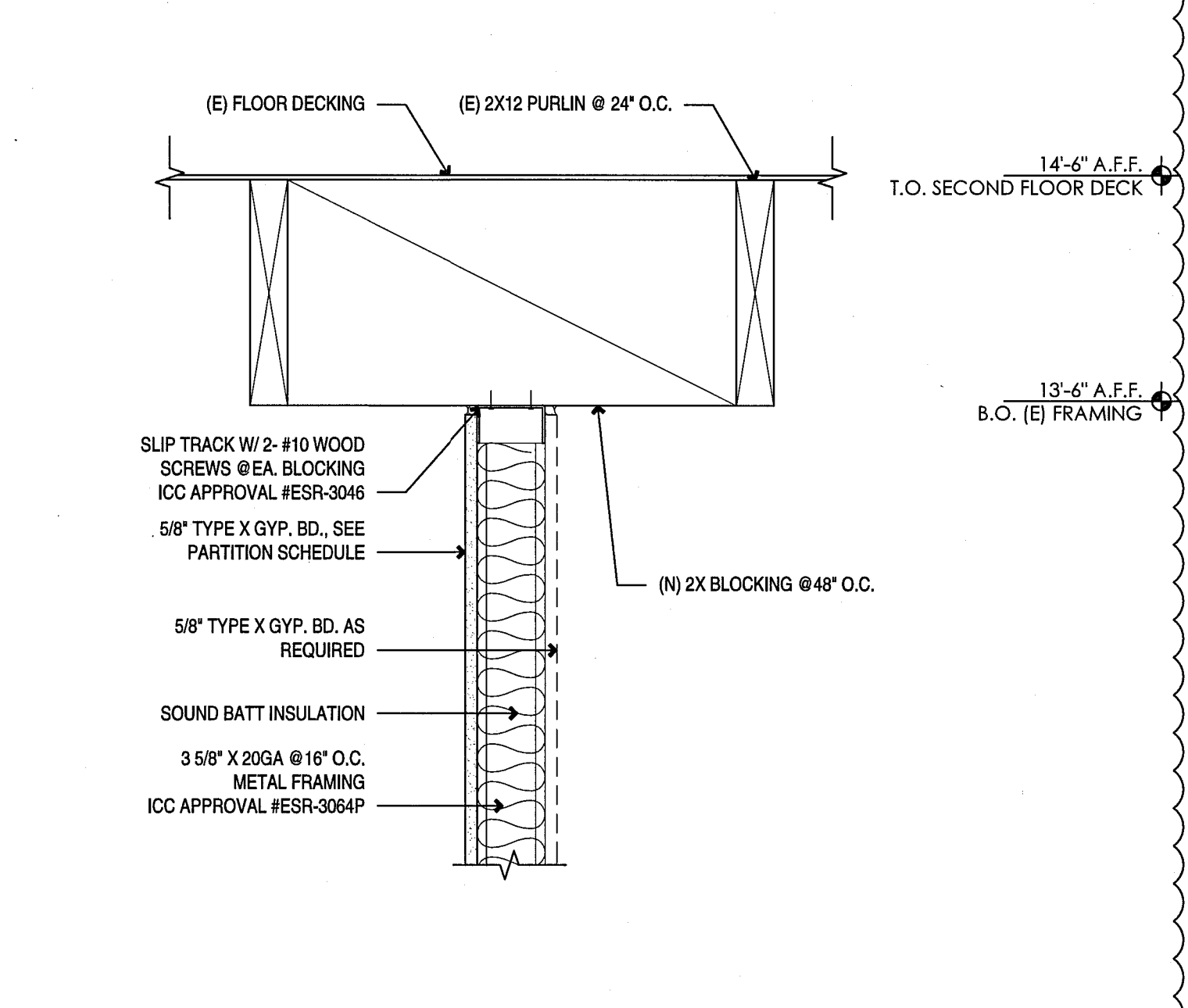
FULL HEIGHT 6" PARTITION 1 1/2" = 1'-0" 10



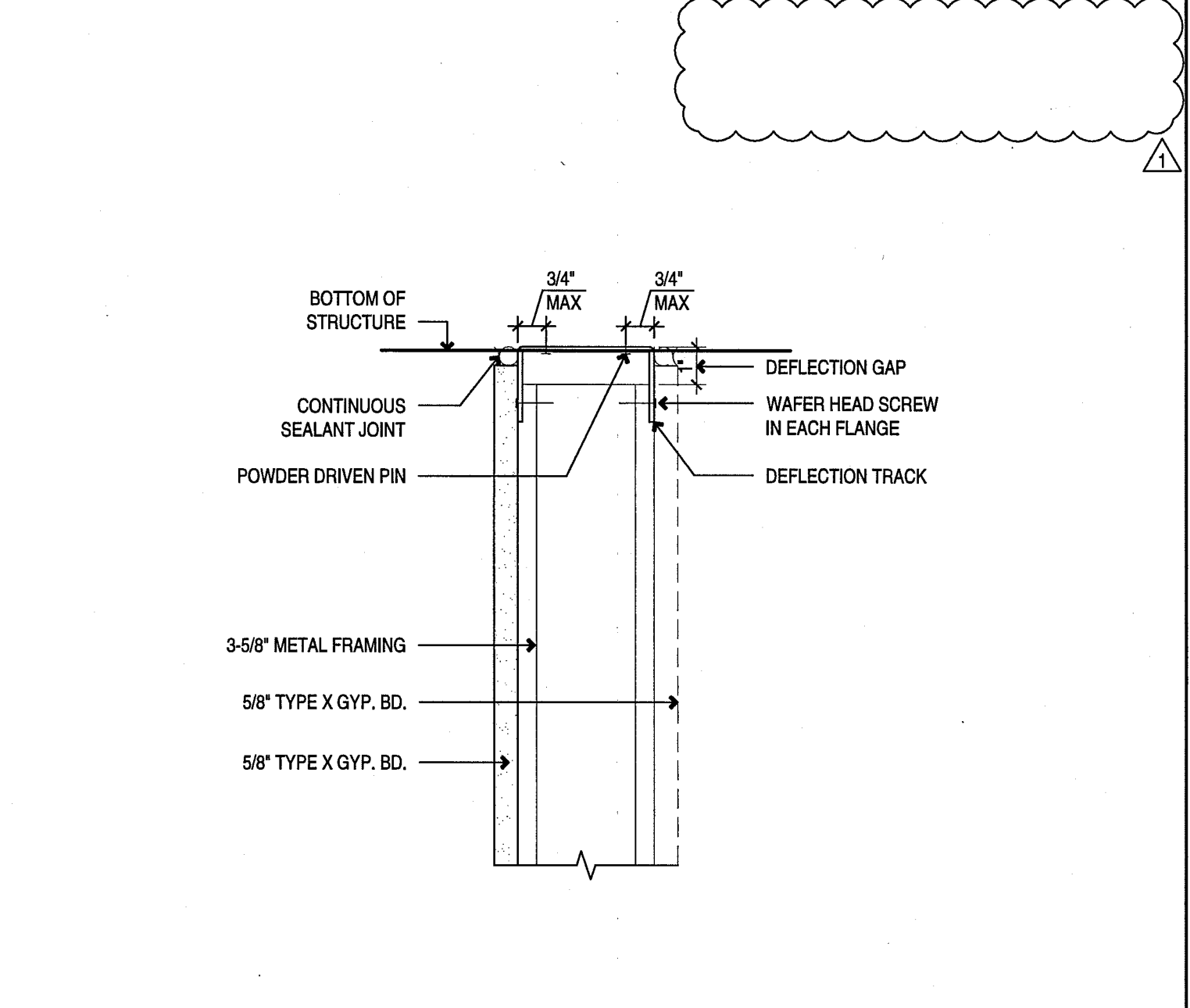
FULL HEIGHT 3 5/8" PARTITION 1 1/2" = 1'-0" 9



PARTITION CONNECTION DETAIL PARALLEL TO B.O. (E) FRAMING 1 1/2" = 1'-0" 7



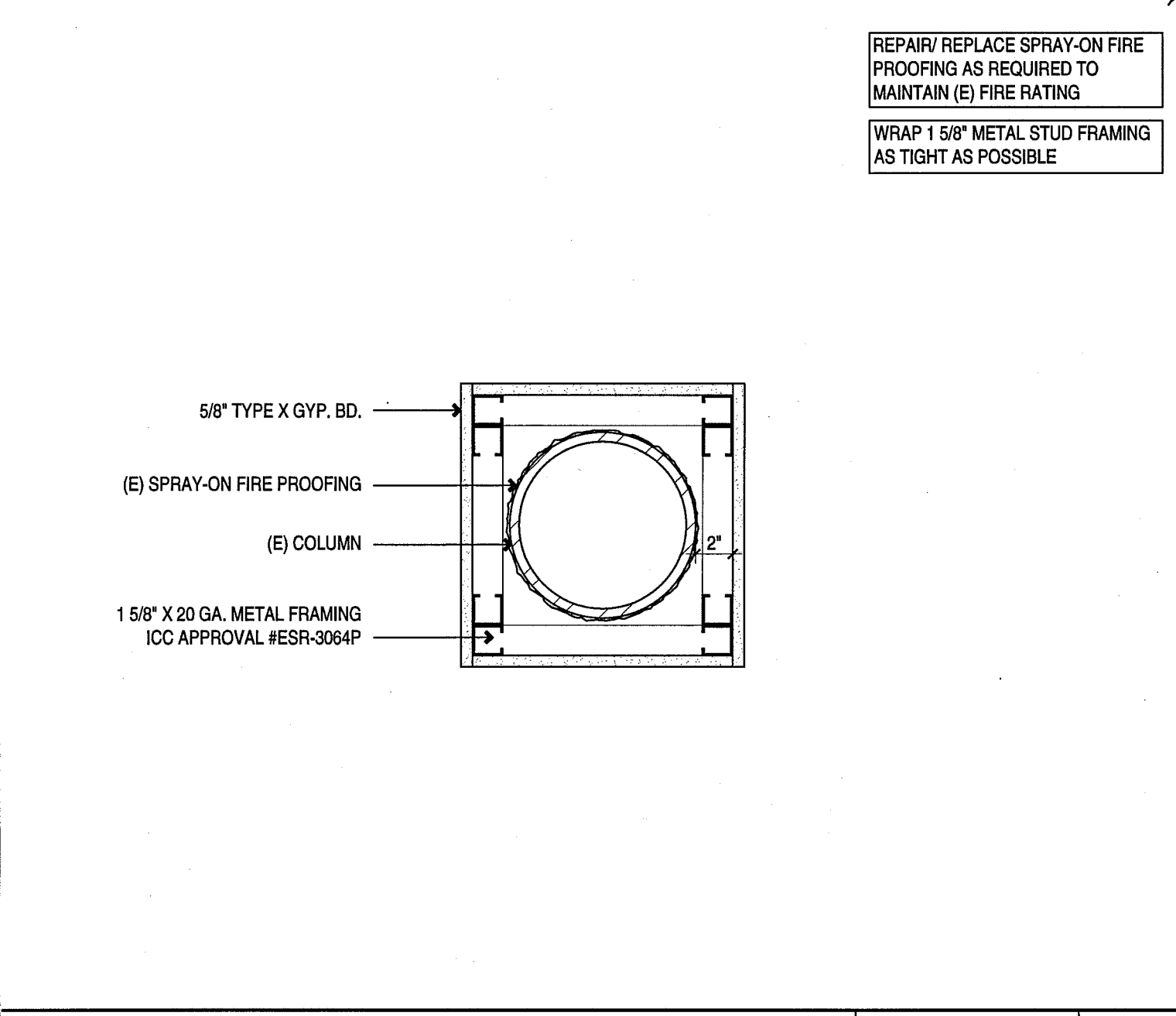
DEFLECTION TRACK 3" = 1'-0" 6



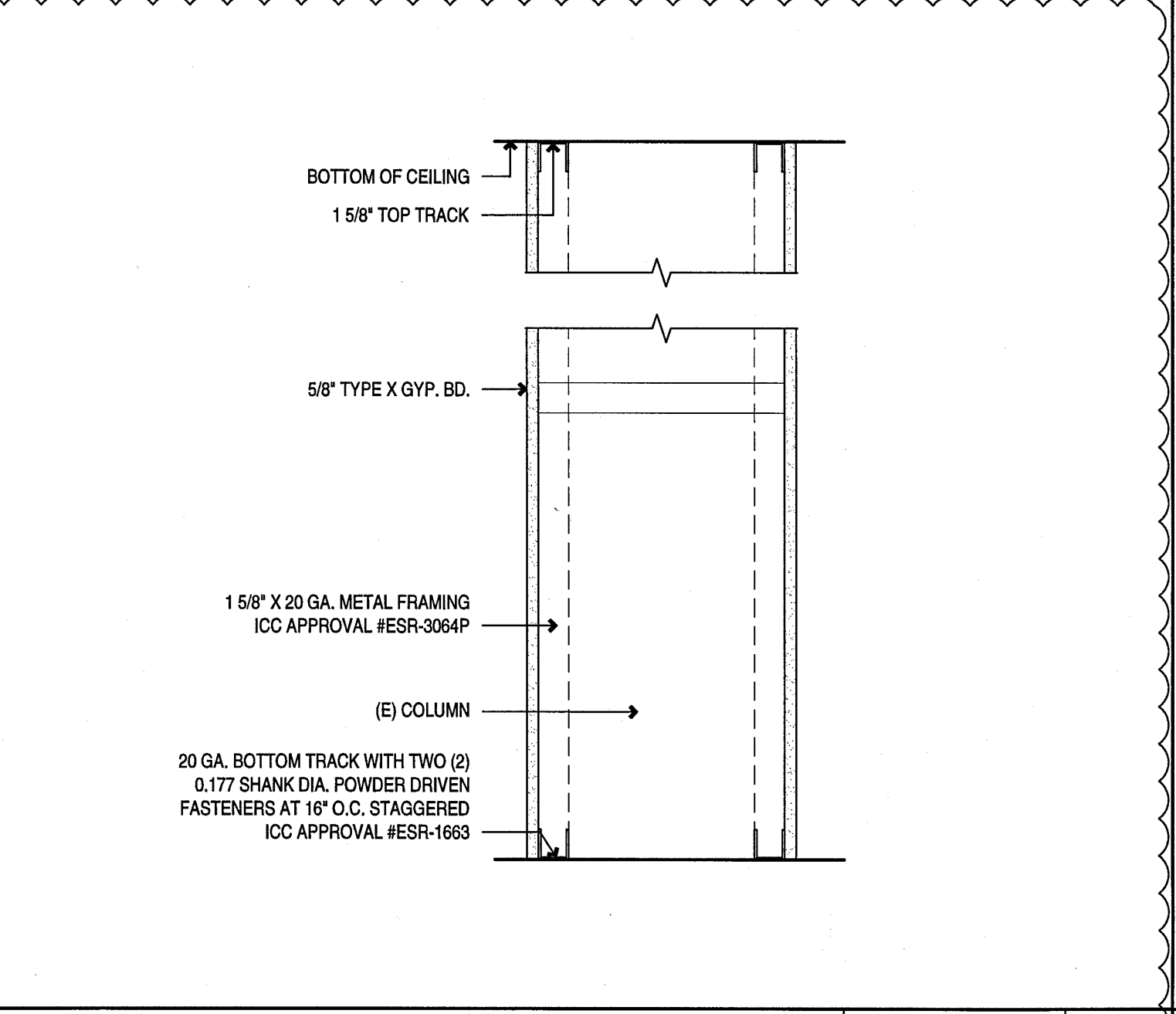
PARTIAL HEIGHT 3 5/8" PARTITION 1 1/2" = 1'-0" 5



COLUMN ENCLOSURE DETAIL 1 1/2" = 1'-0" 3



PARTIAL HEIGHT COLUMN ENCLOSURE 1 1/2" = 1'-0" 2

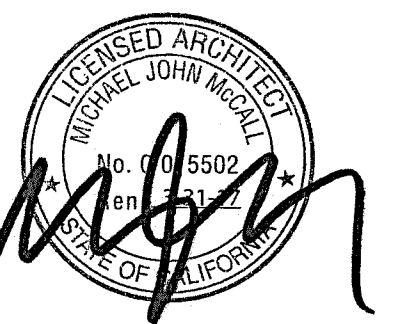


LOW KNEE WALL 1 1/2" = 1'-0" 1

Plot Date: Mar 13, 2017 - 2:49pm Plotted by: Jimmy Filename: jf60.dwg

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE

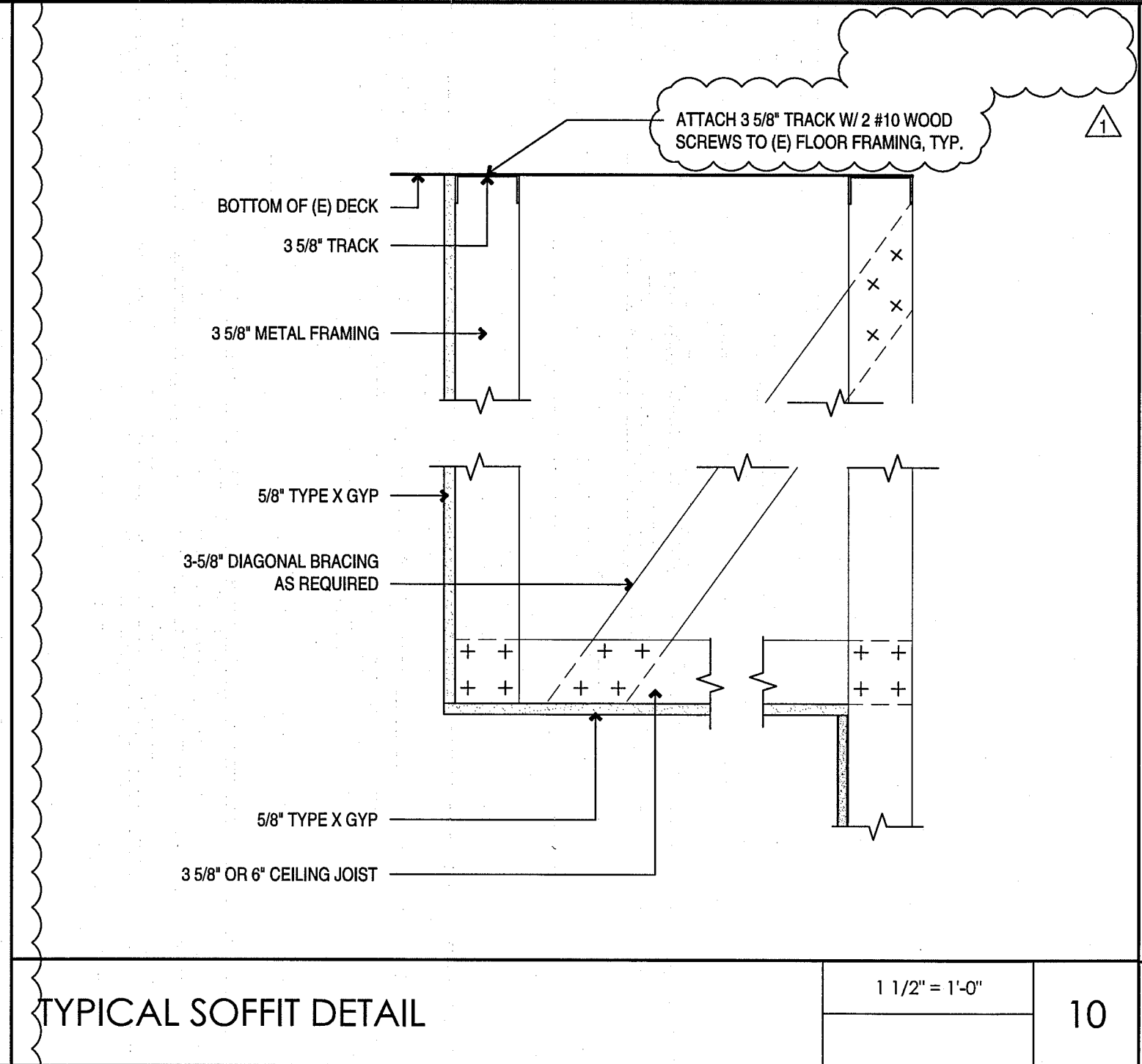


DRAWING DESCRIPTION

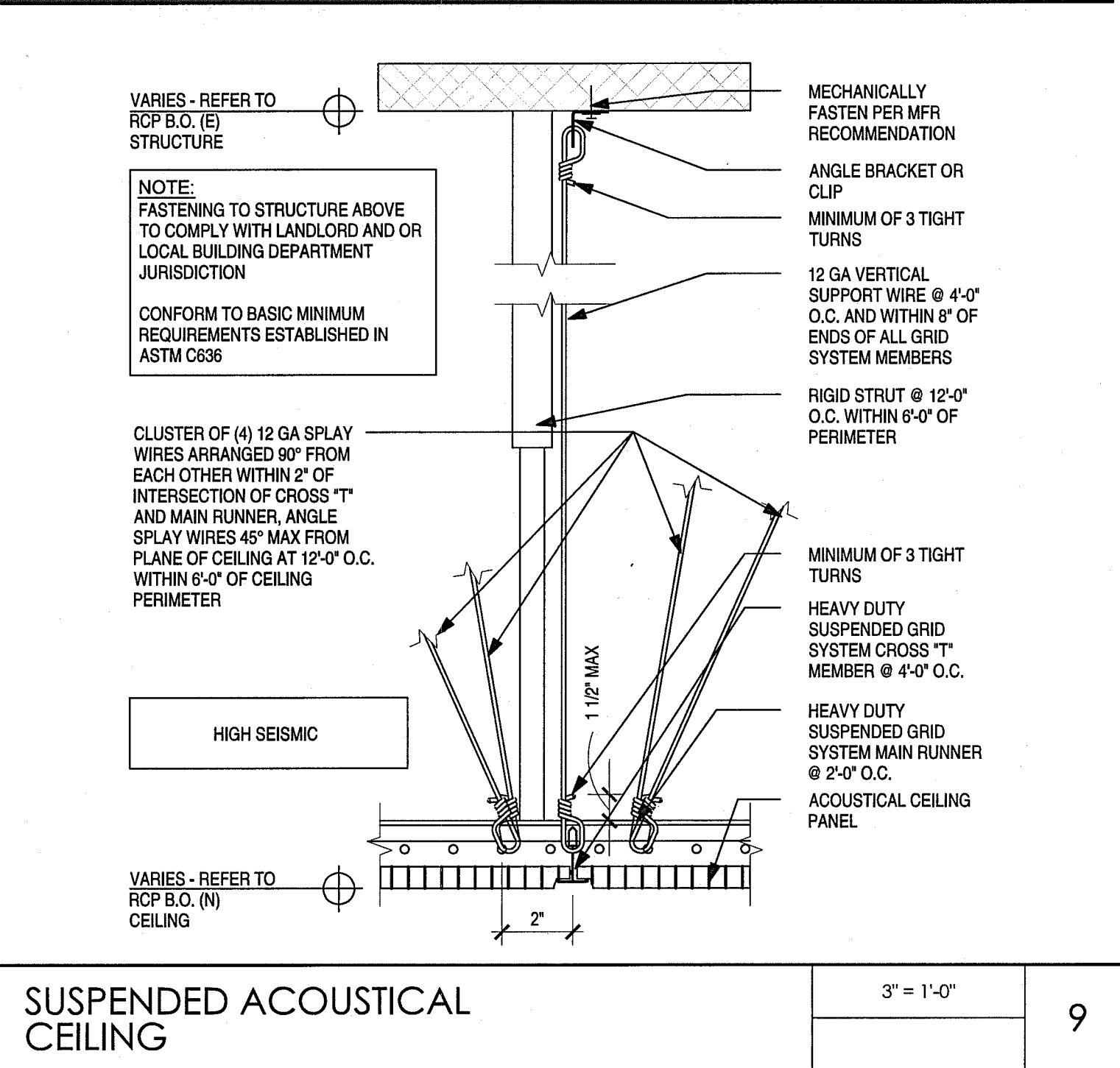
CONSTRUCTION DETAILS

SCALE

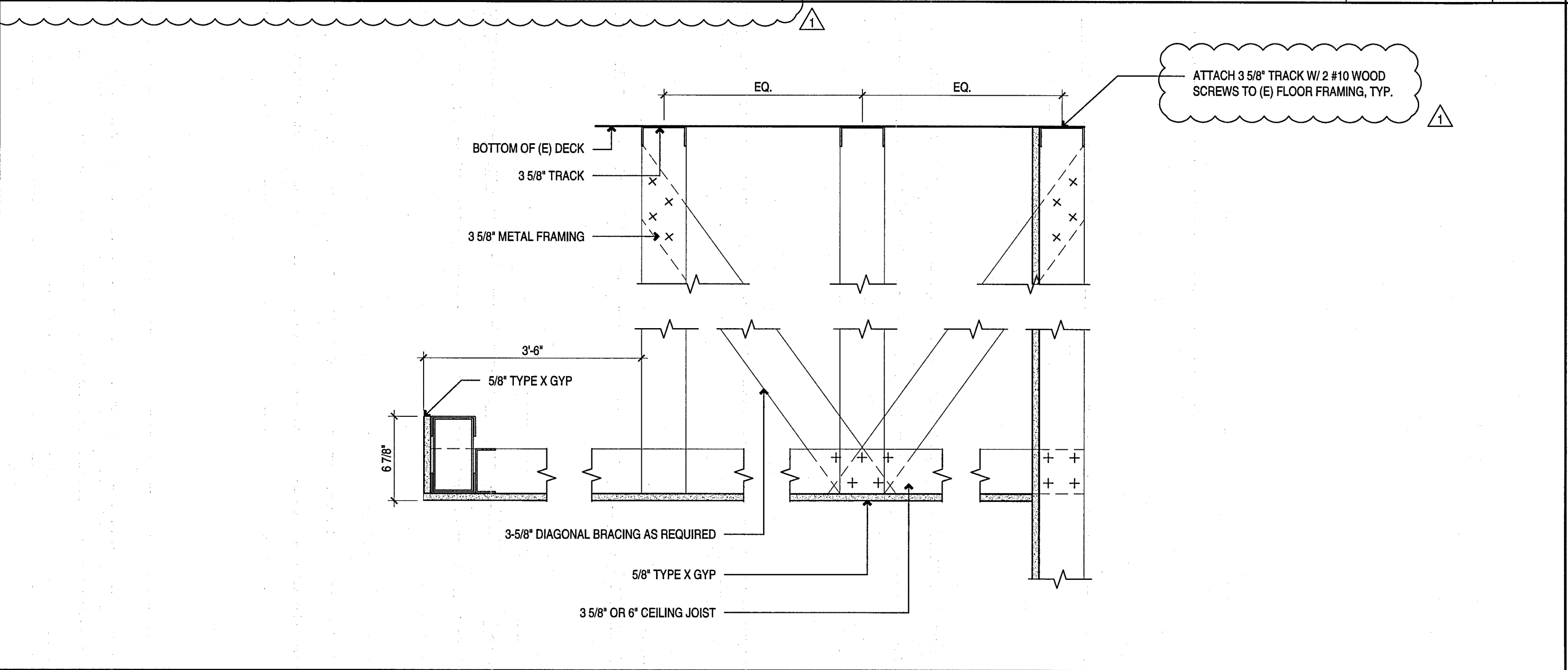
A6.1



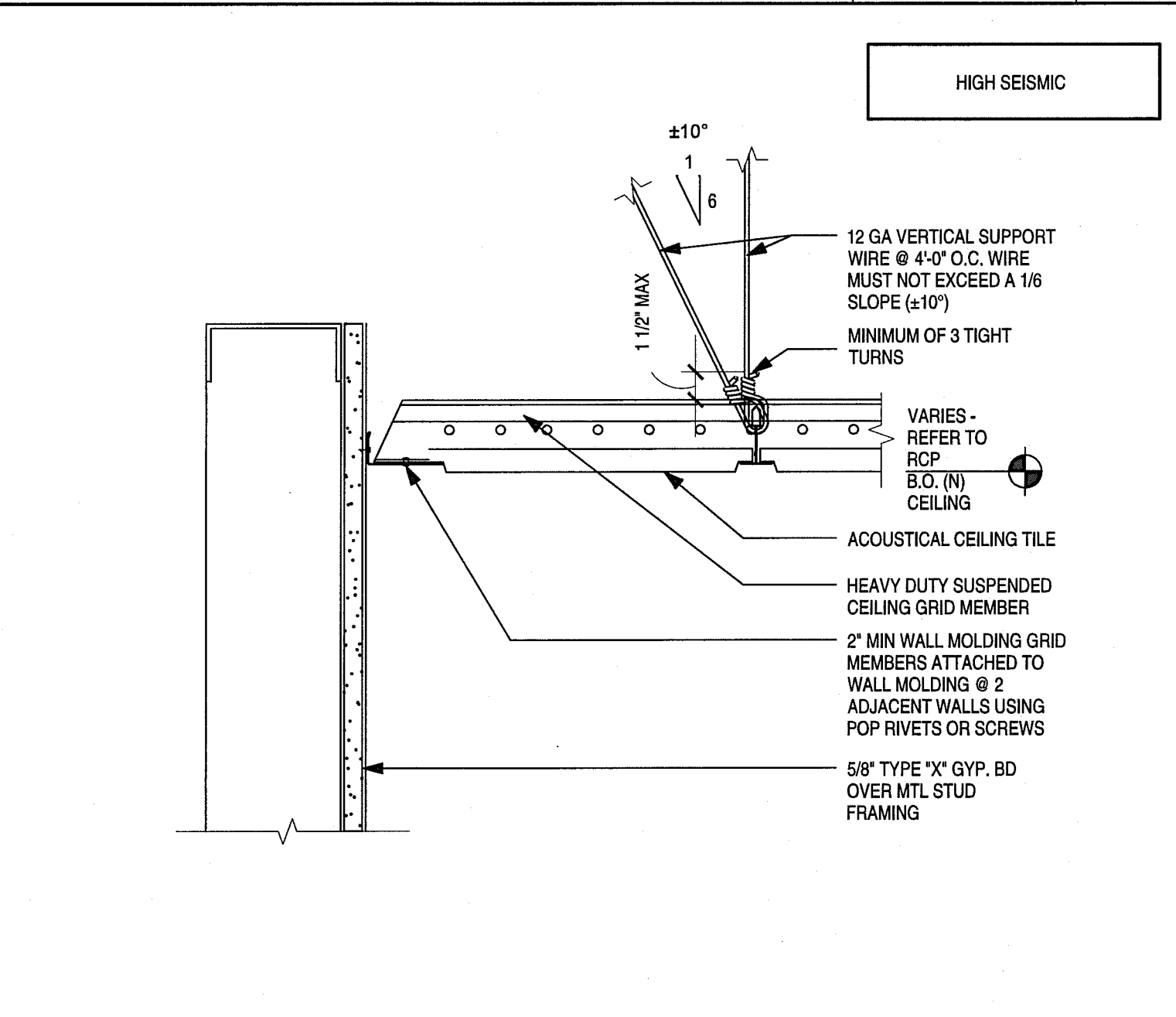
TYPICAL SOFFIT DETAIL 1 1/2" = 1'-0" 10



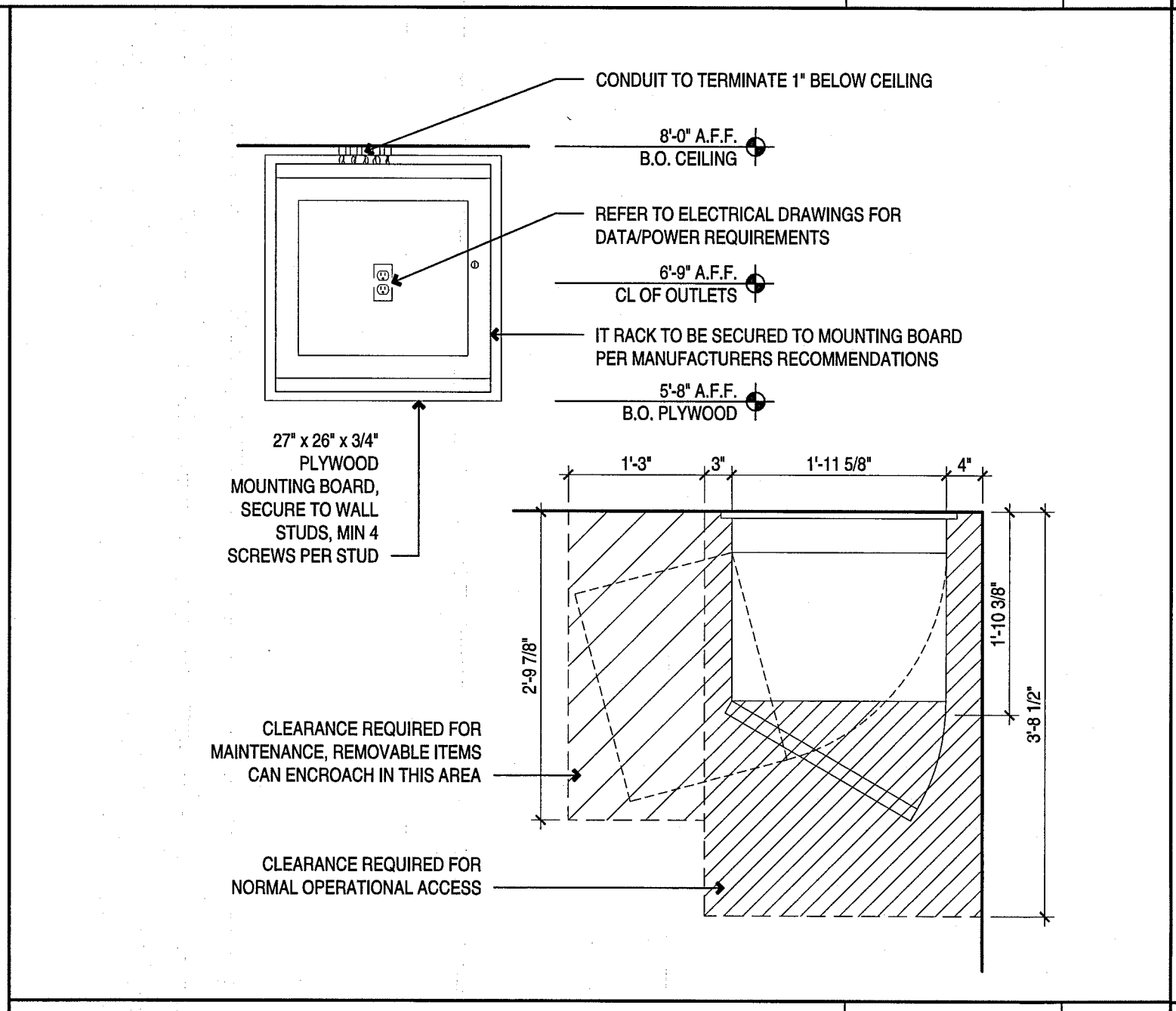
SUSPENDED ACOUSTICAL CEILING 3" = 1'-0" 9



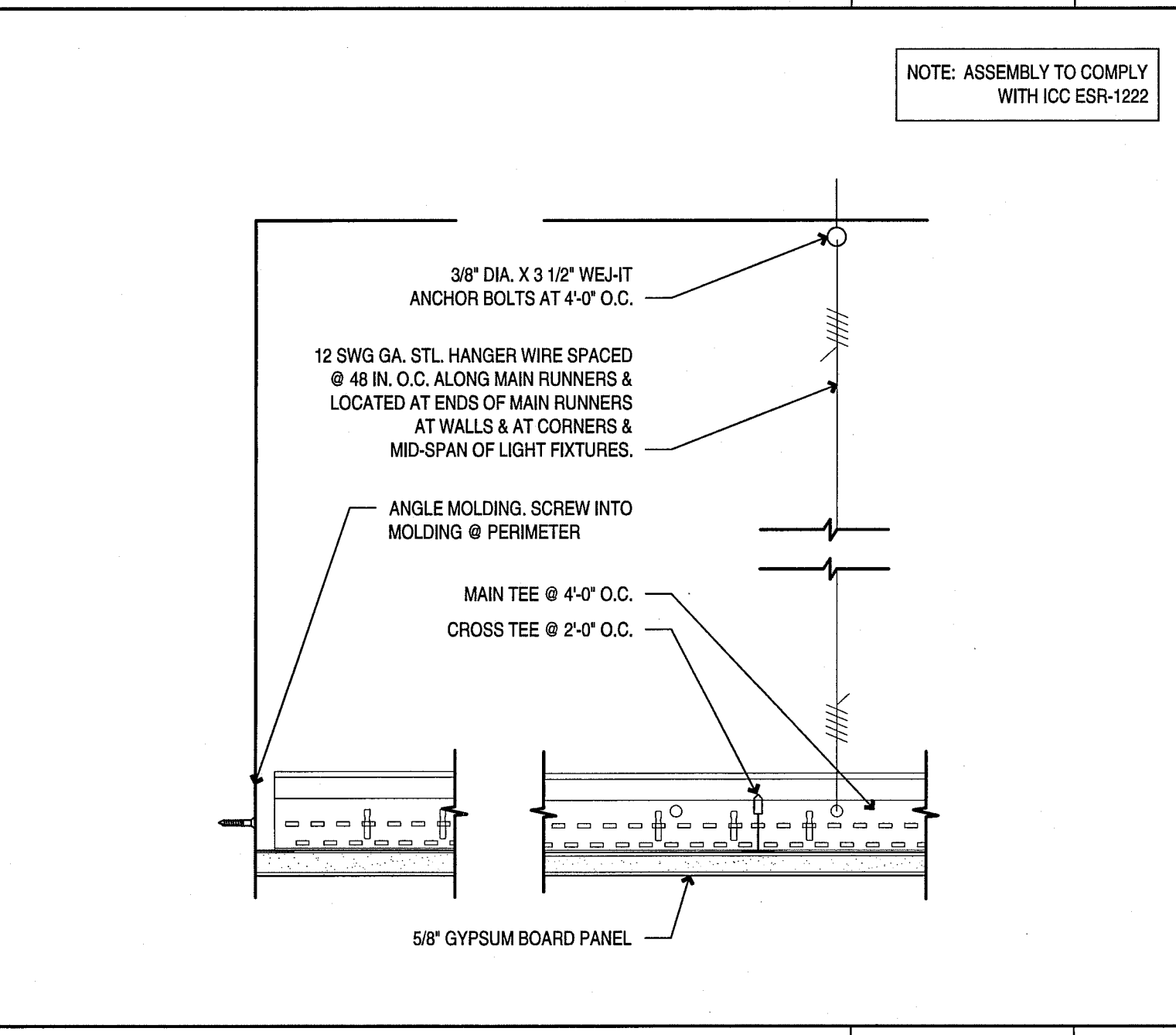
BARISTA CEILING 1 1/2" = 1'-0" 6



SUSPENDED ACOUSTICAL CEILING 3" = 1'-0" 5

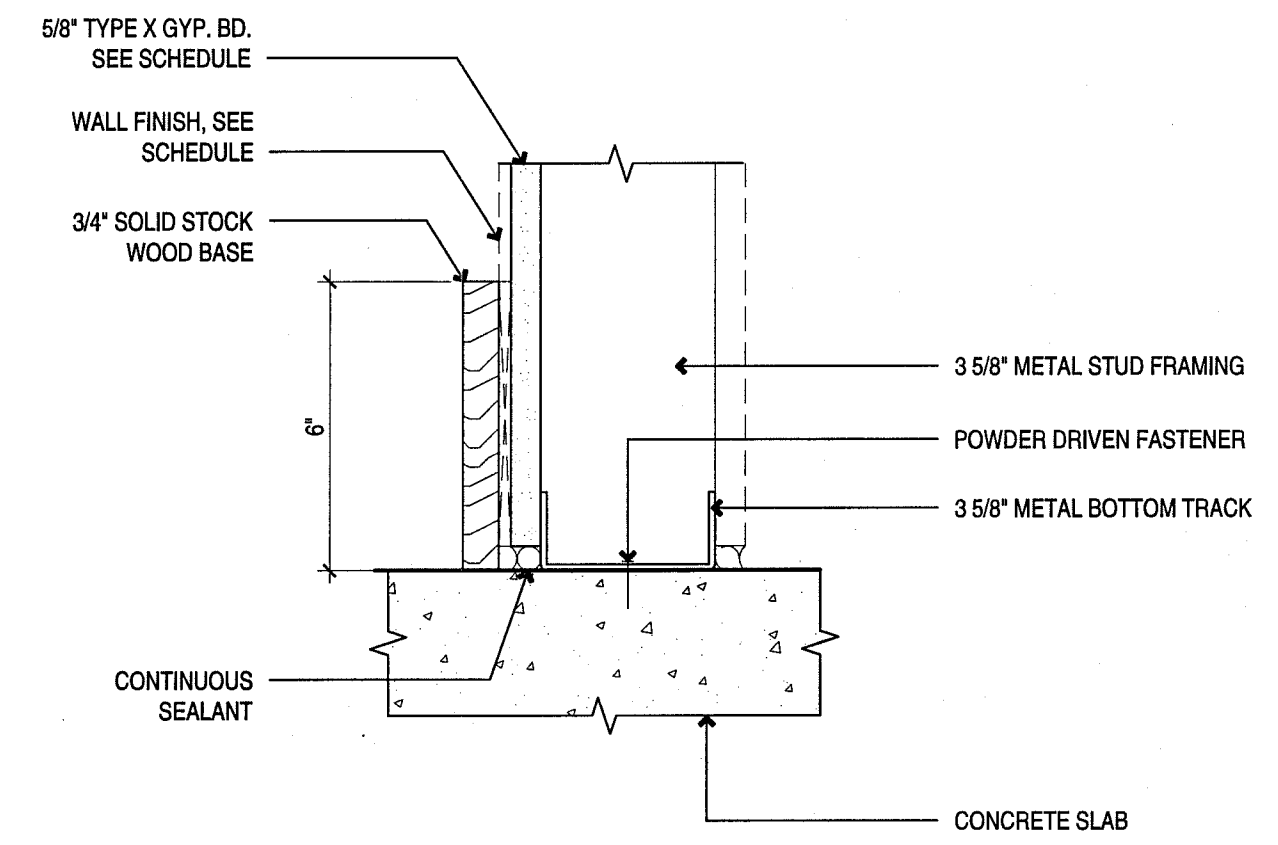


IT RACK 3/4" = 1'-0" 2



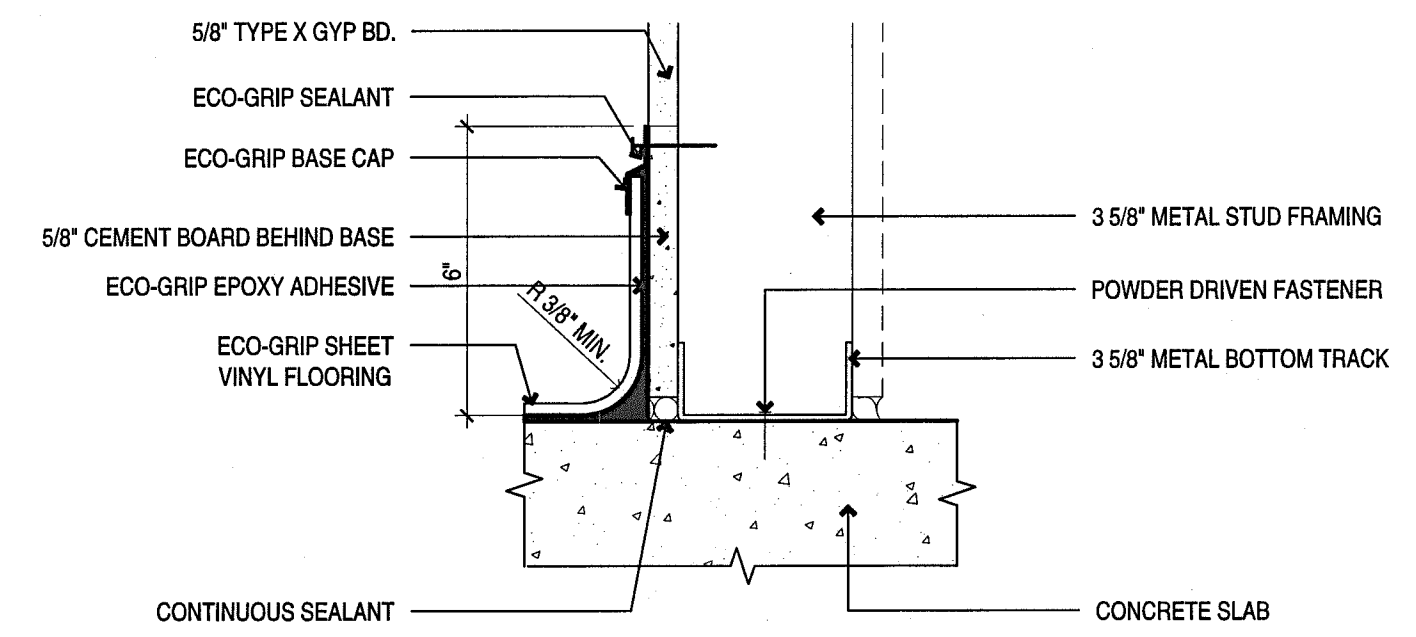
SUSPENDED GYP. BD. CEILING 3" = 1'-0" 1

Plot Date: Mar 10, 2017 - 2:18pm Plotted by: jimmy Filename: lj60.dwg



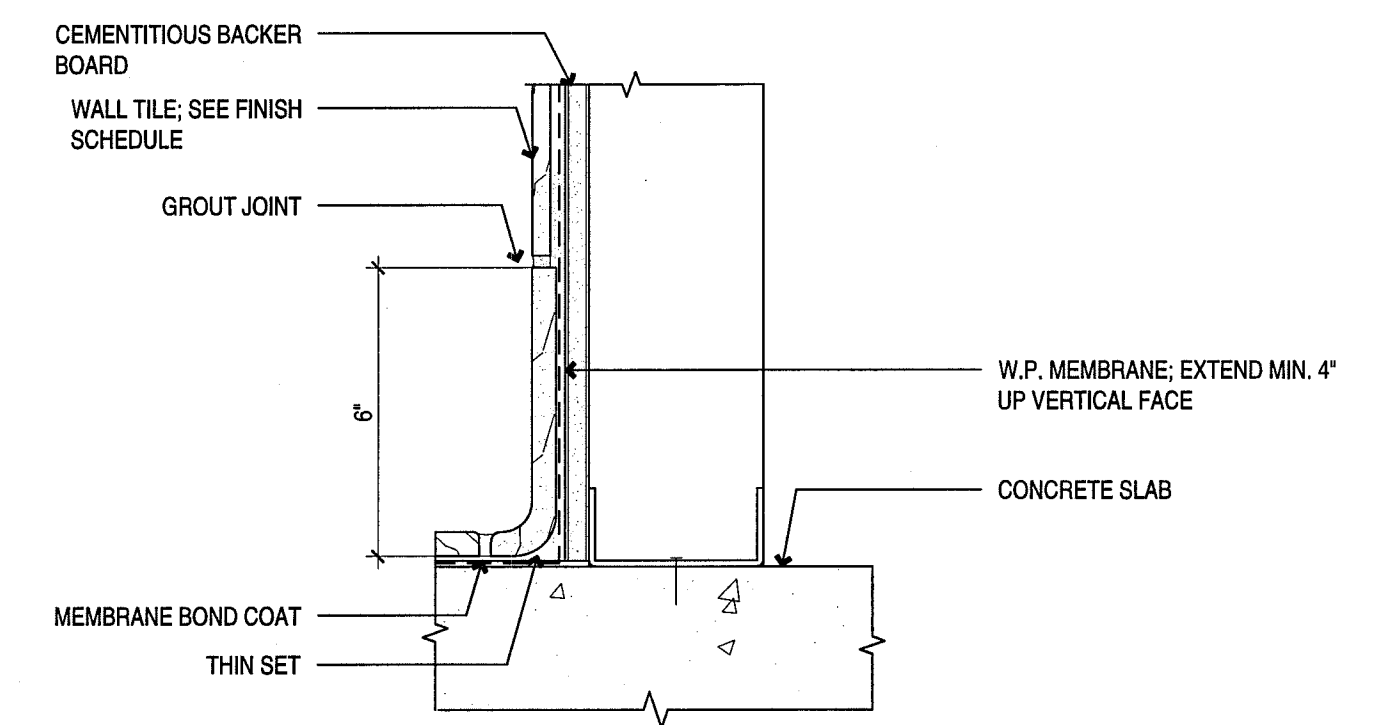
WOOD BASE

3" = 1'-0" 9



3/8" RADIUS COVERED VINYL BASE

3" = 1'-0" 5



COVERED TILE BASE

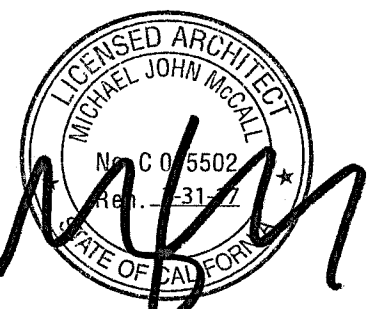
3" = 1'-0" 1

PHILZ COFFEE
 8849 VILLA LA JOLLA VILLAGE DR, #307
 SAN DIEGO, CA

JOB NUMBER:
 216086

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE

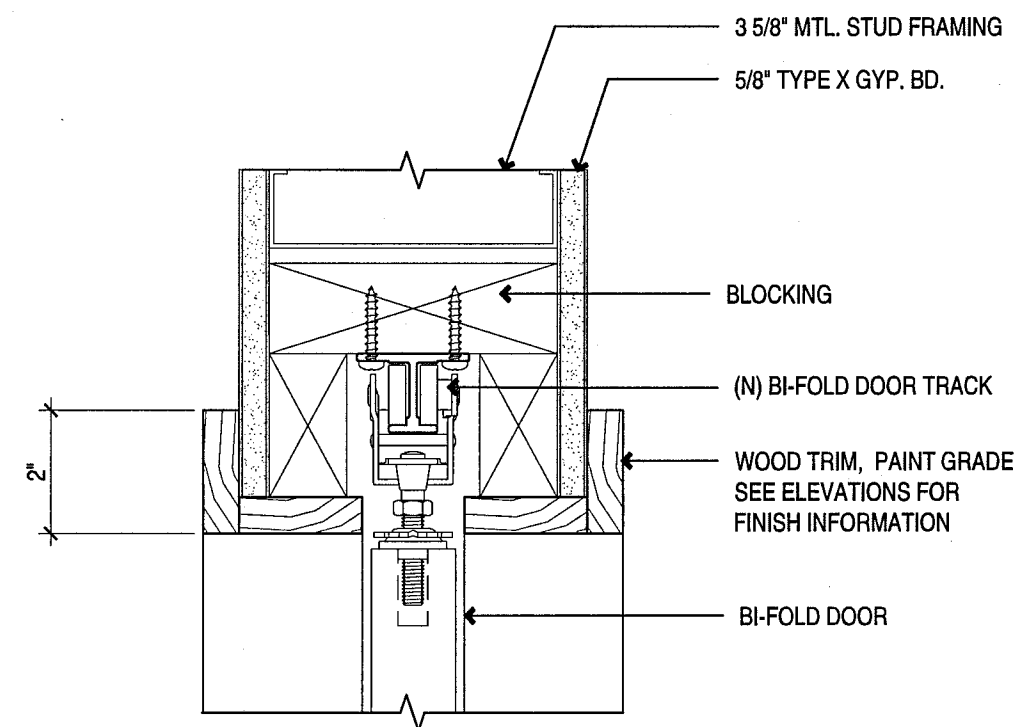


DRAWING DESCRIPTION

CONSTRUCTION
 DETAILS

SCALE

A6.2



REFER TO MANUFACTURE SPECIFICATION FOR PROPER INSTALLATION
SEE DOOR SCHEDULE ON A0.4 FOR DOOR HARDWARE AND FINISH

BI-FOLD DOOR HEAD

3" = 1'-0"

12

(E) ENTRY ALUMINUM DOOR HEAD

3" = 1'-0"

11

(E) REAR ENTRY METAL DOOR HEAD

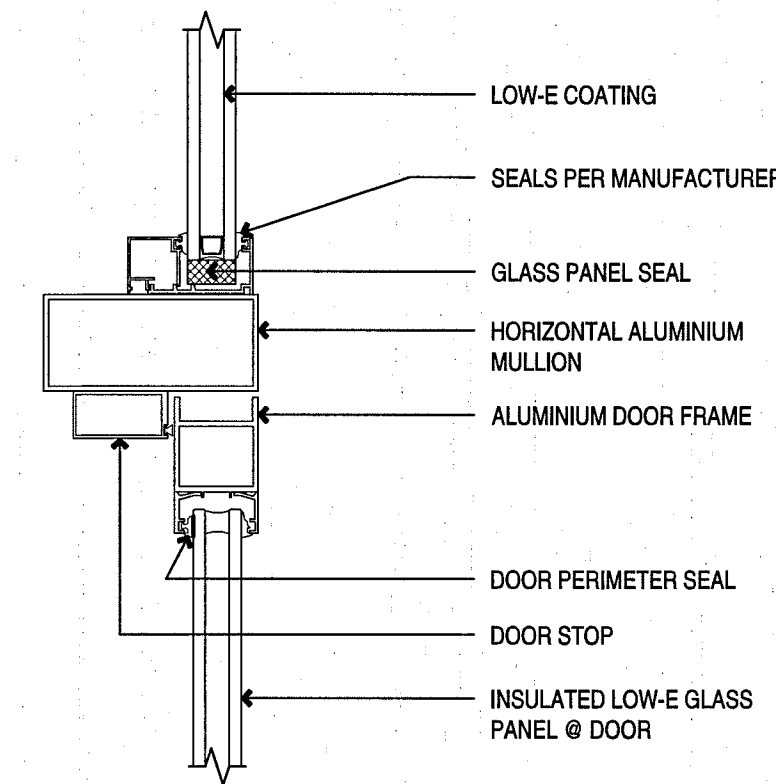
3" = 1'-0"

10

METAL DOOR HEAD

3" = 1'-0"

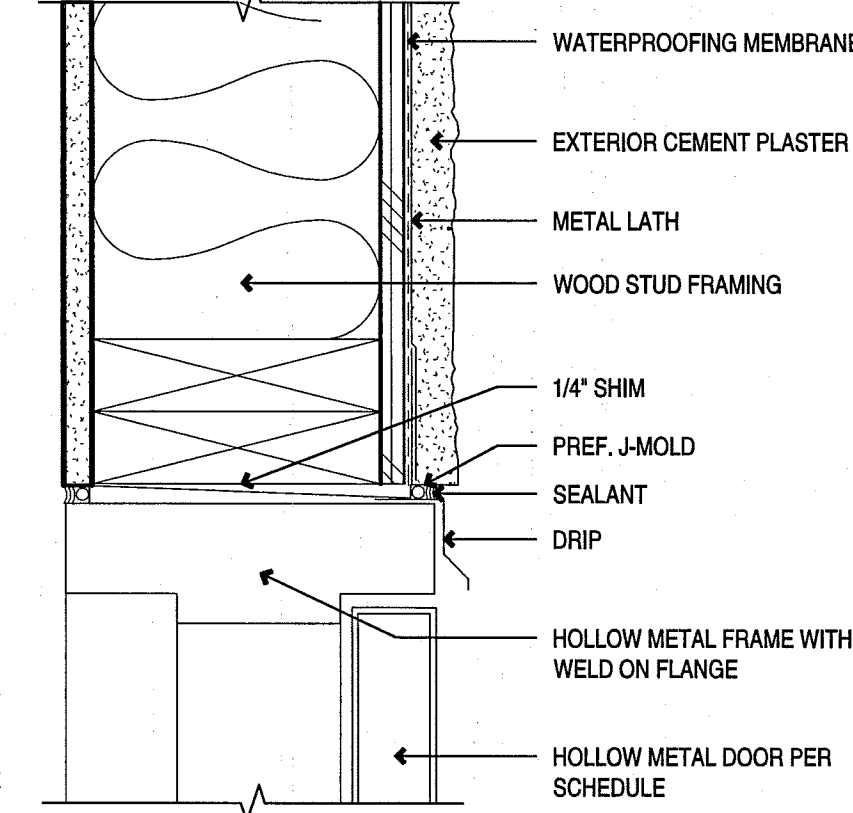
9



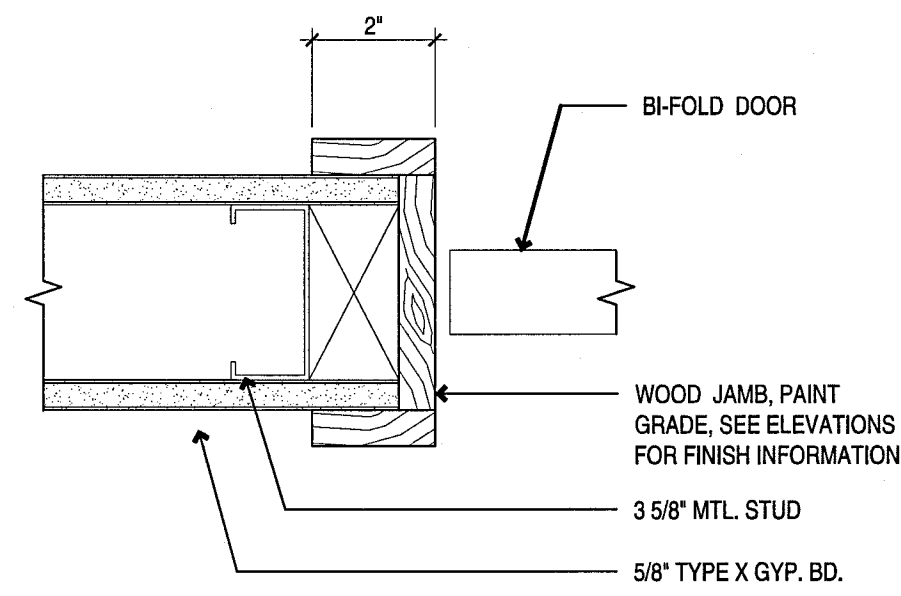
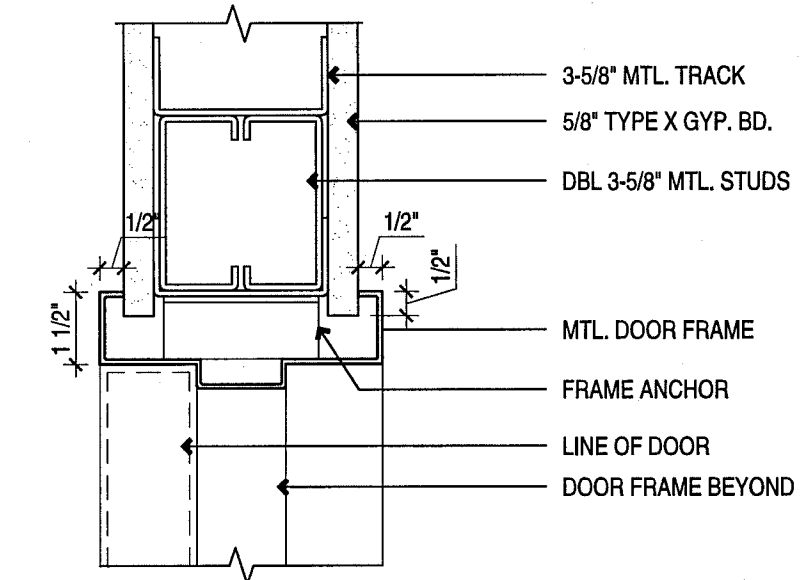
INTERIOR

EXTERIOR

G.C. TO VERIFY EXISTING EXTERIOR WALL ASSEMBLY. G.C. TO PROVIDE WEATHER STRIPPING AS REQUIRED



G.C. TO VERIFY EXISTING EXTERIOR WALL ASSEMBLY. G.C. TO PROVIDE WEATHER STRIPPING AS REQUIRED



BI-FOLD DOOR JAMB

3" = 1'-0"

8

(E) ENTRY ALUMINUM DOOR JAMB

3" = 1'-0"

7

(E) REAR ENTRY METAL DOOR SILL

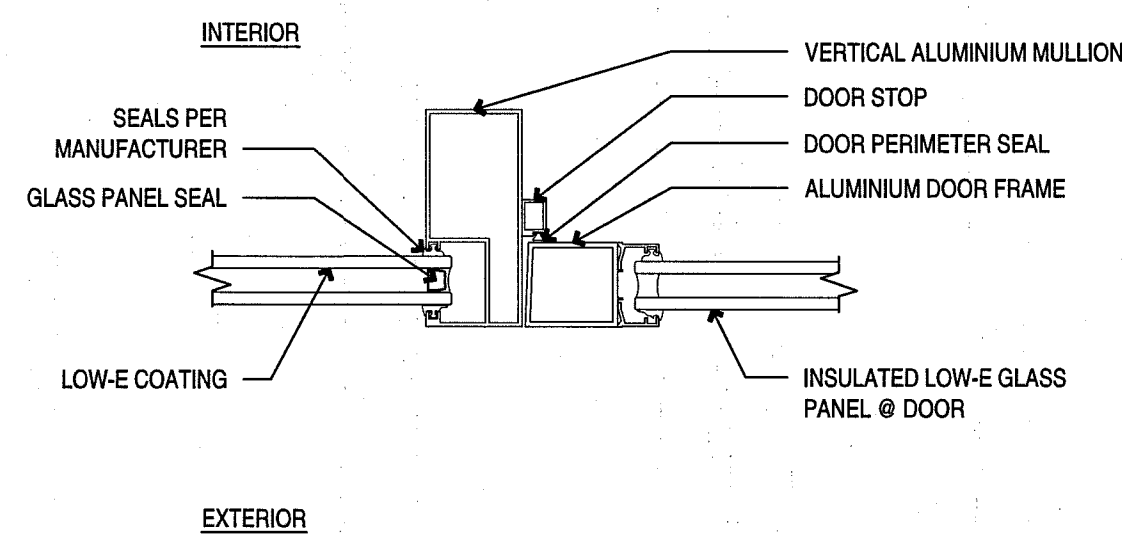
3" = 1'-0"

6

METAL DOOR JAMB

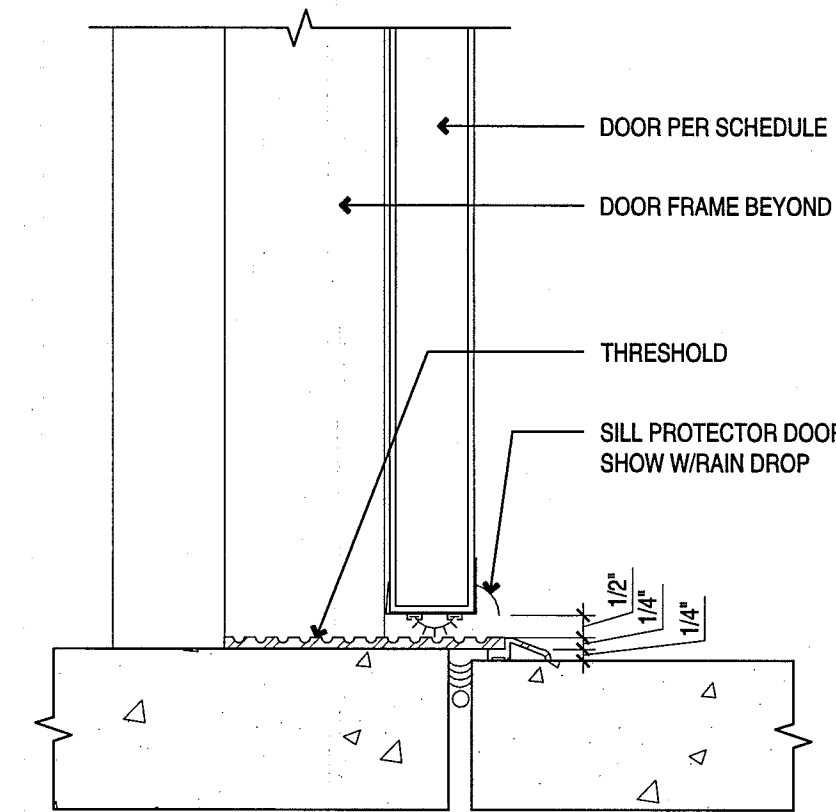
3" = 1'-0"

5

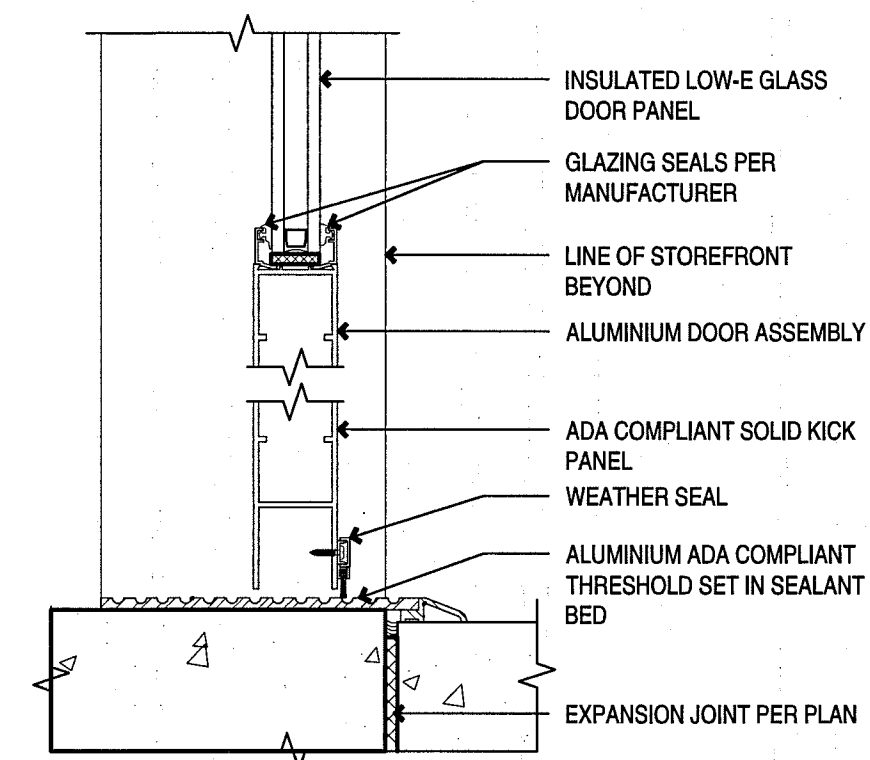
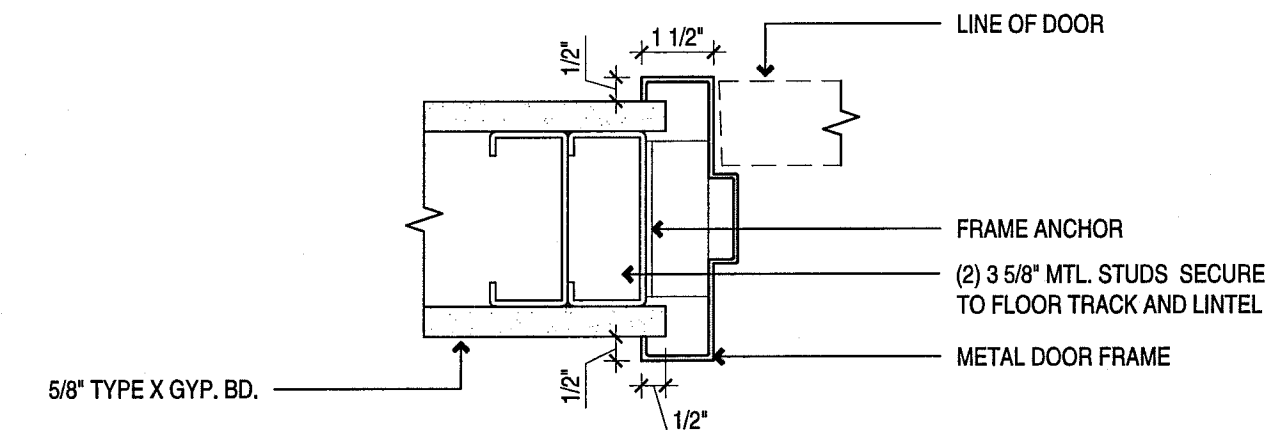


INTERIOR

G.C. TO VERIFY EXISTING EXTERIOR WALL ASSEMBLY. G.C. TO PROVIDE WEATHER STRIPPING AS REQUIRED



G.C. TO VERIFY EXISTING EXTERIOR WALL ASSEMBLY. G.C. TO PROVIDE WEATHER STRIPPING AS REQUIRED



INTERIOR

EXTERIOR

DOOR THRESHOLD AT ENTRY

3" = 1'-0"

3

EPOXY FLOOR TRANSITION

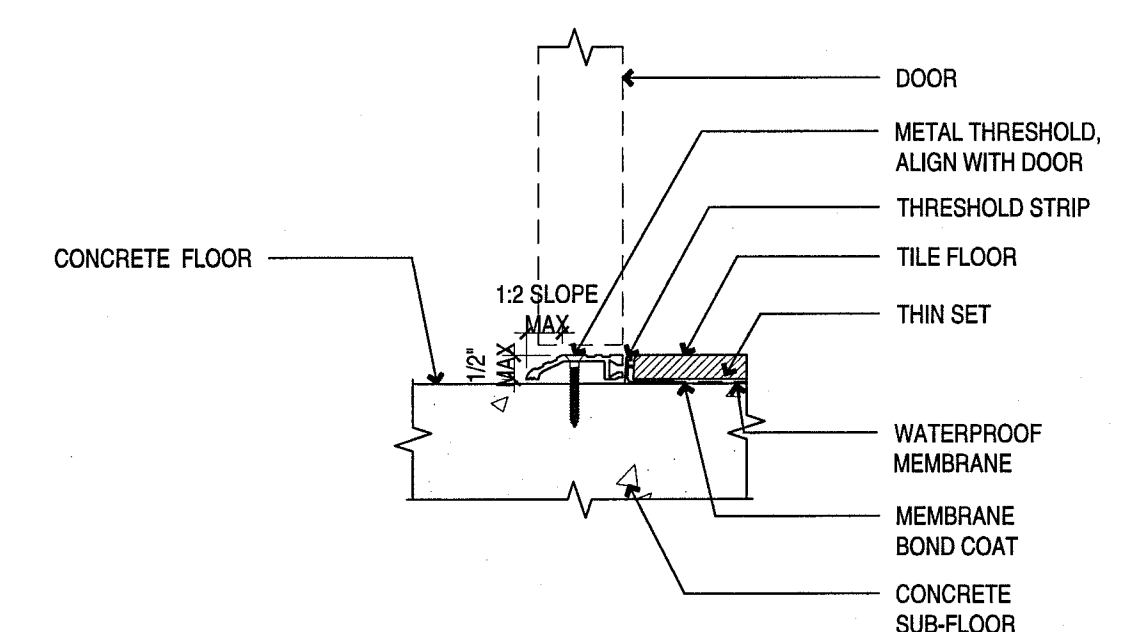
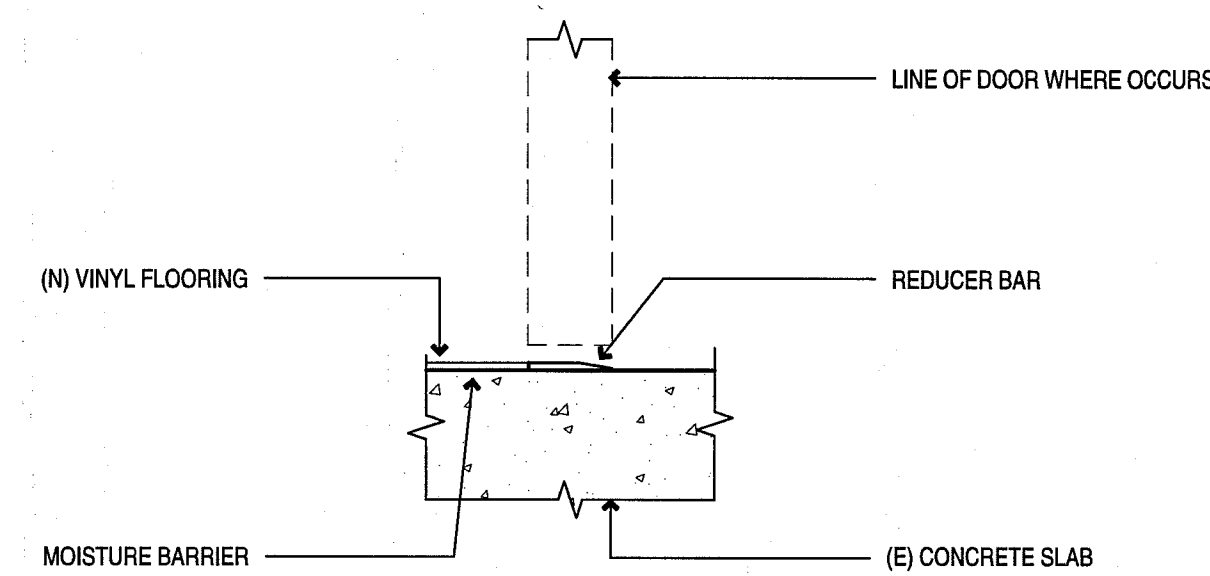
3" = 1'-0"

2

TILE FLOOR TRANSITION

3" = 1'-0"

1



PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA
JOB NUMBER:
215086

DATE ISSUE

12.15.16 ISSUE FOR PERMIT

03.03.17 PLAN CHECK COMMENTS

SEAL/SIGNATURE

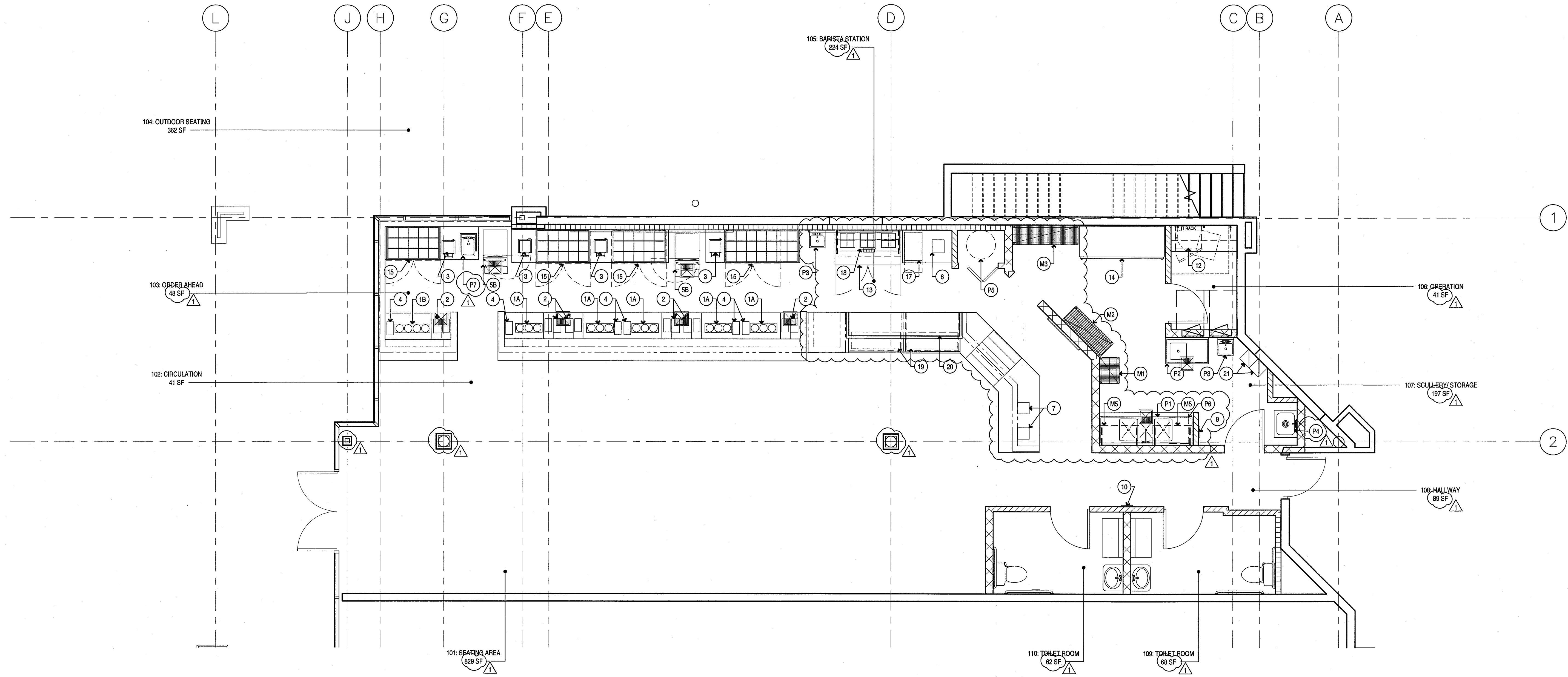
ARCHITECT
MICHAEL JOHN TROTT
LICENSED ARCHITECT
No. C 1555
San Diego, CA
STATE OF CALIFORNIA

DRAWING DESCRIPTION

CONSTRUCTION
DETAILS

SCALE

A6.3



PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA
JOB NUMBER:
216003

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

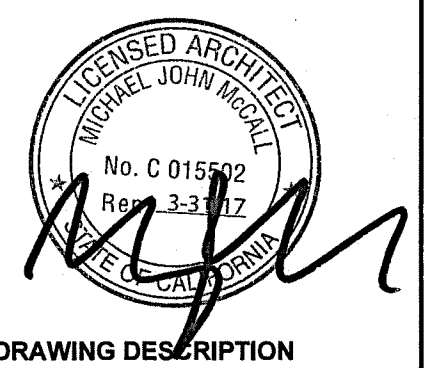
EQUIPMENT PLAN

1/4" = 1'-0" 2

#	Description	Model	Qty.	Responsibility	Notes	#	Description	Model	Qty.	Responsibility	Notes	#	Description	Model	Qty.	Responsibility	Notes	
Food Service Equipment						Storage						Toilet Room Accessories						
1A	Brew Station	3-Basket	5	VF/VI	Indirect drain	M1	Storage Shelving	Super Erecta, 18"D x 24"L x 86"H	1	VF/CI		RR1	36" Grab Bar	Bobrick	B-5806 Series	2	CF/CI	Requires backing in wall
1B	Brew Station	4-Basket	1	VF/VI	Indirect drain	M2	Storage Shelving	Super Erecta, 18"D x 48"L x 86"H	1	VF/CI		RR2	42" Grab Bar	Bobrick	B-5806 Series	2	CF/CI	Requires backing in wall
2	Hot Water Tower	Bunn	6	OF/CI	NEMA 6-30P plug, 30amp	M3	Storage Shelving	Super Erecta, 18"D x 60"L x 86"H	1	VF/CI		RR3	Coat Hook	Bobrick	B-542	2	CF/CI	
3	Grinder	Ditting	4	OF/CI	Electrical Outlet	M4	Storage Shelving	Super Erecta, Specify depth & height	1	VF/CI		RR4	Mirror	Bobrick	B-293 1830	2	CF/CI	
4	Ice Coffee Dispenser	Tablecraft	6	OF/OI		M5	Wall Shelving	Super Erecta, Specify depth & height	2	VF/CI	at 3 Compartment Sink	RR5	Paper Towel Dispenser	Bobrick	B-2620	5	CF/CI	2 at Toilet Rooms, 3 at Kitchen areas
5A	Ice Machine - 30"	Manitowoc Ice, 1-450 w/B570 bin	1	VF/VI	Filtered Water, Indirect Drain	Plumbing Fixtures						RR6	Soap Dispenser	Bobrick	B-4112	5	CF/CI	2 at Toilet Rooms, 3 at Kitchen areas
5B	Ice Machine - 22"	Manitowoc Ice, 1-522 w/B420 bin	2	VF/VI	Filtered Water, Indirect Drain	P1	3-Compartment Sink	GSS model for reference	1	VF/VI	Hot & Cold water, Indirect Drain	RR7	Toilet Tissue Dispenser	Bobrick	B-4288	2	CF/CI	
5C	Ice Machine - Undercounter	Manitowoc Ice NEO 240, Order-Ahead	1	VF/VI	Filtered Water, Indirect Drain	P2	Food Prep Sink	GSS model for reference	1	VF/VI	Hot & Cold water, Indirect Drain	RR8	Toilet Seat Cover Dispenser	Bobrick	B-221	2	CF/CI	
6	Scale	Torrey Electronics	1	OF/OI	Electrical Outlet	P3	Hand Sink, Wall Mounted	GSS model for reference	2	VF/VI	Hot & Cold water, Direct Drain, w/ Splash Guard	RR9	Feminine Disposal	Bobrick	B-270	2	CF/CI	
7	POS Touch-Pad	Touch-Pad	2	VF/VI	Electrical & Data Outlet	P4	Mop Sink	Advance Tabco for reference	1	VF/VI	Hot & Cold water, Direct Drain, w/ Splash Guard	RR10	Diaper Changing Station	Koala Care	KB200-00	2	OF/CI	Requires backing in wall
8	Order Ahead Touch-Pad	Touch-Pad	1	VF/VI	Data Outlet	P5	Hot Water Heater	AO Smith	1	CF/CI	Electrical Outlet, Hot & Cold Water	*ALL HAND SINKS TO BE PAIRED WITH WALL MOUNTED SOAP DISPENSER AND PAPER TOWEL DISPENSER						
9	Time Clock	Touch-Pad	1	VF/VI	Data Outlet	P6	Water Filtration System	Global Customized	1	VF/CI	Cold water							
10	Survey Touch-Pad	Touch-Pad	1	VF/VI	Data Outlet	P7	Hand Sink, In Counter	Eagle	1	VF/CI	Hot & Cold water, Direct Drain, w/ Splash Guard							
11	Receipt Printer	Star, at POS, Order Ahead, Food Station	1	VF/VI	Electrical & Data Outlet													
12	IT Rack	Tripp Lite	1	VF/VI	Electrical													
13	Food Prep Table	True, 5'	1	VF/CI	Electrical Outlet													
14	Refrigerator	True, 3-door reach-in	1	VF/CI	Electrical Outlet													
15	Under Counter Refrigerator	True, 2-door	4	VF/CI	Electrical Outlet													
16	Under Counter Refrigerator	True, 1-door	1	VF/CI	Electrical Outlet													
17	Turbo Chef Oven	Turbo Chef, SOTA	1	VF/CI	NEMA 6-30P plug 30amp													
18	Conveyer Toaster	APW Wyatt	1	VF/CI	Electrical Outlet													
19	Cold Case	Structural Concepts, Oasis, 4'	2	VF/CI	Electrical Outlet													
20	Sneeze Guard	Pastry Counter, Specify Length	1	CF/CI	Refer to Millwork Drawings													
21	Employee Locker		2	OF/CI	Requires Assembly													

Plot Date: Mar 13, 2017 - 2:49pm Plotted by: jimmy Filename: lj70.dwg

1/4" = 1'-0" 2

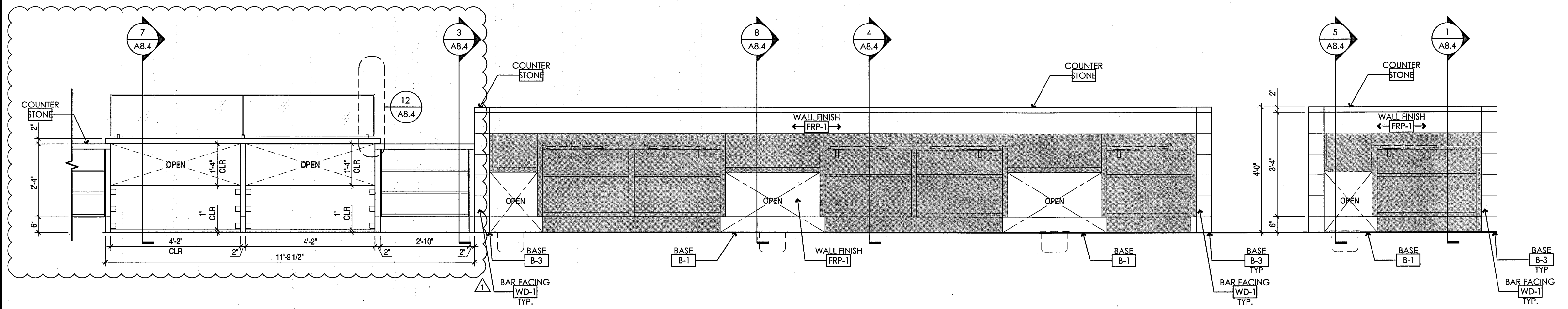
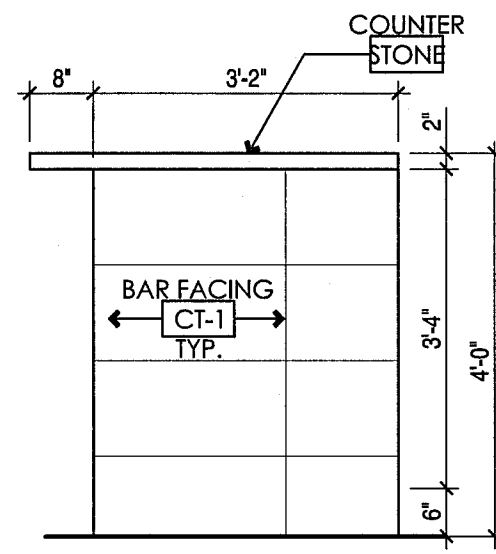


EQUIPMENT PLAN

SCALE

A7.0

1/4" = 1'-0" 1



ORDER AHEAD - SIDE ELEVATION

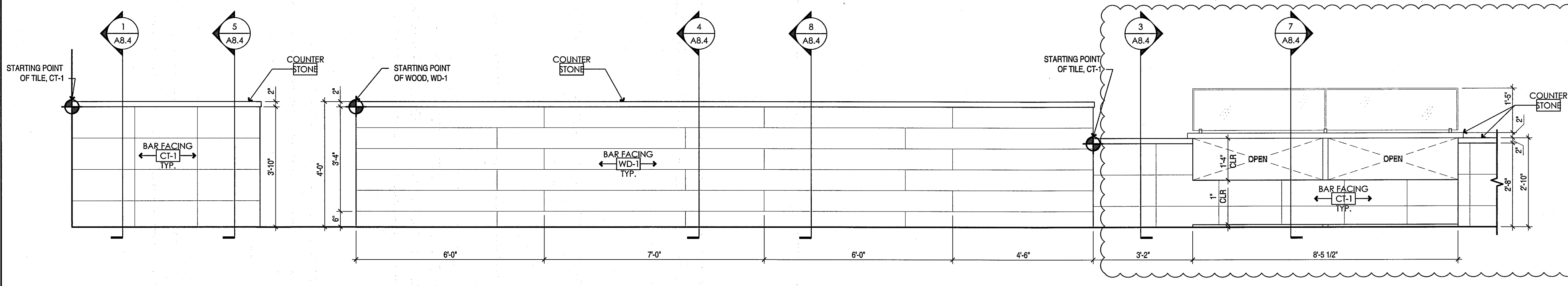
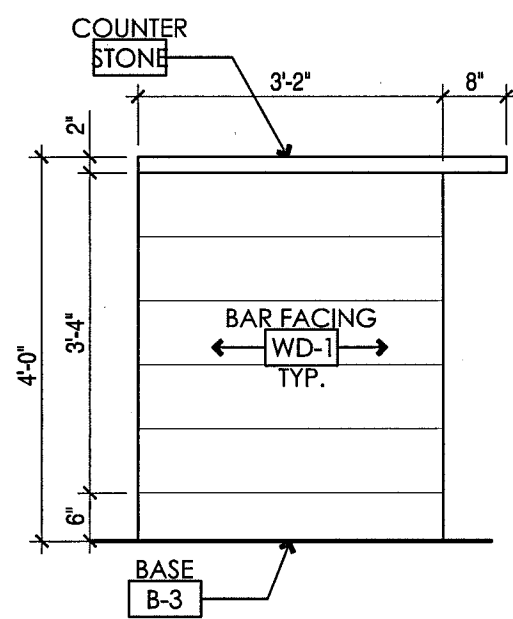
1/2" = 1'-0"

15

ORDER AHEAD/ BARISTA COUNTER/ FOOD DISPLAY - BACK ELEVATION

1/2" = 1'-0"

11



BARISTA COUNTER - SIDE ELEVATION

1/2" = 1'-0"

10

ORDER AHEAD/ BARISTA COUNTER/ FOOD DISPLAY - FRONT ELEVATION

1/2" = 1'-0"

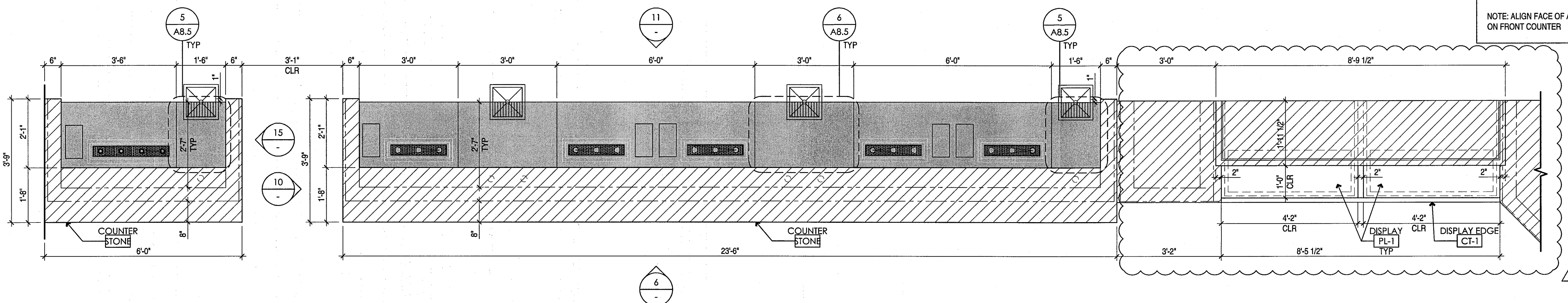
6

NOTE: G.C. TO COORDINATE FLOOR SINK LOCATIONS WITH FINAL MILLWORK LAYOUT

LEGEND

- WOOD
- STONE
- STAINLESS STEEL

NOTE: ALIGN FACE OF ALL FINISHES ON FRONT COUNTER



ORDER AHEAD/ BARISTA COUNTER/ FOOD DISPLAY ENLARGED PLAN

1/2" = 1'-0"

1

PHILZ COFFEE
 8849 VILLA LA JOLLA VILLAGE DR, #307
 SAN DIEGO, CA

JOB NUMBER: 216088

DATE ISSUE

12.15.16 ISSUE FOR PERMIT

03.03.17 PLAN CHECK COMMENTS

SEAL/SIGNATURE

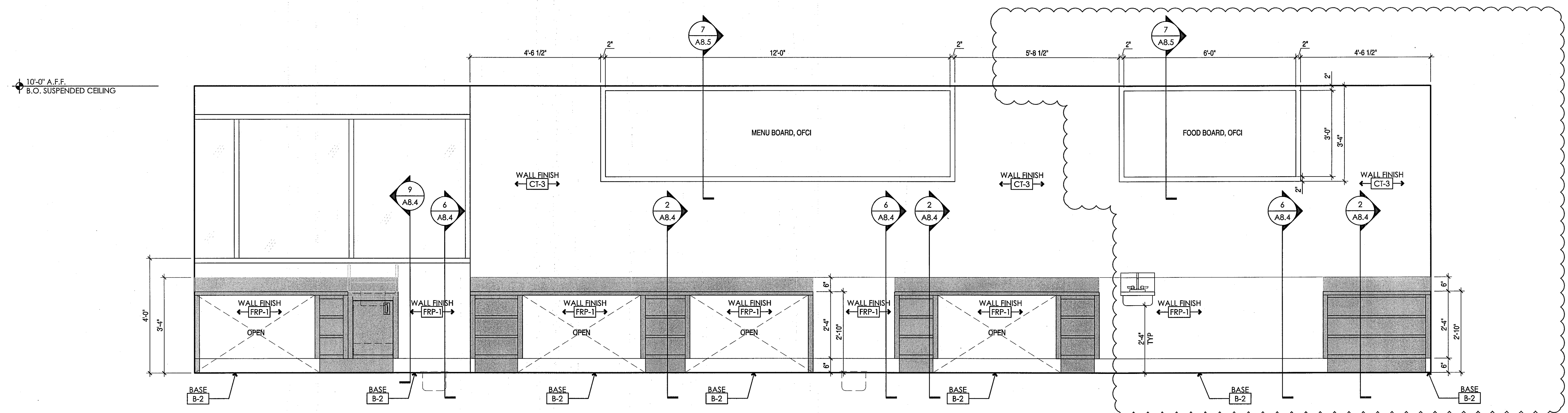


DRAWING DESCRIPTION

MILLWORK ELEVATIONS

SCALE

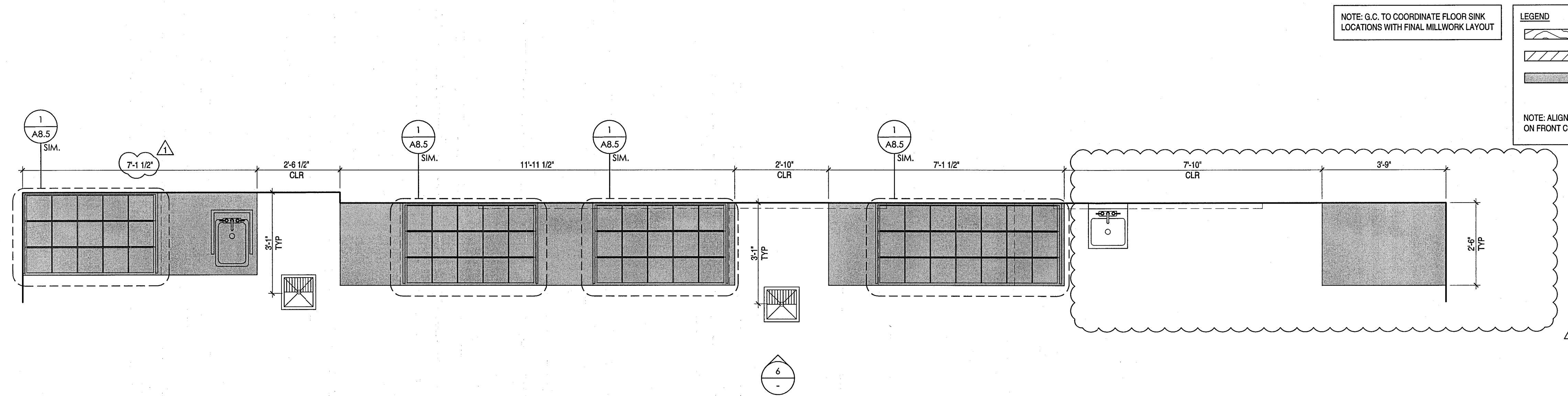
A8.0



REAR POS/ BARISTA COUNTER/ FOOD DISPLAY - FRONT ELEVATION

1/2" = 1'-0"

6



REAR POS/ BARISTA COUNTER/ FOOD DISPLAY ENLARGED PLAN

1/2" = 1'-0"

1

PHILZ COFFEE
 8849 VILLA LA JOLLA VILLAGE DR, #307
 SAN DIEGO, CA

JOB NUMBER:
 216088

DATE ISSUE

12.15.16 ISSUE FOR PERMIT

03.03.17 PLAN CHECK COMMENTS

SEAL/SIGNATURE

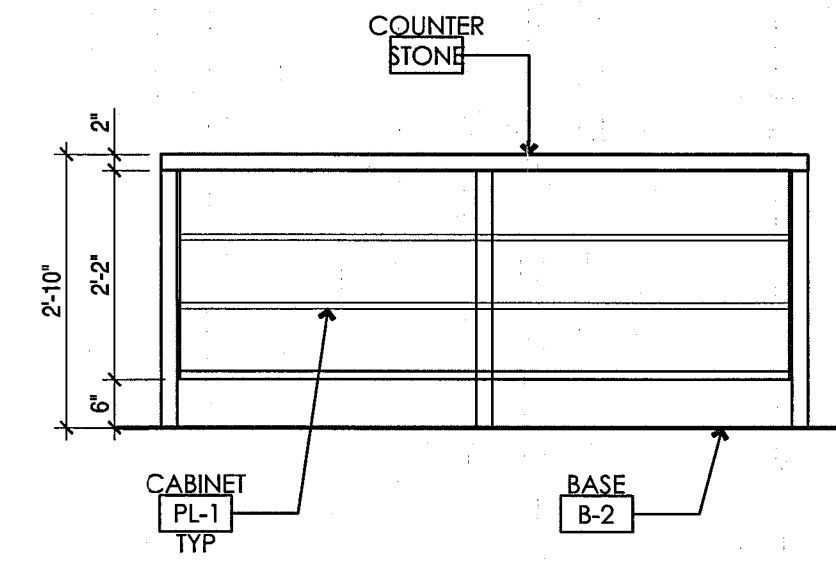


DRAWING DESCRIPTION

MILLWORK ELEVATIONS

SCALE

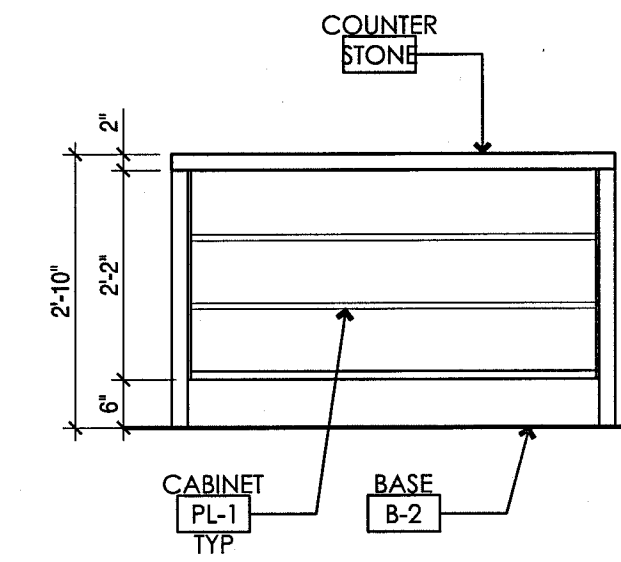
A8.1



COFFEE POUND BAG DISPLAY - BACK ELEVATION

1/2" = 1'-0"

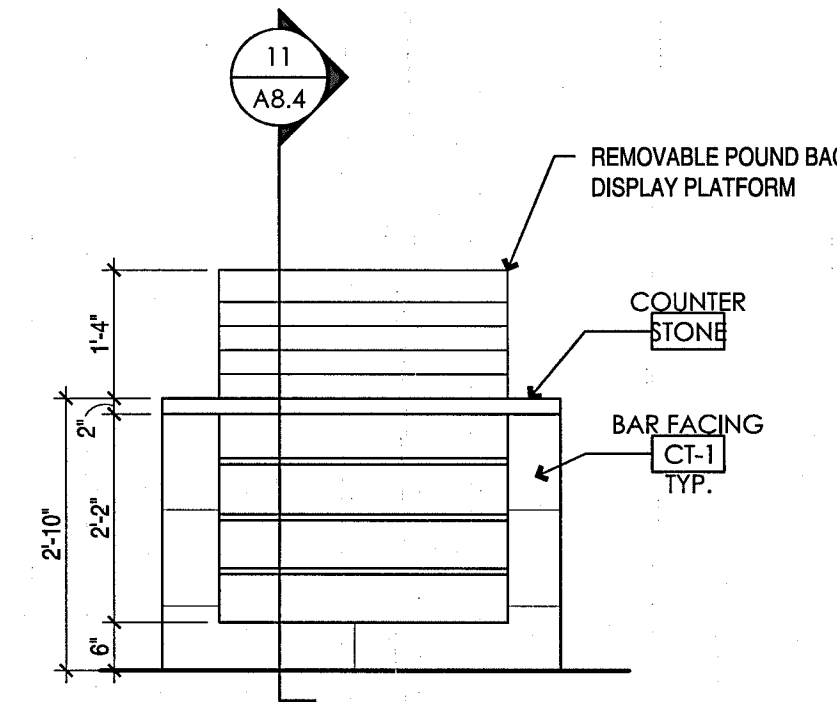
13



POS - BACK ELEVATION

1/2" = 1'-0"

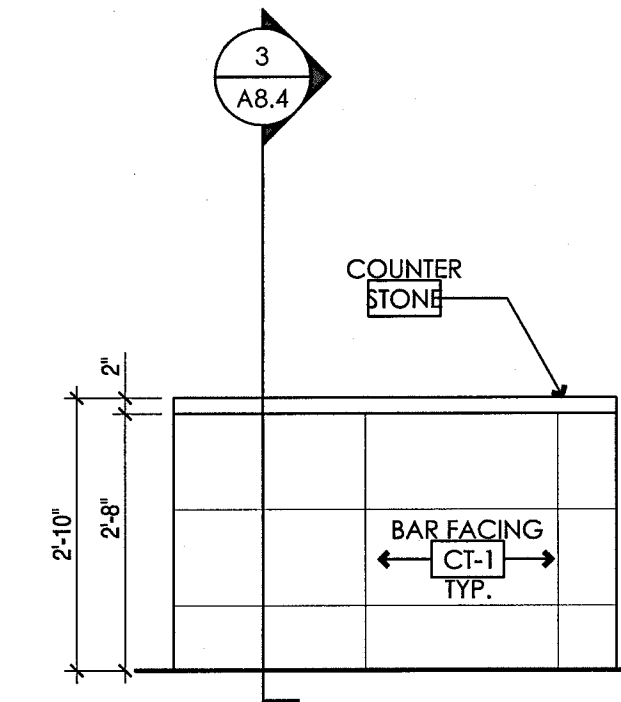
11



COFFEE POUND BAG DISPLAY - FRONT ELEVATION

1/2" = 1'-0"

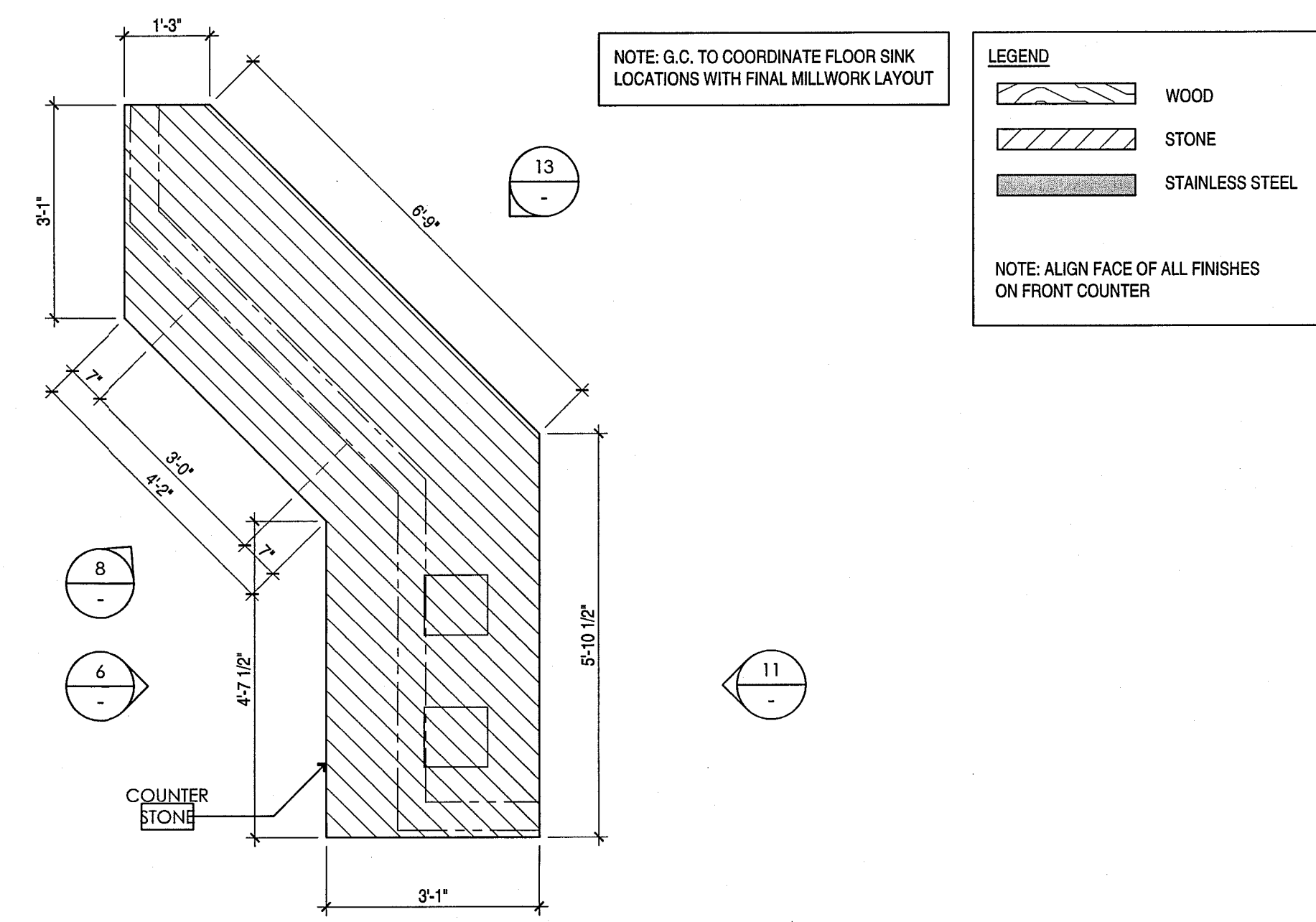
8



POS - FRONT ELEVATION

1/2" = 1'-0"

6



POS/ COFFEE POUND BAG DISPLAY ENLARGED PLAN

1/2" = 1'-0"

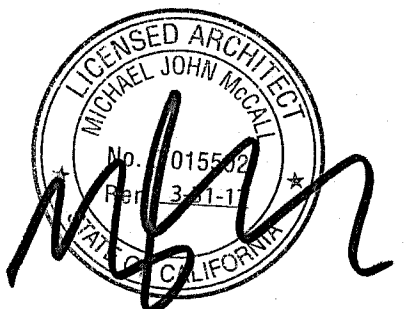
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PHILZ COFFEE
 8849 VILLA LA JOLLA VILLAGE DR, #307
 SAN DIEGO, CA

JOB NUMBER:
 216088

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE

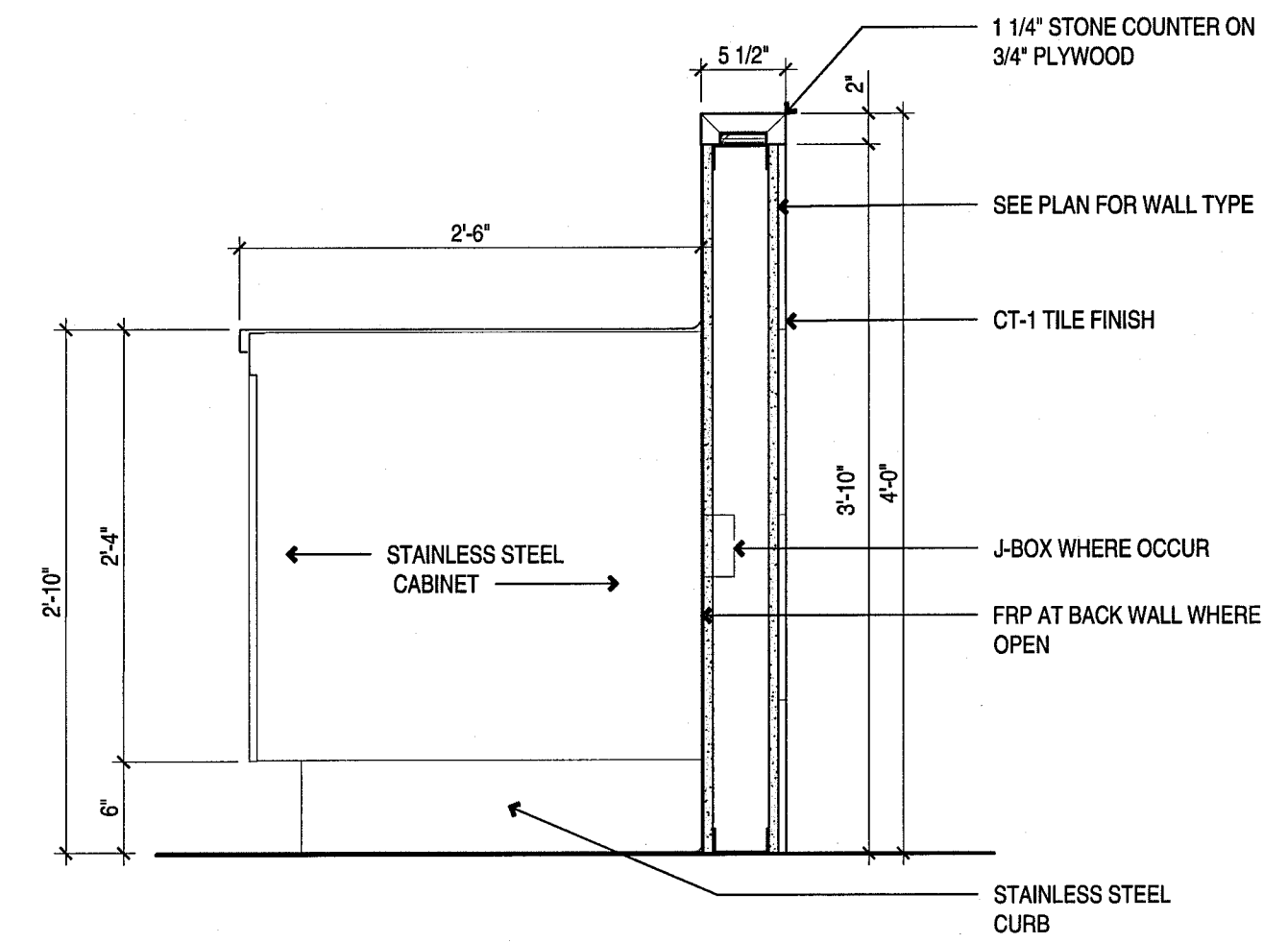
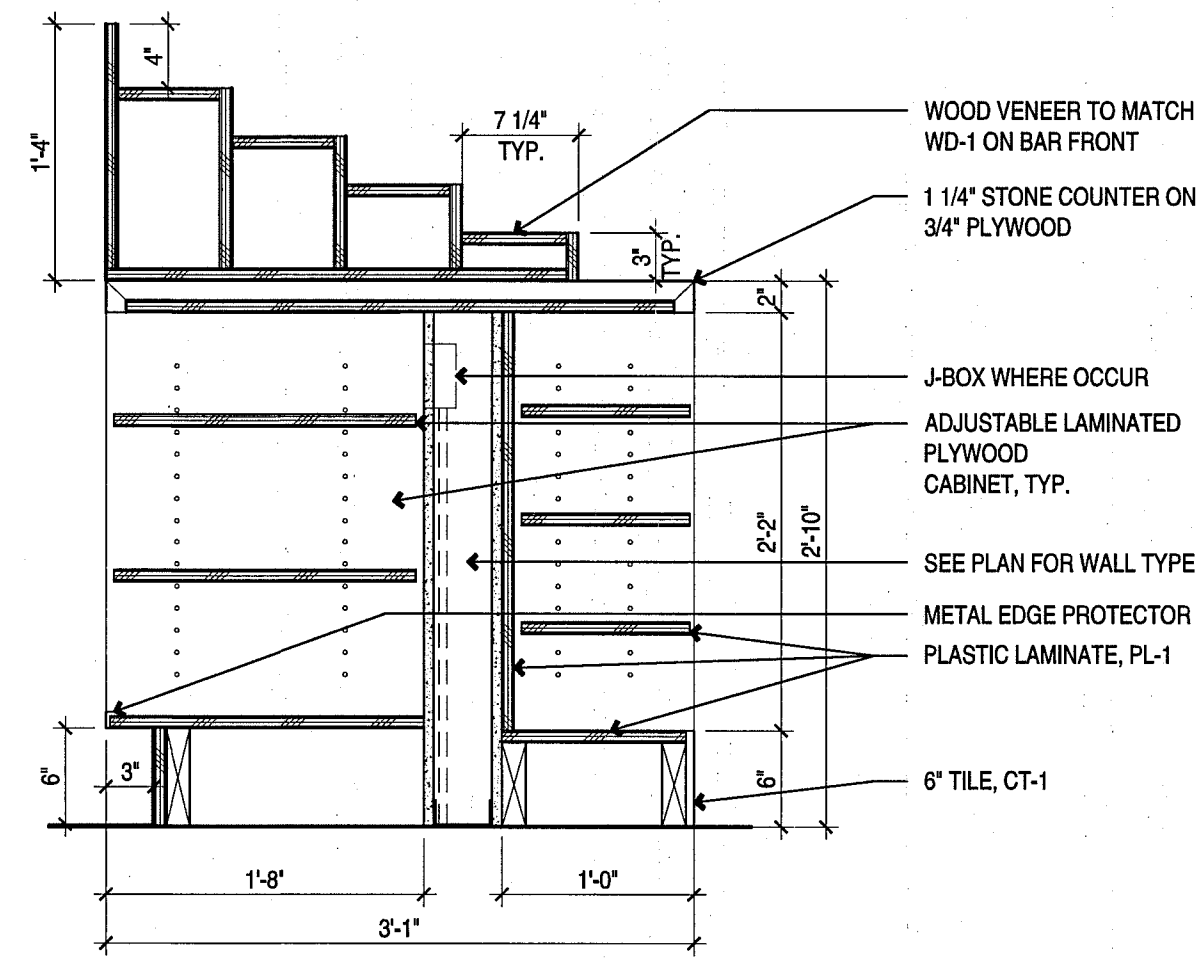
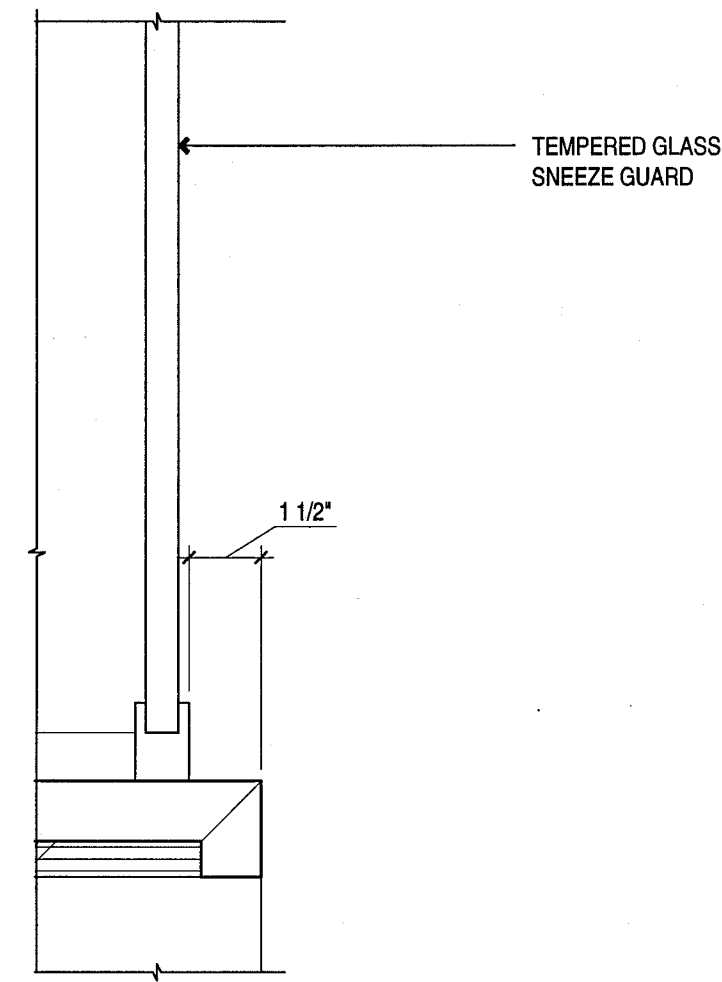


DRAWING DESCRIPTION

MILLWORK
 ELEVATIONS

SCALE

A8.2



SNEEZE GUARD DETAIL

3" = 1'-0"

12

COFFEE POUND BAG DISPLAY

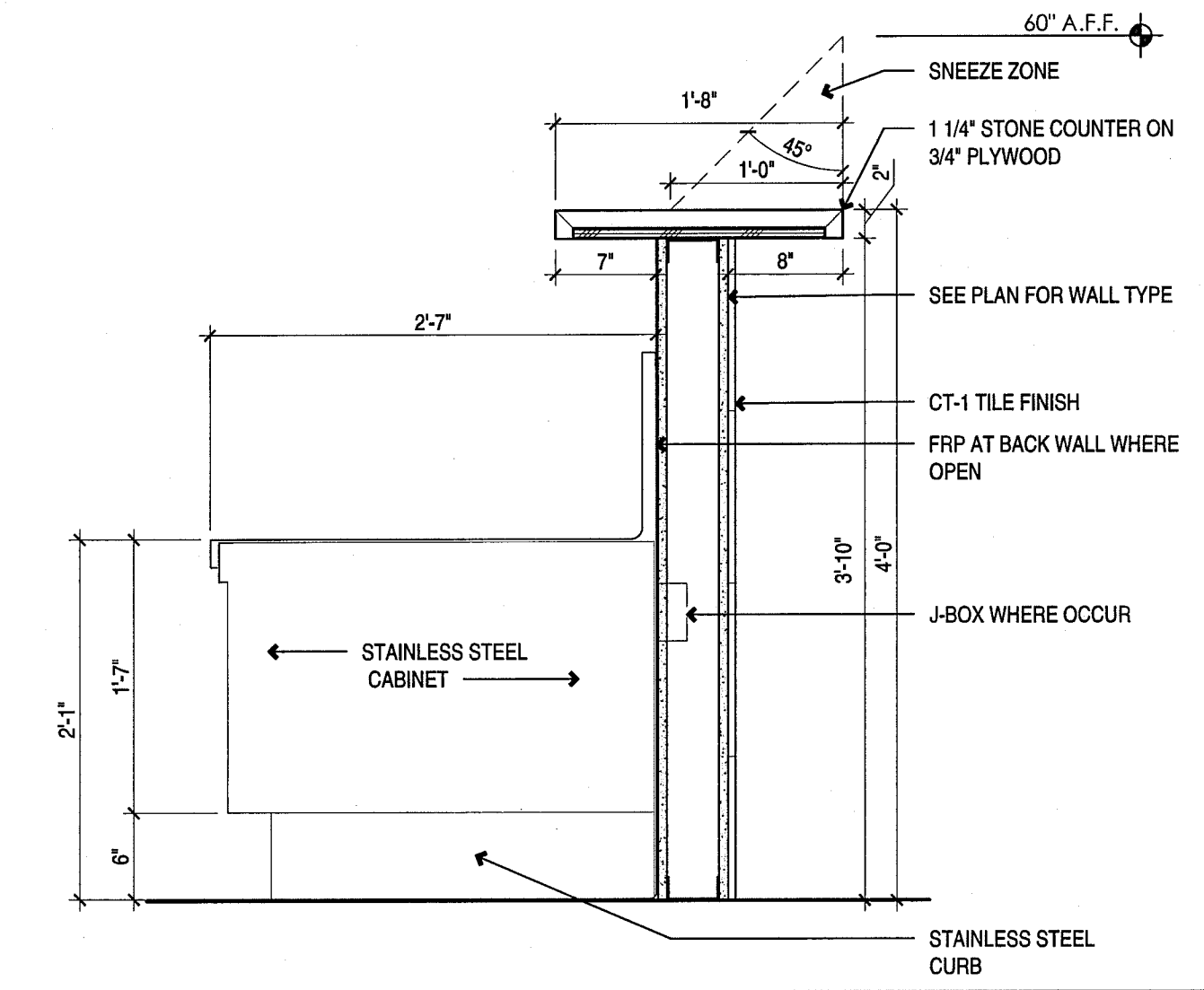
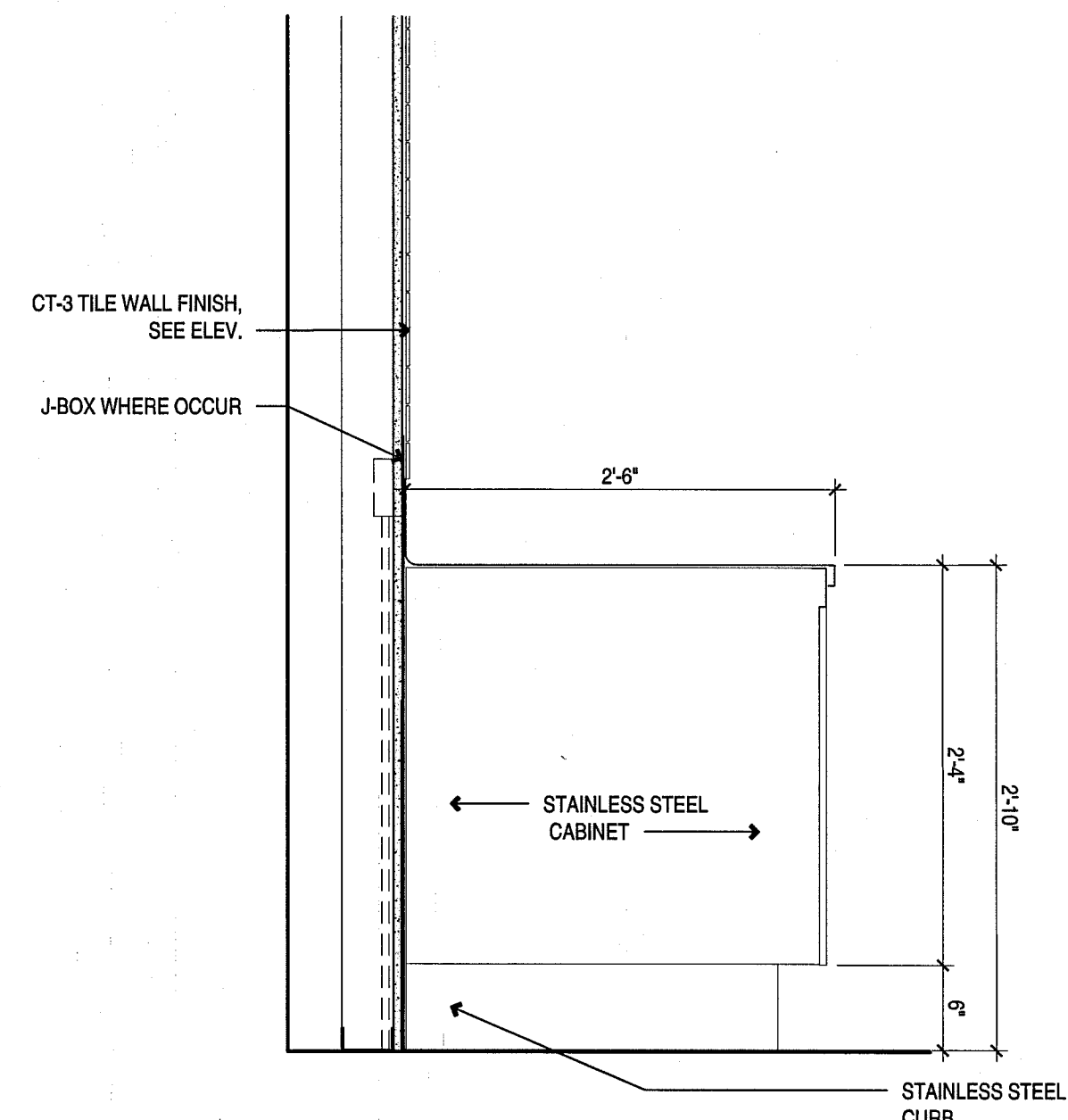
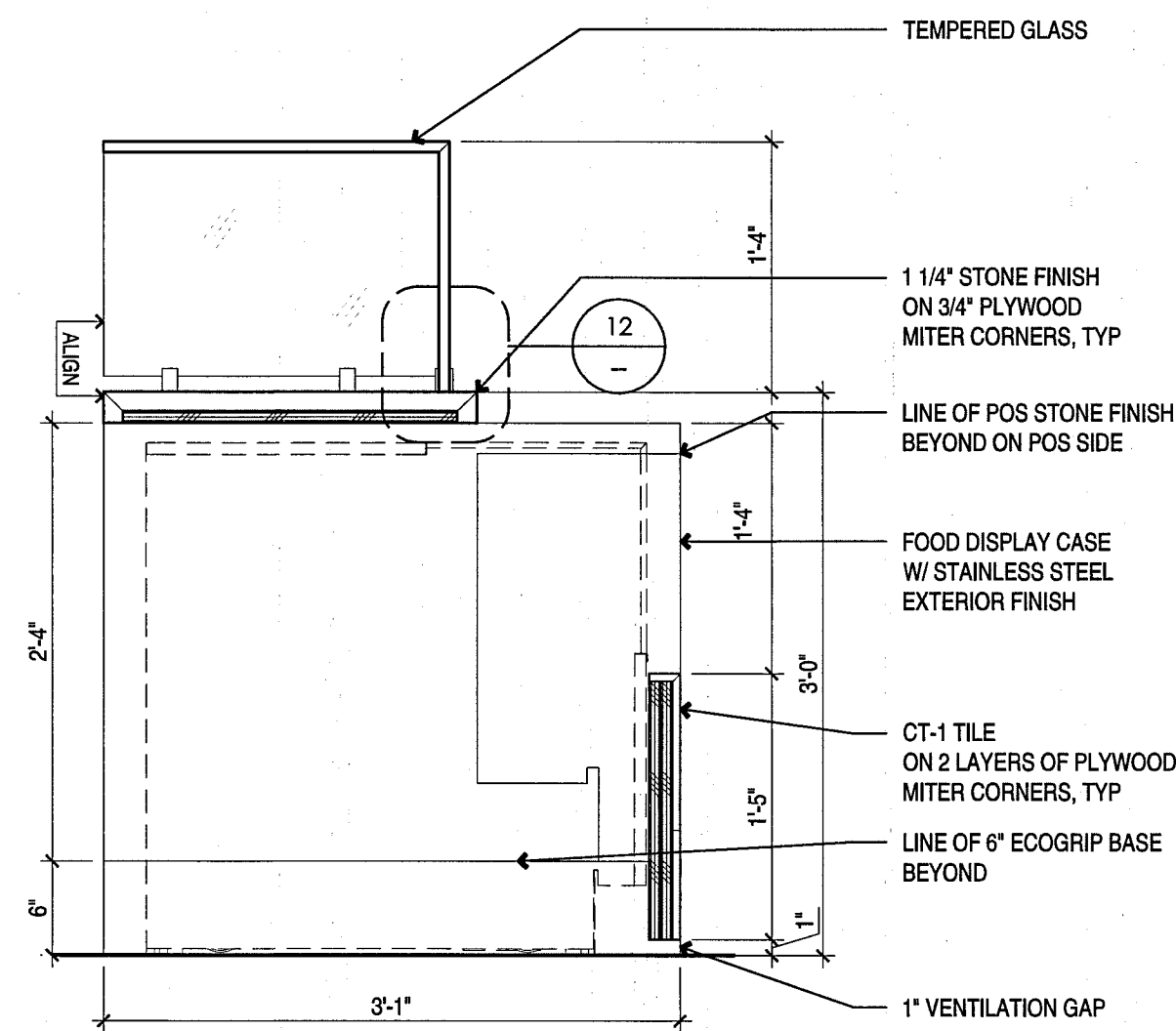
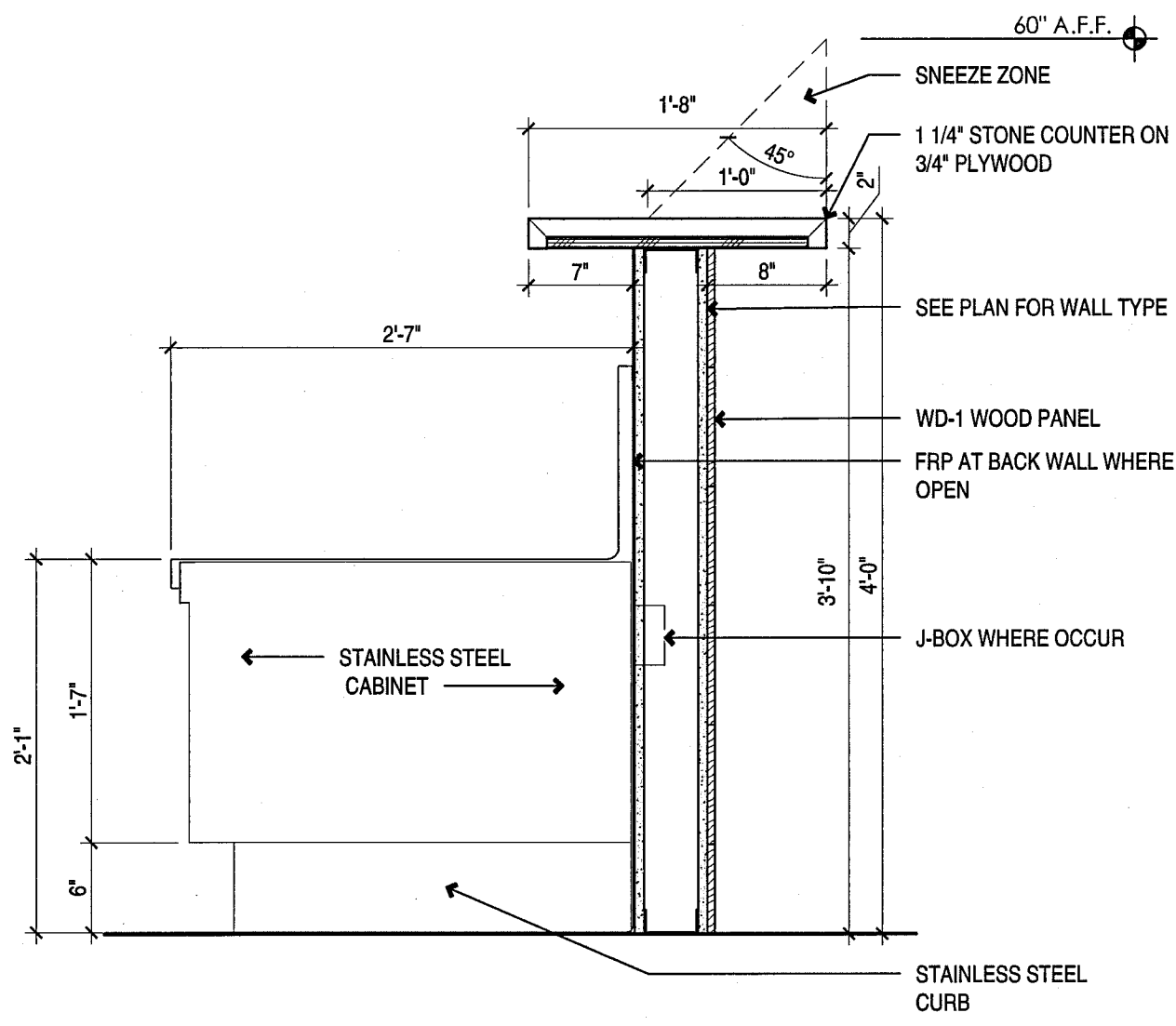
1" = 1'-0"

11

ORDER AHEAD STOREFRONT BACK COUNTER

1" = 1'-0"

9



BARISTA STATION WATER TOWER COUNTER

1" = 1'-0"

8

FOOD DISPLAY

1" = 1'-0"

7

OA/ BARISTA STATION BACK COUNTER - SIDE ELEVATION

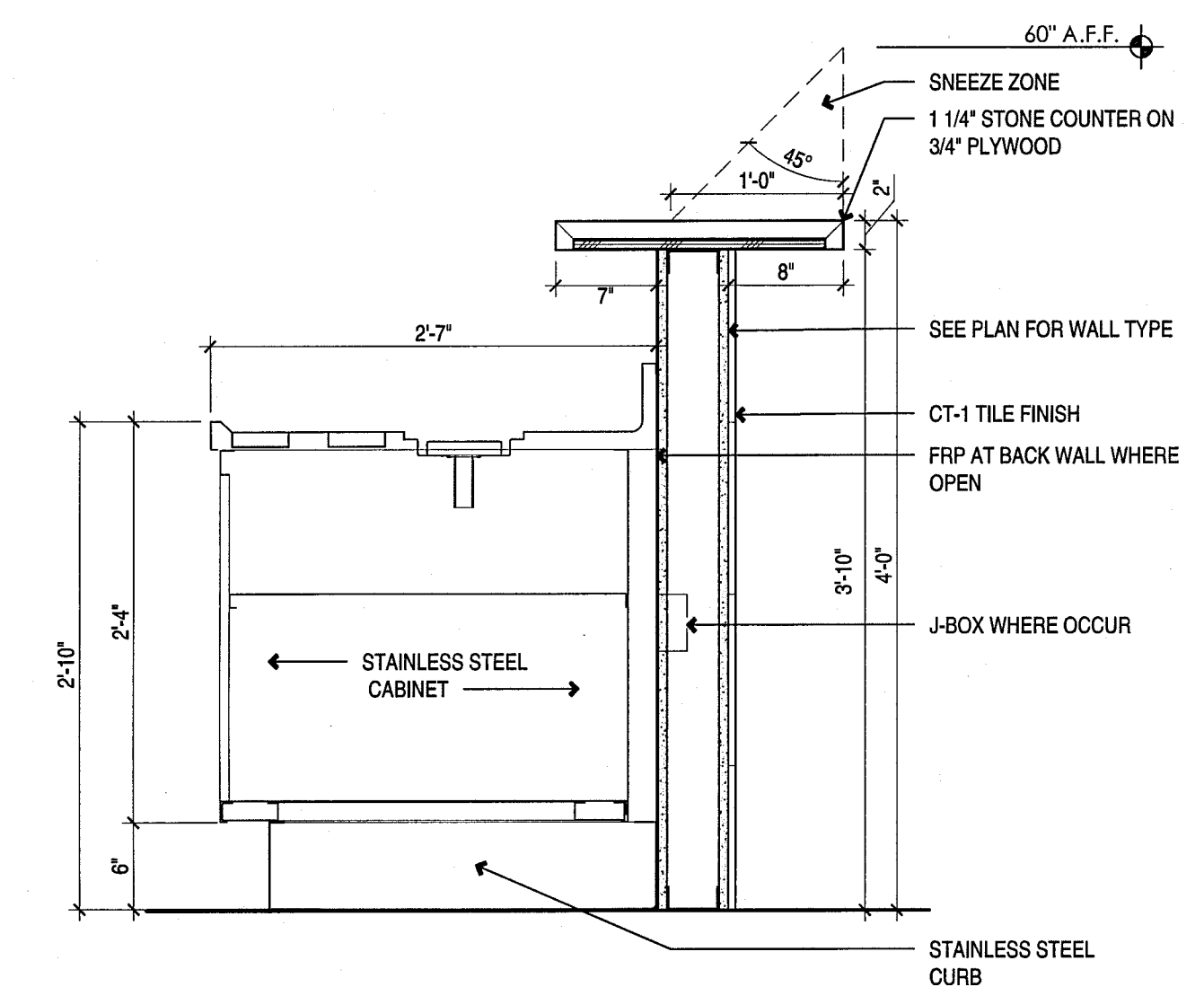
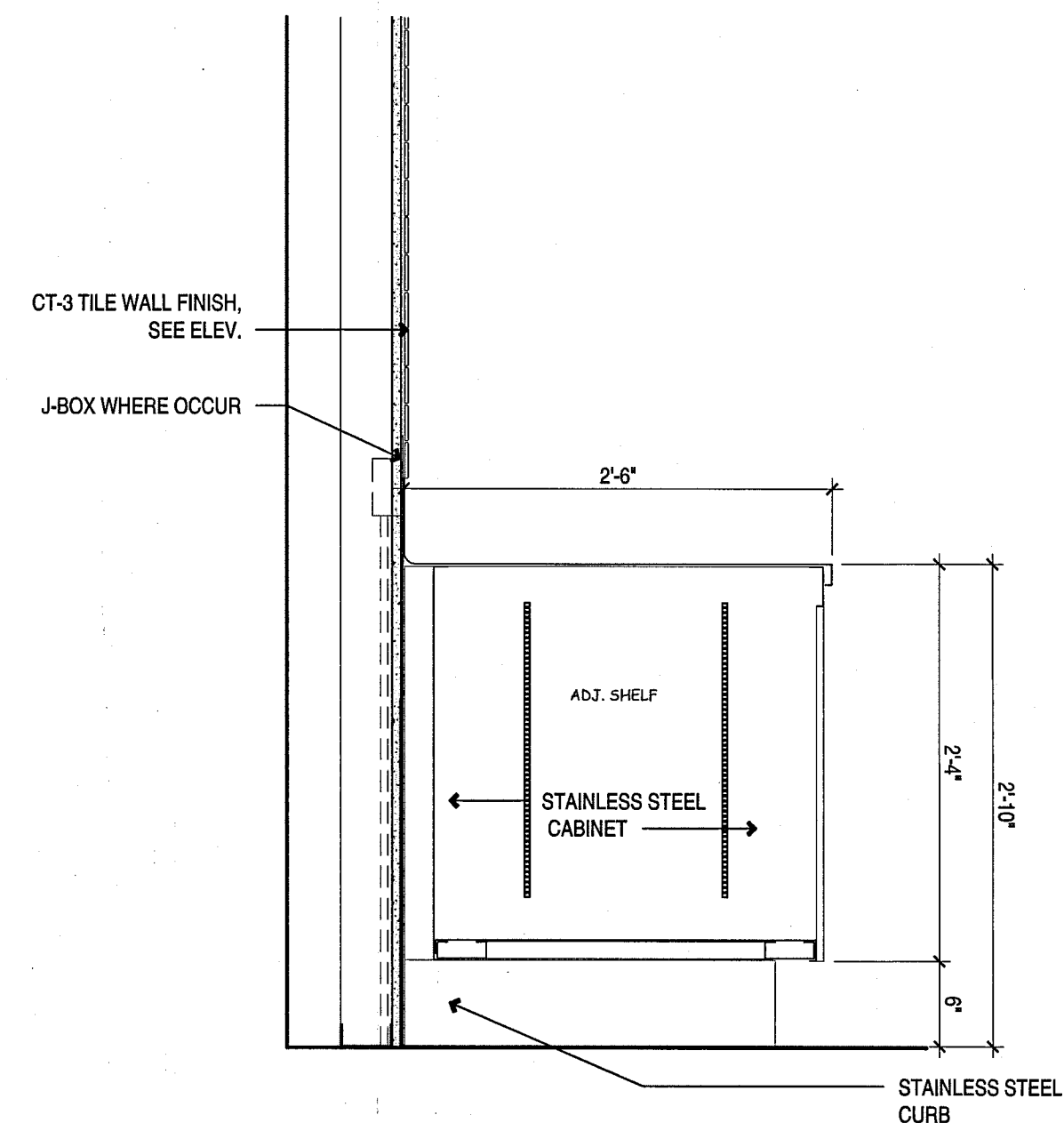
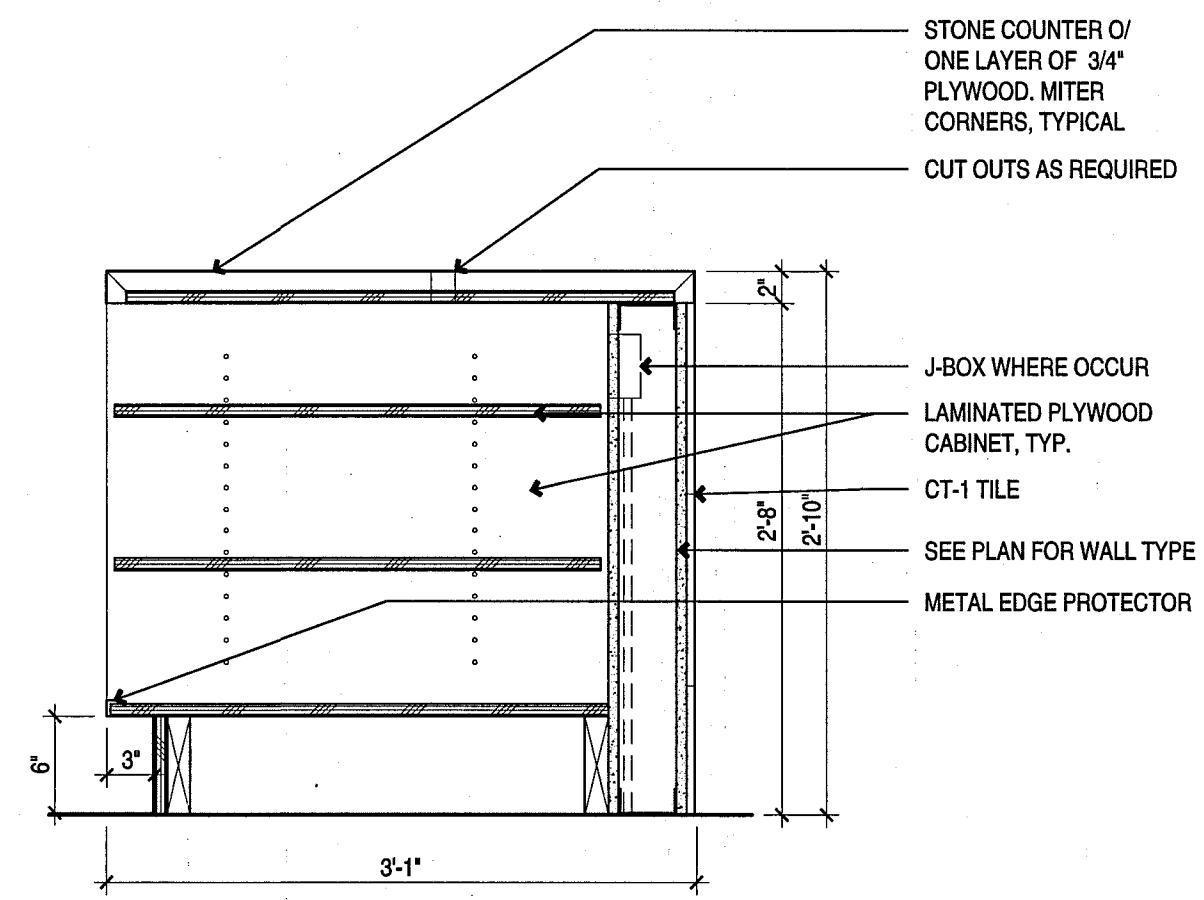
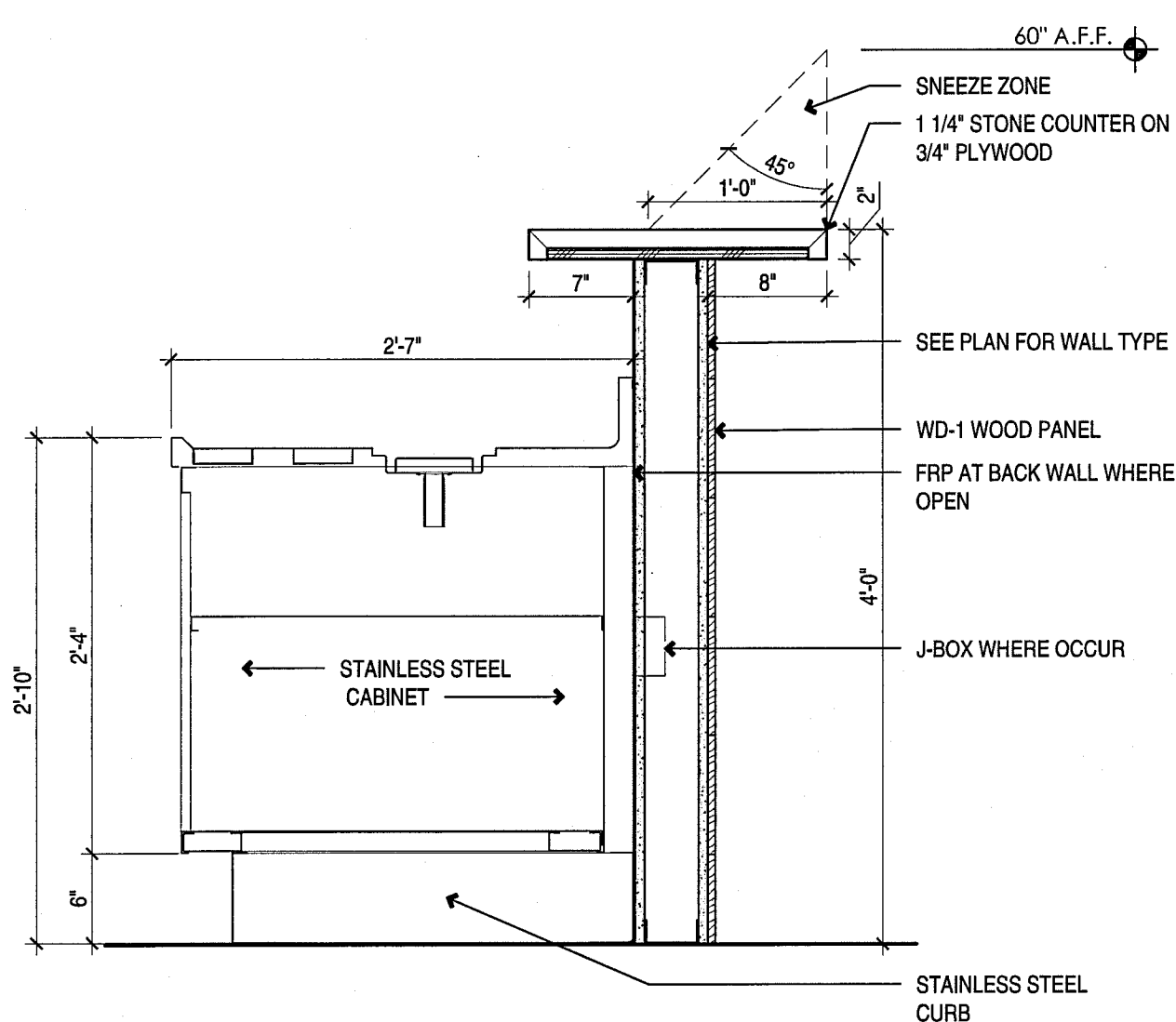
1" = 1'-0"

6

ORDER AHEAD WATER TOWER COUNTER

1" = 1'-0"

5



BARISTA STATION - FRONT COUNTER

1" = 1'-0"

4

POS COUNTER

1" = 1'-0"

3

OA/ BARISTA STATION BACK COUNTER W/ DOOR

1" = 1'-0"

2

ORDER AHEAD FRONT COUNTER

1" = 1'-0"

1

Plot Date: Mar 10, 2017 - 2:19pm Plotted by: Jimmy Filename: jf80.dwg

PHILZ COFFEE
 8849 VILLA LA JOLLA VILLAGE DR, #307
 SAN DIEGO, CA

JOB NUMBER:
 216069

DATE ISSUE

12.15.16 ISSUE FOR PERMIT

03.03.17 PLAN CHECK COMMENTS

SEAL/SIGNATURE



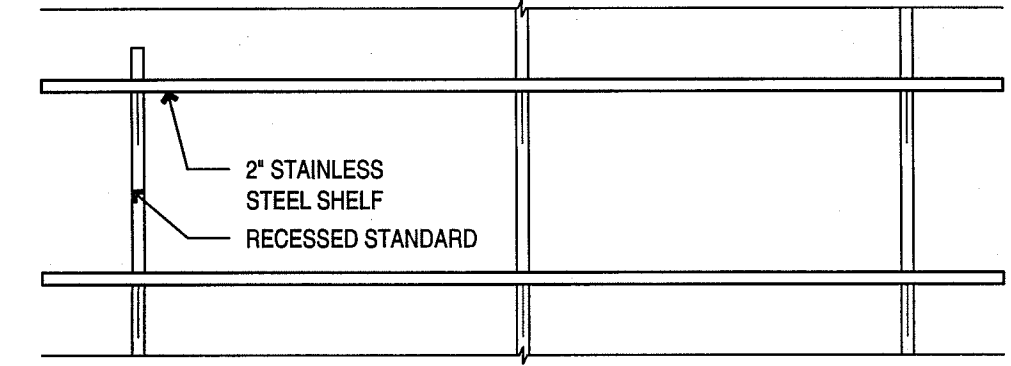
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MILLWORK DETAILS

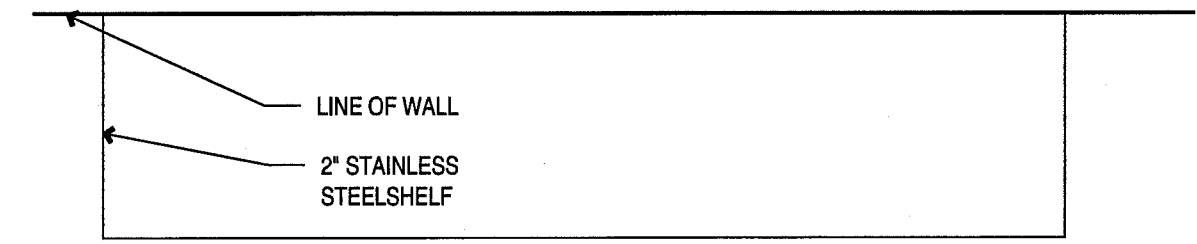
SCALE

A8.4

NOTE: SEE ELEVATIONS FOR MOUNTING HEIGHTS



A. ELEVATION

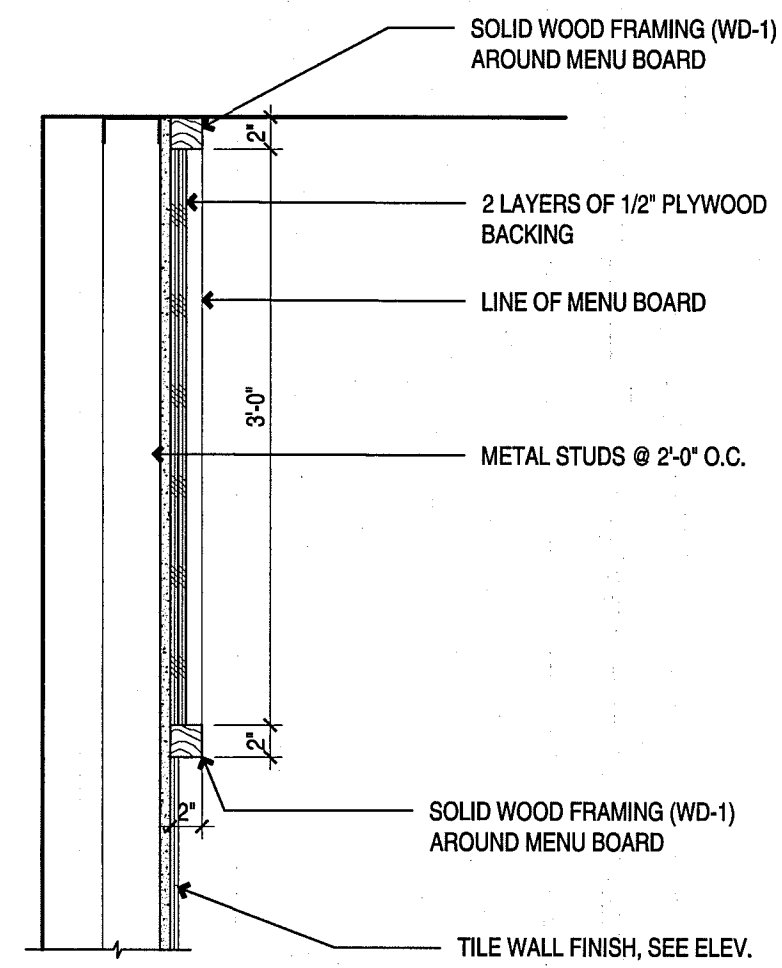


B. PLAN

OPERATIONS SHELVING DETAILS

1" = 1'-0"

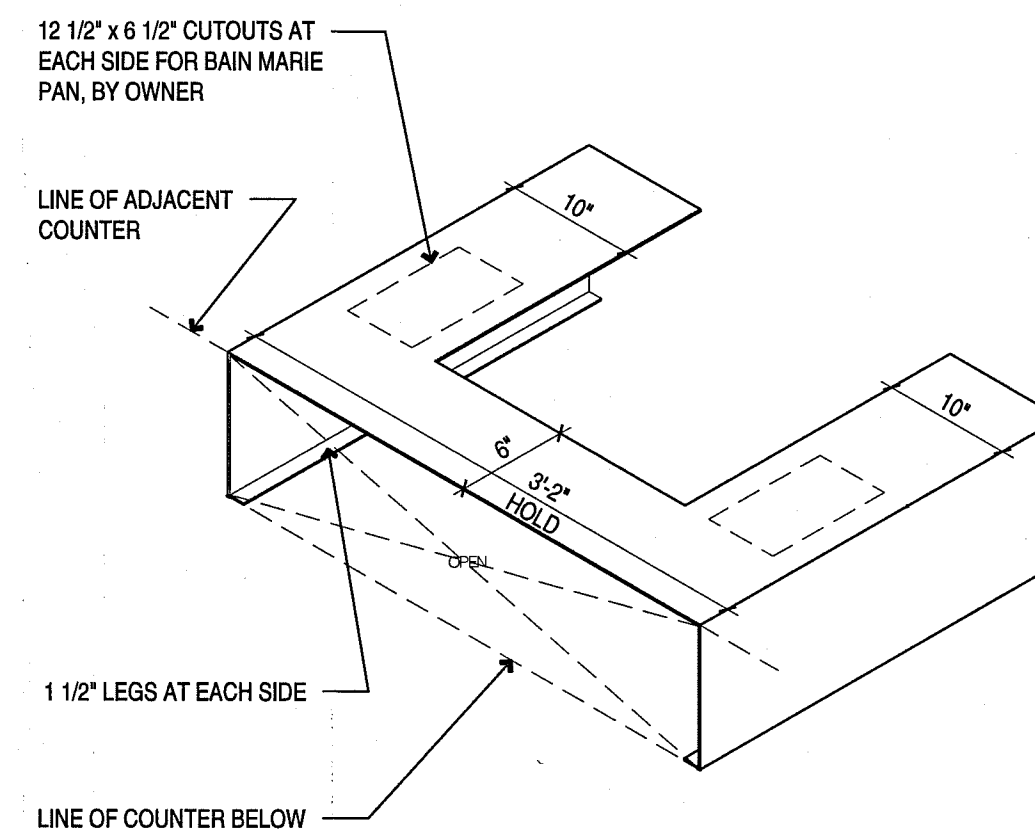
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MENU BOARD DETAIL

1" = 1'-0"

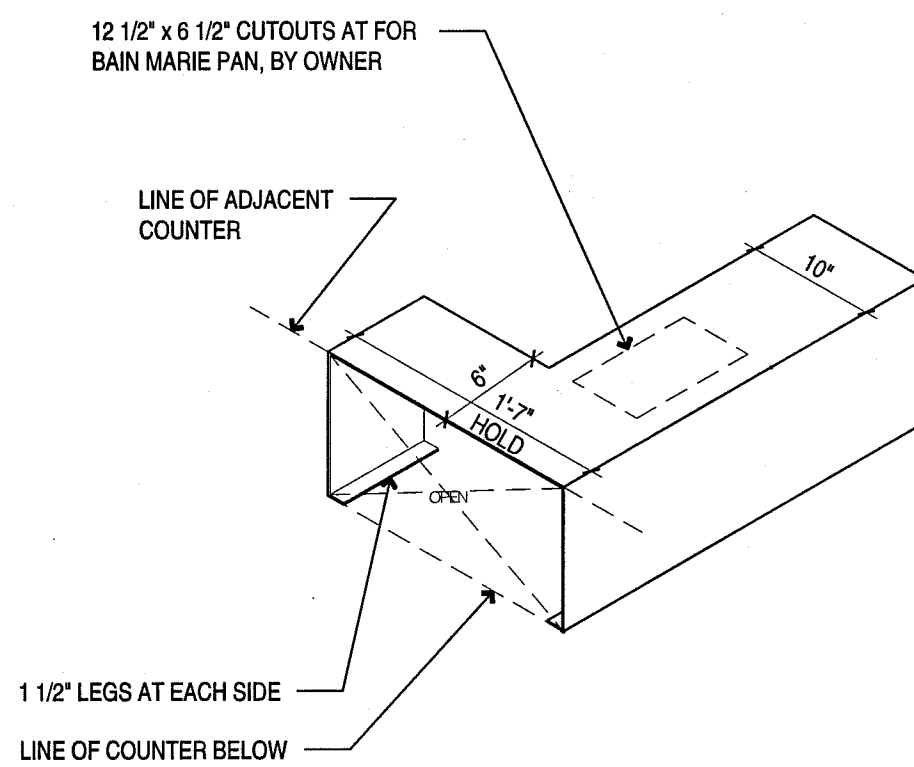
7



STAINLESS PLATFORM DETAIL

1" = 1'-0"

6



STAINLESS PLATFORM DETAIL

1" = 1'-0"

5

PHILZ COFFEE
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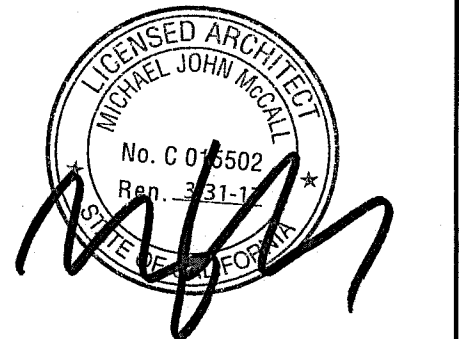
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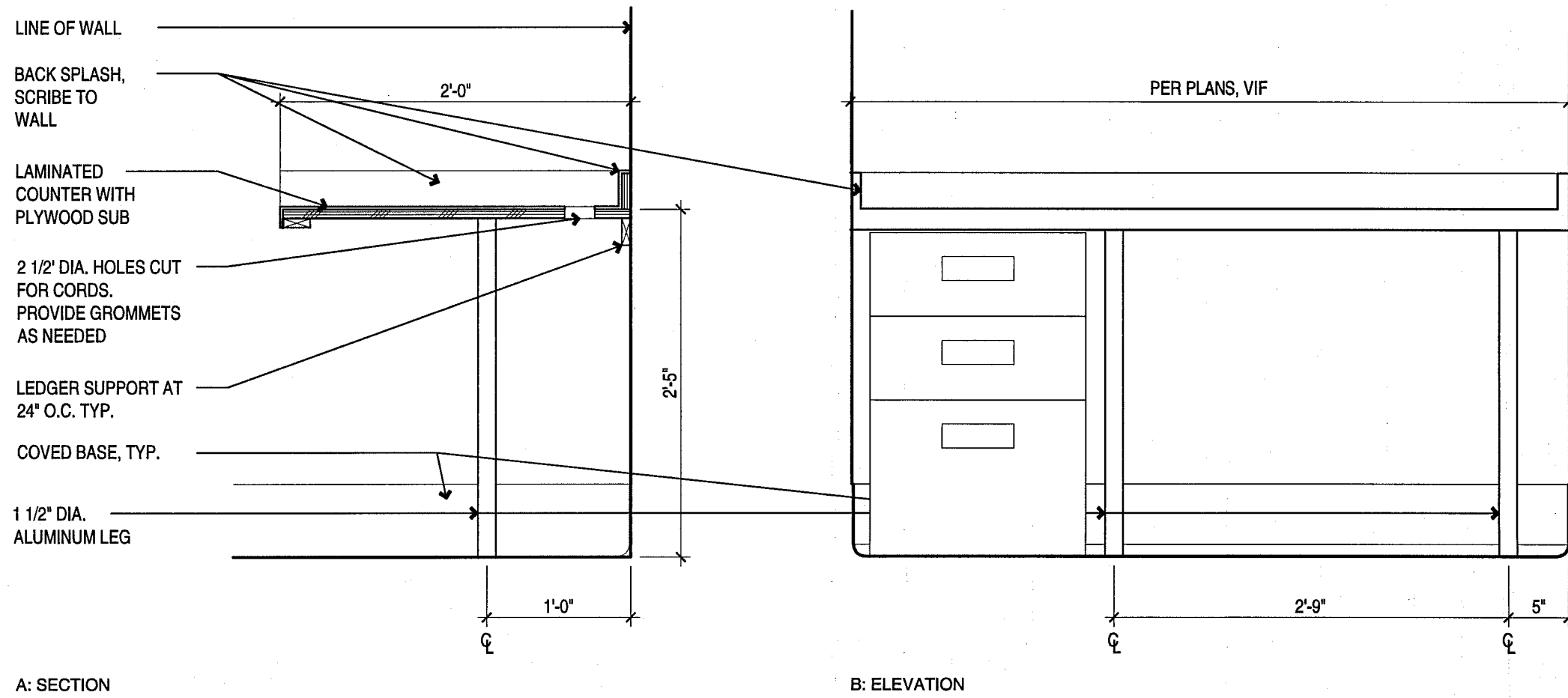


DRAWING DESCRIPTION

MILLWORK DETAILS

SCALE

A8.5

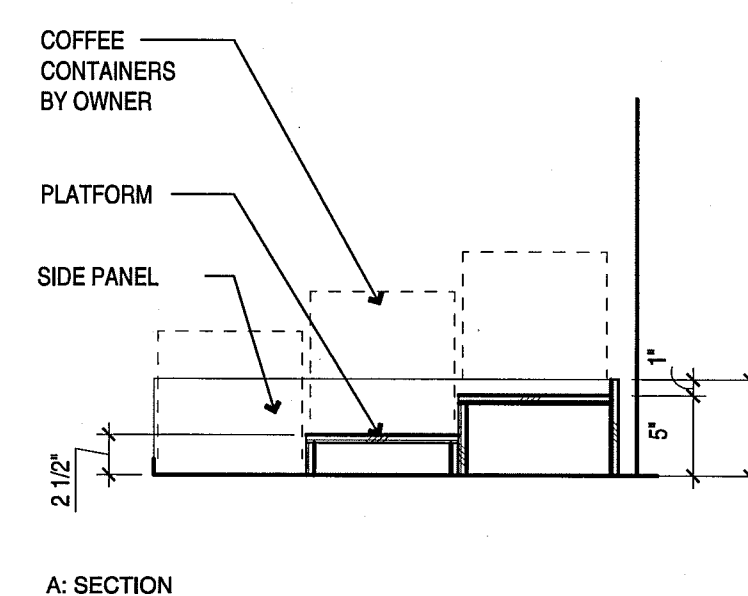


DESK

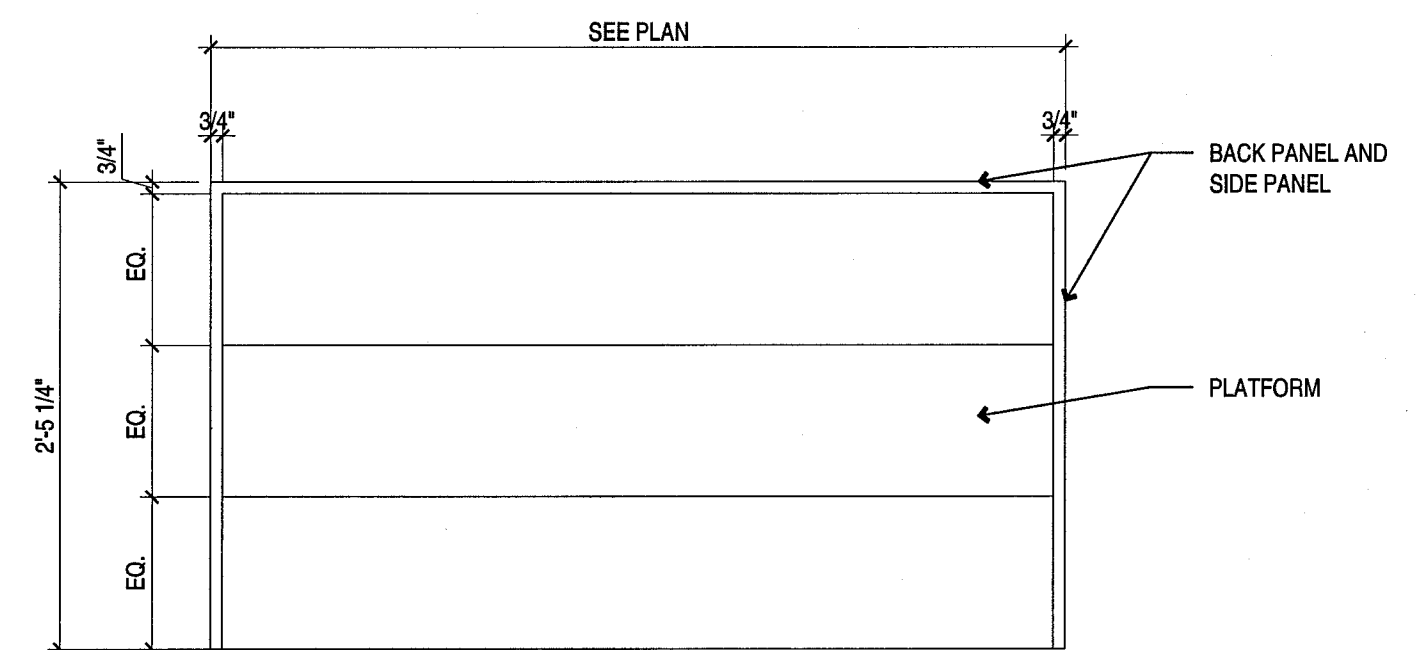
1" = 1'-0"

3

COFFEE BEAN PLATFORMS



A: SECTION



B: PLAN

1" = 1'-0"

1

ROOFTOP PACKAGED HEAT PUMP SCHEDULE

EQUIP. TAG	MANUFACTURER & MODEL	AREA SERVED	LOCATION	NOMINAL CAPACITY (TONS)	SUPPLY FAN SECTION			COOLING				HEATING		ELECTRICAL			REMARKS			
					SUPPLY AIR (cfm)	OUTSIDE AIR (cfm)	EXTERNAL STATIC PRESSUR E (in. WC)	MOTOR HORSE POWER (bhp)	TOTAL COOLING CAPACITY (MBH)	SENSIBLE COOLING CAPACITY (MBH)	EAT DB/WB (°F)	AMBIENT TEMP (°F)	SEER/EER	HEATING CAPACITY (MBH)	EFFICIENCY @47°F (HSPF)	ELECTRICAL SERVICE (v/ph/Hz)		MCA (A)	MAX. FUSE SIZE	WEIGHT (lbs)
RTU 1 (E)	CARRIER 50TCQA-06	SERVICE/SCULLERY	ROOF	5.0	2000	200	0.75	-	61.3	47.3	80/67	95	13.2/-	58.4	7.7	208/3/60	26.2	40	765	1,2,3
RTU 2 (E)	CARRIER 50TCQA-06	SEATING AREA	ROOF	5.0	2000	450	0.75	-	61.3	47.3	80/67	95	13.2/-	58.4	7.7	208/3/60	26.2	40	765	1,2,3

- NOTES:
 1. EXISTING UNIT. SHOWN FOR REFERENCE ONLY.
 2. PROVIDE 24/7 PROGRAMMABLE THERMOSTAT W/ WIRELESS TEMPERATURE SENSOR.
 3. BALANCE TO OUTSIDE AIR SHOWN.

GENERAL NOTES

- THE INSTALLATION SHALL COMPLY WITH THE FOLLOWING CODES ANY AND/OR ALL REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION.
- CONSTRUCTION TO CONFORM:
 - 2013 CALIFORNIA MECHANICAL CODE, WITH LOCAL AMENDMENTS
 - 2013 CALIFORNIA BUILDING CODE, WITH LOCAL AMENDMENTS
 - 2013 CALIFORNIA ENERGY CODE, T-24, SECTION 6
- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AN OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS.
- CENTER OF THERMOSTATS, AND TEMPERATURE SENSORS MOUNTED AT 48" ABOVE FINISH FLOOR. HEIGHT OF CONTROLS TO MATCH ELECTRICAL SWITCHES.
- ALL INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY. BEFORE PROCEEDING WITH THE WORK, THIS CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL DIMENSIONS, SIZES, REQUIRED CLEARANCES, AND SHALL ASSUME FULL RESPONSIBILITY FOR THE FITTING OF ALL EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK AND TO THE WORK OF OTHER TRADES.
- CONTRACTOR SHALL COMPLY WITH ALL CONTRACT DOCUMENTS IN LAYING OUT HIS WORK AND EQUIPMENT OR SPECIALTIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BUILDING.
- DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH CHAPTER 6 OF THE CMC, 2013 EDITION AND SMACNA, 2005 EDITION.
- ALL BRACING OF DUCTS AND PIPING SHALL INSTALLED IN ACCORDANCE WITH "SMACNA" GUIDELINES AS FOR SEISMIC RESTRAINTS OF MECHANICAL AND PLUMBING SYSTEMS. WHERE BRACING DETAILS ARE NOT SHOWN ON DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE TO THE APPROVAL OF THE ARCHITECT AND THE STRUCTURAL ENGINEER.
- ALL FRESH AIR INTAKES SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY SANITARY VENT, EXHAUST FAN DISCHARGE AND FLUE OF OTHER FURNACES. WHEN NECESSARY EXTEND VENT OR PROVIDE ADDITIONAL FRESH AIR INTAKE DUCTWORK AS DIRECTED BY THE ENGINEER.
- WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER.
- THE SIZES, WEIGHTS AND CAPACITIES OF ALL EQUIPMENT SCHEDULES ON THE DRAWING HAVE BEEN CAREFULLY COMPUTED. SHOULD EQUAL ITEMS BUT DIFFERENT MANUFACTURER'S BE SUBMITTED FOR APPROVAL, ALL SUCH SUBMITTALS SHALL INCLUDE 1/4" SCALE SHOP DRAWINGS SHOWING METHOD OF INSTALLATION, PROVIDE LOAD RATINGS AND SEISMIC CALCULATIONS AS APPROVED BY A REGISTERED STRUCTURAL ENGINEER WITH EACH SUBMITTAL.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL TRADES AT THE SITE. ANY COST TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE PLANS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM, TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DO ALL CORING, SAW CUTTING, PATCHING AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY FOR HIM TO PENETRATE FOR HIS WORK. ALL OPENING SHALL BE SEALED TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING PENETRATED.
- WHEREVER A DISCREPANCY IN QUANTITY OR SIZE OF MECHANICAL EQUIPMENT MATERIAL ARISES ON THE DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON DRAWINGS AND/OR IN THE SPECIFICATION TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ENGINEER.
- PENETRATION OF PIPES, CONDUITS, ETC., IN WALLS REQUIRING PROTECTED OPENING SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A U.L. TESTED AND APPROVED ASSEMBLY APPROVED BY THE STATE FIRE MARSHALL.
- INSTALLATION INSTRUCTIONS FOR ALL LISTED EQUIPMENT SHALL BE MADE AVAILABLE TO THE BUILDING INSPECTOR AT THE TIME OF INSPECTION.
- PROVIDE MANUAL BALANCE DAMPERS AT EVERY DUCT BRACH WHETHER SHOWN OR NOT.
- PROVIDE SMOKE DETECTORS AND AUTOMATIC SHUTOFF FOR HVAC UNITS OR COMBINATION THEREOF SUPPLYING AIR IN EXCESS OF 2000 CFM. WHERE FIRE DETECTION OR ALARM SYSTEMS ARE PROVIDED FOR THE BUILDING, THE SMOKE DETECTORS SHALL BE SUPERVISED BY SUCH SYSTEMS AND SHALL ACTIVATE THE FIRE ALARM SYSTEMS.
- ALL MECHANICAL EQUIPMENT SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY.
- CONTRACTOR TO FILL OUT ACCEPTANCE FORMS AND SUBMIT AS REQUIRED BY THE CITY OF SAN DIEGO. FORMS CAN BE FOUND AT:
http://energy.ca.gov/title24/2013standards/nonresidential_manual.html

MECHANICAL SYMBOLS

SYMBOL & ABBREVIATION	DESCRIPTION
	SA/SUP SUPPLY AIR (RISE/DROP)
	RA/RET RETURN AIR DUCT (RISE/DROP)
	EA/EXH EXHAUST AIR DUCT (RISE/DROP)
	SD/SR SUPPLY DIFFUSER/SUPPLY REGISTER (ARROWHEAD REPRESENTS NUMBER OF THROW)
	RR/RG RETURN REGISTER/GRILLE
	ER/EG EXHAUST REGISTER/GRILLE
	RECTANGULAR DUCT ELBOW WITH TURNING VANES
	FLEXIBLE CONNECTION
	MANUAL VOLUME DAMPER
	FIRE/SMOKE DAMPER
	DUCT LINING (1" THICK UNLESS OTHERWISE NOTED)
	SMOKE DETECTOR
	DUCT TRANSITION (RECTANGULAR TO ROUND)
	FLEXIBLE DUCT (5'-0" MAXIMUM)
	TIMECLOCK
	T-STAT PROGRAMABLE THERMOSTAT AT 48" AFF
	SENSOR SENSOR AT 48" AFF
	CD CONDENSATE DRAIN
	DIA DIAMETER
	DL DOOR LOUVER
	UC DOOR UNDERCUT (3/4" MINIMUM)
	MECH FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.
	ELECTRICAL FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
	MECH/ELECTRICAL FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
	CO2 SENSOR CO2 SENSOR
	SD-1 AIR OUTLET/INLET DEVICE DESIGNATION(S-SUPPLY, R-RETURN, E-EXHAUST)
	100 AIR QUANTITY IN CFM
	AC MECHANICAL EQUIPMENT DESIGNATION DESIGNATED NUMBER
	A/C, AC AIR CONDITIONING
	BDD BACK DRAFT DAMPER
	CB CIRCUIT BREAKER
	CLG CEILING
	CONN. CONNECT/CONNECTION
	CONT. CONTINUATION
	CONT'R CONTRACTOR
	CFM CUBIC FEET PER MINUTE
	DET. DETAIL
	DISC. DISCONNECT
	DTR DOWN THRU ROOF
	E EXHAUST FAN
	(E) EXISTING
	E.C. ELECTRICAL CONTRACTOR
	GA. GAGE/GAUGE
	GC GENERAL CONTRACTOR
	HVAC HEATING, VENTILATING, AND AIR CONDITIONING
	MFR. MANUFACTURER
	MECH. MECHANICAL
	(N) NEW
	OA/OSA OUTSIDE AIR
	OBD OPPOSED BLADE DAMPER
	RS/RL REFRIGERANT SUCTION/REFRIGERANT LIQUID
	RTU ROOF TOP UNIT
	SF SUPPLY FAN
	S/S STAINLESS STEEL
	TYP. TYPICAL
	UON UNLESS OTHERWISE NOTED
	UTR UP THRU ROOF

GREEN BUILDING NOTES

- 5.410.4.3.1 THE HVAC SYSTEM SHALL BE BALANCED IN ACCORDANCE WITH APPROVED NATIONAL STANDARDS.
- 5.410.4.4 A FINAL REPORT SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PROVIDING SERVICES SHALL BE PROVIDED AFTER COMPLETION OF TESTING, ADJUSTING, AND BALANCING.
- 5.410.4.5 PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM.
- 5.410.4.5.1 INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY
- 5.504.3 AT THE TIME OF ROUGH INSTALLATION OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL START-UP OF THE HEATING AND COOLING EQUIPMENT, ALL DUCTS AND OTHER RELATED AIR DISTRIBUTION COMPONENT EQUIPMENT SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM.
- 5.504.4 ADHESIVES, SEALANTS, AND CAULKS USED IN THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS:
 1. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE OR SCAQMD RULE 116B VOC LIMITS, AS SHOWN IN TABLES 5.504.1 AND 5.504.4.2.
 2. AEROSOL ADHESIVES AND SMALLER UNIT SIZES OF ADHESIVES AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN ONE POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.0
- 5.504.5.3 IN MECHANICAL VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR OCCUPANCY THAT PROVIDES AT LEAST A MERV 8.
- 5.506.1 MECHANICAL VENTILATION SHALL BE CALCULATED PER SECTION 121 OF THE CALIFORNIA ENERGY CODE, TITLE 24, SECTION 6.
- 5.506.2 FOR BUILDINGS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA ENERGY COD, CCR, SECTION 121(C).
- 5.508.1 HVAC, REFRIGERATION, AND FIRE-SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CFCS OR HALON. CGCB 5.508

AIR DEVICE SCHEDULE

MARK	NECK SIZE	DIFFUSER FACE OR CEILING GRID SIZE (in)	CFM RANGE	TYPE				MOUNTING				DUTY				MANUFACTURER	MODEL NO.	REMARKS
				DIFFUSER	REGISTER	GRILLE	LOUVER	LAY-IN	SURFACE	DUCT	SUPPLY	RETURN	EXHAUST	TRANSFER				
SD-1	6"φ	12"x12"	0-100	X	-	-	-	X	-	X	-	-	-	-	TITUS	OMNI	1,2	
SD-2	8"φ	24"x12"	101-200	X	-	-	-	X	-	X	-	-	-	-	TITUS	OMNI	1,2	
SD-3	8"φ	24"x24"	0-200	X	-	-	-	X	-	X	-	-	-	-	TITUS	OMNI	1,2	
SD-4	10"φ	24"x24"	201-375	X	-	-	-	X	-	X	-	-	-	-	TITUS	OMNI	1,2	
SG-1	10"x6"	12"x8"	0-250	-	-	X	-	-	-	X	X	-	-	-	TITUS	S300FS	1,2,3	

- NOTES:
 1. TYPE AND CFM SHALL BE AS INDICATED ON DRAWINGS M2.1 AT EACH GRILLE OR DIFFUSER.
 2. SELECTION OF THE FINISHES OF AIR DISTRIBUTION DEVICES BY INTERIOR DESIGNER/ARCHITECT.
 3. OPPOSED BLADE DAMPER.

EXHAUST FAN SCHEDULE

EQUIP. TAG	SPACE SERVED	MANUFACTURER & MODEL	TYPE	DRIVE	AIR FLOW (cfm)	TOTAL STATIC PRESSURE	RPM (rpm)	MOTOR POWER (WATTS)	ELECTRICAL SERVICE (V/ph/Hz)	WEIGHT (lbs)	REMARKS
EF 1	TOILET ROOM	GREENHECK SP-B150	CEILING	DIRECT	100	0.35	1050	129	115/1/60	15	1,2,3,4
EF 2	TOILET ROOM	GREENHECK SP-B150	CEILING	DIRECT	100	0.35	1050	129	115/1/60	15	1,2,3,4

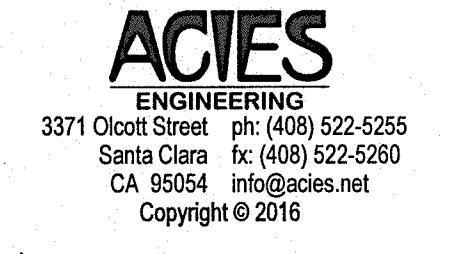
- NOTES:
 1. PROVIDE BACKDRAFT DAMPER.
 2. FLEXIBLE DUCT CONNECTION.
 3. FAN TO RUN CONTINUOUSLY DURING OPERATING HOURS.
 4. PROVIDE DISCONNECT SWITCH.

DRAWING SCHEDULE

SHEET	TITLE	ISSUE FOR PERMIT 12.15.16	FORM CHECK COMMENTS 03.03.17				
MO.1	MECHANICAL SCHEDULES AND NOTES	●					
MO.2	MECHANICAL SPECIFICATIONS	●					
MO.3	T-24 FORMS	●					
MO.4	T-24 FORMS	●					
M2.1	MECHANICAL PLAN	●	●				
M6.1	MECHANICAL DETAILS	●					



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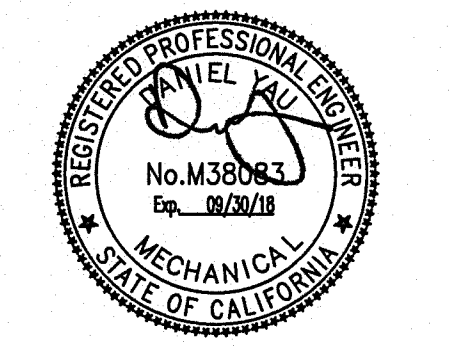
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DRAWING DESCRIPTION

MECHANICAL SCHEDULES AND NOTES

SCALE

M0.1

SECTION 1500 - HEATING, VENTILATION AND AIR CONDITIONING

1.00 - GENERAL

1.01 DESCRIPTION OF WORK

FURNISH AND INSTALL COMPLETE AND OPERATIVE HVAC SYSTEM AS SHOWN ON THE DRAWING AND SPECIFIED HEREIN. WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

- A. AC UNIT, SEE SCHEDULES.
- B. TOILET EXHAUST FAN.
- C. AUTOMATIC TEMPERATURE CONTROLS SYSTEM INCLUDING TIME CLOCK, BY-PASS TIMER, THERMOSTATS, CONTROL LOW-VOLTAGE INTERLOCK WIRING AND OTHER ASSOCIATED DEVICES.
- D. DUCTWORK AND AIR DISTRIBUTION SYSTEMS.
- E. HANGERS AND SUPPORTS FOR DUCTWORK, PIPING AND HVAC EQUIPMENT
- F. FLASHING OF DUCT AND PIPE PENETRATIONS THROUGH EXTERIOR OPENINGS.
- G. ROOF CURB AND ROOF SLEEPER SUPPORTS.
- H. DUCT THERMAL AND ACOUSTIC INSULATION.
- I. LICENSE, PERMITS AND ASSOCIATED FEES.
- J. DEMOLITION AND REMOVAL OF EXISTING HVAC EQUIPMENT AS REQUIRED.
- K. SEISMIC RESTRAINTS AND BRACING.

1.02 RELATED WORK INCLUDED UNDER OTHER SECTIONS

- A. FIRE PROTECTION, SECTION 15300.
- B. PLUMBING, SECTION 15400.
- C. LINE VOLTAGE AND POWER WIRING, ELECTRICAL SECTION 16000.

1.03 EXAMINATION OF SITE

VISIT SITE BEFORE SUBMITTING BID AND CHECK LOCATION OF ALL EXISTING CONDITIONS WHICH WILL AFFECT THIS WORK, VERIFY DIMENSIONS AND LOCATIONS SHOWN ON DRAWINGS AND COVER ALL COSTS. CONTRACTOR SHALL ASSUME REASONABLE VARIATIONS OR MINOR OMISSIONS AND SHALL COMPLETE PROPOSED WORK WITHOUT ADDITIONAL COST. FAILURE TO VISIT SITE WILL NOT LESSEN RESPONSIBILITY OR ENTITLE ADDITIONAL COMPENSATION FOR WORK NOT INCLUDED IN PROPOSAL.

1.04 DRAWINGS

THE ACCOMPANYING DRAWINGS SHALL BE CONSIDERED PART OF THESE SPECIFICATIONS. WORK AND MATERIALS SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS AND VICE VERSA SHALL BE EXECUTED AS IF SPECIFICALLY MENTIONED OR SHOWN IN BOTH. THE DRAWINGS SHALL BE CONSIDERED AS SCHEMATIC IN NATURE AND MINOR MODIFICATIONS OF THE WORK TO COMPLY WITH THE STRUCTURE AS FOUND SHALL BE MADE.

1.05 RULES AND REGULATIONS

- A. ALL WORK AND MATERIAL SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHAL AND OTHER APPLICABLE STATE AND LOCAL RULES AND REGULATIONS. NOTHING IN THESE DRAWINGS OR SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.
- B. FURNISH WITHOUT ANY EXTRA CHARGE ANY ADDITIONAL MATERIAL AND LABOR WHEN REQUIRED TO COMPLY WITH THESE LAWS, ORDINANCES AND CODES REGARDLESS OF WHETHER SHOWN OR MENTIONED IN THESE SPECIFICATIONS OF DRAWINGS.

1.06 SUBMITTALS

- A. SUBMIT FOR REVIEW TO THE OWNER A COMPLETE AND ALL-INCLUSIVE LIST OF EQUIPMENT AND MATERIALS PROPOSED FOR USE (1) HARD COPY & (1) SOFT COPY ACCOMPANIED BY MANUFACTURER'S DATA SHEETS. DATA SHALL BE FORWARDED IN A SINGLE PACKAGE WITHIN 15 DAYS AFTER AWARD OF CONTRACT. SUBMIT PORTABLE DOCUMENT FORMAT(PDF) AND ONE REPRODUCIBLE SHOP DRAWING SHOWING PROPOSED DUCTWORK INSTALLATION. INCLUDE SIZES, LOCATIONS AND OTHER REQUIRED INFORMATION TO COORDINATE INSTALLATION WITH OTHER TRADES.
- B. WITHIN 5 DAYS AFTER AWARD OF CONTRACT, SUBMIT PDF & A COPY OF A LETTER STATING ANY MATERIALS THAT CONTRACTOR WISHES TO SUBSTITUTE, TO THE OWNER FOR APPROVAL. INCLUDE SUCH INFORMATION AS MANUFACTURER'S NAME, TYPE OF MATERIAL, CERTIFIED RATINGS, OVERALL APPEARANCE, AND NECESSARY INFORMATION TO EXPLAIN FUNCTION AND OPERATION OF MATERIAL. ALL PROPOSED SUBSTITUTIONS SHALL BE EQUAL IN QUALITY, DESIGN, UTILITY AND APPEARANCE TO MATERIAL, EQUIPMENT OR METHOD SPECIFIED.

1.07 AS-BUILT DRAWINGS

A SET OF HVAC PRINTS OR ACCESS TO A PRINT SHOP/PDfs WILL BE FURNISHED TO THE CONTRACTOR ON WHICH HE/SHE SHALL INDICATE THE INSTALLATION "AS-BUILT" AS THE WORK PROGRESSES. UPON COMPLETION OF THE WORK, A SET OR REPRODUCIBLE DRAWINGS SHALL BE OBTAINED FROM THE OWNER AT COST, AND ALL CHANGES AS NOTED ON THE RECORD SET OF PRINTS SHALL BE INCORPORATED THEREON. THIS SET OF REPRODUCIBLES, ALONG WITH ONE SET OF PDfs, SHALL BE DELIVERED TO THE OWNER UPON COMPLETION AND BEFORE FINAL ACCEPTANCE OF THE PROJECT.

THE CONTRACTOR SHALL LEAVE THE ENTIRE INSTALLATION IN COMPLETE WORKING ORDER FREE FROM ANY DEFECTIVE MATERIAL, WORKMANSHIP OR FINISH. HE SHALL GUARANTEE TO REPAIR OR REPLACE, WITHOUT CHARGE, DEFECTS DUE TO FAULTY WORKMANSHIP OR MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF FILING OF THE NOTICE OF COMPLETION.

1.09 OPERATION MANUALS AND OWNER INSTRUCTIONS

- A. PROVIDE COMPLETE OPERATION AND MAINTENANCE MANUALS COVERING ALL MECHANICAL SYSTEMS AND EQUIPMENT THAT HAVE BEEN INSTALLED. A HARD COPY & SOFT COPY OF THE MANUAL SHALL BE PROVIDED TO AN OWNER.
- B. PROVIDE INSTRUCTIONS TO STORE PERSONEL AS TO OPERATION OF ALL HVAC EQUIPMENT AND THERMOSTATS. INSTRUCTION PERIOD TO COMMENCE FOR MINIMUM OF (2) HOURS AND SHALL BE SCHEDULED AT OWNER'S CONVENIENCE. ALSO, PROVIDE STORE MANAGER WITH OPERATION MANUAL.

1.10 CUTTING AND PATCHING

- A. THE CONTRACTOR SHALL DO ALL CUTTING, DRILLING AND PATCHING WHICH MAY BE REQUIRED FOR THE INSTALLATION OF THE WORK UNDER THIS SECTION OF THE SPECIFICATIONS.
- B. PATCHING SHALL BE OF THE SAME WORKMANSHIP, MATERIAL AND FINISH AND SHALL MATCH ACCURATELY ALL SURROUNDING CONSTRUCTION IN A MANNER SATISFACTORY TO THE OWNER. NO CUTTING OF THE STRUCTURE SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNER.

2.00 - PRODUCTS

2.01 DUCTWORK:

2.01.1 METAL AIR DUCTS

- A. SHEET METAL RECTANGULAR AND ROUND DUCTWORK, PLENUMS, AND CASINGS SHALL BE FABRICATED IN STRICT ACCORDANCE WITH LATEST EDITION OF SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" BASED ON INDICATED STATIC-PRESSURE CLASS.
- B. MATERIALS FOR DUCTWORK SHALL BE HOT DIPPED GALVANIZED (G60) STEEL OF GAUGES SHOWN IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS. ALL DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PRESSURE CLASSIFICATION SCHEDULES OF NO LESS THAN CLASS +/- 2" W.G., AND SHALL BE SEALED TO THE DUCT SEALING REQUIREMENTS OF CLASS "C" MINIMUM.
- C. SELECT TRANSVERSE JOINT AND LONGITUDINAL SEAM TYPES, FIGURES 1-4 AND 1-5 RESPECTIVELY, AND FABRICATE RECTANGULAR DUCTWORK ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE".
- D. SELECT ELBOWS, TRANSITIONS, OFFSETS, BRANCH CONNECTIONS, TEES AND LATERALS, AND OTHER FITTING TYPES, AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE".
- E. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE", CHAPTER 4, "HANGERS AND SUPPORTS" FOR UPPER AND LOWER ATTACHMENTS, FIGURES 4.2 AND 4.4 RESPECTIVELY. REFER TO TABLES 4.1 AND 4.2 FOR RECTANGULAR AND ROUND MINIMUM HANGER SIZE AND SPACING.

- F. SHEET METAL ROUND DUCT SHALL BE UNITED MCGILL, SEMCO INC., LINX IND., OR EQUAL. SPIRAL SEAM DUCTS WITH GASKET "UNISEAL" CONNECTION FOR EXPOSED INSTALLATIONS, AND SPIRAL OR LONGITUDINAL SEAM WITH BEADED SLEEVE JOINT CONNECTIONS FOR CONCEALED INSTALLATIONS. FITTINGS SHALL BE "UNIFORM" MACHINE FORMED WITH CONTINUOUS WELDS.
- G. SUPPLY AND RETURN AIR DUCTWORK SHALL BE EXTERNALLY INSULATED WITH 1 1/2" THICK, 1 1/2 PCF DENSITY OR AS REQUIRED BY LOCAL ENERGY CODE. INSULATION SHALL BE OWENS-CORNING SOFT DUCT WRAP OR EQUAL CONSISTING OF A BLANKET OF GLASS FIBER INSULATION FACTORY-LAMINATED TO FRK VAPOR RETARDER FACING. INSULATION SHALL MEET THE REQUIREMENTS OF NFPA 90A AND 90 B AND OTHER MECHANICAL ENERGY CODES.
- H. ACOUSTICAL FLEXIBLE DUCT SHALL BE UL 181 LISTED, CLASS 1, 2-PLY VINYL FILM SUPPORTED BY HELICALLY WOUND SPRING-STEEL WIRE, FIBROUS-GLASS INSULATION TO MEET LOCAL CODE R-VALUES, AND FINISHED WITH A POLYETHYLENE VAPOR-BARRIER FILM. INTERIOR VINYL FILM SHALL BE PERFORATED FOR SOUND ATTENUATION. FLEXIBLE DUCT SHALL BE RATED TO +10/-1" W.G., 4000 FPM, AND -20 TO 210 DEG. F TEMPERATURE RANGE. FLEXIBLE DUCT CLAMP CONNECTORS SHALL BE STAINLESS-STEEL BAND WITH CADMIUM HEX SCREW TO TIGHTEN BAND WITH A WORM-GEAR ACTION. FLEXIBLE DUCTS SHALL BE ALLOWED ONLY AT THE FINAL CONNECTION TO AIR OUTLETS/INLETS AT A LENGTH OF 5 FEET MAXIMUM.

2.01.2 FACTORY-MADE AIR DUCTS

- A. FACTORY-MADE AIR DUCTS SHALL BE APPROVED FOR THE USE INTENDED. EACH SECTION OF A FACTORY-MADE AIR DUCT SHALL BE IDENTIFIED BY THE MANUFACTURER WITH A LABEL INDICATING CLASS DESIGNATION. THESE DUCTS SHALL BE LISTED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTING.
- B. INSULATED ALUMINUM FLEXIBLE DUCT SHALL BE UL 181 LISTED, CLASS 0, INTERLOCKING SPIRAL OF ALUMINUM FOIL, FIBROUS-GLASS INSULATION SHALL MEET LOCAL CODE R-VALUE, AND SHALL BE FINISHED WITH A POLYETHYLENE VAPOR-BARRIER FILM. ALUMINUM FLEXIBLE DUCT SHALL BE RATED TO +/- 8" W.G., 5000 FPM VELOCITY, AND -20 TO 250 DEG. F TEMPERATURE RANGE.
- C. INSULATED WIRE FLEXIBLE DUCT SHALL BE UL 181 LISTED, CLASS 1, 2-PLY VINYL FILM SUPPORTED BY HELICALLY WOUND SPRING-STEEL WIRE, FIBROUS-GLASS INSULATION SHALL MEET LOCAL CODE R-VALUES, AND SHALL BE FINISHED WITH A POLYETHYLENE VAPOR-BARRIER FILM. FLEXIBLE DUCTS SHALL BE RATED TO +10/-1" W.G., 4000 FPM VELOCITY, AND -20 TO 210 DEG. F TEMPERATURE RANGE. FLEXIBLE DUCT CLAMP CONNECTORS SHALL BE STAINLESS-STEEL BAND WITH CADMIUM HEX SCREW TO TIGHTEN BAND WITH A WORM-GEAR ACTION.
- D. INSTALLATION OF FACTORY-MADE AIR DUCT JOINTS AND ATTACHMENTS SHALL BE IN STRICT ACCORDANCE WITH LATEST EDITION OF SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE".
- E. SELECT TRANSITIONS, BRANCH CONNECTIONS, TEES AND LATERALS, AND OTHER FITTING TYPES, AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" BASED ON INDICATED STATIC-PRESSURE CLASS.
- F. SELECT SIZING PRACTICES IN ACCORDANCE TO THE AIR CONDITIONING CONTRACTORS OF AMERICA (ACCA), MANUALS D & Q. IN PRACTICE LIMIT VELOCITIES TO 700 FPM MAX. FOR SUPPLY AND RETURN AIR DUCTS, AND INCREASE DUCT SIZES BY ONE SIZE (EVEN NUMBER) LARGER THAN METAL AIR DUCTS.
- G. FACTORY-MADE DUCTS SHALL NOT BE USED FOR VERTICAL RISERS IN AIR DISTRIBUTION DUCT SYSTEMS. SUCH A DUCT SHALL NOT PENETRATE CONSTRUCTION WHERE FIRE DAMPERS ARE REQUIRED.

2.02 PIPING

- A. CHILLED WATER, HOT WATER AND CONDENSER WATER SERVICE PIPING SHALL BE BLACK STEEL SCHEDULE 40, PER ASTM A-120 WITH PLAIN WELDED JOINTS AND SEAMLESS SCHEDULE 40 FITTINGS GALVANIZED FOR EXTERIOR LOCATIONS.
- B. ALL STEEL PIPING SHALL HAVE THREADED CONNECTIONS AND ALL COPPER PIPING SHALL HAVE SOLDERED JOINTS OF 300 LB. PRESSURE RATING.
- C. PIPE HANGERS SHALL BE SUPERSTRUT OR KIN-LINE, SPACED @ 6 FT. O.C., WITH CLEWS OR TRAPEZE TYPE HANGERS. SECURE PIPE HANGER RODS TO STRUCTURE PER UPC PROVIDE ISOLATION SHIELDS WHERE PIPE RESTS ON HANGER ASSEMBLY.
- D. INSULATE ALL WATER PIPING WITH DENSITY FIBROUS GLASS INSULATION WITH WHITE KRAFT BONDED TO ALUMINUM FOIL THICKNESS AND R VALUE AS PER TABLE 120.3-A OF DEC STANDARDS. FITTINGS SHALL BE INSULATED WITH PREMOILED FIBERGLASS INSULATION. THE INTEGRITY OF THE VAPOR BARRIER SHALL BE MAINTAINED THROUGHOUT THE INSTALLATION. TAPE AND SEAL ALL JOINTS WITH VAPOR BARRIER TAPE.
- E. ALL CONNECTIONS BETWEEN DISSIMILAR METALS SHALL UTILIZE DIELECTRIC INSULATING FITTINGS, COUPLINGS AND UNIONS.
- F. ALL SHUT-OFF VALVES AND DRAIN VALVES SHALL BE BALL-COCK TYPE, 300 LB. RATING WITH PLUGS INSTALLED ON DRAIN VALVES. NIBCO OR EQUAL.

2.03 DUCTWORK ACCESSORIES

- A. DAMPER OPERATORS
 - 1. DUCTS WITH EXTERNAL INSULATION: VENTLOCK #637, DURADYNE, YOUNG, OR APPROVED EQUAL.
 - 2. DUCTS WITH INTERNAL INSULATION AND/OR NO INSULATION: VENTLOCK #635, DURADYNE, YOUNG, OR APPROVED EQUAL.
- B. FLEXIBLE CONNECTIONS: VENTFIBRICS "VENTGLAS", DURADYNE, OR APPROVED EQUAL, U.L. 181 APPROVED WITH METAL ATTACHMENT.
- C. AIR EXTRACTOR: TITUS AG-225, KRUEGER EX-88C, OR APPROVED EQUAL.
- D. TURNING VANES SHALL COMPLY WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS ALL RECTANGULAR DUCT WITH MITERED ELBOWS SHALL BE FITTED WITH TURNING VANES.
- E. SPIN-IN-FITTINGS ARE NOT ALLOWED. USE UNITED MCGILL BELLMOUTH FITTING FOR ROUND DUCT TAPS.
- F. SUPPORT DUCTWORK ACCORDING TO THE SMACNA DUCT CONSTRUCTION STANDARDS AND THE DRAWINGS.
- G. ACCESS DOORS IN DUCTWORK: SHALL BE VENTLOCK, DUCTMATE OR APPROVED EQUAL, STAMPED OR FORMED INSULATED ACCESS DOORS COMPLETE WITH ALL HARDWARE AND SEALANT.
- H. JOINT SEALING:
 - 1. THE FOLLOWING ITEMS ARE TO BE SEALED WITH HARDCAST DT TAPE AND ADHESIVE:
 - A. LONGITUDINAL AND TRANSVERSE SEAMS OF RECTANGULAR DUCTWORK.
 - B. ALL ROUND FITTINGS AND JOINT CONNECTORS USE FTA-20 FOR INDOOR USE AND RTA-20 FOR OUTDOOR USE.
 - 2. FLEXIBLE DUCT AT DIFFUSERS SHALL USE INTEGRAL STAINLESS STEEL DRAW BAND AND PRESSURE SENSITIVE TAPE, HARDCAST P-301 OR EQUAL.
- I. BRACINGS, HANGERS, NUTS, ETC. SHALL BE GALVANIZED.
- J. CURVED ELBOWS SHALL HAVE CENTERLINE RADIUS EQUAL TO ONE AND ONE-HALF TIMES DUCT WIDTH IN PLANE OF TURN.
- K. SQUARE ELBOWS SHALL HAVE TURNING VANES. MITER ELBOWS (NOT SQUARE) SHALL HAVE SPLITTER VANES 3 INCHES O.C.
- L. VOLUME DAMPERS SHALL BE CONSTRUCTED TO SMACNA STANDARDS AND SHALL BE YOUNG REGULATOR MODEL 4040 FOR ROUND DUCTS AND SERIES 820 FOR RECTANGULAR DUCTS

2.04 AIR DEVICES

DIFFUSERS, GRILLES AND REGISTERS: TITUS, KRUEGER, METALMARE, OR THERMAFUSER WHERE SHOWN. FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR. PROVIDE VOLUME DAMPERS AND PAINT INTERIOR FLAT BLACK. SIZE, FINISH, FRAME TYPES AND ACCESSORIES AS SHOWN ON THE DRAWINGS.

2.05 FIRE DAMPERS & SMOKE FIRE DAMPERS

- A. PROVIDE FIRE DAMPERS WITH ACCESS DOORS INSTALLED WHERE REQUIRED BY ALL LOCAL CODES. IN GENERAL, FIRE DAMPERS ARE REQUIRED WHERE DUCTS Pierce FIRE-RATED FLOORS, CEILINGS, WALLS AND SHAFTS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL FIRE RATED ASSEMBLIES.
- B. FIRE DAMPERS SHALL BE EQUAL TO AIR BALANCE INC., MODEL NO. 119BLX, OR 119CL, OR AS APPROVED, FOR RECTANGULAR AND ROUND DUCTS. DAMPERS SHALL MEET THE REQUIREMENTS FOR NFPA BULLETIN NO. 90A, AND SHALL BE TESTED IN ACCORDANCE WITH UL 555 TEST CRITERIA, FIRE DAMPERS SHALL BE LABELED AND LISTED BY UL.
- C. IF APPLICABLE, FIRE DAMPERS SHALL COMPLY WITH UL-555-2006, 7TH EDITION AND SHALL BE MARKED "FOR USE IN DYNAMIC SYSTEMS" OR "FOR USE IN STATIC SYSTEMS" AS REQUIRED.
- D. COMBINATION SMOKE FIRE DAMPERS SHALL BE INSTALLED WHERE DUCTWORK PENETRATES FIRE RATED WALLS SURROUNDING AN EXIT CORRIDOR.

2.06 AIR CONDITIONING EQUIPMENT

- A. FURNISH AND INSTALL AIR CONDITIONING EQUIPMENT AS SPECIFIED ON THE DRAWINGS AND IN EQUIPMENT SCHEDULES.

2.07 INSULATION (INSTALLED PER MANUFACTURER'S RECOMMENDATIONS)

- A. HEATING AND COOLING DUCTWORK LOCATED IN INTERIOR LOCATIONS
 - 1. INSULATE WITH OWENS-CORNING FIBERGLASS ALL SERVICE FACED DUCT WRAP TYPE 150 WITH FACTORY APPLIED FLAME RETARDANT FOIL REINFORCED KRAFT FACING (FRK-25 UL LABELS), OR APPROVED EQUAL. INSTALLED THERMAL RESISTANCE SHALL BE A MINIMUM OF R-8 FOR CA CLIMATE ZONES 11, 14-16 AND R-6 FOR ALL OTHER ZONES.
- B. ACOUSTICAL DUCTWORK AND PLENUM AND CASING LINER
 - 1. PROVIDE INTERNALLY LINED DUCTWORK WHERE INDICATED ON DRAWINGS. ACOUSTICAL DUCT LINER SHALL BE TRALITE DUCT LINER, OR EQUAL, MATTE FACE, SUITABLE FOR VELOCITIES FROM 1500 TO 4000 FPM, IN COMPLIANCE W/ UL723 AND UL181. SECURE LINER TO DUCTWORK WITH ADHESIVE AND MECHANICAL FASTENERS PER SMACNA DUCT LINER APPLICATION STANDARD.
 - 2. WHERE INTERNAL INSULATION IS APPLIED, DUCT AND PLENUM SIZES AS SHOWN ON THE DRAWINGS SHALL BE INSIDE CLEAR DIMENSIONS.
 - 3. FIBERGLAS DUCT AND PLENUM INSULATION ARE TO BE APPLIED ONLY WITH MANUFACTURER'S APPROVED ADHESIVES, MASTICS AND MECHANICAL FASTENING DEVICES.
- C. HEATING AND COOLING DUCTWORK LOCATED ON THE ROOF
 - 1. INSULATE WITH RIGID BOARD INSULATION WITH A MINIMUM R VALUE OF R-6 OR R-8, AS REQUIRED PER CODED. COAT EXTERIOR OF INSULATION WITH PERFORATED SHEET METAL LINER. SUITABLE FOR VELOCITIES FROM 1500 TO 4000 FPM, IN COMPLIANCE W/ UL723 AND UL181.
 - 2. WHERE INTERNAL INSULATION IS APPLIED, DUCT AND PLENUM SIZES AS SHOWN ON THE DRAWINGS SHALL BE INSIDE CLEAR DIMENSIONS.
- D. SOFT FLEXIBLE DUCT.
 - 1. R-8 FOR CA CLIMATE ZONES 11, 14-16 AND R-6 FOR ALL OTHERS CALIFORNIA ZONES

E. INSULATION.

- 1. FOIL FACED FIBERGLASS, OWENS CORNING TYPE 75 OR EQUAL, FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPMENT RATING OF NOT MORE THAN 50 UNLESS SHOWN OTHERWISE, ALL INSULATION SHALL BE EXTERNAL TO DUCTWORK.
- F. DUCT LINER.
 - 1. FOR EXTERIOR DUCTS: FIBERGLASS WITH FIRE RATED BLACK COATING, OWENS CORNING AEROFLEX TYPE 150.
 - 2. FOR OTHER LOCATIONS SHOWN ON DRAWINGS: AEROFLEX TYPE 150, AS ABOVE, EXCEPT 1 INCH THICK. FLAME SPREAD RATING OF NOT MORE THAN 25 AND SMOKE DEVELOPED RATING OF NOT MORE THAN 50.
 - 3. AN EPA-APPROVED BIOCIDES IN THE AIRSTREAM COATING ENABLES OWENS-CORNING DUCT LINERS TO RESIST FUNGAL OR BACTERIAL GROWTH WHEN SUBJECTED TO MICROBIAL ATTACK DESCRIBED IN ASTM C 665 AND STANDARD PRACTICES ASTM G 21 (FUNGUS TEST) AND G 22 (BACTERIA TEST).

2.08 TEMPERATURE CONTROL SYSTEM

- A. ALL UNITARY HEATING OR COOLING SYSTEMS, INCLUDING HEAT PUMPS, NOT CONTROLLED BY A CENTRAL ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) SHALL HAVE A SETBACK THERMOSTAT.
 - 1. SETBACK CAPABILITIES. ALL THERMOSTATS SHALL HAVE A CLOCK MECHANISM THAT ALLOWS THE BUILDING OCCUPANT TO PROGRAM THE TEMPERATURE SETPOINTS FOR AT LEAST FOUR PERIODS WITHIN 24 HOURS.
 - 2. HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS SHALL HAVE CONTROLS:
 - 1. THAT PREVENT SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE; AND
 - 2. IN WHICH THE CUT-ON TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-ON TEMPERATURE FOR SUPPLEMENTARY HEATING, AND THE CUT-OFF TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-OFF TEMPERATURE FOR SUPPLEMENTARY HEATING.
- C. ALL UNITARY SINGLE ZONE, AIR CONDITIONERS, HEAT PUMPS, AND FURNACES, THE THERMOSTAT MUST COMPLY WITH THE REQUIREMENTS CALIFORNIA ENERGY COMMISSION, T-24, PART 6, REFERENCE JOINT APPENDIX JAS, ALSO KNOWN AS THE OCCUPANT CONTROLLED SMART THERMOSTATS, WHICH ARE CAPABLE OF RECEIVING DEMAND RESPONSE SIGNALS IN THE EVENT OF GRID CONGESTION AND SHORTAGES DURING HIGH ELECTRICAL DEMAND PERIODS.
- D. CONTRACTOR SHALL POST IN THE OFFICE TYPEWRITTEN INSTRUCTIONS ON OPERATION OF ALL CONTROLS.

2.09 DX PIPING

REFRIGERANT PIPING SHALL BE TYPE L HARD COPPER ACR TUBING WITH WROUGHT COPPER, SOLDER JOINT FITTINGS, SILVER SOLDERED. ALL REFRIGERANT PIPING SHALL BE INSULATED EXCEPT WHERE THE UNINSULATED AREA DOES NOT RESULT IN AN ENERGY LOSS TO THE SYSTEM OR AN ADVERSE EFFECT TO THE SYSTEM FROM STRAY HEAT. PIPE INSULATION SHALL BE ARMSTRONG ARMAFLEX, OWENS-CORNING FLEXIBLE TUBING, RUBICON OR APPROVED EQUAL. THICKNESS SHALL BE 3/4" ON INTERIOR PIPING AND 1" ON EXTERIOR PIPING. INSULATED PIPING EXPOSED TO WEATHER SHALL BE PROVIDED WITH ARMSTRONG ARMAFLEX FINISH AND ALL-WEATHER SERVICE JACKET FOR OUTDOOR APPLICATIONS VALVES, STRAINERS, SIGHT GLASS, FILTER DRIERS, OIL SEPARATORS, ETC. SHALL BE MANUFACTURED BY SPORLAN VALVE CO.

2.10 SEISMIC RESTRAINTS AND BRACING

- A. ALL HVAC EQUIPMENT, DUCTWORK, PIPING AND WIRING CONDUITS SHALL BE INSTALLED TO MEET THE LATERAL BRACING REQUIREMENTS FOR THE APPLICABLE SEISMIC ZONE. PROVIDE SEISMIC RESTRAINTS IN ACCORDANCE WITH SEISMIC HAZARD LEVEL (SHL) A OF THE "SEISMIC RESTRAINT MANUAL: GUIDELINES FOR MECHANICAL SYSTEMS" DATED 2009, AS PUBLISHED BY S.M.A.C.I.N.A. AND ALSO IN ACCORDANCE WITH APPLICABLE LOCAL BUILDING CODES.
- B. ALL ROOFTOP EQUIPMENT SHALL HAVE PROPER ANCHORING AND RESTRAINT SYSTEMS, AND SHALL BE SECURED TO A ROOF CURB, EQUIPMENT PAD OR OTHER STRUCTURAL MEMBER TO PREVENT LATERAL, VERTICAL OR OVERTURNING MOVEMENT WITHOUT SACRIFICING ANY RESILIENT VIBRATION ISOLATION REQUIREMENTS.

3.00 INSTALLATION AND EXECUTION

3.01 INSTALLATION REQUIREMENTS

- A. DUCTWORK:
 - 1. DUCT BRANCHES SHALL BE FITTED WITH VOLUME OR SPLITTER DAMPER AND WHERE REQUIRED, EXTRACTION DAMPER. ALL ACCESSIBLE VOLUME CONTROLS SHALL HAVE LOCKING QUADRANTS. ALL INACCESSIBLE CONTROLS (DAMPERS, ETC.) SHALL BE PROVIDED WITH PERMANENT EXTENSIONS TO ACCESSIBLE SPACES. BRANCH VOLUME CONTROLS ARE IN ADDITION TO VOLUME CONTROLS AT THE REGISTERS AND DIFFUSERS.

2. AIR INLETS, OUTLETS SHALL BE PROPERLY SET IN PLACE. REGISTERS AND GRILLES SHALL BE TIGHTLY SEALED.

- 3. TRANSITIONS IN SIZE OF DUCTS SHALL BE MADE BY UNIFORMLY TAPERING SECTIONS HAVING 1 INCH INCREASE IN WIDTH FOR EACH 7 INCHES OF RUN UNLESS CONSTRUCTION LIMITATIONS REQUIRE A MORE ABRUPT TRANSITION.
- 4. DIFFUSERS, GRILLES AND REGISTERS: EACH REGISTER AND DIFFUSER SHALL BE EQUIPPED WITH A VOLUME DAMPER OR AIR EXTRACTOR. PAINT INTERIOR SURFACE OF ALL UNITS FLAT BLACK. FACE AND TRIM OF ALL UNITS SHALL BE FINISHED. SIZE, FINISH, FRAMES, ACCESSORIES, CAPACITY AND PATTERN AS SHOWN ON DRAWINGS.
- 5. CONTRACTOR SHALL PROVIDE MANUAL VOLUME DAMPERS AT ALL BRANCH DUCTWORK IN SUPPLY AIR, RETURN AIR AND OUTSIDE AIR SYSTEMS (WHETHER SHOWN ON PLANS OR NOT) WHERE REQUIRED FOR AIR BALANCING OF HVAC SYSTEMS.

3.02 TESTING AND BALANCING (SEE ALSO, SECTION 15990 AT RIGHT.)

- BALANCING OF THE AIR CONDITIONING SYSTEM WILL BE PERFORMED BY AN INDEPENDENT TEST AND BALANCING AGENCY. THE MECHANICAL CONTRACTOR SHALL COOPERATE WITH THE SELECTED TEST AND BALANCE AGENCY IN THE FOLLOWING MANNER:
 - A. PROVIDE SUFFICIENT TIME BEFORE FINAL COMPLETION DATE SO THAT TEST AND BALANCING CAN BE ACCOMPLISHED.
 - B. PROVIDE IMMEDIATE LABOR AND TOOLS TO MAKE CORRECTIONS WHEN REQUIRED WITHOUT UNDUE DELAY. INSTALL BALANCING DAMPERS AS REQUIRED BY TEST AND BALANCE AGENCY.
 - C. THE CONTRACTOR SHALL PUT ALL HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS AND EQUIPMENT INTO FULL OPERATION AND SHALL CONTINUE THE OPERATION OF SAME DURING EACH WORKING DAY OF TESTING AND BALANCING.
 - D. TESTING AND BALANCING AGENCY SHALL BE KEPT INFORMED OF ANY MAJOR CHANGES MADE TO SYSTEM DURING CONSTRUCTION AND SHALL BE PROVIDED WITH COMPLETE AS-BUILT DRAWINGS.
 - E. THE MECHANICAL CONTRACTOR SHALL INCLUDE THE COSTS OF DAMPERS, PULLEY AND BELT CHANGES IN HIS CONTRACT.

3.04 SPECIAL CONDITIONS

- A. AIR CONDITIONING EQUIPMENT ON ROOF: THE EXACT EQUIPMENT LOCATIONS ON THE ROOF SHALL BE FIELD VERIFIED BY CONTRACTOR. THE INTENT OF THE DESIGN IS TO UTILIZE A MANUFACTURER SUPPLIED ROOF CURB THAT WOULD SUPPORT THE NEW EQUIPMENT. CONTRACTOR SHALL CONFORM TO MANUFACTURER'S PUBLISHED INSTALLATION AND ASSEMBLY GUIDE. INSTALLATION SHALL CONFORM TO STRUCTURAL ENGINEER'S REQUIREMENTS.
- B. STRUCTURAL SUPPORT FOR THE AIR CONDITIONING UNIT: THE OWNER SHALL ENGAGE A LICENSED STRUCTURAL ENGINEER TO DESIGN THE STRUCTURAL SUPPORT FOR THE AIR CONDITIONING UNIT ON THE ROOF. THE MECHANICAL CONTRACTOR IS TO COORDINATE ALL WORK WITH THE STRUCTURAL ENGINEER.
- C. ALL REQUIRED PENETRATIONS OF EXISTING ROOFING SYSTEM SHALL BE MADE BY LANDLORD'S ROOFING CONTRACTOR AT OWNER'S EXPENSE AFTER NOTIFICATION TO LANDLORD FOR APPROVAL.

SECTION 15990 - TESTING, ADJUSTING AND BALANCING

1.00 - GENERAL

1.01 DESCRIPTION

THE TESTING AND BALANCING WORK WILL BE PERFORMED UNDER A SEPARATE CONTRACT FROM THE HVAC WORK. THE WORK DESCRIBED IN THIS SECTION SHALL BE PERFORMED BY AN INDEPENDENT TEST AND BALANCE AGENCY, SPECIALIZING IN TESTING AND BALANCING OF HVAC SYSTEMS AND A NUMBER OF THE AABC OR APPROVED EQUAL ORGANIZATION.

1.02 SCOPE OF WORK

- A. HVAC SYSTEM TEST AND BALANCE IN ACCORDANCE WITH PROCEDURES ESTABLISHED BY AABC OR NEBB.
- B. MEASUREMENT OF FINAL OPERATING CONDITIONS OF HVAC EQUIPMENT.
- C. TEST AND BALANCE REPORTS.
- D. EACH PIECE OF AIR CONDITIONING AND HEATING EQUIPMENT AND THE AIR DISTRIBUTIONS SYSTEMS SHALL BE TESTED AND ADJUSTED TO INSURE PROPER FUNCTIONING OF ALL CONTROL. PROPER DISTRIBUTION OF AIR, MAINTENANCE OF TEMPERATURE, ELIMINATION OF DRAFTS, NOISE AND VIBRATION, AND LEFT IN FIRST CLASS OPERATING CONDITION. THE AIR SYSTEM SHALL BE READJUSTED IF REQUIRED FOR COMFORT OF EACH ROOM.
- E. THE MECHANICAL CONTRACTOR WILL MAKE ANY CHANGES IN THE PULLEYS, BELTS, DAMPERS, VANES, BAFFLES AND THE LIKE REQUIRED FOR CORRECT BALANCE OF SYSTEM AS RECOMMENDED BY T&B AGENCY AND TO THE SATISFACTION OF THE OWNER.

1.03 SUBMITTALS

- A. PROVIDE (1) HARD COPY & (1) SOFT COPY OF TEST AND BALANCE REPORT TO THE OWNER FOR REVIEW AND APPROVAL IN SOFT COVER, LETTER SIZE, 3-RING BINDER MANUAL COMPLETE WITH INDEX PAGE AND INDEXING TABS. THE REPORT SHALL INCLUDE A SET OF REDUCED DRAWINGS WITH AIR OUTLETS AND EQUIPMENT IDENTIFIED TO CORRESPOND WITH DATA SHEETS AND INDICATING THERMOSTAT LOCATIONS.
- B. THE TEST AND BALANCE REPORT SHALL INCLUDE, AS A MINIMUM, BUT NOT BE LIMITED TO:
 - 1. EACH EQUIPMENT SHALL BE IDENTIFIED BY EQUIPMENT SERVICE NUMBER, MANUFACTURER, MODEL NUMBER, AND SERIAL NUMBER, MOTOR HORSEPOWER, MOTOR NAMEPLATE VOLTAGE, MOTOR RPM, ACTUAL AND DESIGN STATIC PRESSURE, ACTUAL OUTLET VELOCITY, ACTUAL CFM, DESIGN CFM.
 - 2. EACH COIL SHALL BE IDENTIFIED BY EQUIPMENT SERVICE NUMBER, MANUFACTURER, MODEL NUMBER AND SIZE, NUMBER OF ROWS, TOTAL CFM, AIR INLET AND OUTLET DRY BULB AND WET BULB TEMPERATURES.
 - 3. EACH AIR OUTLET SHALL BE IDENTIFIED WITH MANUFACTURE, MODEL NUMBER, SIZE, VELOCITY, CORRECTION FACTOR, ACTUAL CFM, DESIGN CFM.
 - 4. TRAVERSE READING OF MAIN SUPPLY, RETURN AND OUTSIDE AIR DUCTS TO ESTABLISH AIR QUANTITIES.
 - 5. TEST AND RECORD TEMPERATURES FROM TEMPERATURE CONTROLLERS SUCH AS DAY THERMOSTAT, NIGHT THERMOSTAT.
 - 6. TEST AND RECORD TEMPERATURES FROM MAIN SUPPLY AIR TRUNK, MIXED AIR DURING THE FULL HEATING AND FULL COOLING CYCLE AND ECONOMIZER CYCLE.
 - 7. TEST AND BALANCE ECONOMIZER.
 - 8. WATER BALANCE INFORMATION
 - 9. EXHAUST SYSTEM BALANCE.

2.00 - PRODUCTS (NOT APPLICABLE)

3.00 - EXECUTION

3.01 DEFICIENCIES IN SYSTEM

BALANCING CONTRACTOR SHALL REPORT IN WRITING TO THE OWNER ANY DISCREPANCIES ON ITEMS NOT INSTALLED IN ACCORDANCE WITH CONTRACT DOCUMENTS, ALL DEFICIENCIES IN HVAC SYSTEM, AND OTHER DEFICIENCIES. THE OWNER WILL REIMBURSE THE BALANCING CONTRACTOR IF ADDITIONAL WORK IS REQUIRED FOR HIS/HER PHASE OF WORK.

3.02 WARRANTY

THE TEST AND BALANCE AGENCY SHALL INCLUDE AN EXTENDED WARRANTY OF 90 DAYS, AFTER COMPLETION OF WORK, DURING WHICH TIME THE OWNER, AT THEIR DISCRETION, MAY REQUEST A RECHECK OR RESETING OF ANY OUTLET, SUPPLY AIR FAN, OR EXHAUST FAN AS LISTED IN TEST REPORT.

END OF SECTION

McCall

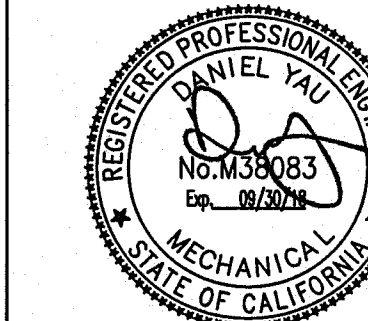
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DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

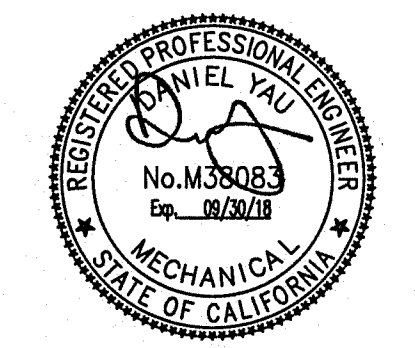
MECHANICAL SPECIFICATIONS

SCALE

M0.2

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

T-24 FORMS

SCALE

M0.3

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 08/15)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-MCH-01-E
Mechanical Systems Page 1 of 4
Project Name: Philz Coffee - La Jolla Village Date Prepared: 12/14/2016

A. MECHANICAL COMPLIANCE FORMS & WORKSHEETS (check box if worksheet is included)
For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, refer to the 2013 Nonresidential Manual
Note: The Enforcement Agency may require all forms to be incorporated onto the building plans.

YES	NO	Form/Worksheet #	Title
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCC-MCH-01-E (Part 1 of 3)	Certificate of Compliance, Declaration. Required on plans for all submittals.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCC-MCH-01-E (Part 2 of 3)	Certificate of Compliance, Required Acceptance Tests (MCH-02A to 11A). Required on plans for all submittals.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCC-MCH-01-E (Part 3 of 3)	Certificate of Compliance, Required Acceptance Tests (MCH-12A to 18A). Required on plans where applicable.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCC-MCH-02-E (Part 1 of 2)	Mechanical Dry Equipment Summary is required for all submittals with Central Air Systems. It is optional on plans.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCC-MCH-02-E (Part 2 of 2)	Mechanical Wet Equipment Summary is required for all submittals with chilled water, hot water or condenser water systems. It is optional on plans.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCC-MCH-03-E	Mechanical Ventilation and Reheat is required for all submittals with multiple zone heating and cooling systems. It is optional on plans.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCC-MCH-07-E (Part 1 of 2)	Power Consumption of Fans. Required on plans where applicable
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCC-MCH-07-E (Part 2 of 2)	Power Consumption of Fans, Declaration. Required on plans where applicable

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 08/15)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-MCH-01-E
Mechanical Systems Page 3 of 4
Project Name: Philz Coffee - La Jolla Village Date Prepared: 12/14/2016

C. MECHANICAL HVAC ACCEPTANCE FORMS (check box for required forms)
Test Performed By:
Designer:
This form is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for HVAC systems. The designer is required to check the applicable boxes for all acceptance tests that apply and list all equipment that requires an acceptance test. All equipment of the same type that requires a test, list the equipment description and the number of systems.
Installing Contractor:
The contractor who installed the equipment is responsible to either conduct the acceptance test them self or have a qualified entity run the test for them. If more than one person has responsibility for the acceptance testing, each person shall sign and submit the Certificate of Acceptance applicable to the portion of the construction or installation for which they are responsible.
Enforcement Agency:
Plancheck - The NRCC-MCH-01-E form is not considered a completed form and is not to be accepted by the building department unless the correct boxes are checked.
Inspector - Before occupancy permit is granted all newly installed process systems must be tested to ensure proper operations.

Test Description	# of Units	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A
Equipment Requiring Testing or Verification		Fault Detection & Diagnostics for DX Units	Automatic Fault Detection & Diagnostics for Air & Zone	Distributed Energy Storage DX AC Systems	Thermal Energy Storage (TES) Systems	Supply Air Temperature Reset Controls	Condenser Water Reset Controls	ECMS
(E)RTU-1/2	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 08/15)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-MCH-01-E
Mechanical Systems Page 2 of 4
Project Name: Philz Coffee - La Jolla Village Date Prepared: 12/14/2016

B. MECHANICAL HVAC ACCEPTANCE FORMS (check box for required forms)
Test Performed By:
Designer:
This form is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for HVAC systems. The designer is required to check the applicable boxes for all acceptance tests that apply and list all equipment that requires an acceptance test. All equipment of the same type that requires a test, list the equipment description and the number of systems.
Installing Contractor:
The contractor who installed the equipment is responsible to either conduct the acceptance test them self or have a qualified entity run the test for them. If more than one person has responsibility for the acceptance testing, each person shall sign and submit the Certificate of Acceptance applicable to the portion of the construction or installation for which they are responsible.
Enforcement Agency:
Plancheck - The NRCC-MCH-01-E form is not considered a completed form and is not to be accepted by the building department unless the correct boxes are checked.
Inspector - Before occupancy permit is granted all newly installed process systems must be tested to ensure proper operations.

Test Description	# of Units	MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A
Equipment Requiring Testing or Verification		Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Controlled Ventilation (DCV)	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	Hydronic System Variable Flow Control	Automatic Demand Shed Control
(E)RTU-1/2	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

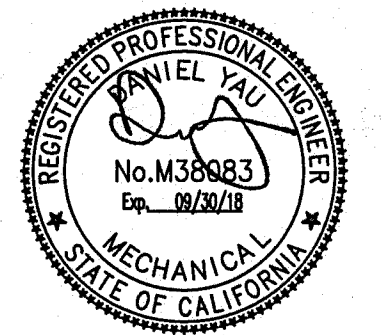
CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 08/15)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-MCH-01-E
Mechanical Systems Page 4 of 4
Project Name: Philz Coffee - La Jolla Village Date Prepared: 12/14/2016

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.
Documentation Author Name: Daniel Yau
Documentation Author Signature: [Signature]
Company: ACIES Engineering
Signature Date: 12/14/2016
Address: 3371 Olcott Street
City/State/Zip: Santa Clara, CA 95054
CEA/HERS Certification Identification (if applicable):
Phone: (408) 522-5255

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.
Responsible Designer Name: Daniel Yau
Responsible Designer Signature: [Signature]
Company: ACIES Engineering
Date Signed: 12/14/2016
Address: 3371 Olcott Street
License: M38083
City/State/Zip: Santa Clara, CA 95054
Phone: (408) 522-5255

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015



STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 01/16)

CALIFORNIA ENERGY COMMISSION
NRCC-MCH-03-E
CERTIFICATE OF COMPLIANCE
Mechanical Ventilation & Reheat
Page 1 of 3
Project Name: Philz Coffee - La Jolla Village Date Prepared: 12/14/2016

ACTUAL DESIGN (FROM EQUIPMENT SCHEDULES, ETC)				AREA BASIS				OCCUPANCY BASIS				MINIMUM	VAV REHEATED PRIMARY AIR CFM	VAV DEADBAND PRIMARY AIR CFM	COMPLIES				
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
ZONE/SYSTEM/VAV BOX TAG	DESIGN PRIMARY COOLING AIRFLOW (CFM)	DESIGN PRIMARY DEADBAND AIRFLOW (CFM)	DESIGN PRIMARY HEATING AIRFLOW (CFM)	CONTROL TYPE DDC (Y/N)	TRANSFER AIRFLOW (CFM)	CONDITIONED AREA (ft²)	MIN CFM PER AREA	MIN CFM BY AREA	NUMBER OF PEOPLE	CFM PER PERSON	MIN CFM BY OCCUPANT	REQUIRED AIRFLOW (MAX OF L OR I) (CFM)	COMPLIES	BASED DESIGN PRIMARY COOLING AIR (50% DDC, 50% NON-DDC) (CFM)	MAXIMUM REHEAT CFM (MAX OF M OR O)	COMPLIES	AIR (20% DDC, N/A FOR NON-DDC) (CFM)	LARGER OF M OR R, N/A FOR NON-DDC (CFM)	COMPLIES
(E)RTU-1	2,000	2,000	2,000	No		1,009	0.15	151.35	11	15	165	165	Y	600	600	N	NA	NA	Y
(E)RTU-2	2,000	2,000	2,000	No		866	0.5	433	29	15	435	435	Y	600	600	N	NA	NA	Y

Add Row Remove Last

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance January 2016

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 01/16)

CALIFORNIA ENERGY COMMISSION
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Page 2 of 3
Project Name: Philz Coffee - La Jolla Village Date Prepared: 12/14/2016

Instructions:
Shaded cells require user input. Remaining cells are read-only and will automatically calculate values.
B. The largest amount of primary air supplied by the terminal unit when it's operating in the cooling mode.
C. The smallest amount of primary air supplied by the terminal unit in the deadband mode.
D. The largest amount of primary air supplied by the terminal unit when it's operating in the heating mode.
E. A terminal unit can be controlled with DDC controls, or non-DDC controls. Each control category has different reheat limitations in code.
F. Transfer air must be provided where Required Ventilation Airflow (Column M) is greater than the Design Primary Deadband Airflow (Column C).
H. Minimum ventilation rate per Section 120.1 Table 120.1-A
J. Based on number of fixed seats where applicable or the greater of the expected number of occupants and 50% of the CBC occupant load for egress purposes for spaces without fixed seating.
M. Required Ventilation Airflow (Req'd Ventilation Airflow) is the larger of the ventilation rates calculated on an AREA BASIS or OCCUPANCY BASIS (Column I or L)
N. This column identifies whether or not the Design Primary Reheat Airflow complies or not. It compares the value in column P to the value in column F.
O. Design Primary Cooling Airflow * 0.50 for DDC, Design Primary Cooling Airflow * 0.30 for Non-DDC. If the Design Primary Cooling Airflow is less than 300 cfm, then this is not applicable.
P. Maximum of Column M and Column O. If the Design Primary Cooling Airflow is 300 cfm or less, then this is not applicable.
Q. This column identifies whether or not the Design Primary Reheat Airflow at the zone level, complies or not. It compares the value in column P to the value in column D.
R. Design Primary Cooling Airflow * 0.20 for DDC. Not applicable for Non-DDC zones or zones where Design Primary Cooling Airflow is 300 cfm or less.
S. Maximum of Column M and Column R. Not applicable if the Design Primary Cooling Airflow is 300 cfm or less.
T. This column identifies whether or not the Design Primary Deadband Airflow at the zone level, complies or not. It compares the value in column S to the value in column C.

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance January 2016

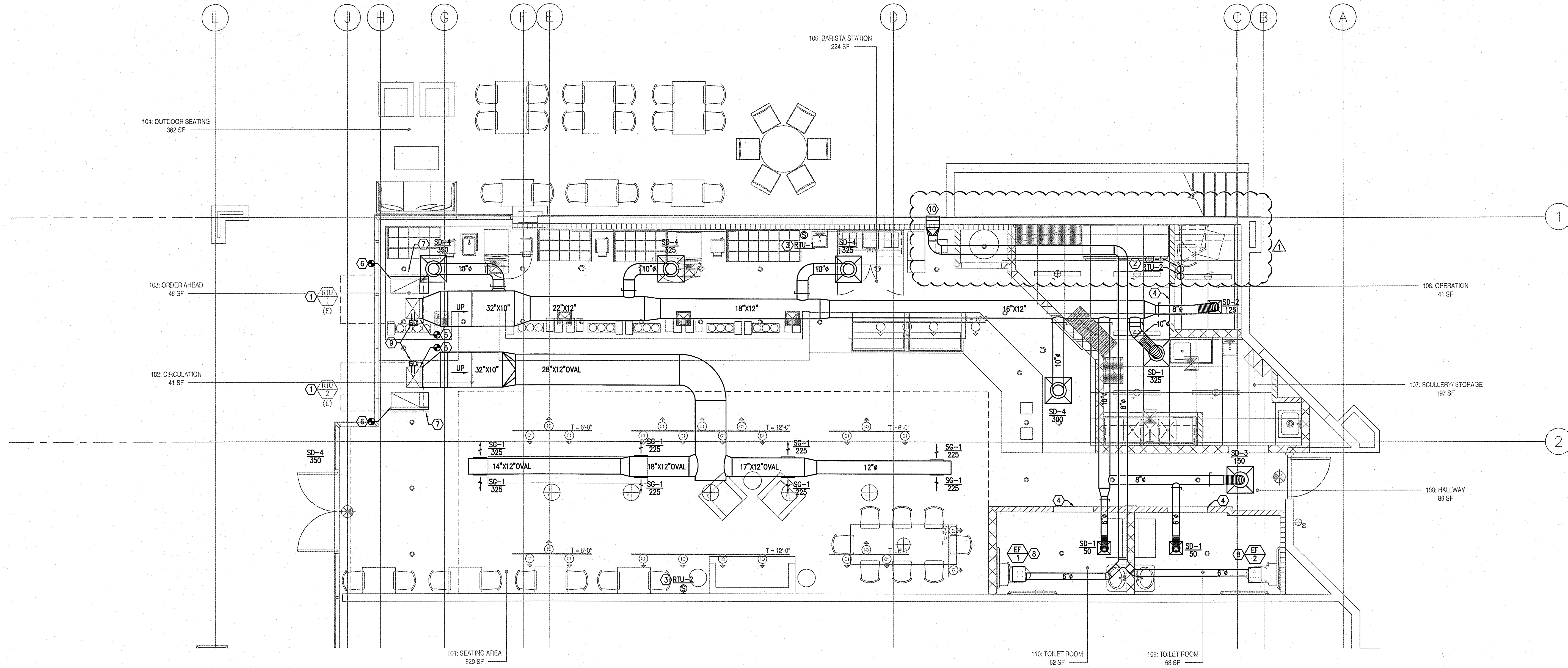
STATE OF CALIFORNIA
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Address: 3371 Olcott Street
City/State/Zip: Santa Clara, CA 95054
License: M38083
Phone: (408) 522-5255

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance January 2016



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

GENERAL NOTES:

1. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
2. CONTRACTOR MUST VERIFY ALL CLEARANCES AND DIMENSIONS IN FIELD.
3. VOLUME DAMPER SHALL BE PROVIDED FOR EACH AIR REGISTER WHETHER SHOWN OR NOT.
4. NO FLEX DUCT ALLOWED WHERE DUCTWORK IS VISIBLE.
5. ALL EXTERIOR VENTING MUST BE POINTED AWAY FROM SECOND FLOOR STRUCTURES.
6. ALL ROOF PENETRATIONS AND REPAIRS MUST BE COMPLETED BY THE LANDLORD ROOFING CONTRACTOR: MARTIN ROOFING, (619) 287-6860.

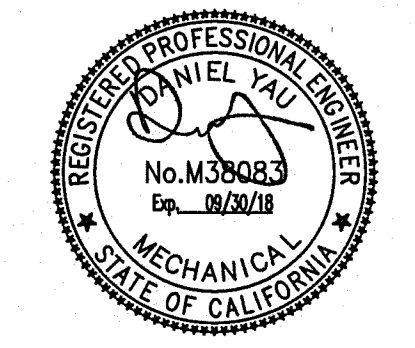
KEYED NOTES:

- ① EXISTING PACKAGED ROOFTOP HEAT PUMP UNITS ON ROOF.
- ② WALL MOUNTED THERMOSTATS, MOUNT AT 48" AFF.
- ③ WALL MOUNTED TEMPERATURE SENSOR AT 48" AFF. CONNECT TO ASSOCIATED THERMOSTAT IN DRESSING ROOM. COORDINATE EXACT LOCATION WITH ARCHITECT. SENSOR TO BE BAPI "BUTTON" TYPE WALL SENSOR OR EQUAL.
- ④ 3/4" DOOR UNDERCUT.
- ⑤ CONNECT NEW SUPPLY DUCTWORK TO EXISTING SUPPLY DUCT DROP. FIELD VERIFY EXISTING CONDITIONS.
- ⑥ CONNECT NEW RETURN DUCTWORK TO EXISTING RETURN DUCT DROP. FIELD VERIFY EXISTING CONDITIONS.
- ⑦ ACOUSTICALLY LINED 34"x12" RETURN AIR OPENING WITH 1/2" WIRE MESH SCREEN.
- ⑧ NEW CEILING EXHAUST FAN.
- ⑨ EXISTING SMOKE DETECTOR IN SUPPLY AIR DUCT.
- ⑩ 12"x12" EXTERIOR LOUVER 11" AFF. GREENHECK MODEL EDD-401 OR EQUAL. PAINT TO MATCH WALL COLOR. DISCHARGE TO BE 10' CLEAR OF ALL OUTSIDE AIR INTAKES AND BUILDING OPERABLE WINDOWS. ALL EXTERIOR VENTING MUST BE POINTED AWAY FROM SECOND FLOOR STRUCTURES. FIELD VERIFY.

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT

DATE	PLAN CHECK COMMENTS
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



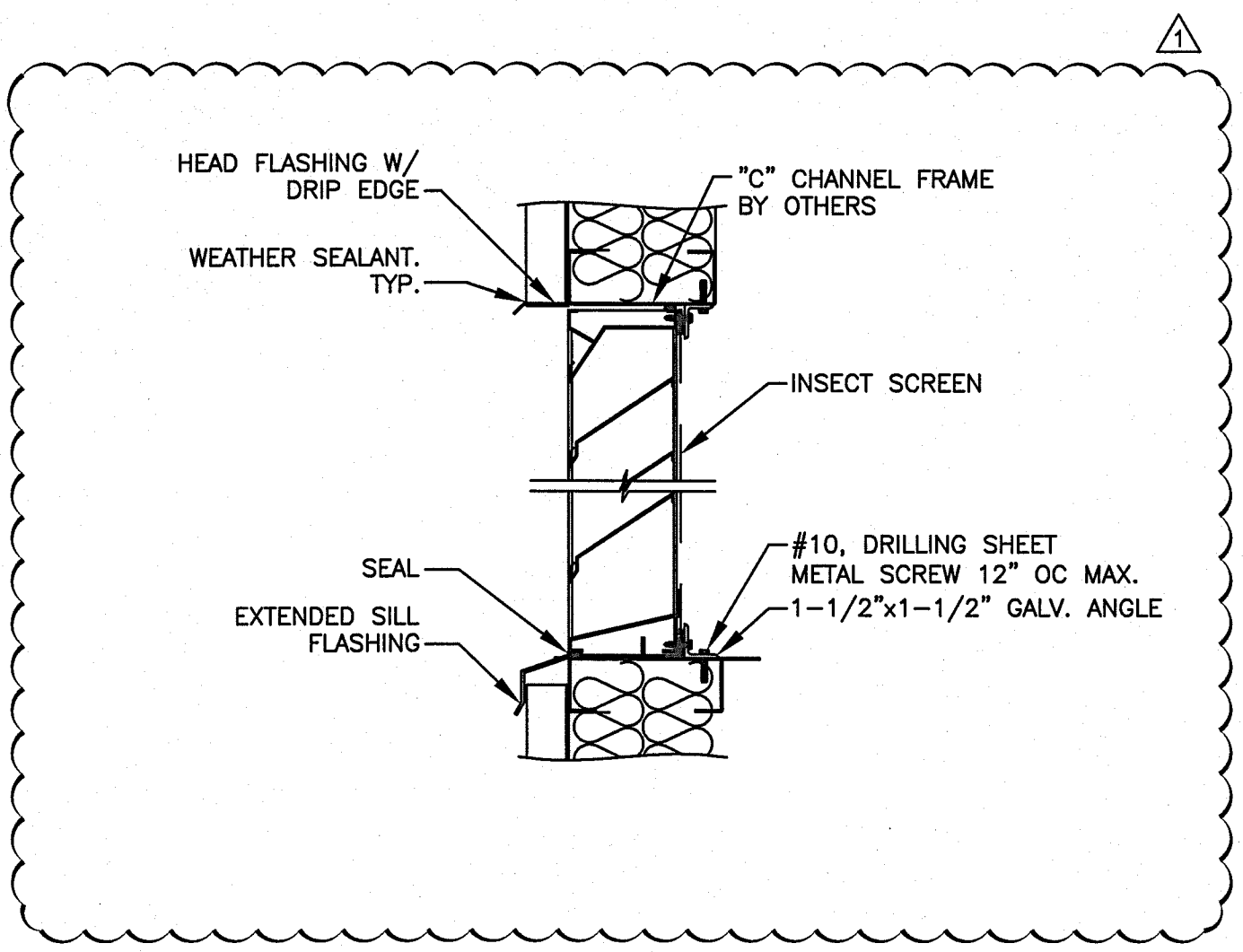
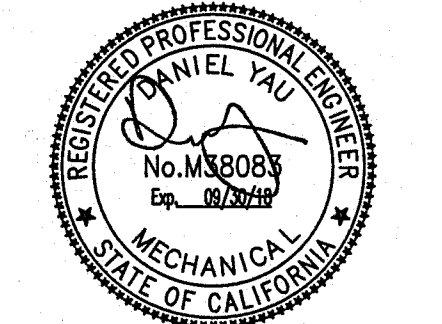
DRAWING DESCRIPTION

MECHANICAL PLAN

SCALE

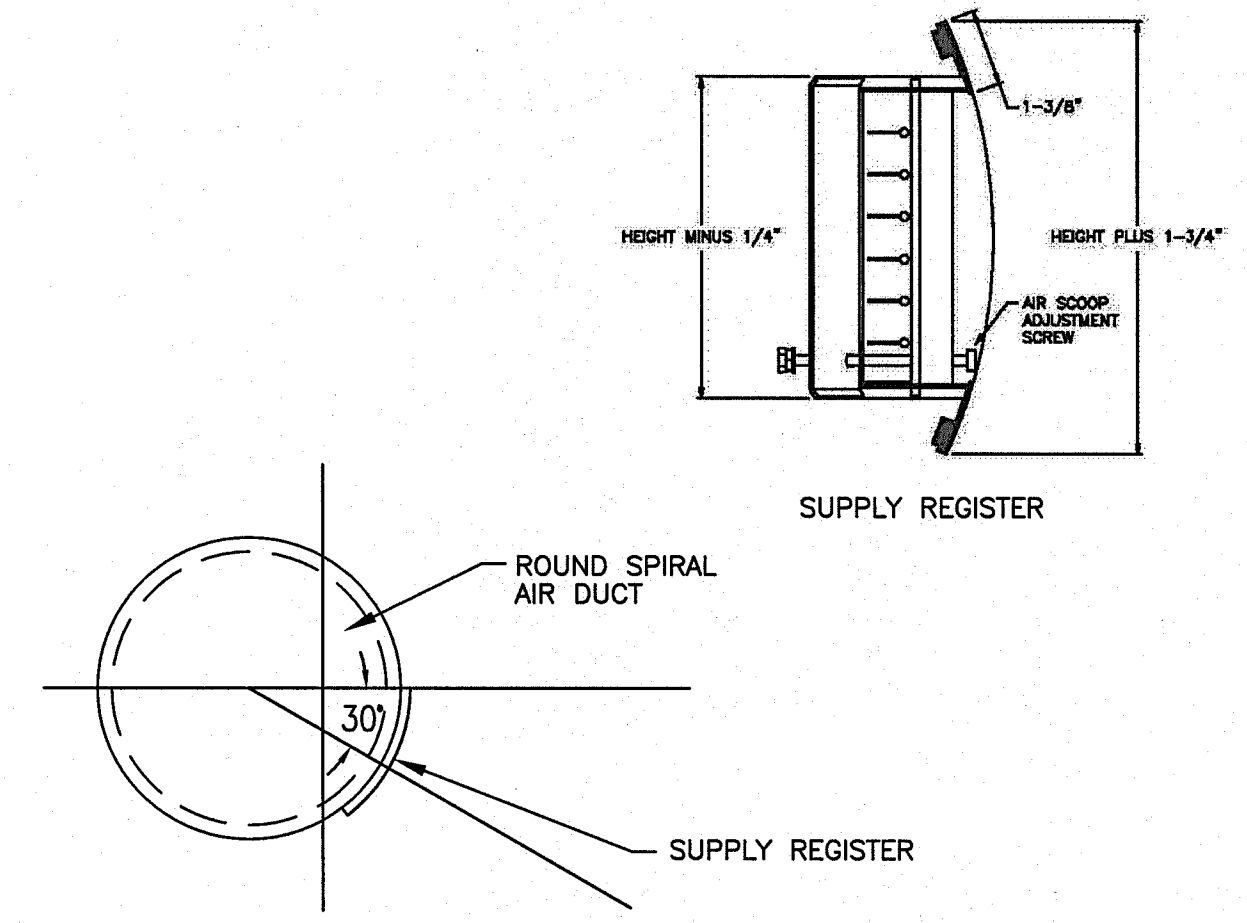
M2.1

NOTES SCALE NTS 2



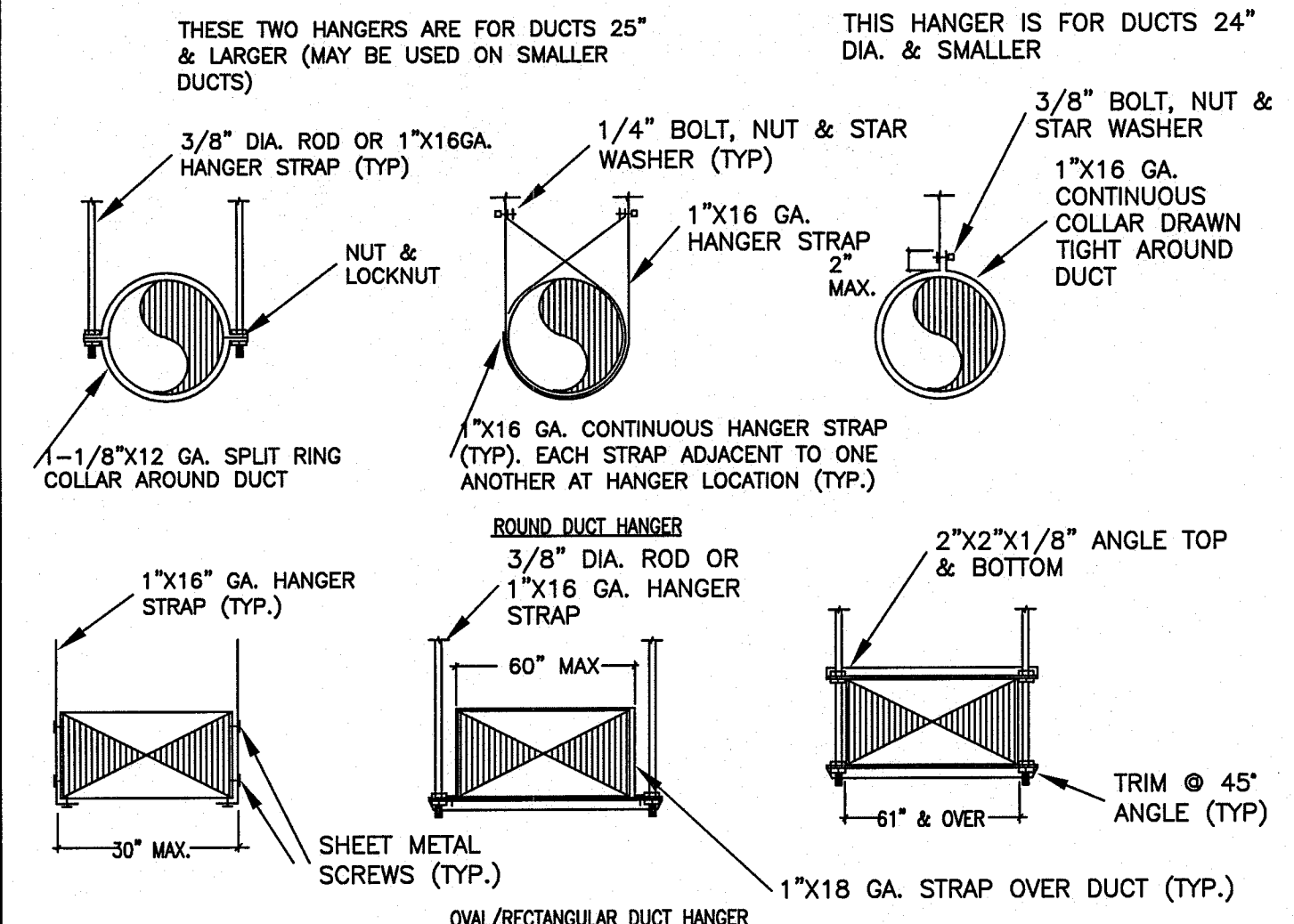
NOT USED
NOT TO SCALE
10

WALL LOUVER DETAIL
NOT TO SCALE
7



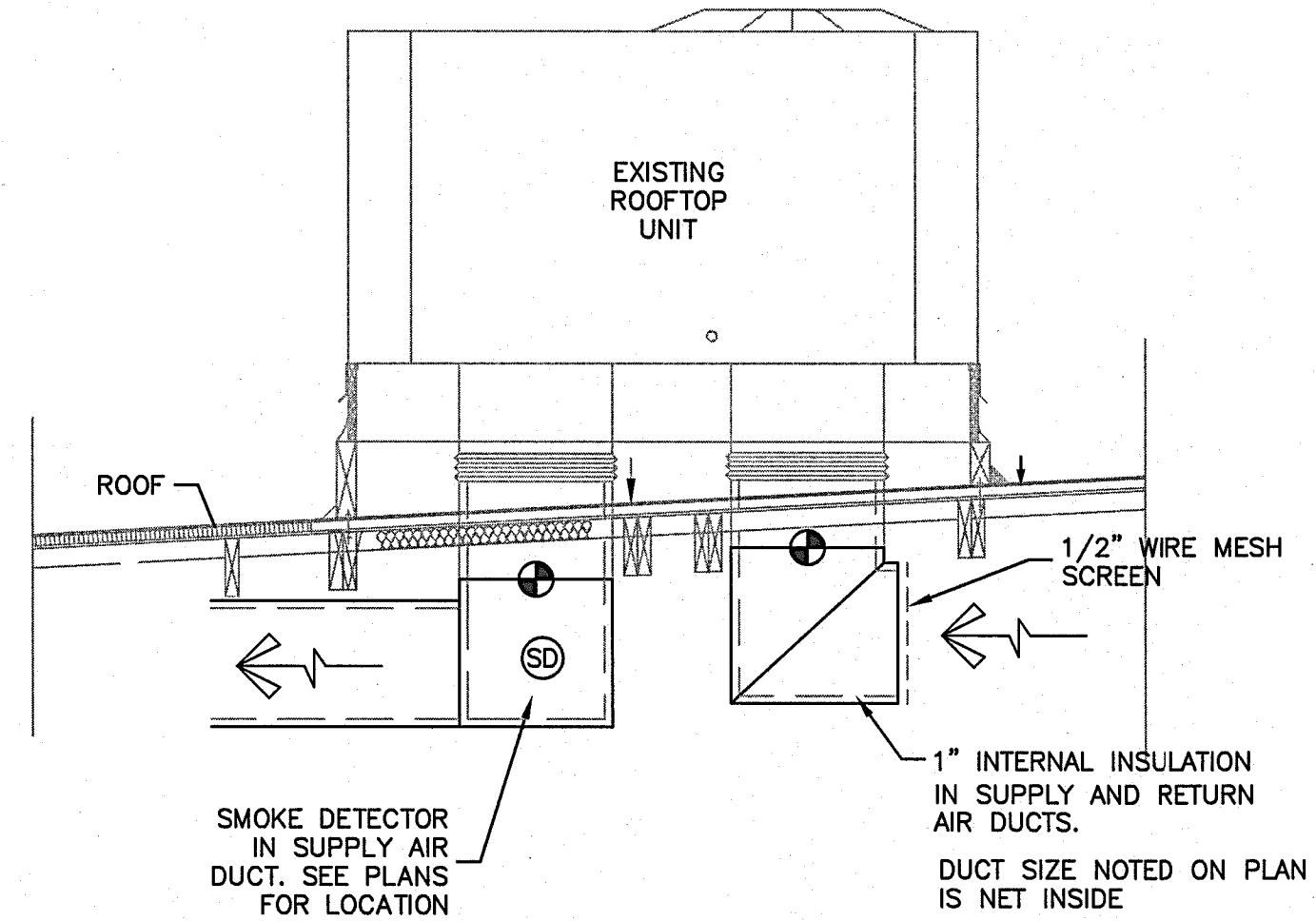
NOTES:
REGISTER CONTAINS CONTROL AT GRILLE
GRILLE FLANGES MUST COVER DUCT FLANGES
SEE FLOOR PLAN DRAWINGS FOR DUCT SIZE AND LOCATION OF REGISTERS

CEILING MOUNTED REGISTER
NOT TO SCALE
4



NOTES:
1 REFER TO SPECIFICATIONS FOR HANGER SPACINGS.
2 ATTACHMENTS TO OVERHEAD STRUCTURE SHALL BE MADE IN ACCORDANCE WITH STRUCTURAL ENGINEERS REQUIREMENTS AND WEIGHT LIMITATIONS.

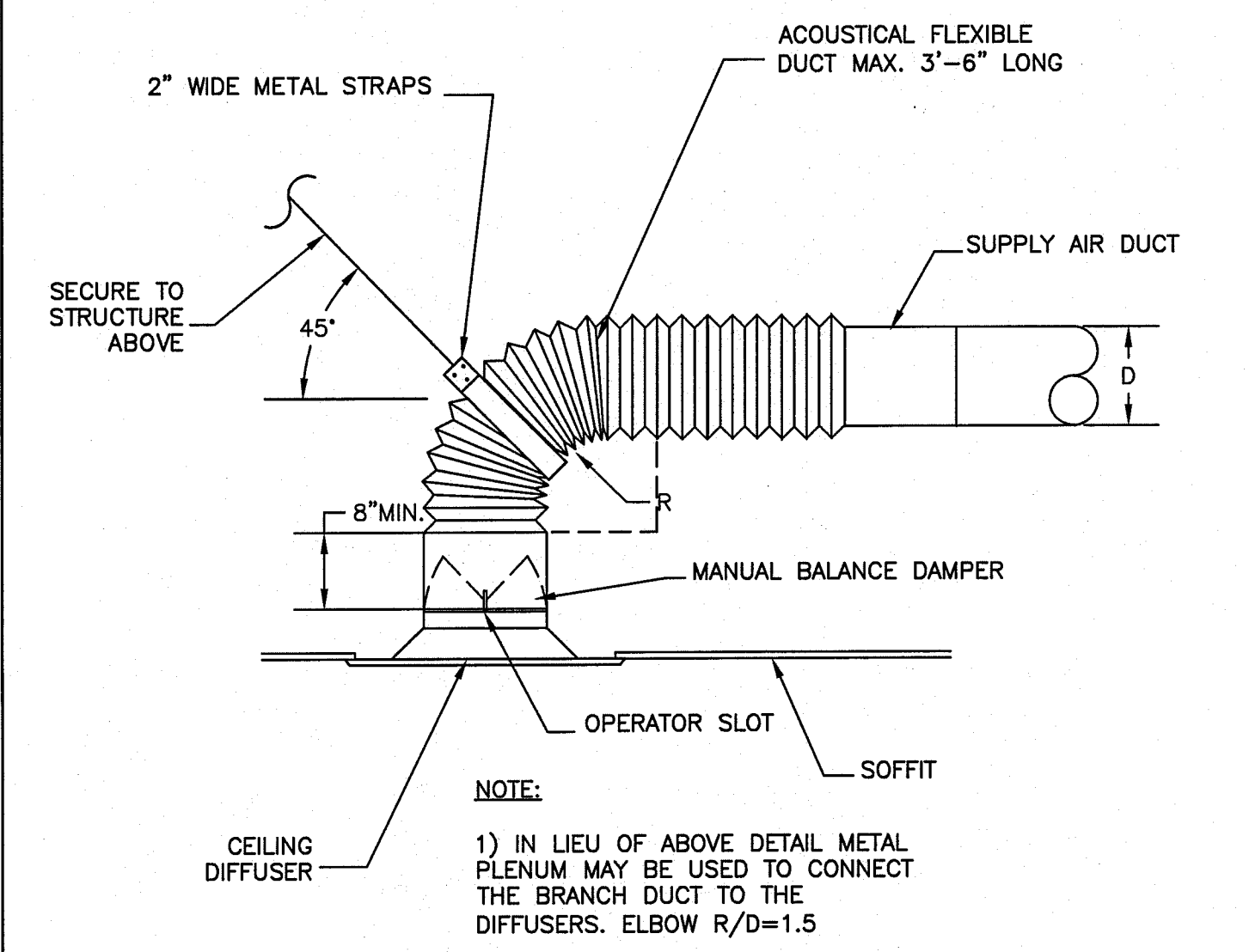
DUCT SUPPORT
NOT TO SCALE
1



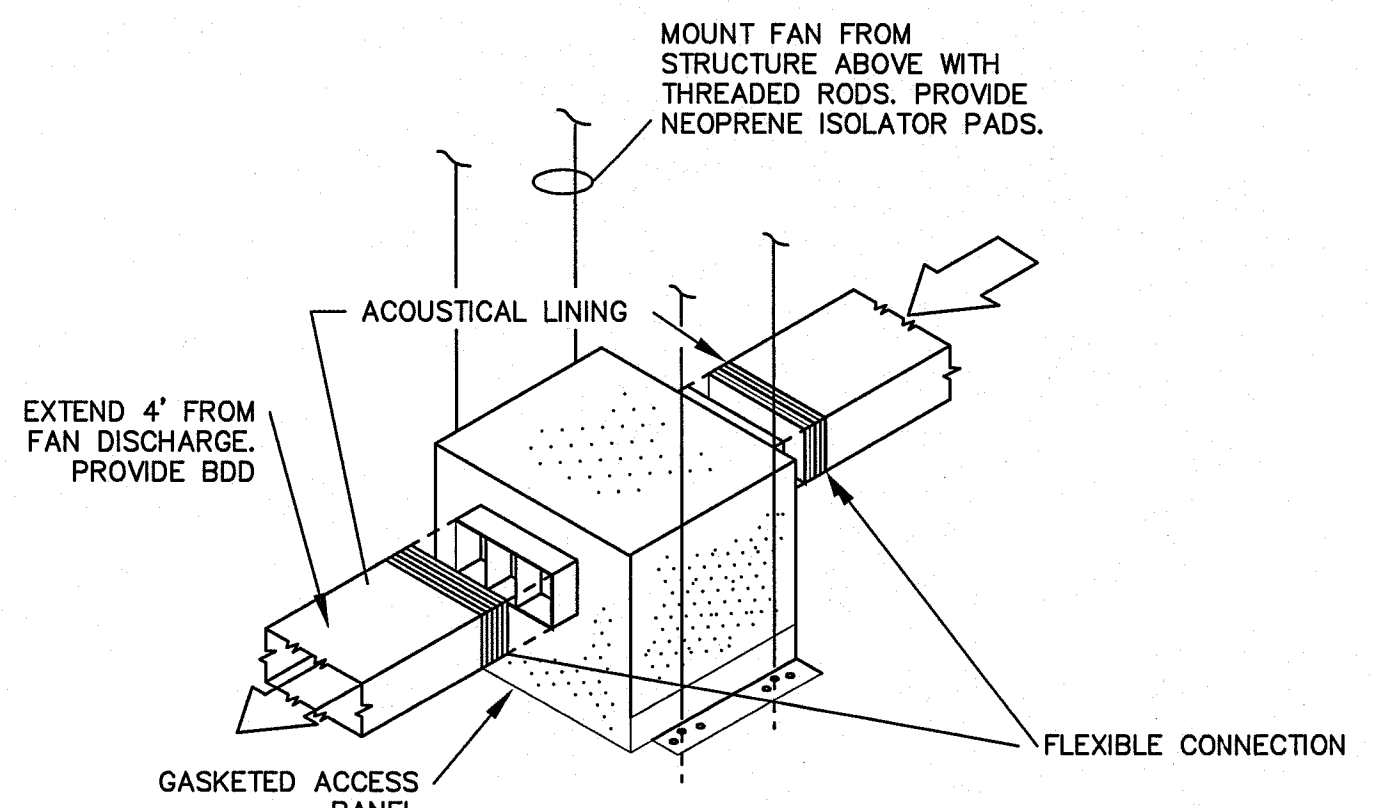
NOT USED
NOT TO SCALE
11

NOT USED
NOT TO SCALE
8

ROOFTOP UNIT CONNECTION
NOT TO SCALE
5



CEILING DIFFUSER
NOT TO SCALE
2



NOT USED
NOT TO SCALE
12

NOT USED
NOT TO SCALE
9

IN-LINE EXHAUST FAN
NOT TO SCALE
6

DUCT CONSTRUCTION MINIMUM SHEET METAL THICKNESSES			
RECTANGULAR DUCTS			
MAXIMUM SIZE (INCHES)	STEEL (MINIMUM THICKNESS, NOMINAL)		ALUMINUM (MINIMUM THICKNESS, NOMINAL)
	THROUGH 12	0.022 INCH (26 GAGE, GALV.)	0.020 INCH (NO. 24 B&S GAGE)
13 THROUGH 30	0.028 INCH (24 GAGE, GALV.)	0.025 INCH (NO. 22 B&S GAGE)	
31 THROUGH 54	0.034 INCH (22 GAGE, GALV.)	0.032 INCH (NO. 20 B&S GAGE)	
55 THROUGH 84	0.040 INCH (20 GAGE, GALV.)	0.040 INCH (NO. 18 B&S GAGE)	
OVER 84	0.052 INCH (18 GAGE, GALV.)	0.051 INCH (NO. 16 B&S GAGE)	
ROUND DUCTS			
MAXIMUM SIZE (INCHES)	SPIRAL SEAM DUCT	LONGITUDINAL SEAM DUCT	FITTINGS
	STEEL (MINIMUM THICKNESS, NOMINAL)	STEEL (MINIMUM THICKNESS, NOMINAL)	STEEL (MINIMUM THICKNESS, NOMINAL)
THROUGH 12	0.019 INCH (28 GAGE, GALV.)	0.022 INCH (26 GAGE, GALV.)	0.022 INCH (26 GAGE, GALV.)
13 THROUGH 18	0.022 INCH (26 GAGE, GALV.)	0.028 INCH (24 GAGE, GALV.)	0.028 INCH (24 GAGE, GALV.)
19 THROUGH 28	0.028 INCH (24 GAGE, GALV.)	0.034 INCH (22 GAGE, GALV.)	0.034 INCH (22 GAGE, GALV.)
29 THROUGH 36	0.034 INCH (22 GAGE, GALV.)	0.040 INCH (20 GAGE, GALV.)	0.040 INCH (20 GAGE, GALV.)
37 THROUGH 52	0.040 INCH (20 GAGE, GALV.)	0.052 INCH (18 GAGE, GALV.)	0.052 INCH (18 GAGE, GALV.)
OVAL DUCTS			
MAJOR DIMENSION DUCT WIDTH	SPIRAL SEAM	LONGITUDINAL SEAM	FITTINGS
	DUCT GAGE	DUCT GAGE	GAGE
THROUGH 24	24	20	20
25 THROUGH 36	22	20	20
37 THROUGH 48	22	18	18
49 THROUGH 60	20	18	18
61 THROUGH 70	20	16	16

SHEET METAL GAGES
NOT TO SCALE
3

LIGHTING FIXTURES SCHEDULE

TYPE	MANUFACTURER & CATALOG #	DESCRIPTION	LAMPS	VOLTS	REMARKS
A1	CONTRAST LIGHTING CONCERTO LED - LD2D MODEL: LD2D-C-11-11-27-80-W-2 HOUSING: NWLD200LD1	ADJUSTABLE RECESSED LED DOWNLIGHT WITH PERFORMANCE 1 HOUSING, NARROW FLOOD, 0-10V DIMMING DRIVER	15.5W @ 120V 16.0W @ 277V	120/277	PROVIDE ALL NECESSARY ACCESSORIES FOR COMPLETE INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT
A2	TECH LIGHTING IBISS HEAD LED MODEL: 700-MO-IBISS-WWW-S-L2-12-S	MONORAIL SINGLE WALL WASH 70%-10% ELV DIMMING	15W	120/277	PROVIDE ALL NECESSARY ACCESSORIES FOR COMPLETE INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT
C1	WAC LIGHTING HHT-809LED-BN	LED TRACK HEAD WITH H-TRACK SINGLE CIRCUIT SYSTEM. ELV DIMMING.	8W LED	120	PROVIDE TRACK SUSPENSION KIT FOR PENDANT MOUNTING. SEE PLAN FOR CURRENT LIMITER.
C2	WAC LIGHTING H-LED710F-WWW-AN	LED TRACK HEAD WITH H-TRACK SINGLE CIRCUIT SYSTEM. ELV DIMMING.	14.5W	120	PROVIDE TRACK SUSPENSION KIT FOR PENDANT MOUNTING. SEE PLAN FOR CURRENT LIMITER.
D1	YLIGHTING 1454973451	WAVE SUSPENSION LIGHT (3) 7.7W, 120V LINEAR MODULE LED	24W	120	PROVIDE ALL NECESSARY ACCESSORIES FOR COMPLETE INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT
D3	TECHLIGHTING 700WSPIT-S-I-LED830	PITCH SINGLE WALL SCONCE LED, ELV DIMMING BUG RATINGS: B1-U0-G0	26.1W	120	PROVIDE ALL NECESSARY ACCESSORIES FOR COMPLETE INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT
D4	HI-LITE MFG. CO. H-13115	GOOSENECK LIGHT FIXTURE, LED	30W	120	EQUIVALENT INCANDESCENT OR LED CAN BE USED. PROVIDE ALL NECESSARY ACCESSORIES FOR COMPLETE INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT
J	LITHONIA LIGHTING ZLN-L48-3000LM-MDD-120-40K-80CRI-WH	48" LED STRIP LIGHT WITH 0-10V DIMMING, 4000K	42W LED	120	VERIFY FINISH AND MOUNTING HEIGHT WITH ARCHITECTURAL DRAWING. PROVIDE BSL722 FOR EMERGENCY FIXTURE
X	LITHONIA LIGHTING EDGR-Brushed-1-R-EL-SD	RECESSED LED EDGE-LIT BLADE EXT SIGN	3.8W	MVOLT	EXIT SIGN WITH 90 MINUTES BATTERY BACKUP
X2	LITHONIA LIGHTS AFFINITY SERIES OR EQUAL	EMERGENCY LIGHT RATED FOR OUTDOOR	(2)1.5W	120	MOUNT FIXTURE ABOVE DOOR
X3	RAB LIGHTING CLEDEX13W	EMERGENCY LED LIGHT	(2)13W LED	120	EMERGENCY EGRESS LIGHT ONLY

- VERIFY WITH ARCHITECTURAL DRAWINGS FOR SPECIFIC MOUNTING HEIGHT REQUIREMENTS.
- PROVIDE J-BOX FOR PENDANT LIGHTS. EACH J-BOX IS TO FEED UP TO 4 FIXTURES. E.C. IS TO REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF THE J-BOXES.
- ALL CONDUIT SHALL BE CONCEALED IN WALL.

GENERAL ELECTRICAL NOTES

- GENERAL CONTRACTOR SHALL VERIFY FIELD CONDITIONS BEFORE SUBMITTING BID.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH NEC AS AMENDED BY CEC, AND ANY ADDITIONAL STATE OR LOCAL CODES WHICH MAY APPLY.
- GENERAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, CERTIFICATES, ETC. REQUIRED.
- GENERAL CONTRACTOR SHALL OBTAIN AND PAY FOR BOTH ROUGH AND FINAL UNDER-WRITERS OR OTHER APPROVED INSPECTION AGENCY CERTIFICATES "ELECTRICAL INSPECTION". THESE CERTIFICATES SHALL BE PRESENTED WITH REQUEST FOR FINAL PAYMENT.
- IT IS THE INTENT OF THESE PLANS TO PROVIDE A COMPLETE OPERATING ELECTRICAL SYSTEM. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL WIRING, EQUIPMENT, MATERIAL, ETC. REQUIRED, EXCEPT WHERE SPECIFICALLY NOTED AS BEING FURNISHED BY OTHERS. SHOULD THERE BE ANY QUESTIONS CONCERNING RESPONSIBILITY, THEY SHALL BE ADDRESSED TO ARCHITECT PRIOR TO BID. NO EXTRA CHARGES WILL BE ALLOWED.
- ELECTRICAL SERVICE SHALL BE COORDINATED WITH THE EXISTING FIELD CONDITIONS.
- CONSULT WITH CONTRACTORS FURNISHING HVAC EQUIPMENT TO VERIFY LOADS AND SECURE EXACT LOCATIONS (REFER TO HVAC DRAWINGS). WIRE AND CONNECT TO ALL HVAC EQUIPMENT, INCLUDING CONTROLS AND THERMOSTATS.
- CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO ALL CONTROLS, OWNER-SUPPLIED EQUIPMENT, MECHANICAL AND PLUMBING EQUIPMENT AS REQUIRED.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATION DETAILS. ALL FIXTURE AND DEVICE LOCATIONS SHOWN ON ARCHITECTURAL DRAWINGS SUPERSEDE THOSE SHOWN ON ELECTRICAL PLANS.
- CIRCUIT NUMBER ON THE DRAWINGS ARE FOR IDENTIFICATION ONLY AND DO NOT INDICATE THE POSITION ON THE PANEL BOARD. CONNECT THE CIRCUITS WITH THE LIGHTEST LOADS AND THE RECEPTACLE CIRCUITS NEAR THE TOP OF THE PANEL, AND THE MORE HEAVILY LOADED CIRCUITS NEAR THE BOTTOM. BALANCE ALL CIRCUITS EVENLY BETWEEN PHASE SO THAT FEEDER WIRES CARRY APPROXIMATELY EQUAL CURRENT. ALL PHASES MUST BE BALANCED WITHIN 10% OR LESS. G.C. SHALL REBALANCE IF NECESSARY.
- BRANCH CIRCUIT CONDUCTORS SHALL NOT BE LESS THAN NO. 12AWG. THE INSULATION SHALL BE COLOR CODED, AND SHALL BE 600 VOLT. TYPE THHN/THWN COPPER.
- CABLES IN HIGH TEMPERATURE AREAS SHALL HAVE INSULATION TYPE SUITABLE FOR THE TEMPERATURE. CABLES USED IN SPACES FOR ENVIRONMENTAL AIR SHALL CONFORM WITH APPLICABLE N.E.C. REQUIREMENTS.
- ALL WIRING USED IN RETURN OR DISCHARGE AIR PLENUMS SHALL BE PLENUM RATED OR INSTALLED PER METHODS APPROVED BY THE LATEST EDITION OF THE N.E.C. FOR SUCH APPLICATION.
- ALL WIRE AND CABLE CONDUCTORS SHALL BE COPPER WITH INSULATION RATED 600V. CONDUCTORS SIZED #10 AWG AND SMALLER SHALL BE SOLID, AND CONDUCTORS SIZED LARGER THAN #10 WG SHALL BE STANDARD WIRE.
- BRANCH CIRCUITS FOR POWER AND LIGHTING SHALL NOT BE LESS THAN #12 AWG. OR AS NOTED. WIRES ARE TO BE SIZED FOR THE APPROPRIATE VOLTAGE DROPS.
- ALL EQUIPMENT AND LIGHT FIXTURES WIRING SHALL NOT BE LESS THAN #12 AWG TYPE SFF-2. AND FLEXIBLE CORDS SHALL NOT BE LESS THAN #12 AWG TYPE S.
- CONTROL WIRING SHALL NOT BE LESS THAN #14 AWG UNLESS OTHERWISE NOTED.
- HOMERUNS SHOWN ARE SCHEMATIC. CONTRACTOR MAY ORIGINATE HOMERUNS FROM DIFFERENT LOCATIONS. ALL WIRE INCLUDING HOMERUNS SHALL BE DELINEATED ON AS-BUILT DRAWINGS.
- PROVIDE ALL ELECTRICAL SYSTEM GROUNDING IN ACCORDANCE WITH N.E.C. REQUIREMENTS EVEN IF IT IS NOT SHOWN ON THE DRAWINGS. INCLUDE ADDITIONAL GROUNDING CONDUCTORS IN NONMETALLIC RACEWAYS EVEN THOUGH THE DRAWINGS SHOW ONLY CIRCUIT AND/OR NEUTRALS CONDUCTORS. THE PLUMBING AND PIPING SYSTEM SHALL NOT BE USED AS A GROUND. ALL TRANSFORMER NEUTRALS SHALL BE GROUNDED TO BUILDING STILL IN ACCORDANCE WITH NEC 250-70.
- ALL CONDUITS PASSING THROUGH PARTITIONS ARE TO BE APPROPRIATELY SLEEVED AND SEALED.
- FURNISH AND INSTALL ALL CONDUIT WITH PULL WIRES AS REQUIRED. ALL OUTLET BOXES SHALL BE STEEL, EXTRA DEEP WITH GROUNDING PIGTAILS. GROUNDING PUSH-CLIPS ARE NOT ACCEPTABLE.
- ALL SLAB PENETRATIONS SHALL BE INSTALLED AND FIRE RATED PER NATIONAL STATE AND LOCAL CODES
- DO NOT MAKE ANY CHANGES OR SUBSTITUTIONS WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER.
- GUARANTEE ALL WORK, MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE YEAR FROM THE DATED OF APPROVAL AND FINAL ACCEPTANCE.
- THIS DESIGN IS BASED ON INITIAL DESIGN DATA. GENERAL CONTRACTOR TO SUPPLY AND INSTALL FEEDERS, FUSES AND CIRCUIT BREAKERS TO MATCH THE NAMEPLATE RATING OF ALL EQUIPMENT. THIS SHALL BE INCLUDED IN THE INITIAL BID PROPOSAL AND NO EXTRAS SHALL BE ENTERTAINED.
- THE G.C. SHALL PROVIDE ALL EQUIPMENT, MATERIALS AND LABOR TO COMPLETE ALL ELECTRICAL WORK IN A NEAT AND WORKMANLIKE MANNER AND IN ACCORDANCE WITH GOOD COMMERCIAL PRACTICE INCLUDING THE INSTALLATION OF ALL THE EQUIPMENT MATERIALS AND SYSTEMS AND THE FINAL CONNECTIONS TO THE OWNER'S EQUIPMENT AND FIXTURES AS REQUIRED BY THE OWNER. THE G.C. SHALL ALSO FURNISH TEMPORARY WIRING AND LIGHTING TO PROVIDE A MINIMUM OF 25 FC IN WORK AREAS FOR USE OF ALL THE TRADES DURING CONSTRUCTION AND THE INSTALLATION OF THE OWNERS FIXTURES. THE G.C. IS RESPONSIBLE TO REMOVE ALL TEMPORARY WIRING UPON COMPLETION OF CONSTRUCTION OF ALL TRADES.
- G.C. SHALL LABEL ALL JUNCTION BOX, OUTLETS, LIGHT SWITCH, ETC. WITH CIRCUIT NUMBER ON INTERIOR OF COVER PLATE.
- G.C. SHALL PROVIDE ALL TEMPORARY LIGHTING FOR ALL TRADES AS REQUIRED DURING CONSTRUCTION.
- GENERAL CONTRACTOR SHALL PROVIDE SEISMIC RESTRAINTS AND SUPPORTS FOR ALL FLOOR AND CEILING MOUNTED ELECTRICAL EQUIPMENT TO RESIST EARTHQUAKE EFFECTS DETERMINED IN ACCORDANCE WITH THE BUILDING CODE.
- THIS CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL SUPPLEMENTARY SUPPORT, INCLUDING SUPPORT STEEL AS REQUIRED TO HANG ALL EQUIPMENT AND LIGHTING FROM THE EXISTING STRUCTURE IN ACCORDANCE WITH THE ARCHITECTURAL/STRUCTURAL SUPPORT AND LOADING CRITERIA.
- IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO PROVIDE FULLY DIMENSIONED COORDINATION DRAWINGS FOR ALL OF HIS RESPECTIVE WORK. THESE DRAWINGS MUST BE FULLY COORDINATED WITH ALL EXISTING CONDITIONS. ALL HVAC, PLUMBING, FIRE PROTECTION, ELECTRICAL, LIGHTING, STRUCTURAL AND ARCHITECTURAL SYSTEMS PRIOR TO PREPARING COMPOSITE MULTI DISCIPLINE COORDINATION DRAWINGS.
- ALL DISCONNECTING MEANS AND EQUIPMENT INDICATED ON THE DRAWING SHALL BE IDENTIFIED BY NAMEPLATE IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE 110-22.
- ALL WIRING FOR THE EMERGENCY LIGHTING AND EMERGENCY SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE ARTICLE 700.
- THE WIRING METHODS AND MATERIALS INDICATED IN THE SPECIFICATIONS AND ON THE DRAWINGS SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE ARTICLE 300.
- THE ELECTRICAL SERVICE AND DISTRIBUTION SYSTEM AS INDICATED ON THE RISER DIAGRAM AND MATERIALS INDICATED IN THE SPECIFICATIONS SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE ARTICLE 230.
- ALL OVER CURRENT PROTECTION SHALL BE IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE SECTION 240.
- ALL GROUNDING REQUIREMENTS OF THE COMPLETE ELECTRICAL DISTRIBUTION SYSTEM AND AS INDICATED IN THE SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ARTICLE 250.
- PRIOR TO ANY REQUIRED CUTTING AND PATCHING OF CONCRETE FLOOR AND/OR CUTTING OF ROOF CONTRACTOR SHALL COORDINATE WITH BUILDING ENGINEER. SEAL ALL EXTERIOR AND FIREWALL PENETRATIONS.
- FOR ALL LIGHTING FIXTURES MOUNTED IN HUNG CEILING THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL INDIVIDUAL SUPPORT AT EACH CORNER OF RECESSED LIGHTING TROFFER CONNECTED TO BUILDING STEEL ABOVE ALL CONDUIT AND MC CABLE MOUNTED ABOVE HUNG CEILING SHALL BE INDIVIDUALLY SUPPORTED IN THE SAME FASHION AS PER NEC REQUIREMENTS.
- NO "DOUBLING UP" ON CIRCUIT BREAKERS OR CONDUCTOR SPLICES WITH IN PANEL BOARDS SHALL BE PERMITTED. THE CONTRACTOR SHALL PROVIDE JUNCTION BOXES ADJACENT TO PANELBOARDS AS REQUIRED TO SPLICE COMMON CIRCUITS CONNECTORS.
- DO NOT SCALE FROM THESE DRAWINGS.
- PLANS ARE PREPARED WITH REQUIRED BRANCH CIRCUITS INDICATED BY CIRCUITS NUMBERS. PROVIDE AND INSTALL ALL CONDUITS, CONDUCTORS, BOXES, MISCELLANEOUS FITTINGS, ETC. FOR A COMPLETE AND OPERABLE SYSTEM (HOME RUN SHOWN). BRANCH CIRCUIT INSTALLATION SHALL COMPLY WITH SPECIFICATIONS AND N.E.C.
- NATIONALLY RECOGNIZED TESTING LABORATORY SHALL LIST ALL EQUIPMENT IN COMPLIANCE WITH 02 NEC ART. 110.3.
- ALL CONDUITS SHALL MAINTAIN FIVE (5) FEET CLEARANCE IN FRONT OF HVAC SUPPLY AND RETURN.
- BUILDING COMMISSIONING
 - TESTING AND ADJUSTING - TESTING AND ADJUSTING OF SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY BEST PRACTICES AND APPLICABLE STANDARDS ON EACH SYSTEM AS DETERMINED BY THE BUILDING OFFICIAL. PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.
 - OPERATION AND MAINTENANCE (O & M) MANUAL - PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O & M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.
 - INSPECTIONS AND REPORTS - INCLUDE A COPY OF ALL INSPECTIONS, VERIFICATIONS, AND REPORTS, REQUIRED BY THE ENFORCING AGENCY.

LEGEND

SYMBOL	DESCRIPTION
Ⓢ	SINGLE POLE SWITCH AND BOX, WALL MOUNTED. LOWER CASE LETTER INDICATES CIRCUIT CONTROLLED BY SWITCH. ADDITIONAL NUMBERS/LETTERS STAND FOR: - 3 - THREE WAY SWITCH - 4 - FOUR WAY SWITCH - LV - LOW VOLTAGE SWITCH - BP - BY-PASS TIMER - T - HORSEPOWER RATED TOGGLE SWITCH WITH THERMAL OVERLOADS
ⓈWP	TWO POLE SWITCH AND BOX, HORSEPOWER RATED FOR LOAD SERVED. LOWER CASE LETTER INDICATES CIRCUIT CONTROLLED BY SWITCH (WP=WEATHERPROOF)
Ⓢ	SINGLE RECEPTACLE WITH USB PORT, 15A, 125V GRD, LEVITON T5630W OR EQUAL.
Ⓢ	RECEPTACLE, DUPLEX 20A, 120V GRD, NEMA 5-20R U.O.N. (WP=WEATHERPROOF, GFI=GROUND FAULT CIRCUIT INTERRUPTER)
Ⓢ	RECEPTACLE, DOUBLE DUPLEX (2) 20A, 120V, GRD - NEMA (2) 5-20R U.O.N.
Ⓢ	FLUSH FLOOR OUTLET, DUPLEX RECEPTACLE INSIDE, 20A, 125V, 3WG, NEMA 5-20R, CARPET PLATE WHERE REQUIRED.
Ⓢ	FLUSH FLOOR OUTLET, DOUBLE DUPLEX RECEPTACLE INSIDE, 20A, 125V, 3WG, NEMA 5-20R, CARPET PLATE WHERE REQUIRED.
Ⓢ	DUPLEX RECEPTACLE, 20A, 120V, GND, (5-20R U.O.N.), SUSPENDED BY TYPE S.O. CORD WITH GRIPS AT EACH END
Ⓢ	TWIST-LOCK RECEPTACLE, 30A,250V, 3PHASE, GROUND, SUSPENDED, SUSPENDED BY TYPE S.O. CORD WITH GRIPS AT EACH END
Ⓢ	SPECIAL RECEPTACLE. COORDINATE RECEPTACLE TYPE WITH EQUIPMENT CORD AND PLUG.
Ⓢ	TELEPHONE WALL OUTLET, SINGLE GANG RING AND STRING INTO CEILING SPACE. INSTALL J-BOX AND 3/4" CONDUIT WITH STRING INTO ACCESSIBLE CEILING SPACE. CABLING BY OTHERS. MOUNTED NO MORE THAN 48" MEASURED FROM THE TOP OF THE OUTLET BOX OR HOUSING NOR LESS THAN 15" MEASURED FROM THE BOTTOM OF THE OUTLET BOX OR HOUSING TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM UON.
Ⓢ	DATA OUTLET, SAME AS TELEPHONE OUTLET ABOVE. MOUNTED NO MORE THAN 48" MEASURED FROM THE TOP OF THE OUTLET BOX OR HOUSING NOR LESS THAN 15" MEASURED FROM THE BOTTOM OF THE OUTLET BOX OR HOUSING TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM UON.
Ⓢ	VOICE/DATA OUTLET (SIXPLEX TELCOM JACK, FBO) 4" SQUARE x 2 1/8" BOX WITH SINGLE GANG FACEPLATE, 3/4" STUB-OUT WITH INSULATED END BUSHING AND PULLSTRING MOUNTED NO MORE THAN 48" MEASURED FROM THE TOP OF THE OUTLET BOX OR HOUSING NOR LESS THAN 15" MEASURED FROM THE BOTTOM OF THE OUTLET BOX OR HOUSING TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM UON.
Ⓢ	TELEPHONE FLUSH FLOOR OUTLET, CARPET PLATE WHERE REQUIRED. PROVIDE 3/4" CONDUIT WITH STRING FROM OUTLET UP TO ACCESSIBLE CEILING SPACE U.O.N.
Ⓢ	DATA FLUSH FLOOR OUTLET, CARPET PLATE WHERE REQUIRED. PROVIDE 3/4" CONDUIT AND STRING FROM OUTLET UP TO ACCESSIBLE CEILING SPACE U.O.N.
Ⓢ	VOICE/DATA FLUSH FLOOR OUTLET, CARPET PLATE WHERE REQUIRED. PROVIDE 3/4" CONDUIT AND STRING FROM OUTLET UP TO ACCESSIBLE CEILING SPACE UON.
Ⓢ	JUNCTION BOX, CEILING OR WALL MOUNTED, SIZE TO CODE, TAPE AND TAG WIRES.
Ⓢ	PANELBOARD, SURFACE OR FLUSH MOUNTED. VERIFY WALL DEPTH IF FLUSH MOUNTED.
Ⓢ	FUSED DISCONNECT SWITCH WITH DUAL ELEMENT FUSES. SWITCH AND FUSES RATING PER NAMEPLATE OF SERVED UNIT.
Ⓢ	NON-FUSED DISCONNECT SWITCH, RATING PER NAMEPLATE OF SERVED UNIT
Ⓢ	MAGNETIC MOTOR STARTER
Ⓢ	MOTOR FURNISHED AND INSTALLED BY OTHERS.
Ⓢ	OCCUPANCY SENSOR, MOUNTED NO MORE THAN 48" MEASURED FROM THE TOP OF THE OUTLET BOX OR HOUSING NOR LESS THAN 15" MEASURED FROM THE BOTTOM OF THE OUTLET BOX OR HOUSING TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM UON.
Ⓢ	CEILING MOUNTED OCCUPANCY SENSOR

NOTE:
MOUNT RECEPTACLE, LIGHT SWITCHES AND WALL SENSORS NO MORE THAN 48" MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15" MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM UON.

ABBREVIATIONS

ABB.	DESCRIPTION	ABB.	DESCRIPTION
IG	ISOLATED GROUND	UAC	UNDER ANOTHER CONTRACT
AE	APPROVED EQUIVALENT	UAS	UNDER ANOTHER SECTION
AFF	ABOVE FINISHED FLOOR	UON	UNLESS OTHERWISE NOTED
BP	BY-PASS	WP	WEATHERPROOF
EC	ELECTRICAL CONTRACTOR	(E)	EXISTING TO REMAIN
EF	EXHAUST FAN	(EM)	EMERGENCY LIGHT
EM	EMERGENCY LIGHT	(N)	NEW
GC	GENERAL CONTRACTOR	Ⓢ	MECHANICAL UNIT TAG. SEE MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
GFI	GROUND FAULT INTERRUPTER	Ⓢ	MECHANICAL UNIT TAG. SEE MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
NIC	NOT IN CONTRACT	Ⓢ	MECHANICAL UNIT TAG. SEE MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
NTS	NOT TO SCALE	Ⓢ	MECHANICAL UNIT TAG. SEE MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
PROVIDE	FURNISH, INSTALL AND CONNECT.	Ⓢ	MECHANICAL UNIT TAG. SEE MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DRAWING SCHEDULE

SHEET #	DESCRIPTION
EO.1	LEGEND, NOTES & SCHEDULES
EO.2A	ELECTRICAL SPECIFICATIONS
EO.2B	ELECTRICAL SPECIFICATIONS
EO.3	SINGLE LINE & PANEL SCHEDULES
EO.4A-EO.4F	TITLE 24 FORMS
EO.5	LIGHTING CONTROL
E1.1	LIGHTING PLAN
E2.1	POWER PLAN
E3.0	DETAILS

EQUIPMENT SCHEDULE

#	Description	Model	Qty.	Responsibility	Notes	
Food Service Equipment						
1A	Brew Station	3-Basket	5	VF/M	Indirect drain	
1B	Brew Station	4-Basket	1	VF/M	Indirect drain	
2	Hot Water Tower	Bunn	H5X SST	6	OF/CI	NEMA 6-30P plug, 30amp
3	Grinder	Ditting	KR 1403	4	OF/CI	Electrical Outlet
4	Ice Coffee Dispenser	Tablecraft	353DP	6	OF/CI	
5A	Ice Machine - 30"	Manitowoc Ice, I-450 w/B570 bin	IY-0454A		VF/M	Filtered Water, Indirect Drain
5B	Ice Machine - 22"	Manitowoc Ice, I-522 w/B420 bin	IY-0524A	2	VF/M	Filtered Water, Indirect Drain
5C	Ice Machine - Undercounter	Manitowoc Ice NEO 240, Order-Ahead	UY-0240A		VF/M	Filtered Water, Indirect Drain
6	Scale	Torrey Electronics	PC 40L	1	OF/CI	Electrical Outlet
7	POS Touch-Pad	Touch-Pad		2	VF/M	Electrical & Data Outlet
8	Order Ahead Touch-Pad	Touch-Pad		1	VF/M	Data Outlet
9	Time Clock	Touch-Pad		1	VF/M	Data Outlet
10	Survey Touch-Pad	Touch-Pad		1	VF/M	Data Outlet
11	Receipt Printer	Star, at POS, Order Ahead, Food Station	TSP100		VF/M	Electrical & Data Outlet
12	IT Rack	Tripp Lite	SRW21US	1	VF/M	Electrical
13	Food Prep Table	True, 3'	TSSU-36-08-ADA	2	VF/CI	Electrical Outlet
14	Refrigerator	True, 3-door Reach-In	TSD-693-LD	1	VF/CI	Electrical Outlet
15	Under Counter Refrigerator	True, 2-door	TUC-483-LP	4	VF/CI	Electrical Outlet
16	Under Counter Refrigerator	True, 1-door	TUC-276-LP		VF/CI	Electrical Outlet
17	Turbo Chef Oven	Turbo Chef, SOTA	tl-9500-1	1	VF/CI	NEMA 6-30P plug 30amp
18	Conveyer Toaster	APW Wyatt	AT Express	2	VF/CI	Electrical Outlet
19	Cold Case	Structural Concepts, Oasis, 4'	CO43R	2	VF/CI	Electrical Outlet
20	Bean Bins	CAMBRO - food storage container	8SFSCW		OF/OI	
20A	Cold Case	Structural Concepts, Oasis, 5'	CO53R	1	VF/CI	Electrical Outlet
20B	Cold Case	Structural Concepts, Oasis, 6'	CO63R		VF/CI	Electrical Outlet
21	Bean Bins	CAMBRO - food storage container	8SFSCW		OF/OI	
22	Employee Locker			2	OF/CI	Requires Assembly
23	Security Monitor				VF/M	Electrical Outlet
24	Computer Printer				OF/CI	Electrical Outlet
25	Safe				VF/M	
26	Refuse Bins (Scullery)	Rubbermaid			OF/CI	
27	Refuse Bins (Service)	Rubbermaid			OF/CI	

NOTE:
1. ALL ELECTRICAL CONNECTIONS AND OUTLETS FOR KITCHEN EQUIPMENT PER EQUIPMENT SPECIFICATIONS. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO INSTALLATION AND CONCEAL ALL CONDUITS IN WALL.



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JOB NUMBER:
216088

DATE: 12.15.16 ISSUE FOR PERMIT

DATE: 03.03.17 PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

LEGEND, NOTES & SCHEDULES

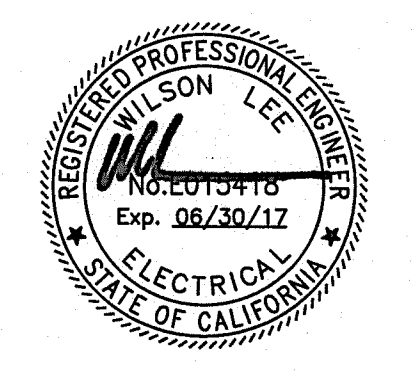
SCALE

EO.1

Table with 2 columns: DATE, ISSUE. Row 1: 12.15.16, ISSUE FOR PERMIT.

Table with 2 columns: DATE, PLAN CHECK COMMENTS. Row 1: 03.03.17, PLAN CHECK COMMENTS.

SEAL/SIGNATURE



DRAWING DESCRIPTION

ELECTRICAL SPECIFICATIONS

SCALE NONE

PART 2 PRODUCTS

2.01 MATERIAL APPROVAL

A. ALL MATERIALS MUST BE NEW AND BEAR UNDERWRITER'S LABORATORIES LABEL. MATERIALS THAT ARE NOT COVERED BY UL TESTING STANDARDS SHALL BE TESTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY OR A GOVERNMENTAL AGENCY. MATERIAL NOT IN ACCORDANCE WITH THESE SPECIFICATIONS MAY BE REJECTED EITHER BEFORE OR AFTER INSTALLATION.
B. FOR LEED QUALIFIED BUILDINGS, PRODUCTS SHALL BE MANUFACTURED WITHIN 100 MILES OF PROJECT SITE.

2.02 BASIC ELECTRICAL MATERIALS

- A. CONDUITS AND RACEWAYS
1. RIGID STEEL: HOT-DIPPED GALVANIZED.
2. INTERMEDIATE METAL CONDUIT (IMC): HOT-DIPPED GALVANIZED.
3. ELECTRICAL METALLIC TUBING (EMT): ELECTRO-GALVANIZED.
4. RIGID NON METALLIC CONDUIT (PVC SCHEDULE 40)
5. WIREWAY: CODE GAUGE STEEL, WITH KNOCKOUTS AND HINGED COVER, CORROSION RESISTANT GRAY BAKED ENAMEL FINISH.
6. PROVIDE FITTINGS AND ACCESSORIES APPROVED FOR THE PURPOSE EQUAL IN ALL RESPECTS TO THE CONDUIT OR RACEWAY. EMT CONNECTORS AND COUPLINGS SHALL BE STEEL SETSCREW TYPE INDOORS AND STEEL COMPRESSION TYPE IN WET LOCATIONS AND OUTDOORS.

B. WIRES AND CABLES

- 1. FOR POWER AND LIGHTING SYSTEM 600V OR LESS:
A.) CONDUCTOR: MINIMUM SIZE #12 AWG.
i. #12 AND #10 AWG SOLID COPPER
ii. #8 AWG AND LARGER SHALL BE STRANDED COPPER.
B.) INSULATION TYPE:
i. #12 TO #1 AWG: THIN FOR WET OR UNDERGROUND AND THIN FOR DRY LOCATIONS.
ii. #1/0 THROUGH #4/0 AWG: XHHW (55 MILS).
iii. #250 MCM AND LARGER: XHHW (65 MILS).
iv. GROUNDING WIRE: TW.
v.) METAL CLAD (MC) CABLES
i. CONDUCTORS ARE MADE FROM CLASS B COPPER. SIZES 14AWG, 12 AWG AND 10 AWG MAY BE EITHER SOLID OR STRANDED, 8AWG AND LARGER ARE STRANDED. THE CONDUCTORS ARE CONSTRUCTED WITH THHN/THWN OR XHHW-2 INSULATION RATED FOR 900C DRY OR WET AT 600 VOLTS MAX. A COPPER GROUNDING CONDUCTOR IS CABLED WITH THE PHASE CONDUCTORS. THE GROUND CONDUCTOR HAS A GREEN INSULATION. AN INTERLOCKED ALUMINUM ARMOR IS HELICALLY FORMED AROUND THE CONDUCTOR. ASSEMBLY AND IS 45X LIGHTER THAN STEEL MC CABLE.

2. FOR SIGNAL AND COMMUNICATIONS CIRCUIT:

- A.) SPECIAL CABLES SHALL BE AS SPECIFIED ON DRAWINGS.
B.) CONDUCTORS FOR GENERAL USE SHALL BE STRANDED COPPER CONDUCTOR, #16 AWG MINIMUM, WITH THIN INSULATION FOR UNDERGROUND OR WET LOCATIONS AND THIN INSULATION FOR DRY LOCATIONS.
3. ACCEPTABLE PRODUCTS: GENERAL ELECTRIC, ANACONDA, OKONITE, PARANITE OR TRIANGLE PRODUCTS CONFORMING OR EXCEEDING APPLICABLE IPECA STANDARDS.

C. OUTLET BOXES, JUNCTION AND PULLBOXES

- 1. OUTLET BOXES: 4" SQUARE X 1-1/2" DEEP (OR LARGER) GALVANIZED SHEET STEEL KO-TYPE WITH PLASTER RING AND COVER FOR GENERAL INTERIOR USE AND CAST METAL TYPE FS OR FD WITH MATCHING SCREW COVERS FOR EXTERIOR AND EXPOSED INTERIOR LOCATIONS (GASKETED IN DAMP OR WET LOCATIONS).
2. JUNCTION BOXES (FLOOR BOX NOT INCLUDED) SHALL BE SAME AS OUTLET BOXES UP TO 42 CU. IN. AND CODE-GAUGE STEEL IN LARGER SIZES WITH SURFACE OR FLUSH-TYPE SCREW-MOUNTED TRIMCOVERS, BOTH BOXES AND COVERS INHIBITOR-PRIMED AND PAINTED INSIDE OUT.
3. PULL BOXES SHALL BE SAME AS JUNCTION BOXES UNLESS INDICATED OTHERWISE ON THE DRAWINGS, WITH COVERS.
4. TELEPHONE OUTLET BOXES SHALL BE THE TYPE AND SIZE REQUIRED BY THE SERVING TELEPHONE COMPANY BUT NOT SMALLER THAN 4-11/16" SQUARE X 2-1/8" DEEP WITH SINGLE-GANG RING AND SIERRA #5-754N SPLIT PLATE BUSHING.
5. UNDERGROUND AND SITE JUNCTION BOXES, HANDHOLES, AND MANHOLES
A.) SHALL BE MADE UP OF PRECAST CONCRETE WITH TRAFFIC RATED STEEL COVERS. EXTENSIONS SHALL BE PROVIDED AS NECESSARY TO MAINTAIN REQUIRED COVERAGE FOR DUCT BANKS.
B.) PROVIDE 10" X 17" (MIN) FOR PULLBOXES, 36" X 60" (MIN) FOR HANDHOLES, AND 6'X8'X6" (MIN) MANHOLES.

D. WIRING DEVICES AND PLATES

- 1. WIRING DEVICES AND PLATES SHALL BE LISTED FOR SPECIFIC USE.
2. ALL POWER RECEPTACLES AND SWITCHES FOR GENERAL PURPOSE CIRCUITS SHALL BE NEMA SPECIFICATION GRADE, RATED AS FOLLOWS:
A.) GENERAL PURPOSE RECEPTACLES: NEMA 5-15R OR 5-20R
B.) LAB BENCH RECEPTACLES: NEMA 5-20R
C.) DEDICATED RECEPTACLES: NEMA 5-20R
3. SWITCHES: TWENTY (20) AMPERE.
A.) IN MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, ILLUMINATED LIGHT SWITCHES SHALL BE PROVIDED.
4. ALL GENERAL PURPOSE TWENTY (20) A, 125/250 V RECEPTACLES AND 120/277 V SWITCHES SHALL CONFORM TO NEMA WD-1 SPECIFICATIONS.
5. UNLESS OTHERWISE INDICATED, WIRING DEVICES AND COVER PLATES SHALL BE FURNISHED AND INSTALLED WITH WHITE COLOR OR PAINTED TO MATCH FINISH SURFACE WHERE IT IS LOCATED ON, I.E., DARK BROWN, BEIGE, WHITE OR STAINLESS STEEL.
A.) OUTLETS SERVED FROM AN EMERGENCY POWER SYSTEM SHALL BE RED.
B.) OUTLETS SERVED FROM THE NORMAL POWER SYSTEM SHALL BE IVORY OR WHITE, TO MATCH ADJACENT FINISH.
C.) OUTLETS SERVED FROM AN ISOLATED GROUND SHALL BE ORANGE WITH ISOLATED GROUND (TRIANGULAR) MARKING.

E. CONDUIT HANGERS

- 1. FOR INDIVIDUAL CONDUIT RUNS NOT DIRECTLY FASTENED TO THE STRUCTURE, USE ROD HANGERS MANUFACTURED BY CADDY, UNISTRUT OR POWERSTRUT. FOR MULTIPLE CONDUIT RUNS, USE UNISTRUT OR POWERSTRUT TRAPEZOID TYPE CONDUIT SUPPORT DESIGNED FOR MAXIMUM DEFLECTION NOT GREATER THAN 1/8".

2.03 PANELBOARDS

- A. UNLESS OTHERWISE NOTED ACCEPTABLE MANUFACTURERS ARE CUTLER HAMMER, SQUARE D, SIEMENS, GENERAL ELECTRIC, OR APPROVED EQUAL. ELECTRICAL EQUIPMENT ARE BASED ON THE FOLLOWING:
1. LIGHTING AND APPLIANCE PANELBOARDS - SQUARE D NF AND NOOD
2. POWER PANELBOARDS - SQUARE D, I LINE
A.) CONSTRUCTION: CABINETS SHALL BE OF CODE GAUGE, GALVANIZED STEEL, SURFACE OR FLUSH MOUNTED AS INDICATED. DOORS SHALL BE OF COLD-ROLLED STEEL WITH CONCEALED HINGES AND FLUSH CATCH AND LOCK. ALL PANELS SHALL BE KEYS ALIKE. PANELS LOCATED ADJACENT TO EACH OTHER SHALL HAVE IDENTICALLY SIZED ENCLOSURE AND TRIMS. MINIMUM PANEL WIDTH SHALL BE 20". FINISH EXPOSED PART WITH ONE COAT OF PRIMER AND ONE COAT OF LIGHT GREY ENAMEL SUITABLE FOR OVER PAINTING IN FIELD IF DESIRED.
B.) BUS BARS: PROVIDE GROUND BLOCK WITH FULL COMPLEMENT OF TERMINALS IN ADDITION TO INSULATED NEUTRAL BUS. FUTURE BREAKER SPACES SHALL HAVE COMPLETE PROVISION INCLUDING BUSES AND CONNECTING HARDWARE.
C.) CIRCUIT BREAKERS: SHALL BE QUICK-MAKE, QUICK-BREAK, MOLDED CASE TYPE:
i. 120/240 VOLT PANELS: SHALL BE SQUARE D TYPE "QOB" LINE, BOLT-ON TYPE, WITH MINIMUM SYMMETRICAL INTERRUPTING CAPACITY AS SHOWN.
ii. PROVIDE MULTI-POLE UNITS WITH COMMON TRIP ELEMENT.
iii. CIRCUIT BREAKERS USED ON "ON-OFF" CONTROL OF FLUORESCENT LIGHTING (PANELBOARD SWITCHING) SHALL BE UNDERWRITERS' LABORATORIES LISTED AND MARKED "SWO" TO INDICATE THEIR SUITABILITY.
6. IDENTIFICATION: PROVIDE SCHEDULED-ON (NO ADHESIVES) BAKELITE OR PHOTO-ETCHED METALLIC NAMEPLATE IDENTIFICATION ON OUTSIDE OF EACH PANEL SHOWING PANEL DESIGNATION, VOLTAGE AND PHASE IN MINIMUM 1/8" HIGH LETTERS. EACH PANEL SHALL CONTAIN A METAL-FRAMED CIRCUIT DIRECTORY INSIDE COVER, WITH PLASTIC PROTECTOR.
C. COMPLETE SHOP DRAWINGS ARE REQUIRED. DIMENSIONS SHALL MATCH FLOOR PLANS AND ELEVATIONS.

2.04 LOAD CENTERS

- A. LOAD CENTERS TO BE FURNISHED AND INSTALLED AT LOCATIONS AS SHOWN ON THE DRAWINGS. LOAD CENTERS SHALL BE OF THE TYPE APPROVED, INDICATED, AND SPECIFIED HEREIN.
B. ENCLOSURE SHALL BE FABRICATED OF COLD ROLLED STEEL FOR NEMA 1 AND GALVANNEALED STEEL OR EQUIVALENT RUST-RESISTANT STEEL FOR NEMA 3R. INDOOR TYPE L ENCLOSURES SHALL HAVE A FLUSH FRONT, WITH FINISH TO BE AS SELECTED BY ARCHITECT. WHEN USED, OUTDOOR TYPE 3R ENCLOSURES SHALL HAVE A HASP TO SECURE THE COVER. A DIRECTORY LABEL SHALL BE PROVIDED WITH CIRCUITS IDENTIFIED AS INDICATED ON THE SCHEDULE.
C. BUS BAR CONNECTIONS TO THE BRANCH CIRCUIT BREAKERS SHALL BE THE DISTRIBUTED PHASE TYPE AND SHALL ACCEPT PLUG-IN CIRCUIT BREAKERS. 300-400 A LOAD CENTERS SHALL ACCEPT A 150 A MAXIMUM BOLT-ON BREAKER IN ADDITION TO PLUG-IN TYPES. C. SHORT CIRCUIT CURRENT RATINGS AMPERE RMS SYMMETRICAL SHORT CIRCUIT RATINGS SHALL BE COORDINATED WITH PGE.
D. CIRCUIT BREAKERS SHALL BE SQUARE D TYPE QO (PLUG-ON) THERMAL MAGNETIC TRIP OR APPROVED EQUAL, WITH AN INTEGRAL CROSSBAR TO ENSURE SIMULTANEOUS OPENING OF ALL POLES IN MULTI-POLE CIRCUIT BREAKERS. CIRCUIT BREAKERS SHALL HAVE AN OVERCENTER, TRIP-FREE, TOGGLE-TYPE OPERATING MECHANISM WITH QUICK-MAKE, QUICK-BREAK ACTION AND POSITIVE HANDLE INDICATION. HANDLES SHALL HAVE ON, OFF, AND "TRIPPED" POSITIONS. IN ADDITION, TRIP INDICATION SHALL INCLUDE A WSI-TRIP INDICATOR APPEARING IN THE WINDOW OF THE CIRCUIT BREAKER CASE (THROUGH 125 AMPERES). CIRCUIT BREAKERS SHALL BE UL LISTED IN ACCORDANCE WITH UL STANDARD 489 WITH CURRENT RATINGS AS NOTED ON THE PLANS. INTERRUPTING RATINGS SHALL BE SELECTED TO PROVIDE THE REQUIRED LOAD CENTER SHORT CIRCUIT CURRENT RATING. SINGLE-POLE, 15 AND 20 AMPERE CIRCUIT BREAKERS INTENDED TO SWITCH FLUORESCENT LIGHTING LOADS ON A REGULAR BASIS SHALL HAVE THE SWD MARKING. TWO- AND THREE-POLE CIRCUIT BREAKERS 15-60 AMPERES INTENDED FOR USE WITH AIR CONDITIONING, HEATING, AND REFRIGERATION EQUIPMENT HAVING MOTOR GROUP COMBINATIONS AND MARKED AS SUCH SHALL HAVE THE MARK MARKING.
E. MANUFACTURERS: PANELBOARDS SHALL BE GENERAL ELECTRIC TYPE "AO" OR TYPE "AE" OR EQUIVALENT PRODUCTS OF WESTINGHOUSE, SQUARE-D OR SIEMENS-ITE.

2.05 SERVICE ENTRANCE EQUIPMENT

- A. SERVICE ENTRANCE EQUIPMENT ARE SUBJECT TO THE REQUIREMENTS OF THE UTILITY COMPANIES PROVIDING SERVICES TO PROJECT SITE. EQUIPMENT SHOWN ON THE CONSTRUCTION DOCUMENTS IS A GENERAL GUIDELINE AND SHALL BE ADJUSTED TO MEET SPECIFIC UTILITIES REQUIREMENTS.
B. ENCLOSURES, PULL SECTIONS, AND TERMINATIONS SHALL BE TOTALLY ENCLOSED, DEAD FRONT, FREE-STANDING, FRONT AND REAR ALIGNED. ACCESSIBILITY SHALL BE FROM THE FRONT. THE EQUIPMENT SHALL BE NEMA TYPE 1 OR NEMA TYPE 3R NON-WALK-IN RAINPROOF. THE FRAMEWORK SHALL BE STEEL, SECURED TOGETHER TO SUPPORT ALL COVER PLATES, BUSSING, AND COMPONENT DEVICES DURING SHIPMENT AND INSTALLATION. ALL COVERS SHALL HAVE UTILITY SEALING PROVISIONS WHERE REQUIRED BY THE UTILITY.
C. THE ENTIRE SERVICE ENTRANCE EQUIPMENT SHALL BE SUITABLE FOR OPERATION AT THE SPECIFIED AVAILABLE FAULT CURRENT. THE EQUIPMENT SHALL BE LABELED TO INDICATE THE MAXIMUM AVAILABLE FAULT CURRENT RATING, TAKING INTO ACCOUNT THE STRUCTURE, BUSSING, MAIN DISCONNECTS, AND TENANT MAIN DISCONNECTS.
D. THE METERING EQUIPMENT THROUGH BUS SHALL BE TIN-PLATED ALUMINUM. THE BUSSING SHALL BE OF SUFFICIENT CROSS-SECTIONAL AREA TO MEET UL STANDARD 891 FOR TEMPERATURE RISE. THE THROUGH BUS SHALL EXTEND THE FULL LENGTH OF THE EQUIPMENT AND BE 100% RATED THROUGHOUT THE LINE-UP. TAPERED BUS IS NOT ACCEPTABLE. THERE SHALL BE PROVISIONS FOR FUTURE SPLICING OF ADDITIONAL SECTIONS FROM EITHER END. THE NEUTRAL BUS SHALL ALSO BE 100% RATED. THE GROUND BUS SHALL BE SIZED PER UL STANDARD 891, AND OF THE SAME MATERIAL AS THE THROUGH BUS. BUS CONNECTIONS SHALL BE BOLTED WITH GRADE 5 BOLTS AND CONICAL SPRING WASHERS.
E. UTILITY COMPARTMENTS SHALL BE ARRANGED IN HOT SEQUENCE. THE METERING COMPARTMENTS SHALL BE BARRIRED AND COVERS SHALL HAVE SEALING PROVISIONS. THE METERING COMPARTMENTS SHALL MEET EUSERC STANDARDS, OR THE APPLICABLE UTILITIES STANDARDS.
F. THE MAIN DISCONNECT SHALL BE CIRCUIT BREAKER. EQUIPMENT GROUND FAULT SHALL BE PROVIDED WHEN REQUIRED PER THE NATIONAL ELECTRICAL CODE (NEC), OR WHEN REQUESTED BY THE CUSTOMER.
G. METER SOCKETS SHALL BE RING TYPE METER SOCKETS SHALL BE RATED AS NOTED IN THE DRAWINGS. THE METER SOCKET SHALL HAVE PROVISIONS FOR A EUSERC APPROVED TEST BLOCK. THE METER SOCKET SHALL PLUG ON TO A VERTICAL BUS ASSEMBLY ON THE LINE SIDE AND BE CABLED FROM THE LOAD SIDE OF THE METER SOCKET TO THE LINE SIDE OF THE TENANT MAIN DISCONNECT.
H. BRANCH DEVICES - CIRCUIT BREAKERS SHALL BE COMMON TRIP FOR SIMULTANEOUS OPENING OF ALL POLES. BREAKERS SHALL HAVE AN OVER-CENTER, TRIP-FREE, TOGGLE-TYPE OPERATING MECHANISM WITH QUICK-MAKE, QUICK-BREAK ACTION AND POSITIVE HANDLE INDICATION. CIRCUIT BREAKERS SHALL BE UL LISTED IN ACCORDANCE WITH UL STANDARD 489 AND SHALL BE RATED FOR THE MAXIMUM VOLTAGE SPECIFIED AND WITH CONTINUOUS CURRENT RATINGS AS NOTED ON THE PLANS. THE CIRCUIT BREAKERS SHALL BE CURRENT LIMITING.
I. COMMERCIAL MULTI-METERING SHALL BE TOTALLY ENCLOSED, DEAD FRONT, FREE-STANDING, FRONT AND REAR ALIGNED. ACCESSIBILITY SHALL BE FROM THE FRONT. THE EQUIPMENT SHALL BE NEMA TYPE 1 OR NEMA TYPE 3R NON-WALK-IN RAINPROOF. THE FRAMEWORK SHALL BE STEEL, SECURED TOGETHER TO SUPPORT ALL COVER PLATES, BUSSING, AND COMPONENT DEVICES DURING SHIPMENT AND INSTALLATION. ALL COVERS SHALL HAVE UTILITY SEALING PROVISIONS WHERE REQUIRED BY THE UTILITY.

2.06 INDIVIDUALLY MOUNTED MOTOR CONTROLLERS

- A. FOR POLYPHASE MOTORS: MAGNETIC STARTER OR COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC STARTER, WITH 3-LEG OVERLOAD PROTECTION. PROVIDE TWO INTERLOCK CONTACTS OF THE INTERCHANGEABLE OPEN-CLOSE TYPE. PROVIDE HAND-OFF-AUTOMATIC SELECTOR SWITCH, MOTOR RUNNING PILOT LIGHT AND RESET BUTTON IN COVER. CIRCUITS 300V AND OVER SHALL BE PROVIDED WITH 120V CONTROL TRANSFORMERS.
B. STARTERS FOR FRACTIONAL HORSEPOWER 120V MOTORS SHALL BE MANUAL TYPE UNLESS SHOWN OTHERWISE, EQUIPPED WITH BUILT-IN OVERLOAD PROTECTION.
C. ACCEPTABLE MANUFACTURERS: GENERAL ELECTRIC, SIEMENS, SQUARE D, WESTINGHOUSE, AND ALLEN BRADLEY.

2.07 DISCONNECT SWITCHES

- A. SAFETY SWITCHES: HEAVY DUTY TYPE, 480 OR 240V, HORSEPOWER RATED FOR MOTORS, FUSED OR NON-FUSED AS REQUIRED.
B. PROVIDE FUSE AS SHOWN IN CONSTRUCTION DOCUMENTS. MOUNT IN ENCLOSURE WITH NEMA RATING AS REQUIRED FOR THE SPECIFIC APPLICATION.
C. ACCEPTABLE MANUFACTURERS: GENERAL ELECTRIC, SQUARE D OR WESTINGHOUSE.

2.08 LOW VOLTAGE DRY TYPE DISTRIBUTION TRANSFORMERS

- A. TRANSFORMER 15KVA UP TO 500 KVA SHALL BE TP-1. TRANSFORMER COILS SHALL BE OF THE CONTINUOUS WOUND CONSTRUCTION. CORE AND COIL SHALL BE OF COPPER. THE COMPLETED CORE AND COIL SHALL BE BOLTED TO THE BASE OF THE ENCLOSURE BUT ISOLATED BY MEANS OF RUBBER VIBRATION-ABSORBING MOUNTS. THERE SHALL BE NO METAL-TO-METAL CONTACT BETWEEN THE CORE AND COIL AND THE ENCLOSURE EXCEPT FOR A FLEXIBLE SAFETY GROUND STRAP. SOUND ISOLATION SYSTEMS REQUIRING THE COMPLETE REMOVAL OF ALL FASTENING DEVICES WILL NOT BE ACCEPTABLE. THE CORE OF THE TRANSFORMER SHALL BE VISIBLY GROUNDING TO THE ENCLOSURE BY MEANS OF A FLEXIBLE GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH APPLICABLE UL AND NEC STANDARDS.
B. THE TRANSFORMER ENCLOSURES SHALL BE VENTILATED AND BE FABRICATED OF HEAVY GAUGE, SHEET STEEL CONSTRUCTION.
C. SOUND LEVELS SHALL BE WARRANTED BY THE MANUFACTURER NOT TO EXCEED THE FOLLOWING -15 TO 50KVA - 45db; 51 TO 150KVA - 50db; 151 TO 300KVA - 55db;

PART 1 GENERAL

1.01 SCOPE OF WORK

A. FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT AND PROVIDE ALL LABOR, TOOLS, TRANSPORTATION, SUPERINTENDENCE AND SERVICES REQUIRED AND NECESSARY TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN. ALSO INCLUDE ALL OTHER WORK AND MISCELLANEOUS ITEMS, NOT SPECIFICALLY MENTIONED, BUT REASONABLY INFERRRED FOR A COMPLETE INSTALLATION INCLUDING ALL ACCESSORIES AND APPURTENANCES REQUIRED FOR TESTING THE SYSTEM. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS THAT ALL SYSTEMS BE COMPLETE, AND READY FOR OPERATION.

1.02 REGULATORY REQUIREMENT

- A. CODE COMPLIANCE IS MANDATORY. NOTHING IN THESE DRAWINGS AND SPECIFICATIONS PERMITS WORK NOT CONFORMING TO THESE CODES. WHERE WORK IS SHOWN TO EXCEED MINIMUM CODE REQUIREMENTS, COMPLY WITH DRAWINGS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST RULES, CODES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
1. OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS (OSHA).
2. NFPA #70: NATIONAL ELECTRIC CODE (NEC).
3. NFPA #01: LIFE SAFETY CODE.
4. STATE FIRE MARSHAL
5. LOCAL UTILITY COMPANIES
6. LANDLORD REQUIREMENTS

1.03 LICENSE, FEES, AND PERMITS

A. ELECTRICAL CONTRACTOR SHALL PAY FOR ALL LICENSES, PERMITS AND INSPECTION FEES REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND SHALL ARRANGE FOR ALL REQUIRED INSPECTIONS.

1.04 SAFETY AND INDEMNITY

A. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. NO ACT, SERVICE, DRAWING REVIEW OR CONSTRUCTION REVIEW BY THE OWNER, THE ENGINEERS OR THEIR CONSULTANTS, IS INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON, OR NEAR THE CONSTRUCTION SITE.

1.05 DRAWINGS AND SPECIFICATIONS

A. ALL DRAWINGS AND ALL DIVISIONS OF THESE SPECIFICATIONS SHALL BE CONSIDERED AS A WHOLE AND WORK OF THIS DIVISION SHOWN ANYWHERE THEREIN SHALL BE FURNISHED UNDER THIS DIVISION. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF EQUIPMENT AND WIRING. MOST DIRECT ROUTING OF CONDUITS AND WIRING IS NOT ASSURED. EXACT REQUIREMENTS SHALL BE GOVERNED BY CONDITIONS OF THE JOB. CONSULT ALL OTHER DRAWINGS IN PREPARATION OF THE BID. EXTRA LENGTHS OF WIRING OR ADDITION OF PULL OR JUNCTION BOXES, ETC., NECESSITATE BY SUCH CONDITIONS SHALL BE INCLUDED IN THE BID.

1.06 CONDITIONS AT SITE

A. VISIT SITE OF THE WORK, COMPARE IT WITH THE DRAWINGS AND SPECIFICATIONS AS TO THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED, ASCERTAIN AND CHECK ALL CONDITIONS AND ELEVATIONS AND TAKE ALL MEASUREMENTS WHICH MAY AFFECT THE WORK. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE FOR ANY EXTRA EXPENSE OR CLAIMS DUE TO FAILURE OR NEGLIGENCE UNDER THIS REQUIREMENT TO MAKE SUCH EXAMINATION, INCLUDING EXAMINATION OF RESTRICTED WORKING CONDITIONS OR SUCH OTHER DIFFICULTIES VISUALLY OBSERVED DURING SITE VISIT. CONTRACTOR IS RESPONSIBLE FOR BECOMING COMPLETELY FAMILIAR WITH THE ARCHITECTURAL AND STRUCTURAL CONDITIONS AND LIMITATIONS WHICH WILL EXIST IN THE BUILDING AND TO PROVIDE ALL LABOR, TOOLS AND MATERIALS REQUIRED TO PRODUCE A COMPLETELY CONCEALED INSTALLATION AS INDICATED ON THE PLANS, SPECIFICATIONS, AND REQUIRED BY THE CODE.

1.07 WORKMANSHIP AND CONTRACTOR'S QUALIFICATIONS

A. ONLY QUALITY WORKMANSHIP WILL BE ACCEPTED. HAPHAZARD OR POOR INSTALLATION WILL BE CAUSE FOR REJECTION OF WORK.

1.08 SUBMITTALS

A. SUBMITTALS, UNLESS OTHERWISE NOTED, SHALL BE A SINGLE PACKAGE OF SIX (6) COPIES SUBMITTED TO OWNER FOR REVIEW. WORK SHALL NOT COMMENCE UNLESS SUBMITTALS HAVE BEEN APPROVED.
B. SUBMIT CUTSHEETS, MATERIAL DATA, AND SHOP DRAWINGS, AS NOTED BELOW. FOR REVIEW WITHIN FIFTEEN (15) DAYS AFTER AWARD OF CONTRACT. SUBMITTALS REQUIRED AS FOLLOWS:

- 1. BASIC ELECTRICAL MATERIALS INCLUDING BUT IS NOT LIMITED TO:
A.) WIRING DEVICES - RECEPTACLES, SWITCHES, FACEPLATES
B.) WIRES, CONNECTORS, TAPES, SPLICES, TERMINATIONS, AND ACCESSORIES
C.) RACEWAYS AND ACCESSORIES
D.) DEVICE IDENTIFICATION
2. ELECTRICAL EQUIPMENT
A.) POWER DISTRIBUTION EQUIPMENT - PANELBOARDS, SWITCHBOARDS, SWITCHGEAR, DISCONNECT SWITCHES, CIRCUIT BREAKERS, TRANSFORMERS, GENERATORS, INVERTERS, UPS, POWER DISTRIBUTION UNITS, ETC.
B.) SERVICE ENTRANCE EQUIPMENT - BUS DUCT, TERMINATION CANS, METERED SWITCHBOARDS, ETC.
3. LIGHTING
A.) LIGHT FIXTURES AND SUPPORT DEVICES
B.) LAMPS AND BALLASTS - INCLUDE BALLASTS CERTIFICATION. BALLAST SHALL HAVE LOCAL DISCONNECTS.
C.) POLES
D.) CONTROLS - OCCUPANCY SENSORS, PHOTOCELL, LIGHTING CONTACTORS, LIGHTING CONTROL PANELS, DIMMERS, ETC.
E.) FIXTURE AND ASSEMBLY WATTAGES
F.) FOR PROJECTS THAT ARE SUBJECT TO CALIFORNIA ENERGY CODES, PROVIDE SUBMITTALS CONFIRMING THAT PRODUCTS SUBMITTED MEET THE REQUIRED MANDATORY MEASURES AS WELL AS MEETS MAXIMUM STATED ENERGY CONSUMPTIONS SHOWN IN TITLE 24 CALCULATIONS.
C. SUBMIT COMPLETE TEST REPORTS AND ANALYSIS FOR REVIEW WITHIN FIFTEEN (15) DAYS AFTER TESTING.
D. FOR LEED PROJECTS, SUBMIT LEED COMPLIANCE FORMS AT VARIOUS STAGES OF THE PROJECTS, OR AS REQUESTED.
E. SUBMIT TITLE 24 COMPLIANCE FORMS AT VARIOUS STAGES OF THE PROJECTS, OR AS REQUESTED.
F. SUBMIT VERIFIED PUNCHLIST TWO (2) WEEKS AFTER ISSUANCE DATE. INDICATE PUNCHLIST ITEMS THAT HAVE BEEN COMPLETED BY CONTRACTOR. INCLUDE DATE FOR REPUNCH.

1.09 SUBSTITUTIONS

- A. ONE OR MORE MAKES OF MATERIALS OR METHODS MAY HAVE BEEN SPECIFIED TO ESTABLISH THE STANDARD OF QUALITY, WORKMANSHIP, FINISH, AND DESIGN REQUIRED, BUT OTHER MATERIALS OR METHODS EQUAL OR BETTER IN QUALITY, WORKMANSHIP, FINISH, DESIGN, AND GUARANTEED PERFORMANCE, MAY BE SUBMITTED FOR REVIEW AND APPROVAL AS SUBSTITUTION. ALL SUBSTITUTIONS ARE SUBJECT TO REVIEW AND APPROVAL BY ARCHITECT, ENGINEER, AND OWNER.
B. SUBSTITUTIONS SHALL BE REQUESTED IN A WRITTEN FORM AND SHALL BE ACCOMPANIED WITH A SIGNED STATEMENT THAT PROPOSED SUBSTITUTION IS EQUAL, OR BETTER THAN SPECIFIED. ADDITIONAL DOCUMENTATION TO SUBSTITUTED PROPOSED SUBSTITUTION MAY BE REQUIRED BY OWNER, ARCHITECT, AND ENGINEER. CONTRACTOR SHALL SUBMIT AS DIRECTED.
C. CONTRACTOR SHALL ACCOMPANY REQUEST FOR SUBSTITUTION LETTER WITH A COMPLETED CSI SUBSTITUTION FORM INCLUDING THE COMPARISON FOR FOLLOWING:
1. ELECTRICAL RATING
2. FINISHES
3. SPARE PARTS
4. PERFORMANCE DATA
5. COSTS AND SCHEDULE
D. A WRITTEN SIGNED STATEMENT FROM THE GENERAL CONTRACTOR SHALL ACCOMPANY SUBSTITUTION REQUEST FORM ASSURING THAT:
1. HE HAS VERIFIED DIMENSIONS WITH PROJECT CONDITIONS AND HAS COORDINATED WITH OTHER TRADES. SUBSTITUTION DOES NOT AFFECT DIMENSIONS SHOWN ON DRAWINGS.
2. HE SHALL PAY AND BURDEN THE COSTS FOR CHANGES TO THE PROJECT INCLUDING RE-DESIGN, RE-ENGINEERING AND REVIEW OF SUBSTITUTION. ONLY ONE (1) ENGINEERING REVIEW TIME IS ALLOWED FOR EACH PRODUCT SUBSTITUTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL REVIEW TIME AND SHALL PAY ARCHITECT AND ENGINEER'S TIME AT THEIR PROFESSIONAL RATE SCHEDULE.
3. HE HAS CONFIRMED THAT THE PROPOSED SUBSTITUTION WILL HAVE NO ADVERSE AFFECT ON OTHER TRADES, THE CONSTRUCTION SCHEDULE, OR SPECIFIED WARRANTY REQUIREMENTS.
4. HE HAS CONFIRMED THAT MAINTENANCE AND SERVICE PARTS WILL BE LOCALLY AVAILABLE FOR THE PROPOSED SUBSTITUTION.
E. COST SAVINGS RESULTING FROM SUBSTITUTION SHALL BE RETURNED TO THE CONTRACTOR OR THE OWNER IF THE SUBSTITUTION IS PERMITTED.
F. NO WORK INVOLVING MATERIALS SUBMITTED FOR SUBSTITUTION SHALL PROCEED UNTIL WRITTEN ACCEPTANCE IS RECEIVED FROM THE OWNER. THE OWNER IS THE FINAL JUDGE OF ACCEPTABILITY OF PREFERRED SUBSTITUTIONS.

1.10 COORDINATION

- A. COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICT AND TO PROVIDE CORRECT ROUGH-IN AND CONNECTION FOR EQUIPMENT FURNISHED UNDER OTHER TRADES THAT REQUIRE ELECTRICAL CONNECTIONS. INFORM CONTRACTORS OF OTHER TRADES OF THE REQUIRED ACCESS TO AND CLEARANCES AROUND ELECTRICAL EQUIPMENT TO MAINTAIN SERVICE ABILITY AND CODE COMPLIANCE.
B. VERIFY EQUIPMENT DIMENSIONS AND REQUIREMENTS WITH PROVISIONS SPECIFIED UNDER THIS SECTION. CHECK ACTUAL JOB CONDITIONS BEFORE FABRICATING WORK. REPORT NECESSARY CHANGES IN TIME TO PREVENT NEEDLESS WORK. CHANGES OR ADDITIONS, SUBJECT TO ADDITIONAL COMPENSATION, WHICH ARE MADE WITHOUT WRITTEN AUTHORIZATION AND AN AGREED PRICE, SHALL BE AT THE CONTRACTOR'S RISK AND EXPENSE.

1.11 CUTTING AND PATCHING

A. ALL CUTTING AND PATCHING REQUIRED FOR WORK OF THIS DIVISION IS INCLUDED HEREIN. COORDINATION WITH GENERAL CONTRACTOR AND OTHER TRADES IS IMPERATIVE. CONTRACTOR SHALL BEAR THE RESPONSIBILITY FOR AND THE ADDED EXPENSE OF ADJUSTING FOR IMPROPER HOLES, SUPPORTS, ETC.

1.12 ACCEPTANCE AND DEMONSTRATION

- A. UPON COMPLETION OF THE WORK, AT A TIME TO BE DESIGNATED BY THE OWNER, THE CONTRACTOR SHALL DEMONSTRATE FOR THE OWNER THE OPERATION OF THE ELECTRICAL INSTALLATION, INCLUDING ANY AND ALL SPECIAL ITEMS INSTALLED BY HIM OR INSTALLED UNDER HIS SUPERVISION.
B. PROPERLY SET LIGHTING CONTROL PANELS, AUTOMATIC TIME SWITCHES, ETC. TO PERFORM SWITCHING OPERATIONS IN ACCORDANCE WITH SCHEDULES PROVIDED BY THE OWNER'S REPRESENTATIVE, AND DEMONSTRATE (USING THE MANUFACTURER'S OPERATING INSTRUCTIONS) HOW TO OVERRIDE CONTROLS AND/OR TEST TIME SWITCHES PROGRAMMING.

1.13 RECORD DRAWINGS AND EQUIPMENT DATA

- A. MAINTAIN ONE SET OF CLEAN WORKING DRAWINGS AT THE JOB SITE AND ENTER DAILY SUCH "AS-BUILT" INFORMATION AS FEEDER AND SERVICE ROUTES, PULL BOX LOCATIONS AND CHANGES IN LAYOUT OR ARRANGEMENT WHICH OCCUR DURING CONSTRUCTION. DELIVER COMPLETED "RED LINE AS-BUILTS" DRAWINGS TO THE OWNER.
B. SUBMIT TO THE OWNER'S REPRESENTATIVE A SET OF "AS BUILT" DRAWINGS IN YELLOW AND CAD FILE. AS BUILT COMMENTS SHALL BE WRITTEN IN A LEGIBLE MANNER IN THE SAME STYLE AS THE CONTRACT DOCUMENTS. ALSO SUBMIT THREE COPIES OF DATA SHEETS OR OTHER CURRENT MANUFACTURERS' PUBLICATIONS FOR EACH ITEM OF ELECTRICAL EQUIPMENT FURNISHED FOR THE PROJECT INCLUDING AT LEAST THESE DATA:
1. TECHNICAL DESCRIPTION AND REPLACEABLE PARTS LIST.
2. PHYSICAL DESCRIPTION AND INSTALLATION INSTRUCTIONS.
3. USER'S MANUAL AND OPERATING INSTRUCTIONS.
4. MANUFACTURER'S WARRANTY.

1.14 CLEAN-UP

A. RIDE THE PREMISES OF SCRAP MATERIALS, TRASH AND DEBRIS BOTH DURING CONSTRUCTION AND AT COMPLETION OF THE PROJECT. LEAVE THE BUILDING AND SURROUNDING AREA IN A CLEAN AND ORDERLY CONDITION.

1.15 GUARANTEE

A. GUARANTEE THE INSTALLATION FREE FROM DEFECTS OF WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER DATE OF CERTIFICATION OF FINAL PAYMENT AND PROMPTLY REMEDY ANY DEFECTS DEVELOPING DURING THIS PERIOD, WITHOUT CHARGE.

1.16 TEMPORARY SERVICES

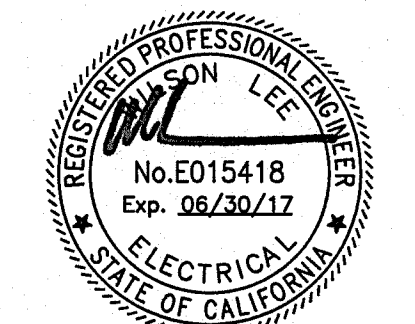
- A. PROVIDE ADEQUATE AND SAFE TEMPORARY ELECTRICAL POWER AND LIGHTING THROUGHOUT THE CONSTRUCTION AND FINISHING OF THE PREMISES. IN ADDITION TO SPECIAL OR UNUSUAL REQUIREMENTS, PROVIDE AT LEAST THESE ITEMS:
1. THREE (3) 20-AMP CIRCUITS FOR CONSTRUCTION POWER TOOLS. PROVIDE GF TEMPORARY CIRCUITS WITH COVERPLATES TO MEET OSHA REQUIREMENTS.
2. THREE OR MORE LIGHT STRINGS SUSPENDED APPROXIMATELY ONE FOOT BELOW THE HEIGHT OF FINISH CEILING WITH LAMPS SPACED NOT MORE THAN TWELVE FEET ON CENTERS. STRINGS SHALL BE RUN THE LENGTH OF THE STORE SPACE PARALLEL TO THE DEMISING WALLS, WITH ONE STRING WITHIN EIGHT FEET OF EACH WALL AND ONE (OR MORE) INTERMEDIATE STRING(S) ARRANGED TO LIMIT THE SPACING BETWEEN ROWS TO SIXTEEN FEET OR LESS.
3. FLOOD LIGHTING AND TASK LIGHTING FOR PAINTING AND OTHER FINISH WORK.
B. WHERE SCOPE INCLUDES THE REMOVAL OF EXTERIOR LIGHTING, CONTRACTOR SHALL PROVIDE TEMPORARY EXTERIOR LIGHTING UNTIL THE NEW EXTERIOR LIGHTING HAS BEEN ACCEPTED BY THE OWNER. TEMPORARY EXTERIOR LIGHTING SHALL COMPLY WITH IESNA STANDARDS FOR SECURITY LIGHTING.
C. WHERE SCOPE INCLUDES THE DISABLING OF A FIRE ALARM SYSTEM, CONTRACTOR SHALL PROVIDE A FIRE WATCH. FIRE WATCH SHALL COMPLY WITH NFPA AND LOCAL FIRE MARSHAL REQUIREMENTS.
D. WHEN PERMANENT ELECTRICAL SERVICE IS OPERABLE, DISCONNECT AND REMOVE FROM THE PREMISES THE MATERIALS AND EQUIPMENT USED FOR TEMPORARY POWER AND LIGHTING. RESTORE MODIFICATIONS AND REPAIR DAMAGE CAUSED BY THE INSTALLATION, USE OR REMOVAL OF TEMPORARY SERVICE PROVISIONS.

DATE ISSUE

12.15.16 ISSUE FOR PERMIT

03.03.17 PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

ELECTRICAL SPECIFICATIONS

SCALE NONE

E0.2B

PART 3 EXECUTION

3.01 GENERAL

- A. ELECTRIC SYSTEM LAYOUTS INDICATED ON THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. GOVERN EXACT ROUTING OF CABLE AND WIRING AND THE LOCATIONS OF OUTLETS BY THE STRUCTURE AND EQUIPMENT SERVED. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS.
B. CONSULT ALL OTHER DRAWINGS, VERIFY SCALES AND REPORT ANY DIMENSIONAL DISCREPANCIES OR OTHER CONFLICTS WITH OWNER BEFORE SUBMITTING BID.
C. ALL HOME RUNS TO PANELBOARDS ARE INDICATED AS STARTING FROM THE OUTLET NEAREST THE PANEL AND CONTINUING IN THE GENERAL DIRECTION OF THAT PANEL. CONTINUE SUCH CIRCUITS TO THE PANEL AS THOUGH THE ROUTES WERE COMPLETELY INDICATED. TERMINATE HOMERUNS OF SIGNAL, ALARM, AND COMMUNICATION SYSTEMS IN A SIMILAR MANNER.
D. AVOID CUTTING AND BORING HOLES THROUGH STRUCTURE OR STRUCTURAL MEMBERS WHEREVER POSSIBLE. OBTAIN PRIOR APPROVAL OF OWNER AND CONFORM TO ALL STRUCTURAL REQUIREMENTS WHEN CUTTING OR BORING THE STRUCTURE IS NECESSARY AND PERMITTED.
E. FURNISH AND INSTALL ALL NECESSARY HARDWARE, HANGERS, BLOCKING, BRACKETS, BRACING, RUNNERS, ETC. REQUIRED FOR EQUIPMENT SPECIFIED UNDER THIS SECTION. INSTALLATION SHALL MEET SEISMIC 4 REQUIREMENTS.
F. PROVIDE NECESSARY BACKING REQUIRED TO INSURE RIGID MOUNTING OF OUTLET BOXES.
G. ELECTRICAL INSTALLATION IN PUBLIC LOCATIONS SHALL BE ACCESSIBLE AND INSTALLATION SHALL COMPLY WITH AMERICAN DISABILITIES ACT (ADA) REQUIREMENTS. ELECTRICAL INSTALLATION SHALL COMPLY WITH APPLICABLE CODES AS LISTED IN CONSTRUCTION DOCUMENTS.

3.02 WIRING METHODS

- A. IN CONCEALED SPACES WHERE THE USE OF "ROMEX" AND "BX" WIRING IS PERMITTED BY ALL APPLICABLE CODES AND REGULATIONS, PROVIDE FACTORY-FABRICATED, PRE-ASSEMBLED UL LABELED TYPE "NMC" AND TYPE "AC" CABLES AS PREFERRED WIRING METHOD FOR BRANCH CIRCUITS. A GROUNDING CONDUCTOR SHALL BE PROVIDED IN EACH CABLE.
B. WHEN CONDITIONS DETERMINED IN "A" ABOVE ARE NOT MET, INSTALL ALL WIRING IN RACEWAY, OR USE MC CABLE WHERE APPROVED BY ALL APPLICABLE CODES AND REGULATIONS. CONDUIT SHALL BE RIGID STEEL, IMC OR EMT AS FOLLOWS:
1. ABOVE GROUND: USE RIGID STEEL, IMC OR EMT.
2. WET LOCATIONS: RIGID STEEL OR IMC ONLY.
3. LOCATIONS SUBJECT TO MECHANICAL INJURY: RIGID STEEL OR IMC ONLY.
4. DRY LOCATIONS AND NOT SUBJECT TO MECHANICAL INJURY: EMT, IMC OR RIGID STEEL CONDUIT.
5. UNDERGROUND: USE RIGID STEEL AT LAST TRANSITION TO ABOVE GROUND.
C. USE FLEXIBLE CONDUITS OR MC CABLE IN THE FOLLOWING APPLICATIONS:
1. FINAL CONNECTIONS TO MOTOR.
2. FINAL CONNECTIONS INTO AND OUT OF THE TRANSFORMER.
3. FINAL CONNECTIONS TO VIBRATING EQUIPMENT.
4. INTER-CONNECTIONS BETWEEN ALL LIGHT FIXTURES (NOT TO INCLUDE HOMERUN FROM FIXTURE OR DEVICE TO PANELBOARD, WHICH MUST BE RIGID).
5. FINAL CONNECTIONS WHERE RIGID CONDUIT IS NOT PRACTICAL.
6. IN WALLS (FOR LIGHT SWITCHES AND 120V POWER RECEPTACLES AND HVAC CONTROL EQUIPMENT).
D. FLEXIBLE METALLIC CONDUIT OR MC CABLE MUST BE THE SAME SIZE AS THE RIGID CONDUIT TO WHICH IT IS CONNECTED.
E. THE CONNECTION TO OUTDOOR EQUIPMENT MUST BE WEATHERPROOF, I.E. LIQUDTIGHT OR SEALTIGHT.
F. MINIMUM SIZE OF CONDUIT SHALL BE 1/2" FOR INDIVIDUAL LIGHTING FIXTURE CONNECTIONS OR TO INDIVIDUAL LIGHT SWITCHES IF APPROVED BY ALL APPLICABLE CODES. MINIMUM SIZE FOR ALL OTHER LOCATIONS SHALL BE 3/4". IF HVAC CONTROL WIRING IS REQUIRED TO BE RUN IN CONDUIT, IT SHALL BE A 3/4" MINIMUM, UNLESS OTHERWISE NOTED ON DRAWINGS. ALL IN/UNDER FLOOR CONDUITS SHALL BE 3/4" MINIMUM SIZE.
G. USE OF RIGID NON METALLIC CONDUIT IS LIMITED TO OUTDOOR, UNDERGROUND UP TO THE LAST PULLBOX PRIOR TO ENTERING OR TRANSITIONING TO ABOVE GROUND. TRANSITION SHALL BE TAPED WRAPPED RIGID STEEL CONDUIT.

3.03 INSTALLATION OF CONDUITS

- A. GENERAL:
1. RUN ALL CONDUITS CONCEALED UNLESS OTHERWISE NOTED OR SHOWN. RUN ALL CONDUIT PARALLEL TO OR AT RIGHT ANGLES TO CENTER LINES OF COLUMNS AND BEAMS. CONDUITS ABOVE CEILINGS SHALL NOT OBSTRUCT REMOVAL OF CEILING TILES, LIGHTING FIXTURES, AIR DIFFUSERS, ETC. CONDUITS SHALL NOT CROSS ANY DUCT SHAFT OR AREA DESIGNATED AS FUTURE DUCT SHAFT HORIZONTALLY. CONDUIT RISERS WHEN ALLOWED IN DUCT SHAFT MUST BE COORDINATED WITH MECHANICAL WORK TO AVOID ANY CONFLICT. CONDUITS SHALL MAINTAIN 5 FEET CLEARANCE IN FRONT OF HVAC SUPPLY AND RETURN OPENINGS. GENERAL USE OF CONDUIT:
a.) RIGID - INSTALL IN TRAFFIC AREA, EXPOSED, FROM FINISHED FLOOR TO 8 FEET
b.) EMT - ABOVE EIGHT FEET OF FINISHED FLOOR, CONCEALED
c.) PVC - UNDERGROUND, NOT ALLOWED IN MEDICAL INSTALLATION
B. CONDUIT SUPPORTS:
1. SUPPORT CONDUITS WITH UNDERWRITER'S LABORATORIES LISTED STEEL CONDUIT SUPPORTS AT INTERVALS REQUIRED BY THE NATIONAL ELECTRIC CODE. WIRES OR SHEET METAL STRIPS ARE NOT ACCEPTABLE FOR CONDUIT SUPPORT. USE CONDUIT HANGERS FOR ALL CONDUITS NOT DIRECTLY FASTENED TO STRUCTURE AND FOR ALL MULTIPLE CONDUIT RUNS. DO NOT ATTACH ANY CONDUIT TO MECHANICAL DUCTS OR PIPES.
2. INDIVIDUAL CONDUITS 1/2" AND 3/4" SIZE FOR LIGHTING MAY BE SUPPORTED FROM CEILING SUPPORT WIRES WITH CADDY CLIPS ONLY IF ACCEPTABLE TO LOCAL CODE. ONLY ONE CONDUIT IS PERMITTED TO BE ATTACHED TO ANY CEILING SUPPORT WIRE. HANG SUCH CONDUIT SO AS NOT TO AFFECT LEVEL OF CEILING.
3. AVOID ATTACHING CONDUIT TO FAN PLENUMS. WHEN IT IS NECESSARY TO SUPPORT CONDUIT FROM FAN PLENUM, PROVIDE A LENGTH OF FLEXIBLE CONDUIT BETWEEN PORTION ATTACHED FAN PLENUM AND PORTION ATTACHED TO THE BUILDING TO MINIMIZE TRANSMISSION OF VIBRATION TO THE BUILDING STRUCTURE.
C. CONDUIT PENETRATION:
1. PENETRATING FIRE RATED FLOOR OR WALL: INSTALL CONDUIT IN CONDUIT SLEEVE OR FRAMED OPENING. SEAL PENETRATION WITH FIRE RETARDANT SEALANT TO MATCH CONSTRUCTION FIRE RATING.
2. PENETRATING ROOF OR EXTERIOR WALL: AVOID PENETRATING ROOF OR EXTERIOR WALL WHERE POSSIBLE. WHERE PENETRATIONS ARE NECESSARY, BUILDING WEATHERPROOF INTEGRITY MUST BE PRESERVED.
3. PENETRATING SOUND INSULATED OR AIR PLENUM WALL: INSTALL CONDUIT IN CONDUIT SLEEVE AND SEAL PENETRATION AS DETAILED ON THE DRAWINGS.
4. PENETRATING NON-FIRE RATED DRY WALL: CONDUIT SLEEVES ARE NOT REQUIRED. PENETRATIONS MUST BE SEALED WITH PLASTER PRIOR TO PAINTING. PENETRATIONS MADE AFTER WALL FINISH IS APPLIED MUST BE AS SMALL AS POSSIBLE AND PROVIDED WITH ESCUTCHEONS, ONE ON EACH SIDE OF WALL.
5. PENETRATING SUSPENDED CEILING: CUT HOLE AS SMALL AS POSSIBLE TO PERMIT CONDUIT PENETRATION. PROVIDE ESCUTCHEON FOR EACH CONDUIT BELOW CEILING.

3.04 CONNECTIONS TO EQUIPMENT

- A. GENERAL
1. FURNISH AND INSTALL REQUIRED POWER SUPPLY CONDUIT AND WIRING TO ALL EQUIPMENT IDENTIFIED IN THE CONSTRUCTION DOCUMENTS.
2. FURNISH AND INSTALL A DISCONNECT SWITCH IMMEDIATELY AHEAD OF AND ADJACENT TO EACH MAGNETIC MOTOR STARTER OR APPLIANCE UNLESS THE MOTOR APPLIANCE IS LOCATED ADJACENT AND WITHIN SIGHT OF THE SERVING PANELBOARD, CIRCUIT BREAKER OR SWITCH. VERIFY ALL EQUIPMENT NAMEPLATE CURRENT RATINGS PRIOR TO INSTALLATION.
3. INSTALL ALL ROUGH-IN WORK FOR EQUIPMENT FROM APPROVED SHOP DRAWINGS TO SUIT THE SPECIFIC REQUIREMENTS OF THE EQUIPMENT.
4. FURNISH AND INSTALL MANUAL THERMAL PROTECTION FOR ALL MOTORS NOT INTEGRALLY EQUIPPED WITH THERMAL PROTECTION.
5. FURNISH 120 VOLT POWER TO EACH CONTROL PANEL AND TIME SWITCH REQUIRING A SOURCE OF POWER TO OPERATE.

3.05 INSTALLATION OF WIRES

- A. PULL NO WIRE INTO ANY PORTION OF THE CONDUIT SYSTEM UNTIL ALL CONSTRUCTION WORK WHICH MIGHT DAMAGE THE WIRE HAS BEEN COMPLETED.
B. INSTALL ALL WIRE CONTINUOUS FROM OUTLET TO OUTLET OR TERMINAL TO TERMINAL. SPLICES IN CABLES WHEN REQUIRED SHALL BE MADE IN HANDHOLES, PULL BOXES OR JUNCTION BOXES. MAKE BRANCH CIRCUIT SPLICES IN OUTLET BOXES WITH 8" OF CORRECTLY COLOR-CODED TAILS LEFT IN THE BOX.
C. SPLICES IN WIRES AND CABLES SHALL BE MADE UTILIZING MATERIALS AND METHODS DESCRIBED HEREIN BEFORE.
D. MAKE ALL GROUND, NEUTRAL AND LINE CONNECTIONS TO RECEPTACLE AND WIRING DEVICE TERMINALS AS RECOMMENDED BY MANUFACTURE. PROVIDE GROUND JUMPER FROM OUTLET BOX TO GROUND TERMINAL OF DEVICES WHEN THE DEVICE IS NOT APPROVED FOR GROUNDING THROUGH THE MOUNTING SCREWS.
E. PROVIDE BRADY WIRE MARKERS WHERE NUMBER OF CONDUCTORS IN A BOX EXCEEDS FOUR.

3.06 WIRE COLOR CODE:

- A. COLOR CODING SHALL BE CONTINUOUS FOR WIRE #12 THROUGH #10 AWG. PHASE CONDUCTORS #8 AND LARGER AND CONDUCTORS OF ANY SIZE IN CABLE ASSEMBLIES MAY HAVE COLORED PHASING TAPE AT TERMINATIONS. COLOR CODE WIRES AS FOLLOWS:
1. VOLTAGE 120/208V
A.) PHASE A BLACK
B.) PHASE B RED
C.) PHASE C BLUE
D.) NEUTRAL WHITE
E.) GROUND GREEN
F.) ISOLATED GROUND GREEN WITH ORANGE STRIPE
2. VOLTAGE 277/480V
A.) PHASE A BROWN
B.) PHASE B ORANGE
C.) PHASE C YELLOW
D.) NEUTRAL GRAY
E.) GROUND GREEN
F.) ISOLATED GROUND GREEN WITH ORANGE STRIPE

3.07 IDENTIFICATION

- A. PROVIDE NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT AND ALL SIMILAR EQUIPMENT AND DEVICES. NAMEPLATES SHALL BE SCREWED (NO ADHESIVES) ENGRAVED BAKELITE OR PHOTO-ETCHED METALLIC NAMEPLATE IDENTIFICATION SHOWING PANEL DESIGNATION, VOLTAGE AND PHASE IN MINIMUM 1/4" HIGH LETTERS.
B. PROVIDE DEMO LABELS ON ALL LIGHTING SWITCHES AND CONVENIENCE AND SPECIAL PURPOSE RECEPTACLES TO SHOW PANEL AND CIRCUIT NUMBER TO WHICH THE DEVICE IS CONNECTED.
C. EACH PANELBOARD SHALL CONTAIN A METAL-FRAMED CIRCUIT DIRECTORY INSIDE COVER, WITH PLASTIC PROTECTOR.
D. PANELBOARD SCHEDULE: AFTER COMPLETION OF WORK, PROVIDE ELECTRONIC UPDATED PANELBOARD SCHEDULES FOR ALL PANELBOARDS. USE EXCEL FORMAT.

3.08 GROUNDING

- A. ELECTRICAL SERVICE AND SEPARATELY DERIVED ALTERNATING CURRENT SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH NEC 2011, ARTICLE 250.
B. GROUND NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT ENCLOSURES, FRAMES, CONDUCTOR RACEWAYS OR CABLE TRAYS TO PROVIDE A LOW IMPEDANCE PATH FOR LINE-TO-GROUND FAULT CURRENT AND TO BAND ALL NON-CURRENT CARRYING METAL PARTS TOGETHER. PROVIDE GROUND CONDUCTOR IN EACH RACEWAY SYSTEM IN ADDITION TO CONDUCTORS SHOWN. EQUIPMENT GROUND CONDUCTOR SHALL BE ELECTRICALLY AND MECHANICALLY CONTINUOUS FROM THE ELECTRICAL CIRCUIT SOURCE TO THE EQUIPMENT TO BE GROUNDED. SIZE GROUND CONDUCTORS PER NEC 2011 UNLESS LARGER CONDUCTORS ARE SHOWN ON DRAWINGS.
C. GROUNDING CONDUCTORS SHALL BE IDENTIFIED WITH GREEN INSULATION. WHERE GREEN INSULATION IS NOT AVAILABLE ON LARGER SIZES, BLACK INSULATION SHALL BE USED AND SUITABLY IDENTIFIED WITH GREEN TAPE AT EACH JUNCTION BOX OR DEVICE ENCLOSURE.

3.09 REMODELING WORK

- A. EXISTING ELECTRICAL WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO OPERATING CONDITION. WHERE CONSTRUCTION CHANGES REQUIRE, OUTLETS AND CONDUIT RUNS SHALL BE RELOCATED.
B. EXTEND CONDUITS AND PULL IN NEW WIRING OR INSTALL JUNCTION BOXES AND SPLICE IN NEW WIRING.
C. WHERE CONDUITS EXTENDING THROUGH FLOORS ARE TO BE ABANDONED, THE CONTRACTOR SHALL CUT AND CAP OR PLUG CONDUIT, AND THE CONDUIT SHALL NOT PROTRUDE ABOVE THE FLOOR.
D. WHERE EXISTING CONDUIT IS TO BE ABANDONED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED, IN A CRAWL SPACE OR IN ACCESSIBLE CEILING. WHERE IT IS IMPOSSIBLE TO REMOVE THE CONDUIT, IT SHALL BE CUT OFF AND CAPPED OR PLUGGED.
E. REMOVE ALL EXISTING WIRING NOT REUSED OR REQUIRED TO MAINTAIN CONTINUITY TO CIRCUITS TO REMAIN.
F. THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIRS DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED.
G. RESTOP ALL PENETRATIONS.
H. MAINTAIN CIRCUIT CONTINUITY TO AREAS OUTSIDE OF THIS WORK. PROVIDE NEW CONDUIT AND CONDUCTORS AS REQUIRED TO MAINTAIN CONTINUITY AND MAINTAIN AREA AS EXISTING.

3.10 ELECTRICAL ACCEPTANCE TESTING

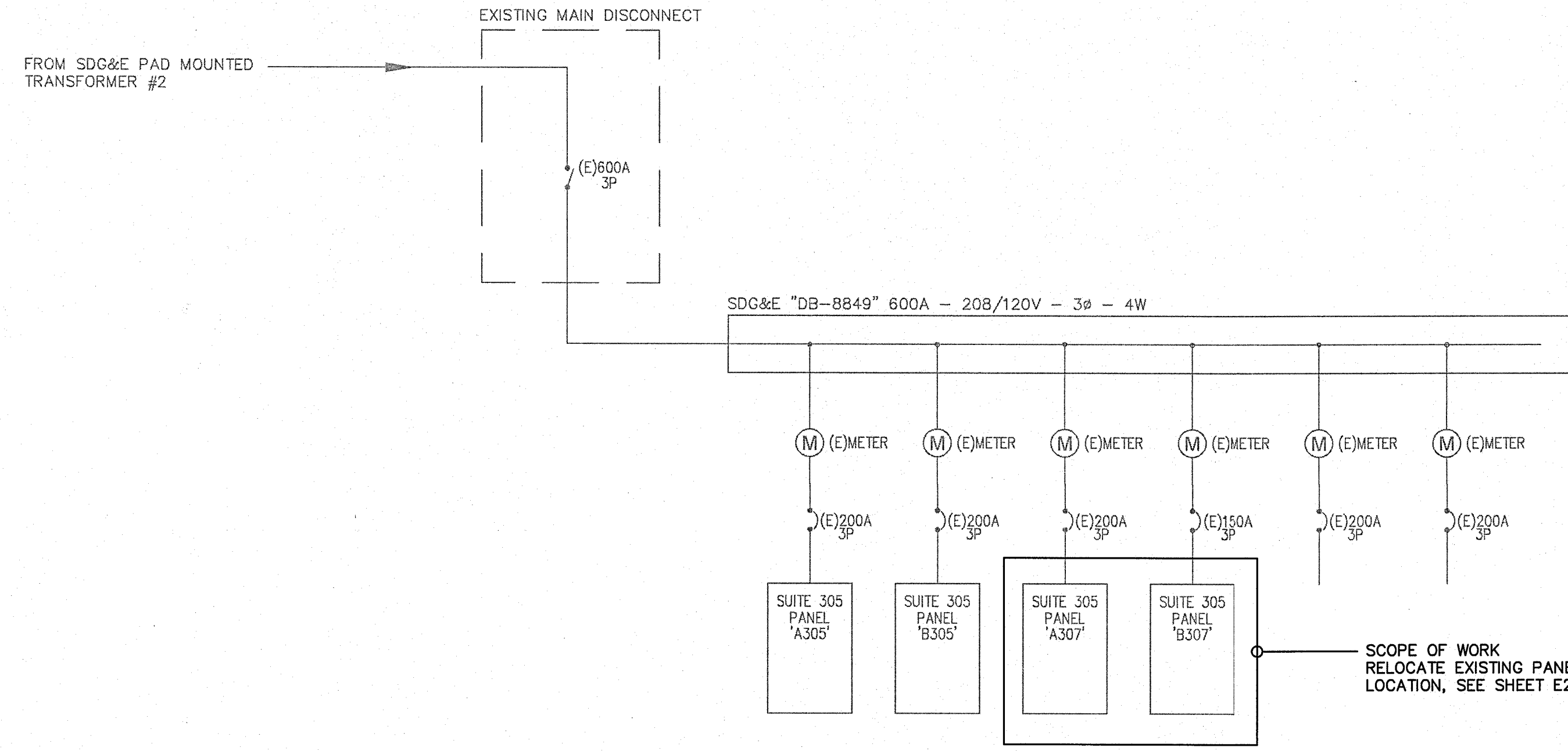
- A. PERFORM PHYSICAL AND VISUAL INSPECTION OF ELECTRICAL INSTALLATION. ENSURE THAT ALL WIRES HAVE BEEN TERMINATED, CONNECTIONS TIGHTENED, AND OPENINGS ARE PROTECTED.
B. PERFORM PHASE ROTATION, CONTINUITY TEST, AND PHASE BALANCE
1. VOLTAGE READINGS SHALL BE TAKEN AT VARIOUS TEST POINTS, OR AT THE DISCRETION OF THE AHI.
2. VOLTAGE, PHASE, AND AMP READINGS SHALL BE TAKEN ON ALL THREE PHASES UNDER LOAD CONDITIONS.
3. VERIFY THAT MOTORS ARE ROTATING IN THE CORRECT DIRECTION. VERIFY THAT EACH PHASE LOAD IS WITHIN 20% OF EACH OTHER. ADJUST AS NECESSARY.
C. INSULATION TEST
1. PERFORM MEGGER AND RECORD INSULATION RESISTANCE, 1000 VOLT MEGGER FOR ONE MINUTE. MAKE TESTS WITH CIRCUITS ISOLATED FROM SOURCE AND LOAD.
A.) 600V CONDUCTORS SIZE #4/0 AND LARGER
B.) MCC, SWITCHGEAR, SWITCHBOARD, AND PANELBOARD BUSS BARS
C.) MOTOR AND TRANSFORMER WINDINGS
D. TESTING SHALL BE PER NEMA ACCEPTANCE STANDARDS.
E. SUBMIT TEST RESULTS TO ENGINEER. EQUIPMENT THAT HAVE FAILED TESTS SHALL BE REPLACED WITHIN 2 WEEKS AND PRIOR TO PROJECT COMPLETION.

END OF SECTION

VOLTAGE DROP CALCULATION (208/120V SYSTEM)

BRANCH CIRCUIT: 3% MAX							
LOAD PER PHASE (KVA)	MAXIMUM SIZE CB (A)	WIRE SIZE (AWG)	GROUND WIRE SIZE (AWG)	MAXIMUM LENGTH OF BRANCH CIRCUIT PER UTILIZATION VOLTAGE			NOTES AND REMARKS
				(120V, 1PH)	(208V, 1PH)	(208V, 3PH)	
< 1.92	20	#12	#12	56 FT.	85 FT.	98 FT.	A
		#10	#10	94 FT.	141 FT.	163 FT.	A
		#8	#8	144 FT.	217 FT.	250 FT.	A
< 1.44	20	#6	#6	230 FT.	345 FT.	398 FT.	A
		#12	#12	75 FT.	113 FT.	130 FT.	A
		#10	#10	125 FT.	188 FT.	217 FT.	A
< 1.26	20	#8	#8	192 FT.	289 FT.	334 FT.	A
		#6	#6	308 FT.	460 FT.	531 FT.	A
		#12	#12	85 FT.	129 FT.	149 FT.	
< 1.08	20	#10	#10	143 FT.	215 FT.	248 FT.	
		#8	#8	220 FT.	330 FT.	381 FT.	
		#12	#12	100 FT.	150 FT.	173 FT.	
< 0.9	20	#10	#10	167 FT.	250 FT.	289 FT.	
		#8	#8	256 FT.	385 FT.	445 FT.	
		#12	#12	120 FT.	180 FT.	208 FT.	
< 0.72	20	#10	#10	200 FT.	300 FT.	347 FT.	
		#12	#12	150 FT.	225 FT.	260 FT.	
		#10	#10	250 FT.	375 FT.	434 FT.	

- CONTRACTOR SHALL REFER TO THIS TABLE PRIOR TO START OF BRANCH CIRCUIT ROUGH-IN.
 - CONTRACTOR SHALL USE THE APPROPRIATE WIRE SIZE IN CONJUNCTION WITH THE LENGTH OF THE PROPOSED FIELD VERIFIED ROUTING OF BRANCH CIRCUIT WIRING (INCLUDING VERTICAL & LATERAL RUN, ROUTED PARALLEL / PERPENDICULAR TO THE BUILDING STRUCTURE).
SEE PANEL SCHEDULE FOR THE CORRESPONDING KVA LOAD PER PHASE OF A PARTICULAR BRANCH CIRCUIT.
 - RESISTANCE VALUES ARE FOR UNCOATED COPPER WIRES IN STEEL CONDUIT, 75 DEGREE C., OPERATING AT 60 HZ.
- NOTES:
A = THE VALUES IN "120V, 1PH" COLUMN IS TO BE USED FOR GENERAL PURPOSE RECEPTACLE LOADS.



VOLTAGE DROP TABLE

SCALE NTS 3

SINGLE LINE DIAGRAM

SCALE NTS 2

PANEL: LA		VOLTAGE	WIRE	MOUNTING	SURFACE	NOTES			
		BUS RATING: 200A	PHASE 3	AIC RATING: EXISTING	EXISTING	PREVIOUSLY			
		MAIN REQUIREMENT: 200A MCB	TYPE 1	CONDITION: EXISTING	EXISTING	A307			
CKT#	NOTES	LOAD CB P T	LOAD DESCRIPTION	LOAD KVA	PHASE	LOAD DESCRIPTION	CB P T	LOAD NOTES	CKT#
1	*	C 1 20	LTG - DAYLIGHT / ORDER AHEAD / BARISTA	0.68	A	DUCT SMOKE DETECTOR	1 20	G ***	2
3	**	C 1 20	LTG - SEATING AREA	0.41	B	TENANT SIGN	1 20	C ***	4
5	**	C 1 20	LTG - SCULLERY / STORAGE / OPERATION	0.30	C	CONVEYOR TOASTER (ITEM #16)	2 20	K ***	6
7	**	C 1 20	LTG - EXTERIOR	0.10	A		1 20	K **	8
9	**	K 1 20	REC - ICE MACHINE (ITEM #5B)	1.73	B	SPARE	1 20	**	10
11	**	K 1 20	REC - ICE MACHINE (ITEM #5B)	1.73	C	SPARE	1 20	**	12
13	**	G 1 20	REC - POINT OF SALE (ITEM #7)	0.36	A	WATER TOWER (ITEM #2)	2 35	K **	14
15	**	K 2 40	TURBO CHEF OVEN (ITEM #17)	3.12	B	WATER TOWER (ITEM #2)	- -	K **	16
17	**	K - -	- - -	3.12	C	WATER TOWER (ITEM #2)	2 35	K **	18
19	**	K 3 20	DITTING GRINDER (ITEM #3)	1.36	A	WATER TOWER (ITEM #2)	- -	K **	20
21	**	K - -	- - -	1.36	B	WATER TOWER (ITEM #2)	2 35	K **	22
23	**	K - -	- - -	1.36	C	WATER TOWER (ITEM #2)	- -	K **	24
25	**	K 3 20	DITTING GRINDER (ITEM #3)	1.36	A	WATER TOWER (ITEM #2)	2 35	K **	26
27	**	K - -	- - -	1.36	B	WATER TOWER (ITEM #2)	- -	K **	28
29	**	K - -	- - -	1.36	C	WATER TOWER (ITEM #2)	2 35	K **	30
31	**	K 3 20	DITTING GRINDER (ITEM #3)	1.36	A	WATER TOWER (ITEM #2)	- -	K **	32
33	**	K - -	- - -	1.36	B	WATER TOWER (ITEM #2)	2 35	K **	34
35	**	K - -	- - -	1.36	C	WATER TOWER (ITEM #2)	- -	K **	36
37	**	K 3 20	DITTING GRINDER (ITEM #3)	1.36	A	12KW WATER HEATER	3 60	C **	38
39	**	K - -	- - -	1.36	B	WATER TOWER (ITEM #2)	- -	C **	40
41	**	K - -	- - -	1.36	C	WATER TOWER (ITEM #2)	- -	C **	42

CONNECTED LOAD:				DEMAND LOAD CALCULATION			
PHASE A	24.16	KVA	DEMAND LOAD	SUBTOTAL	NEC DEMAND FACTOR	TOTAL DEMAND KVA	37.57
PHASE B	27.96	KVA	CONTINUOUS LOAD (C)	14.69	125%	AMPS @ 120/208, 3 PHASE, 4WIRE	104.28
PHASE C	28.06	KVA	DEDICATED LOAD (D)	0.00	100%		
TOTAL	80.18	KVA	GENERAL RECEPTACLE (G)	0.46	100% of 1st 10KVA & 50% of remaining		
			KITCHEN EQUIPMENT (K)	28.84	65%		
			MOTOR LOAD (MML)	0.00	125% of largest motor load + 100% remaining		

NOTES:
* EXISTING BREAKER TO BE REUSED, FIELD VERIFY
** PROVIDE NEW BREAKER AS INDICATED
*** EXISTING BREAKER & LOAD TO REMAIN, FIELD VERIFY

PANEL: LB		VOLTAGE	WIRE	MOUNTING	SURFACE	NOTES			
		BUS RATING: 150A	PHASE 3	AIC RATING: EXISTING	EXISTING	PREVIOUSLY			
		MAIN REQUIREMENT: 150A MCB	TYPE 1	CONDITION: EXISTING	EXISTING	B307			
CKT#	NOTES	LOAD CB P T	LOAD DESCRIPTION	LOAD KVA	PHASE	LOAD DESCRIPTION	CB P T	LOAD NOTES	CKT#
1	**	G 1 20	REC - TIME CARD / SURVEY (ITEM # 9, 10)	0.36	A	REC - COLD CASE (ITEM #19)	1 20	K **	2
3	**	G 1 20	REC - IT RACK (ITEM #12)	0.36	B	REC - COLD CASE (ITEM #19)	1 20	K **	4
5	**	G 1 20	REC - SHOW WINDOW	0.54	C	REC - PRINTER	1 20	G **	6
7	**	G 1 20	REC - RESTROOM	0.36	A	REC - PREP TABLE (ITEM # 13)	1 20	K **	8
9	**	G 1 20	REC - SEATING AREA	1.26	B	SPARE	1 20	K **	10
11	**	D 1 20	RO SYSTEM	0.36	C	REC - REFRIGERATOR (ITEM #14)	1 20	K **	12
13	**	D 1 20	RECIRCULATION PUMP	0.18	A	REC - UNDER COUNTER FRIDGE (ITEM #15)	1 20	K **	14
15	**	G 1 20	REC - BACK-UP GRINDER	0.36	B	REC - UNDER COUNTER FRIDGE (ITEM #15)	1 20	K **	16
17	**	G 1 20	REC - BACK-UP GRINDER	0.36	C	REC - UNDER COUNTER FRIDGE (ITEM #15)	1 20	K **	18
19	**	G 1 20	REC - OPERATIONS	0.18	A	REC - UNDER COUNTER FRIDGE (ITEM #15)	1 20	K **	20
21	**	G 1 20	REC - TELE BOARD	0.36	B	REC - ORDER AHEAD	1 20	G **	22
23	**	G 1 20	REC - SCALE (ITEM # 6)	0.36	C	SPARE	1 20	**	24
25	**	1 20	SPARE		A	SPARE	1 20	**	26
27	**	1 20	SPARE		B	SPARE	1 20	**	28
29	**	G 1 20	REC - RTU SERVICE RECEPT.	0.36	C	SPACE			30
31	*	M		3.15	A	SPACE			32
33	*	M	3 40 RTU-3-1	3.15	B	SPACE			34
35	*	M		3.15	C	SPACE			36
37	*	ML		3.15	A	SPACE			38
39	**	ML	3 40 RTU-3-2	3.15	B	SPACE			40
41	**	ML		3.15	C	SPACE			42

CONNECTED LOAD:				DEMAND LOAD CALCULATION			
PHASE A	11.14	KVA	DEMAND LOAD	SUBTOTAL	NEC DEMAND FACTOR	TOTAL DEMAND KVA	29.82
PHASE B	10.89	KVA	CONTINUOUS LOAD (C)	0.00	125%	AMPS @ 120/208, 3 PHASE, 4WIRE	82.77
PHASE C	10.57	KVA	DEDICATED LOAD (D)	0.54	100%		
TOTAL	32.61	KVA	GENERAL RECEPTACLE (G)	5.22	100% of 1st 10KVA & 50% of remaining		
			KITCHEN EQUIPMENT (K)	7.97	65%		
			MOTOR LOAD (MML)	18.88	125% of largest motor load + 100% remaining		

NOTES:
L - PROVIDE LOCK ON DEVICE
* EXISTING BREAKER TO BE REUSED, FIELD VERIFY
** PROVIDE NEW BREAKER AS INDICATED

PANEL SCHEDULES

SCALE NTS 1

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION


SINGLE LINE & PANEL SCHEDULES

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
 CEC-NRCC-LTI-03-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

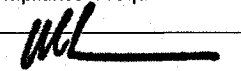
CERTIFICATE OF COMPLIANCE NRCC-LTI-03-E
 Certificate of Compliance - Indoor Lighting Power Allowance (Page 4 of 4)

Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Wilson Lee
 Signature: 
 Company: ACIES Engineering
 Address: 3371 Olcott Street
 City/State/Zip: Santa Clara, CA 95054
 Phone: (408) 522 - 5255
 Signature Date: 2016-12-15
 CEA Certification Identification (if applicable):

RESPONSIBLE PERSON'S DECLARATION STATEMENT
 I certify the following under penalty of perjury, under the laws of the State of California:
 1. The information provided on this Certificate of Compliance is true and correct.
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Wilson Lee
 Signature: 
 Company: ACIES Engineering
 Address: 3371 Olcott Street
 City/State/Zip: Santa Clara, CA 95054
 Phone: (408) 522 - 5255
 Signature Date: 2016-12-15
 License: E-015418

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

STATE OF CALIFORNIA
LINE-VOLTAGE TRACK LIGHTING WORKSHEET
 CEC-NRCC-LTI-05-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-LTI-05-E
 Indoor Lighting - Line-Voltage Track Lighting Worksheet (Page 1 of 2)

Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15

There are four different methods available for determining how many watts of line-voltage track or line-voltage busway has been installed. One or more methods may be used to determine how many watts of line-voltage track or line-voltage busway has been installed. Use this worksheet to separately calculate the input wattage for each system.
 Separately enter each row of this worksheet into the Luminaire Schedule in section C of NRCC-LTI-01-E
 Method 1 is the only option available for determining wattage for track or busway rated for more than 20 amperes

METHOD 1 - VOLT-AMPERE (VA) RATING OF THE BRANCH CIRCUIT(S)

A	B
BRANCH CIRCUIT NAME OR ID	VOLT-AMPERE (VA) RATING OF THE BRANCH CIRCUIT

METHOD 2 - USE THE HIGHER OF 45 WATTS PER LINEAR FOOT OF TRACK OR TOTAL RATED WATTAGE OF ALL LUMINAIRES

A	B	C	D	E	F
Track or Name #	Linear Feet of Track	(W/LF)	B x C (W)	TOTAL RATED WATTAGE OF ALL LUMINAIRES	LARGER OF (D or E)
		45	0		
		45	0		
		45	0		

METHOD 3 - USE THE HIGHER OF: 12.5 WATTS / LINEAR FOOT OF TRACK - OR VA RATING OF INTEGRAL CURRENT LIMITER
 Only integral current limiters which are certified to the Energy Commission shall be recognized by the Standards.
 This method shall not be recognized if an Installation Certificate is not submitted.

A	B	C	D	E	F
Track or Name #	Linear Feet of Track	(W/LF)	B x C (W)	VA Rating of Integral Current Limiter	Larger of (D or E)
		12.5	0		
		12.5	0		
		12.5	0		

METHOD 4 - DEDICATED TRACK LIGHTING SUPPLEMENTARY OVERCURRENT PROTECTION PANEL
 This method shall not be recognized if an Installation Certificate is not submitted.
 This method shall be used only for line-voltage track lighting, and shall not be recognized for any other lighting systems. If any other lighting systems or devices are installed, the supplementary overcurrent protection panel shall not be recognized for compliance with the Standards

A	B	C	D
NAME OR ID	Voltage of the Branch Circuit	Sum of the Ampere Rating of all Devices Installed in the Panel	Wattage = Sum of the Ampere Ratings of all of the Devices Times The Branch Circuit Voltage (B x C)
Panel-TCL	120	3	120 * 3 = 360

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

STATE OF CALIFORNIA
LINE-VOLTAGE TRACK LIGHTING WORKSHEET
 CEC-NRCC-LTI-05-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

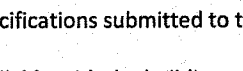
CERTIFICATE OF COMPLIANCE NRCC-LTI-05-E
 Indoor Lighting - Line-Voltage Track Lighting Worksheet (Page 2 of 2)

Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Wilson Lee
 Signature: 
 Company: ACIES Engineering
 Address: 3371 Olcott Street
 City/State/Zip: Santa Clara, CA 95054
 Phone: (408) 522 - 5255
 Signature Date: 2016-12-15
 CEA Certification Identification (if applicable):

RESPONSIBLE PERSON'S DECLARATION STATEMENT
 I certify the following under penalty of perjury, under the laws of the State of California:
 1. The information provided on this Certificate of Compliance is true and correct.
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Wilson Lee
 Signature: 
 Company: ACIES Engineering
 Address: 3371 Olcott Street
 City/State/Zip: Santa Clara, CA 95054
 Phone: (408) 522 - 5255
 Signature Date: 2016-12-15
 License: E-015418

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

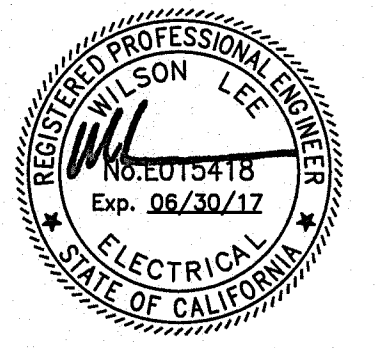
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PHILZ COFFEE
 8849 VILLA LA JOLLA VILLAGE DR, #307
 SAN DIEGO, CA
 JOB NUMBER:
 216088

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

TITLE-24 FORMS
 SCALE
 E0.4C

STATE OF CALIFORNIA
Electrical Power Distribution
 CEENRCC-ELC-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-ELC-01-E
 Electrical Power Distribution Page 1 of 6
 Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15

A. General Information
 Project Address: 8849 Villa La Jolla Village Dr., #307, San Diego, CA Climate Zone: 7 Conditioned Floor Area: 1,493 Unconditioned Floor Area:
 Building Type: Nonresidential High-Rise Residential Hotel/Motel
 Schools Relocatable Public Schools Conditioned Spaces Unconditioned Spaces
 Phase of Construction: New Construction Addition Alteration

B. Electrical Service Metering
 Each newly installed electrical service (in both existing and newly constructed buildings) is required to be metered, as set out in Table 130.5-A, which is reproduced below.
 Fill out a separate line for each electrical service that is connected to the building.

Electrical Service Schedule	Electrical Service Rating	Metering Capabilities (check all that are present)					Field Inspector
A	B	C	D	E	F	G	
Designation/location in building/description	kVA	Instantaneous (at the time) kW demand	Historical peak demand (kW)	Resettable kWh	kWh per rate period	Pass	Fail

Table 130.5-A: MINIMUM REQUIREMENTS FOR METERING OF ELECTRICAL LOAD

Meter Rating (kVA)	50 kVA or less	More than 50 kVA and less than or equal to 250 kVA	More than 250 kVA and less than or equal to 1000 kVA	Services rated more than 1000 kVA
Instantaneous (at the time) kW demand	Required	Required	Required	Required
Historical peak demand (kW)	Not required	Not required	Required	Required
Resettable kWh	Required	Required	Required	Required
kWh per rate period	Not required	Not required	Not required	Required

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

STATE OF CALIFORNIA
Electrical Power Distribution
 CEENRCC-ELC-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-ELC-01-E
 Electrical Power Distribution Page 2 of 6
 Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15

C. Disaggregation of Electrical Circuits
 Each newly installed switchboard, panel, and motor control center (in both existing and newly constructed buildings) is required to be disaggregated according to the requirements of Table 130.5-B, shown on the next page.
 Individual branch circuits, taps, or disconnects that require overcurrent protection devices rated 60A or greater.
 As an alternative, current transformers can be added for additional branch circuits and loads throughout the building, and a permanent measurement system can be installed. In this case, disaggregated wiring would not be required as long as the metering system allows the equivalent disaggregated measurements.
 Fill out a separate line for each switchboard, motor control center, panelboard and subpanel.

Switchboard, motor control center, panelboard or subpanel	Electrical Service that supplies that switchboard or panel	Electrical Service Rating	Pass	Fail
A	B	C	D	E
Designation/location in building/description	Designation/location in building/description	kVA		

OR

Current transformers have been attached to individual branch circuits and loads throughout the building, and a permanent measurement system is installed that allows an equivalent degree of disaggregated measurements as required by the Standards.

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

STATE OF CALIFORNIA
Electrical Power Distribution
 CEENRCC-ELC-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-ELC-01-E
 Electrical Power Distribution Page 3 of 6
 Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15

D. Disaggregation of Electrical Circuits (continued)

Table 130.5-B - MINIMUM REQUIREMENTS FOR SEPARATION OF ELECTRICAL LOAD

Table 130.5-B sets the upper limit on how many load(s) of each type can be supplied by each feeder. A feeder may not supply loads of more than one type unless the service is rated at 50 kVA or less. For instance, on the fifth row of the table, one feeder on a service >50 kVA could be used to supply all the plug loads on a floor of a building, provided that there are no areas in which more than 25kVA of plug load is supplied to a space less than 5000sf

Load Type	Services rated 50 kVA or less	Services rated more than 50kVA and less than or equal to 250 kVA	Services rated more than 250 kVA and less than or equal to 1000kVA	Services rated more than 1000kVA
Lighting including exit and egress lighting and exterior lighting	Not required	All lighting in aggregate	All lighting disaggregated by floor, type or area	All lighting disaggregated by floor, type or area
HVAC systems and components including chillers, fans, heaters, furnaces, package units, cooling towers, and circulation pumps associated with HVAC	Not required	All HVAC in aggregate	All HVAC in aggregate and each HVAC load rated at least 50 kVA	All HVAC in aggregate and each HVAC load rated at least 50kVA
Domestic and service water system pumps and related systems and components	Not required	All loads in aggregate	All loads in aggregate	All loads in aggregate
Plug load including appliances rated less than 25 kVA	Not required	All plug load in aggregate exceeding 25 kVA connected load in an area less than 5000 sf	All plug load separated by floor, type or area exceeding 25 kVA connected load in an area less than 5000 sf	All plug loads separated by floor, type or area. All groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf
Elevators, escalators, moving walks, and transit systems	Not required	All loads in aggregate	All loads in aggregate	All loads in aggregate
Other individual non-HVAC loads or appliances rated 25kVA or greater	Not required	All	Each	Each
Industrial and commercial load centers 25 kVA or greater including theatrical lighting installations and commercial kitchens	Not required	All	Each	Each
Renewable power source (net or total)	Each group	Each group	Each group	Each group
Loads associated with renewable power source	Not required	All loads in aggregate	All loads in aggregate	All loads in aggregate
Charging stations for electric vehicles	All loads in aggregate	All loads in aggregate	All loads in aggregate	All loads in aggregate

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

STATE OF CALIFORNIA
Electrical Power Distribution
 CEENRCC-ELC-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-ELC-01-E
 Electrical Power Distribution Page 4 of 6
 Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15

E. Voltage Drop
 Attach voltage drop worksheet to this form.
 Field inspector has discretion to approve the worksheets; the tables shown below in this section are advisory only.
 Feeder conductors and branch circuits that are dedicated to emergency services are exempt from these requirements.
 An advisory table of typical power factors is shown below

Field Inspector	Pass	Fail
Feeders. Feeder conductors shall be sized for a maximum voltage drop of 2 percent at design load.	<input type="checkbox"/>	<input type="checkbox"/>
Branch Circuits. Branch circuit conductors shall be sized for a maximum voltage drop of 3 percent at design load.	<input type="checkbox"/>	<input type="checkbox"/>

Compliance Manual, Chapter 8, Table 8.2: Typical Power Factors for Voltage Drop Calculations

Load Type	Default Power Factor at 120 volts	Default Power Factor at 277 volts	Clarifying Notes
Fluorescent lighting	0.95	0.95	
Compact fluorescent lighting	0.9 (hardwired)	0.9 (hardwired)	NPF magnetic ballasts use GU-24 values
LED lighting	0.7	0.5	May be higher if specifications call for high power factor drivers
Incandescent lighting	1.0	1.0	
HID lighting	0.9	0.9	May be lower if NPF ballasts are specified
HVAC packages	0.85	0.9	
Other motors <5 HP	0.8	0.8	
Other motors >5 HP	0.85	0.85	
Kitchen equipment	0.9	N/A	
Receptacles	0.6	N/A	For dedicated receptacles, may be rated according to the load
Electric heating including hot water	1.0	1.0	
Other	0.85	0.85	

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

STATE OF CALIFORNIA
Electrical Power Distribution
 CEENRCC-ELC-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-ELC-01-E
 Electrical Power Distribution Page 5 of 6
 Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15

F. Circuit Controls for 120-Volt Receptacles
 Controlled 120 volt receptacles shall be provided, as required by Section 130.5(d) of the Standards.
 In open office areas, controlled circuit receptacles are not required if, at time of final permit, workstations are installed, and each workstation is equipped with an occupant sensing control that is permanently mounted in each workstation, and which controls a hardwired, nonresidential-rated power strip. Plug-in strips and other plug-in devices that incorporate an occupant sensor shall not be used for this exception.
 Receptacles that are only for the following purposes are exempt:
 -Receptacles specifically for refrigerators and water dispensers in kitchenettes.
 -Receptacles located a minimum of six feet above the floor that are specifically for clocks.
 -Receptacles for network copiers, fax machines, A/V and data equipment other than personal computers in copy rooms.

Field Inspector	Pass	Fail
1. At least one controlled receptacle is installed within 6 feet of each uncontrolled receptacle, or split-wired duplex receptacles are installed, that have one controlled and one uncontrolled receptacle. This applies in all of the following spaces: <ul style="list-style-type: none"> Private offices, open office areas Receptions and lobbies Conference rooms Kitchenettes in office spaces Copy room 	<input type="checkbox"/>	<input type="checkbox"/>
2. Electric circuits serving controlled receptacles are equipped with automatic shut-OFF controls following the requirements prescribed in Section 130.1(c)(1) through 5 (in many cases this will mean that the receptacles are connected to the same automatic shut-OFF system as the general lighting of the space).	<input type="checkbox"/>	<input type="checkbox"/>
3. Controlled receptacles shall have a permanent marking to differentiate them from uncontrolled receptacles.	<input type="checkbox"/>	<input type="checkbox"/>
4. For open office areas, controlled circuits shall be provided and marked to support installation and configuration of office furniture with receptacles that comply with Section 130.5(d) 1, 2, and 3.	<input type="checkbox"/>	<input type="checkbox"/>
5. For hotel and motel guest rooms at least one-half of the 120-volt receptacles in each guest room are controlled receptacles that comply with Section 130.5(d) 1, 2, and 3 (see numbers 1, 2, and 3 above). Electric circuits serving controlled receptacles have captive card key controls, occupancy sensing controls, or automatic controls such that, no longer than 30 minutes after the guest room has been vacated, power is switched off.	<input type="checkbox"/>	<input type="checkbox"/>
6. Plug-in strips and other plug-in devices that incorporate an occupant sensor are not used to comply with any of these requirements.	<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

STATE OF CALIFORNIA
Electrical Power Distribution
 CEENRCC-ELC-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-ELC-01-E
 Electrical Power Distribution Page 6 of 6
 Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 1. I certify that this Certificate of Compliance documentation is accurate and complete.
 Documentation Author Name: Wilson Lee Date Signed: 2016-12-15
 Company: ACIES Engineering Signature Date: 2016-12-15
 Address: 3371 Olcott Street City/State/Zip: Santa Clara, CA 95054
 Phone: (408) 522-5255

RESPONSIBLE PERSON'S DECLARATION STATEMENT
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 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
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Responsible Designer Name: Wilson Lee Date Signed: 2016-12-15
 Company: ACIES Engineering Signature Date: 2016-12-15
 Address: 3371 Olcott Street City/State/Zip: Santa Clara, CA 95054
 License: E-015418 Phone: (408) 522-5255

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

McCall

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 CA 95054 info@acies.net
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PHILZ COFFEE
 8849 VILLA LA JOLLA VILLAGE DR., #307
 SAN DIEGO, CA
 JOB NUMBER: 216088

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

TITLE-24 FORMS

SCALE

E0.4D

Plot Date: Mar 13, 2017 - 12:53pm Plotted by: Judith File Name: E0.4 Title_24.dwg



STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 08/15)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
NRCC-LTO-01-E
Outdoor Lighting
Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15 (Page 3 of 4)

I. Outdoor Lighting Schedule and Field Inspection Energy Checklist

Name or Item Tag	Complete Luminaire Description	Watts per Luminaire	How wattage was determined		Number of Luminaires	Total Installed Watts in this area (C x E)	Location	Cutoff	Field Inspector		
			CEC Method from Table	According to §130.0(c)					BUG Rating	seg	IRF
D3	Wall sconce, LED, ELV dimming	26.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	26.1	Back exit lighting	B1-UO-G0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INSTALLED WATTS PAGE TOTAL:						26.1	Enter sum total of all pages or if only one page is used, enter PAGE total here (Sum Total INSTALLED Outdoor lighting wattage)			26.1	

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 08/15)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
NRCC-LTO-01-E
Outdoor Lighting
Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15 (Page 2 of 4)

F. Schedule of luminaires exempt from the outdoor lighting power requirements in §140.7

Name or Symbol	Description of exempt luminaire in accordance with the exemptions

G. Schedule of luminaires exempt from the cutoff requirements in §130.2(b)

Name or Symbol	Description of exempt luminaire in accordance with the exemptions

H. Schedule of luminaires exempt from the outdoor lighting control requirements in §130.2(c)

Name or Symbol	Description of exempt luminaire in accordance with the exemptions

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 08/15)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
NRCC-LTO-01-E
Outdoor Lighting
Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15 (Page 1 of 4)

A. General Information

Project Address: 8849 Villa La Jolla Village Drive, #307, San Diego, CA 92037 Total Illuminated Landscape Area 45 SF

Phase of Construction: New Construction Addition Alteration

Outdoor Lighting Zone (OLZ) OLZ-1 OLZ-2 OLZ-3 OLZ-4

I have confirmed with the AHJ which OLZ applies to this site. For default lighting zone designations, see Title 24 Part 6, §10-114

B. LIGHTING COMPLIANCE DOCUMENTS
(check box for each document included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

NRCC-LTO-01-E Certificate of Compliance
 NRCC-LTO-02-E Outdoor Lighting Controls Certificate of Compliance
 NRCC-LTO-03-E Outdoor Lighting Power Allowance Certificate of Compliance

C. Summary of Allowed Outdoor Lighting Power

	Watts
1. Sum Total ALLOWED Outdoor Lighting Wattage from NRCC-LTO-03-E, page 1	816.35
Complies ONLY if Installed ≤ Allowed	
2. Sum Total INSTALLED Outdoor lighting Wattage from NRCC-LTO-01-E, page 3	26.1

D. Declaration of Required Installation Certificates
Declare by checking all Installation Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

NRCI-LTO-01-E - Must be submitted for all buildings Field Inspector
 NRCI-LTO-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance. Field Inspector

E. Declaration of Required Certificates of Acceptance
Declare by checking all of the Certificates of Acceptance that will be submitted. (Retain copies and verify forms are completed and signed.)

NRCA-LTO-02-A - Must be submitted for outdoor lighting controls. Field Inspector

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

STATE OF CALIFORNIA
OUTDOOR LIGHTING CONTROLS
CEC-NRCC-LTO-02-E (Revised 08/15)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
NRCC-LTO-02-E
Outdoor Lighting Controls
Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15 (Page 2 of 3)

B. Mandatory Outdoor Lighting Control Schedule and Field Inspection Checklist

Outdoor Lighting Control Schedule	Standards Complying With (✓ all that apply, or leave empty if Exempted)										Field Inspector	
	A	B	C	D	E	F	G	H	I	J		K
Location and Application of Luminaires being controlled	Type/Description of Lighting Control (i.e. motion sensor, photocontrol, outdoor astronomical time-switch control, centralized time-based zone lighting control)	# of Units	§130.2(b)	§130.2(c)	§130.2(d)	§130.2(e)	§130.2(f)	§130.2(g)	§130.2(h)	§130.2(i)	Pass	Fail
Back Exit	Timelock	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

STATE OF CALIFORNIA
OUTDOOR LIGHTING CONTROLS
CEC-NRCC-LTO-02-E (Revised 08/15)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
NRCC-LTO-02-E
Outdoor Lighting Controls
Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15 (Page 1 of 3)

The NRCC-LTO-02-E shall be used to document all mandatory outdoor lighting controls that are applicable to the project.

A. Mandatory Outdoor Lighting Control Declaration Statements

Check all that apply:

Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with §110.9(a).

Lighting shall be controlled by a lighting control system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with §130.4(b).

All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with §130.1

Part-Night Outdoor Lighting Controls, as defined in Section 100.1(b), shall meet the requirements in Section 110.9(b)5

All outdoor incandescent luminaires rated over 100 watts, determined in accordance with Section 130.0(c), shall be controlled by a motion sensor.

All outdoor luminaires rated for use with lamps greater than 150 lamp watts, determined in accordance with Section 130.0(c), shall comply with Backlight, Uplight, and Glare (collectively referred to as "BUG") in accordance with Section 130.2(b)

All installed outdoor lighting shall be controlled by a photocontrol or outdoor astronomical time-switch control in accordance with Section 130.2(c)1

All installed outdoor lighting shall be circuted and independently controlled from other electrical loads by an automatic scheduling control in accordance with Section 130.2(c)2

All installed outdoor lighting, where the bottom of the luminaire is mounted 24 feet or less above the ground, shall be controlled with automatic lighting controls in accordance with Section 130.2(c)3

For Outdoor Sales Frontage, Outdoor Sales Lots, and Outdoor Sales Canopies lighting, an automatic lighting control in accordance with Section 130.2(c)4

For Building Facade, Ornamental Hardscape and Outdoor Dining lighting, an automatic lighting control in accordance with Section 130.2(c)5

Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with §130.4 (a). Outdoor lighting controls shall comply with the applicable requirements of Section 130.2(c) and Reference Nonresidential Appendix NA7.8

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 08/15)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
NRCC-LTO-01-E
Outdoor Lighting
Project Name: Philz Coffee - La Jolla Date Prepared: 2016-12-15 (Page 4 of 4)

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Wilson Lee
Signature: [Signature]
Signature Date: 2016-12-15
Company: ACIES Engineering
Address: 3317 Olcott Street
City/State/Zip: Santa Clara, CA 95054
Phone: (408) 522-5255

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

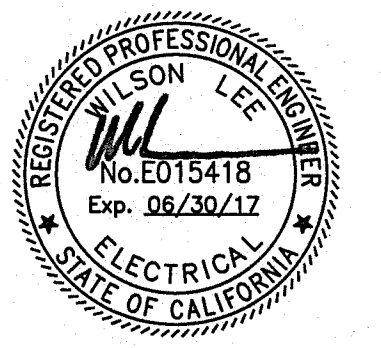
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The information provided on this Certificate of Compliance is true and correct.
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Wilson Lee
Signature: [Signature]
Date Signed: 2016-12-15
Company: ACIES Engineering
Address: 3317 Olcott Street
City/State/Zip: Santa Clara, CA 95054
Phone: (408) 522-5255

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

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DRAWING DESCRIPTION

LIGHTING CONTROL

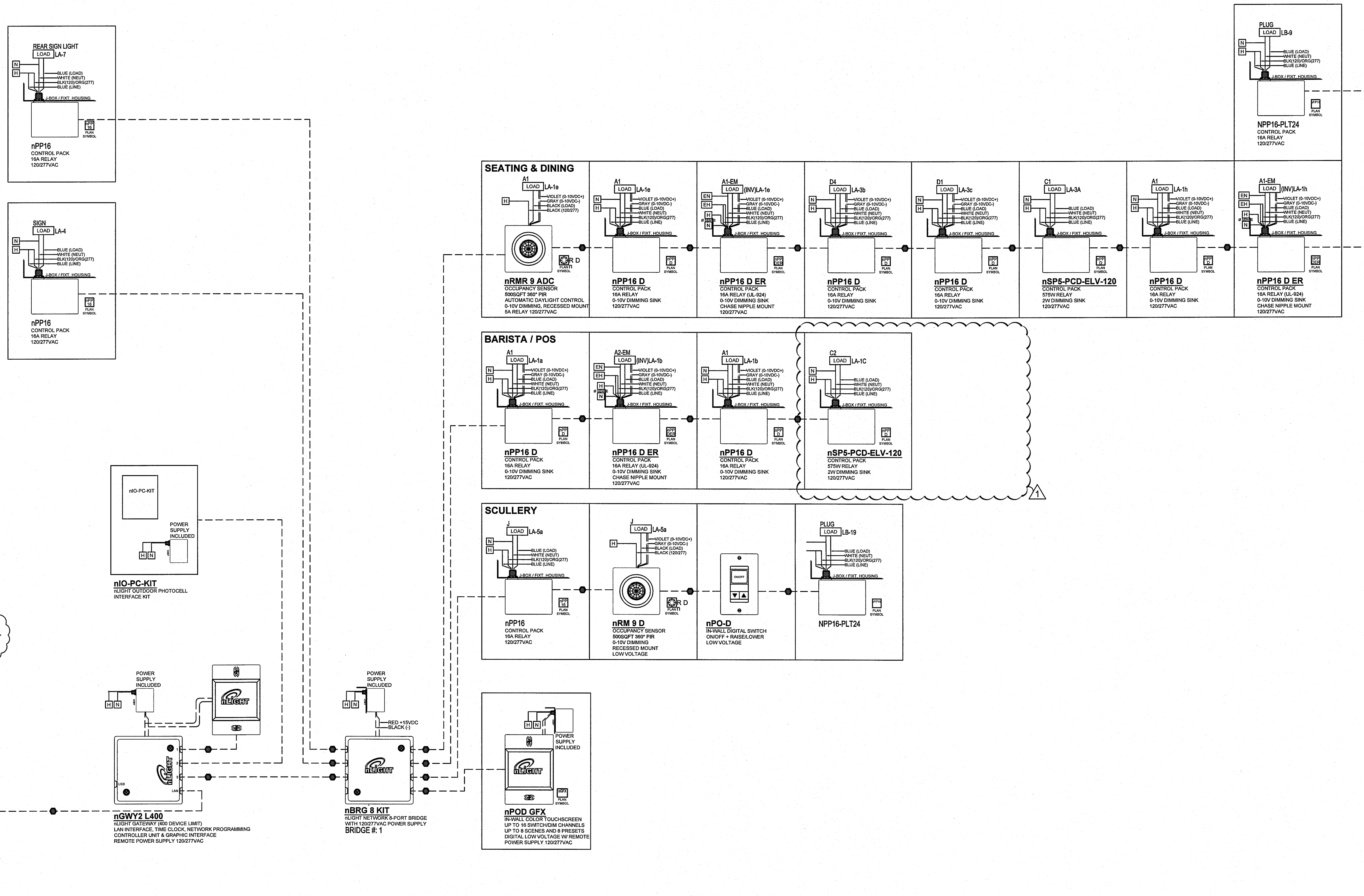
SCALE

E0.5

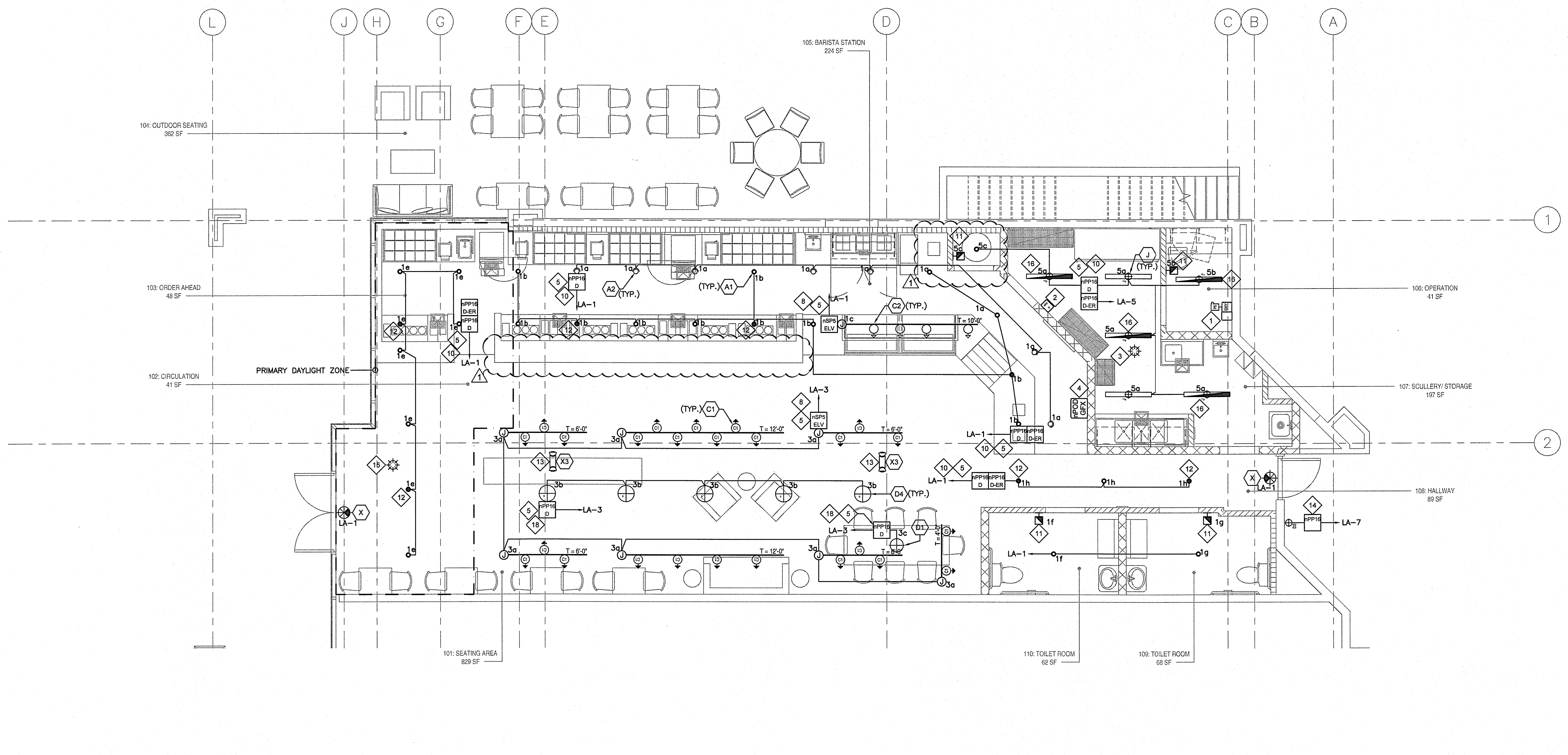
NOTE:
CONTRACTOR SHALL COORDINATE LIGHTING CONTROL SYSTEM AND VERIFY ALL REQUIREMENTS FOR INTENT DEPICTED ON PLANS WITH VENDOR BELOW.

sixtenthundred
Phil Catalano
Principal - Lighting Controls
E-mail: pcatalano@6500.com
P: 510-645-2569

NO CHANGE ORDER WILL BE ALLOWED.



DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS



LIGHTING PLAN SCALE 1/4" = 1'-0" **2**

GENERAL NOTES

- INSTALLATION OF CONDUITS AND WIRES SHALL BE CONCEALED ABOVE THE CEILING AND BEHIND WALLS. WHERE NOT POSSIBLE, CONTRACTOR SHALL OBTAIN APPROVAL FOR EXPOSED LOCATIONS PRIOR TO ROUGH IN. USE WIREMOLD IN EXPOSED AREAS.
- PROVIDE 1/2" AND 3#12 WIRE (MIN) FOR LIGHTING CIRCUITS UNLESS OTHERWISE NOTED.
- COORDINATION INSTALLATION OF LIGHT FIXTURES WITH MECHANICAL WORK AND FIRE SPRINKLER WORK.
- ALL EMERGENCY BATTERY PACK IN EMERGENCY LIGHT FIXTURES SHALL BE WIRED AHEAD OF ALL LIGHT SWITCHES, OCCUPANCY SENSORS AND LIGHTING CONTROLS. FIXTURE SHALL RETAIN LOCAL ON/OFF CONTROL.
- PROVIDE LINEAR DISCONNECT FOR THOSE FIXTURES EMPLOYING DOUBLE-ENDED FLUORESCENT LAMPS PER NEC 410.73(G).
- REFER TO KITCHEN EQUIPMENT PLANS FOR EXACT LOCATIONS AND MOUNTING INSTRUCTIONS FOR ALL LIGHT FIXTURES. ELECTRICAL CONTRACTOR'S BID SHALL INCLUDE THE INSTALLATION OF ALL LIGHT FIXTURES AND ASSOCIATED LAMPS. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THE ADJUSTABILITY OF ALL DOWN LIGHTS AFTER INSTALLATION AND AIM THEM AS DIRECTED BY OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL COORDINATE THE EXACT MOUNTING LOCATION OF ALL LIGHT FIXTURES, LIGHT SWITCHES AND ANY OTHER DEVICE LOCATIONS SHOWN ON THIS PLAN WITH THE ARCHITECTURAL FLOOR PLAN, ARCHITECTURAL REFLECTED CEILING PLAN, AND ARCHITECTURAL INTERIOR ELEVATIONS. DEVICES NOTE LOCATED ON THE ARCHITECTURAL DRAWINGS SHALL BE COORDINATED WITH THE ARCHITECT IN THE FORM OF RFI (REQUEST FOR INFORMATION). CONTRACTOR SHALL ASSUME THAT THE DEVICES ARE TO BE MOUNTED CENTERED ON THE WALLS, SECTION OF WALLS, WINDOWS, ETC. AND THAT ADDITIONAL MOUNTING BRACKETS AND ACCESSORIES SHALL BE A PART OF THE BID PROPOSAL.
- PROVIDE IDENTIFIED HANDLE TIES FOR ALL MULTI-WIRE BRANCH CIRCUITS PER NEC 210.4(B).

KEYED NOTES

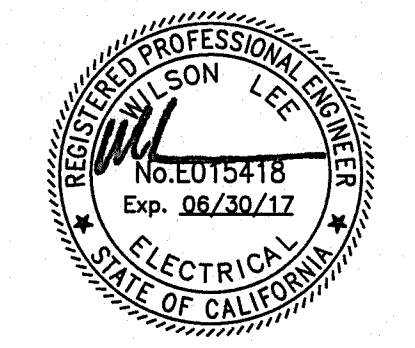
- PROVIDE LIGHTING CONTROL PANEL WITH ASTRONOMIC TIME CLOCK FOR CONTROL OF INTERIOR LIGHTING AND LOW VOLTAGE OVERRIDE SWITCHES NEXT TO PANEL. SEE SHEET E0.5 FOR DETAIL.
- LOCATION OF WALL POD FOR MANUAL LIGHTING CONTROL. SEE LIGHTING CONTROL DIAGRAM ON SHEET E0.5 FOR DETAILS.
- PIR & ULTRASONIC OCCUPANCY SENSOR WITH MANUAL DIMMER SWITCH. SEE LIGHTING CONTROL DIAGRAM ON SHEET E0.5 FOR DETAILS.
- LOCATION OF GRAPHIX WALL POD FOR MANUAL LIGHTING CONTROL. SEE LIGHTING CONTROL DIAGRAM ON SHEET E0.5 FOR DETAILS.
- PROVIDE ACCESS PANEL FOR POWER PACK LOCATED ABOVE CEILING. SEE LIGHTING CONTROL DIAGRAM FOR DETAILS.
- LED STRIPS BY CONTRACTOR. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT HEIGHTS. PROVIDE POWER PACK FOR LED STRIP.
- FOR FUTURE EQUIPMENT MOUNT BOX ON SIDE OF WOOD BEAM.
- PROVIDE nLIGHT POWER PACK, nSP5-PCD-ELV-120 FOR POWERING AND DIMMING OF LED TRACK HEAD USING ELV DIMMING.
- PROVIDE nLIGHT POWER PACK, nSP5-PCD-2W FOR POWERING AND DIMMING OF PENDANT LIGHT.
- PROVIDE nLIGHT POWER PACK, nPP16-D FOR POWERING AND DIMMING OF RECESSED LED LIGHT.
- WALL MOUNTED OCCUPANCY SENSOR, WSX-WH.
- CONNECT LIGHT FIXTURE TO MAIN EMERGENCY CENTRAL SYSTEM VIA EMERGENCY POWER PACK nPP16-D-ER. COORDINATE WITH LANDLORD ON EXACT CIRCUIT TO CONNECT TO.
- EMERGENCY EGRESS FIXTURE ONLY. CONNECT TO EXISTING EMERGENCY BACKUP SYSTEM LOCATED IN ELECTRICAL ROOM. COORDINATE WITH LANDLORD FOR EXACT LOCATION AND CIRCUIT.

- PROVIDE nLIGHT POWER PACK nPP16 FOR SIGN LIGHT CONTROL.
- PROVIDE nLIGHT AUTOMATIC DAYLIGHT SENSOR WITH DUAL ZONE, nCM-ADCX FOR AUTOMATIC DAYLIGHT CONTROL.
- PROVIDE EMERGENCY BATTERY PACK OPTION FOR FIXTURE.
- PROVIDE nLIGHT POWER PACK nSP5-PCD-ELV-120 FOR POWERING AND DIMMING OF LED PENDANT.
- PROVIDE nLIGHT POWER PACK nPP16-D FOR POWERING AND DIMMING OF LED PENDANT.

LIGHTING CONTROL ACCEPTANCE:
 IT IS THE CONTRACTOR RESPONSIBILITY TO COMPLY WITH THE LIGHTING CONTROL ACCEPTANCE REQUIREMENTS PER 130.4. A CERTIFICATE OF ACCEPTANCE SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY UNDER SECTION 10-103(a) OF PART 1 FOR:
 A. AUTOMATIC DAYLIGHT CONTROLS
 B. LIGHTING CONTROLS
 CONTRACTOR IS ALSO RESPONSIBLE FOR COMPLETING THE CERTIFICATION OF INSTALLATION FORM TO BE SUBMITTED ALONG WITH THE CERTIFICATION OF ACCEPTANCE TO THE ENFORCEMENT AGENCY FOR THE INSTALLATION WORK APPLICABLE TO THE CONTRACTOR.

- EXIT SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED. (CBC 1011.2)
- ELECTRICALLY POWERED EXIT SIGNS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 924. (CBC SECTION 1011.4)
- EMERGENCY POWER SUPPLY TO ILLUMINATE EXIT SIGNS FOR A DURATION OF NOT LESS THAN 90 MINUTES.
- IN THE EVENT OF POWER SUPPLY FAILURE, AN EMERGENCY ELECTRICAL SYSTEM SHALL AUTOMATICALLY ILLUMINATE AISLES, LOBBY, CORRIDOR AND EXTERIOR DOOR LANDING. THE EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR A DURATION OF NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR. INITIAL ILLUMINATION AVERAGE OF 1 FOOT-CANDLE AND A MINIMUM OF 0.1 FOOT CANDLE AT FLOOR LEVEL. (CBC SECTION 1006.3).

SEAL/SIGNATURE

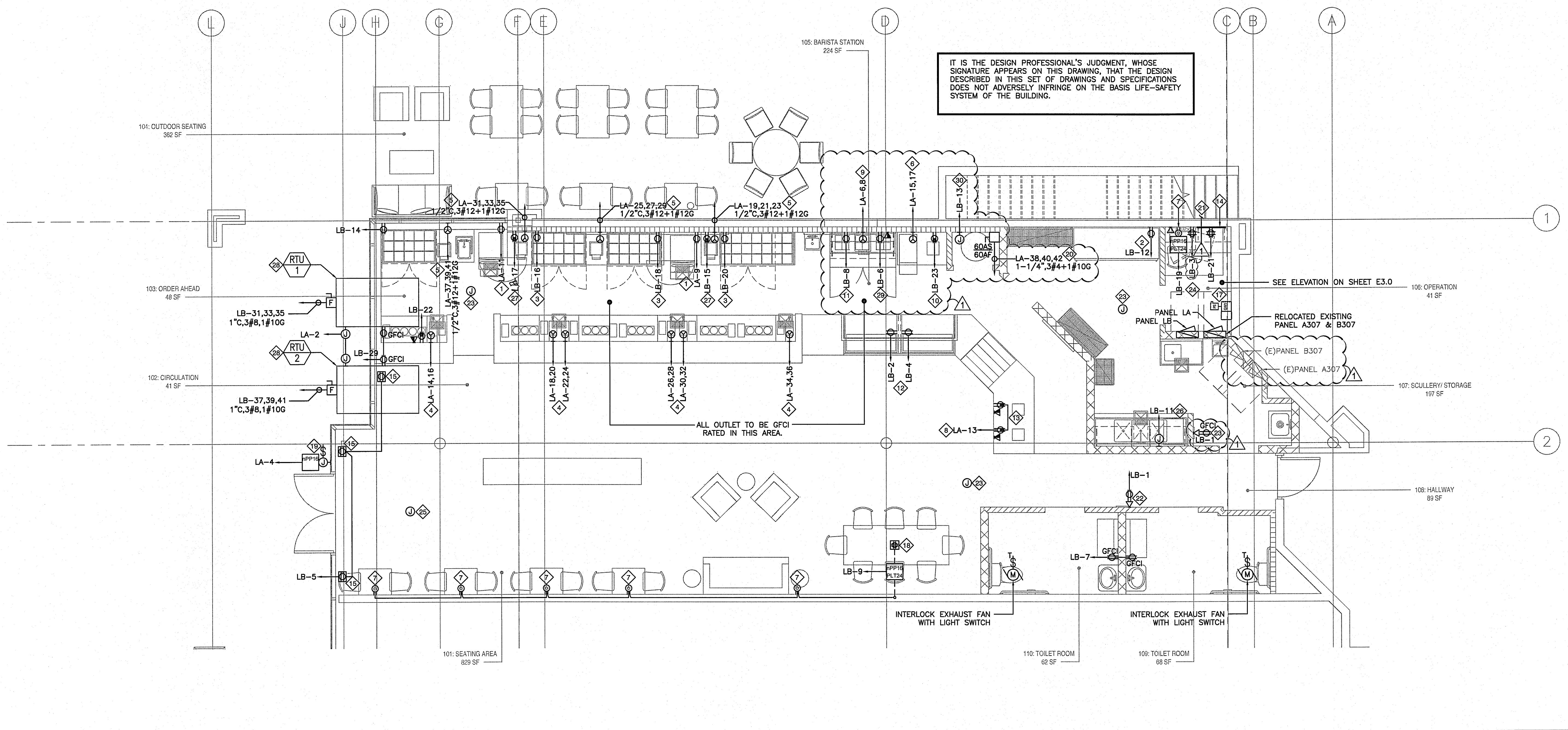


DRAWING DESCRIPTION

LIGHTING PLAN

SCALE

NOTES SCALE NTS **1**



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

GENERAL NOTES

- PROVIDE GFCI PROTECTION FOR ALL 120V RECEPTACLES IN KITCHEN AND FOOD PREP AREA PER NEC 210.8(B)(2).
- REFER TO KITCHEN EQUIPMENT DRAWINGS AND CUTSHEETS FOR EQUIPMENT CALL OUT, DESCRIPTION, LOCATION AND MOUNTING HEIGHT OF ALL OUTLETS AND DEVICES.
- KITCHEN EQUIPMENT POWER/ELECTRICAL INFORMATION ARE BASED ON INFORMATION AVAILABLE FROM KITCHEN DRAWINGS. ELECTRICAL CONTRACTOR SHALL VERIFY RECEPTACLE CONFIGURATIONS AND LOAD WITH EQUIPMENT VENDOR PRIOR TO ROUGH-IN AND REPORT TO ENGINEER OF RECORD AS TO DISCREPANCIES.
- COORDINATE LOCATION OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL CONTROLS INFORMATION.
- SAW CUT EXISTING FLOOR AS REQUIRED TO ACCOMMODATE UNDERFLOOR CONDUITS. PATCH FLOOR WITH LIKE MATERIAL AS REQUIRED UPON COMPLETION OF INSTALLATION OF CONDUIT.
- CONDUITS SHALL MAINTAIN 5" CLEARANCE IN FRONT OF HVAC SUPPLY AND RETURN OPENINGS.
- PROVIDE 1/2"C AND 3#12 MINIMUM TO ALL 20A LIGHTING AND POWER CIRCUITS. REFER TO VOLTAGE DROP TABLE PROVIDED ON SHEET E0.3 FOR INCREASE OF WIRE SIZE BASED ON DISTANCE.
- PROVIDE IDENTIFIED HANDLE TIES FOR ALL MULTI WIRE BRANCH CIRCUITS PER NEC 210.4(B).
- ALL PERMANENTLY CONNECTED (HARD-WIRED) APPLIANCES SHALL BE SERVED WITH DISCONNECTING MEAN WITHIN SIGHT OF THE UNIT, OR THE SERVING CIRCUIT BREAKER IN THE PANEL SHALL BE CAPABLE OF BEING LOCKED IN OPEN POSITION AS REQUIRED PER NEC 422.31.
- COORDINATE RECEPTACLE CONFIGURATION WITH THE EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN/INSTALLATION/BID.
- ELECTRICAL CONTRACTOR SHALL PROVIDE PRICE IN BID TO INCLUDE DESIGN BUILD OF FIRE ALARM SYSTEM, FIRE ALARM SYSTEM SHALL BE COMPATIBLE WITH EXISTING BUILDING SYSTEM. CONSULT WITH LANDLORD AND BUILDING ENGINEER FOR ALL REQUIREMENTS.
- UNDERGROUND AND OVERHEAD ROUTING OF BRANCH CIRCUITS ARE GENERALLY NOT SHOWN. HOWEVER THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR COMPLETE WIRING SYSTEM INCLUDING HOMERUNS, RESTORATION OF ALL NEW OR EXISTING SURFACES REQUIRING SAW CUTTING, PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIR DUE TO THE INSTALLATION OF ELECTRICAL WORK. SEALED ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED. VERIFY ANY APPLICABLE SEALANT SPECIFICATIONS WITH LANDLORD'S REPRESENTATIVE.
- THE WIDTH OF THE WORKING SPACE IN FRONT OF THE ELECTRICAL EQUIPMENT SHALL BE THE WIDTH OF THE EQUIPMENT. PROVIDE 36" CLEARANCE IN FRONT OF THE ELECTRICAL EQUIPMENT.
- THE HEIGHT OF THE WORK SPACE SHALL BE CLEAR AND EXTEND FROM THE GRADE, FLOOR, OR PLATFORM TO THE HEIGHT REQUIRED BY 110.26(E), 78"
- ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS AS REQUIRED FOR A FULLY COMPLETE AND OPERABLE SYSTEM.

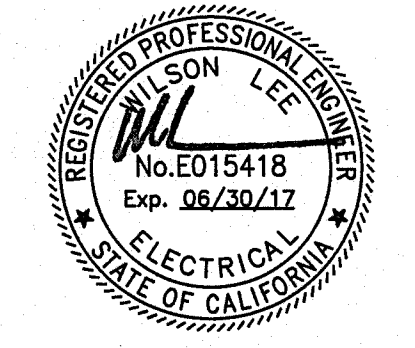
KEYED NOTES

- RECEPTACLE OUTLET AT 60" AFF TO TOP OF BOX FOR ICE MACHINE. FIELD VERIFY MOUNTING HEIGHT WITH EQUIPMENT DRAWING PRIOR TO ROUGH IN.
- RECEPTACLE OUTLET AT 18" AFF TO TOP OF BOX FOR REFRIGERATOR.
- RECEPTACLE OUTLET AT 18" AFF TO TOP OF BOX FOR UNDER COUNTER REFRIGERATOR.
- (L6-30R) RECEPTACLE MOUNTED 30" AFF FOR WATER TOWER. PROVIDE 3/4"C, 2#10,1#10G.
- RECEPTACLE MOUNTED ABOVE COUNTER AT 44" AFF FOR DITTING GRINDER. VERIFY RECEPTACLE CONFIGURATION PRIOR TO ROUGH-IN AND INSTALLATION.
- RECEPTACLE MOUNTED 44" AFF FOR TURBO OVEN.
- CONTROLLED RECEPTACLE WITH PERMANENT INDICATOR MARK PER NEC.
- PROVIDE DEDICATED CIRCUIT WITH ISOLATED GROUND RECEPTACLE OUTLET AND PAIRED WITH TEL/DATA OUTLET FOR (2) POS STATIONS. PROVIDE (1) 2" DATA CONDUIT WITH PULL STRING FROM CASHWRAP TO OFFICE CEILING SPACE AND (1) 1/2" CONDUIT POWER HOMERUN. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO TEL/DATA ROUGH-IN/INSTALLATION.
- RECEPTACLE MOUNTED 58" AFF FOR TOASTER.
- RECEPTACLE MOUNTED 47" AFF FOR SCALE. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION PRIOR TO ROUGH-IN/INSTALLATION.
- RECEPTACLE MOUNTED 18" AFF FOR PREP TABLE.
- RECEPTACLE MOUNTED 18" AFF INSIDE MILLWORK FOR DISPLAY CASE.
- PROVIDE RECEPTACLE AND TELE/DATA OUTLET FOR POINT OF SALE MOUNTED INSIDE MILLWORK.
- TELEPHONE BOARD, 2'X4'X3/4" PLYWOOD WITH CODE APPROVED GROUNDING MEANS. EXTEND CONDUIT STUBBED INTO CEILING SPACE TO TELEPHONE BOARD WITH PULL WIRES.
- SHOW WINDOW RECEPTACLE OUTLET PER NEC 210-62 SHOWN FOR REFERENCE ONLY.
- RECEPTACLE OUTLET AT 18" AFF TO TOP OF BOX FOR ICE MACHINE.
- LIGHTING CONTROL PANEL. PROVIDE NEMA 1 ENCLOSURE FOR CONTRACTORS. SEE LIGHTING CONTROL FOR ADDITIONAL INFORMATION.
- FLUSH FLOOR BOX WITH QUAD RECEPTACLE & GFCI COVER. FLOOR BOX BY WIREMOLD, EVOLUTION SERIES, AT8 OR EQUAL. FINISH TO MATCH FLOOR FINISH.
- J-BOX FOR SIGNAGE. PROVIDE POWER PACK nPP16 FOR TIMECLOCK CONTROL. EXTEND CONDUIT AND PROVIDE WIRES FROM J-BOX TO PANEL.
- CONNECTION FOR WATER HEATER. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH PLUMBING CONTRACTOR.
- INTERCEPT AND EXTEND EXISTING (2)1" CONDUIT FOR TELEPHONE & CABLE, (1)3/4" CONDUIT FOR FIRE ALARM TO NEW TELEPHONE BOARD.
- RECEPTACLE AT +44" AFF TO TOP OF BOX FOR SURVEY IPAD CHARGING.
- RECEPTACLE AT +44" FOR EMPLOYEE CLOCK IPAD CHARGING.
- RECEPTACLE FOR I.T. RACK AT +72" AFF. VERIFY EXACT LOCATION WITH PHILZ COFFEE REPRESENTATIVE PRIOR TO ROUGH-IN.
- PROVIDE (1)3/4" CONDUIT WITH PULL STRING FROM CAMERA TO AV/DATA RACK IN OPERATIONS CEILING SPACE. VERIFY EXACT LOCATION WITH SECURITY CONTRACTOR PRIOR TO ROUGH-IN. CONDUIT TO BE RUN AS HIGH AS POSSIBLE TO MINIMIZE VISIBILITY.
- CONNECTION FOR RO-1. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH PLUMBING CONTRACTOR.
- RECEPTACLE MOUNT ABOVE COUNTER AT 44" AFF TO TOP OF BOX FOR BACKUP GRINDER.
- EXISTING HVAC UNIT ON ROOF, FIELD VERIFY AND MAKE FINAL CONNECT FOR UNIT POWER, SERVICE RECEPTACLE AND DUCT SMOKE DETECTOR.
- FOR PRINTER, MOUNT +58" A.F.F.
- GFCI RECEPTACLE FOR CIRCULATION PUMP RP-1. FIELD COORDINATE WITH PLUMBING CONTRACTOR FOR EXACT LOCATION.

NOTES	SCALE	1
	NTS	

DATE	ISSUE
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SEAL/SIGNATURE

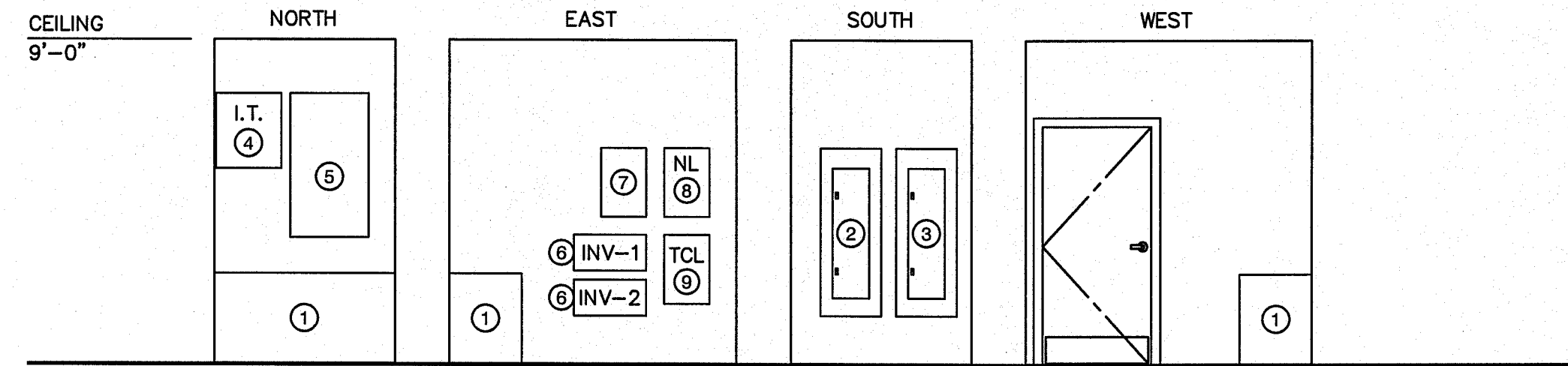


DRAWING DESCRIPTION

POWER PLAN

SCALE

E2.1



ELEVATION NOTES:

1. OUTLINE OF DESK.
2. PANEL-LA.
3. PANEL-LB.
4. I.T. RACK, KEEP SWING OUT CLEARANCE CLEAR OF ALL OTHER EQUIPMENTS.
5. 2"Wx4"H TELEPHONE BOARD ABOVE SHELVING. SEE ARCHITECT DRAWING.
6. SURFACE MOUNT EMERGENCY INVERTER.
7. FIRE ALARM PANEL. COORDINATE WITH FIRE ALARM CONTRACTOR.
8. LIGHTING CONTROL MODULE.
9. TRACK CURRENT LIMITING PANEL-TCL.

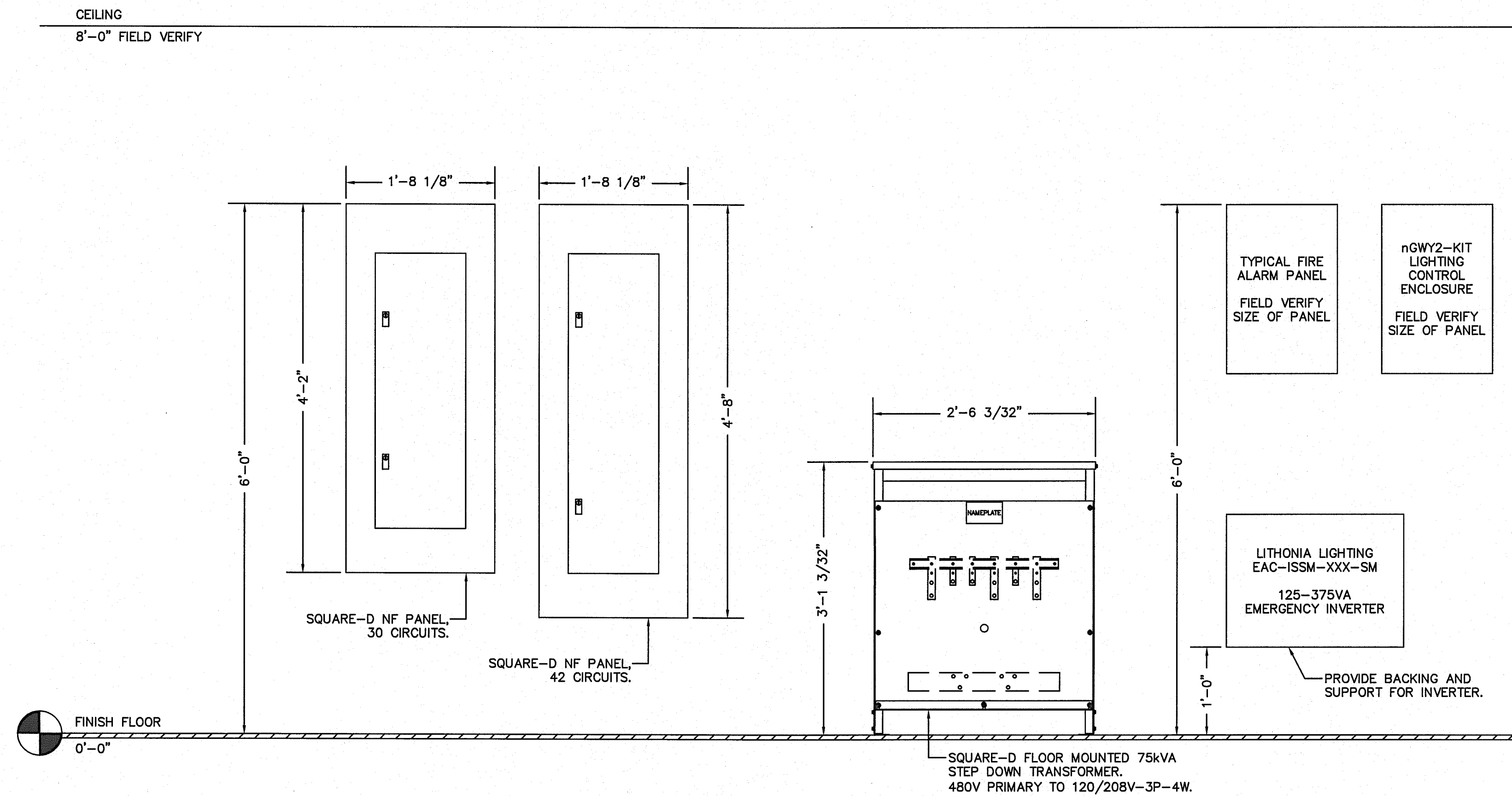
NOT USED SCALE N.T.S. 4

ELECTRICAL ROOM ELEVATION SCALE 1/4" = 1'-0" 3

PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA

JOB NUMBER:
216080

CEILING
8'-0" FIELD VERIFY



FINISH FLOOR
0'-0"

NOT USED SCALE N.T.S. 2

TYPICAL ELECTRICAL EQUIPMENT MOUNTING HEIGHT - FOR REFERENCE ONLY SCALE 1" = 1'-0" 1

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DRAWING DESCRIPTION

DETAILS
SCALE

E3.0

PLUMBING FIXTURE LOAD CALCULATION

FIXTURE ID	QTY	SANITARY F.U.		WATER F.U. COLD		WATER F.U. HOT	
		EACH	TOTAL	EACH	TOTAL	EACH	TOTAL
WC-1	2	4	8	2.5	5	-	-
LV-1	2	1	2	1	2	1	2
MS-1	1	3	3	3	3	3	3
S-1	1	3	3	3	3	3	3
S-2	2	1	2	1	2	1	2
S-3	1	1	1	1	1	1	1
S-4	1	3	3	3	3	3	3
IM-1	2	0.5	1	0.5	1	-	-
WT-1	6	0.5	3	0.5	3	-	-
FD-1	1	1	1	-	-	-	-
TOTAL			27		23		14

UTILITY LOAD

SANITARY SEWER	(E) 4"	27 D.F.U.
DOMESTIC COLD WATER	(E) 1"	23 F.U. = 17 GPM

BASED ON THE CALIFORNIA PLUMBING CODE 2013

MATERIAL SPECIFICATIONS

SERVICES		CAST IRON NO HUB						REMARKS
		CAST IRON NO HUB	CAST IRON NO HUB	CAST IRON NO HUB	CAST IRON NO HUB	CAST IRON NO HUB	CAST IRON NO HUB	
COLD WATER	ABOVE GROUND							
	BELOW GROUND							
HOT WATER	ABOVE GROUND							
	BELOW GROUND							
WASTE	ABOVE GROUND							
	BELOW GROUND							
VENT	ABOVE GROUND							
	BELOW GROUND							
INDIRECT WASTE	INDOOR							
	OUTDOOR							



THE CITY OF SAN DIEGO
PUBLIC UTILITIES DEPARTMENT WASTEWATER
FOOD ESTABLISHMENT WASTEWATER DISCHARGE PERMIT PROGRAM

PLAN CHECK LIST

Plan Review Date: 01/12/2017 Inspection Due Date: 03/01/2017 Extended Due Date: _____
 Plan Type: NEW
 Estab Name: PHILZ COFFEE Estab#: 17943
 8849 VILLA LA JOLLA VILLA DR 307 SAN DIEGO, 92037
 Owner: GARCIA, JOSEFINA
 Plan Contact: ANALISA MCMULLEN, GLASSMAN PLANNING (619) 804-4123

Fixt #	Fixture Name	Fixture Description/Use	GRE REQ	GRE Size	GRE ID	Fixture Comment

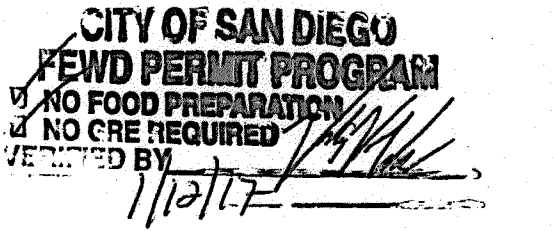
NO GRE REQUIRED

NO GREASE REMOVAL EQUIPMENT REQUIRED PER THIS PLAN CHECK BECAUSE FOOD PREP IS LIMITED TO PREPACKAGED ITEMS PRODUCED OFFSITE AND RE-HEATED IN TURBO CHEF AND COFFEE & ICED DRINKS ONLY. NO ESPRESSO MACHINE ON EQUIPMENT LIST.

IMPORTANT

- * This plan check identifies fixtures requiring Grease Removal Equipment (GRE) and the required minimum size of GRE ONLY.
- * All installation/plumbing must be inspected/approved by the Development Services Department (619-446-5156). This fixture list, or a copy, must be available on site during the plumbing inspection.
- * You must re-submit your plans to the FEWD Permit Program if any plumbing changes are made to the plans after the plan review date.
- * DISHWASHERS MAY NOT BE CONNECTED TO A GREASE INTERCEPTOR PER 2016 CALIFORNIA PLUMBING CODE.
- * A sample box is required on all Gravity Grease Interceptors (GGI) or substitute model (SCHIER GB-75 or GB-250).
- * 3 manholes are required on Gravity Grease Interceptors 1500 gallons and over, 4 total with the sample box.
- * Location of Grease Removal Equipment to be determined by DEPARTMENT OF ENVIRONMENTAL HEALTH (858-505-6659).
- * NO suspended grease interceptors requiring a ladder to access will be allowed.
- * Size of GRE installed should match or exceed size on Plan Check List.
- * Approved grease interceptors must have PDI or IAPMO Certification or must meet ASME A112 Standards per the California Plumbing Code.

OWNER/AGENT SIGNATURE: *Annelise McMillen*



PLUMBING FIXTURE SCHEDULE

FIXT. ID	DESCRIPTION	MANUFACTURER	MODEL	ROUGH-IN					REMARKS
				W	V	CW	HW	RO	
WC-1	WATER CLOSET ADA COMPLIANT	AMERICAN STANDARD	CADET 2467.100	4"	2"	1/2"	-	-	FLOOR MOUNT, FLUSH TANK, ELONGATED, WHITE, 1.1 GPF, ADA COMPLIANT, TRIP LEVEL ON ACCESSIBLE SIDE, PRESSURE ASSIST, WITH BEMIS OPEN FRONT, WHITE, SEAT-LESS COVER.
LV-1	LAVATORY ADA COMPLIANT	AMERICAN STANDARD	LUCERNE 0355.012	2"	1-1/2"	1/2"	1/2"	-	WALL-HUNG, WHITE VITREOUS CHINA, 4" CENTERS, WITH SELECTRONIC INNSBROOK 6055.205 FAUCET, 0.4 GPM AERATOR, BATTERY POWERED, SENSOR ACTIVATED, WITH 605XTMV MIXING VALVE, WITH TRUEBRO LAVGUARD 102
MS-1	MOP SINK	ADVANCE TABCO	9-OP-40	3"	2"	1/2"	1/2"	-	16"x20"x12" BOWL WITH 16" OVERALL HEIGHT. WT. 35 lbs. WITH K-240 SERVICE FAUCET.
S-1	3-COMP SINK	GSW	SE16203D18	2"	2"	1/2"	1/2"	-	3-BOWLS, 16X20X12 EACH BOWL, 2-HOLES 8" CENTERS, WITH FISHER 34428 SPRAY HOSE PROVIDE WITH 16" RISER AND ADD-ON FAUCET 16" SPOUT, 1.15 GPM
S-2	HAND SINK	GSW	HS-1416D	2"	2"	1/2"	1/2"	-	WALL MOUNT, STAINLESS STEEL, WITH SPLASH GUARD, WITH FAUCET AND STRAINER. PROVIDE 0.5 GPM AERATOR.
S-3	HAND SINK	EAGLE	SR10-14-5-1	2"	2"	1/2"	1/2"	-	COUNTERTOP DROP IN, STAINLESS STEEL, 10X14X5, WITH SPLASH GUARD, WITH FAUCET AND STRAINER. PROVIDE 0.5 GPM AERATOR.
S-4	PREP SINK	GSW	SE18181L	2" ID	2"	3/4"	3/4"	-	SINGLE BOWL 18X18X12 PREP SINK WITH 18" DRAIN BOARD, STAINLESS STEEL WITH FISHER 60275 FAUCET
IM-1	ICE MACHINE	MANITOWOC	I-522 ON B-420	(2) 1/2" ID	-	-	-	3/8"	115V-60HZ-1PHASE, 11.5 AMPS, 15 MOC, 1/2" BIN DRAIN.
WT-1	HOT WATER TOWER	BUNN	H5E/H5X	-	-	-	-	1/2"	5 GALLON HOT WATER MACHINE, DISPENSES UP TO 18 GALLONS, PRECISE TEMPERATURE 72F-212F. REQUIRES TWO WIRES AND GROUND FOR ELECTRICAL SERVICE
TP-1	TRAP PRIMER	PRECISION PLUMBING PRODUCTS	P2 500	-	-	1/2"	-	-	CORROSION RESISTANT, INSTALL AT LEAST 12" ABOVE THE TRAP TO INSURE PROPER FLOW, 1/2" MALE INLET, 1/2" FEMALE OUTLET PROVIDE AND INSTALL ACCESS PANEL
EW-1	ELECTRIC WATER HEATER	AO SMITH	DSE-50	-	-	1"	1"	-	POWER INPUT: 15KW, CAPACITY: 50 GALLONS, RECOVERY 60F: 102 GPH 208V - 3PHASE - 60 HZ., 3 ELEMENTS, 700 LBS OPER. WT. TOTAL
RP-1	HOT WATER CIRCULATING PUMP	GRUNDFOS	UP15 1087-TLC	-	-	-	3/4"	-	4.2 GPM @ 3 FT HD, 115V/1PH/60HZ, 1/25HP, 25 WATTS, WITH TIME CLOCK AND AQUASTAT, COORDINATE WITH OWNER FOR TIMER SETTINGS. MOUNT PUMP 5FT ABOVE FINISHED FLOOR.
ET-1	EXPANSION TANK	AMTROL	ST 5	-	-	3/4"	-	-	2.0 GALLON, 8" DIAMETER x 12-5/8" HIGH, 3/4" NPTM CONNECTION
RO-1	REVERSE OSMOSIS SYSTEM	GLOBAL CUSTOMIZED WATER	EASY SERIES 720	-	-	-	3/4"	3/4"	720 GPD, 5 GPM OPEN FLOW RATE, 3 GPM SERVICE FLOW RATE. ELECTRICAL: 110V/60HZ/1PH, 2 AMPS. WET WEIGHT: 215 LBS. MOUNT ON PLATFORM ABOVE SINK.
FD-1	FLOOR DRAIN	ZURN	Z-415S	2"	1-1/2"	-	-	-	6"x6" SQUARE STRAINER, PIPE SIZE AS SHOWN ON PLAN, WITH 1/2" TRAP PRIMER CONNECTION
FS-1	FLOOR SINK	ZURN	Z-1901 OR Z-1901-DX	SEE PLAN	2"	-	-	-	12" X 12" RECEPTOR 8" SUMP DEPTH. PIPE SIZE AND GRATE AS SHOWN ON PLAN
BFP-1	BACKFLOW PREVENTER	WILKINS	975XL2	-	1"	-	-	-	REDUCED PRESSURE ZONE BACKFLOW PREVENTER (OR APPROVED EQUAL)

WATER HEATER SIZING

FIXTURE	DESCRIPTION OF EQUIPMENT	QTY	DEMAND	TOTAL
S-1	3 COMP. SINK	1	50 GPH	50 GPH
S-2	HAND SINK	2	5 GPH	10 GPH
S-3	HAND SINK	1	5 GPH	5 GPH
S-4	PREP SINK	1	5 GPH	5 GPH
MS-1	MOP SINK	1	15 GPH	15 GPH
LV-1	LAVATORY	2	5 GPH	10 GPH
TOTAL				95 GPH

95 GPH X 80% USAGE FACTOR = 76 GPH RECOVERY
 KW INPUT = 76 GPH X 60°F X 8.33 LB/GAL. = 11.35 KW
 0.98 X 3412 BTU/KW
 EWH-1: 15KW INPUT, 102 GPH RECOVERY @ 60°F RISE

CONDENSATE DRAIN PIPE SIZING

CONDENSATE DRAIN SIZE (IN INCHES)	MAXIMUM EQUIPMENT CAPACITY IN TONS OF REFRIGERATION (SLOPE : 1/8" = 1'-0")	REMARK
3/4"	20	WITH PIPE RUNNING AT 3/4 FULL AND OUTSIDE AIR AT 90°F DB AND 73°F WB.
1"	40	
1-1/4"	90	
1-1/2"	125	
2"	250	

AS PER 2013 CALIFORNIA PLUMBING CODE, TABLE 814.1.

PLUMBING LEGEND

SYMBOL	ABBREV.	DESCRIPTION
---	CW	DOMESTIC COLD WATER
---	HW	DOMESTIC HOT WATER
---	HWR	DOMESTIC HOT WATER RETURN
---	RW	RECLAIMED WATER
---	RO	REVERSE OSMOSIS WATER
---	SS	SANITARY SEWER
---	SS	SANITARY SEWER HUNG PIPE
---	GW	GREASE WASTE
---	V	VENT
---	G	NATURAL GAS (LOW PRESSURE)
---	OFL	OVERFLOW LEADER
---	RWL	RAINWATER LEADER
---	OD	OVERFLOW DRAIN
---	SD	STORM DRAIN
---	D(P)	SUMP PUMP DRAIN
---	CD	CONDENSATE DRAIN
---	WHA	WATER HAMMER ARRESTOR
---	P.O.C.	POINT-OF-CONNECTION
---		CAPPED
---		UNION
---	UP	PIPE UP
---	DN	PIPE DOWN
---	DN	PIPE TEE DOWN
---	BV	BALL VALVE
---	CV	CHECK VALVE
---	RED	REDUCER
---	SOV	SHUT-OFF VALVE
---		PUMP
---	FCO	FLOOR CLEANOUT
---	COTG	CLEANOUT TO GRADE
---	HB	HOSE BIBB
---	WCO	WALL CLEANOUT
---		GAS COCK WITH UNION
---	AG	ABOVE GROUND
---	AFF	ABOVE FINISHED FLOOR
---	BG	BELOW GROUND
---	CF	CAP FOR FUTURE
---	ID	INDIRECT DRAIN
---	IE	INVERT ELEVATION
---	(N)	NEW
---	(E)	EXISTING
---	SOV	SHUT-OFF VALVE
---	VTR	VENT THROUGH ROOF
---	UG	UNDERGROUND

DRAWING SCHEDULE

SHEET	TITLE	DATE FOR PERMIT	DATE FOR COMMENTS	DATE FOR QUALITY	DATE FOR REVIEW
P0.1	PLUMBING FIXTURE SCHEDULE				
P0.2	GENERAL NOTES AND SPECIFICATIONS				
P0.3	PLUMBING T-24 FORM				
P0.4	PLUMBING T-24 FORM				
P2.1	PLUMBING PLAN - WASTE AND VENT				
P2.2	PLUMBING PLAN - DOMESTIC WATER				
P3.1	PLUMBING ISOMETRICS				
P6.1	PLUMBING DETAILS				

WATER HAMMER ARRESTER SCHEDULE

MARK	MANUFACTURER/MODEL #	FIXTURE UNITS	INLET SIZE
WHA-A	MIFAB WHB-A	1-11	3/4"
WHA-B	MIFAB WHB-B	12-30	1"
WHA-C	MIFAB WHB-C	31-60	1"
WHA-D	MIFAB WHB-D	61-113	1"
WHA-E	MIFAB WHB-E	114-154	1"
WHA-F	MIFAB WHB-F	155-330	1"

CERTIFIED TO THE PDI WH-201 STANDARD. MOUNT AT ACCESSIBLE LOCATION.

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DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE

DRAWING DESCRIPTION

PLUMBING FIXTURE SCHEDULE
 SCALE

SPECIFICATIONS

SECTION 15400 - PLUMBING

1.00 - GENERAL

1.01 DESCRIPTION OF WORK

FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES REQUIRED FOR AND/OR REASONABLY INCIDENTAL TO THE COMPLETION OF THE FOLLOWING WORK:

- SANITARY WASTE AND VENT PIPING SYSTEM INCLUDING CONNECTIONS TO BUILDING SEWER AS SHOWN.
- DOMESTIC HOT AND COLD WATER SYSTEMS INCLUDING WATER HEATER, AND RELATED ACCESSORIES AND CONTROLS, CONNECTION TO BUILDING WATER AS SHOWN.
- PLUMBING FIXTURES, TRIM AND ACCESSORIES INCLUDING INSTALLATION AND SUPPORT.
- FLASHING AND SEALING OF ROOF AND EXTERIOR WALL PENETRATIONS FOR WATER TIGHTNESS.
- CAULKING AND SEALING OF FLOOR AND WALL PENETRATIONS AND FORMED SHAFT PENETRATIONS.
- BACKING FOR SECURING FIXTURES, TRIM AND PIPING.
- ACCESS DOORS WHERE SHOWN OR REQUIRED BY CODE.
- HANGERS, SUPPORTS, AND GUIDES.
- CLEANUP OF DEBRIS AND FINAL CLEANUP OF DRAINS, FIXTURES AND EQUIPMENT.
- RECORD DRAWINGS AND OPERATING MANUALS.
- LICENSE, PERMITS AND ASSOCIATED FEES.
- CUTTING, DRILLING AND PATCHING FOR ALL SURFACES IN RELATION TO PLUMBING WORK.
- CONDENSATE DRAINS FROM HVAC EQUIPMENT.

1.02 RELATED WORK INCLUDED UNDER OTHER SECTIONS

- HVAC AND ELECTRICAL WORK, 15500 AND 16000
- FIRE PROTECTION WORK 15300 (IF APPLICABLE)

1.03 EXAMINATION OF SITE

A. VISIT SITE BEFORE SUBMITTING BID AND CHECK LOCATION OF ALL EXISTING CONDITIONS WHICH WILL AFFECT THIS WORK, VERIFY DIMENSIONS AND LOCATIONS SHOWN ON DRAWINGS AND COVER ALL COSTS. CONTRACTOR SHALL ASSUME REASONABLE VARIATIONS OR MINOR OMISSIONS AND SHALL COMPLETE PROPOSED WORK WITHOUT ADDITIONAL COST. FAILURE TO VISIT SITE WILL NOT LESSEN RESPONSIBILITY OR ENTITLE ADDITIONAL COMPENSATION FOR WORK NOT INCLUDED IN PROPOSAL.

B. VISIT SITE OF THE WORK, COMPARE IT WITH THE DRAWINGS AND SPECIFICATIONS AS TO THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED, ASCERTAIN AND CHECK ALL CONDITIONS AND ELEVATIONS AND TAKE ALL MEASUREMENTS WHICH MAY AFFECT THE WORK. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE FOR ANY EXTRA EXPENSE OR CLAIMS DUE TO FAILURE OR NEGLECT UNDER THIS REQUIREMENT TO MAKE SUCH EXAMINATION, INCLUDING EXAMINATION OF RESTRICTED WORKING CONDITIONS OR SUCH OTHER DIFFICULTIES VISUALLY OBSERVED DURING SITE VISIT. CONTRACTOR IS RESPONSIBLE FOR BECOMING COMPLETELY FAMILIAR WITH THE ARCHITECTURAL AND STRUCTURAL CONDITIONS AND LIMITATIONS WHICH WILL EXIST IN THE BUILDING AND TO PROVIDE ALL LABOR, TOOLS AND MATERIALS REQUIRED TO PRODUCE A COMPLETELY CONCEALED INSTALLATION AS INDICATED ON THE PLANS, SPECIFICATIONS, AND REQUIRED BY THE CODE.

1.04 DRAWINGS

THE ACCOMPANYING DRAWINGS SHALL BE CONSIDERED PART OF THESE SPECIFICATIONS. WORK AND MATERIALS SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS AND VICE VERSA SHALL BE EXECUTED AS IF SPECIFICALLY MENTIONED OR SHOWN IN BOTH. THE DRAWINGS SHALL BE CONSIDERED AS SCHEMATIC IN NATURE AND MINOR MODIFICATIONS OF THE WORK TO COMPLY WITH THE STRUCTURE AS FOUND SHALL BE MADE.

1.05 RULES AND REGULATIONS

A. ALL WORK AND MATERIAL SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHAL AND OTHER APPLICABLE STATE AND LOCAL RULES AND REGULATIONS. NOTHING IN THESE DRAWINGS OR SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

B. FURNISH WITHOUT ANY EXTRA CHARGE ANY ADDITIONAL MATERIAL AND LABOR WHEN REQUIRED TO COMPLY WITH THESE LAWS, ORDINANCES AND CODES REGARDLESS OF WHETHER SHOWN OR MENTIONED IN THESE SPECIFICATIONS OF DRAWINGS.

C. ALL WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH THE LANDLORD'S MECH/ELECT. DESIGN CRITERIA. ALL CONTRACTORS SHALL OBTAIN A COPY FROM THE LANDLORD'S TENANT COORDINATOR OR MALL OPERATIONS MANAGER AND BECOME FAMILIAR WITH THE REQUIREMENTS CONTAINED WITHIN PRIOR TO BIDDING THE JOB. WHERE LANDLORD'S REQUIREMENTS CONFLICT WITH CODES OR ORDINANCES THE STRICTEST INTERPRETATION SHALL APPLY.

1.06 SUBMITTALS

A. SUBMIT FOR REVIEW TO THE OWNER A COMPLETE AND ALL-INCLUSIVE LIST OF EQUIPMENT AND MATERIALS PROPOSED FOR USE (6 COPIES), ACCOMPANIED BY MANUFACTURER'S DATA SHEETS. DATA SHALL BE FORWARDED IN A SINGLE PACKAGE WRITTEN 15 DAYS AFTER AWARD OF CONTRACT. SUBMIT SIX BLACKLINE PRINTS AND ONE REPRODUCIBLE SHOP DRAWING SHOWING PROPOSED PLUMBING INSTALLATION. INCLUDE SIZES, LOCATIONS AND OTHER REQUIRED INFORMATION TO COORDINATE INSTALLATION WITH OTHER TRADES.

B. WITHIN 5 DAYS AFTER AWARD OF CONTRACT, SUBMIT 6 COPIES OF A LETTER STATING ANY MATERIALS THAT CONTRACTOR WISHES TO SUBSTITUTE TO THE OWNER FOR APPROVAL. INCLUDE SUCH INFORMATION AS MANUFACTURER'S NAME, TYPE OF MATERIAL, CERTIFIED RATINGS, OVERALL APPEARANCE, AND NECESSARY INFORMATION TO EXPLAIN FUNCTION AND OPERATION OF MATERIAL. ALL PROPOSED SUBSTITUTIONS SHALL BE EQUAL IN QUALITY, DESIGN, UTILITY AND APPEARANCE TO MATERIAL, EQUIPMENT OR METHOD SPECIFIED.

1.07 AS-BUILT DRAWINGS

A SET OF PLUMBING PLANS WILL BE FURNISHED TO THE CONTRACTOR ON WHICH HE SHALL INDICATE THE INSTALLATION "AS-BUILT" AS THE WORK PROGRESSES. UPON COMPLETION OF THE WORK, A SET OF REPRODUCIBLE DRAWINGS SHALL BE OBTAINED FROM THE OWNER AT COST, AND ALL CHANGES AS NOTED ON THE RECORD SET OF PRINTS SHALL BE INCORPORATED THEREON. THIS SET OF REPRODUCIBLES, ALONG WITH ONE SET OF BLUEPRINTS, SHALL BE DELIVERED TO THE OWNER UPON COMPLETION AND BEFORE FINAL ACCEPTANCE OF THE PROJECT.

1.08 GUARANTEE

THE CONTRACTOR SHALL LEAVE THE ENTIRE INSTALLATION IN COMPLETE WORKING ORDER FREE FROM ANY DEFECTIVE MATERIAL, WORKMANSHIP OR FINISH. HE SHALL GUARANTEE TO REPAIR OR REPLACE, WITHOUT CHARGE, DEFECTS DUE TO FAULTY WORKMANSHIP OR MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF FILING OF THE NOTICE OF COMPLETION.

1.09 OPERATION MANUALS AND OWNER INSTRUCTIONS

A. PROVIDE COMPLETE OPERATION AND MAINTENANCE MANUALS COVERING ALL PLUMBING SYSTEMS AND EQUIPMENT THAT HAVE BEEN INSTALLED. THREE (3) COPIES OF THE MANUAL SHALL BE FOUND IN HARDBACK BINDERS.

B. PROVIDE INSTRUCTIONS TO OWNER AS TO OPERATION OF ALL EQUIPMENT. INSTRUCTION PERIOD TO COMMENCE FOR MINIMUM OF (2) HOURS AND SHALL BE SCHEDULED AT OWNER'S CONVENIENCE.

1.10 CUTTING AND PATCHING

A. THE CONTRACTOR SHALL DO ALL CUTTING, DRILLING AND PATCHING WHICH MAY BE REQUIRED FOR THE INSTALLATION OF THE WORK UNDER THIS SECTION OF THE SPECIFICATIONS.

B. PATCHING SHALL BE OF THE SAME WORKMANSHIP, MATERIAL, AND FINISH AND SHALL MATCH ACCURATELY ALL SURROUNDING CONSTRUCTION IN A MANNER SATISFACTORY TO THE OWNER. NO CUTTING OF THE STRUCTURE SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNER.

2.00 - MATERIALS - PIPING

BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH THE LOCAL AUTHORITY HAVING JURISDICTION. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.

A. INTERIOR UNDERGROUND STORM, SANITARY AND WASTE PIPING:
SERVICE WEIGHT BELL AND SPIGOT CAST IRON OR NO-HUB C.I. PIPE AND FITTINGS, COMPLYING WITH CISPI STANDARDS, OR ABS DWV SCH40 IF ALLOWED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

B. INTERIOR SUSPENDED SANITARY AND WASTE PIPING:
SERVICE WEIGHT BELL AND SPIGOT CAST IRON OR NO-HUB C.I. PIPE AND FITTINGS, COMPLYING WITH CISPI STANDARDS, OR ABS DWV SCH40 IF ALLOWED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

C. INTERIOR DOMESTIC WATER PIPING ABOVE GROUND:
3" AND SMALLER - TYPE L HARD TEMPERED COPPER WITH SOLDER END FITTINGS. 95-5 TIN AND ANTIMONY SOLDER JOINTING (LEAD-FREE).

D. OUTDOOR ABOVE GROUND DOMESTIC WATER PIPING:
3" AND SMALLER - TYPE L HARD TEMPERED COPPER WITH SOLDER END FITTINGS. 95-5 TIN AND ANTIMONY SOLDER JOINTING (LEAD-FREE).

E. DOMESTIC WATER PIPING BELOW GROUND:
TYPE K COPPER PIPE SHALL BE USED. WHEN PIPING IS INSTALLED WITHIN A BUILDING AND UNDER A CONCRETE SLAB, IT SHALL BE INSTALLED WITHOUT JOINTS, WHEN JOINTS ARE UNAVOIDABLE, THEY SHALL BE BRAZED.

- PROTECTORS SHALL BE FACTORY OR FIELD APPLIED ACCORDING TO MANUFACTURERS WRITTEN INSTRUCTIONS.
- 2" OR LARGER PRODUCTS SHALL BE POLYKEN NO. 1027 PRIMER AND POLYKEN NO. 910 TAPE COATING, 10 MIL MINIMUM 1" OVERLAP REQUIRED.
- 2" AND SMALLER PRODUCTS SHALL BE 10 MIL PLASTIC SLEEVE PROTECTOR.

F. CONDENSATE DRAIN PIPING:
COPPER WATER TUBE ASTM 888, TYPE "M", SOLDER WITH 95-5 SOLDER, LEAD-FREE TYPE.

2.01 PIPE FLASHINGS

4 LBS. LEAD WITH COUNTERFLASHING RING BY GLECO, STONEMAN ENGINEERING OR APPROVED EQUAL.

2.02 VALVES

- GATE VALVES: RED & WHITE 204 OR EQUAL, 3" AND SMALLER.
- CHECK VALVES: RED & WHITE 238 OR EQUAL, 3" AND SMALLER.
- BALL VALVES: NIBCO 580-70 OR EQUAL, 3" AND SMALLER.

2.03 PLUMBING FIXTURES AND TRIM:

PLUMBING FIXTURES TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT. SEE PLUMBING FIXTURE SCHEDULE.

2.04 PIPE HANGERS AND SUPPORTS

- ASTRUT, GRINNELL, OR APPROVED EQUAL.
- INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS.
- PIPE HANGERS SHALL HAVE NON-METALLIC FELT OR ELASTOMERIC LINER OR WRAP APPLIED TO THE PIPE FOR ELECTROLYTIC PROTECTION WHERE HANGERS AND SUPPORTS ARE USED TO SUPPORT COPPER TUBING OR PIPE. THE LINER OR WRAP SHALL BE DESIGNED TO ALLOW EXPANSION OR CONTRACTION OF THE PIPING.

2.05 PIPE SLEEVES

SHALL BE PROVIDED TO PROTECT ALL PIPING THROUGH CONCRETE AND MASONRY WALLS. ANNUAL SPACES BETWEEN SLEEVES AND PIPES SHALL BE FILLED OR CAULKED IN AN APPROVED MANNER. ANNUAL SPACES BETWEEN SLEEVES AND PIPES IN FIRE-RESISTANCE-RATED ASSEMBLIES SHALL BE FILLED OR TIGHTLY CAULKED IN ACCORDANCE WITH THE BUILDING CODE. ALL UNDERSLAB CAST IRON PIPING SHALL BE COVERED WITH POLYETHYLENE SLEEVE (POLYWRAP) AND CONTRACTOR MUST FOLLOW MANUFACTURER'S MANUAL FOR PROPER INSTALLATION.

2.06 TEMPERATURE AND PRESSURE RELIEF VALVE

TEMPERATURE & PRESSURE RELIEF VALVE SHALL DISCHARGE FULL LINE SIZE TO AN APPROVED WASTE RECEPTOR THROUGH AN AIR GAP AS INDICATED ON PLANS OR 6" MINIMUM, 24" MAXIMUM.

2.07 SCALD GUARD PROTECTION

PROVIDE AND INSTALL LAVATORY SCALD PROTECTION FOR WASTE PIPING AND HOT WATER PIPING.

2.08 DOMESTIC PIPING INSULATION

- PROVIDE AND INSTALL "INSULATION PROTECTION SHIELD" FOR PIPING WITH FOAM OR FIBERGLASS INSULATION.
- INSULATE ALL DOMESTIC WATER PIPING OUTSIDE THE BUILDING OR ON ROOF WITH 1-1/2" THICK ARMSTRONG ARMAFLEX OR APPROVED EQUAL, AND SECTIONS BUTTED FIRMLY TOGETHER.
- INSULATE ALL CONDENSATE DRAIN PIPING WITH 1/2" THICK ARMSTRONG ARMAFLEX OR EQUAL, AND SECTIONS BUTTED FIRMLY TOGETHER.
- INSULATE ALL HOT WATER PIPING WITH 1" THICK FIBERGLASS INSULATION.
- PROVIDE AND INSTALL SCALD GUARD PROTECTION/INSULATION UNDER SINKS WITH EXPOSED P-TRAPS AND HOT WATER SUPPLIES.
- MINIMUM R-VALUES FOR HOT WATER PIPING INSULATION HAVING PIPE DIAMETER OF LESS THAN OR EQUAL TO 2" IS R-4, FOR LARGER THAN 2" DIAMETER IS R-6.
- ALL OUTDOOR INSULATION SHALL BE PROTECTED WITH ALUMINUM JACKET.

2.09 CLEANOUT

A. ACCESSIBLE CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE STACK AND RAINWATER LEADERS. ADDITIONAL CLEANOUT SHALL BE PROVIDED IN DRAINAGE LINE FOR EACH HORIZONTAL CHANGE OF DIRECTION EXCEEDING 135 DEGREES. CLEANOUT MUST BE PROVIDED ON A HORIZONTAL DRAIN LINE EXCEEDING 5FT OR MORE IN LENGTH SERVING SINKS OR URINALS. AN APPROVED TYPE OF 2-WAY CLEANOUT FITTING SHALL BE INSTALLED OUTSIDE OF A BUILDING AT THE LOWER END OF A BUILDING DRAIN AND EXTENDED TO GRADE.

2.10 WATER HEATER

- PROVIDE ANCHORS AND STRAPS TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION.
- STRAPPING SHALL BE LOCATED UPPER 1/3 AND LOWER 1/3 OF ITS VERTICAL DIMENSIONS. STRAPS SHALL BE A MINIMUM 2"x16 GAGE PROPERLY SECURED TO WALL STUDS. ELEVATE WATER HEATER AT LEAST 4" MINIMUM ABOVE THE FINISHED FLOOR WITH AN APPROVED BASE. PROVIDE A 22 GAGE WATER TIGHT DRAIN PAN, CORROSION RESISTANT, AT THE BOTTOM OF THE WATER HEATER. DRAIN PAN SHALL HAVE A 3/4" DRAIN LINE TO BE DISCHARGED INTO AN APPROVED RECEPTOR BY MEANS OF AN AIR GAP. A PROPERLY SIZED THERMAL EXPANSION TANK SHALL BE PROVIDED AT THE WATER HEATER. HOT WATER SUPPLY FOR THE LAVATORIES AND HAND SINKS SHALL NOT EXCEED 110°F TEMPERATURE.

2.11 TRENCHING

- ALL TRENCHES DEEPER THAN THE FOOTING OF ANY BUILDING OR STRUCTURE AND PARALLELING THE SAME SHALL BE AT LEAST 45 DEGREES THEREFROM.

3.00 - INSTALLATION AND EXECUTION

3.01 GENERAL

- CAST-IRON HUBLESS WITH STAINLESS STEEL SHIELDED COUPLER SHALL BE SUPPORTED HORIZONTALLY AT EVERY OTHER JOINT, UNLESS OVER 4 FEET, THEN SUPPORT EACH JOINT ADJACENT TO JOINT, NOT TO EXCEED 18". BRACE AT NOT MORE THAN 40FT INTERVALS. SUPPORT AT EACH HORIZONTAL BRANCH CONNECTION. HANGERS SHALL NOT BE PLACED ON THE COUPLING. SUPPORT VERTICAL PIPES AT THE BASE AND EACH FLOOR NOT TO EXCEED 15FT. HANGERS AND SUPPORTS FOR ALL PIPING SHALL COMPLY WITH THE CPC 2010 TABLE 3-2.

3.02 SPECIAL REQUIREMENTS, RESPONSIBILITIES AND TESTING

- INSTALL PIPING GENERALLY LEVEL, FREE OF TRAPS AND UNNECESSARY BENDS, TO CONFORM WITH BUILDING REQUIREMENTS. PIPE TO BE FREE OF DEFECTS, AND INSTALLED TO AVOID ANY POSSIBLE GALVANIC ACTION BY ISOLATING DISSIMILAR METALS.
- TEST AND RECORD AVAILABLE DOMESTIC WATER PRESSURE IN STATIC AND DYNAMIC CONDITIONS FOR DYNAMIC TESTING RECORD PRESSURE AND FLOW RATE IN GALLONS PER MINUTE. TRANSMIT THIS INFORMATION TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- PROVIDE ALL TESTS SPECIFIED HEREINAFTER AND AS OTHERWISE REQUIRED. PROVIDE ALL TEST EQUIPMENT, INCLUDING TEST PUMPS, GAUGES, INSTRUMENTS AND OTHER EQUIPMENT REQUIRED. PRESSURE GAUGES USED SHALL BE GRADUATED IN INCREMENTS NOT GREATER THAN 5 POUNDS PER SQUARE INCH. NO PLUMBING OR DRAINAGE SYSTEM OR PART THEREOF SHALL BE COVERED, CONCEALED, OR PUT INTO USE UNLESS IT HAS BEEN SPECIFIED. CONDUCT ALL TESTS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE, AND OBTAIN THE NECESSARY JURISDICTIONAL AUTHORITY INSPECTIONS.
- APPLY A WATER TEST TO THE WASTE, AND VENT SYSTEMS WHETHER IN ITS ENTIRETY OR IN SECTIONS; IF APPLIED TO THE ENTIRE SYSTEM, TIGHTLY CLOSE ALL OPENINGS IN THE PIPING EXCEPT THE HIGHEST OPENING, AND FILL THE SYSTEM WITH WATER TO THE POINT OF OVERFLOW. IF THE SYSTEM IS TESTED IN SECTIONS, TIGHTLY PLUG EACH OPENING EXCEPT FOR THE HIGHEST OPENING OF THE SECTION UNDER TEST, AND FILL EACH SECTION WITH WATER, BUT TEST WITH NO LESS THAN A 10" HEAD OF WATER. IN TESTING SUCCESSIVE SECTIONS, TEST AT LEAST THE UPPER 10' OF THE NEXT PRECEDING SECTION SO THAT NO JOINT OR PIPE IN THE BUILDING (EXCEPT THE UPPERMOST 10' OF THE SYSTEM) SHALL HAVE BEEN SUBMITTED TO A WATER TEST WITH A 10" HEAD OF WATER. KEEP WATER IN THE SYSTEM OR IN THE PORTION UNDER TEST FOR AT LEAST 24 HOURS BEFORE INSPECTION STARTS, WITH THE SYSTEM TIGHT AT ALL POINTS.
- DOMESTIC WATER SYSTEM SHALL BE TESTED AND PROVED TIGHT UNDER A PRESSURE OF NOT LESS THAN 120 PSI. PIPING MUST STAND THE TEST FOR A PERIOD OF 24 HOURS WITHOUT LEAKING.
- CHLORINATION OF THE DOMESTIC COLD AND HOT WATER PIPING SYSTEMS IN ACCORDANCE WITH STANDARD TESTING PROCEDURES AND LOCAL HEALTH DEPARTMENT REQUIREMENTS. TESTING BY A FIRM SUCH AS BENNET-MARINE OR EQUAL. SUBMIT CERTIFICATE OF SATISFACTORY TEST RESULTS.
- UPON COMPLETION OF TESTING, CERTIFY TO THE ARCHITECT, IN WRITING THAT THE SPECIFIED TESTS HAVE BEEN PERFORMED AND THAT THE INSTALLATION COMPLIES WITH THE SPECIFIED REQUIREMENTS.

3.03 PIPING INSTALLATION

- MAKE CHANGES IN SIZE OF PIPE WITH REDUCING FITTINGS; BUSHINGS WILL NOT BE PERMITTED EXCEPT FOR BELL SHAPED COPPER BUSHINGS.
- INSTALL DIELECTRIC INSULATING UNIONS IN WATER PIPING BETWEEN COPPER PIPING AND FERROUS PIPING OR EQUIPMENT - EPCO, OR EQUAL.
- INSTALL EXPOSED POLISHED CHROME CONNECTIONS FROM FIXTURES OR EQUIPMENT WITH SPECIAL CARE. SHOW NO TOOL MARKS OR THREADS AT FITTINGS.
- CAP OPENINGS IN PIPING DURING CONSTRUCTION.
- PROVIDE 85% RED BRASS PIPE IPS, IN CONNECTION TO FAUCETS, FLUSH VALVES, HOSE BIBBS OR SIMILAR ITEMS REQUIRING RIGID PIPING. EXTEND BRASS PIPE FROM FIXTURE TO POINT WHERE PIPING CAN BE SECURELY FASTENED TO BUILDING CONSTRUCTION. ALL EXPOSED PIPING AND STOP VALVES IN CONNECTION TO FIXTURES SHALL BE CHROME PLATED BRASS.
- INSTALL UNIONS ADJACENT TO VALVES AND WHERE NECESSARY TO FACILITATE DISASSEMBLY OF PIPING.
- ESCUTCHEONS: FIT EXPOSED PIPES PASSING THROUGH FLOORS, WALLS OR CEILINGS WITH ESCUTCHEONS. MANUFACTURE SPECIAL SIZES OF ESCUTCHEONS FROM STEEL AND PRIME COAT SAME. CUT IN ROUND, RECTANGULAR OR SQUARE SPACE TO PROVIDE A CLEAN APPEARANCE ACCEPTABLE TO THE ARCHITECT.
- SUPPORT PIPING INDEPENDENTLY OF EQUIPMENT TO WHICH IT IS CONNECTED.
- MAKE COPPER SOLDER JOINTS WITH 95/5 SOLDER, OR SILFOS; CLEAN SURFACES TO BE JOINED FREE OF OIL, GREASE, RUST OR OXIDES AND APPLY FLUX TO EACH JOINT BEFORE HEATING ASSEMBLY.
- ROUGH-IN AND MAKE FINAL CONNECTIONS TO ALL OTHER EQUIPMENT FURNISHED UNDER OTHER DIVISIONS, REQUIRING PLUMBING CONNECTIONS.

3.04 SUBSTITUTIONS

- ONE OR MORE MAKES OF MATERIALS AND METHODS MAY HAVE BEEN SPECIFIED TO ESTABLISH THE STANDARD OF QUALITY, WORKMANSHIP, FINISH AND DESIGN REQUIRED, BUT OTHER MATERIALS OR METHODS EQUAL OR BETTER IN QUALITY, WORKMANSHIP, FINISH, DESIGN, AND GUARANTEED PERFORMANCE, MAY BE SUBMITTED FOR REVIEW AND APPROVAL AS SUBSTITUTION. ALL SUBSTITUTIONS ARE SUBJECT TO REVIEW AND APPROVAL BY ARCHITECT, ENGINEER, AND OWNER.
- SUBSTITUTIONS SHALL BE REQUESTED IN A WRITTEN FORM AND SHALL BE ACCOMPANIED WITH A SIGNED STATEMENT THAT PROPOSED SUBSTITUTION IS EQUAL OR BETTER THAN SPECIFIED. ADDITIONAL DOCUMENTATION TO SUBSTITUTED PROPOSED SUBSTITUTION MAY BE REQUIRED BY OWNER, ARCHITECT, AND ENGINEER. CONTRACTOR SHALL SUBMIT AS DIRECTED.
- CONTRACTOR SHALL ACCOMPANY REQUEST FOR SUBSTITUTION LETTER WITH A COMPLETED CSI SUBSTITUTION FORM INCLUDING THE COMPARISON FOR FOLLOWING:
 - PERFORMANCE DATA
 - DIMENSIONS
 - COSTS AND DELIVERY SCHEDULE
 - LISTED AND APPROVED
- A WRITTEN SIGNED STATEMENT FROM THE GENERAL CONTRACTOR SHALL ACCOMPANY SUBSTITUTION REQUEST FORM ASSURING THAT:
 - DIMENSIONS HAS BEEN VERIFIED WITH PROJECT CONDITIONS AND HAS COORDINATED WITH OTHER TRADES. SUBSTITUTION DOES NOT AFFECT DIMENSIONS SHOWN ON DRAWINGS.
 - HE SHALL PAY AND BURDEN THE COSTS FOR CHANGES TO THE PROJECT INCLUDING REDESIGN, REENGINEERING AND REVIEW OF SUBSTITUTION. ONLY ONE ENGINEERING REVIEW TIME IS ALLOWED FOR EACH PRODUCT SUBSTITUTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL REVIEW TIME AND SHALL PAY ARCHITECT AND ENGINEER'S TIME AT THEIR PROFESSIONAL RATE SCHEDULE.
 - HE HAS CONFIRMED THAT THE PROPOSED SUBSTITUTION WILL HAVE NO ADVERSE EFFECT ON OTHER TRADES, THE CONSTRUCTION SCHEDULE, OR SPECIFIED WARRANTY REQUIREMENTS.
 - HE HAS CONFIRMED THAT MAINTENANCE AND SERVICE PARTS WILL BE LOCALLY AVAILABLE FOR THE PROPOSED SUBSTITUTION.
- COST SAVINGS RESULTING FROM SUBSTITUTION SHALL BE RETURNED TO THE CONTRACT OR THE OWNER IF THE SUBSTITUTION IS PERMITTED.
- NO WORK INVOLVING MATERIALS SUBMITTED FOR SUBSTITUTION SHALL PROCEED UNTIL WRITTEN ACCEPTANCE IS RECEIVED FROM THE OWNER. THE OWNER IS THE FINAL JUDGE OF ACCEPTABILITY OF PREFERRED SUBSTITUTIONS.

3.05 COORDINATION

- COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICT AND TO PROVIDE CORRECT ROUGH-IN AND CONNECTION FOR EQUIPMENT FURNISHED UNDER OTHER TRADES THAT REQUIRE PLUMBING CONNECTIONS. INFORM CONTRACTORS OF OTHER TRADES OF THE REQUIRED ACCESS TO AND CLEARANCES AROUND EQUIPMENT TO MAINTAIN SERVICE ABILITY AND CODE COMPLIANCE.
- VERIFY EQUIPMENT DIMENSIONS AND REQUIREMENTS WITH PROVISIONS SPECIFIED UNDER THIS SECTION. CHECK ACTUAL JOB CONDITIONS BEFORE FABRICATING WORK. REPORT NECESSARY CHANGES IN TIME TO PREVENT NEEDLESS WORK. CHANGES OR ADDITIONS, SUBJECT TO ADDITIONAL COMPENSATION, WHICH ARE MADE WITHOUT WRITTEN AUTHORIZATION AND AN AGREED PRICE, SHALL BE AT THE CONTRACTOR'S RISK AND EXPENSE.

3.06 MARKINGS AND IDENTIFICATION

- ALL DOMESTIC COLD WATER, HOT WATER, SANITARY SEWER, SANITARY VENT, CONDENSATE DRAIN, AND NATURAL GAS PIPING SHALL HAVE VISIBLE PERMANENT LABELS AT EVERY 20 FEET, THE DIRECTION OF NORMAL FLOW SHALL BE CLEARLY SHOWN, AT LEAST ONCE PER ROOM, AND SHALL BE VISIBLE FROM THE FLOOR LEVEL. THE MINIMUM SIZE OF THE LETTERS SHOWN ON TABLE 6-1 BELOW. VALVES SHALL BE LABELED WITH STENCILED OR STAMPED METAL TAGS BEARING THE NAME OF THE SYSTEM THEY CARRY.

PIPE SIZE (INCHES)	SIZE OF LETTER (INCHES)
1/2 - 1 1/2	5/8
1 1/2 - 2	3/4
2 1/2 - 6	1 1/2
8 - 10	2 1/2

GENERAL NOTES

- PLUMBING CONTRACT DRAWINGS ARE IN PART DIAGNOSTIC, COVERING THE SCOPE OF WORK AND GENERAL ARRANGEMENT OF THE EQUIPMENT, PIPING, ETC., AND THE APPROXIMATE SIZE OF EQUIPMENT AND MATERIALS. THE CONTRACTOR SHALL FOLLOW THESE DRAWINGS IN LAYING OUT THE PLUMBING WORK. PLUMBING CONTRACTOR SHALL CONSULT GENERAL, SPRINKLER, HEATING/VENTILATING/AIR CONDITIONING CONTRACT AND ELECTRICAL DRAWINGS TO FACILITATE HANDS OFF WITH THAT WORK AND TO VERIFY THE SPACES IN WHICH THE PLUMBING WORK WILL BE INSTALLED.
- BECAUSE OF THE NATURE AND SCALE OF THE DRAWINGS, CERTAIN BASIC PLUMBING ITEMS SUCH AS UNIONS, FITTINGS, ELBOWS, ETC., MAY NOT BE SHOWN. WHERE SUCH ITEMS ARE REQUIRED BY OTHER SECTIONS OF THE SPECIFICATIONS, OR WHERE THEY ARE REQUIRED BY THE NATURE OF THE WORK OR BY OCCURRING REGULARLY, THEY SHALL BE FURNISHED AND INSTALLED AT NO ADDITIONAL COST TO THE OWNER. THE DRAWINGS INDICATE GENERAL LOCATIONS OF PIPING, EQUIPMENT, DUCTWORK AND SIMILAR. THE EXACT LOCATION TO BE DETERMINED BY THE CONTRACTOR TO BEST FIT THE LAYOUT OF THE JOB.
- ALL EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT, WATER, AND CHEMICAL OR MECHANICAL INJURY OR TRIP. PLUMBING FIXTURES SHALL BE COVERED WITH HEAVY PAPER COVERINGS AFTER INSTALLATION AND SHALL BE THOROUGHLY CLEANED AT THE COMPLETION OF THE PROJECT.
- ALL MATERIALS SUCH AS VALVES, FITTINGS, PIPING, EQUIPMENT, PUMPS, COILS, ETC., SHALL BE PROPERLY PROTECTED, AND ALL PIPING OPENINGS SHALL BE TEMPORARILY CLOSED BY THE CONTRACTOR FOR THE WORK UNDER HIS CHARGE, ON A DAILY BASIS, AT THE END OF EACH WORKING DAY, SO AS TO PREVENT OBSTRUCTION AND DAMAGE. THE ABOVE REQUIREMENTS ARE MANDATORY.
- THE CONTRACTOR SHALL SEE THAT ALL MATERIALS, INSTALLATION AND WORKMANSHIP IS PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ALL APPLICABLE CODES, LAWS, OR ORDINANCES OF THE STATE OF CALIFORNIA, AND COUNTY AND LOCAL CODES. SAN DIEGO LOCAL ORDINANCES INCLUDING STATE OR LOCAL BOARD OF HEALTH, FEDERAL AND STATE ENVIRONMENTAL PROTECTION REGULATIONS, STATE ENERGY CODES AND UTILITY REGULATORY AGENCIES.
- ALL WORK SHALL BE FURTHER PERFORMED IN ACCORDANCE WITH THE NATIONAL BOARD OF FIRE UNDERWRITERS, THE PLUMBING AND BUILDING CODES, NATIONAL ELECTRICAL CODE, THE OCCUPATIONAL SAFETY AND HEALTH ACT, THE AMERICAN GAS ASSOCIATION, AND ALL SUCH OTHER SPECIFIC CODES AS MAY BE REFERRED TO IN THE INDIVIDUAL SECTIONS OF THE SPECIFICATIONS.
- PIPE SIZES SHOWN ON THE DRAWINGS ARE THE MINIMUM SIZES ALLOWED REGARDLESS OF THE CODE MINIMUM, EXCEPT WHEN THE CODE MINIMUM SIZE IS LARGER THAN THAT SHOWN.
- THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONTRACT PRINTS ON THE CONSTRUCTION SITE AT ALL TIMES, ON WHICH HE SHALL ACCURATELY RECORD THE ACTUAL INSTALLATION OF ALL PLUMBING WORK. AS WORK PROGRESSES, MARK CHANGES MADE WHETHER RESULTING FROM JOB CONDITIONS, ADDENDA, FORMAL CHANGE ORDERS OR OTHER INSTRUCTIONS ISSUED BY THE ENGINEER.
- THE PLUMBING CONTRACTOR SHALL INDICATE PROGRESS BY COLORING IN VARIOUS PIPES, FIXTURES, AND ASSOCIATED APPURTENANCES EXACTLY AS THEY ARE ERRECTED AND INSTALLED.
- MARK ALL PIPE SIZES AND LOCATIONS DURING CONSTRUCTION. ALSO, MARK LOCATIONS OF ALL VALVES AND VARIOUS EQUIPMENT, APPARATUS, AND ASSOCIATED APPURTENANCES AS ERRECTED WEEKLY DURING CONSTRUCTION.
- AT THE COMPLETION OF THE JOB THESE PRINTS, INCORPORATING CHANGES, ADDENDA AND ADDED DATA NOTED ON MARK-UP PRINTS INCLUDING UNDESIGNED LOCATIONS INCLUDING UNDESIGNED PIPING BEYOND LIMITS OF BUILDING, SHALL BE SUBMITTED TO THE ENGINEER FOR FINAL REVIEW AND COMMENT. THE PRINTS WILL BE RETURNED WITH APPROPRIATE COMMENTS AND RECOMMENDATIONS. THESE CORRECTED PRINTS TOGETHER WITH ORIGINAL PRINTS INDICATING ALL THE REVISIONS, ADDITIONS AND DELETIONS OF WORK, SHALL FORM THE BASIS FOR PREPARING A SET OF RECORD DRAWINGS.
- WHERE PIPING, AND OTHER PLUMBING APPURTENANCES PASS THROUGH FIRE PARTITIONS, FIRE WALLS, OR FLOORS, INSTALL A FIRE-STOP THAT PROVIDES AN EFFECTIVE BARRIER AGAINST THE SPREAD OF FIRE, SMOKE AND GASES. FIRE-STOP MATERIAL SHALL BE UL APPROVED, PACKED TIGHT AND COMPLETELY FILL CLEARANCES BETWEEN RACKINGS AND OPENINGS, FLOOR, EXTERIOR WALL, AND ROOF SEALS SHALL ALSO BE MADE WATER-TIGHT AS APPROVED BY THE ADMINISTRATIVE AUTHORITY.
- ARRANGE AND INSTALL PIPES APPROXIMATELY AS INDICATED, STRAIGHT, PLUMB AND AS DIRECT AS POSSIBLE. FORM RIGHT ANGLES PARALLEL LINES WITH BUILDING WALLS. KEEP PIPES CLOSE TO WALLS, PARTITIONS AND CEILINGS, OFFSETTING ONLY WHERE NECESSARY TO FOLLOW WALLS AND AVOID INTERFERENCE WITH OTHER MECHANICAL ITEMS. LOCATE GROUPS OF PIPES PARALLEL TO EACH OTHER, SPACE THEM AT A DISTANCE TO PERMIT ACCESS FOR SERVICING VALVES.
- PIPING SHALL BE FITTED TO POINTS OF DRAINAGE WITH CONSTANT UNIFORM SLOPE.
- INSTALL HORIZONTAL PIPING AS HIGH AS POSSIBLE WITHOUT SAGS OR HUMPS.
- GRADE DRAINAGE AT UNIFORM SLOPE OF NOT LESS THAN 1/4" PER FOOT TOWARD THE POINT OF DISPOSAL.
- WHERE CHANGES IN PIPE SIZES OCCUR, USE ONLY REDUCING FITTINGS.
- FOR DRAINAGE PIPING CHANGES IN DIRECTION, USE LONG SWEEP WHERE POSSIBLE, OTHERWISE, SHORT SWEEP 1/4 BENDS, OR COMBINATION WYE AND 1/8 BENDS; USE SANITARY TEE BRANCHES ONLY FOR HORIZONTAL BRANCHES DISCHARGING TO STACKS.
- INSTALL SECTIONALIZING VALVES AND ON EACH BRANCH LINE TO MULTI-FIXTURE GROUPS. LOCATE VALVES IN A READILY ACCESSIBLE LOCATION, DO NOT CONCEAL. DO NOT LOCATE VALVE SYSTEMS BELOW HORIZONTAL UNLESS INDICATED ON PLANS. LOCATE ANGLE STOP VALVES BELOW THE SINK OR WATER CLOSET.
- WATER SUPPLY TO ALL FIXTURES AND CONTAINERS SHALL BE SO INSTALLED AS TO PREVENT POSSIBLE BACK SPONGE OF POLLUTED WATER. ALL SUPPLIES SHALL BE EITHER ABOVE THE FLOOD RIM OF THE FIXTURE OR SEPARATED FROM THE DRAINAGE END BY MEANS OF AN APPROVED VACUUM BREAKERS.
- PROVIDE PIPING AND FIXTURE TRAPS. CONNECT TO FIXTURES AND OTHER EQUIPMENT INDICATED OR SPECIFIED AS REQUIRING SLOP, WASTE, DRAIN AND VENT FACILITIES.
- LAY ALL PIPING TRUE TO LINE AND GRADE, FIT BIDS TOGETHER, MATCH SO THAT SEWER OR DRAIN WILL HAVE SMOOTH AND UNIFORM INSERT. FOLLOW LOCATIONS AND ELEVATIONS AT SITE. AS THE PIPE LAYING PROGRESSES, CLEAR PIPE INTERIOR OF GROUT, DIRT, AND OTHER FOREIGN MATERIALS. DURING WORK STOPPAGE PERIODS, PROVIDE EFFECTIVE PLUGS OR COVERS FOR OPEN ENDS OF PIPE AND DRAINS.
- PROVIDE CLEANOUTS WHERE INDICATED AND AT INTERVALS OF 100' OR AS REQUIRED BY LOCAL PLUMBING CODE AND WHERE INDICATED BY CHANGES OF DIRECTION. CLEANOUTS SHALL BE INSTALLED AT 45 DEGREE ANGLES. CLEANOUTS SHALL BE THE SAME SIZE AS PIPE SERVED EXCEPT THAT NO CLEANOUT NEED BE LARGER THAN FOUR INCHES.
- EXTEND VENT PIPES 12 INCHES ABOVE ROOF AND 10FT MINIMUM AWAY FROM ANY FRESH AIR INTAKES. MAINTAIN AT LEAST 24 INCHES AWAY FROM THE PARAPET WALLS.
- SANITARY VENT PIPING SHALL BE GRADED SO THAT THE AIRFLOW TO THE OUTSIDE WILL BE CONTINUOUSLY UPWARD AND SO THAT NO LOW POINTS WILL BE DRAINED.
- MAKE TIGHT CONNECTION BETWEEN WATER CLOSET FLANGES AND EARTHWARE FIXTURE BY MEANS OF AN APPROVED MOLDED WAX RING OR SETTING COMPOUND AND BOLTING.
- VENTS: PROVIDE FLASHING FOR STACKS PASSING THROUGH ROOF. MAKE WATER-TIGHT AT ROOF WITH 4 LB. SHEET LEAD; EXTEND INTO ROOFING FELTS AT LEAST 24" FROM PIPES. EXTEND LEAD COLLAR UP AROUND OUTSIDE AND TURN DOWN INSIDE VENTS AT THE TOP. DO NOT LOCATE VENT THROUGH ROOF LESS THAN 24 INCHES FROM A PARAPET WALL.
- ALL PLUMBING FIXTURES AND PIPING ARE TO BE LISTED BY AN APPROVED LISTING AND TESTING AGENCY AND PROPERLY LABELED.
- COORDINATE ALL LOCATIONS, SIZES, AND ELEVATIONS OF ALL SLEEVES THROUGH WALLS, BEAMS, SLABS AND FOOTING WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS. ALL PIPES SLEEVING THROUGH FOOTINGS SHALL HAVE A SLEEVE DIAMETER OF TWO PIPE SIZES OVER THE PIPE PASSING THROUGH THE FOOTING. NO PIPE TO BE PLACED THROUGH FOOTING UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
- ALL PIPES SHALL BE PROTECTED AT THE POINT THEY CROSS BUILDING EXPANSION JOINT, EITHER WITH AN EXPANSION FITTINGS OR IN ANOTHER MANNER ACCEPTABLE TO THE ENGINEER.
- FAUCET CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS.
- PENETRATION OF FLOOR/CEILING ASSEMBLIES AND ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE PROTECTED IN ACCORDANCE WITH THE BUILDING CODE.
- WHERE WATER PRESSURE WITHIN A BUILDING EXCEEDS 80 PSI, AN APPROVED WATER-PRESSURE REDUCING VALVE CONFORMING TO ASSE 1003 WITH STRAINER SHALL BE INSTALLED TO REDUCE THE PRESSURE IN THE BUILDING WATER DISTRIBUTION PIPING TO 80 PSI STATIC OR LESS.
- DISINFECTION OF POTABLE WATER SYSTEM SHALL COMPLY WITH THE LOCAL AND THE CALIFORNIA PLUMBING CODE.
- ALL PIPING SHALL MAINTAIN AT LEAST 5'-0" CLEARANCE IN FRONT OF THE HVAC SUPPLY AND RETURN OPENINGS.
- PLASTIC PIPES ARE NOT PERMITTED TO BE INSTALLED WITHIN THE AIR PLenum SPACE.
- CONTRACTOR IS REQUIRED TO SCOPE THE EXISTING SANITARY SEWER LINE PRIOR OF WORK. IF REQUIRED, CONTRACTOR SHALL PERFORM RODDING TO GUARANTEE FREE FLOWING OF THE EXISTING WASTE LINE AND NOTIFY THE ENGINEER IF THE EXISTING INVERT ELEVATION IN POINT IS NOT ADEQUATE TO MEET THE INVERT ELEVATION INDICATED ON THE PLANS.
- PLUMBING FIXTURES AND FITTINGS SHALL MEET THE STANDARDS REFERENCED IN TABLE 4.303.3 OF THE CALIFORNIA GREEN BUILDING STANDARDS CODE.
- PRIOR OF INSTALLATION OF THE BACKFLOW PREVENTER DEVICE(S), IF REQUIRED, CONTRACTOR SHALL REGISTER AND CERTIFY ALL DEVICES WITH THE COUNTY HAVING JURISDICTION. CONTRACTOR MUST PROPERLY FOLLOW THE MANUFACTURER'S INSTALLATION MANUAL. BACKFLOW PREVENTER DEVICE SHALL BE MOUNTED AT READILY ACCESSIBLE LOCATION. IF REQUIRED, CONTRACTOR SHALL PROVIDE INDIRECT DRAIN PIPING TO DISCHARGE INTO AN APPROVED RECEPTOR.
- ALL FIXTURES, EQUIPMENT, PIPING, AND MATERIALS SHALL BE LISTED.
- ALL PLUMBING FIXTURES SHALL MEET THE FLOW REQUIREMENTS SPECIFIED IN THE MARIN PLUMBING CODE.
- ALL FAUCETS IN PUBLIC RESTROOMS SHALL BE SELF-CLOSING OR SELF-CLOSING METERING FAUCETS.
- WATER PIPE AND FITTINGS WITH A LEAD CONTENT WHICH EXCEEDS 0.25% SHALL BE PROHIBITED IN SYSTEMS CONVEYING POTABLE WATER.

McCall

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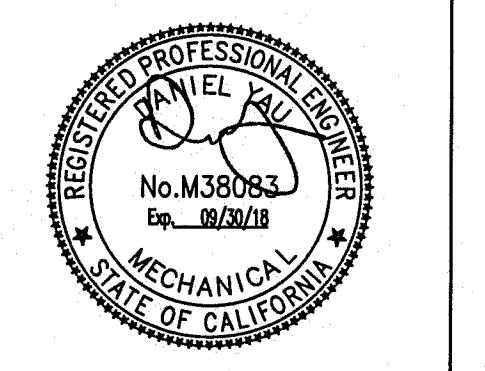
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PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA

JOB NUMBER:
216008

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

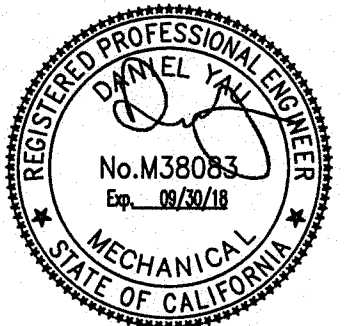
GENERAL NOTES & SPECIFICATIONS

SCALE

P0.2

DATE	ISSUE
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03.03.17	PLAN CHECK COMMENTS

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DRAWING DESCRIPTION

PLUMBING
T-24 FORM

SCALE

STATE OF CALIFORNIA
WATER HEATING SYSTEM GENERAL INFORMATION
CEC-NRCC-PLB-01-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-PLB-01-E
Water Heating System General Information (Page 1 of 2)
Project Name: PHILZ COFFEE 8849 VILLA LA JOLLA VILLAGE DR, #307, SAN DIEGO, CA Date Prepared: 03-01-2017

A. GENERAL INFORMATION/SYSTEM INFORMATION

01	Water Heater System Name:	EWH-1
02	Water Heater System Configuration:	Central System
03	Water Heater System Type:	Domestic Hot Water
04	Building Type:	Nonresidential
05	Total Number of Water Heaters in Systems:	1
06	Central DHW Distribution Type:	Demand Recirculation
07	Dwelling Unit DHW Distribution Type:	

B. WATER HEATER INFORMATION
Each water heater type requires a separate form.

01	Water Heater Type:	Small Storage - Electric
02	Fuel Type:	Electricity
03	Manufacture Name:	A.O. SMITH
04	Model Number:	DSE-50
05	Number of Identical Water Heaters:	
06	Installed Water Heater System Efficiency:	0.93
07	Required Minimum Efficiency:	N/A
08	Standby Loss Percent or Standby Loss Total:	N/A
09	Rated Input:	15 KW
10	Pilot Energy:	N/A
11	Water Heater Tank Storage Volume:	50 GALLONS
12	Exterior Insulation on Water Heater:	N/A
13	Volume of Supplemental Storage:	N/A
14	Internal Insulation on Supplemental Storage:	N/A
15	Exterior Insulation on Supplemental Storage:	N/A

C. PLUMBING COMPLIANCE FORMS & WORKSHEETS
(check box if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, refer to the 2013 Nonresidential Manual
Note: The Enforcement Agency may require all forms to be incorporated onto the building plans.

YES	NO	Form/Worksheet #	Title
<input checked="" type="radio"/>	<input type="radio"/>	NRCC-PLB-01-E	Certificate of Compliance, Declaration. Required on plans for all submittals.
<input checked="" type="radio"/>	<input type="radio"/>	NRCI-PLB-01-E	Certificate of Installation. Required on plans for all submittals.
<input type="radio"/>	<input checked="" type="radio"/>	NRCI-PLB-02-E	Certificate of Installation, required on central systems in high-rise residential, hotel/motel application.
<input type="radio"/>	<input checked="" type="radio"/>	NRCI-PLB-03-E	Certificate of Installation, required on single dwelling unit systems in high-rise residential, hotel/motel application.
<input type="radio"/>	<input checked="" type="radio"/>	NRCI-PLB-21-H	Certificate of Installation, required on HERS verified central systems in high-rise residential, hotel/motel application.
<input type="radio"/>	<input checked="" type="radio"/>	NRCI-PLB-22-H	Certificate of Installation, required on HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.
<input type="radio"/>	<input checked="" type="radio"/>	NRCI-STH-01-E	Certificate of Installation, required on any solar water heating

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

STATE OF CALIFORNIA
WATER HEATING SYSTEM GENERAL INFORMATION
CEC-NRCC-PLB-01-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-PLB-01-E
Water Heating System General Information (Page 2 of 2)
Project Name: PHILZ COFFEE 8849 VILLA LA JOLLA VILLAGE DR, #307, SAN DIEGO, CA Date Prepared: 03-01-2017

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Daniel Yau Documentation Author Signature:

Company: ACIES ENGINEERING Signature Date: 03-01-2017
Address: 3371 OLCOTT STREET CEA/HERS Certification Identification (if applicable):
City/State/Zip: SANTA CLARA, CA 95054 Phone: 408-522-5255

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

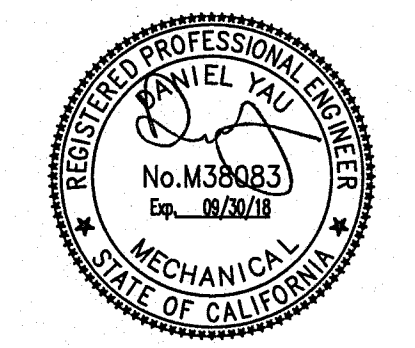
Responsible Designer Name: Daniel Yau Responsible Designer Signature:

Company: ACIES ENGINEERING Date Signed: 03-01-2017
Address: 3371 OLCOTT STREET License: M38083
City/State/Zip: SANTA CLARA, CA 95054 Phone: 408-522-5255

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance August 2015

DATE	ISSUE
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PLUMBING
T-24 FORM

SCALE

P0.4

STATE OF CALIFORNIA
PLUMBING
CEC-NRCI-PLB-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF INSTALLATION NRCI-PLB-01-E
Page 3 of 5
Project Name: Philz Coffee La Jolla, San Diego, CA Enforcement Agency: Permit Number:
Project Address: 8849 Villa La Jolla Village DR, #307 City: San Diego Zip Code: 92037

D. MANDATORY MEASURES FOR ALL SINGLE DWELLING HOT WATER DISTRIBUTION SYSTEMS

01	Equipment shall meet the applicable requirements of the Appliance Efficiency Regulations (Section 110.3(b)(1)).
02	Unfired Storage Tanks are insulated with an external R-12 or combination of R-16 internal and external insulation. (Section 110.3(c)(4)).
03	The following pipes are insulated, to the thicknesses required by Table 120.3A, except for those sections of pipe that are subject to one of the exceptions below: (RA4.4.1) • The first 5 feet (1.5 meters) of hot and cold water pipes from the storage tank. • All piping with a nominal diameter of 3/4 inch (19 millimeter) or larger. • All piping associated with a domestic hot water recirculation system regardless of the pipe diameter, except when cold water return is used in a demand system. • Piping from the heating source to storage tank or between tanks. • Piping buried below grade. • All hot water pipes from the heating source to the kitchen fixtures. The following sections of pipe do not have to be insulated: (RA4.4.1) • Piping installed in interior or exterior walls that is surrounded on all sides by at least 1 inch of insulation. • Piping installed in attics with a minimum of 4 inches (10 cm) of attic insulation on top. • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Metal piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall butt securely against all framing members.
04	Piping buried below grade must be installed in a water proof and non-crushable casing or sleeve that allows for installation, removal, and replacement of the enclosed pipe and insulation. (Section 150.0(j))
05	All elbows and tees shall be fully insulated. (RA4.4.1)
06	Where insulation is required, no piping shall be visible due to insulation voids, and all insulation shall fit tightly to the pipe. (RA4.4.1)
07	For Gas or Propane Water Heaters: Ensure the following are installed (Section 150.0(n)) 1. A 120V electrical receptacle is within 3 feet from the water heater and accessible with no obstructions 2. A Category III or IV vent, or a Type B vent with straight pipe between outside and water heater 3. A condensate drain no more than 2 inches higher than the base on water heater for natural draining 4. A gas supply line with capacity of at least 200,000 Btu/hr

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

STATE OF CALIFORNIA
PLUMBING
CEC-NRCI-PLB-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF INSTALLATION NRCI-PLB-01-E
Page 2 of 5
Project Name: Philz Coffee La Jolla, San Diego, CA Enforcement Agency: Permit Number:
Project Address: 8849 Villa La Jolla Village DR, #307 City: San Diego Zip Code: 92037

C. MANDATORY REQUIREMENTS FOR ALL CENTRAL DOMESTIC HOT WATER RECIRCULATION SYSTEMS

01	On systems that have a total capacity greater than 167,000 Btu/hr, outlets that require higher than service water temperatures as listed in the ASHRAE Handbook have separate remote heaters, heat exchangers, or boosters to supply the outlet with the higher temperature. (Section 110.3 (c)3)
02	Systems with circulating pumps or with electrical heat trace systems shall be capable of automatically turning off the system. (Section 110.3(c)(2)).
03	For public lavatories, the control system shall limit the outlet temperature to 110 degrees Fahrenheit. (Section 110.3(c)(3)).
04	Unfired storage tanks are insulated with an external R-12 or combination of R-16 internal and external insulation. Alternatively, the heat loss of the tank surface based on an 80 degrees Fahrenheit water-air temperature difference shall be less than 6.5 Btu per hour per square foot. (Section 110.3(c)(4)).
05	All sections of the recirculation loop, and the first five feet of all branches off the loop are insulated, to the thicknesses required by Table 120.3A, except for the following: (RA4.4.1) • Piping installed in interior or exterior walls that is surrounded on all sides by at least 1 inch of insulation. • Piping installed in attics with a minimum of 4 inches (10 cm) of attic insulation on top • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Metal piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall butt securely against all framing members. • Insulation is not required on the cold water line when it is used as the return
06	Hot water pipes that are buried below grade are installed in a water proof and non-crushable casing or sleeve that allows for installation, removal, and replacement of the enclosed pipe and insulation. (RA4.4.1)
07	Insulation outside conditioned space is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. (RA4.4.1)
08	Pipe insulation fits tightly to the pipe. (RA4.4.1)
09	On insulated sections of pipe, no piping is visible due to insulation voids, and all elbows and tees are fully insulated. (RA4.4.1)
10	The recirculation pump is mounted on a vertical section of the return line, OR an automatic air release valve is installed on a riser at least 12 inches in length, on the inlet side of the recirculation pump, no more than 4 feet from the pump. (Section 110.3(c)(5A)).
11	A check valve is located between the recirculation pump and the water heater. (Section 110.3(c)(5B)).
12	A hose bibb is installed between the pump and the water heating equipment with an isolation valve between the hose bibb and the water heating equipment. (Section 110.3(c)(5C)).
13	Isolation valves are installed on both sides of the pump. One of the isolation valves may be the same isolation valve as in item 12 above. (Section 110.3(c)(5D)).
14	The cold water supply piping and the recirculation loop piping is not connected to the hot water storage tank drain port. (Section 110.3(c)(5E)).
15	A check valve is installed on the cold water supply line between the hot water system and the next closest tee on the cold water supply. (Section 110.3(c)(5F)).
16	The hot water distribution system piping from the water heater(s) to the fixtures and appliances takes the most direct path. (RA 4.4.7.1)
17	Installation and operation instructions that provide details of the operation of the pump and controls are available at the jobsite for inspection. (RA 4.4.7.1)
18	More than one circulation loop may be installed. Each loop shall have its own pump and controls. (RA4.4.8, RA 4.4.9, RA 4.4.10)

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

STATE OF CALIFORNIA
PLUMBING
CEC-NRCI-PLB-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF INSTALLATION NRCI-PLB-01-E
Page 5 of 5
Project Name: Philz Coffee La Jolla, San Diego, CA Enforcement Agency: Permit Number:
Project Address: 8849 Villa La Jolla Village DR, #307 City: San Diego Zip Code: 92037

Instructions for NRCI-PLB-01-E

Section A. GENERAL INFORMATION

- Enter the date on the building permit.
- Enter the appropriate building type from the pull down list.
- Enter the appropriate phase of construction from the pull down list

Section B. SCOPE OF RESPONSIBILITY

- Enter the date the enforcement agency approved the certificate of compliance (NRCC-MCH-XX) that used as the basis of the specifications used to demonstrate compliance.
- Enter the construction document that specifies the installed feature, material, component, manufactured device or system performance diagnostic results required for compliance as specified on the certificate of compliance.
- As needed, this row shall be filled according to the instructions for row B.02
- As needed, this row shall be filled according to the instructions for row B.02
- As needed, this row shall be filled according to the instructions for row B.02

Note: more rows shall be added when needed

Section C. MANDATORY REQUIREMENTS FOR ALL CENTRAL DOMESTIC HOT WATER RECIRCULATION SYSTEMS
- For central systems only. Ensure all mandatory requirements are met.

Section D. D. MANDATORY MEASURES FOR ALL SINGLE DWELLING HOT WATER DISTRIBUTION SYSTEMS
- For single dwelling systems only. Ensure all mandatory requirements are met.

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

STATE OF CALIFORNIA
PLUMBING
CEC-NRCI-PLB-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF INSTALLATION NRCI-PLB-01-E
Page 4 of 5
Project Name: Philz Coffee La Jolla, San Diego, CA Enforcement Agency: Permit Number:
Project Address: 8849 Villa La Jolla Village DR, #307 City: San Diego Zip Code: 92037

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: DANIEL YAU	Documentation Author Signature: DANIEL YAU
Company: ACIES ENGINEERING	Signature Date: 12-07-2016
Address: 3371 OLCOTT STREET	CEA/HERS Certification Identification (if applicable):
City/State/Zip: SANTA CLARA, CA 95054	Phone: 408-522-5255

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Builder/Installer Name:	Responsible Builder/Installer Signature:
Company Name (Installing Subcontractor or General Contractor or Builder/Owner):	Position with Company (Title):
Address:	CSLB License:
City/State/Zip:	Phone: Date Signed:

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

STATE OF CALIFORNIA
PLUMBING
CEC-NRCI-PLB-01-E (Revised 12/15) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF INSTALLATION NRCI-PLB-01-E
Page 1 of 5
Project Name: Philz Coffee La Jolla, San Diego, CA Enforcement Agency: Permit Number:
Project Address: 8849 Villa La Jolla Village DR, #307 City: San Diego Zip Code: 92037

A. GENERAL INFORMATION

DATE OF PERMIT:

BUILDING TYPE:

PHASE OF CONSTRUCTION:

If more than one person has responsibility for building construction, each person shall prepare and sign an Installation Certificate document applicable to the portion of construction for which they are responsible; alternatively, the person with chief responsibility for construction shall prepare and sign the installation Certificate document(s) for the entire construction.

B. SCOPE OF RESPONSIBILITY

Enter the date of approval by enforcement agency of the Certificate of Compliance that provides the specifications for the energy efficiency measures for the scope of responsibility for this Installation Certificate.

In the table below identify all applicable construction documents that specify the features, materials, components, manufactured devices, or system performance diagnostic results required for the scope of responsibility for this Installation Certificate (continued).

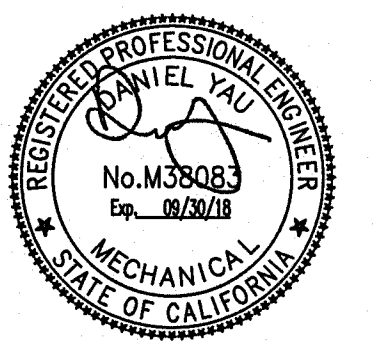
Document Title or Description	Applicable Sheets or Pages, Tables, Schedules, etc.	Date Approved by Enforcement Agency
Plumbing Construction Construction Drawings	All sheet indicated on sheet P0.1	

Add Row Remove Last

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance December 2015

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

PLUMBING PLAN - WASTE AND VENT

SCALE

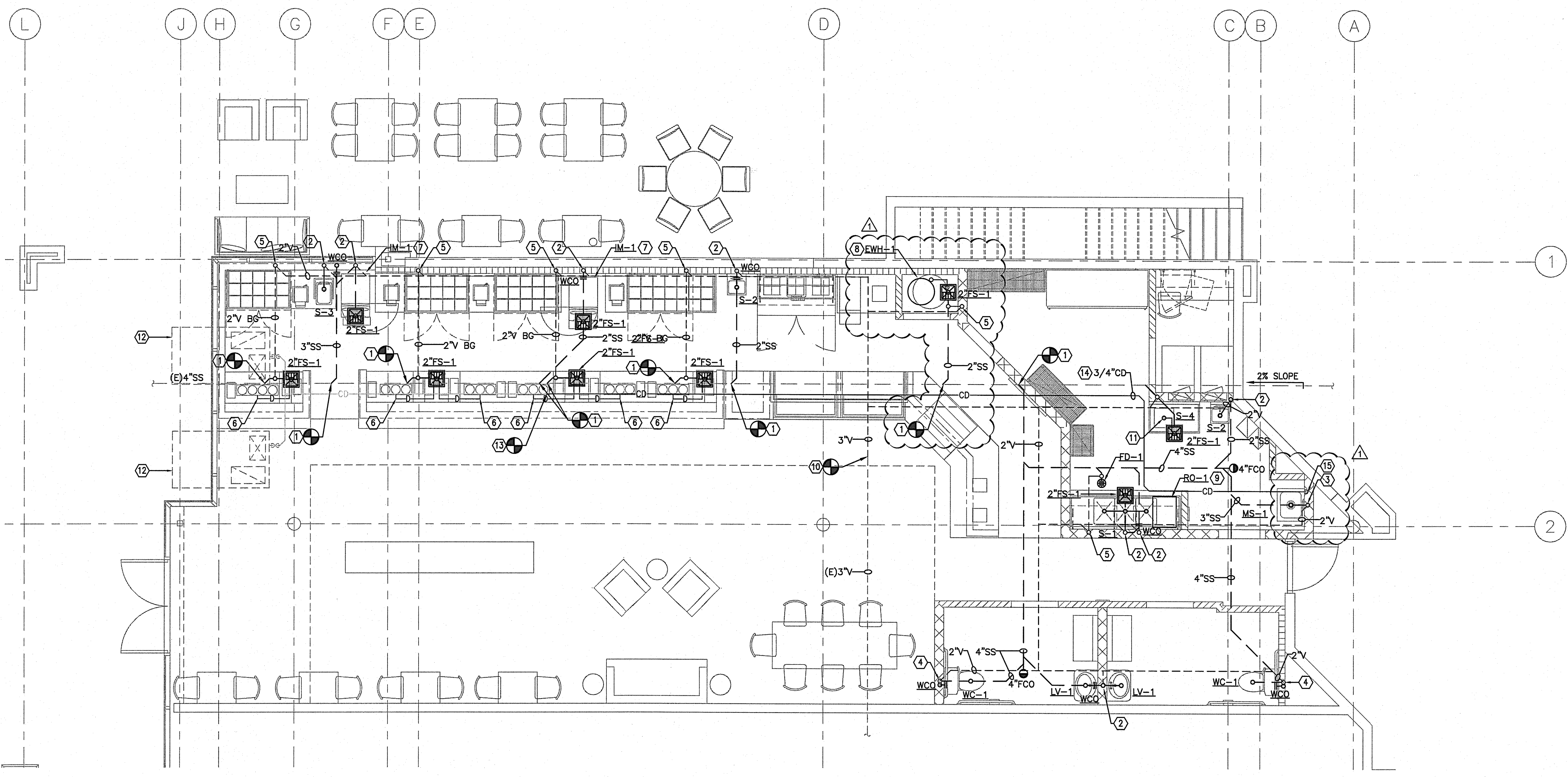
P2.1

GENERAL NOTES:

- CONTRACTOR IS RESPONSIBLE FOR SITE INVESTIGATION PRIOR TO COMMENCEMENT OF WORK, AND SHALL INFORM ARCHITECT OF ANY DISCREPANCY.

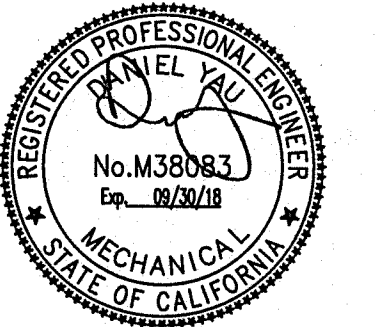
KEYED NOTES:

- CONNECT TO EXISTING 4" SANITARY SEWER MAIN. FIELD VERIFY EXACT SIZE, LOCATION AND INVERT ELEVATION OF EXISTING MAIN PIPE.
- 2" WASTE AND 2" VENT UP.
- 3" WASTE AND 2" VENT UP.
- 4" WASTE AND 2" VENT UP.
- 2" VENT UP FROM BELOW.
- RUN 1" DRAIN FROM DRIP STATION TO FLOOR SINK AND TERMINATE WITH 2" AIR GAP.
- RUN 3/4" DRAIN FROM ICE MACHINE TO FLOOR SINK AND TERMINATE WITH 2" AIR GAP.
- RUN FULL SIZE DRAIN AND TEMPERATURE AND PRESSURE RELIEF DRAIN FROM WATER HEATER AND DISCHARGE INTO FLOOR SINK.
- RUN FULL SIZE DRAIN FROM RO SYSTEM TO FLOOR SINK AND TERMINATE WITH 2" AIR GAP.
- CONNECT TO EXISTING 3" VENT MAIN. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING MAIN PIPE.
- RUN 1" DRAIN FROM PREP SINK TO FLOOR SINK AND TERMINATE WITH 2" AIR GAP.
- OUTLINE OF EXISTING ROOF TOP UNIT.
- CONNECT TO EXISTING 3/4" CD.
- 3/4" CD RUN ABOVE CEILING SPACE.
- 3/4" CD DOWN IN WALL AND TERMINATE ONTO MOP SINK WITH APPROVED AIR GAP.



DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE



DRAWING DESCRIPTION

PLUMBING PLAN - DOMESTIC WATER

SCALE

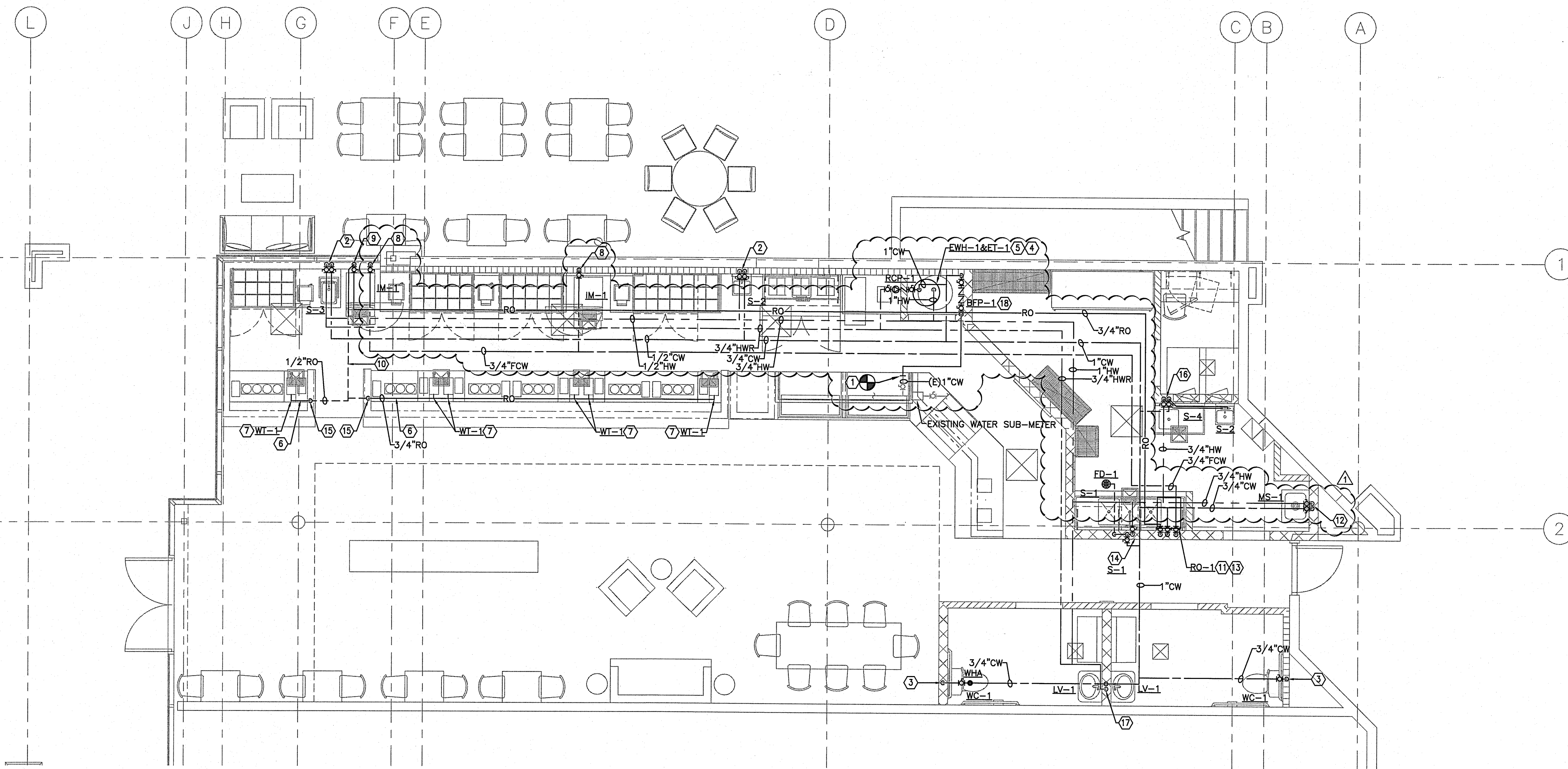
P2.2

GENERAL NOTES:

- CONTRACTOR IS RESPONSIBLE FOR SITE INVESTIGATION PRIOR TO COMMENCEMENT OF WORK, AND SHALL INFORM ARCHITECT OF ANY DISCREPANCY.
- CONNECTION FROM SHUT OFFS TO PLUMBING FIXTURES SHALL BE BY APPROVED METALLIC WATER LINE CONNECTORS. RUBBER AND PLASTICS ARE NOT ALLOWED.

KEYED NOTES:

- CONNECT 1-1/2" CW TO EXISTING COLD WATER. EXISTING 1" CW LINE NEED TO BE UPSIZE TO 1-1/2" CW. VERIFY IN FIELD EXACT LOCATION OF CONNECTING PIPING. CONTRACTOR NEED TO VERIFY IN FIELD EXISTING WATER METER SIZE, MAIN BRANCH SIZE, DISTANCE AND PRESSURE FROM PHILZ SPACE TO THE METER AND UPGRADE THE LINE AS REQUIRED.
- 1/2" HOT WATER AND 1/2" COLD WATER DOWN.
- 3/4" COLD WATER DOWN.
- 1" HOT FROM AND 1" COLD WATER TO WATER HEATER.
- ELECTRIC HOT WATER HEATER MOUNTED ON PLATFORM.
- RUN PIPING IN COUNTER.
- 1/2" RO WATER STUB FOR WATER TOWER.
- 3/4" FILTERED COLD WATER STUB FOR ICE MACHINE.
- 3/4" RO WATER DOWN TO BELOW SLAB.
- PIPING BELOW SLAB IN PVC SLEEVE.
- RO SYSTEM INSTALLED ON PLATFORM. PROVIDE PROPER EQUIPMENT SUPPORTS AS REQUIRED.
- 3/4" COLD AND HOT WATER DOWN WALL.
- 3/4" COLD WATER, 3/4" RO WATER, AND 3/4" FILTERED COLD WATER TO RO WATER FILTER.
- 3/4" COLD AND HOT WATER DOWN IN WALL. RUN 3/4" CW AND HW TO S-1 AND 1/2" COLD WATER TO TP-1.
- RO WATER FROM BELOW SLAB.
- 3/4" COLD AND HOT WATER DOWN IN WALL. RUN 3/4" CW AND HW TO S-4 AND 1/2" CW AND HW TO S-2.
- 3/4" COLD AND HOT WATER DOWN IN WALL. RUN 1/2" CW TO EACH LV-1.
- 1" BFP-1 INSTALLED ON WALL IN ACCESSIBLE LOCATION. DRAIN TO FLOOR SINK WITH 1" AIR GAP.

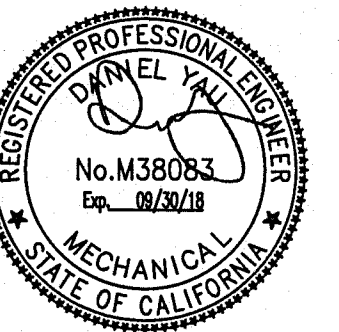


PHILZ COFFEE
8849 VILLA LA JOLLA VILLAGE DR, #307
SAN DIEGO, CA

JOB NUMBER:
 216088

DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE

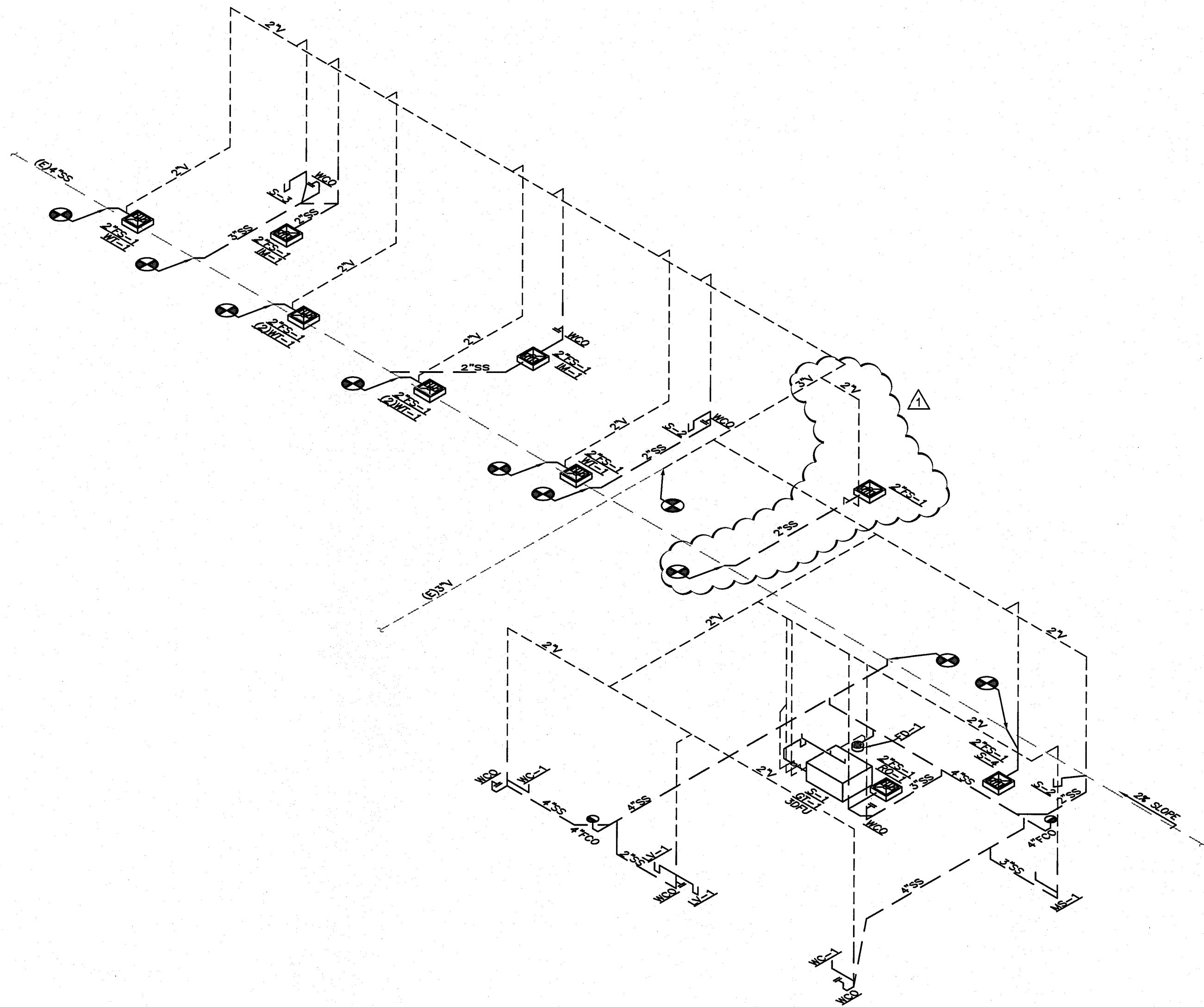


DRAWING DESCRIPTION

PLUMBING
 ISOMETRICS

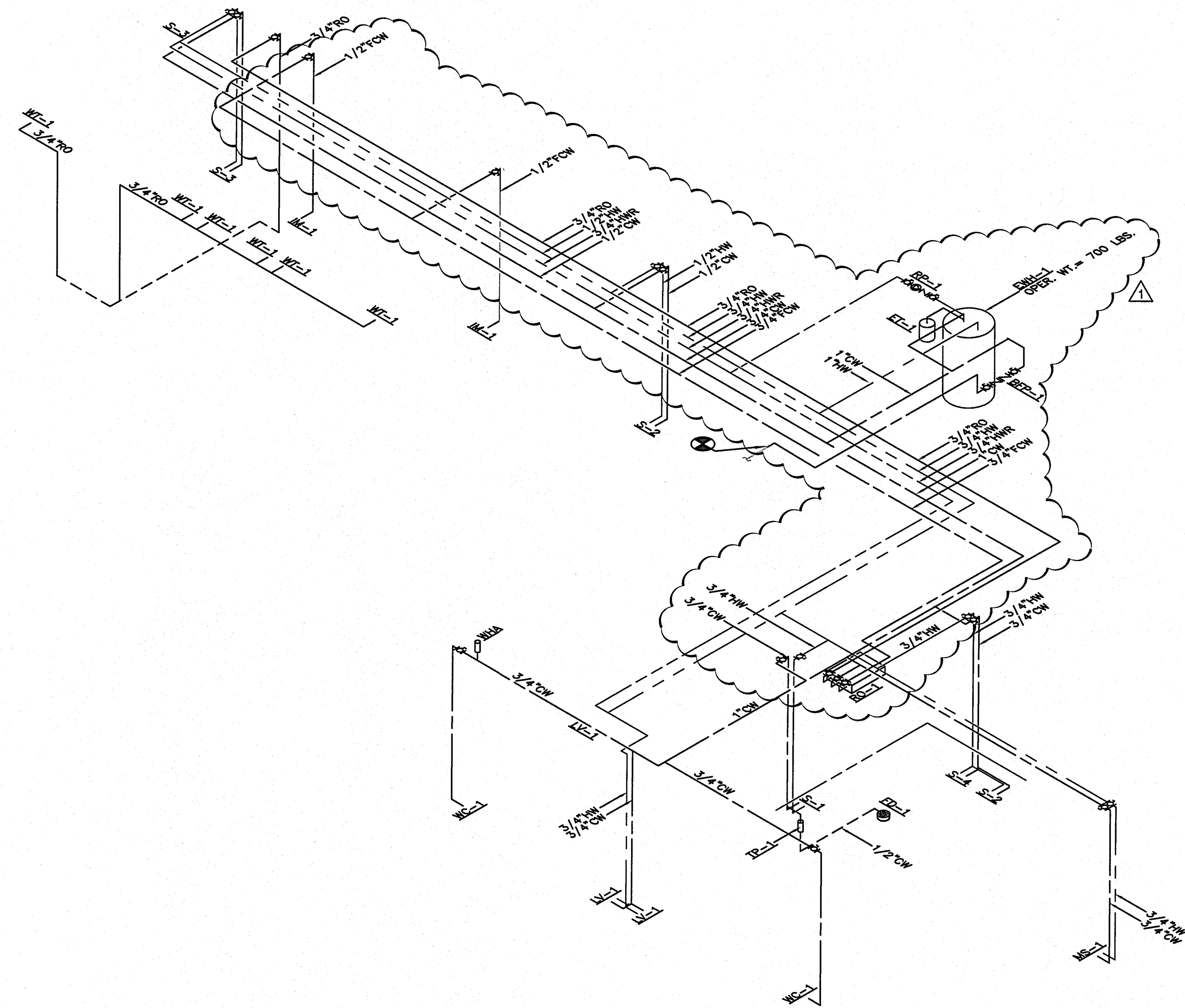
SCALE

P3.1



PLUMBING RISER DIAGRAM - SEWER AND VENT

SCALE
 NONE 2



PLUMBING RISER DIAGRAM - WATER SUPPLY

SCALE
 NONE 1

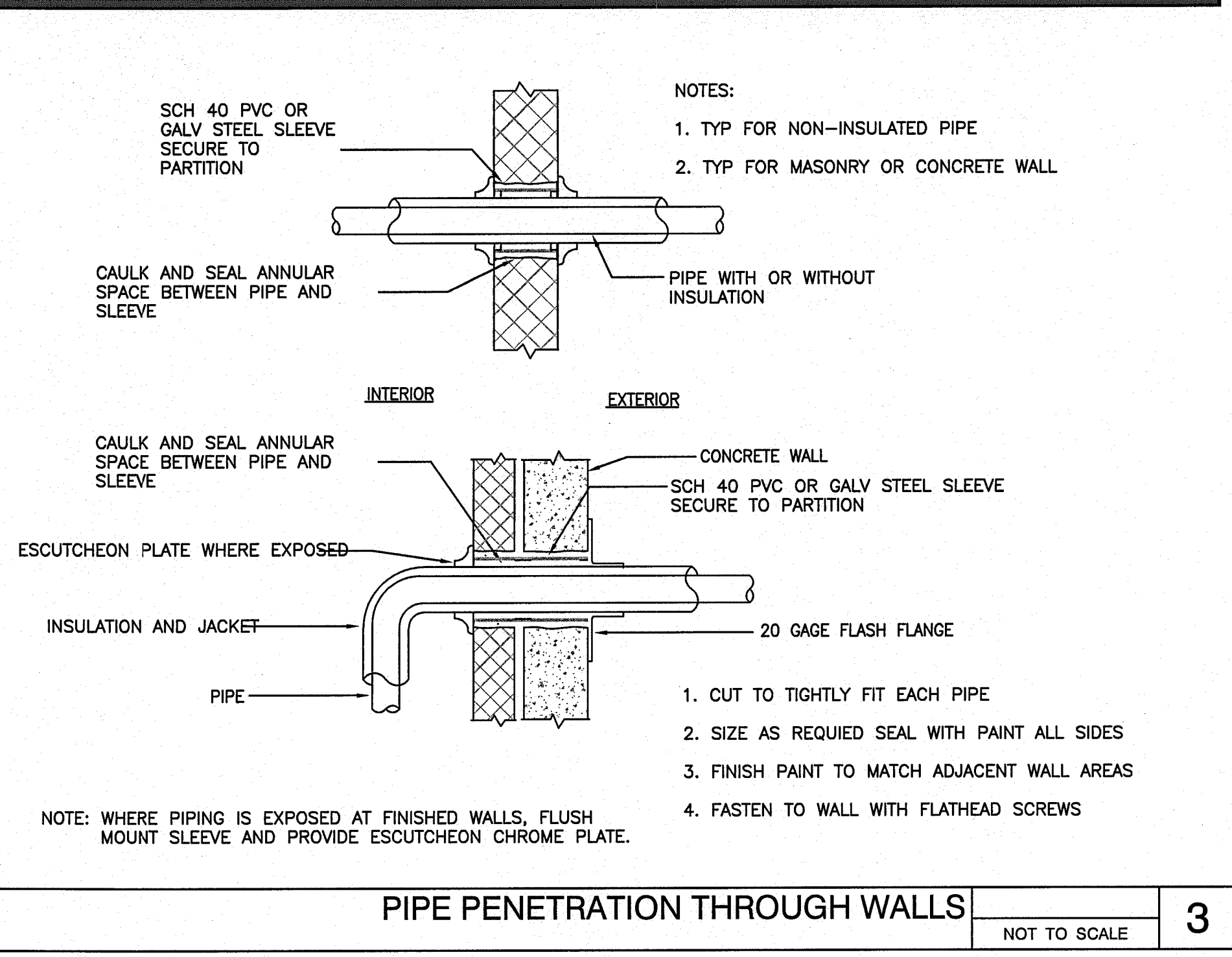
DATE	ISSUE
12.15.16	ISSUE FOR PERMIT
03.03.17	PLAN CHECK COMMENTS

SEAL/SIGNATURE

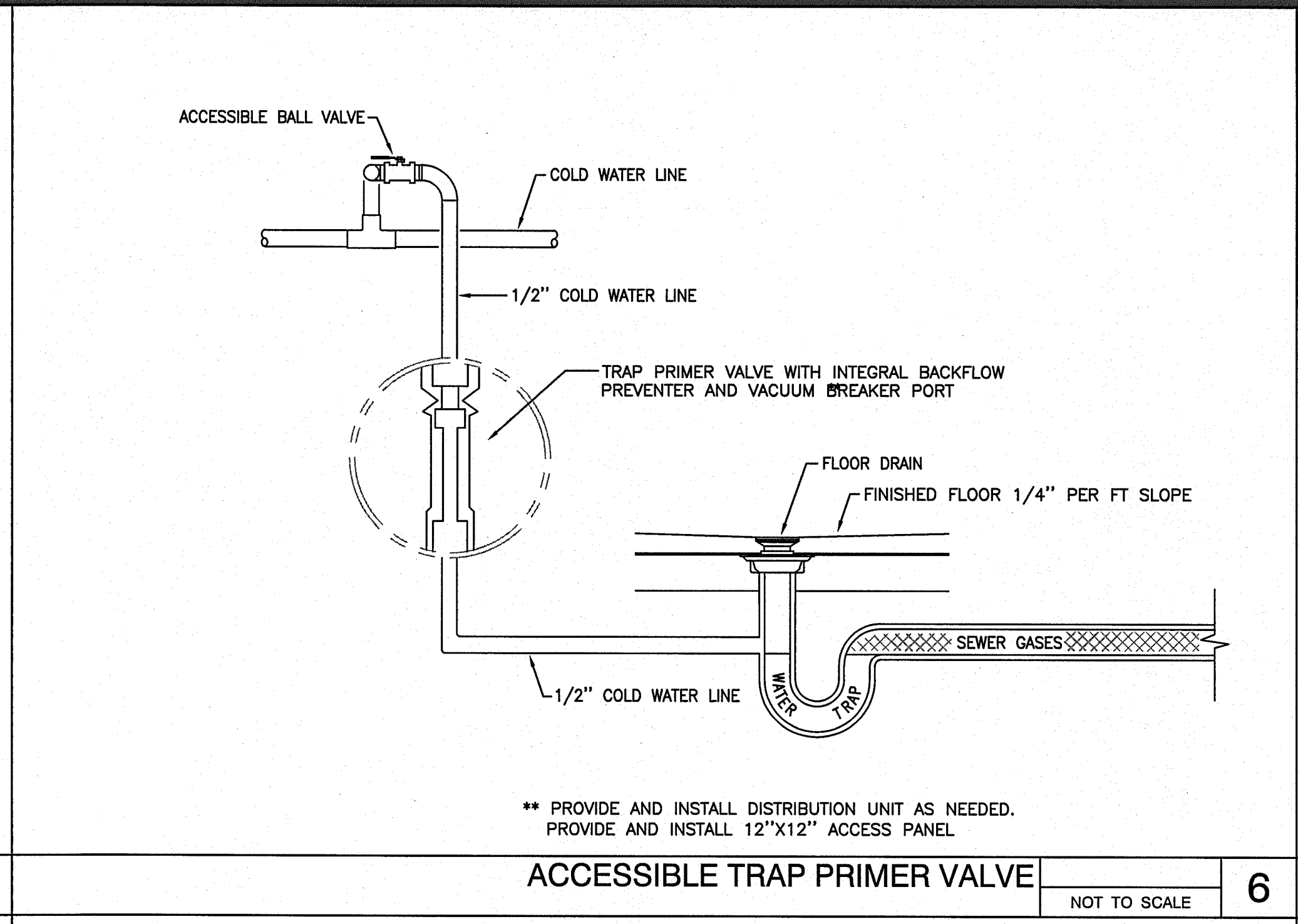


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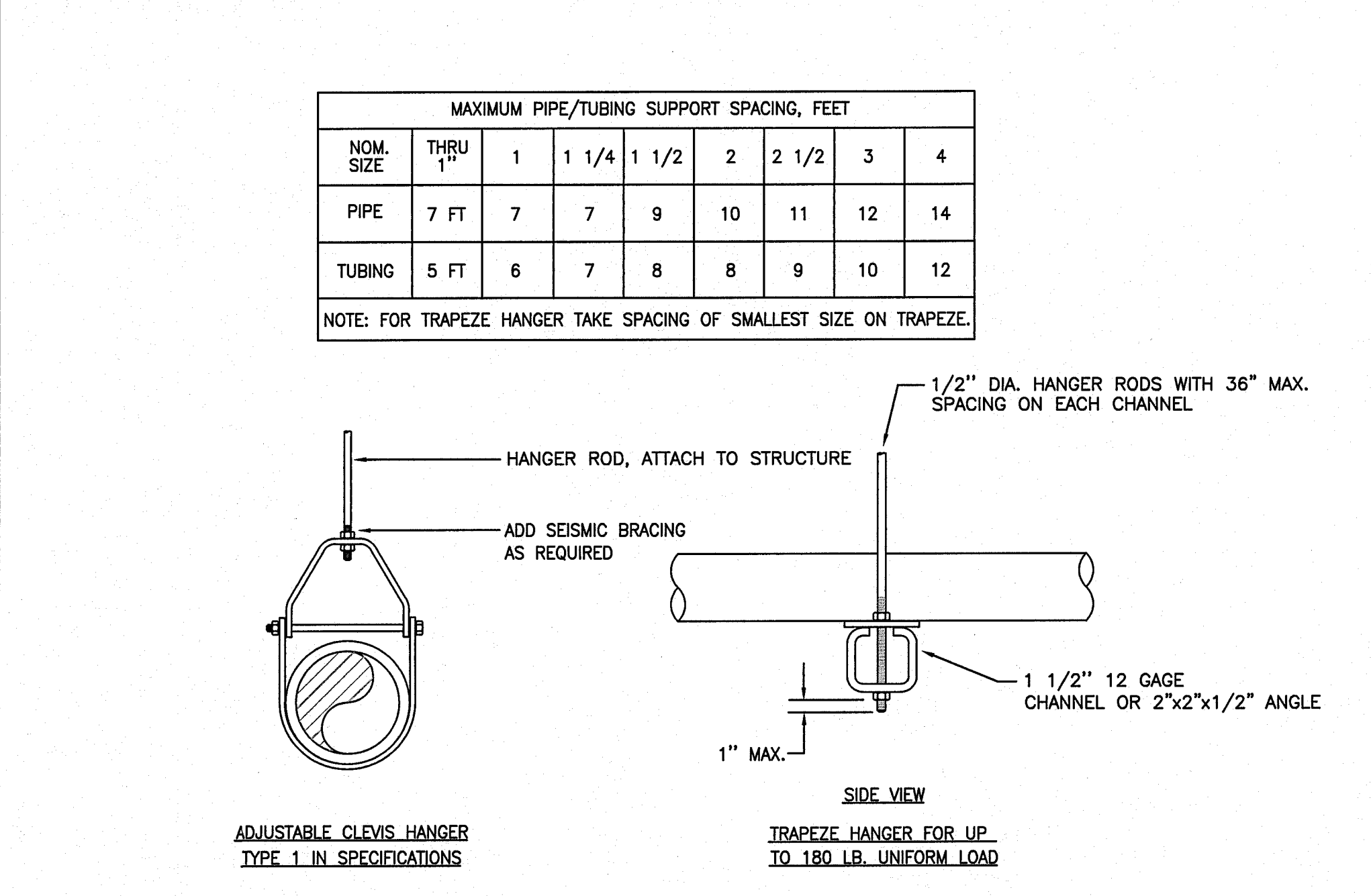
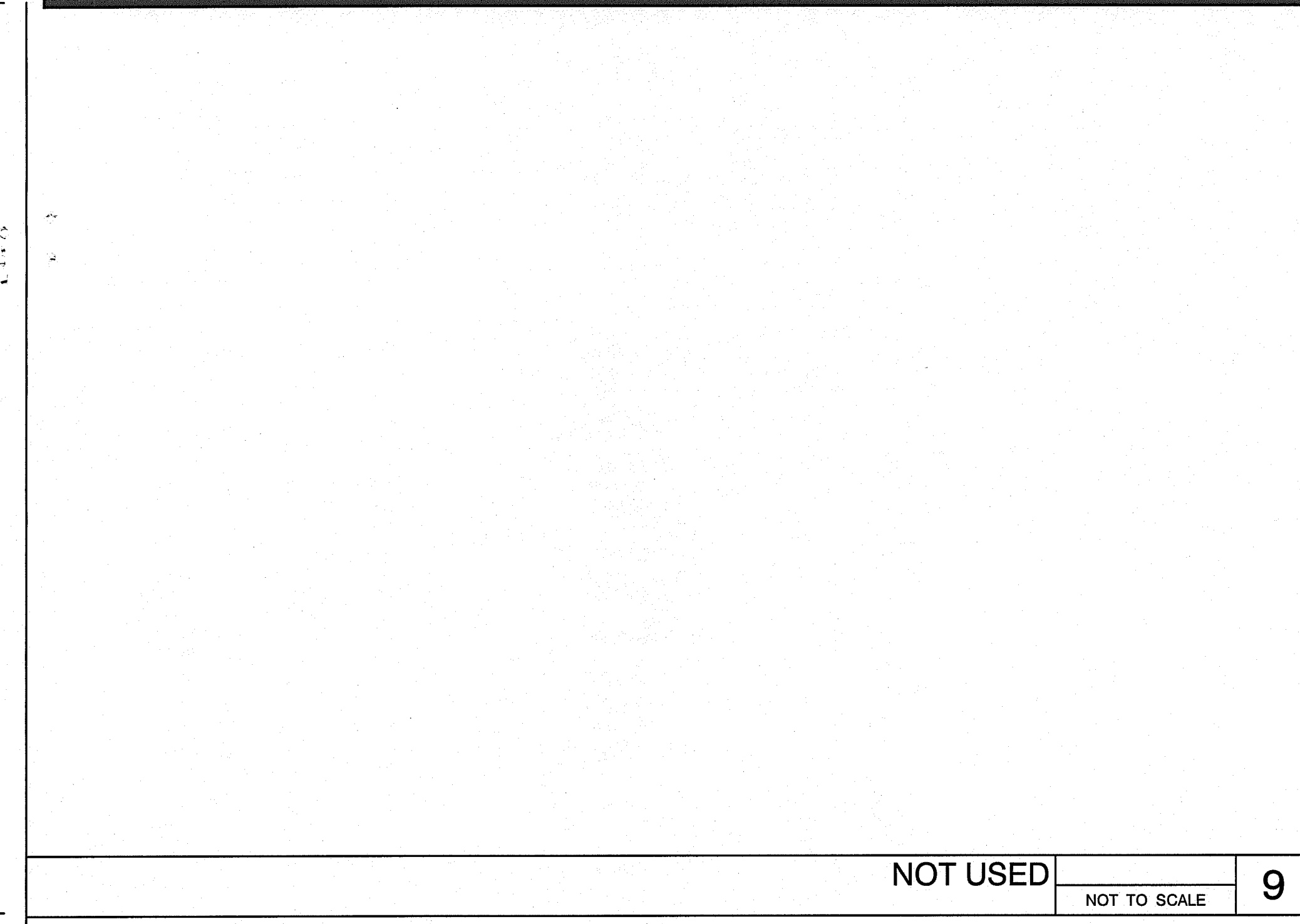
PLUMBING
FIXTURE SCHEDULE
SCALE



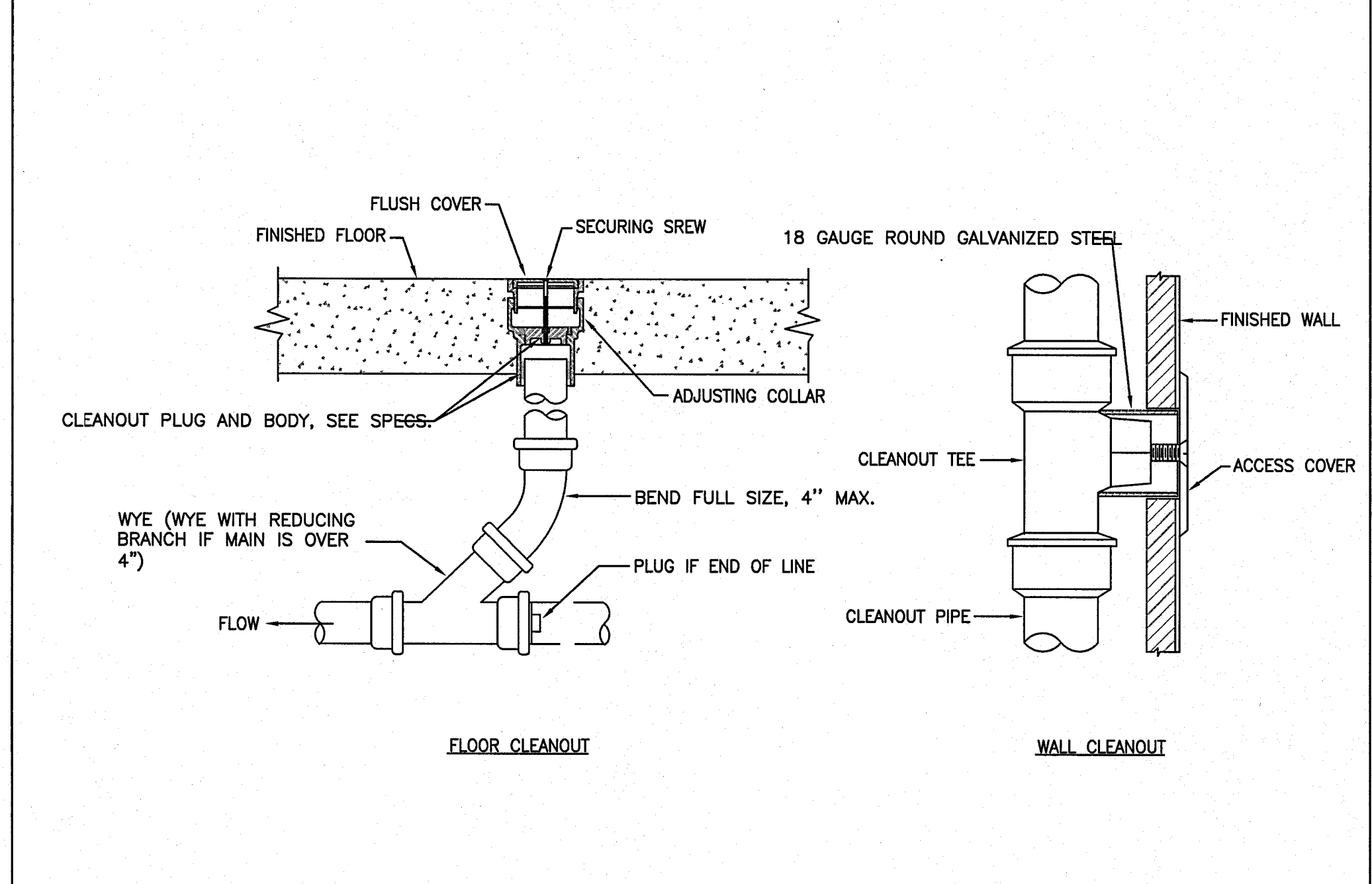
PIPE PENETRATION THROUGH WALLS NOT TO SCALE 3



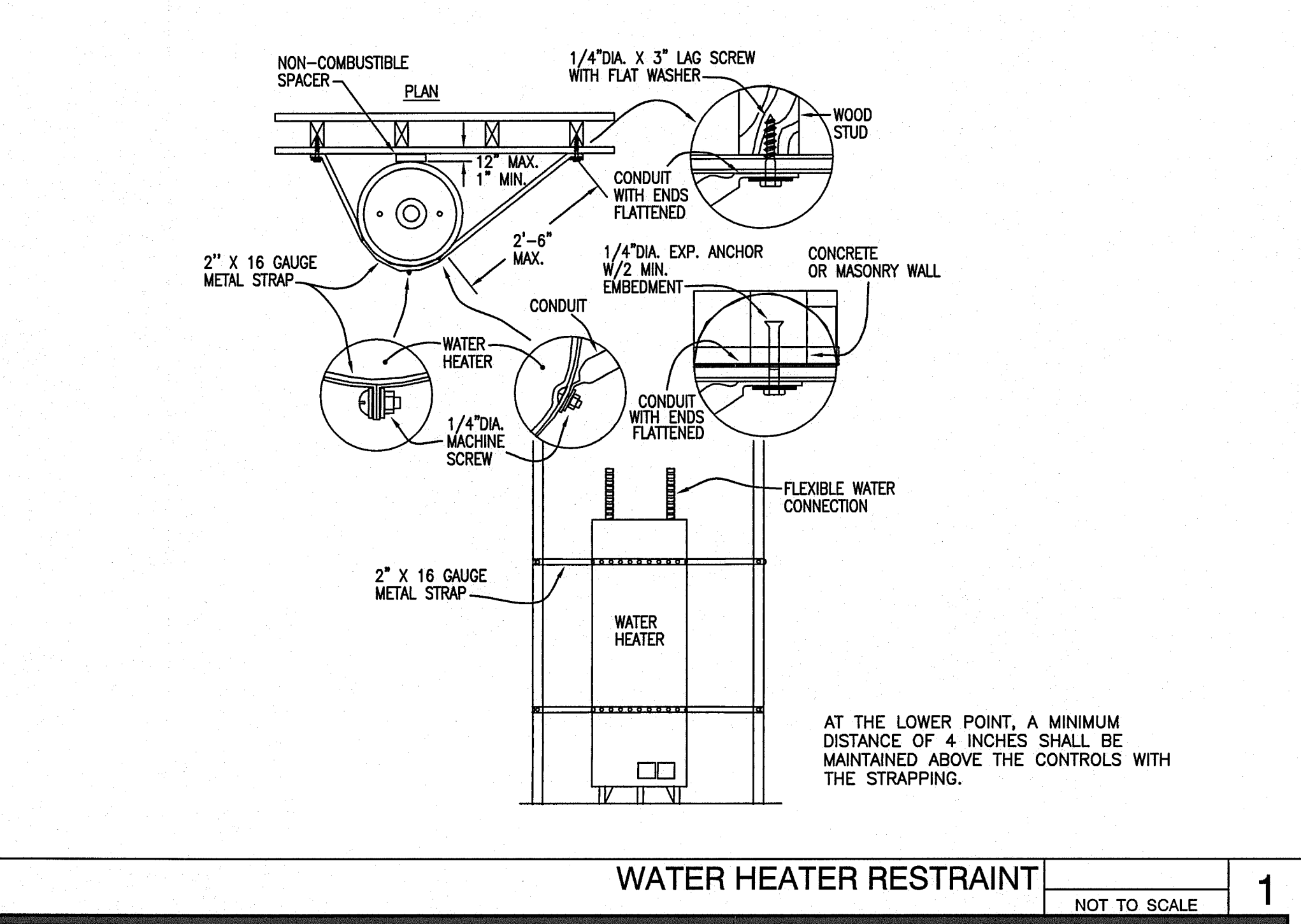
ACCESSIBLE TRAP PRIMER VALVE NOT TO SCALE 6



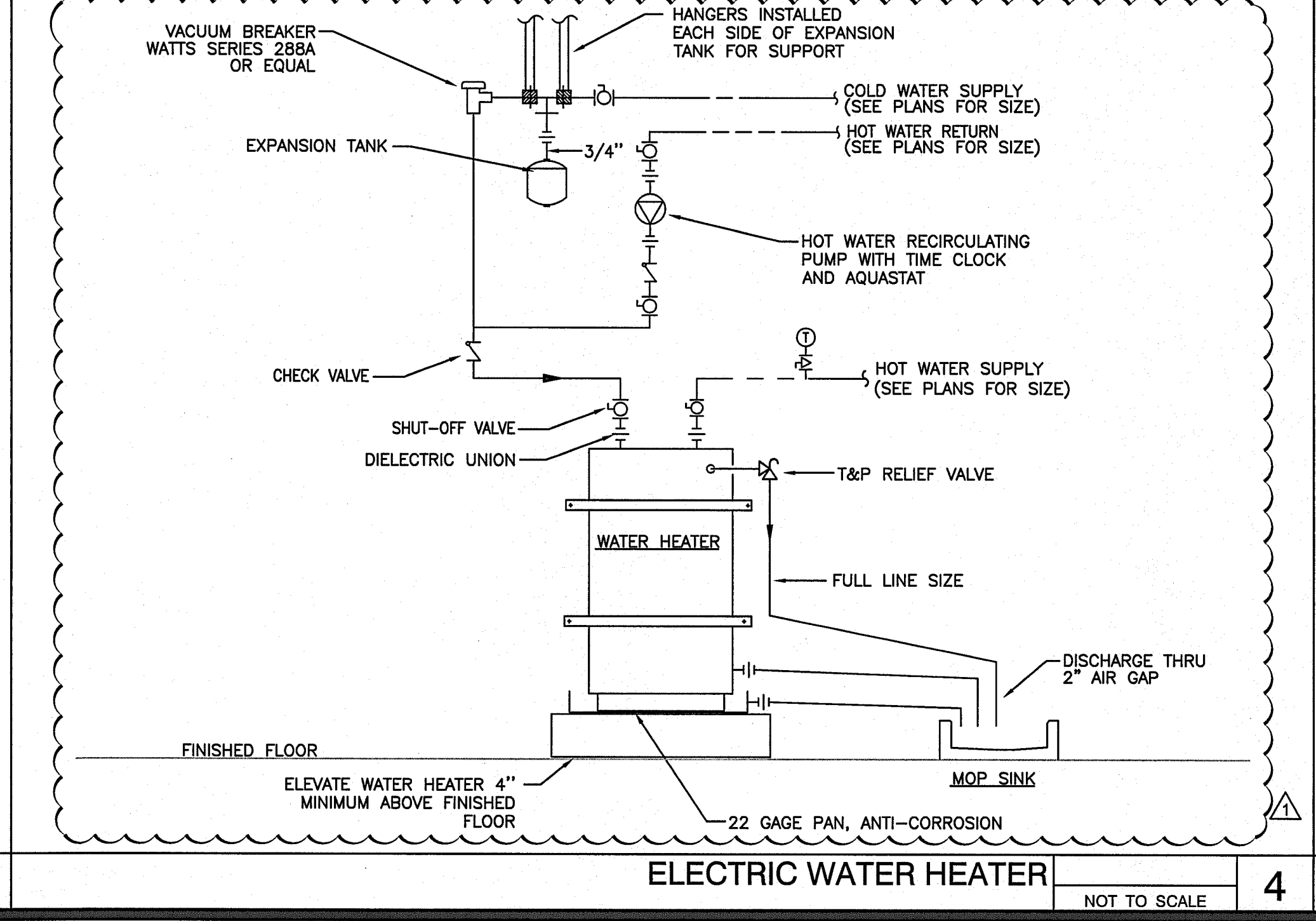
PIPING SUPPORT NOT TO SCALE 2



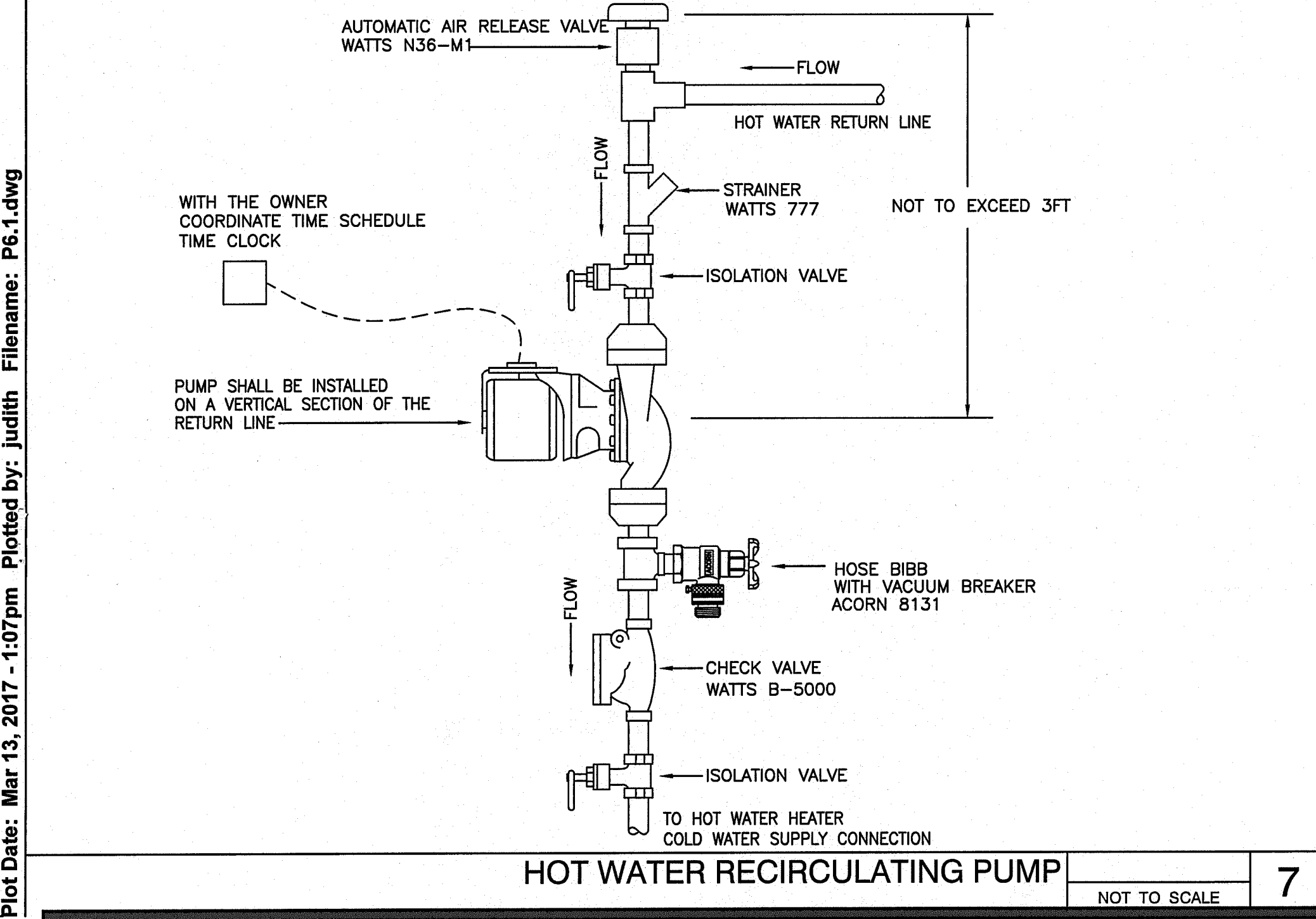
CLEANOUTS NOT TO SCALE 5



WATER HEATER RESTRAINT NOT TO SCALE 1



ELECTRIC WATER HEATER NOT TO SCALE 4



HOT WATER RECIRCULATING PUMP NOT TO SCALE 7

Plot Date: Mar 13, 2017 - 1:07pm Plotted by: Judith Filename: P6.1.dwg