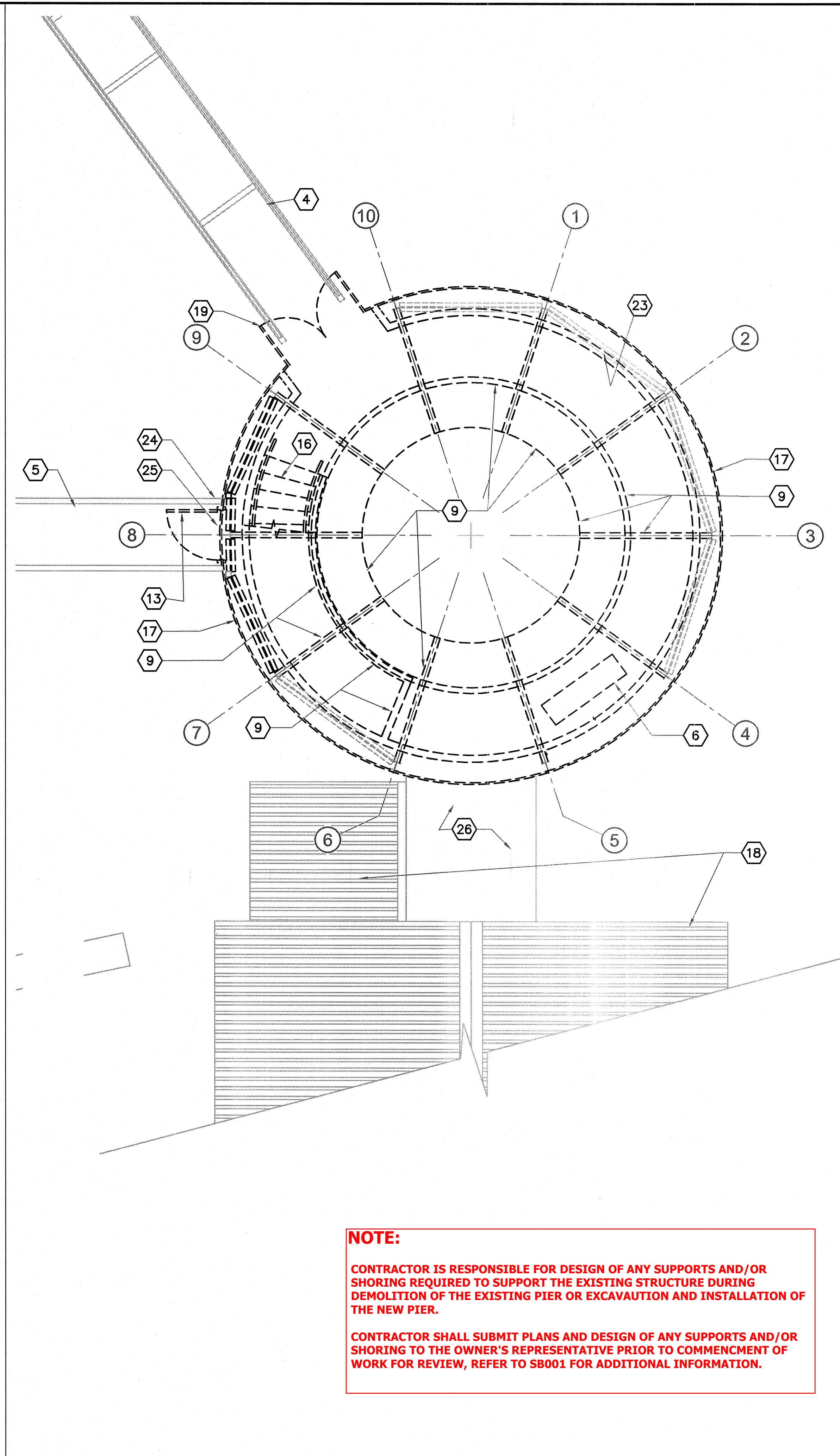
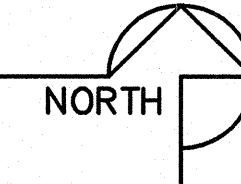
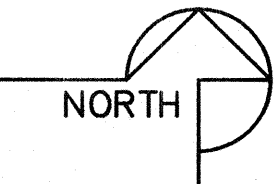


GROUND LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"



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



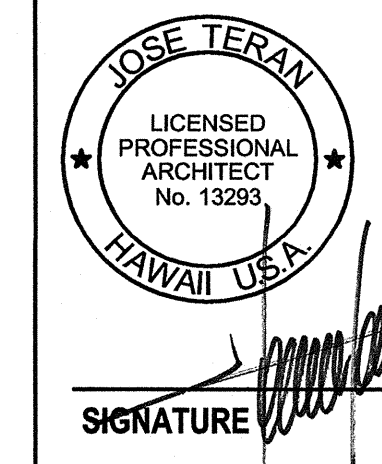
NOTE:
CONTRACTOR IS RESPONSIBLE FOR DESIGN OF ANY SUPPORTS AND/OR SHORING REQUIRED TO SUPPORT THE EXISTING STRUCTURE DURING DEMOLITION OF THE EXISTING PIER OR EXCAVATION AND INSTALLATION OF THE NEW PIER.
CONTRACTOR SHALL SUBMIT PLANS AND DESIGN OF ANY SUPPORTS AND/OR SHORING TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK FOR REVIEW, REFER TO SB001 FOR ADDITIONAL INFORMATION.

KEY NOTES

1. EXISTING METAL SIDING OVER GIRTS TO REMAIN
2. EXISTING STUD PARTITION WITH BATT INSULATION
3. REMOVE THE EXISTING METAL STUD PARTITION AROUND THE PERIMETER AS SHOWN.
4. EXISTING STEEL FRAMED MIRROR CART RUNWAY. RUNWAY TO BE LOWERED. SEE STRUCTURAL SHEET SF202 FOR FURTHER INFORMATION.
5. EXISTING STEEL FRAMED BRIDGE TO BE MODIFIED AS REQUIRED ALONG WITH THE NEW WORK. SEE STRUCTURAL SHEET SF401.
6. REMOVE THE EXISTING HVAC UNIT OR DUCTWORK - SEE MECHANICAL SHEET MH101 FOR FURTHER INFORMATION.
7. REMOVE THE EXISTING CONCRETE PIER AND FOUNDATION.
8. REMOVE THE EXISTING STEEL MEZZANINE COLUMN AND FOOTINGS, TYPICAL OF 5 COLUMNS.
9. REMOVE THE EXISTING STEEL FRAMED MEZZANINE IN ITS ENTIRETY.
10. REMOVE A PORTION OF THE EXISTING CONCRETE FLOOR AS TO INSTALL THE NEW CONCRETE STEPS.
11. EXISTING COMPUTER RACKS FOR PS-1 TO REMAIN
12. REMOVE THE EXISTING WOOD STUD PARTITION AS SHOWN REFER TO STRUCTURAL SHEET SF101 FOR NEW HEADER
13. REMOVE THE EXISTING DOOR AND FRAME
14. SAW CUT AND REMOVE THE EXISTING CONCRETE FLOOR 12" FROM THE EXISTING CONCRETE STEM WALL, TYPICAL.
15. REMOVE THE EXISTING METAL STUD PARTITION AROUND THE EXISTING STAIRS AS SHOWN.
16. REMOVE THE EXISTING METAL STAIRS.
17. REMOVE THE EXISTING METAL SIDING AND THE GIRTS. SEE GENERAL NOTE 5 BELOW.
18. EXISTING METAL ROOFING PANELS
19. REMOVE THE EXISTING PAIR OF METAL SIDING DOORS.
20. REMOVE THE EXISTING WOOD STAIRS AND LANDING.
21. EXISTING LADDER TO MEZZANINE ABOVE TO REMAIN
22. DEMOLISH THE EXISTING GYPSUM BOARD CEILING AND WOOD MEZZANINE FLOOR AS REQUIRED FOR NEW MECHANICAL DUCTWORK AND REGISTERS - SEE MECHANICAL SHEET MH101 FURTHER INFORMATION
23. REMOVE EXISTING ABANDONED (LOWER) SLIP RINGS AND ASSOCIATED GUTTER - COORDINATE WITH OWNER PRIOR TO REMOVING.
24. MODIFY THE EXISTING HANDRAIL TO CLEAR NEW SIDING SEE DETAIL 4/AR303 FOR FURTHER INFORMATION.
25. TRIM THE EXISTING CHECKERED FLOOR PLATE ON THE WALKWAY TO ALIGN WITH THE NEW SIDING
26. EXISTING ROOFING OVER CONCRETE DECK TO REMAIN

GENERAL NOTES

1. COORDINATE ALL DEMOLITION ACTIVITY WITH THE OWNER.
2. THE ROTATING DOME AND ALL OF ITS COMPONENTS, (BOGIES, DRIVES, TRACK, SLIP RINGS, ETC) ARE TO REMAIN IN PLACE. PROTECT AS REQUIRED DURING CONSTRUCTION.
3. REFER TO SF201 FOR ALL FIXED ENCLOSURE STEEL AND CONCRETE DEMOLITION WORK.
4. REFER TO SHEETS MH101 AND ED101 FOR ADDITIONAL MECHANICAL AND ELECTRICAL DEMOLITION WORK.
5. THE EXISTING FIXED ENCLOSURE METAL SIDING IS TO BE REMOVED AS LATE AS POSSIBLE IN ORDER TO MINIMIZE DUST, DEBRIS, AND NOISE POLLUTION TO SURROUNDING AREA.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE *[Signature]* 04.04.2011

EXPIRATION DATE OF LICENSE 04.30.2012

Revisions

Description	Date
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Drawn: S.P.D.
Checked: J.T.U.
Issue Date: 04-04-11

Drawing Title

DEMOLITION FLOOR PLAN

Sheet Number
AD101

M3PN 100064

Last Update: 8.12.2011

SECTION 07413 - INSULATED-CORE METAL PANELS

1. General Performance: Metal panel assemblies shall comply with performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction.
2. Shop Drawings: Provide drawings that show fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details. Distinguish between factory-, shop-, and field-assembled work.
 - a. Accessories: Include details of the following items, at a scale of not less than 1-1/2 inches per 12 inches (1:10):
 - b. Flashing and trim.
 - c. Anchorage systems.
3. Coordination Drawings: Provide exterior elevations, drawn to scale, and coordinating penetrations and wall-mounted items. Show the following:
 - a. Wall panels and attachments.
 - b. Girts.
 - c. Wall-mounted items including ventilation opening, coiling doors.
 - d. Penetrations of wall by pipes and utilities.
4. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.
5. Field Measurements: Verify locations of structural members and wall opening dimensions by field measurements before metal panel fabrication, and indicate measurements on Shop Drawings.
6. Structural Performance: Metal panel assemblies shall withstand the effects the following loads and stresses within limits and under conditions indicated, based on testing according to ASTM E 330:
 - a. Wind and Seismic loads as indicated on the General Structural Notes.
 - b. Deflection Limits: Metal panel assemblies shall withstand wind loads with horizontal deflections no greater than 1/240 of the span.
7. Metallic-Coated Steel Sheet: Restricted flatness steel sheet metallic coated by the hot-dip process and pre-painted by the coil-coating process to comply with ASTM A 755/A 755M.
 - a. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Class AZ55 coating designation, Grade 40 (Class AZM150 coating designation, Grade 275); structural quality.
 - b. Surface: Flat, smooth finish.
 - c. Exterior Finish: Custom Color to match Haleakala Brown.
 - d. Polyurethane core: Closed cell, polyurethane foam using a non-CFC blowing agent, foamed-in-place type, with maximum flame-spread index of 25 and smoke-developed index of 450.
 - e. Closed-Cell Content: 90 percent when tested according to ASTM D 2856.
8. Concealed-Fastener, Foamed-Insulation-Core Metal Wall Panels: Formed with tongue-and-groove panel edges; designed for sequential installation by interlocking panel edges and mechanically attaching panels to supports using concealed clips or fasteners.
 - a. Products: Subject to compliance with requirements, provide the following or approved equal:
 - 1) Metl-Span: CF Architectural Wall Panel.
 - b. Facings: Fabricate panel with the following exterior and interior facings thickness.
 - 1) Material: Aluminum-zinc alloy-coated steel sheet.
 - 2) Exterior Face: 24 gauge, 0.0250 inches minimum.
 - 3) Interior Face: 26 gauge, 0.0187 inches minimum.
 - 4) Exterior Facing Finish: Custom Color
 - 5) Interior Facing Finish:
 - 6) Exterior Surface: Smooth, flat.
 - c. Panel Coverage: 36 inches (914 mm) nominal.
 - d. Panel Thickness: 3.0 inches (76 mm).
 - e. Thermal-Resistance Value (R-Value): 23.80.
9. Panel Accessories: Provide components required for a complete metal panel assembly including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
 - a. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal panels.
 - b. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
 - c. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch (25-mm-) thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
 - d. Flashing and Trim: Formed from 24-gauge-inch minimum thickness, aluminum-zinc alloy-coated steel sheet. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.
10. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weathertight performance of metal panel assemblies. Provide types of gaskets, fillers, and sealants types recommended by metal panel manufacturer.
 - a. Seal metal wall panel end laps with double beads of tape or sealant, full width of panel. Seal side joints where recommended by metal panel manufacturer.
11. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.

12. Metal Panel Installation: Apply continuous ribbon of sealant to panel joint on concealed side of insulated-core metal panels as vapor seal; apply sealant to panel joint on exposed side of panels for weather seal.
 - a. Fasten insulated-core metal panels to supports with fasteners at each lapped joint at location and spacing and with fasteners recommended by manufacturer.
 - b. Provide metal-backed washers under heads of exposed fasteners on weather side of insulated metal panels. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.

SECTION 08110 - STEEL DOORS AND FRAMES

1. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (ZIBO) metallic coating.
2. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z (12G) coating designation; mill phosphatized.
 - a. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/ A 153M, Class B.
3. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
4. Standard Hollow Metal Doors: Provide doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8.
 - a. Design: Flush panel.
 - b. Core Construction:
 - 1) Thermal Rated (All Locations): Provide doors with a U-factor of 0.09 with polyurethane core construction.
 - c. Vertical Edges for Single-Acting Doors: Manufacturer's standard.
 - d. Top and Bottom Edges: Closed with flush or inverted 0.042-inch (1.0-mm-) thick, end closures or channels of same material as face sheets.
 - e. Tolerances: Comply with SDI 117, "Manufacturing Tolerances for Standard Steel Doors and Frames."
 - f. Doors: Face sheets fabricated from metallic-coated steel sheet. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
 - g. Level 3 and Physical Performance Level A (Extra Heavy Duty), Model 2 (Seamless).
 - h. Width: 1-3/4 inches (44.5 mm).
 - i. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.
 - j. Fabricate concealed stiffeners and hardware reinforcement from either cold- or hot-rolled steel sheet.
5. Standard Hollow Metal Frames: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
 - a. Frames: Fabricated from metallic-coated steel sheet.
 - b. Fabricate frames as full profile welded.
 - c. Frames for Level 3 Steel Doors: 0.0785-inch- (2.0 -mm-) thick steel sheet.
 - d. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.
6. Fabrication: Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
 - a. Tolerances: Fabricate hollow metal work to tolerances indicated in ANSI/NAAMM-HMMA 861.
 - b. Hollow Metal Doors: Provide weep-hole openings in bottom of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration
 - c. Hollow Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 - 1) Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
 - 2) Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
 - d. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 - e. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
 - f. Jamb Anchors: Provide number and spacing of anchors as follows:
 - g. Space anchors not more than 32 inches (813 mm) o.c. and as follows:
 - 1) Four anchors per jamb from 60 to 90 inches (1524 to 2286 mm) high.
 - 2) Two anchors per head for frames above 42 inches (1066 mm) wide and mounted in metal-stud partitions.
 - h. Door Silencers: Except on weather-stripped doors, drill stops to receive door silencers as follows. Keep holes clear during construction.
 - i. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
 - j. Double-Door Frames: Drill stop in head jamb to receive two door silencers.
 - k. Fabricate concealed stiffeners, edge channels, and hardware reinforcement from either cold- or hot-rolled steel sheet.
7. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 8 Section "Door Hardware."
 - a. Locate hardware as indicated, or if not indicated, according to ANSI/NAAMM-HMMA 861.
 - b. Reinforce doors and frames to receive non-templated, mortised and surface-mounted door hardware.
 - c. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.

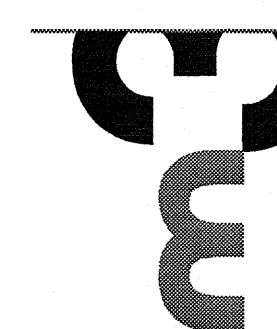
8. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pre-treating.
 - a. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.
9. Installation: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
 - a. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11.

SECTION 08331 - OVERHEAD COILING DOORS

1. Structural Performance, Exterior Doors: Exterior overhead coiling doors shall withstand the wind loads, the effects of gravity loads, and loads and stresses within limits and under conditions indicated according to SEI/ASCE 7.
 - a. Wind and Seismic Loads: As indicated on the General Structural Notes.
 - b. Deflection Limits: Design overhead coiling doors to withstand design wind load without evidencing permanent deformation or disengagement of door components.
2. Operability under Wind Loads: Design overhead coiling doors to remain operable under uniform pressure (velocity pressure) of 20 lbf/sq. ft. (960 Pa) wind load, acting inward and outward.
3. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.
 - a. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - b. Wiring Diagrams: For power, signal, and control wiring.
4. Source Limitations: Obtain overhead coiling doors from single source from single manufacturer.
 - a. Obtain operators and controls from overhead coiling door manufacturer.
5. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
6. Door Curtains: Fabricate overhead coiling-door curtain of interlocking metal slats, designed to withstand wind loading indicated, in a continuous length for width of door without splices. Unless otherwise indicated, provide slats of thickness and mechanical properties recommended by door manufacturer for performance, size, and type of door indicated, and as follows:
 - a. Steel Door Curtain Slats: Zinc-coated (galvanized), cold-rolled structural steel sheet; complying with ASTM A 653/A 653M, with G90 (Z275) zinc coating; nominal sheet thickness (coated) of 0.028 inch (0.71 mm) and as required to meet requirements.
 - b. Insulation: Fill slats for insulated doors with manufacturer's standard thermal insulation complying with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84. Enclose insulation completely within slat faces.
 - c. Metal Interior Curtain-Slat Facing: Match metal of exterior curtain-slat face.
 - d. Gasket Seal: Provide insulated slats with manufacturer's standard interior-to-exterior thermal break or with continuous gaskets between slats.
7. Endlocks and Windlocks for Service Doors: Malleable-iron casings galvanized after fabrication, secured to curtain slats with galvanized rivets or high-strength nylon. Provide locks on not less than alternate curtain slats for curtain alignment and resistance against lateral movement.
8. Bottom Bar for Service Doors: Consisting of two angles, each not less than 1-1/2 by 1-1/2 by 1/8 inch (38 by 38 by 3 mm) thick; fabricated from manufacturer's standard hot-dip galvanized steel, stainless steel, or aluminum extrusions to match curtain slats and finish.
9. Curtain Jamb Guides: Manufacturer's standard angles or channels and angles of same material and finish as curtain slats unless otherwise indicated, with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Slot bolt holes for guide adjustment. Provide removable stops on guides to prevent overtravel of curtain, and a continuous bar for holding windlocks.
10. Hood: Form sheet metal hood to entirely enclose coiled curtain and operating mechanism at opening head. Contour to fit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Form closed ends for surface-mounted hoods and fascia for any portions of between-jamb mounting that projects beyond wall face. Equip hood with intermediated support brackets as required to prevent sagging.
11. Galvanized Steel: nominal 0.028-inch- (0.71-mm-) thick, hot-dip galvanized steel sheet with G90 (Z275) zinc coating, complying with ASTM A 653/A 653M.
 - a. Safety Interlock Switch: Equip power-operated doors with safety interlock switch to disengage power supply when door is locked.
12. Weatherseals: Equip each exterior door with weather-stripping gaskets fitted to entire perimeter of door for a weathertight installation, unless otherwise indicated.
 - a. At door head, use 1/8-inch- (3-mm-) thick, replaceable, continuous sheet secured to inside of hood.
 - b. At door jambs, use replaceable, adjustable, continuous, flexible, 1/8-inch- (3-mm-) thick seals of flexible vinyl, rubber, or neoprene.
13. Electric Door Operators: Electric door operator assembly of size and capacity recommended and provided by door manufacturer for door and operation-cycles requirement specified, with electric motor and factory-wired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, remote-control stations, control devices, integral gearing for locking door, and accessories required for proper operation.
 - a. Comply with NFPA 70.
 - b. Provide control equipment comply with NEMA ICS 1, NEMA ICS 2 and NEMA ICS 6, with NFPA 70 Class 2 control circuit, maximum 24 V, ac or dc.
 - c. Doors are to be operated remotely through the building control system. Provide the required electrical components to interface with the instrumentations and controls as required by the Owner.

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ARCHITECTURE
ENGINEERING
CONSTRUCTION MANAGEMENT



Revisions

Description	Date
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Drawn: S.P.D.
Checked: J.T.U.
Issue Date: 04-04-11

Drawing Title

ARCHITECTURAL
SPECIFICATIONS
SHEET 1 OF 2

Sheet Number

AR001

M3PN 100064

Last Update: 4.4.2011



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE

EXPIRATION DATE OF LICENSE

04.04.2011

04.30.2012

14. Electric Motors: Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements specified in Division 11 Section "Common Motor Requirements for Equipment" unless otherwise indicated.
- Horse Power: 1/2 HP.
 - Phase: Single-phase.
 - Volts: 208 V.
 - Hertz: 60 HZ.
 - Motor Type and Controller: Reversible motor and controller (disconnect switch) for motor exposure indicated.
 - Motor Size: Minimum size as indicated. If not indicated, large enough to start, accelerate, and operate door in either direction from any position, at a speed not less than 8 in./sec. (203 mm/s) and not more than 12 in./sec. (305 mm/s), without exceeding nameplate ratings or service factor.
 - Operating Controls, Controllers (Disconnect Switches), Wiring Devices, and Wiring: Manufacturer's standard unless otherwise indicated.
 - Coordinate wiring requirements and electrical characteristics of motors and other electrical devices with building electrical system and each location where installed.
15. Limit Switches: Equip each motorized door with adjustable switches interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions.
16. Obstruction Detection Device: Equip motorized door with indicated external automatic safety sensor capable of protection full width of door opening. For non-fire-rated doors, activation of device immediately stops and reverses downward door travel.
- Sensor Edge: Automatic safety sensor edge, located within astragal or weather stripping mounted to bottom bar. Contact with sensor activates device. Connect to control circuit using manufacturer's standard take-up reel or self-coiling cable.
 - Self-Monitoring Type: Four-wire configured device designed to interface with door operator control circuit to detect damage to or disconnection of sensor edge.
17. Remote-Control Station: Momentary-contact, three-button control station with push-button controls labeled "Open," "Close," and "Stop."
- Interior units, full-guarded, surface-mounted, heavy-duty type, with general-purpose NEMA ICS 6, Type 1 enclosure.
18. Emergency Manual Operation: Equip each electrically powered door with capability for emergency manual operation. Design manual mechanism so required force for door operation does not exceed 25 lbf (111 N).
19. Emergency Operation Disconnect Device: Equip operator with hand-operated disconnect mechanism for automatically engaging manual operation and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount mechanism so it is accessible from observing level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.
20. Motor Removal: Design operator so motor may be removed without disturbing limit-switch adjustment and without affecting emergency manual operation.
21. Interface to Building Control System.
- The Dome Motion Control System will provide two normally open dry contacts rated 5A/250VAC to control door operation. One will be used to open the door and the other to close the door. These two contacts are to be wired in parallel with the Open and Close pushbuttons provided with the door. When the Open contact closes or the Open pushbutton is pushed and hardwired interlocks permit, the door is to open. When this contact opens or the Open pushbutton is released, the door is to stop in place. When the Close contact closes or the Close pushbutton is pushed and hardwired interlocks permit, the door is to close. When the Close contact opens or the Close pushbutton is released, the door is to stop in place.
 - The vendor provided door controller is to be provided with two dry contacts minimum rating 2A/250VAC indicating when door is fully open or fully closed.
 - Provide terminal blocks rated for AWG #14 conductors with the controller for landing 4 conductors for the Open/Close control wiring and for landing 4 conductors for the Open/Close limit switch wiring.
22. Insulated Service Door: Overhead coiling door formed with curtain of interlocking metal slats.
- Manufacturers: Subject to compliance with requirements, provide the following or approved equal.
 - Wayne-Dalton Corp., Thermotite Door, Model No. 823
23. Curtain R-Value: 7.70
24. Door Curtain Material: Galvanized steel.
25. Door Curtain Slats: Flat profile slats of 2-5/8-inch (67-mm) center-to-center height.
- Insulated-Slat Interior Facing: Metal.
26. Curtain Jamb Guides: Galvanized steel with exposed finish matching curtain slats. Provide continuous integral wear strips to prevent metal-to-metal contact and to minimize operational noise.
27. Hood: Galvanized steel.
- Shape: Square.
 - Mounting: Face of wall.
28. Mounting: As shown on Drawings
29. Manual Door Operator: Manufacturer's standard chain operator.
- Provide operator with manufacturer's standard removable operating arm.
30. Electric Door Operator:
- usage Classification: Heavy duty, 60 to 90 cycles per hour.
 - Motor Exposure: Interior.
 - Emergency Manual Operation: Chain type.
 - Obstruction-Detection Device: Automatic electric sensor edge on bottom bar; self-monitoring type.
 - Remote-Control Station: Interior. Verify location with Owner.
31. Door Factory Prime Finish: Manufacturer's standard color.
32. Interior Curtain-Slat Facing: Paint to match adjacent surface.

33. Install overhead coiling doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.

SECTION 08710 - DOOR HARDWARE

- Shop Drawing Submittal: Product data including construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.
- Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference, and as follows:
 - Existing System: Master key or grand master key locks to Owner's existing system.
- Keys: Nickel silver.
 - Stamping: Permanently inscribe each key with a visual key control number and include the following notation:
 - Notation: "DO NOT DUPLICATE."
- Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- Scheduled Door Hardware: Provide door hardware for each door to comply with requirements in this Section and door hardware sets.
 - Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and named manufacturers' products.
- Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified or approved equal.
- DOOR HARDWARE SETS

Door Hardware Set No. 1:	
1 1/2 Pair Butts	Stanley, FBB 199 4-1/2 x 4-1/2 US32D
1 Latchset	Sargent, 8205 LNP 26D (Office or Entry)
1 Threshold	Pemko, 2005AS
1 Set Weatherstrip	Pemko, S88D and 303AS
1 Door Bottom	Pemko, 216AV with cold weather vinyl
1 Closer	LNC, 4011 Aluminum, Template 100°
Door Hardware Set No. 2:	
3 Pair Butts	Stanley, FBB 199 4-1/2 x 4-1/2 US32D
1 Latchset	Sargent, 8213 LNP 26D (Exit Latch)
1 Set Weatherstrip	Pemko, S88D and 303AS
8 Surface Bolts	Hagar, 275D (Place bolts top and bottom of the interior side of the doors leafs at (4) corners. The (4) bolts on the hinge side are to be used when the door is open)

SECTION 09922 - EXTERIOR PAINTING

- Summary: This Section includes surface preparation and the application of paint systems on the following exterior substrates:
 - Steel.
 - Galvanized metal.
- Submittal: Product data for each type of product indicated.
- Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
- Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.
- Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 90 deg F (10 and 35 deg C).
- Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.
- Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - Glidden Professional.
- Provide materials for use within each paints system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
- For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- Colors: As selected by the Owner from manufacturer's full range.
 - exterior color is to match Haleakala Brown, typical.
- Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 - Beginning coating application constitutes Contractor's acceptance of substrates and conditions.
- Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification manual" applicable to substrates and paint systems indicated.

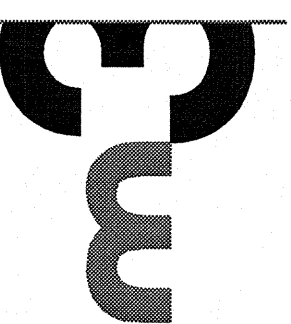
- Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
- After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
 - Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
- Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.
- Apply paints according to manufacturer's written instructions.
- PAINTING SCHEDULE
 - Ferrous and Zinc-Coated Metal: Provide the following finish systems over ferrous and zinc-coated metal:
 - Elastomeric Coating: 2 finish coats over a primer
 - Primer: Glidden Professional DEVGUARD 4160 Multi-Purpose primer.
 - First and Second Coats: Elastomeric coating applied at a spreading rate to achieve a total dry film thickness of not less than 2.2-3.0 mils per coat.
 - Glidden Professional DECRA-FLEX 200 Smooth Exterior Flat Elastomeric Coating.
 - Haleakala Brown color equal to:
 - ICI DECRA-FLEX Smooth 2260.0400 Deep Tint Base
BLK 10 P 52
OXR 3 P 51
YOX 5 P 131

SECTION 14100 - 5 TON LIFT

- General Description: The lift shall be a 5-ton capacity, specially designed hydraulic loading platform with provides an adjustable, easily operated and safe means of loading or unloading the mirror cart and/or other applications as required. This unit consists of a heavy duty welded steel platform which can be raised and lowered by the action of a heavy duty industrial hydraulic cylinder. The hydraulic power is supplied by an enclosed, heavy duty, electric/hydraulic pump unit. The lift is manually controlled by a "dead-man" push button station marked UP/DOWN. Constant pressure on either the button is required to operate the lift. All lifting components shall have a safety factor of 5 to 1.
- Platform: The platform shall be the size as indicated on the drawings, constructed of formed and structural steel members covered with non-skid steel plate, all being adequately welded and reinforced to handle a 100-pound live load. Platform to be provided with heavy duty bolster plate properly drilled and arranged to bolt to the ram head of the hydraulic cylinder assembly. The platform shall have the mirror cart rails to match the facility and located per the drawings. Platform shall be capable of supporting the 5-ton load on the locking supports at the furthestmost edge of the platform rails.
- Hydraulic Cylinder: The hydraulic power cylinder shall be industrial sing acting type, having a ram diameter of 8 1/2-inches. The cylinder shall consist of a plunger of heavy seamless steel pipe with heavy welded steel heads and having a stop ring welded at the bottom to positively prevent it from leaving the casing, and with the plunger being accurately turned and polished to an extremely smooth finish over it's entire length; an outer casing of seamless steel pipe with welded steel bottom head; large internal bronze bearings with are spaced at least 2 1/2 times the ram diameter for greater stability; welded oil connection with automatic air eliminator mechanism (bleeder); a heavy duty gland with multiple "vee" type packing rings which are supported top and bottom with metal adaptors for improved sealing and including a cylinder packing pressure ring, and adjustable packing gland ring and an effective wiper ring. The cylinder assembly will be factory tested at not less than 1000psi. A safety factor of 5 to 1, at maximum system pressure will be maintained at all times for all components of the cylinder. The hydraulic cylinder shall have a working stroke of 16-feet as required. A telescopic non-rotating device shall be provided to prevent the platform from rotating during its vertical travel.
- Power Pump Unit: The power unit shall consist of a 208V, 60 Cycle, 3 Phase, 10-HP; "T" Frame TEPC electric motor directly connected with a flexible coupling to a heavy duty pump, a coupling guard shall be furnished. Lift operating speed shall be not less than 8-FPM with full rated load. They system shall include a cleanable suction strainer, a quiet adjustable pressure relief valve, pre-set at 350 psi, a check valve and a solenoid operated lowering oil valve. A means shall be provided at the power unit for lowering the lift manually in the event of power failure. The motor/pump assembly shall be completely piped and mounted on a reservoir of adequate capacity to properly operate the system, plus reserve oil. The oil reservoir shall be equipped with a drain. Coordinate exact location of power pump unit with the owner.

Locate control station as indicated on the drawings and coordinated with the Owner.
- Painting and Finish: The platform and cylinder shall be primed and painted per the paint specifications. Color as selected by the owner.

- Platform Lift installation and coordination.
 - The following items will be supplied by the owner and installed by the Contractor.
 - Platform.
 - Hydraulic Cylinder.
 - Power Pump Unit.
 - Control Box.
 - Lift Guide Rails.
 - Support Pads for Locks.
 - The following items (but not limited to) are to be supplied and installed by the Contractor. It is the Contractor's responsibility to provide a fully functional and operational Lift. Please contact the Lift Manufacturer for coordination.
 - Steel Caisson and Load Pad.
 - Piping between Power Pump Unit and the Hydraulic Cylinder.
 - Power and Control conduits and wiring required between all Lift components.
 - Installation of Guide Rails.
 - Installation of Support Pads for Locks.
 - Installation and Assembly of supplied Lift components.



Revisions

Description	Date
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Drawn: S.P.D.
 Checked: J.T.U.
 Issue Date: 04-04-11

Drawing Title

ARCHITECTURAL SPECIFICATIONS SHEET 2 OF 2

Sheet Number

AR002

M3PN 100064

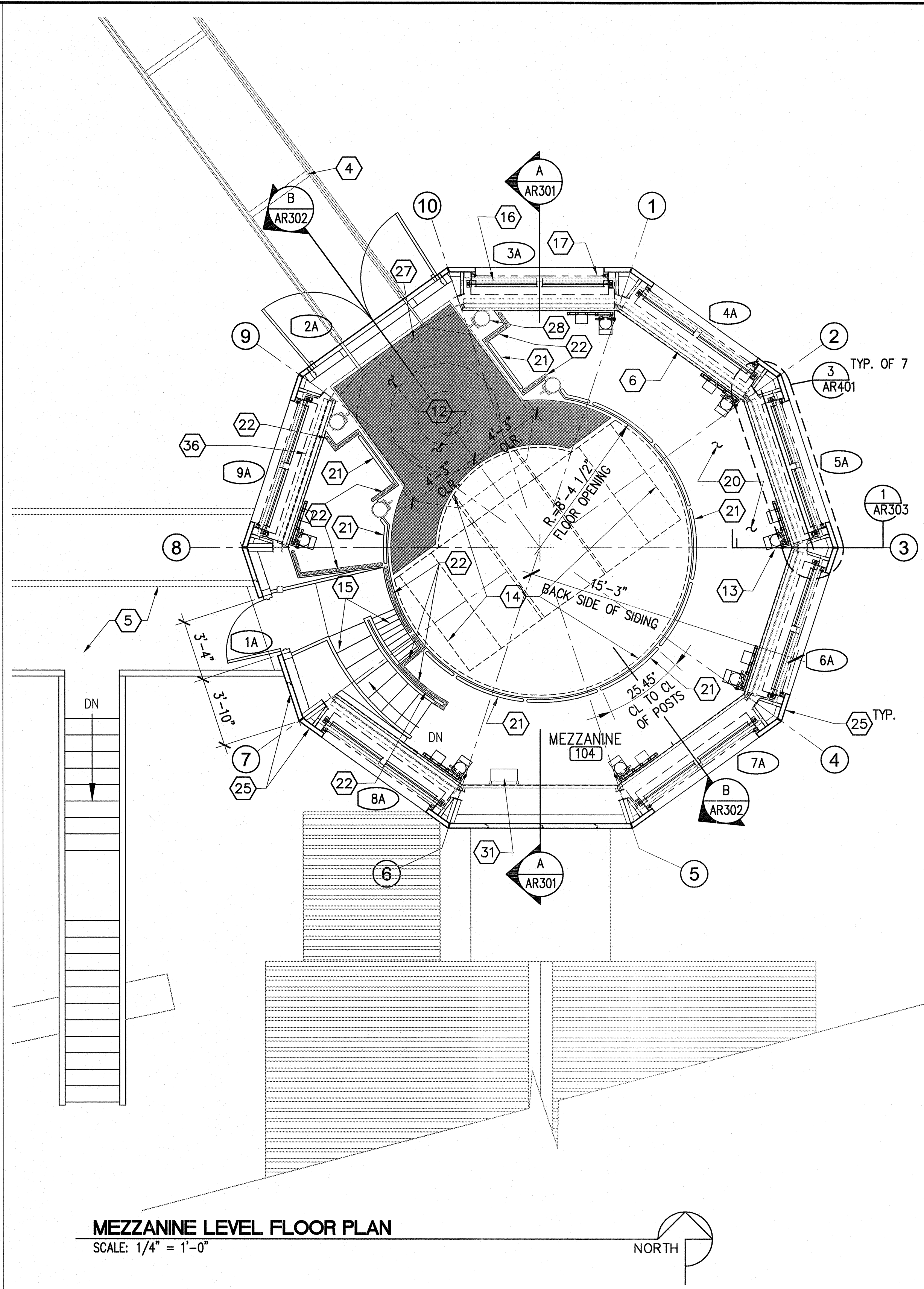
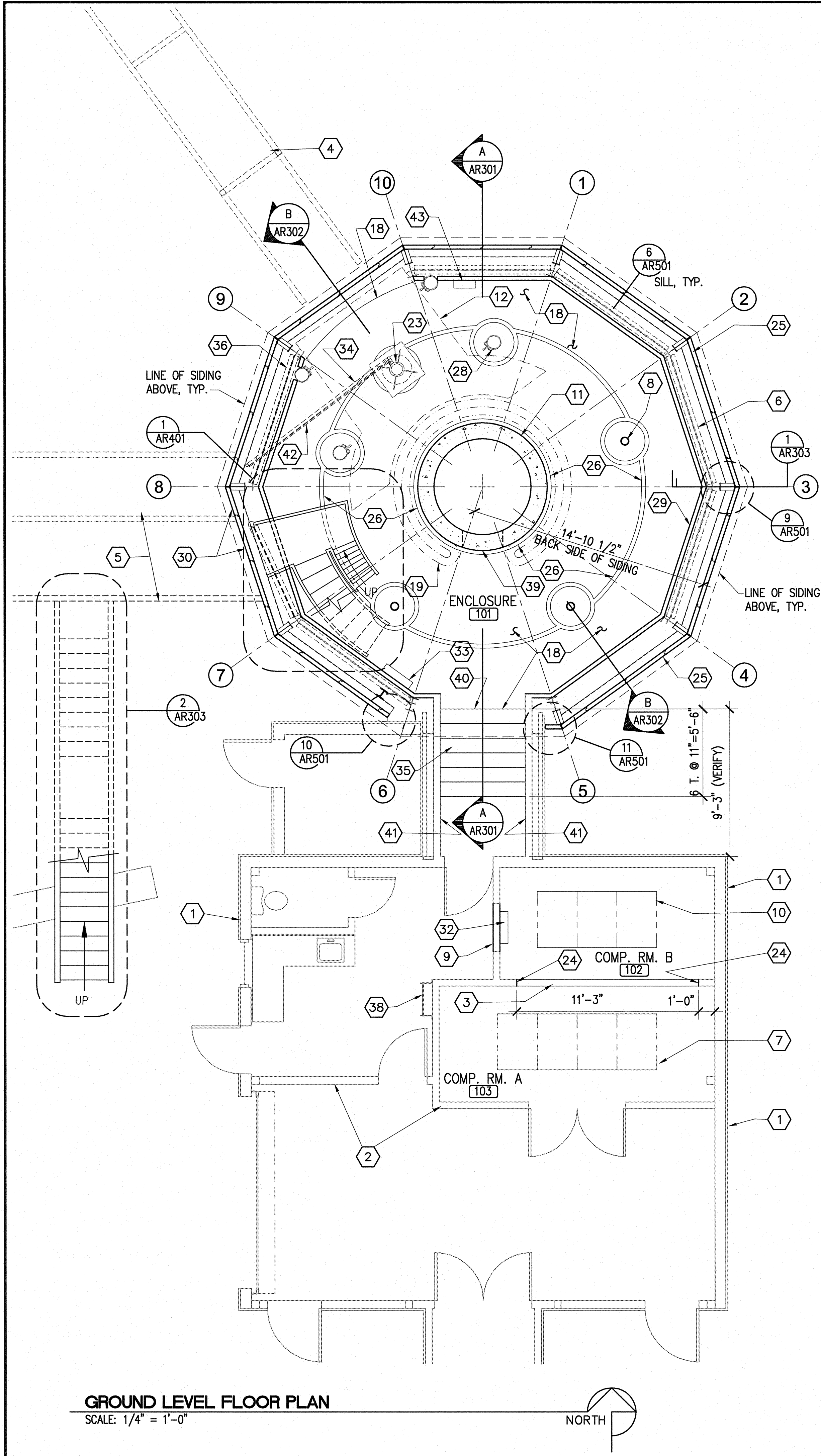
Last Update: 4.6.2011

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SIGNATURE 04.04.2011

EXPIRATION DATE OF LICENSE 04.30.2012



- GENERAL NOTES**
- SEE AR401 FOR THE DOOR SCHEDULE AND TYPES.
 - PAINT ALL NEW AND EXISTING STEEL (EXCLUDING METAL GRATING), CONDUITS, UN-INSULATED PIPING, DUCTWORK. THIS INCLUDES AND IS NOT LIMITED TO THE ENCLOSURE AND THE EXTERIOR CATWALK.

- KEY NOTES**
- EXISTING METAL SIDING OVER GIRTS
 - EXISTING STUD PARTITION WITH BATT INSULATION
 - PROVIDE VCT FLOORING AND RESILIENT BASE TO MATCH EXISTING.
 - EXISTING STEEL FRAMED MIRROR CART RUNWAY. STRUCTURE TO BE LOWERED - SEE SF202.
 - EXISTING STEEL FRAMED BRIDGE WITH WIDTH EXTENSION, SEE SF401.
 - EXISTING STEEL "X-BRACE" TYPICAL - SEE SHEET SF201
 - EXISTING COMPUTER RACKS FOR PS-1
 - STEEL MEZZANINE COLUMN - SEE SB101. TYPICAL FOR 3
 - INFILL THE EXISTING DOOR OPENING WITH METAL STUDS, GYPSUM BOARD AND WALL BASE TO MATCH EXISTING. FINISH AND PAINT TO MATCH ADJACENT SURFACES.
 - COMPUTER RACK FOR PS-2
 - CONCRETE TELESCOPE PIER - SEE SB201
 - 5 TON HYDRAULIC LIFT PLATFORM O.F.C.I (SHADED AREA), SEE 4/AR502
 - ROLL UP DOOR MOTOR OPERATOR, TYP. OF 7
 - TELESCOPE OUTLINE SHOWN DASHED IN PLAN (N.I.C.)
 - METAL GRATING TREAD SHIPS LADDER / STAIR
 - MECHANICAL DAMPER IN A STEEL FRAME, TYPICAL.
 - INSULATED ROLL UP DOOR IN A STEEL FRAME, TYPICAL.
 - EDGE OF NEW CONCRETE FLOOR SLAB - SEE SB101
 - TELESCOPE CABLE WRAP (N.I.C.)
 - METAL GRATING MEZZANINE FLOOR AND STEEL STRUCTURE TYPICAL - SEE SF101
 - REMOVABLE GUARDRAIL SECTIONS - SEE 5/AR502, TYPICAL U.N.O
 - NON REMOVABLE GUARDRAIL (SHOWN SHADED) SEE 5/AR502
 - CASING AND STEEL PLATE FOR THE HYDRAULIC PISTON FOR THE 5 TON LIFT
 - TRIM THE EXISTING GYPSUM BOARD OPENING WITH NEW GYPSUM BOARD AND WOOD STUDS. MATCH EXISTING THICKNESS. PATCH, TEXTURE AND PAINT TO MATCH ADJACENT SURFACES.
 - 3" THICK INSULATED METAL PANEL ON METAL GIRTS TYPICAL
 - 3" THICK ISOLATION JOINT AROUND THE CONCRETE PIER AND PIER FOUNDATION - SEE 1/SB201
 - PRIMARY MIRROR CART (N.I.C.) SHOWN FOR REFERENCE ONLY
 - GUIDE COLUMN FOR THE 5 TON LIFT, TYPICAL OF 4. SEE SB101
 - 2 1/2" x20 GA. METAL STUDS @ 16" O.C. W 1/2" PREMIUM GRADE PLYWOOD (CLEAR VARNISH). PARTITION HEIGHT SHALL BE 8'-0" TYPICAL. BRACE TO EXISTING "X"-BRACE AS REQUIRED. WHERE FAN COIL UNITS INTERFERE WITH THE NEW METAL STUD PARTITION PROVIDE MINIMUM 3" CLEARANCE AROUND THE MECHANICAL FAN COIL UNITS, TYPICAL 2 PLACES. SEE MH101 FOR LOCATION OF UNITS.
 - THERE ARE MULTIPLE EXISTING AND NEW CONDUIT AND PIPE PENETRATIONS AT THIS LOCATION. SEE PSTD-820-0001 FOR CONDUIT LAYOUT. PROVIDE CONDUITS. ONCE ALL PENETRATIONS ARE DONE CONTRACTOR TO PROVIDE SPRAY INSULATION TO SEAL OPENINGS IN THE METAL SIDING AND TRIM WITH METAL FLASHING AS REQUIRED FOR WEATHER TIGHT CONDITIONS.
 - RELOCATED DOME CONTROL BOX - SEE EP101
 - RELOCATED HVAC CONTROL BOX - SEE EP101
 - NEW OFCI PANELBOARD "DB-2" - SEE EP101
 - 1-1/2" SCHED. 80 HYDRAULIC PIPE FOR THE 5 TON LIFT. RUN IN THE EXISTING BRIDGE TO THE CONTAINER BOX. COORDINATE EXACT ROUTING WITH THE LIFT MANUFACTURER AND THE OWNER. SEE C1101. PLACE PIPE UNDER CONCRETE SLAB AND DAYLIGHT BEHIND THE NEW METAL STUD WALL.
 - CONCRETE STEPS - SEE 4/SB501
 - STEEL "X" - BRACE SEE SF201
 - NOT USED
 - EXISTING LADDER TO MEZZANINE ABOVE
 - ACCESS OPENING INTO THE PIER - SEE SB201
 - EXISTING STEEL PLATE SHALL BE THE FIRST RISER FOR THE NEW STEPS. SEE 4/SB501
 - PROVIDE GYPSUM BOARD AND METAL STUDS AS REQUIRED TO INFILL AROUND NEW STEPS WHERE THE EXISTING STEPS WERE REMOVED. PATCH, TEXTURE AND PAINT TO MATCH ADJACENT SURFACES AND STUDS.
 - 3/4" TYPE L COPPER COMPRESSED AIR PIPE FOR THE 5 TON LIFT LOCKING PINS. RUN UNDER THE EXISTING BRIDGE TO THE CONTAINER BOX. COORDINATE EXACT ROUTING WITH THE LIFT MANUFACTURER AND THE OWNER. SEE C1101. PLACE PIPE UNDER CONCRETE SLAB AND DAYLIGHT BEHIND THE NEW STUD WALL. SEE DRAWING PSTD-820-001 FOR WALKWAY CONDUIT LAYOUT.
 - LIFT PUSH BUTTON STATION

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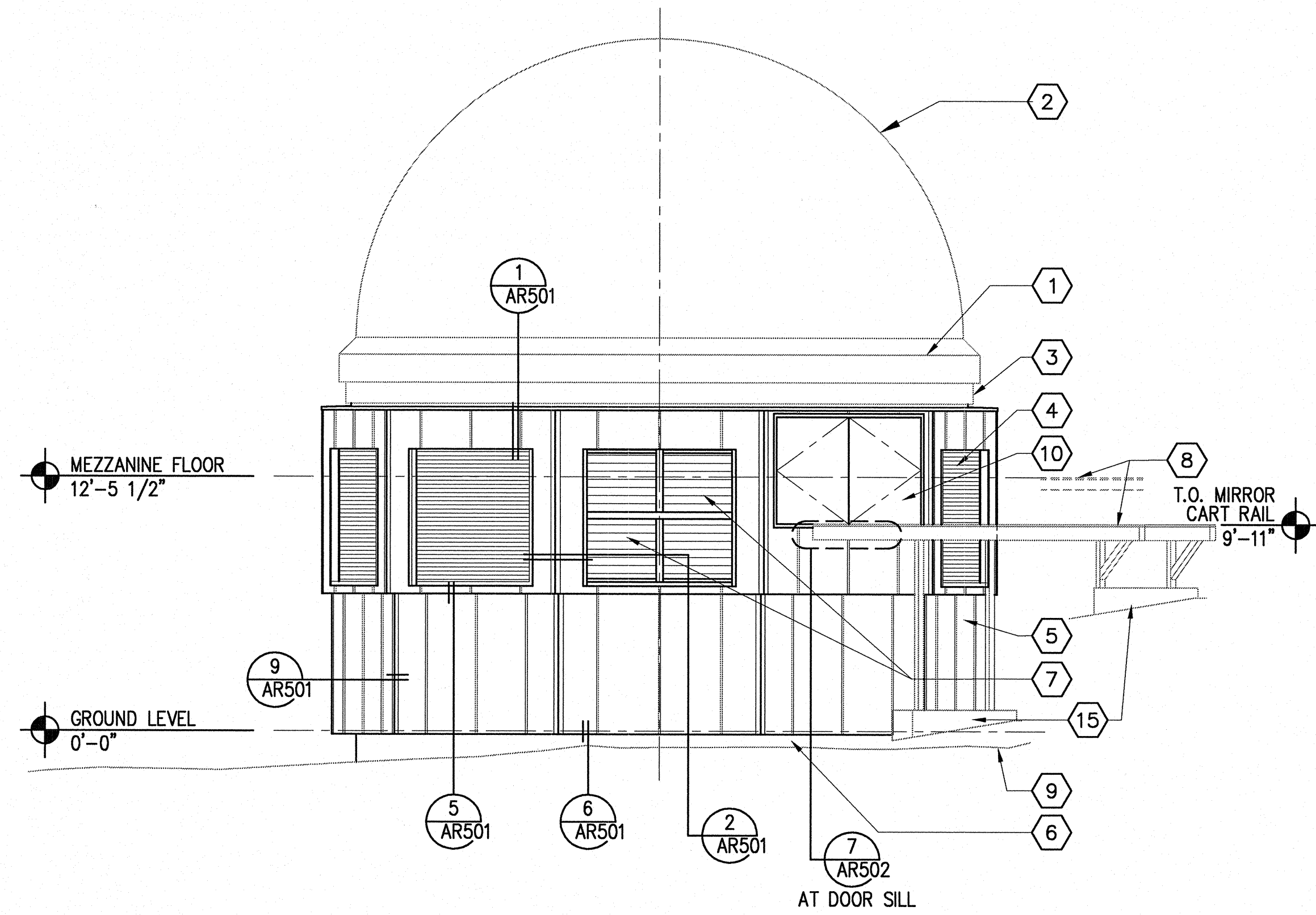
Revisions

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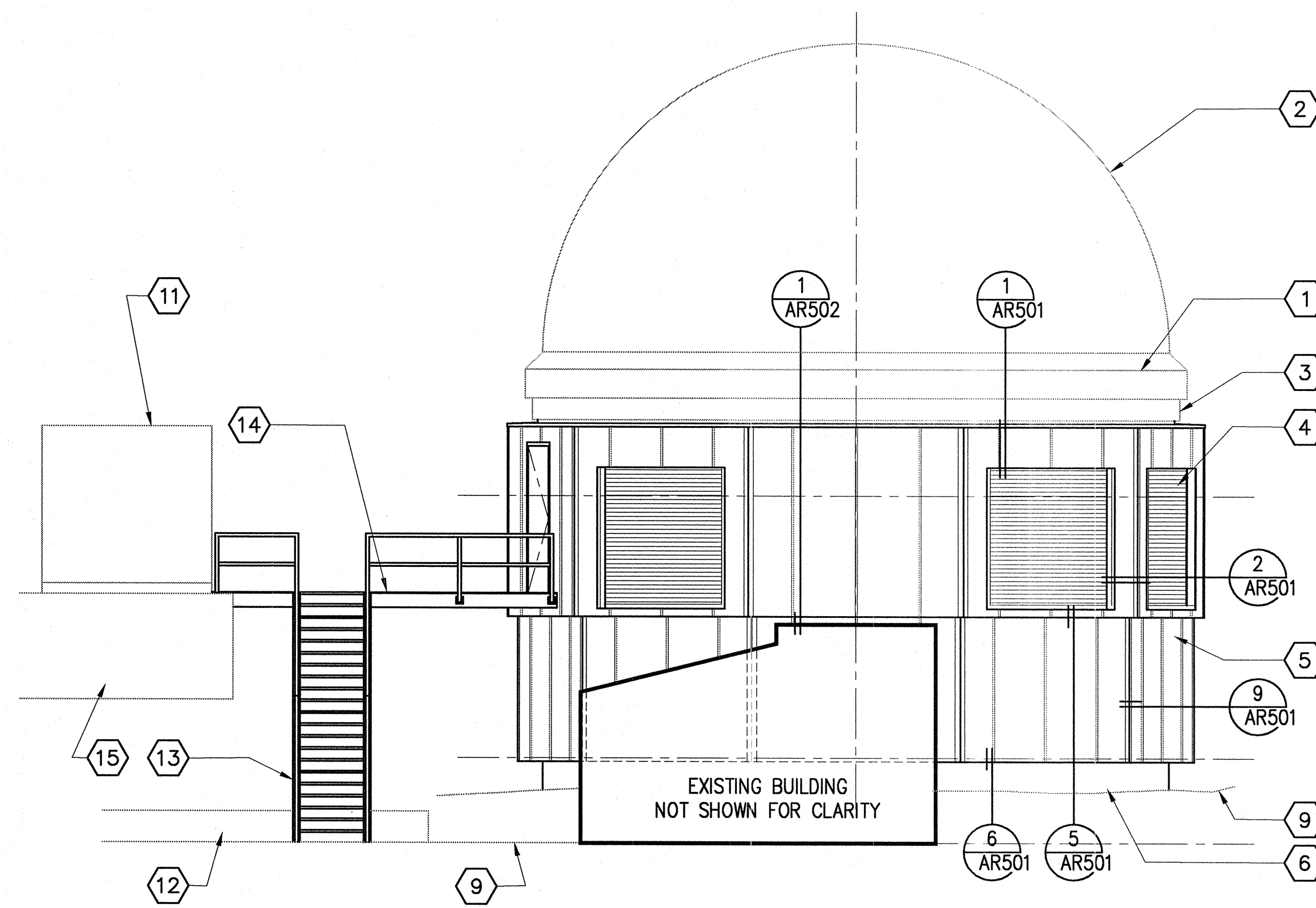
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Checked: J.T.U.
Issue Date: 04-04-11

Drawing Title

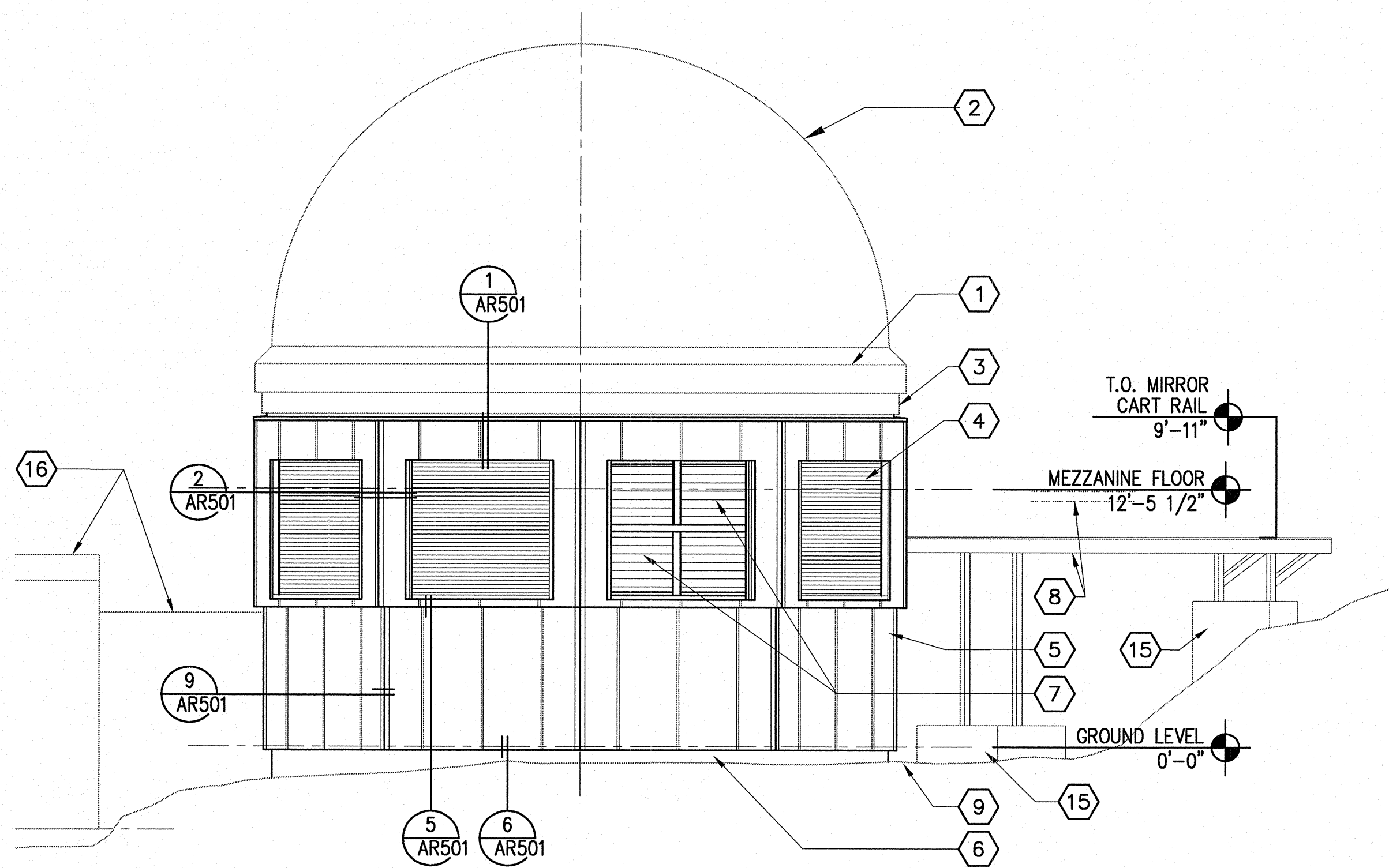
FLOOR PLAN
Sheet Number
AR101
M3PN 100064
Last Update: 4.4.2011



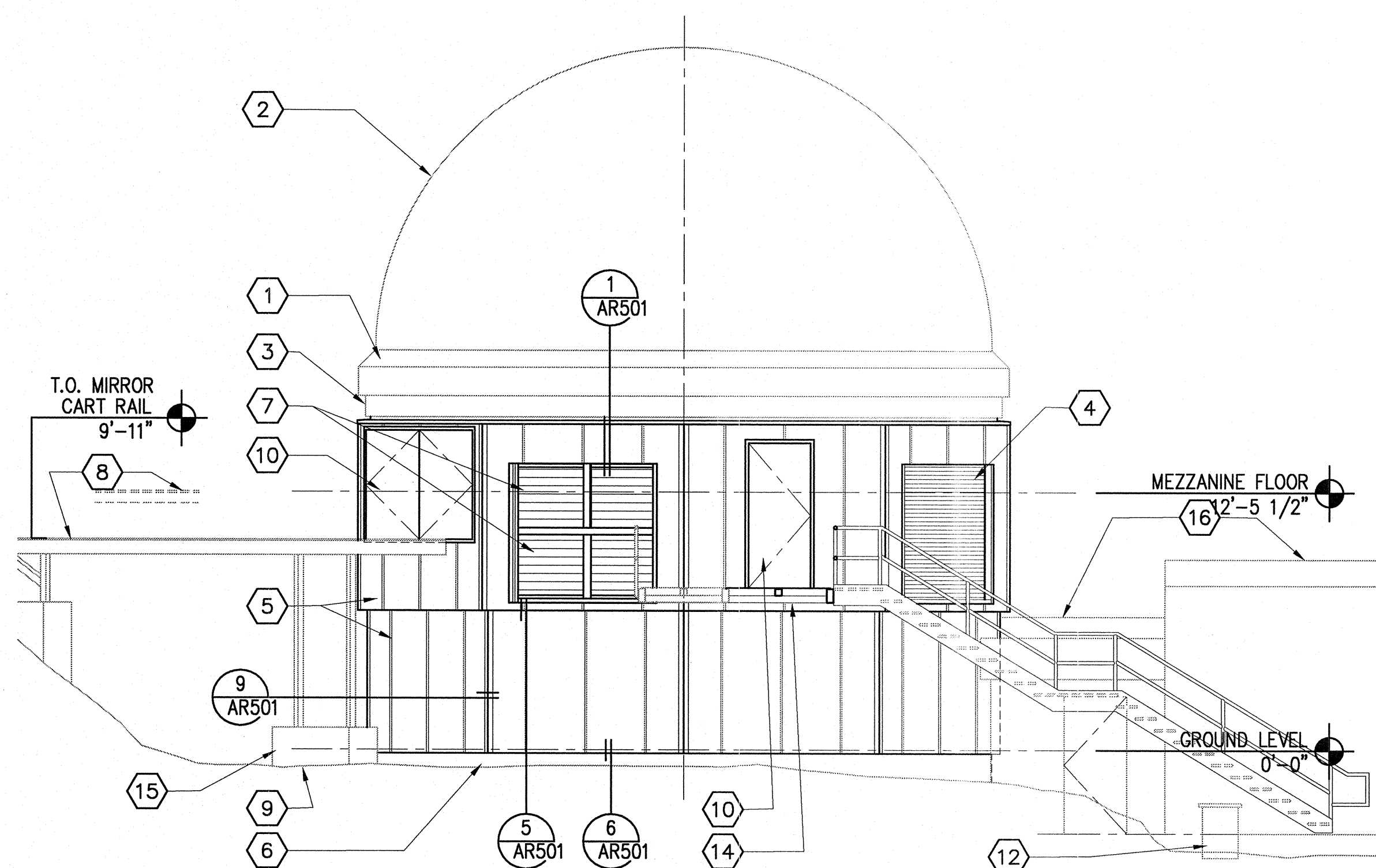
NORTH ELEVATION
SCALE: 3/16" = 1'-0"



SOUTH ELEVATION
SCALE: 3/16" = 1'-0"



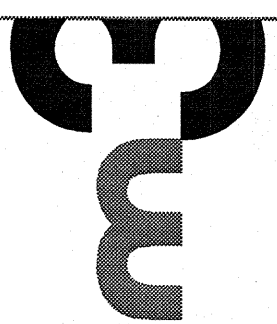
EAST ELEVATION
SCALE: 3/16" = 1'-0"



WEST ELEVATION
SCALE: 3/16" = 1'-0"

KEY NOTES

1. EXISTING ROTATING DOME SKIRT
2. EXISTING DOME STRUCTURE
3. EXISTING FIXED SKIRT
4. INSULATED ROLL UP DOOR IN STEEL TUBE FRAME (PAINT)
5. 3" THICK INSULATED METAL PANEL, TYPICAL
6. EXISTING EXPOSED CONCRETE STEM WALL
7. MECHANICAL DAMPER IN STEEL FRAME. (ROLL UP DOOR NOT SHOWN FOR CLARITY), TYPICAL
8. EXISTING STEEL FRAMED MIRROR CART RUNWAY. STRUCTURE IS TO BE LOWERED - SEE SF202.
9. FINISH GRADE
10. HOLLOW METAL DOOR AND FRAME (PAINT)
11. EXISTING STORAGE CONTAINER TO REMAIN
12. EXISTING ROCK VENEER RETAINING WALL TO REMAIN
13. STEEL STAIRS - SEE SF401
14. EXISTING OR NEW STEEL WALKWAY. SEE SF401
15. EXISTING CONCRETE FOOTING TO REMAIN
16. EXISTING CONTROL BUILDING TO REMAIN



Revisions

Description	Date

Drawn: S.P.D.
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Drawing Title

EXTERIOR ELEVATIONS

Sheet Number

AR201

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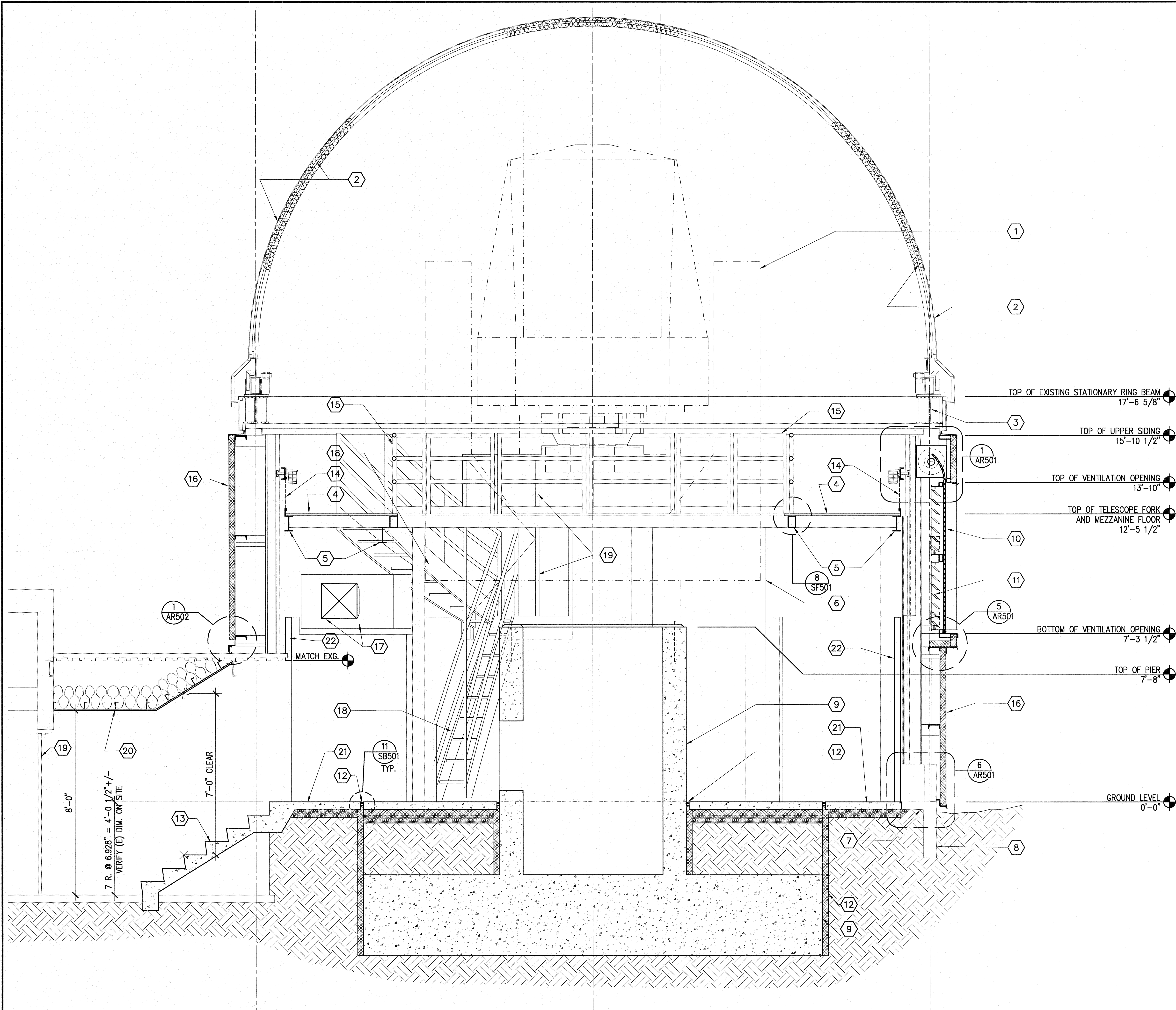
Last Update: 4.4.2011



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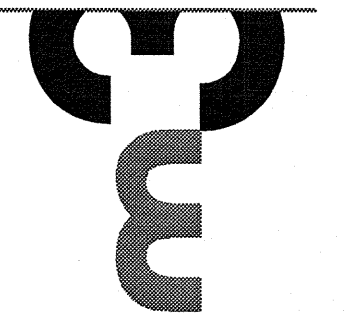
BUILDING SECTION A-A
SCALE: 1/2" = 1'-0"

KEY NOTES

1. TELESCOPE - N.I.C.
2. EXISTING DOME STRUCTURE, PROVIDE R-11 FIBERGLASS BATT INSULATION WITH A SHEET METAL COVER TYPICAL OF THE ENTIRE DOME AND SHUTTER DOORS - SEE 8/AR501
3. EXISTING STATIONARY RING BEAM
4. METAL GRATING MEZZANINE AND STEEL FLOOR STRUCTURE, TYPICAL. SEE SF101
5. MEZZANINE STEEL BEAM - SEE SF101
6. MEZZANINE STEEL COLUMN - SEE SB101
7. EXISTING CONCRETE FLOOR SLAB TO REMAIN - SEE AD101 FOR AREA OF FLOOR TO BE DEMOLISHED.
8. EXISTING CONCRETE FOUNDATION TO REMAIN
9. TELESCOPE CONCRETE PIER - SEE SB401 AND SB201
10. INSULATED ROLL UP DOOR IN STEEL FRAME
11. MECHANICAL DAMPER IN STEEL FRAME
12. PROVIDE 3" STYROFOAM JOINT ON ALL PIER BELOW GRADE, VERTICAL SURFACES FOR VIBRATION ISOLATION. SEE SB201
13. CONCRETE STEPS - SEE 4/SB501
14. WIRE MESH GUARD - SEE 3/AR502
15. REMOVABLE GUARDRAIL SECTIONS - SEE 5/AR502
16. 3" THICK INSULATED METAL PANEL ON METAL GIRTS, TYPICAL
17. HVAC UNIT AND DUCTWORK - SEE MH101
18. METAL GRATING TREAD SHIPS LADDER/STAIR
19. HOLLOW METAL DOOR (PAINT)
20. 3 5/8"x18 GA METAL STUDS WITH 5/8" GYPSUM BOARD CEILING AND R-30 FIBERGLASS BATT INSULATION - FINISH AND PAINT TO MATCH ADJACENT SURFACE
21. CONCRETE FLOOR SLAB OVER VAPOR BARRIER, STYROFOAM AND BASE COURSE (REFER TO STRUCTURAL DRAWINGS FOR LOCATION OF STYROFOAM) -SEE SB101
22. METAL STUD PARTITION - SEE AR101 FOR PARTITION CONSTRUCTION

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Revisions

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Issue Date: 04-04-11

Drawing Title

BUILDING SECTION A-A

Sheet Number

AR301

M3PN 100064

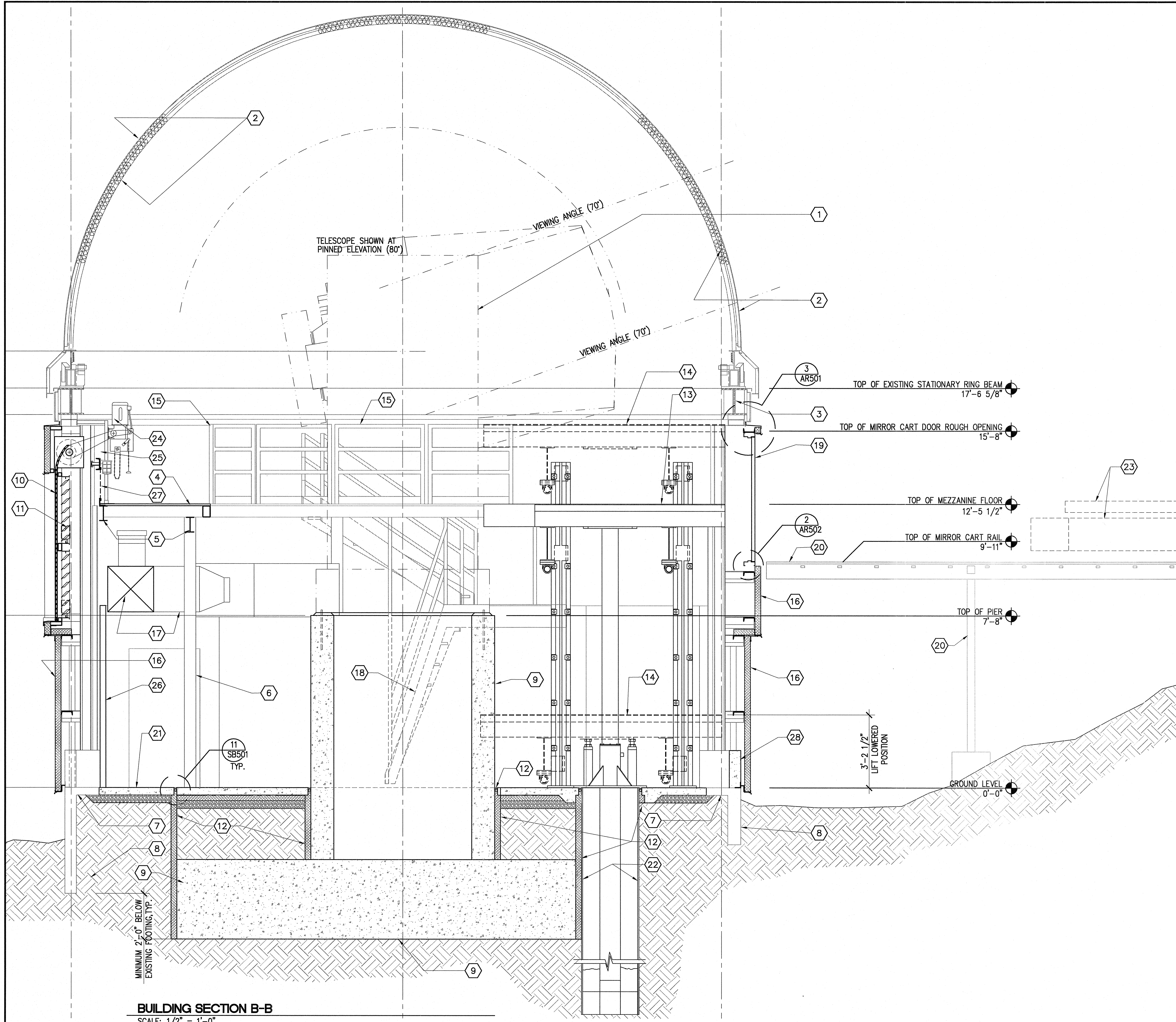
Last Update: 5.9.2011



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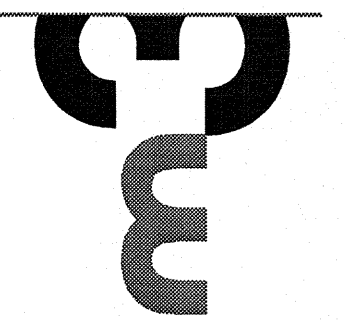
BUILDING SECTION B-B
SCALE: 1/2" = 1'-0"

KEY NOTES

1. TELESCOPE - N.I.C.
2. EXISTING DOME STRUCTURE, PROVIDE R-11 FIBER GLASS BATT INSULATION WITH SHEET METAL COVER TYPICAL OF THE ENTIRE DOME AND SHUTTER DOORS - SEE 8/AR501
3. EXISTING STATIONARY RING BEAM
4. METAL GRATING MEZZANINE AND STEEL FLOOR STRUCTURE - SEE SF101
5. MEZZANINE STEEL BEAM - SEE SF101
6. MEZZANINE STEEL COLUMN - SEE SB101
7. EXISTING CONCRETE FLOOR SLAB TO REMAIN - SEE AD101 FOR AREA OF THE FLOOR TO BE DEMOLISHED.
8. EXISTING CONCRETE FOUNDATION TO REMAIN
9. TELESCOPE CONCRETE PIER - SEE SB401 AND SB201
10. INSULATED ROLL UP DOOR IN STEEL FRAME
11. MECHANICAL DAMPER IN STEEL FRAME
12. PROVIDE 3" STYROFOAM JOINT ON ALL PIER BELOW GRADE VERTICAL SURFACES FOR VIBRATION ISOLATION - SEE SB201
13. 5 TON HYDRAULIC LIFT PLATFORM, O.F.C.I
14. 4 TON LIFT SHOWN IN FULL EXTENDED LIFT POSITION (15'-11" A.F.F., SHOWN DASHED IN LOWERED OR FULLY RAISED POSITION)
15. REMOVABLE GUARDRAIL SECTIONS - SEE 5/AR502
16. 3" THICK INSULATED METAL PANEL ON METAL GIRTS, TYPICAL
17. HVAC UNIT AND DUCTWORK - SEE MH101
18. METAL GRATING TREAD SHIPS LADDER/STAIR
19. HOLLOW METAL DOOR (PAINT)
20. EXISTING STEEL FRAMED MIRROR CART RUNWAY. STRUCTURE SHOWN LOWERED - SEE SF202.
21. CONCRETE FLOOR SLAB - SEE SB101
22. STEEL PIPE CASING FOR HYDRAULIC LIFT. SEE 6/SB501
23. PRIMARY MIRROR CART (N.I.C.) SHOWN FOR REFERENCE ONLY
24. ROLL UP DOOR MOTOR OPERATOR
25. PROVIDE UNISTRUT FRAME AS REQUIRED TO SUPPORT THE ROLL UP DOOR MOTOR, ELECTRICAL DISCONNECT, ETC. BOLT TO FLOOR AND WELD TO STATIONARY BEAM (PAINT) SEE DETAIL 5/AR303
26. METAL STUD PARTITION - SEE SHEET AR101 FOR PARTITION CONSTRUCTION
27. WIRE MESH GUARD - SEE 3/AR502
28. CONCRETE STEM WALL TO MATCH EXISTING - SEE SF201

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Revisions

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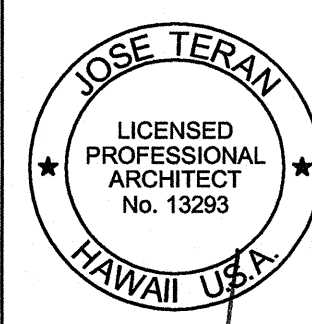
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 Checked: J.T.U.
 Issue Date: 04-04-11
 Drawing Title

BUILDING SECTION B-B

Sheet Number
AR302

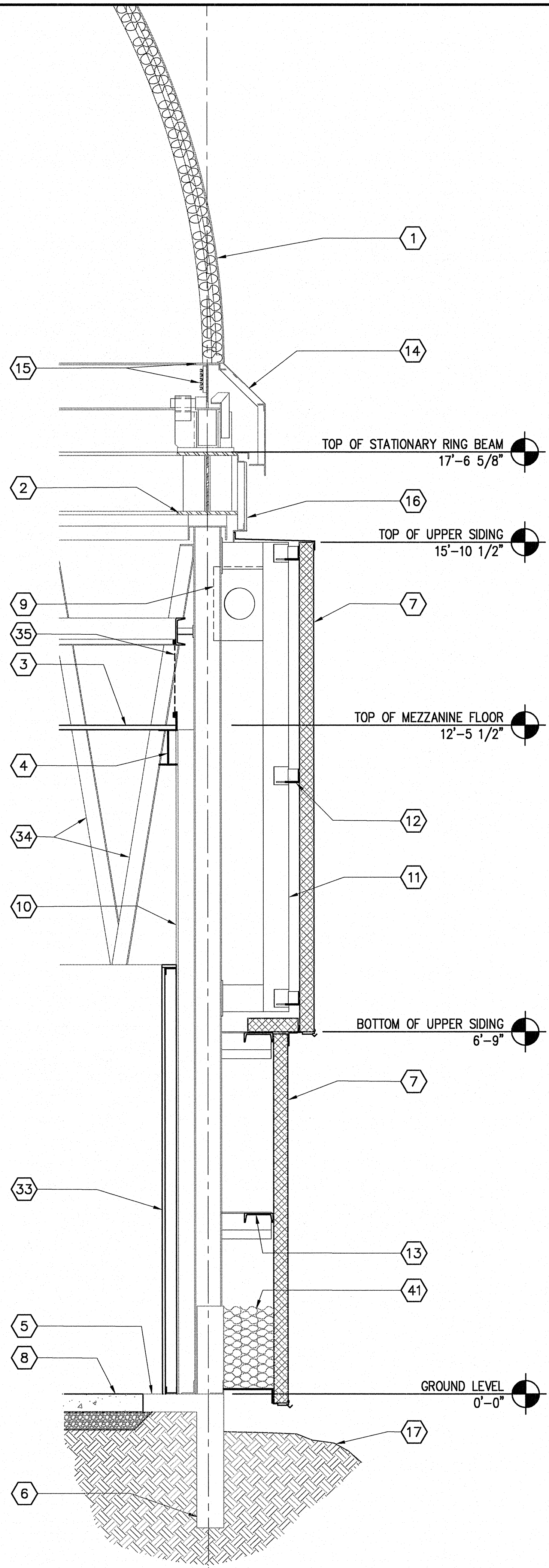
M3PN 100064

Last Update: 5.9.2011



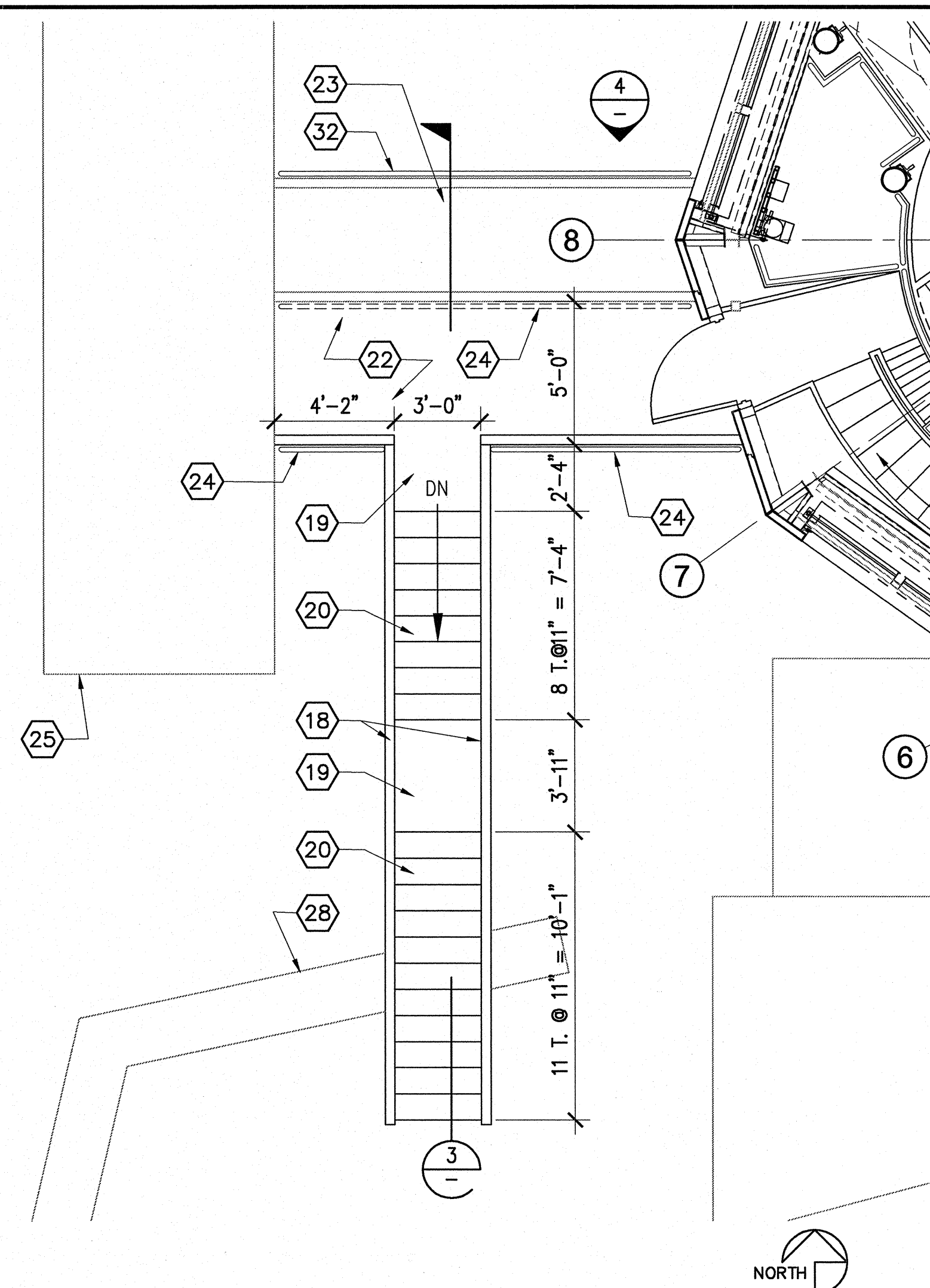
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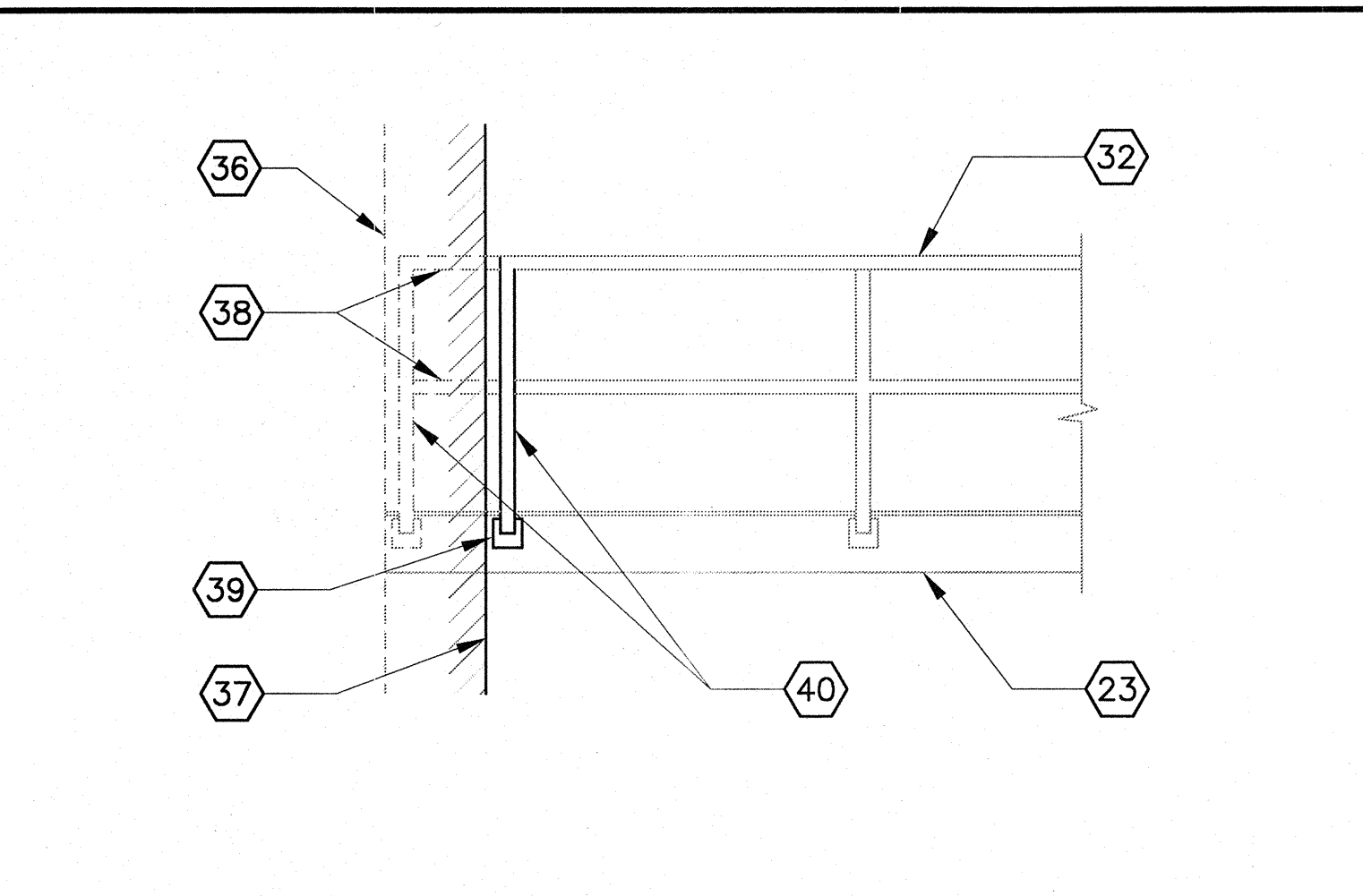
WALL SECTION
SCALE: 3/4" = 1'-0"

1



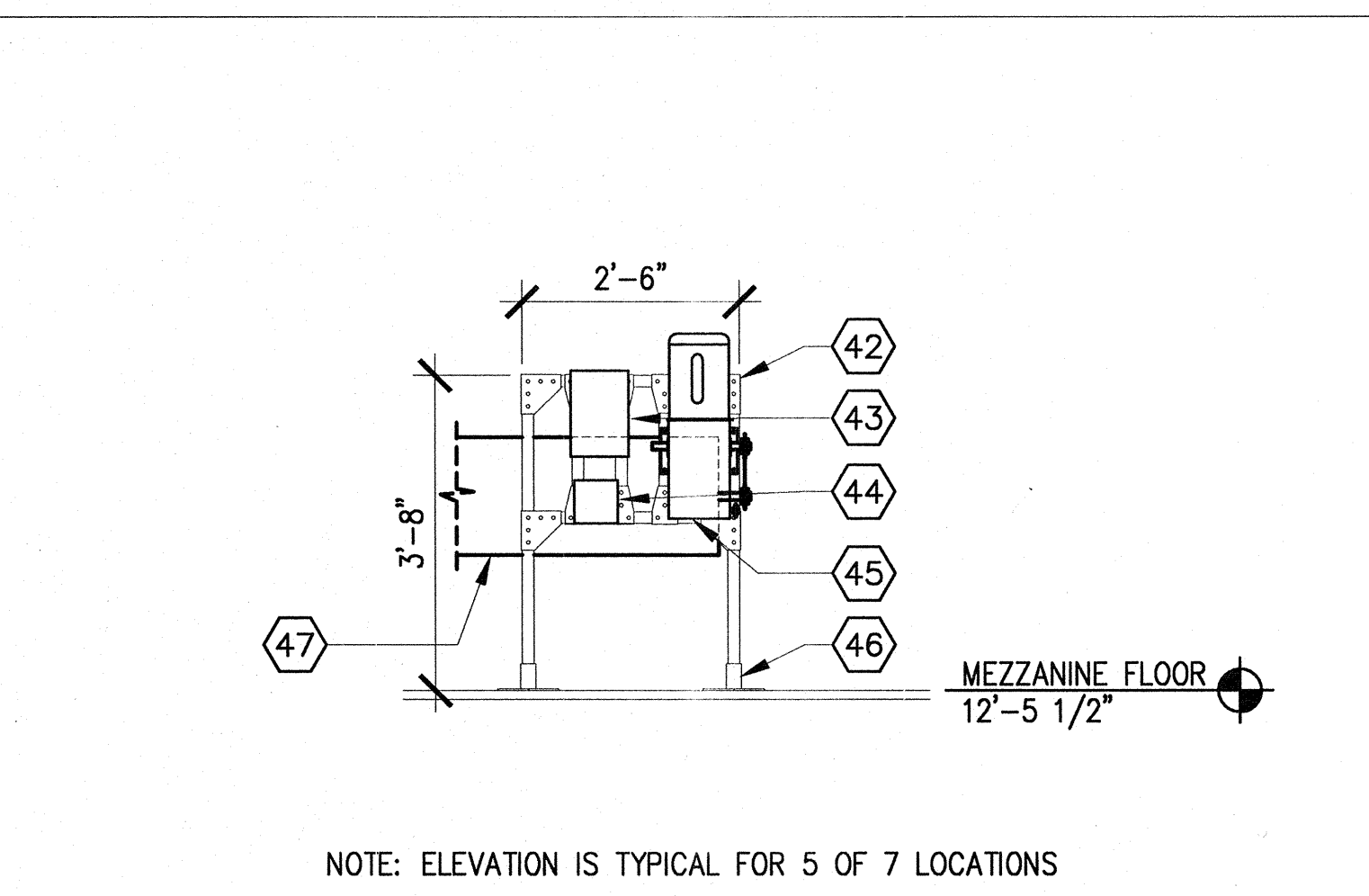
PARTIAL GROUND LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"

2



GUARDRAIL ELEVATION
SCALE: 1/2" = 1'-0"

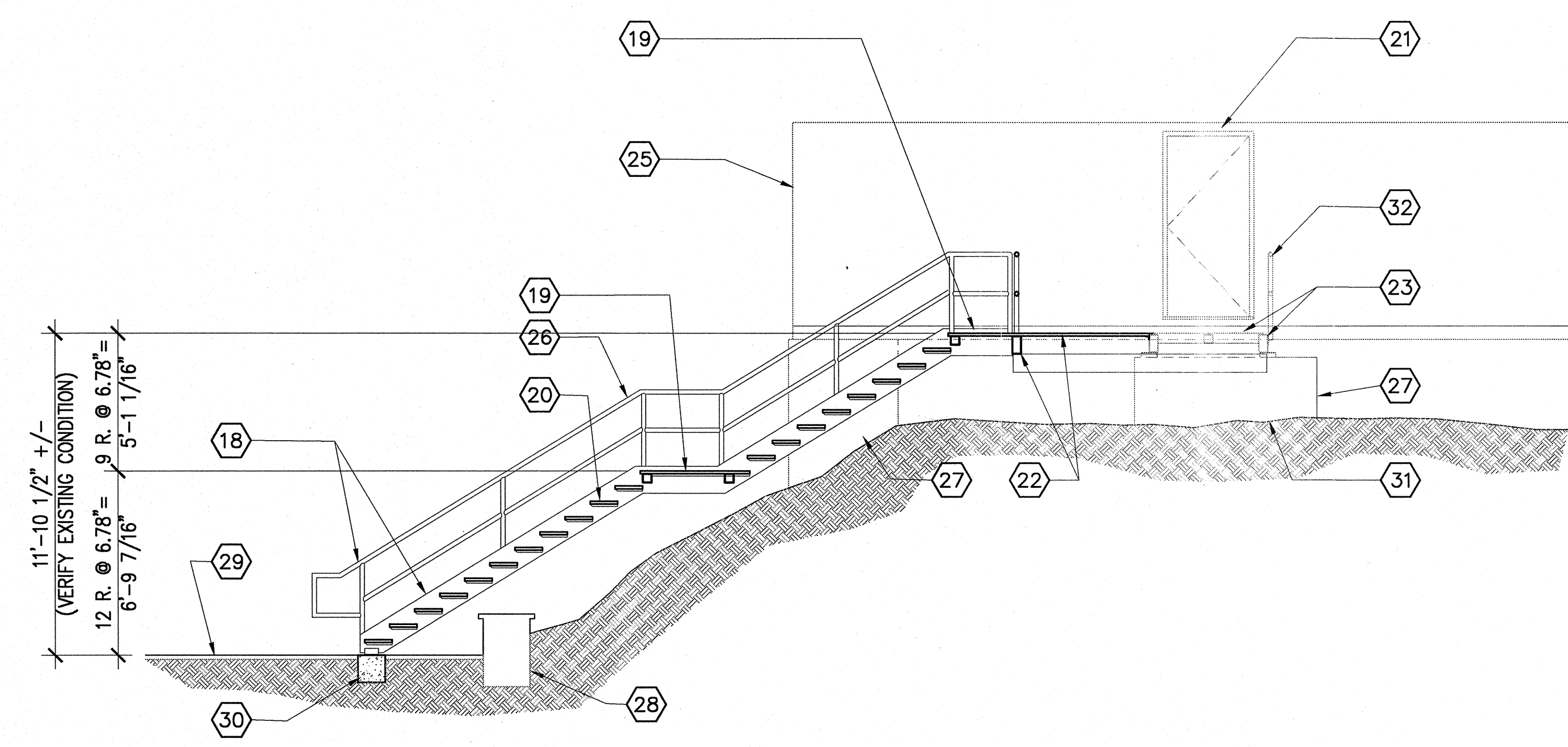
4



MOTOR SUPPORT FRAME ELEVATION
SCALE: 1/2" = 1'-0"

5

NOTE: ELEVATION IS TYPICAL FOR 5 OF 7 LOCATIONS



STAIR SECTION (EXTERIOR)
SCALE: 1/4" = 1'-0"

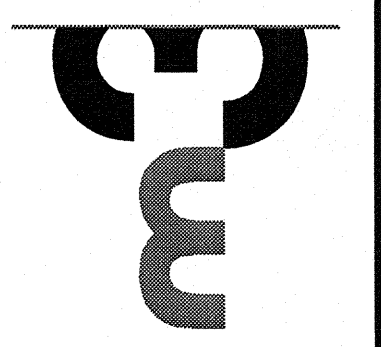
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KEY NOTES

1. EXISTING DOME STRUCTURE, PROVIDE R-11 FIBERGLASS BATT INSULATION WITH SHEET METAL COVER TYPICAL OF THE ENTIRE DOME AND SHUTTER DOORS - SEE 8/AR501
2. EXISTING STATIONARY RING BEAM
3. METAL GRATING MEZZANINE AND STEEL FLOOR STRUCTURE - SEE SF101
4. MEZZANINE STEEL BEAM - SEE SF101
5. EXISTING CONCRETE FLOOR SLAB TO REMAIN - SEE AD101 FOR AREA OF FLOOR TO BE DEMOLISHED.
6. EXISTING CONCRETE FOUNDATION TO REMAIN
7. 3" THICK INSULATED METAL PANEL ON METAL GIRTS
8. CONCRETE FLOOR SLAB - SEE SB101
9. ROLL UP DOOR HOOD AND DRIVE SPROCKET BEYOND
10. EXISTING STEEL COLUMN TO REMAIN
11. STEEL FRAME FOR DAMPER AND ROLL UP DOOR BEYOND
12. STEEL ANGLE GIRT - SEE DETAIL 7/SF502
13. STEEL CHANNEL GIRT - SEE SF201
14. EXISTING ROTATING DOME SKIRT TO REMAIN
15. EXISTING ROTATING STEEL RING BEAM AND ELECTRICAL SLIP RINGS TO REMAIN
16. EXISTING STATIONARY STEEL SKIRT TO REMAIN
17. EXISTING FINISH GRADE
18. STEEL STAIR STRINGER AND HANDRAILS - SEE SF401
19. METAL GRATING STAIR LANDING - SEE SF401
20. METAL GRATING STAIR TREADS - SEE SF401
21. EXISTING HOLLOW METAL DOOR TO REMAIN.
22. STEEL FRAMED WALKWAY - SEE SF401
23. EXISTING STEEL WALKWAY TO REMAIN
24. EXISTING STEEL PIPE HANDRAIL TO BE REMOVED, MODIFY AS REQUIRED AND REATTACH TO THE NEW WALKWAY.
25. EXISTING SHIPPING CONTAINER TO REMAIN
26. STEEL PIPE HANDRAIL - SEE SF401
27. EXISTING CONCRETE FOUNDATION FOR THE CONTAINER AND THE STEEL WALKWAY TO REMAIN.
28. EXISTING ROCK VENEER RETAINING WALL TO REMAIN
29. EXISTING ASPHALT PAVING TO REMAIN
30. CONCRETE FOOTING - SEE DETAIL 5/SB501
31. EXISTING FINISH GRADE
32. EXISTING STEEL PIPE HANDRAIL TO REMAIN - MODIFY PER SF401
33. METAL STUD PARTITION - SEE AR101 FOR PARTITION PARTITION CONSTRUCTION
34. EXISTING STEEL "X"-BRACE TO REMAIN
35. WIRE MESH GUARD - SEE DETAIL 3/AR502
36. LINE OF EXISTING SIDING TO BE REMOVED
37. LINE OF NEW SIDING (SEE PLAN)
38. REMOVE EXISTING STEEL GUARDRAIL HORIZONTAL PIECES
39. WELD BRACKET TO EXISTING STEEL TUBE PER DETAIL 6/SF503
40. RELOCATED (SALVAGED) GUARDRAIL END POST AND BRACKET
41. FILL VOID WITH R-11 FIBERGLASS INSULATION. TYPICAL ALONG THE ENTIRE EXTERIOR WALL
42. UNISTRUT FRAME AND BRACKETS TO SUPPORT EQUIPMENT SHOWN. PROVIDE BRACE BACK TO EXISTING STATIONARY BEAM (WELD TO BEAM)
43. ELECTRICAL MOTOR SWITCH - SEE EP101
44. J-BOX FOR DAMPER ACTUATOR - SEE EP101
45. ROLL UP DOOR MOTOR
46. UNISTRUT BASE THROUGH BOLT THROUGH METAL GATING FLOOR; PROVIDE FLAT PAR WASHER BELOW FLOOR (1/2" Ø BOLT)
47. ROLL UP DOOR HEAD BEYOND

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Revisions

Description	Date

Drawn: S.P.D.
Checked: J.T.U.
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Drawing Title

WALL SECTION AND STAIR PLAN

Sheet Number
AR303

M3PN 100064

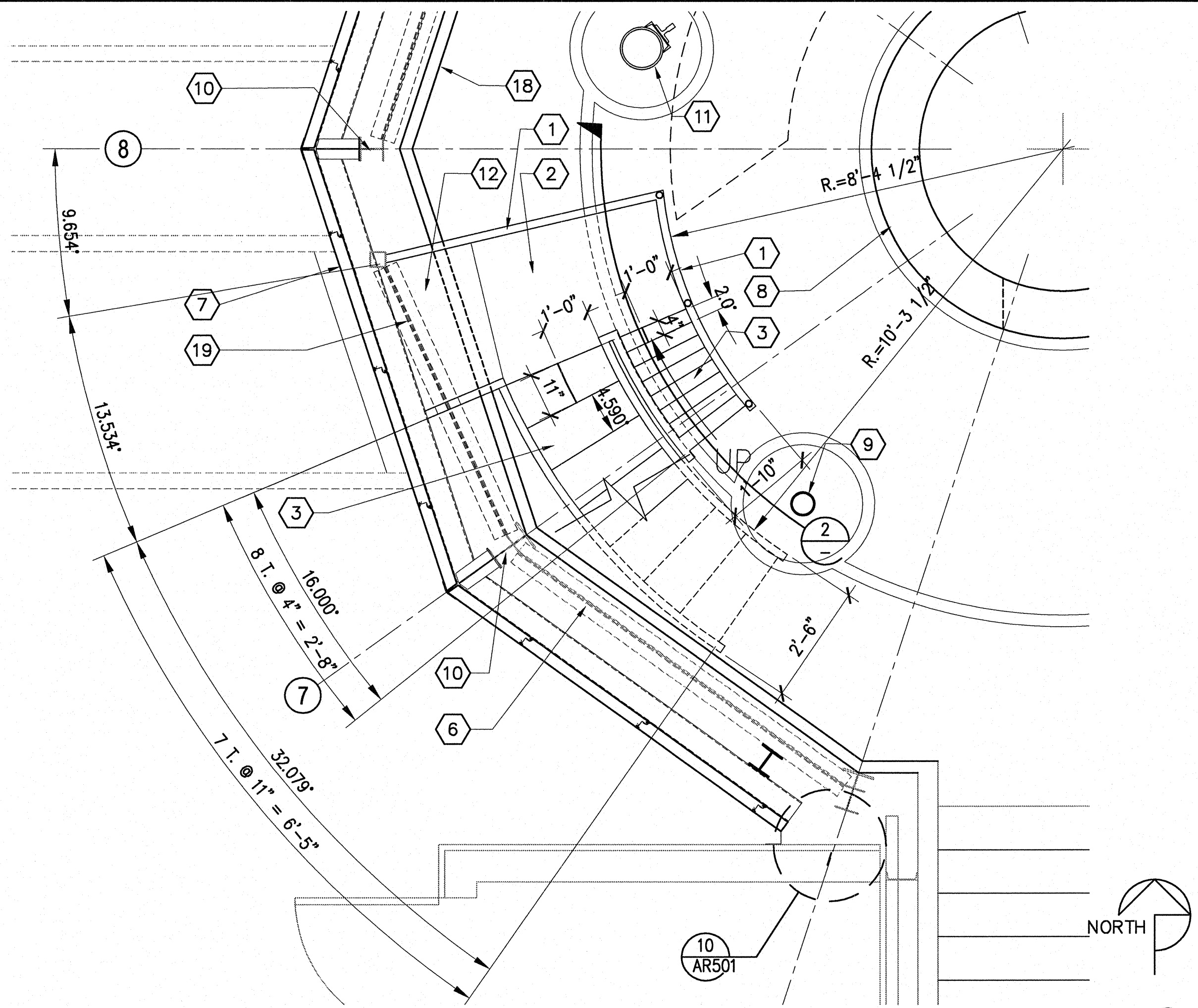
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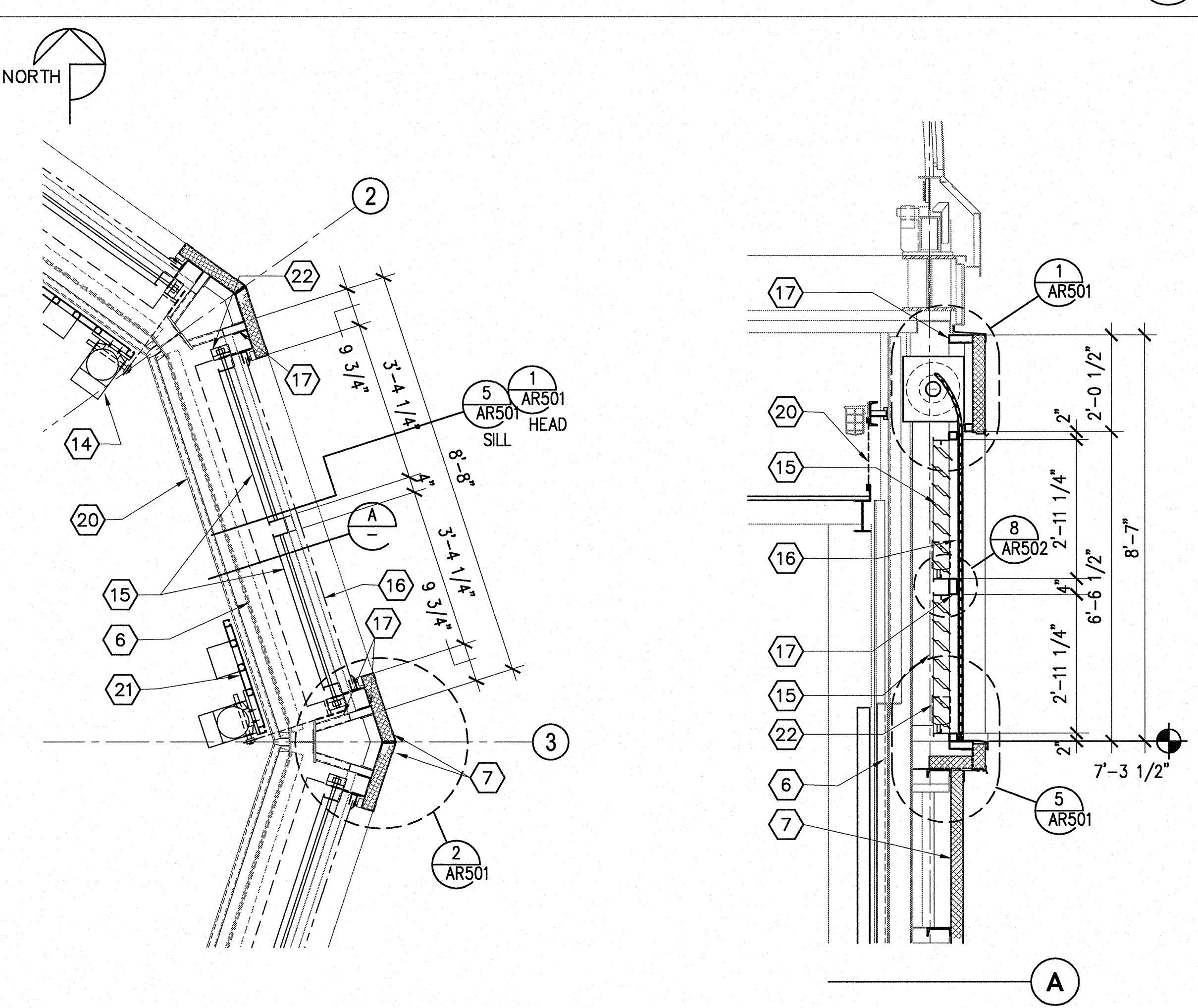
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SIGNATURE *Jose Teran* 04.04.2011

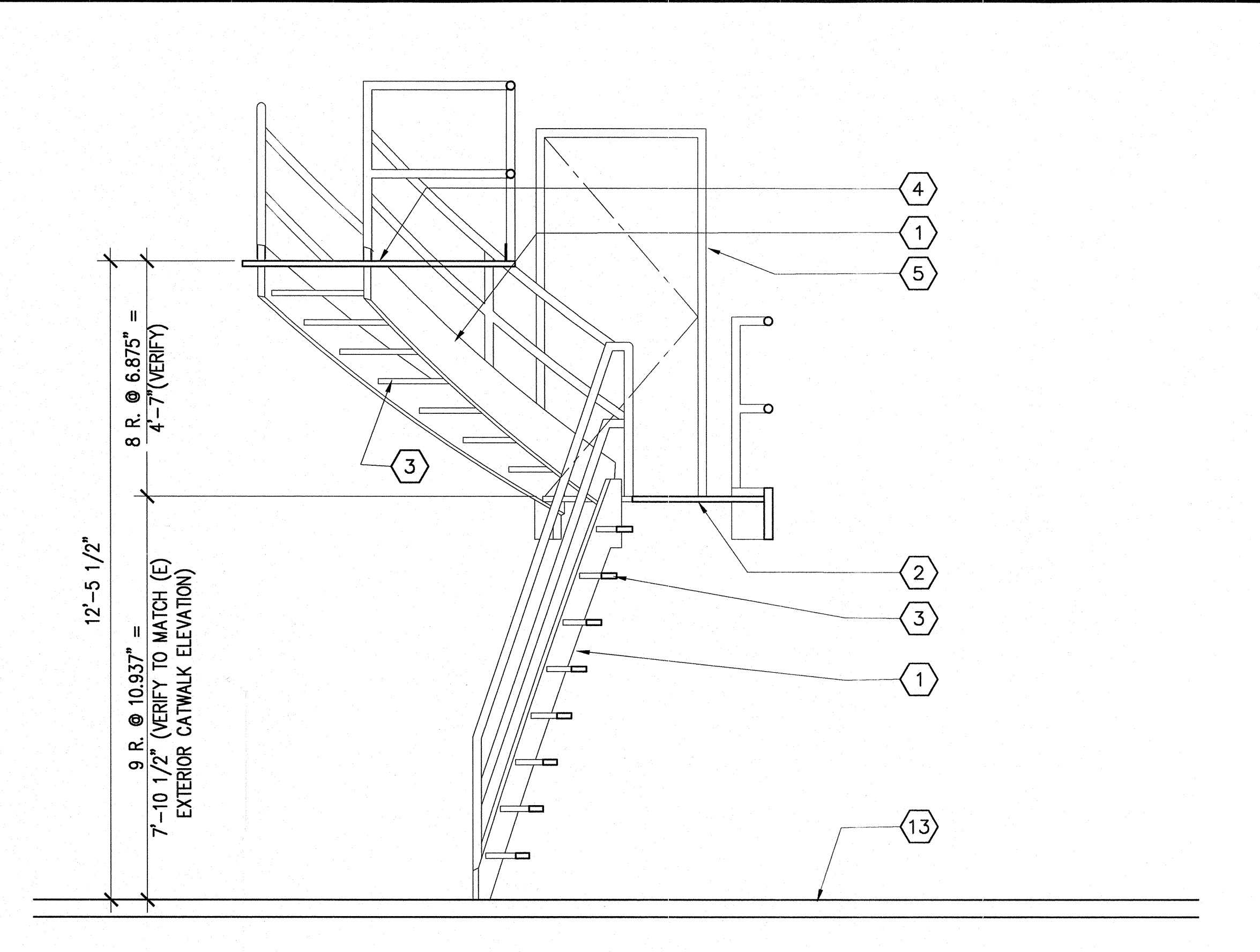
EXPIRATION DATE OF LICENSE 04.30.2012



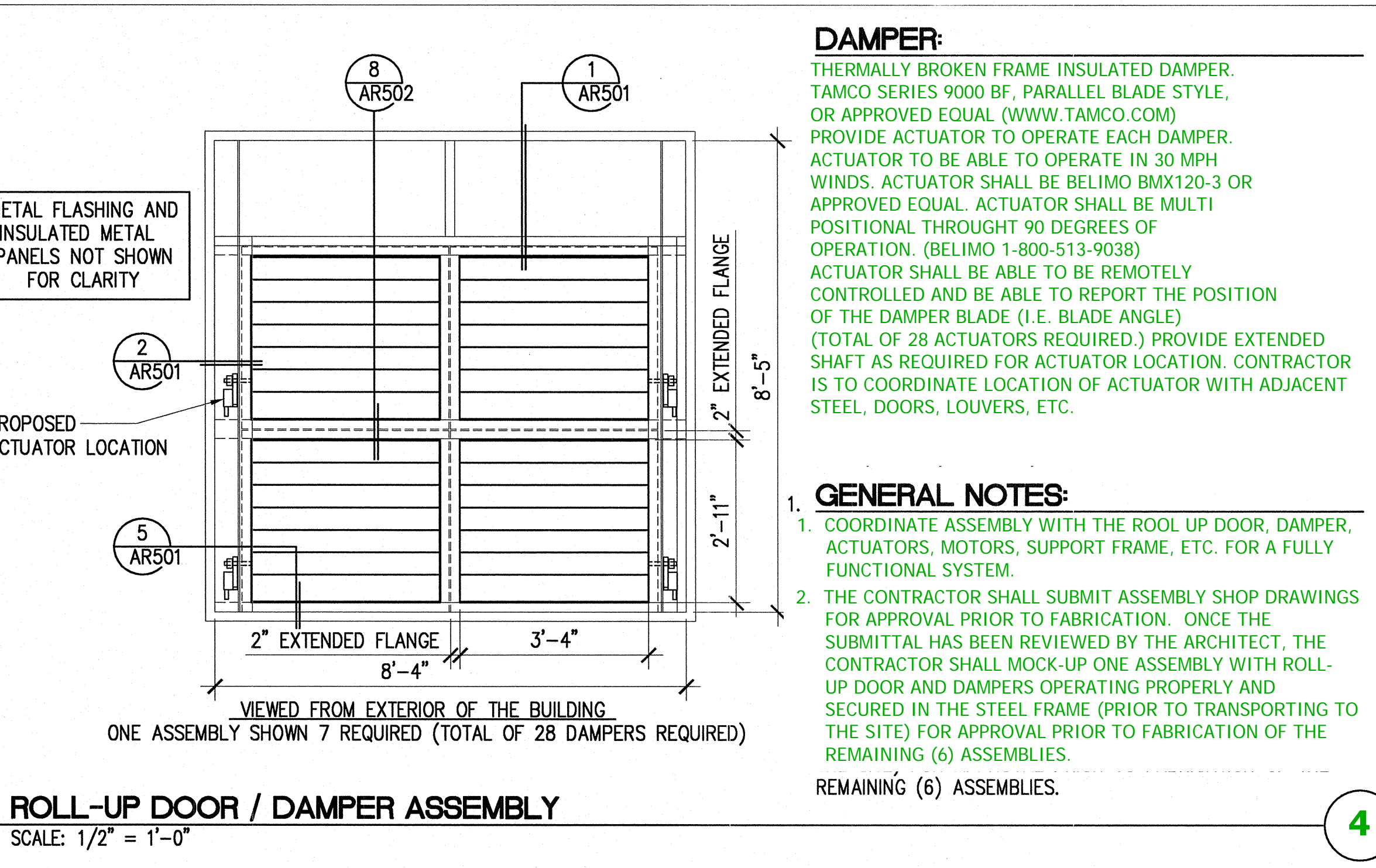
PARTIAL GROUND LEVEL FLOOR PLAN
SCALE: 1/2" = 1'-0"



ENLARGED VENTILATION OPENING PLAN AND SECTION
SCALE: 1/2" = 1'-0"



STAIR SECTION
SCALE: 1/2" = 1'-0"



ROLL-UP DOOR / DAMPER ASSEMBLY
SCALE: 1/2" = 1'-0"

DOOR SCHEDULE

	DOOR SIZE WIDTH x HEIGHT	MATERIAL DOOR/FRAME	DOOR TYPE	FRAME TYPE	RATING	HDWR	FRAME DETAILS			REMARKS
							HEAD	JAMB	SILL	
1A	3'-0" x 7'-0"	HM/HM	A	A	-	1	7/AR501	4/AR501	6/AR502	-
2A	PR. 4'-4" x 5'-6"	HM/HM	A	A	-	2	3/AR501	4/AR501	2/AR502	FOUR SIDED H.M. FRAME
3A-9A	6'-8" x 6'-6"	STL/STL	B	-	-	-	1/AR501	2/AR501	5/AR501	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

DOOR TYPES:
N.T.S.

FRAME TYPES:
N.T.S.

GEN. NOTES:
1. SEE AR002 FOR DOOR HARDWARE
2. ALL DOORS TO BE INSULATED.

- KEY NOTES**
- STEEL STAIR STRINGER - SEE SF401
 - METAL GRATING STAIR LANDING - SEE SF401
 - METAL GRATING STAIR TREADS - SEE SF401
 - METAL GRATING MEZZANINE FLOOR - SEE SF101
 - HOLLOW METAL DOOR AND FRAME BEYOND (PAINT)
 - EXISTING STEEL "X-BRACING" - SEE SF201
 - 3" THICK INSULATED METAL PANEL, TYPICAL
 - CONCRETE TELESCOPE PIER
 - STEEL MEZZANINE COLUMN
 - EXISTING STEEL COLUMN
 - GUIDE COLUMN FOR HYDRAULIC LIFT
 - STEEL PLATE LANDING - SEE SF401
 - CONCRETE SLAB - SEE SB101
 - ROLL UP DOOR MOTOR OPERATOR
 - THERMALLY BROKEN INSULATED DAMPER, TYPICAL SEE DETAIL 4 THIS SHEET
 - INSULATED ROLL UP DOOR
 - STEEL FRAME FOR DAMPER AND ROLL UP DOOR SEE DETAIL 1/SF501
 - GYPSUM BOARD PARTITION - SEE AR101 FOR PARTITION CONSTRUCTION
 - STEEL "X"-BRACE - SEE SF201
 - WIRE MESH GUARD - SEE 3/AR502
 - PROVIDE UNISTRUT FRAME AS REQUIRED TO SUPPORT THE ROLL UP DOOR MOTOR, ELECTRICAL DISCONNECT, ETC. MOUNT TO FLOOR AND STATIONARY BEAM
 - PROPOSED LOCATION OF DAMPER ACUATOR

Pan-STARRS PS2 Lure Modifications
University of Hawaii
(PHASE 1)

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Revisions

Description	Date

Drawn: S.P.D.
Checked: J.T.U.
Issue Date: 04-04-11

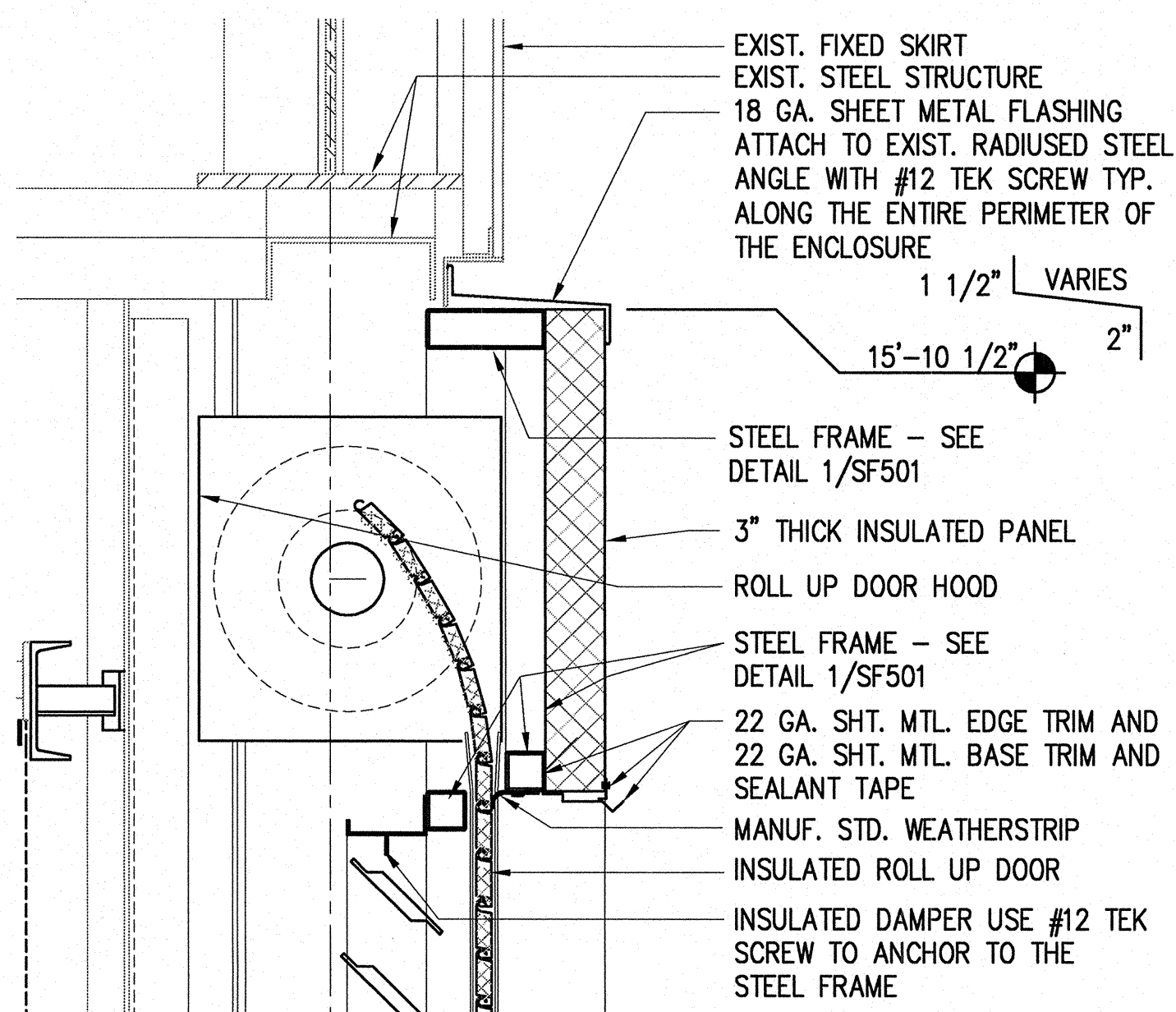
Drawing Title

ENLARGED FLOOR PLAN
Sheet Number
AR401
M3PN 100064
Last Update: 3.15.2011

JOSE TERAN
LICENSED PROFESSIONAL ARCHITECT
No. 13293
HAWAII U.S.A.

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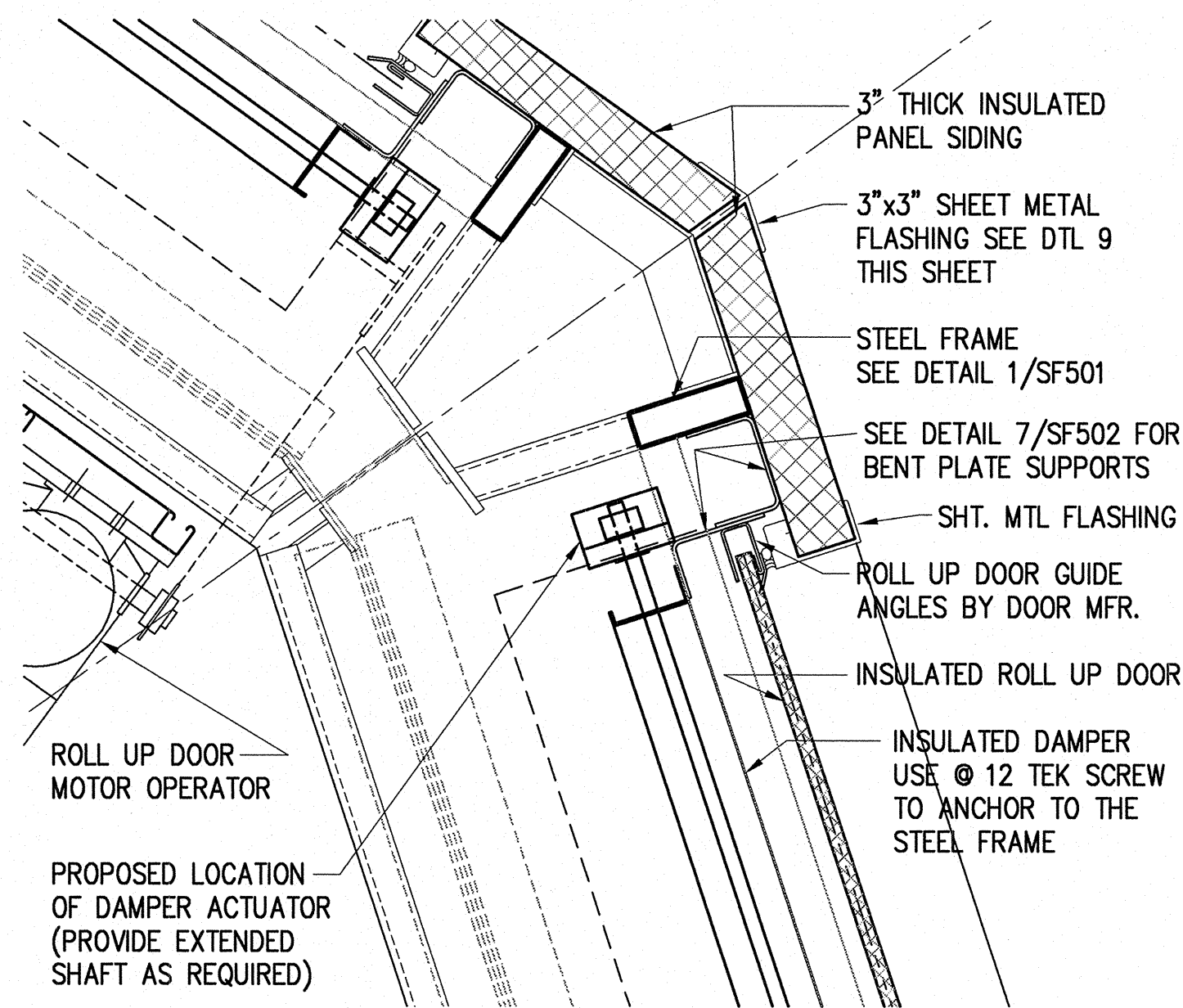
SIGNATURE: *[Signature]* 04.04.2011
EXPIRATION DATE OF LICENSE: 04.30.2012



VENTILATION OPENING - HEAD

SCALE: 3" = 1'-0"

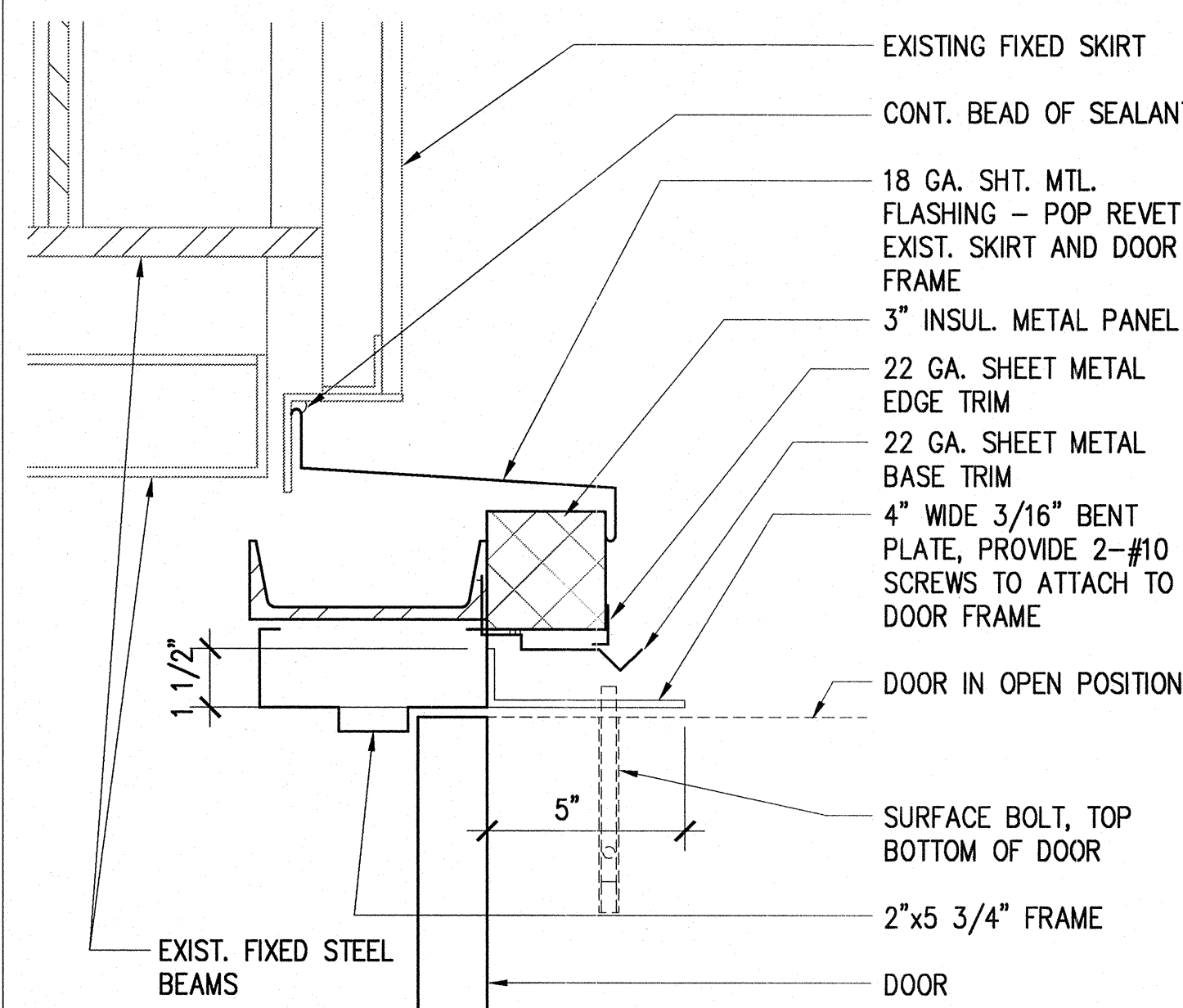
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VENTILATION OPENING - JAMB

SCALE: 1 1/2" = 1'-0"

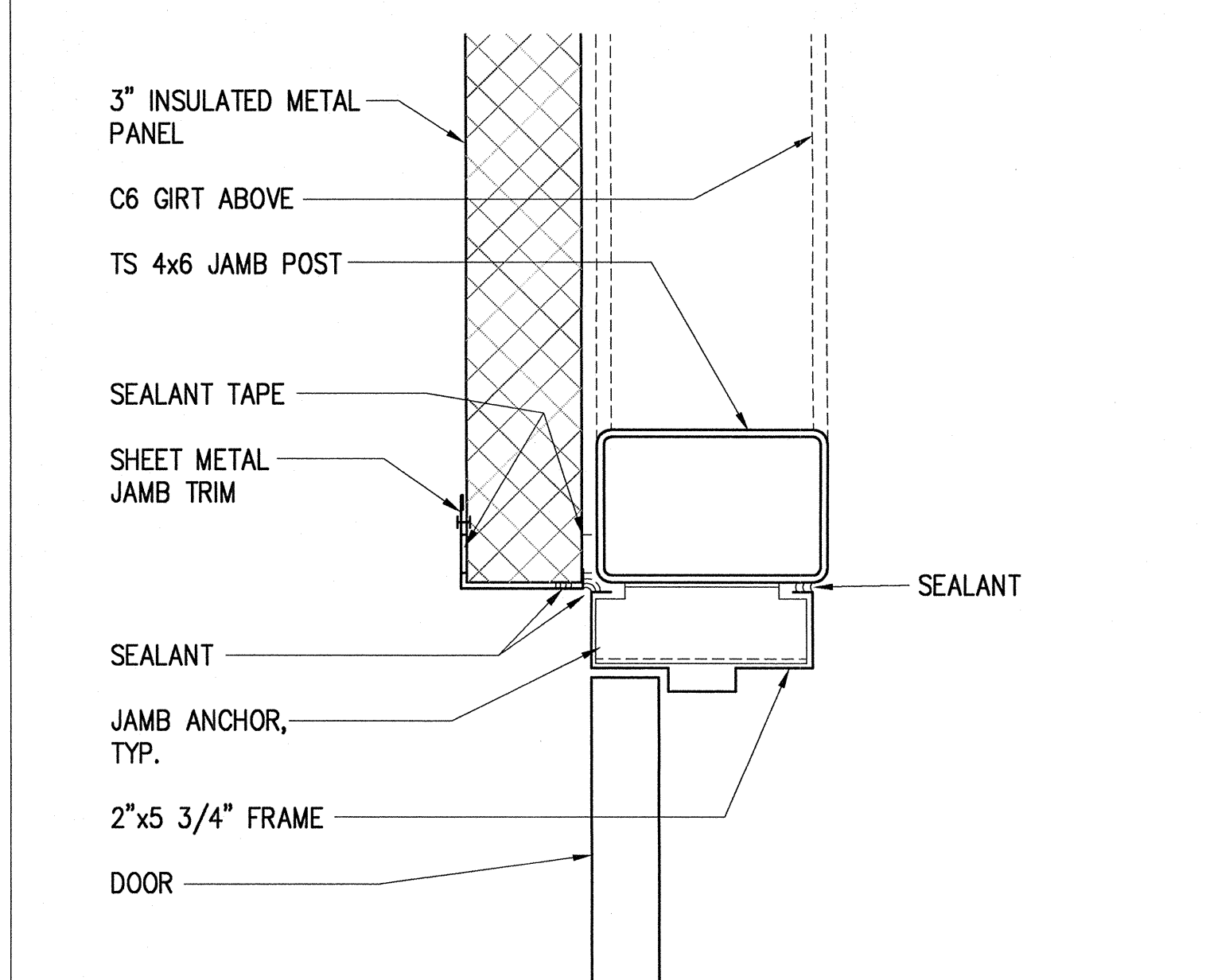
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H.M. DOOR - HEAD

SCALE: 3" = 1'-0"

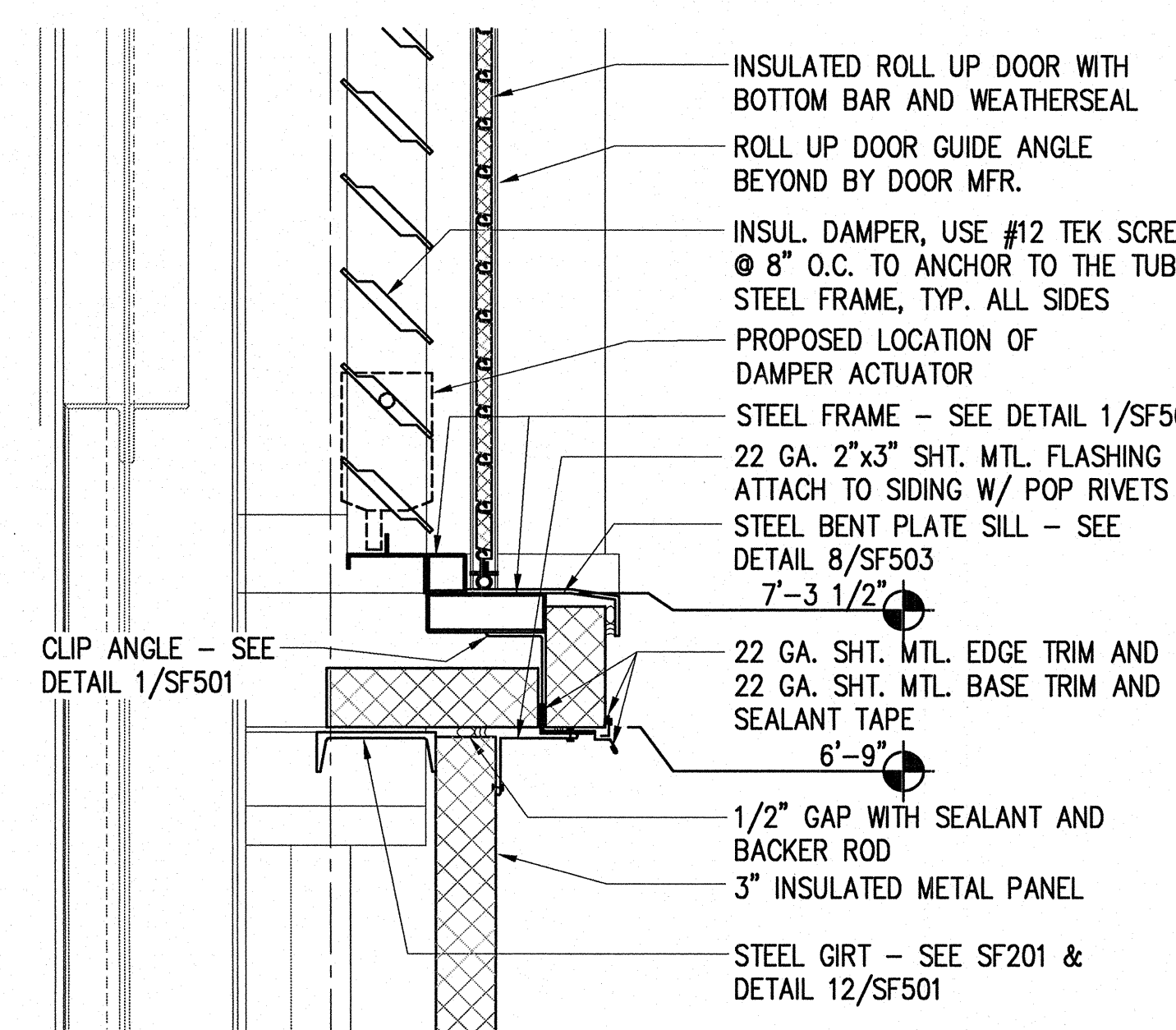
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H.M. DOOR - JAMB

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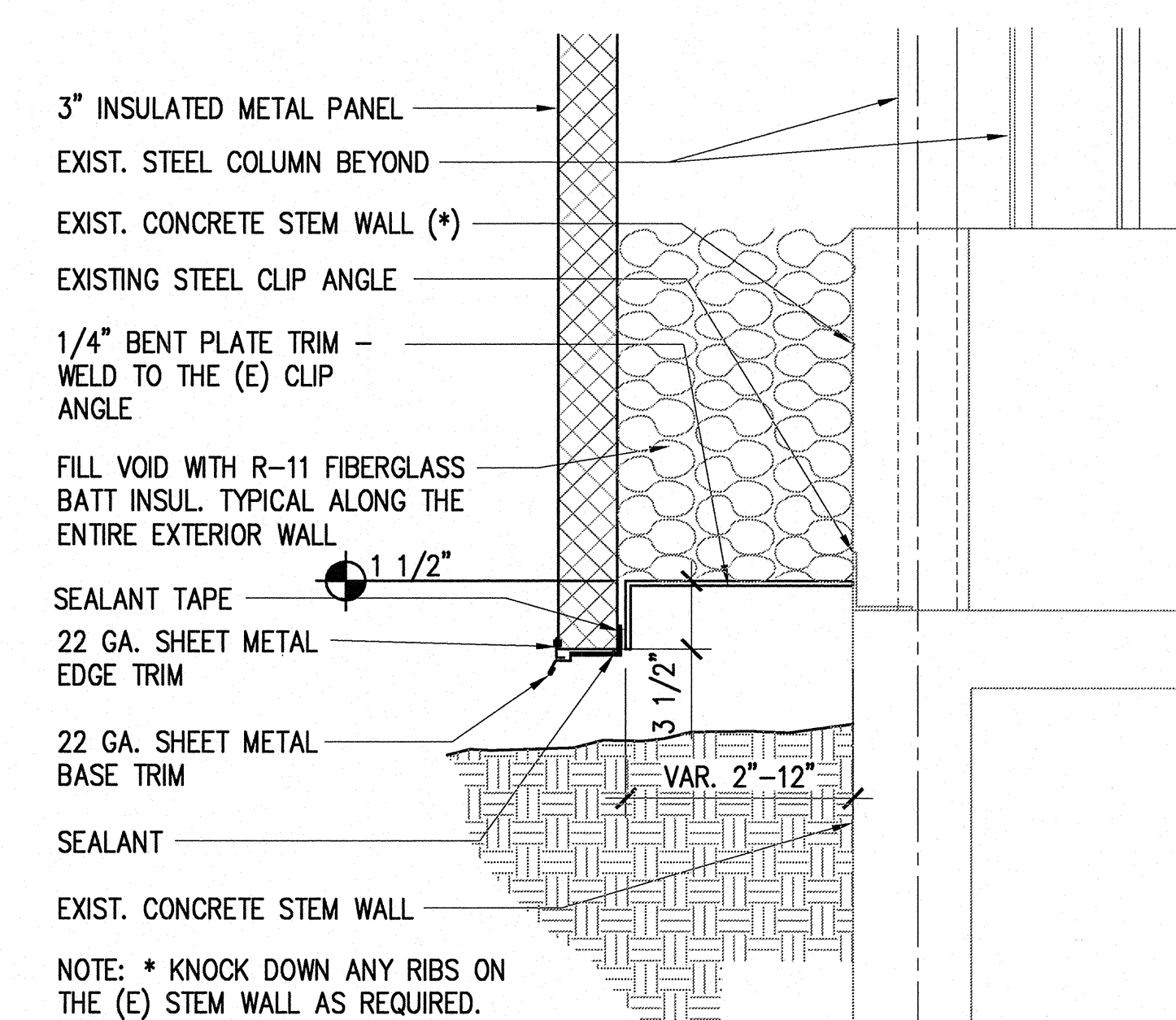
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VENTILATION OPENING - SILL

SCALE: 1-1/2" = 1'-0"

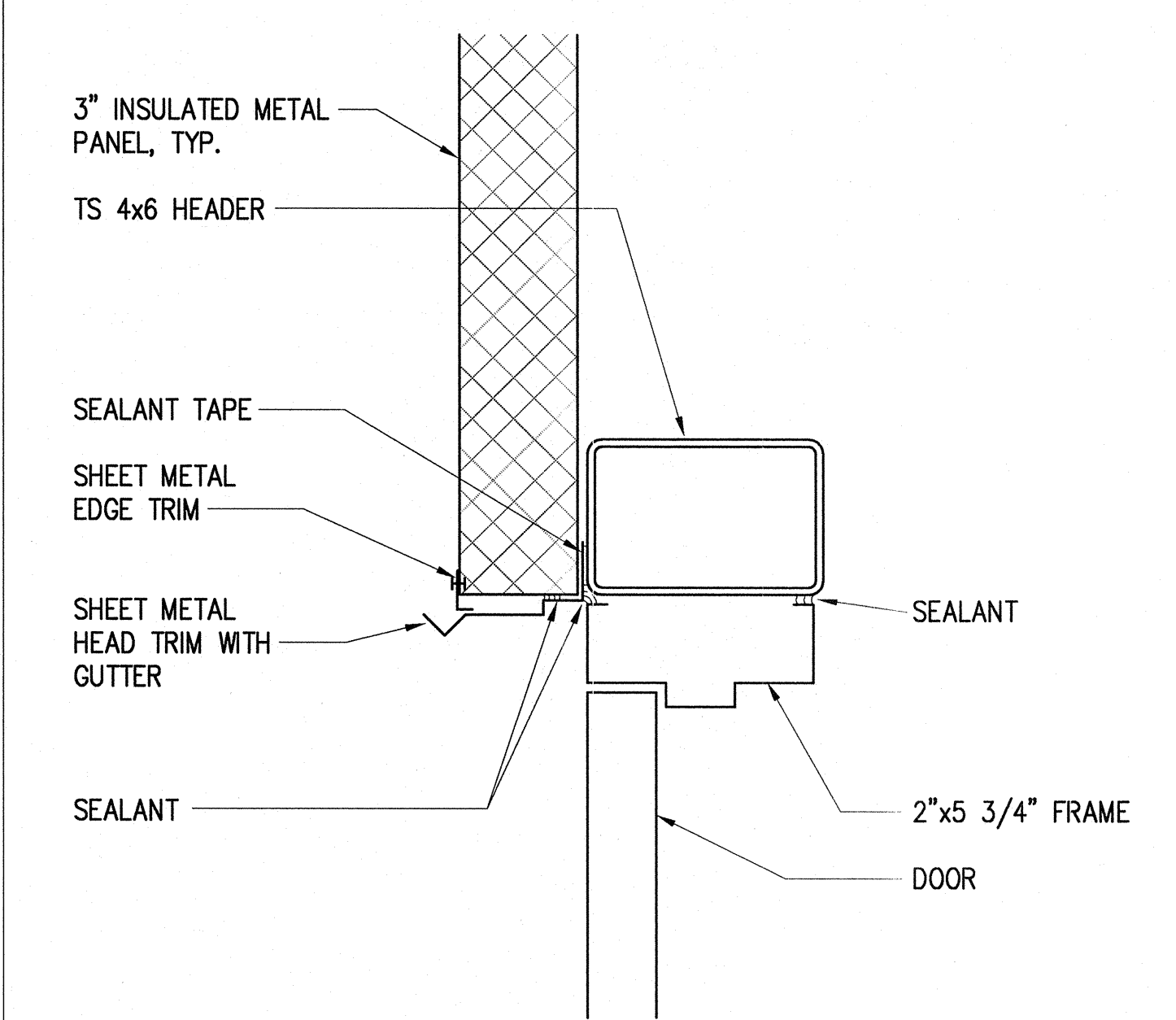
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METAL PANEL - SILL

SCALE: 1 1/2" = 1'-0"

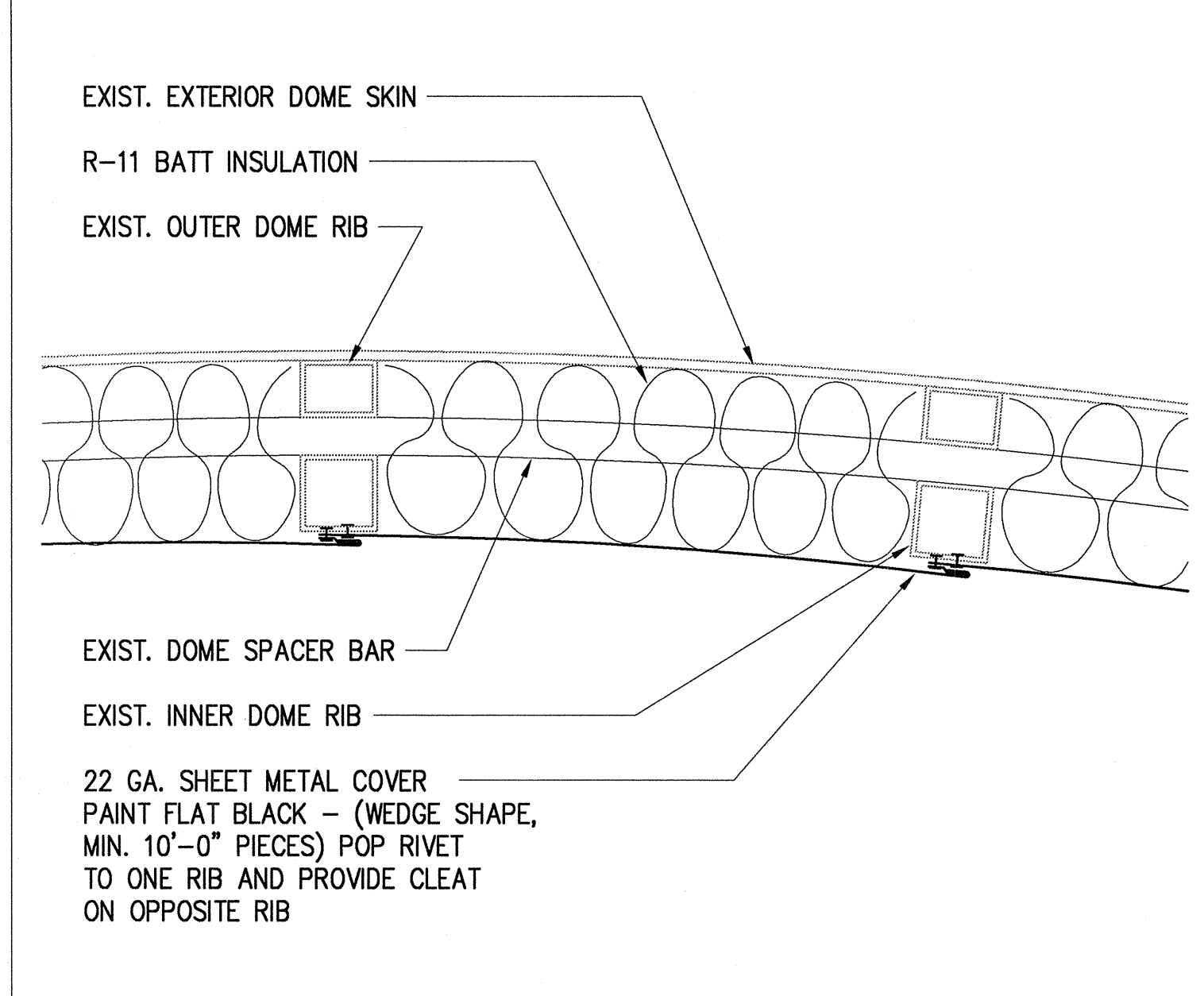
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H.M. DOOR - HEAD

SCALE: 3" = 1'-0"

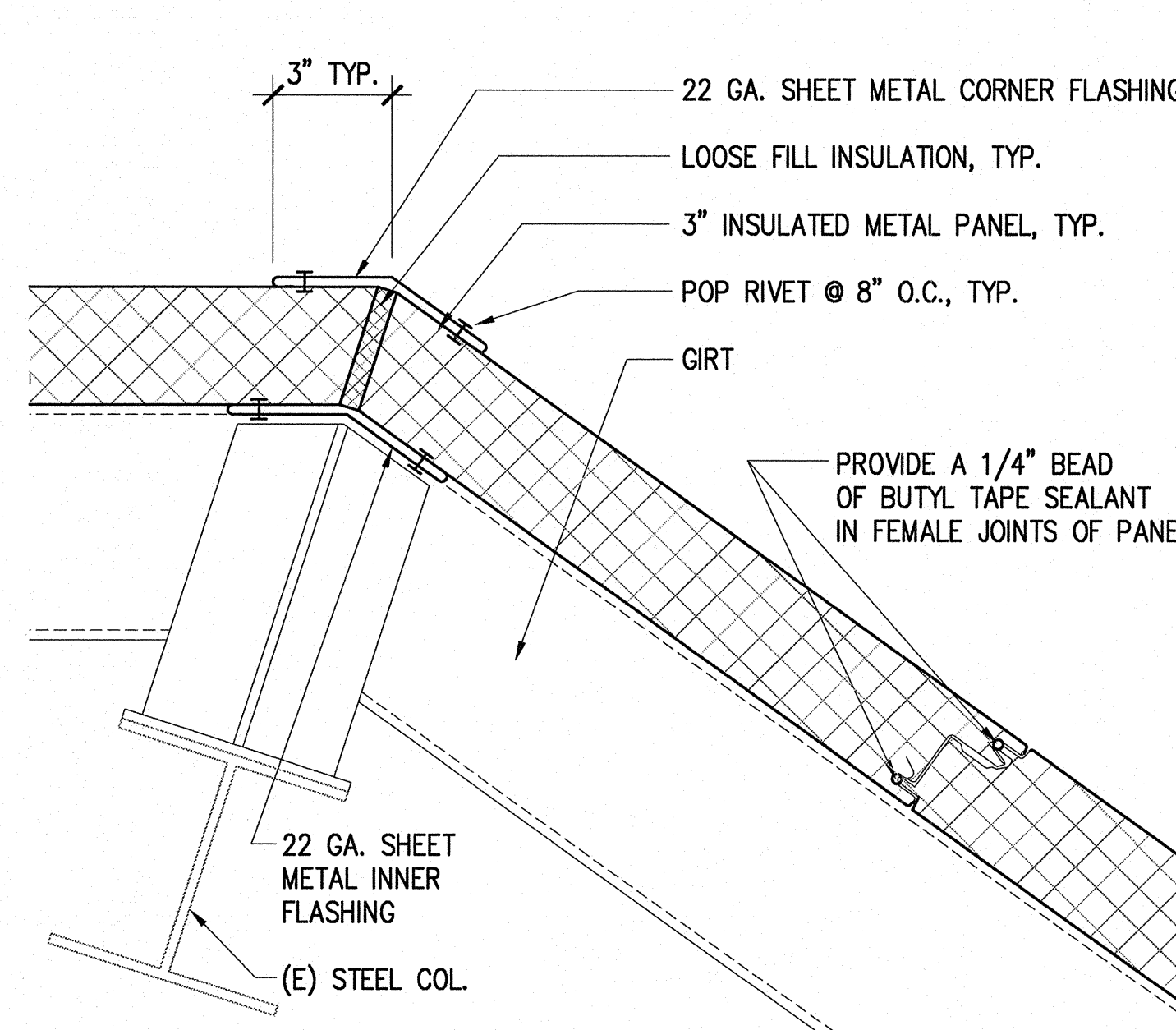
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DOMES INSULATION

SCALE: 3" = 1'-0"

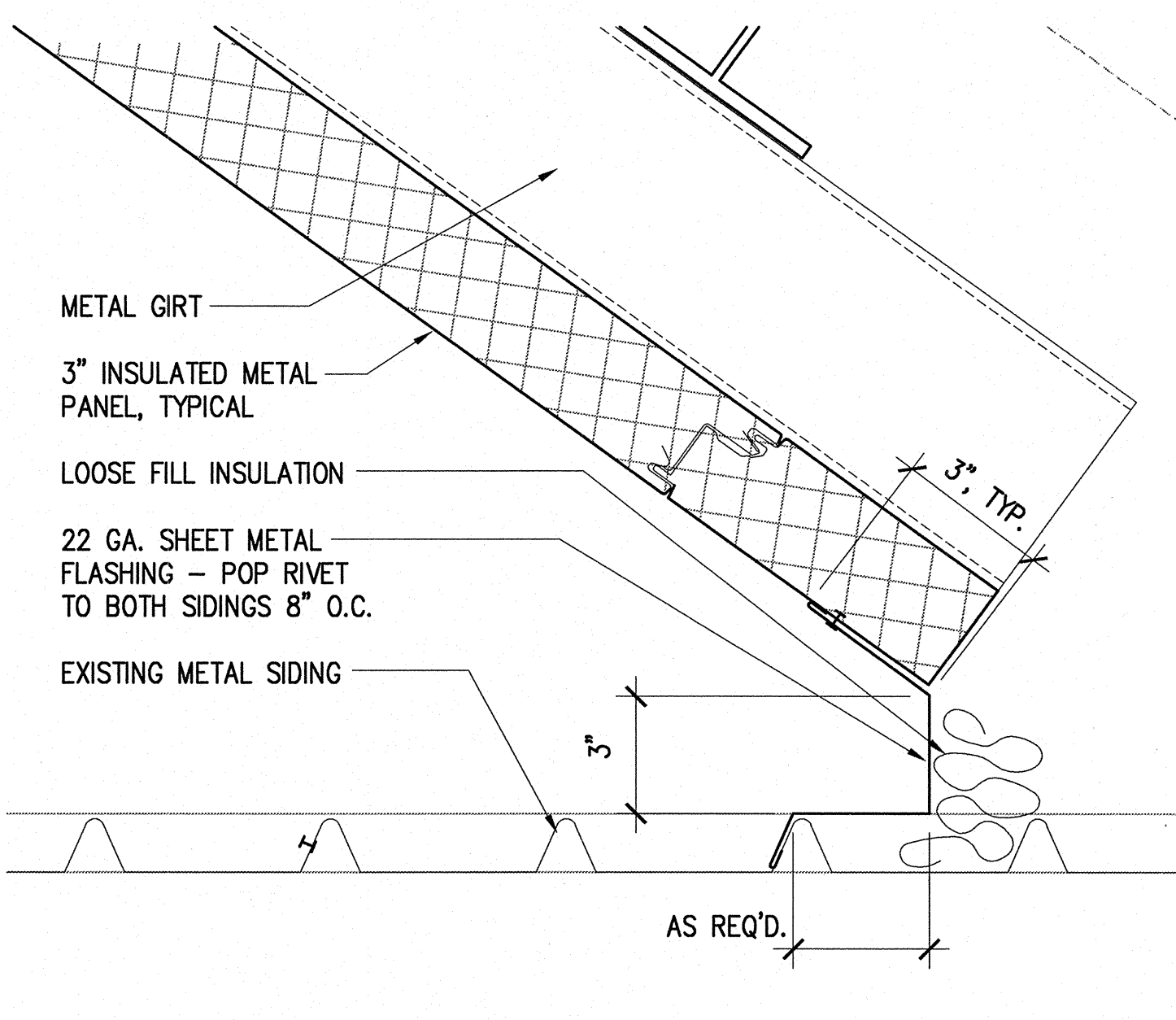
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CORNER FLASHING, TYPICAL

SCALE: 3" = 1'-0"

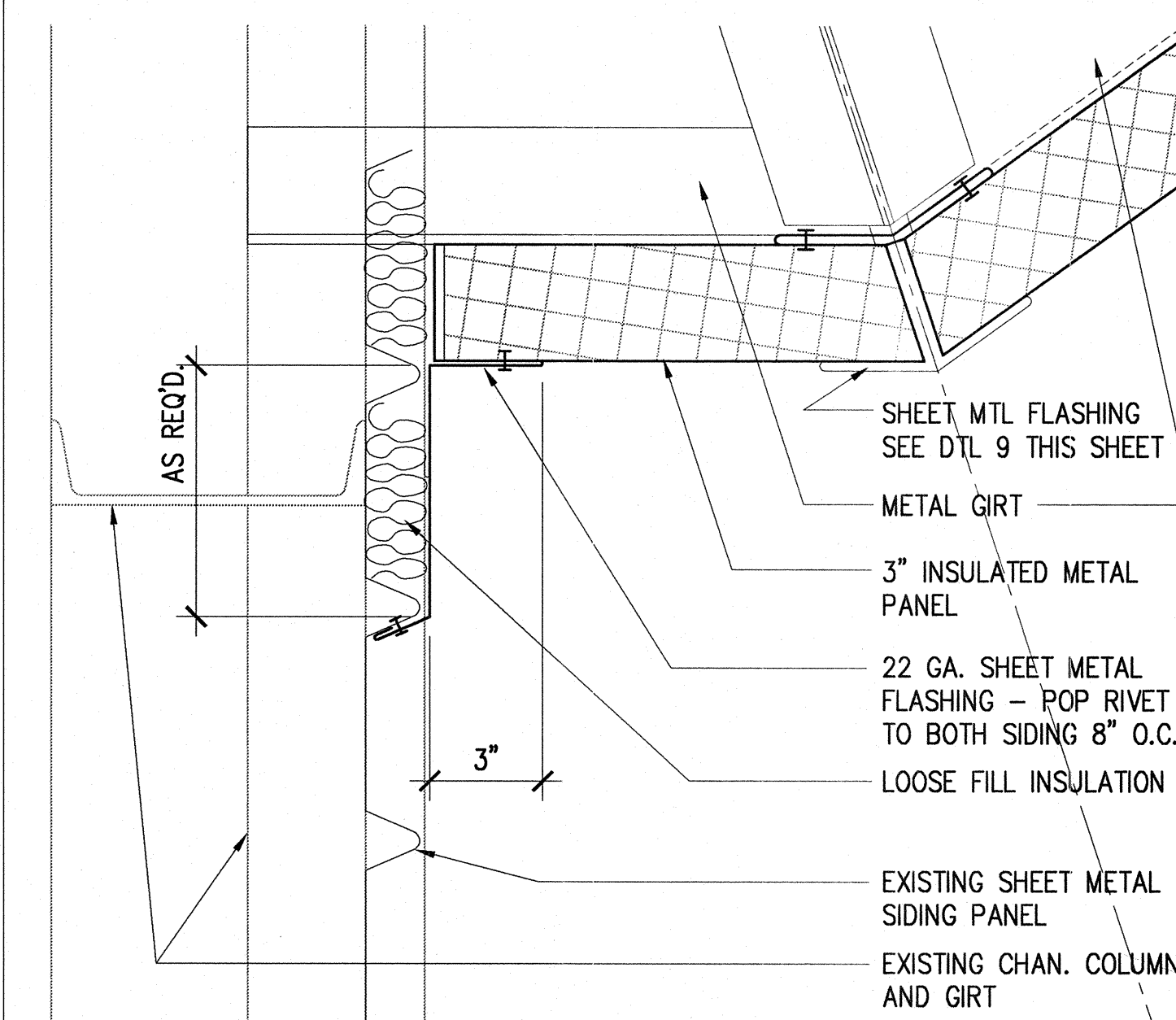
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CORNER • CONTROL BUILDING

SCALE: 3" = 1'-0"

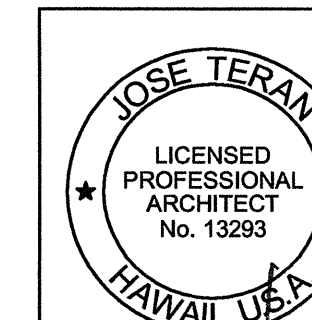
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CORNER FLASHING • CONTROL BUILDING

SCALE: 3" = 1'-0"

11

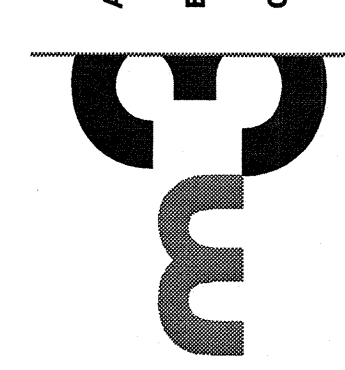


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SIGNATURE

04.04.2011

EXPIRATION DATE OF LICENSE



Revisions

Description	Date
1	
2	
3	
4	
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6	

Drawn: S.P.D.
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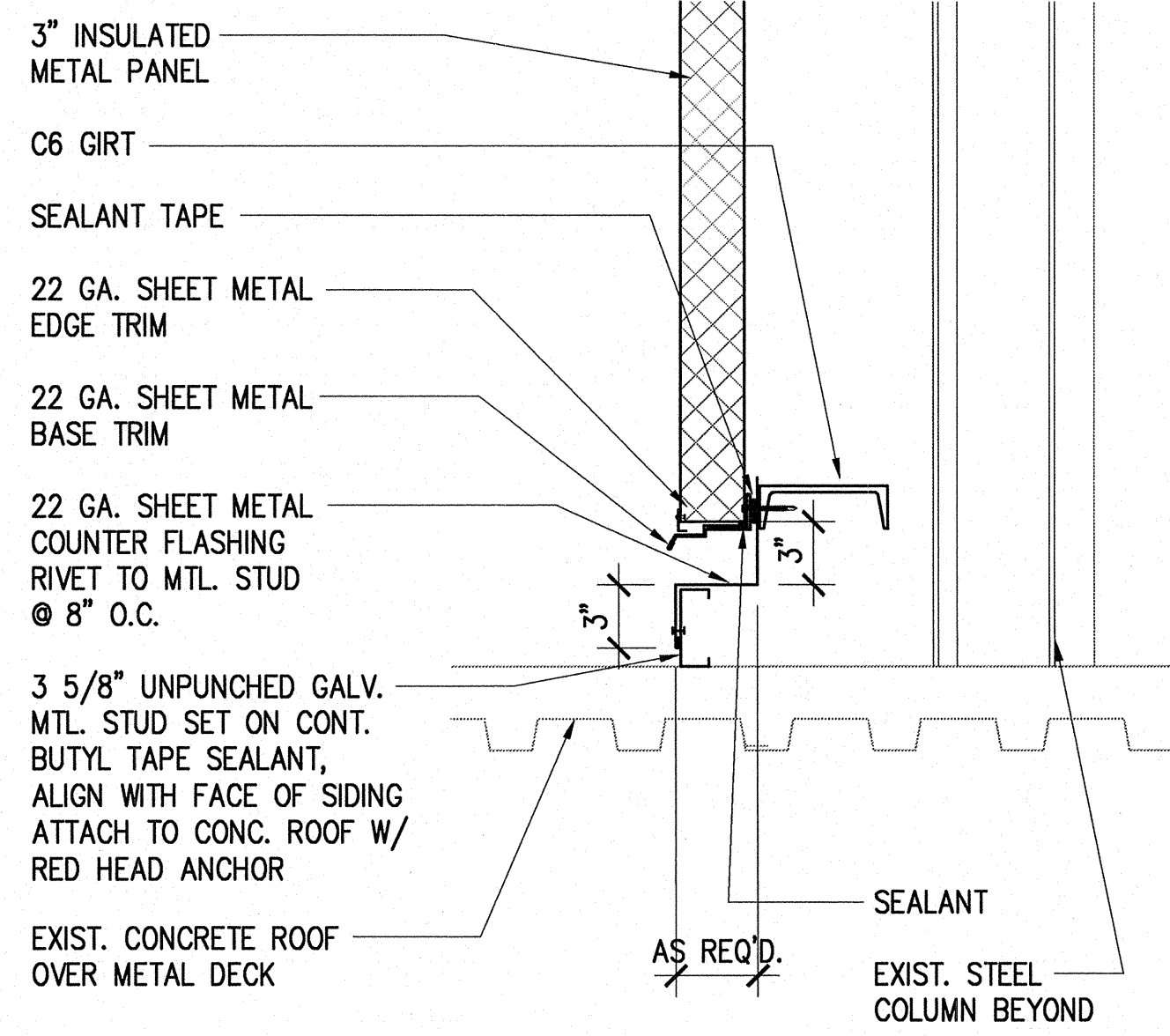
Drawing Title

ARCHITECTURAL DETAILS

Sheet Number
AR501

M3PN 100064

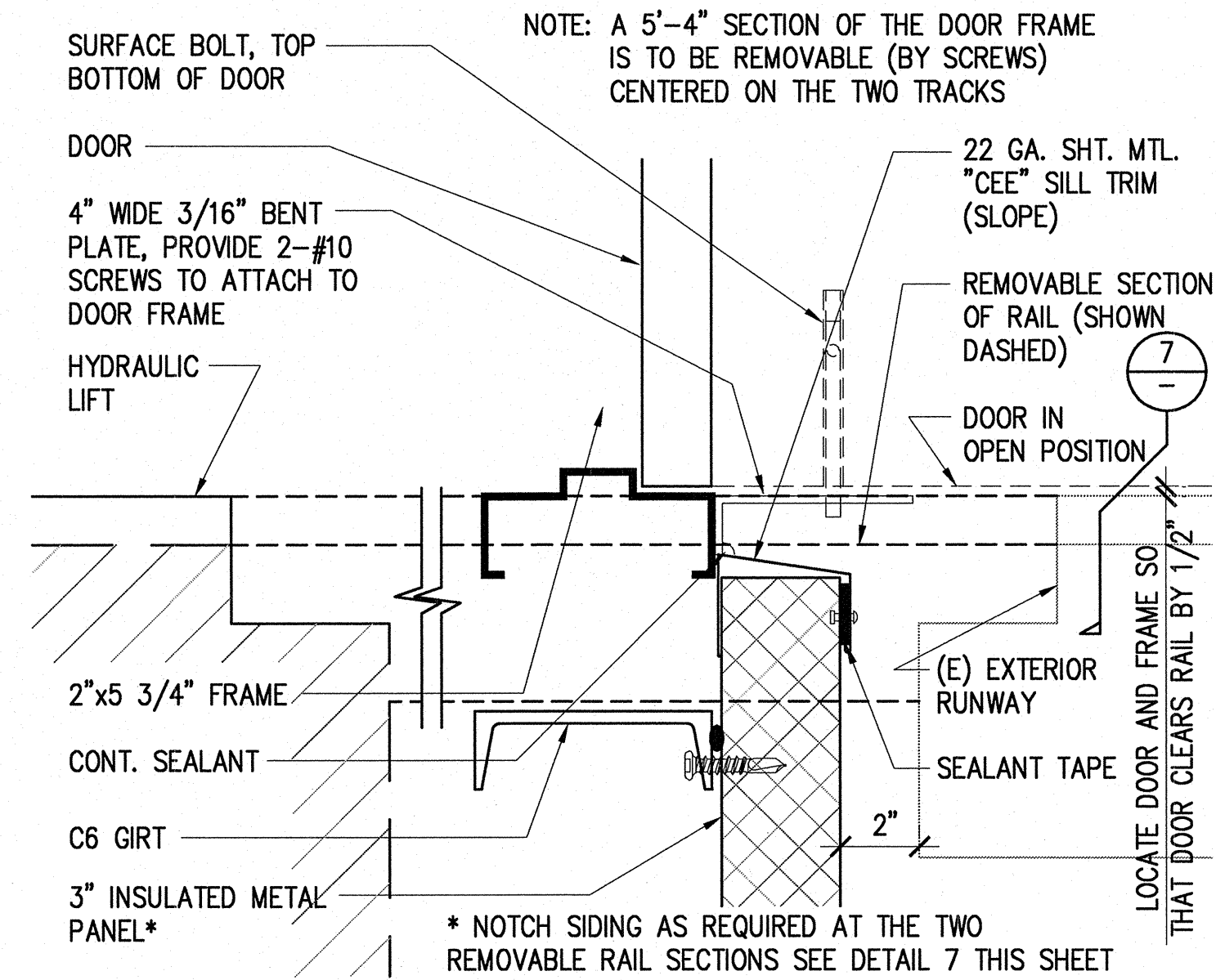
Last Update: 3.15.2011



EXISTING ROOF TO WALL FLASHING

SCALE: 1 1/2" = 1'-0"

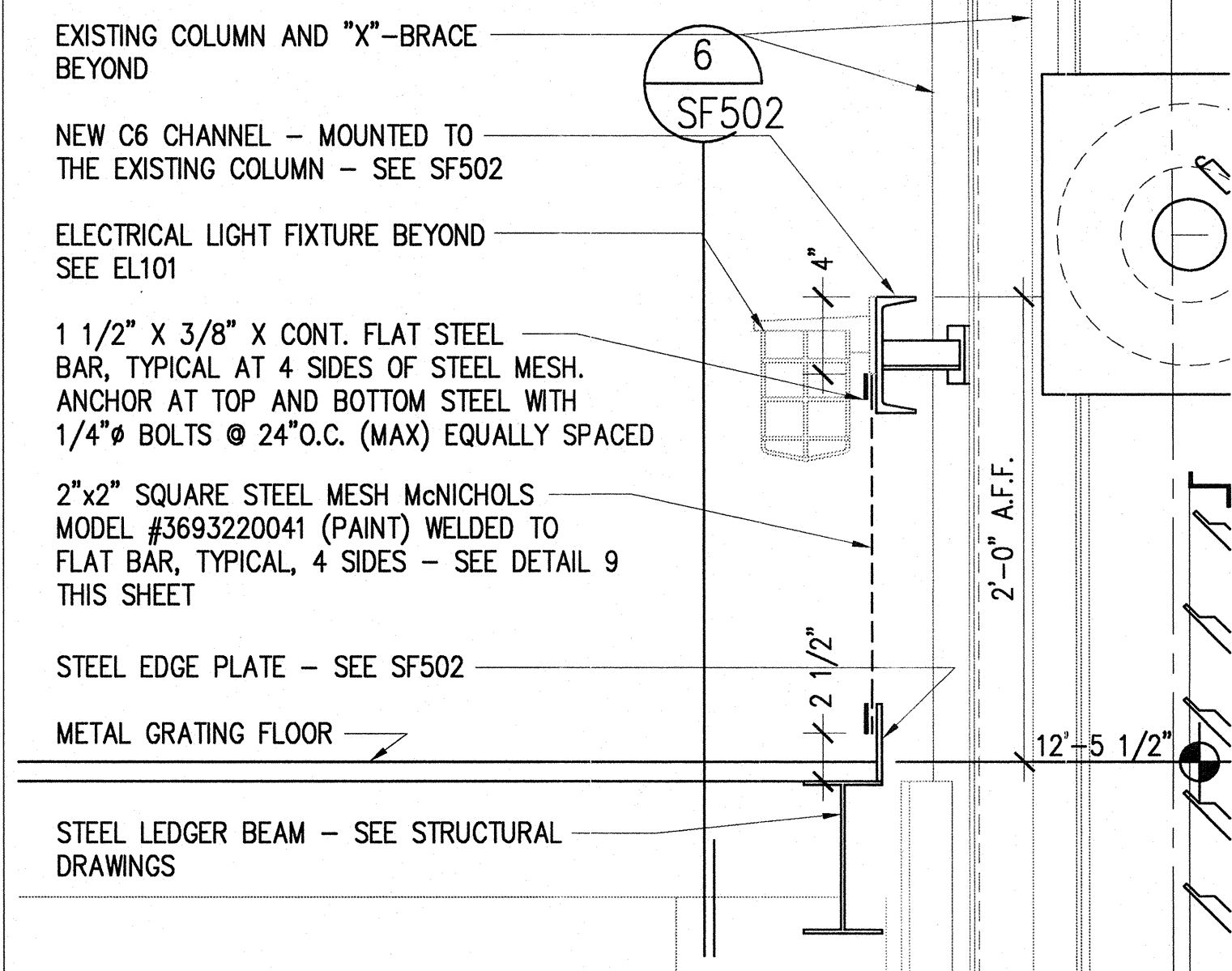
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H.M. DOOR SILL

SCALE: 3" = 1'-0"

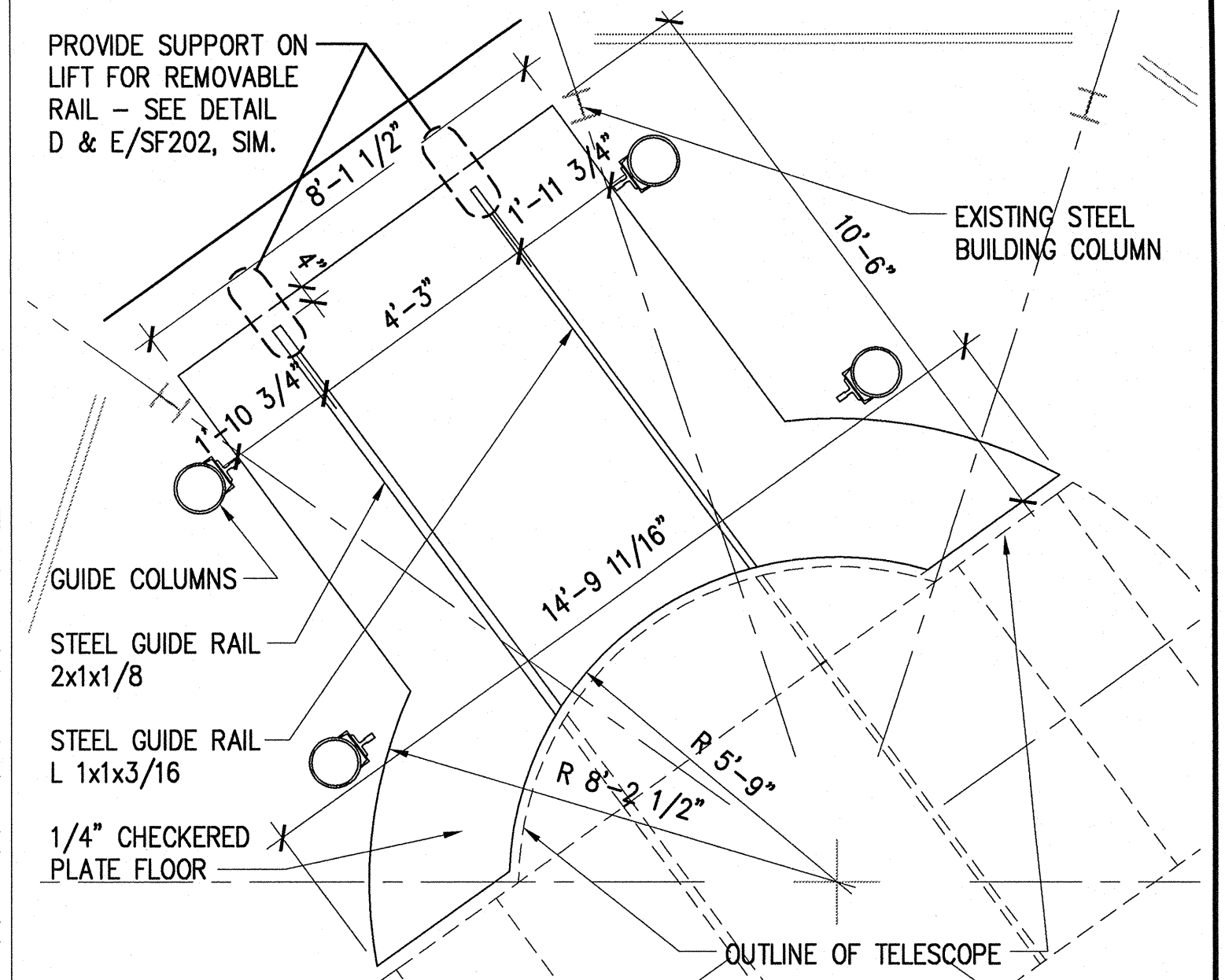
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CONTINUOUS SAFETY GUARD

SCALE: 1 1/2" = 1'-0"

3

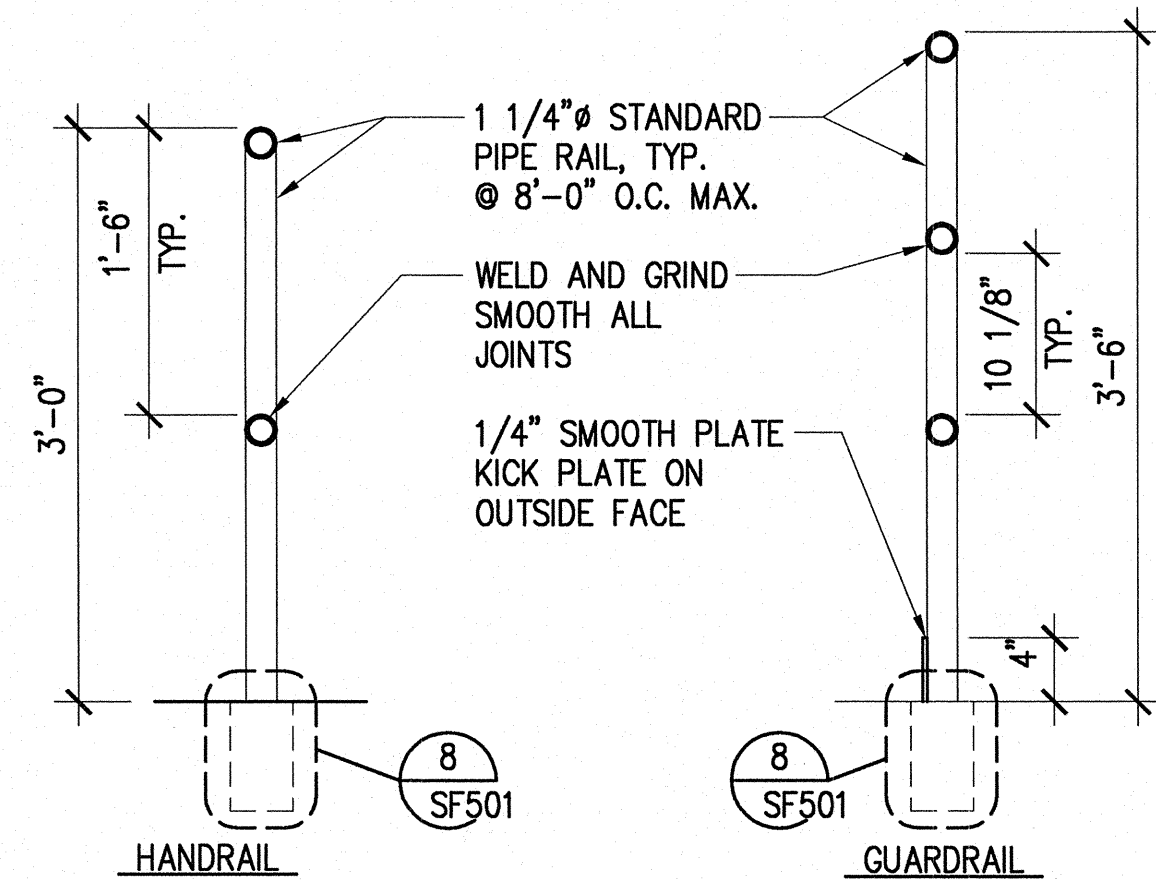


LIFT PLATFORM DIMENSIONS

SCALE: 3/8" = 1'-0"

4

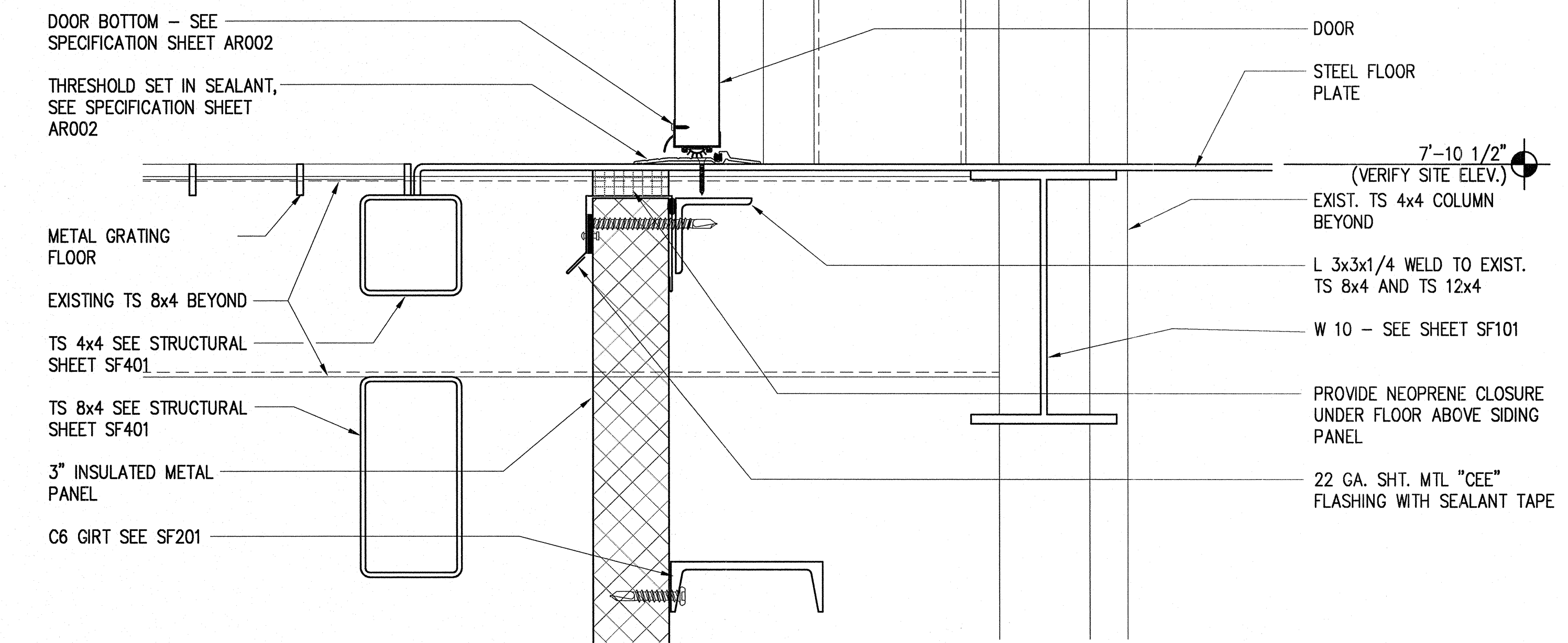
NOTE:
AT EXTERIOR WALKWAY WIDTH EXPANSION,
NEW GUARDRAIL IS TO MATCH EXISTING



TYPICAL HANDRAIL/GUARDRAIL

SCALE: 1" = 1'-0"

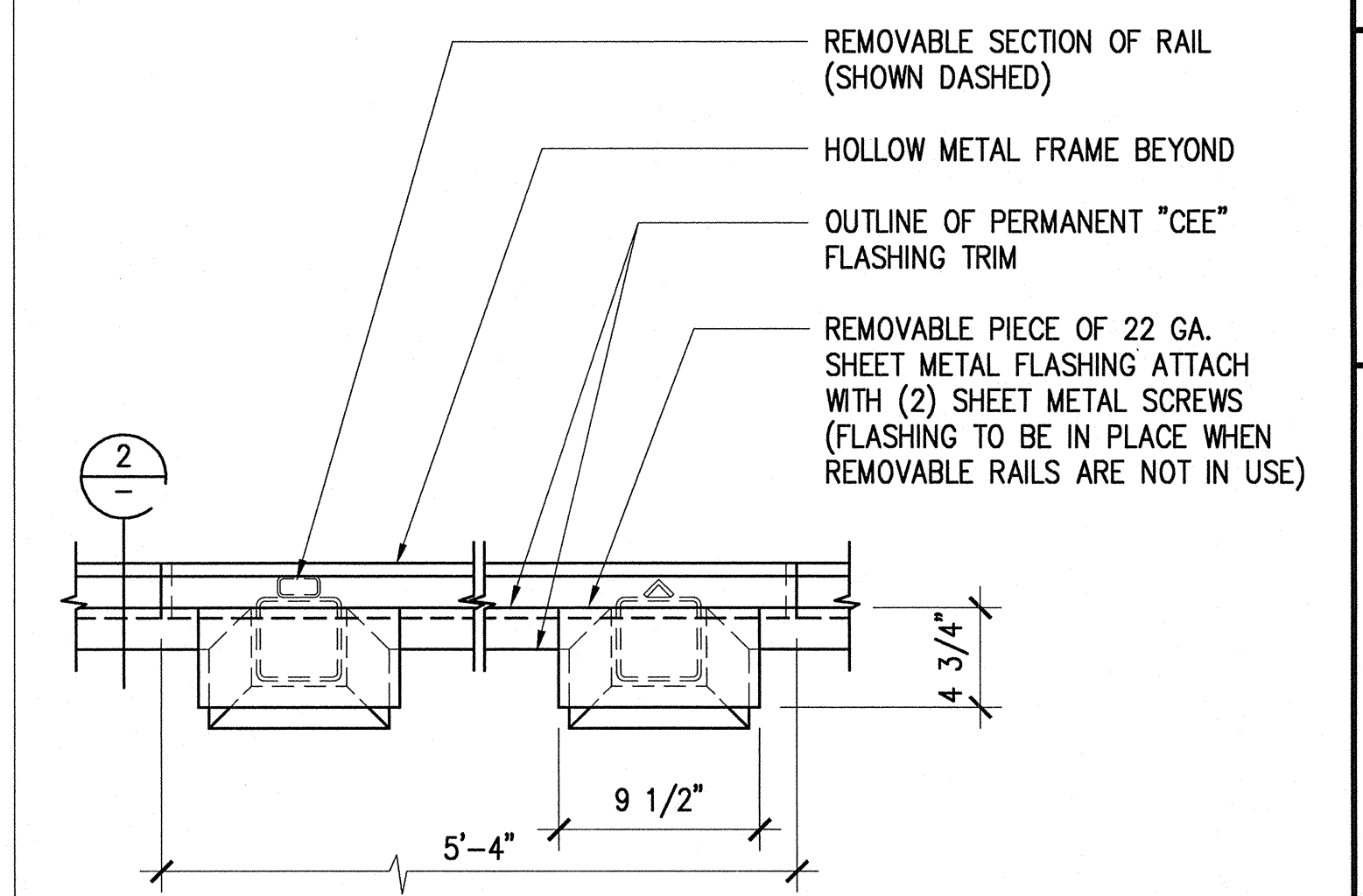
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DOOR SILL

SCALE: 3" = 1'-0"

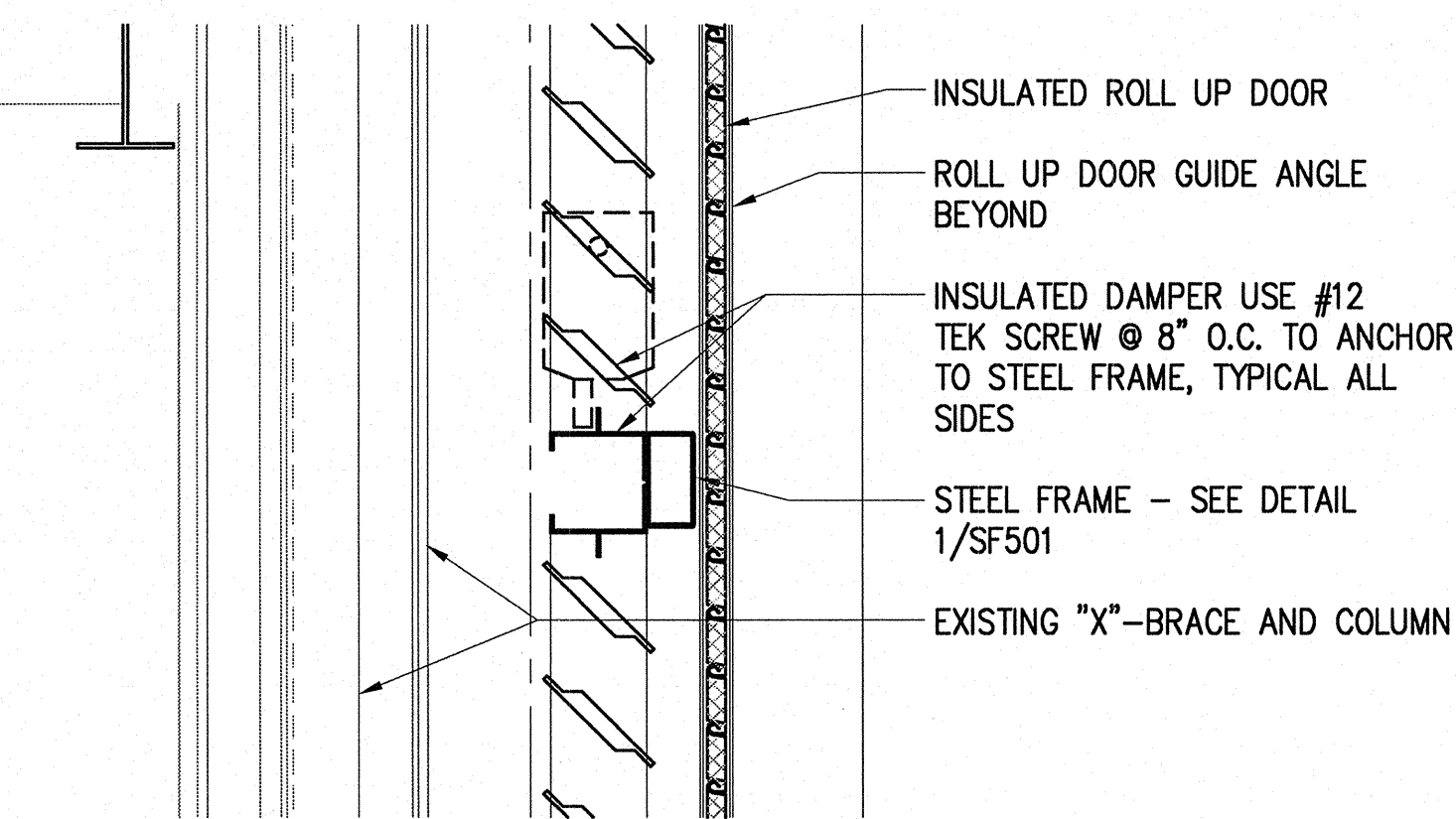
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REMOVABLE FLASHING AT TRACKS

SCALE: 1 1/2" = 1'-0"

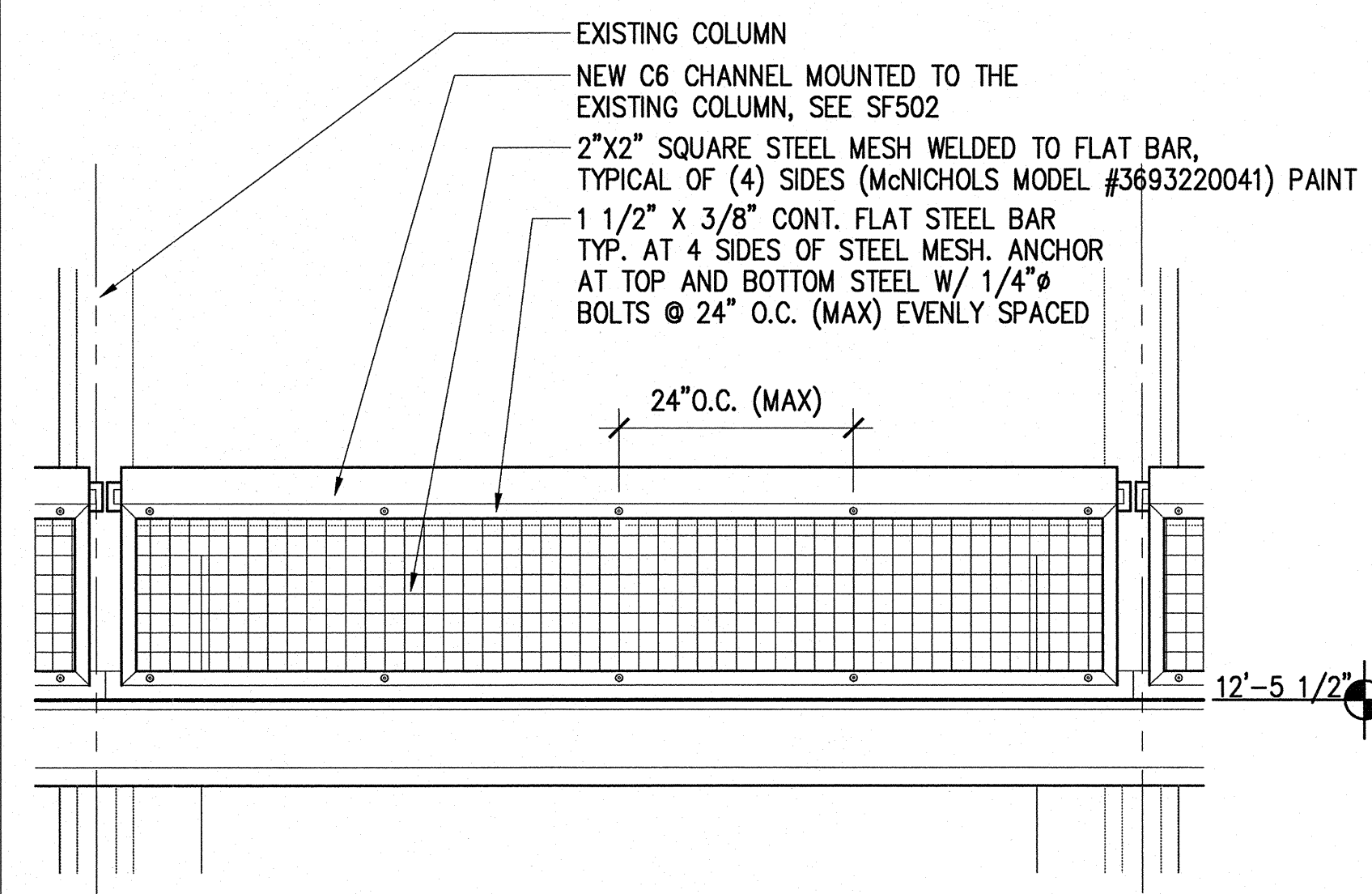
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VENTILATION OPENING INTERMEDIATE BRACE

SCALE: 1 1/2" = 1'-0"

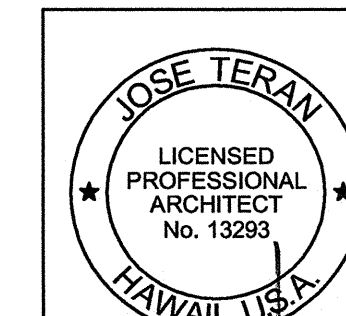
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SAFETY GUARD ELEVATION, TYP.

SCALE: 1 1/2" = 1'-0"

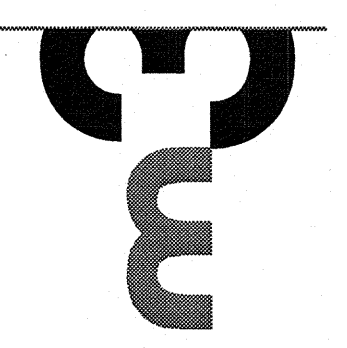
9



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EXPIRATION DATE OF LICENSE 04.10.2012



Revisions

Description	Date

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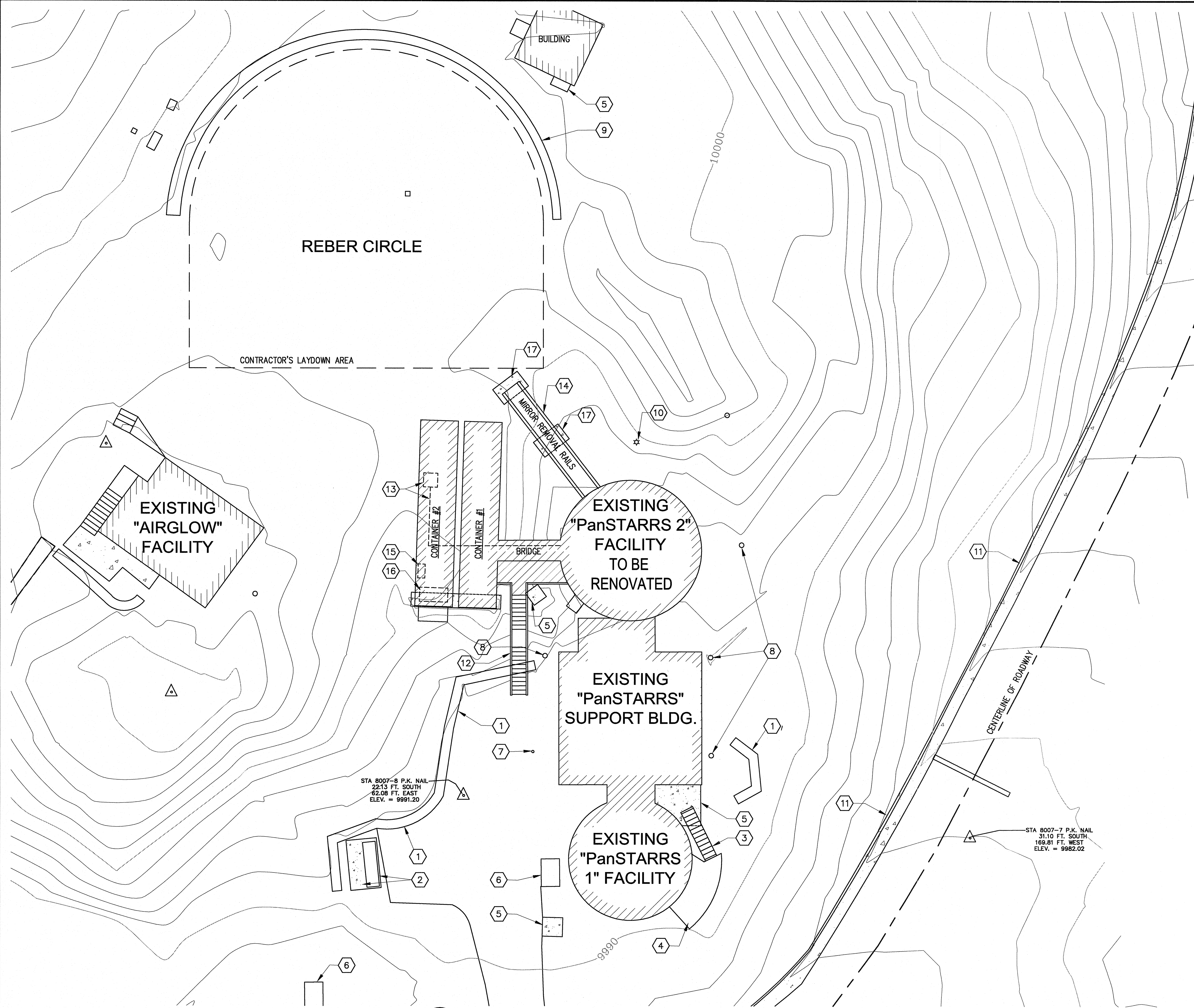
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ARCHITECTURAL DETAILS

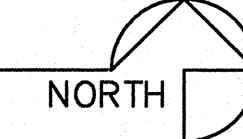
Sheet Number
AR502

M3PN 100064

Last Update: 3.15.2011



ARCHITECTURAL SITE PLAN
SCALE: 1" = 10'-0"



KEY NOTES

1. EXISTING ROCK WALL TO REMAIN
2. EXISTING CHILLER ON A CONCRETE SLAB (CH-1 "AIRSTACK CHILLER") SEE MECHANICAL SHEET MH601 FOR WORK REQUIRED
3. EXISTING STAIRS TO OBSERVATION LEVEL IN PAN-STARRS #1 TO REMAIN
4. EXISTING OBSERVATION LEVEL LANDING TO REMAIN
5. EXISTING CONCRETE SLAB TO REMAIN
6. EXISTING MECO UTILITY BOX TO REMAIN
7. EXISTING GRADE CLEAN OUT TO REMAIN
8. EXISTING LIGHTNING AIR TERMINAL POST TO REMAIN
9. EXISTING CONCRETE MASONRY WALL TO REMAIN
10. EXISTING LIGHT POLE TO REMAIN
11. EXISTING CONCRETE GUTTER ALONG THE ROAD TO REMAIN
12. NEW STEEL STAIRS AND GUARDRAIL - SEE SHEET AR303 FOR FURTHER INFORMATION
13. LOCATION OF NEW HYDRAULIC UNIT FOR THE 5 TON LIFT. ROUTE 1-1/2" SCHED. 80 STEEL PIPE THROUGH FLOOR OF CONTAINER, SUSPEND LINES BELOW CONTAINER AND ROUTE UNDER THE FLOOR OF THE EXISTING WALKWAY INTO THE BUILDING. SEE SHEET AR101 FOR ROUTE CONTINUATION. VERIFY LOCATION AND ROUTING OF PIPE WITH THE OWNER. INSTALL HYDRAULIC LINE PER LIFT MANUFACTURER'S REQUIREMENTS. MAKE WALKWAY CONDUITS COMPLIANT WITH DRAWING PSTD-820-001.
14. EXISTING MIRROR CART RAILS AND STRUCTURE TO BE MODIFIED PER DRAWING SF202
15. EXISTING ELECTRICAL PANEL 'MSB'
16. EXISTING CAMPBELL CHILLER
17. EXISTING CONCRETE COLUMN FOOTING TO REMAIN

GENERAL NOTES

1. THE CONTRACTOR IS TO USE REBER CIRCLE AS THIS PROJECT'S LAYDOWN YARD AND STAGING AREA. COORDINATE LIMITS OF AREA WITH OWNER. NOTE THAT THIS WILL BE SHARED SPACE WITH THE ATST PROJECT.
2. CONTRACTOR IS TO COMPLY WITH ALL GENERAL WORK CONDITIONS OF WORKING ON THIS SITE. REFER TO OWNER'S GENERAL CONDITION REQUIREMENTS.
3. THE EXTENT OF THE WORK IS WITHIN THE PANSTARRS2 FACILITY AND PARKING LOT.

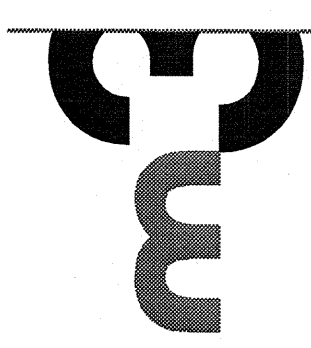


SIGNATURE *[Signature]* 04.04.2011

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04.20.2012
EXPIRATION DATE OF LICENSE

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Revisions

Description	Date

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Drawing Title

SITE IMPROVEMENT PLAN

Sheet Number
C1101

M3PN 100064

Last Update: 4.4.2011

SYMBOLS

	JUNCTION BOX		HOT NEUT.	CONCEALED CONDUIT - NUMBER OF SLASHES INDICATE NUMBER OF WIRES (WHEN MORE THAN TWO) PROVIDE GROUND WIRE IN ALL CONDUITS (SIZE PER NEC 250.122 UNLESS NOTED OTHERWISE); GROUNDS ARE NOT SHOWN BY SLASHES. SLASHES WHERE SHOWN ARE FOR CONVENIENCE OF THE CONTRACTOR ONLY; PROVIDE NUMBER OF CONDUCTORS AS REQUIRED BY CIRCUIT FUNCTION.
	DUPLEX RECEPTACLE OUTLET, NEMA 5-20R, MOUNTED 18" (457.20) AFF, UNLESS NOTED OTHERWISE (U.N.O.)		LS-1,3,5	HOME RUN TO PANELBOARD - 'LS' - INDICATES PANEL DESIGNATION 1,3,5 - INDICATES CIRCUIT BREAKER NO.
	DUPLEX RECEPTACLE ABOVE COUNTER, 42" (1066.80), NEMA-20R			NEW CONDUIT
	GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE 20 AMP FEED THROUGH TYPE			FLEXIBLE CONDUIT
	QUADRUPLEX - TWO DUPLEX RECEPTACLE UNDER A TWO GANG RING, MOUNTED @ 18" (457.20) AFF, UNLESS NOTED OTHERWISE (U.N.O.)		S	SINGLE POLE SWITCH, 20 A OR LOW VOLTAGE TYPE. MAX. HEIGHT = 42" (1066.80) TO CENTERLINE OR AS NOTED ON DRAWINGS.
	SPECIAL PURPOSE RECEPTACLE AS NOTED		S3	THREE WAY SWITCH, 20 AMP
	MOTOR		Sd	DIMMER SWITCH AS INDICATED ON DRAWINGS
	WIREMOLD AS INDICATED ON DRAWINGS		Sm	TOGGLE SWITCH TYPE MANUAL MOTOR STARTER
	EXTERNALLY OPERATED FUSED DISCONNECT SWITCH, SIZE, FUSE SIZE, PHASE AND QUANTITY AS INDICATED. NUMBER INDICATES NEMA TYPE ENCLOSURE, NO NUMBER INDICATES NEMA '1' TYPE ENCLOSURE.		Sos	OCCUPANCY SENSOR
	EXTERNALLY OPERATED NON-FUSED DISCONNECT SWITCH, SIZE AND PHASE AS INDICATED. 'N' INDICATES NEMA TYPE ENCLOSURE. NO NUMBER INDICATES NEMA '1' TYPE ENCLOSURE.		o	WALL MOUNTED LUMINAIRE
	COMBINATION MOTOR STARTER FUSED DISCONNECT, SIZE, FUSE SIZE, PHASE AND QUANTITY AS INDICATED. FUSE SIZE AND QUANTITY AS INDICATED. 'N' INDICATED NEMA TYPE ENCLOSURE, NO NUMBER INDICATES NEMA '1' TYPE ENCLOSURE.		⊗	UNIVERSAL MOUNTED EXIT SIGN WITH ARROWS AND SHADING AS INDICATED
	PUSH BUTTON CONTROL STATION			FLUORESCENT LUMINAIRE AS NOTED WITH 1000 LUMEN BATTERY PACK ON ONE LAMP
	RECESSED PANELBOARD AND CABINET			RECESSED 2x4 (609.60 x 1219.20) FLUORESCENT LUMINAIRE
	SURFACE MOUNTED PANELBOARD AND CABINET			FLUORESCENT STRIP LIGHT LUMINAIRE, SURFACE OR PENDANT MOUNTED.
	TELEPHONE/DATA SYSTEM OUTLET. FLUSH 4S BOX WITH 2 GANG RING & BLANK COVER AND 3/4" (19.05) C.		o ²	'd' INDICATES SWITCH LOCATION, 2 INDICATED CIRCUIT NUMBER.
	COMPUTER OUTLET 4S, 1 GANG RING		(A)	LIGHTING DESIGNATION
	TELEVISION ANTENNA OUTLET		o	RECESSED OR SURFACE MOUNTED LUMINAIRE
	THERMOSTAT PROVIDE 3/4" (19.05) C W/200 LB PULLSTRING TO ACCESSIBLE CEILING SPACE			SURFACE MOUNTED FLUORESCENT LUMINAIRE
	SPEAKER CEILING MOUNTED			RECESSED 2x2 (609.60 x 609.60) FLUORESCENT LUMINAIRE
	SPEAKER WALL MOUNTED			RECESSED 1x2 (304.80 x 609.60) FLUORESCENT LUMINAIRE
	FIRE ALARM - SMOKE DETECTOR			2-HEAD EMERGENCY BATTERY PACK LIGHT
	FIRE ALARM - HEAT DETECTOR		---	BURIED #4/0 BARE COPPER
	FIRE ALARM - MINI HORN-STROBE		⊙	GROUND ROD
	FIRE ALARM - CONTROL PANEL (FACP)		△	AIR TERMINAL
	FIRE ALARM - REMOTE ANNUNCIATOR PANEL (ANUN)		■	EXOTHERMIC WELD
	FIRE ALARM - MANUAL PULL STATION @ +42" (1066.80) AFF			GROUND CONNECTION
	FIRE ALARM - HORN-STROBE @ +84" (2133.60) AFF			INSULATED CASE TYPE POWER CIRCUIT BREAKER, 65000 ALCS RATED, WITH LONG TIME, SHORT TIME, INSTANTANEOUS AND GROUND FAULT.
	FIRE ALARM - STROBE LIGHT			TRANSFORMER, TYPE AS NOTED
	FIRE ALARM - TAMPER SWITCH			CIRCUIT BREAKER
	FIRE ALARM - FLOW SWITCH			FUSED SWITCH, LOAD BREAK
	FIRE ALARM - DUCT DETECTOR			CURRENT TRANSFORMER/POWER TRANSFORMER
	DOOR HOLDER		(M)	METER - UTILITY
	FIRE SUPPRESSION SYSTEM ABORT PUSHBUTTON			
	LOW VOLTAGE LIGHTING CONTROL RELAY			
	CABLE TRAY			

ABBREVIATIONS

A	AMPERES	HP	HORSEPOWER	REM	REMARK
AC	ALTERNATING CURRENT	KW	KILOWATTS	RGS	RIGID GALVANIZED STEEL
ADA	AMERICANS WITH DISABILITIES ACT (1990)	KVA	KILOVOLT AMPS	SDBC	STRANDED BARE COPPER
AFF	ABOVE FINISHED FLOOR	LPMC	LIQUID-TIGHT FLEXIBLE METAL CONDUIT	SHLD,SH	SHIELDED
AFG	ABOVE FINISHED GRADE	M	MOTOR	SN	SOLID NEUTRAL
AIC	AMPERES INTERRUPTING CAPACITY	MCB	MAIN CIRCUIT BREAKER	SP	SPARE
AMP	AMPACITY	MCC	MOTOR CONTROL CENTER	TYP	TYPICAL
AWG	AMERICAN WIRE GAUGE	MCF	METAL CHANNEL FRAMING	UGP	UNDERGROUND PRIMARY
#/C	NUMBER OF CONDUCTORS	MCP	MOTOR CIRCUIT PROTECTOR	UGS	UNDERGROUND SECONDARY
EM	EMERGENCY	MFG	MANUFACTURER	UL	UNDERWRITER'S LABORATORIES
EMT	ELECTRICAL METALLIC TUBING CONDUIT	MLO	MAIN LUGS ONLY	UPS	UNINTERRUPTIBLE POWER SOURCE
EWC	ELECTRIC WATER COOLER	NEC	NATIONAL ELECTRICAL CODE	UON	UNLESS OTHERWISE NOTED
FMC	FLEXIBLE METAL CONDUIT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	V	VOLTS
FU	FUSE	N, NEU	NEUTRAL	W	WATTS
GFI	GROUND FAULT INTERRUPTER	PH	PHASE	WP	WEATHERPROOF
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	PR	PAIR	XFMR	TRANSFORMER
GND	GROUND	PVC	POLYVINYL CHLORIDE		

GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL ELECTRICAL INSTALLATIONS WITH ALL OTHER TRADES TO AVOID ANY CONFLICTS WITH PIPING, STRUCTURE, ETC.
- ALL NEW WIRING SHALL BE INSTALLED IN CONDUIT WITHOUT EXCEPTION, SIZE PER LATEST NEC, AS A MINIMUM, OR AS INDICATED.
- ALL CONDUCTORS SHALL BE MINIMUM 75 DEGREES C., THW, THWN, XHHW, TYPE INSULATION COPPER, UON.
- DRAWINGS ARE DIAGRAMMATIC IN NATURE AND CANNOT SHOW EVERY CONNECTION, J-BOX, WIRE, CONDUIT, ETC. THE EXACT LOCATION AND ARRANGEMENT OF ALL PARTS SHALL BE DETERMINED AS THE WORK PROGRESSES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM.
- THE USE OF NO. 14 AWG COPPER CONDUCTORS SHALL BE RESTRICTED TO CONTROL AND INSTRUMENT WIRING.
- ALL CONDUCTORS INSTALLED IN CONDUIT EXPOSED TO THE SUN SHALL BE TYPE XHHW.
- ALL CONDUIT INSTALLED SHALL BE GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC. ALL CONDUITS SHALL CONTAIN AN INSULATED GROUND WIRE SIZED PER NEC 250.
- ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF RACEWAYS OR EQUIPMENT SHALL BE PERFORMED BY A TRADESMAN EXPERIENCED IN THE WORK REQUIRED. ALL FINISHES SHALL MATCH EXISTING ADJACENT SURFACES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LOSS OR DAMAGE CAUSED BY THE WORKERS TO THE FACILITY DURING THE COURSE OF CONSTRUCTION, AND SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING SUCH.
- ALL ELECTRICAL EQUIPMENT ON ROOF OR OUTSIDE BUILDING SHALL BE NEMA 3R.
- INCIDENTAL ITEMS NOT INDICATED ON DRAWINGS, NOR MENTIONED IN THE SPECIFICATIONS THAT CAN BE LEGITIMATELY AND REASONABLY INFERRED TO BELONG TO THE WORK DESCRIBED OR NECESSARY IN GOOD PRACTICE TO PROVIDE A COMPLETE SYSTEM, SHALL BE FURNISHED AND INSTALLED AS THOUGH ITEMIZED HERE IN EVERY DETAIL.
- CONTRACTOR SHALL FURNISH MATERIALS, TOOLS, SERVICES, LABOR, ETC., FOR A COMPLETE ELECTRICAL INSTALLATION UNLESS OTHERWISE NOTED ON PLANS.
- ALL WORK SHALL COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE, AND SERVING ELECTRICAL UTILITIES' CODES, ORDINANCES, RULES, REGULATIONS, ETC. THE ENTIRE ELECTRICAL INSTALLATION SHALL COMPLY WITH OR SURPASS THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
- ALL MATERIALS AND EQUIPMENT FURNISHED BY THE ELECTRICAL CONTRACTOR SHALL BE NEW OF FIRST-CLASS QUALITY, FREE FROM DEFECTS AND SHALL CONFORM WITH UNDERWRITERS LABORATORIES (UL) STANDARDS, WHERE APPLICABLE, UNLESS OTHERWISE NOTED ON PLANS.
- DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN AUTHORIZED. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING FACILITIES AS REQUIRED.
- CONTRACTOR SHALL CALL FOR BLUSTAKE SERVICES AND AVOID UNDERGROUND PIPES/DRAINS AS NECESSARY.
- CONTRACTOR SHALL VISIT THE JOB SITE, AND PRIOR TO SUBMITTING BID, VERIFY ALL EXISTING CONDITIONS, LOCATIONS, DIMENSIONS AND COUNTS AS SHOWN AND/OR NOTED ON THE DRAWINGS.
- WHERE CORE DRILLING OF FLOORS/WALLS IS REQUIRED, CONTRACTOR SHALL SEAL OPENINGS AFTER UTILITIES HAVE BEEN INSTALLED. LOCATION OF CORED HOLES SHALL COORDINATE WITH LOCATION OF EQUIPMENT IN A MANNER TO BE CLEAN AND FUNCTIONAL. THE CONTRACTOR SHALL INSTALL ONLY ONE CONDUIT PER HOLE AND SEAL THE OPENING AROUND THE CONDUIT AS SPECIFIED.
- PROVIDE FIRE RETARDANT UL APPROVED SEALANT ON ALL RACEWAY PENETRATIONS OF FIRE RATED CEILINGS, PARTITIONS, WALLS, AND STRUCTURAL SLABS. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO VERIFY PRIOR TO SUBMITTING BID, LOCATIONS OF ALL SUCH FIRE RATED PARTITIONS, WALLS AND STRUCTURAL SLABS.
- ALL CONDUIT SHALL BE RUN CONCEALED WHERE POSSIBLE.
- ALL SWITCHES EXCEPT LIGHTING SWITCHES SHALL HAVE ENGRAVED NAMEPLATE TO DESCRIBE THE SWITCH FUNCTION.
- ALL HOMERUN J-BOXES SHALL BE IDENTIFIED WITH PANEL DESIGNATION AND CIRCUIT NUMBER.
- ALL EMPTY CONDUITS SHALL CONTAIN A 200 LB. PULL WIRE.
- TELEPHONE AND DATA WIRING, OUTLET, TERMINATIONS, EQUIPMENT, ETC., SHALL BE FURNISHED BY THE OWNER AND INSTALLED BY SEPARATE CONTRACTOR.
- PROVIDE TYPED, UPDATED PANEL SCHEDULE INDEX CARDS FOR ALL PANELS.
- VERIFY LOCATION AND SIZE OF ALL MECHANICAL EQUIPMENT PRIOR TO INSTALLATION.
- THE ELECTRICAL DRAWINGS SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT, BUT ACCURACY IS NOT GUARANTEED. VERIFY ALL EQUIPMENT LOCATIONS AND SIZES PRIOR TO INSTALLATIONS.
- VERIFY: VOLTAGE, PHASE ROTATION, NEUTRAL, AND GROUND CONNECTIONS TO ALL EQUIPMENT. NOTE: MATCH PHASE ROTATION OF EXISTING POWER SOURCE.
- ALL WIRING TO EQUIPMENT, SHALL COMPLY WITH THE MANUFACTURERS RECOMMENDATIONS, UON.
- ALL ELECTRICAL WORK, SHALL BE COORDINATED WITH ALL OTHER TRADES.
- LABEL ALL POWER PANELS, DISC SWITCHES, RECEPTACLES, ETC. WITH CIRCUIT NUMBERS. SEE SPECIFICATIONS FOR DETAILS.
- THE HORSEPOWER AND LOADS INDICATED ARE APPROXIMATE. MOTOR AND EQUIPMENT ARE SIZED IN ACCORDANCE WITH INFORMATION GIVEN IN OTHER PORTIONS OF THE PLANS AND SPECIFICATIONS. IF MOTORS OR ANY OTHER COMPONENTS ARE FURNISHED IN SIZES OTHER THAN INDICATED, IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO ADJUST THE INDICATED SIZES OF WIRING, CIRCUIT BREAKERS, THERMAL OVERLOADS, ETC. AND TO RE-CIRCUIT IF NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
- LIGHTNING PROTECTION INSTALLATION SHALL CONFORM TO NFPA 780, LATEST EDITION.
- FINAL INSPECTION OF LIGHTNING PROTECTION SYSTEM SHALL BE CONDUCTED BY A PERSON/COMPANY CERTIFIED IN LIGHTNING PROTECTION SYSTEMS.
- SURGE PROTECTIONS DEVICES (SPD'S) SHALL BE INSTALLED PER NFPA 780 REQUIREMENTS.
- GROUNDING ELECTRODE SYSTEM COMPRISES OF A #4/0 SDBC GROUNDING RING INCASED IN CONDUCTIVE CONCRETE MATERIAL. THE GROUNDING RING IS THEN BONDED TO BUILDING CONCRETE FOOTINGS, BUILDING STEEL, EQUIPMENT CONCRETE PADS, CONCRETE APRON AND RETAINING WALLS ALL OF WHICH IS EMBEDDED WITH A REBAR SYSTEM. BONDING OF ALL REBAR IS EXOTHERMICALLY WELDED TO GROUNDING RING. REBAR SYSTEM IS NOT COATED AND IS WIRE TIED AT INTERSECTIONS. REFER TO STRUCTURAL DRAWINGS FOR INFORMATION OF REBAR SYSTEM.

DEMOLITION NOTES

- ALL ITEMS SCHEDULED FOR RELOCATION SHALL BE CAREFULLY REMOVED IN REVERSE OF ORIGINAL ASSEMBLY OR PLACEMENT AND BE PROTECTED UNTIL RELOCATION. THE CONTRACTOR SHALL CLEAN, REPAIR AND PROVIDE NEW MATERIALS AND APPURTENANCES AS REQUIRED TO COMPLETE INSTALLATION AND RESTORE TO GOOD WORKING ORDER. ALL RELOCATION'S SHALL BE PERFORMED BY SKILLED WORKMEN IN ACCORDANCE WITH STANDARD PRACTICE OF THE TRADES INVOLVED.
- ITEMS SCHEDULED FOR RELOCATION REQUIRED EXTENSION OF CIRCUITRY, SHALL HAVE THEIR WIRE AND CONDUIT EXTENDED TO THE NEW LOCATION.
- EXTENDED WIRE AND CONDUIT SHALL BE ROUTED IN SUCH A MANNER SO AS NOT TO INTERFERE WITH THE USE OR ESTHETICS OF ANY AREA IN WHICH IT IS ROUTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING OR MODIFYING AND RECONNECTING ANY PANELBOARDS OR OTHER ELECTRICAL EQUIPMENT ASSOCIATED WITH ITEMS BEING RELOCATED.
- CIRCUITS WITH ONLY A PORTION OF THE LOAD REMOVED SHALL HAVE THE REMOVED LOADS ASSOCIATED CIRCUITRY REMOVED ONLY TO A POINT OR IN SUCH A MANNER THAT THE REMAINING LOAD IS ACTIVE AND IN FIRST CLASS WORKING ORDER.
- ASSOCIATED CIRCUITRY IS DEFINED AS ALL WIRE, CONDUIT, J-BOXES, WIRING DEVICES, DEVICE BOXES, FUSES, DISCONNECT SWITCHES, ETC. ASSOCIATED WITH THE ITEM SCHEDULED FOR REMOVAL.
- ITEMS SCHEDULED FOR REMOVAL WITH CONDUIT IN INACCESSIBLE AREAS SHALL ONLY HAVE THIS CONDUIT EMPTIED AND SEALED OR CAPPED IN A SAFE MANNER ACCEPTABLE TO THE OWNER.
- WHERE ITEMS SCHEDULED FOR REUSE OR RELOCATION ARE FOUND TO BE IN DAMAGED CONDITION, THE CONTRACTOR SHALL CALL THE ATTENTION OF THE OWNER TO SUCH ITEMS AND RECEIVE FURTHER INSTRUCTIONS PRIOR TO REMOVAL. ITEMS DAMAGED DURING RELOCATION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF RACEWAYS OR EQUIPMENT SHALL BE PERFORMED BY A TRADESMAN EXPERIENCED IN THE WORK REQUIRED. ALL FINISHES SHALL MATCH EXISTING ADJACENT SURFACES.
- ITEMS SALVAGED SHALL BE MOVED AND STORED IN A LOCATION AS DIRECTED BY THE OWNER. REFUSE MATERIALS AND ITEMS NOT TO BE SALVAGED SHALL BE REMOVED FROM THE SITE FOR DISPOSAL.
- PROMPTLY REPAIR DAMAGE CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS AT NO COST TO THE OWNER.

ENRICO B. LAOS
LICENSED PROFESSIONAL ENGINEER
No. 11778-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Enrico B. Laos 04/30/2012

SIGNATURE 08/12/11 EXPIRATION DATE OF LICENSE

Pan-STARRS PS2 Lure Modifications

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SECTION 16000 - GENERAL REQUIREMENTS FOR ELECTRICAL WORK

PART 1 - GENERAL

1.1 BUILDING CONSTRUCTION

- A. Refer to Architectural, Structural and Mechanical Drawings and Specifications to become familiar with the general building construction and details as they apply to the Work of this division. Contractor is responsible for all equipment mounting, conduit routing, or incidental work that may be necessary because of architectural or structural details, whether or not they are shown on the electrical drawings.

1.2 SCOPE

- A. The Work covered by this section shall include the furnishing of all materials, labor, transportation, tools, permits, fees, and incidentals necessary for the installation of a complete electrical system.
- B. It is the intent of these contract documents to provide an installation complete in every respect. In the event that additional details or special construction is required for Work indicated or specified in this or other sections, it shall be the responsibility of the Contractor to provide all materials and equipment which is usually furnished with such systems in order to complete the installation, whether mentioned or not.
- C. All apparatus, appliances, material, or labor that may be necessary to complete work in accordance with the intent and purposes of these plans and Specifications shall be furnished by the Contractor without extra cost to the Owner.
- D. Omission of express reference to any parts necessary for, or reasonably incidental to, a complete installation shall not be construed as releasing Contractor from finishing such parts. The electrical system as supplied shall be complete and functioning, with all electrical items furnished in operable condition.

1.3 CODES, FEES, AND LATERAL COSTS

- A. Comply with applicable codes, rules, regulations, and building and safety laws relating to construction, public health and safety.
- B. Where Contractor proposes to use an item of equipment other than that specified or detailed on the Drawing, which requires any redesign of the structure, partitions, foundations, piping, wiring or any other part of the mechanical, electrical or architectural layout, all such redesign and all the new Drawings and detailing required therefore, shall be prepared by the Contractor proposing the change at his own expense and shall be submitted for approval by the Architect. Where such approved deviation requires a different quantity and arrangement of ductwork, piping, wiring, conduit, and equipment from that specified or indicated on the Drawings, Contractor shall furnish and install any such ductwork, piping, structural supports, insulation, controllers, motors, starters, equipment, electrical wiring and conduit, and any other additional components required by the system at no additional cost to the Owner.
- C. Give necessary notices, obtain permits, and pay taxes, fees and other costs in connection with the Work; file necessary plans, and obtain necessary approvals of regulating authorities having jurisdiction; obtain all required Certificates of Inspection for Work and deliver to Architect before request for acceptance and final payment of the Contract.
- D. Provide all labor, materials, services, apparatus, Drawings (in addition to Contract Documents) required to comply with applicable laws, ordinances, rules and regulations.
- E. Contract Documents take precedence when they are more stringent than codes, ordinances, standards and statutes. Codes, ordinances, standards and statutes take precedence when they are more stringent or conflict with Drawings and Specifications. Following industry standards, Specifications and Codes are minimum requirements.

1.4 DRAWINGS

- A. The Drawings are generally diagrammatic, intended to define the Scope and show the general arrangement of the Work. They are not intended to show every offset, fitting, or structural difficulty that may be encountered during the installation of the Work. The exact location and arrangement of all parts shall be determined as the Work progresses to conform in the best possible manner with the surroundings and as directed by the Owner's Representative.
- B. If any departures from the Drawings are deemed necessary by the Contractor, details of such departures and the reasons therefore shall be submitted to the Owner's Representative for review. No departures shall be made without prior written acceptance of the Owner's Representative.
- C. A fresh, clean set of plans on which actual installed positions of all equipment is legibly recorded and designated "as built" shall be furnished to the Owner's Representative upon completion and acceptance of Work and before final payment is made.

1.5 ACCESS TO ELECTRICAL EQUIPMENT

- A. General: The work of this article is limited to access of electrical equipment through other work, and does not include required access for electrical equipment systems. Furnish adequate access doors and removable access plates to other trades involved prior to performance of their work to minimize cutting and patching which would otherwise be required.
- B. Coordination: The exact location and size of each access panel and removable plate required shall be determined prior to installation and such information shall be submitted to the Architect for review and approval. Adjustments may be directed by the Architect for the purposes of controlling visual impact of units. To largest extent possible, prearrange unit locations to minimize number required.

1.6 MOTOR STARTERS

- A. Starters are provided by the Electrical Contractor, unless furnished as an integral part of manufacturer's package equipment or specified to be furnished with equipment. Responsibility for providing starter compatible with motor furnished rests with Contractor.

1.7 WIRE IDENTIFICATION

- A. Provide wire markers on each conductor in panelboard, outlet and junction boxes, and at load connection. Identify with branch circuit or feeder number for power and lighting circuits, and with control wire number as indicated on equipment manufacturer's shop drawings for control wiring.

1.8 NAMEPLATES

- A. All distribution sections, panelboards, Transformers, contactors and other electrical equipment shall have laminated plastic nameplates. Nameplates to have equipment designation as shown on plans or designated by Engineering, and indicated where it is fed from, and what it is serving. Letter size and color as indicated.

EQUIPMENT	LETTERING	COLOR
Circuit Breakers, Transformers	2" High	Black and Yellow
Panelboards	3/4" High	White on Black
Description of where Equipment is fed from	1/4" High	White on Black
Emergency Equipment	Same as above	White on Red

- B. All J-boxes shall be clearly labeled with indelible black ink, indicating panel, circuit number or bus and switch number.
- C. Identify all feeders and branch circuits with "Panduit" #MP-200, plastic marker plates. Use black indelible felt tip marker to designate panel and circuit number. Fasten marker plates to each conduit at exit point from panel box or wireway and at outlet box. Use (2) TY-Wraps to secure each plate to conduit.

1.9 TESTING REQUIREMENTS

- A. General: Before making application for final acceptance of the work, all tests deemed necessary by the Architect to show proper execution of the Work shall have been performed and completed in his presence. Scheduling of all testing procedures shall be arranged to provide a minimum of three days notice to the Architect. Arrange for testing of installed systems in accordance with the requirements of the authorities having jurisdiction and this specification. Provide labor, materials, instruments and power for all testing by procedures specified. Test duration shall be per specifications except when the authority having the jurisdiction requires a longer test period.
- B. Specific Requirements: Wiring shall be tested for continuity, short circuits, and/or accidental grounds. All systems shall be entirely free from "grounds", "short circuits", and any or all defects.
- C. Motors shall be operating in proper rotation, and control devices functioning properly. Check all motor controllers to determine that properly sized overload devices are installed, and all other electrical equipment for proper operation.
- D. Where electricity utilizing equipment, supplied separate from the electrical work, is energized, controlled, or otherwise made operative by electrical systems, the testing to provide the proper functional performance of such wiring systems shall be conducted by the trade responsible for the equipment. The electrical work shall, however, include cooperation in such testing and the making available of any necessary electrical testing equipment.
- E. The electrical work shall include the provision of any assistance, such as the removal of panelboard trims and junction and pull box covers, deemed necessary by the Architect to demonstrate compliance with the requirement of the Drawings and Specification.
- F. Repair or replace defective Work and repeat tests until particular system and component parts thereof receive approval of Architect and regulating authority. Repair any damages resulting from tests and replace damaged materials to satisfaction of Architect and at no cost to Owner.
- G. Make final tests in the presence of the appropriate inspector.
- H. Furnish copies of test reports and certificates of acceptance, signed by the inspector, to the Architect before making claims for final payment; such claims will not be processed until these submittals have been made.

1.10 EQUIPMENT CONNECTIONS

- A. Provide hard service cords and proper receptacles, where required, for "cord and plug connected" equipment.
- B. Where equipment furnished by others includes plug, cord set or mechanical fitting, which do not match the receptacle as installed, change the outlet or change the plug, cord set or mechanical fitting as required, all at no extra cost to the Owner.

1.11 ELECTRICAL GENERAL EQUIPMENT PROVISIONS

- A. General: Furnish materials and equipment that is standard products of a reputable manufacturer regularly engaged in the manufacture of the specified item. All items shall be furnished by the same manufacturer where more than one unit is required, except where specified otherwise.
- B. Install material and equipment in accordance with manufacturer's recommendations. Contact Architect immediately if variance occurs between Contract Documents and manufacturer's recommendations so that variations in installation can be known by all parties concerned.

1.12 SEPARATE CONDUIT SYSTEMS

- A. Each electrical and signal system shall be contained in a separate conduit system. This includes each power system, each lighting system, telephone, emergency system, sound system, fire alarm system, etc.
- B. Each wiring item of building equipment shall have its own run of power wiring. Control wiring may be included in the same conduit, if properly sized, for equipment feeders of #6 AWG and smaller. Larger wire shall have separate conduit.

1.13 CONDUIT SYSTEMS

- A. Minimum conduit size shall be 3/4 inch trade size UON.
- B. Conduit system shall be mechanically and electrically continuous from outlet to outlet and to all cabinets, junction, or pull boxes. Conduit shall enter and be secured to all cabinets in such a manner that all parts will have electrical continuity.

1.14 WIRING DEVICES, BOXES AND CABINETS

- A. Receptacles shall be 20A, 125 volt, specification grade three wire, self or automatic grounding ivory duplex receptacles.

- B. It shall be the responsibility of the Contractor when equipment only, or J-box is indicated for equipment to obtain from the supplier the complete data as relates to the electrical portion of the equipment, including rough-in, mounting height, type of outlet, items furnished by the supplier, etc. The electrical subcontractor shall be responsible for furnishing and installing all materials, which are usually the electrical subcontractor's responsibility with the installation of the equipment.
- C. Support boxes independently of conduit (except for cast boxes that are connected to two rigid metal conduits, both supported within 12 inches (300 mm) of box).
- D. Coordinate mounting heights and locations of outlets mounted above counters, benches and backsplashes.
- E. Locate outlets required for feed to equipment in accordance with the requirements for the equipment and with drawings furnished by the equipment supplier.
- F. Exposed conduit shall be run parallel with supporting wall, beam or ceiling and with each other, with right angles runs consisting of cast metal fittings or symmetrical bends, and with supports spaced at not more than 8 feet apart. All runs of conduit shall be installed in such a manner as to avoid trapped condensation.
- G. All controls apparatus, outlet boxes, junction and pull boxes, and other similar equipment shall be installed and maintained in accessible positions and locations.
- H. A nylon pull wire shall be installed in all wiring raceways which do not have conductors pulled by this Contractor.
- I. All conduits stubbed up from or through floors for connections to machines, equipment shall be rigid type with coupling installed flush with finish floor to permit future conduit removal. Coupling shall be sealed with a flush, threaded pipe lug.
- J. Changes in direction shall be made by bends in the pipe wherever possible, and these shall be made smooth and even without flattening or kinking the pipe or flaking the finish. Bends shall be of as long radius as possible and in no case smaller than the corresponding trade elbow. Long-radius elbows shall be used where necessary.
- K. Not more than four 90 degree bends will be allowed in one raceway run. Where more bends are necessary, a conduit body or pull box shall be installed. All bends in 1 inch and smaller conduit may be made with a manual conduit bender and all larger sizes have machine bends.
- L. Where conduits enter boxes, panels, cabinets, etc., they shall be rigidly clamped to the box by locknuts on the outside and inside, and a grounding bushing on the inside of the box.

1.15 GUARANTEE

- A. The Contractor shall guarantee all labor and materials furnished by him for a period of one (1) year. Certain work and materials shall be guaranteed for a longer period when so specified. Guarantee period shall extend from the time of final acceptance of the installation.
- B. The guarantee shall cover the repair or replacement without additional cost to the Owner, of any defective material or faulty workmanship. Necessary service to each item and other work requiring specialized training, shall be furnished by the Contractor, at no cost to the Owner, for a period of one (1) year, concurrent with the warranty period specified above. This shall not include repair of damage due to fire (unless the fire results from faulty material or workmanship on the part of the Contractor), storm, vandalism or other factors entirely beyond the control of the Contractor, nor shall it include such routine service as oiling motor, replacing blown fuses (unless caused by defective performance of the equipment), replacing lamps, nor any other Work not requiring special skill. The above items pertaining to routine servicing of the equipment and motors, replacing fuses or replacing lamps, are the responsibility of the Owner unless a service agreement is made between the Contractor and the Owner.

1.16 PANELBOARDS

- A. Cabinet shall be industry standard code gauge galvanized sheet metal with corners lapped and riveted.
- B. Doors shall have flush-type cylinder locks and latches. Locks keyed alike with two keys supplied for each lock.
- C. Hinged type covering all switching device handles shall be included in all panel trims.
- D. Directory shall be a metal frame with plastic cover mounted on the inside of cabinet door. Typed list of circuits showing exactly what each circuit controls. Odd numbering down left side and even down right.
- E. Series rated panelboards are not acceptable. Rating shall be equal to or greater than integrated equipment rating shown on the plans.
- F. Phase bus shall be copper, UON.
- G. Provide separate neutral and equipment ground busses.
- H. Load centers are not acceptable, UON.

PART 2 - EXECUTION

2.0 SUBMITTALS

- A. The Contractor shall furnish at least five (5) copies of the manufacturer's literature and Drawings describing all proposed equipment and materials indicated in the Specifications. The proposed use of the exact equipment and materials specified shall not change this requirement of including literature describing the proposed equipment. The front sheet or brochure shall have job name, Architect, Engineer, Contractor, and Suppliers identified.
- B. Shop Drawings and Submittal Data shall be complete in all respects, with all information for all products and services included in one professionally developed package.
- C. All sheets of the Submittal shall have the job name stamped or permanently written on them and shall be assembled in an indexed brochure.
- D. Where submittal sheets cover several sizes or types of equipment, they shall clearly indicate, by the use of different color ink, the type or size to be used on the project and the use intended. Products submitted as substitutions shall be identified in the index as a subscription.

- E. Brochures shall contain a certification that the equipment or materials are suitable for conditions shown and specified; that the equipment or materials are believed to be in conformity with the plans and specifications, except as may be specifically described and that approval is recommended. The certification shall be signed by the Contractor. Brochures received not in conformity with these requirements shall be returned for required action.
- F. Where Contractor desires to use products, material or equipment different than those indicated or specified, or, in the opinion of Contractor, local conditions necessitate an arrangement of materials or equipment different from that indicated on the Drawings, Contractor shall submit for review, six (6) copies of Shop Drawings showing proposed rearrangement. The shop drawings shall be in sufficient detail and of a quality, which will permit the Engineer to review and approve. Shop Drawings shall be drawn at the same scale (or larger) as the original Contract Documents and on reproducible sheets of uniform size. The Shop Drawings will indicate the method of attachment or mounting of all equipment or materials, the weight of all equipment and material, and the utility and ancillary requirements of all equipment. It shall be the responsibility of the Contractor to coordinate with other any changes or revisions so required, and shall be done at no additional cost to the Owner.
- G. It is expected that Contractor will diligently review all shop drawings prior to forwarding to the Architect/Engineer for review. In the event that the Contractor Submittals and Shop Drawings must be returned for corrections more than one time, Contractors shall be billed directly by Architect/Engineer for costs related to such additional review time. As an example, if the resubmittal is returned to Contractor for revisions and Contractor's resubmittal is not acceptable and must be returned for corrections, Contractor will be billed for subsequent review time and expense.

2.1 MATERIALS AND WORKMANSHIP

- A. All work shall be performed by competent mechanics, skilled in their trade, and shall be executed in a thorough and substantial manner.
- B. This Contractor shall be held responsible for transportation of his materials to and on the job and for their storage and protection until the final acceptance of the job.
- C. The Contractor shall be held responsible for timely placing of all conduit outlet boxes, cabinets, and other wiring devices in the walls, ceilings, slabs, beams, etc. as construction progresses.
- D. Contractor shall furnish all necessary scaffolding, tackle, tools, and appurtenances of all kinds and all labor required for the safe and expeditious execution of his contract.
- E. Reference in the Specifications or on the Drawings to any article, device, product, material, fixture, form or type of construction by naming more than one acceptable manufacturer shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition, but the Contractor, in such cases, must get written prior approval for substitution of unnamed manufacturers. Requests for substitution must be received by the Engineer in writing; at least five (5) working days before bid date. The request shall include a detailed listing of all products and/or device for which acceptance is being requested. Engineering, Specifications Sheets and/or Construction Details shall be included for comparative purposes.
- F. If doubt exists about the acceptability or equality of any unnamed product, device, fixture or article, the Contractor shall request written authority for substitution from the Engineer as stated in preceding paragraph. No verbal acceptance will be issued.
- G. All equipment shall be installed in a manner to permit access to parts requiring service. All electrical equipment shall be installed in such a manner as to allow removal for service without disassembly of other equipment and shall have working clearances as required by NEC. Any large piece of apparatus which is to be installed in any space in the building, and which is too large to fit through finished openings, shall be placed before enclosing structure is completed. Following placement, such apparatus shall be completely protected from damage.


2.2 CLEANING

- A. Remove tools, scaffolding, surplus materials, barricades, temporary walks, debris and rubbish from the Project promptly upon completion of that portion of the Work of each section. Leave the area of operations completely clean and free of these items.
- B. During course of construction, cap conduit in approved manner to insure adequate protection against entrance of foreign substances.
- C. Disconnect, clean and reconnect wherever necessary to locate and remove obstructions from any system stopped by any foreign matter after being placed in operation. Repair or replace any Work damaged in course of removing obstruction at no additional cost to the Owner.

2.3 OPERATION BY OWNER

- A. A. Owner may require operation of certain systems or parts thereof, prior to final acceptance.
- B. Operation is not to be construed as acceptance of Work.
- C. Instruction Manual: Prior to completion of installation and final inspection of Work, furnish to Architect three copies of complete Operation & Maintenance Manual, bound in booklet form and indexed for each respective trade specified under Electrical Divisions. Each manual shall contain the following items:
- List of equipment with manufacturer's name, model number and local representative, service facilities and normal channel of supply for each item.
 - Manufacturer's literature describing each item of equipment with detailed parts list.
 - Name, address, and phone number of contractors involved in Work under this Division.
 - Individual equipment warranties.
 - Certificates of Inspection.
 - Record Blueprints and related Shop Drawings.

END OF SECTION 16000



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Enrico B. Lads
SIGNATURE 08/12/11

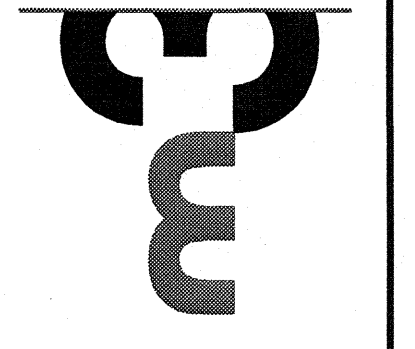
09/30/2012
EXPIRATION DATE OF LICENSE

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Revisions	
Description	Date

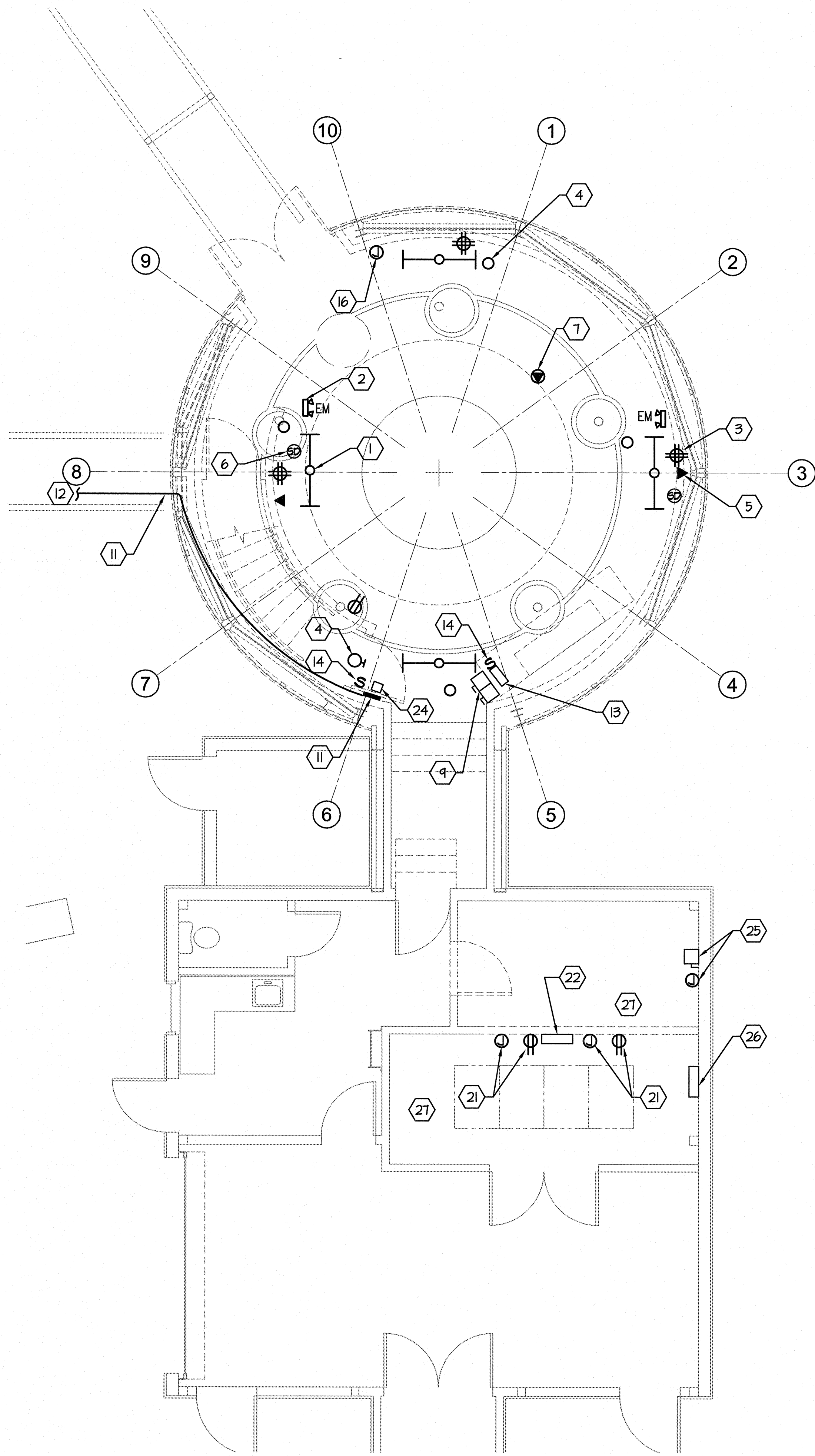
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Drawing Title
ELECTRICAL SPECIFICATIONS

Sheet Number
E002

M3PN 100064

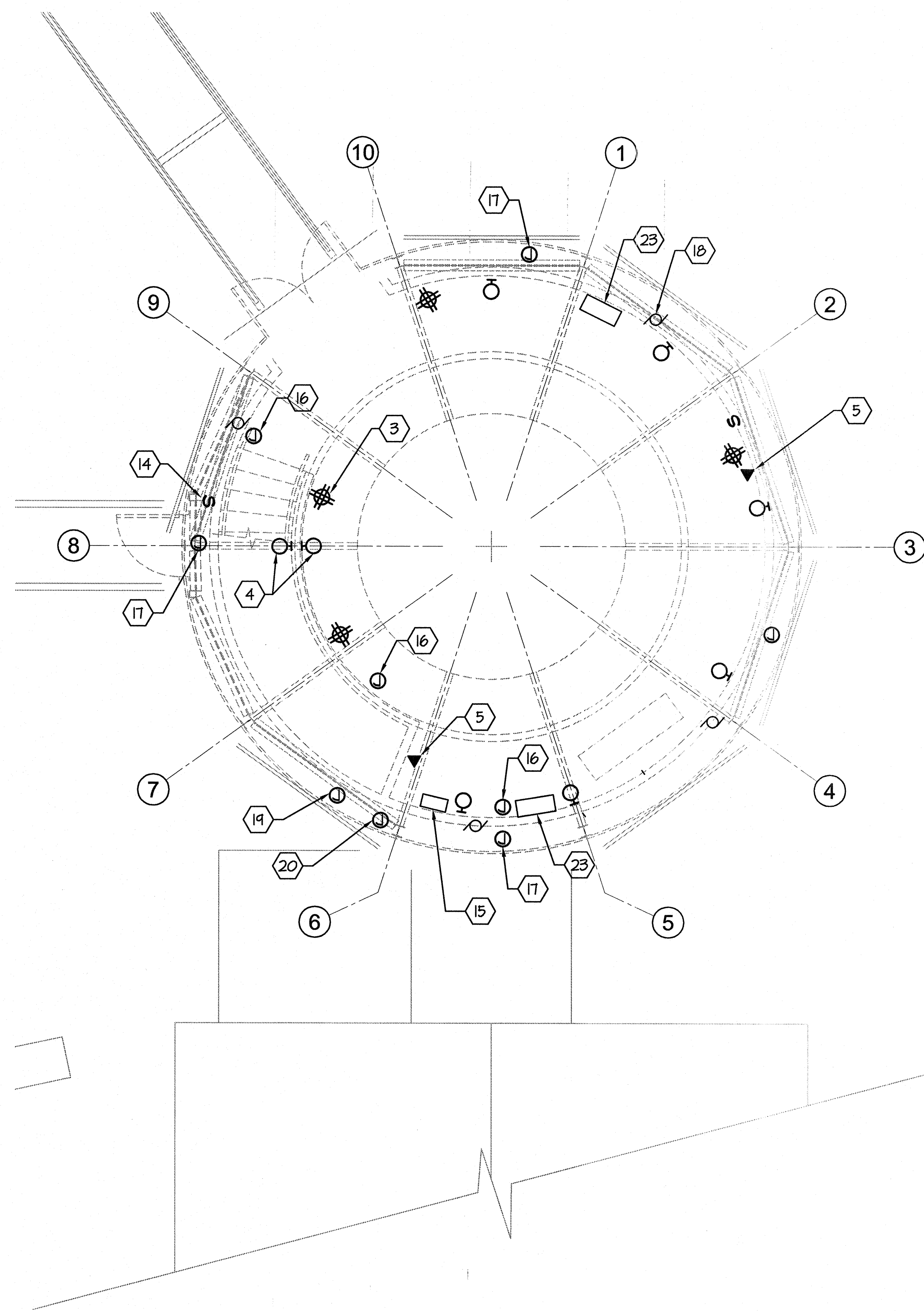
Last Update: 8.4.2011



LOWER LEVEL ELECTRICAL DEMOLITION PLAN

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

NORTH



MEZZANINE LEVEL ELECTRICAL DEMOLITION PLAN

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

NORTH

KEYNOTES

1. REMOVE EXISTING SURFACE MOUNTED WRAP AROUND 2-LAMP FLUORESCENT FIXTURE, TYPICAL.
2. REMOVE EXISTING EMERGENCY LIGHT FIXTURE, TYPICAL.
3. REMOVE EXISTING QUADRUPLEX, TYPICAL.
4. REMOVE EXISTING RED INCANDESCENT LIGHT FIXTURE, WITH WIRE GUARD, TYPICAL.
5. REMOVE EXISTING TELEPHONE OUTLET, TYPICAL.
6. REMOVE EXISTING 120V SMOKE DETECTOR.
7. REMOVE EXISTING 30A/3P RECEPTACLE.
8. NOT USED.
9. REMOVE EXISTING DISCONNECT SWITCHES SERVING HVAC UNIT.
10. NOT USED.
11. REMOVE EXISTING ELECTRICAL PANEL 'DB-2'. REMOVE MAIN FEEDER BACK TO EXISTING PANEL 'MSB' IN CONTAINER #2. VERIFY LOCATION OF FEEDER CONDUIT PRIOR TO DEMOLITION.
12. AT EXISTING PANEL 'MSB' IN CONTAINER #2, REMOVE EXISTING 100A/3P CIRCUIT BREAKER SERVING THIS FEEDER. VERIFY LOCATION OF CIRCUIT BREAKER PRIOR TO DEMOLITION. REFER TO ONE LINE DIAGRAM SHEET EP701.
13. REMOVE EXISTING HVAC CONTROL/CONTACTOR CABINET.
14. REMOVE EXISTING SINGLE SWITCH, TYPICAL.
15. EXISTING DOME AZIMUTH CONTROL PANEL TO REMAIN. ALL CONDUITS, WIRING, ETC., TO AND FROM THIS PANEL ARE TO REMAIN. PROVIDE TEMPORARY SUPPORT AND COVER PROTECTION FOR CONTROL PANEL DURING DEMOLITION.
16. REMOVE EXISTING COVERED JUNCTION BOX.
17. EXISTING DOME AZIMUTH DRIVE LIMIT SWITCH TO REMAIN. TYPICAL.
18. EXISTING DOME BOOGIE DRIVE MOTOR TO REMAIN. TYPICAL.
19. EXISTING SLIP RING CONNECTION TO ROTATING DOME RAIL/BUS TO REMAIN. LOWER, UNUSED SLIP RINGS ARE TO BE REMOVED.
20. EXISTING DOME POSITION SENSOR ROTARY ENCODER TO REMAIN. TYPICAL.
21. REMOVE WIRING, DEVICES AND BRANCH CIRCUITS BACK TO SOURCE.
22. REMOVE AND RELOCATE HVAC CONTROL PANEL. REFER TO SHEET EP101 FOR NEW HVAC CONTROL PANEL LOCATION.
23. REMOVE EXISTING EMERGENCY POWER AND ENCLOSURE OFF CONTROL STATION.
24. REMOVE LIGHTING CONTACTOR AND ENCLOSURE LOCATED ABOVE PANEL 'DB-2'.
25. EXISTING DISCONNECT SWITCH AND JUNCTION BOXES SERVING COMPUTER ROOM PANEL TO REMAIN.
26. EXISTING COMPUTER ROOM PANEL 'CR-1' TO REMAIN.
27. ALL OTHER EXISTING WIRING DEVICES, LIGHTING FIXTURES, JUNCTION BOXES, ETC. TO REMAIN IN THIS ROOM, UON.

GENERAL NOTES

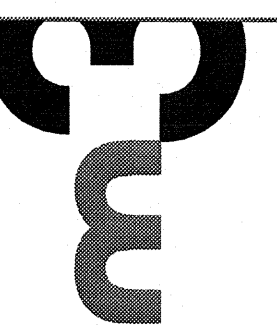
1. REFERENCE DRAWING E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, GENERAL NOTES AND DEMOLITION NOTES.
2. REMOVE ALL THE EXISTING ELECTRICAL DEVICES, CONDUIT, WIRING AND MATERIAL UNLESS OTHERWISE NOTED.
3. ALL ELECTRICAL CONDUITS, WIRE, SLIP RINGS, ETC. TO THE DOME INCLUDING ALL BOGIES, CONTROLS, ETC. ARE TO REMAIN IN PLACE. PROTECT AS REQUIRED.
4. REMOVAL OF LIGHTING FIXTURE, WIRING DEVICES, DISCONNECTS, ETC. INCLUDES REMOVAL OF ASSOCIATED BRANCH CIRCUIT AND FEEDER BACK TO ORIGIN OF CIRCUIT/SOURCE.



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SIGNATURE *Enrico B. Laos*
08/12/11

04/30/2012
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Revisions

Description	Date

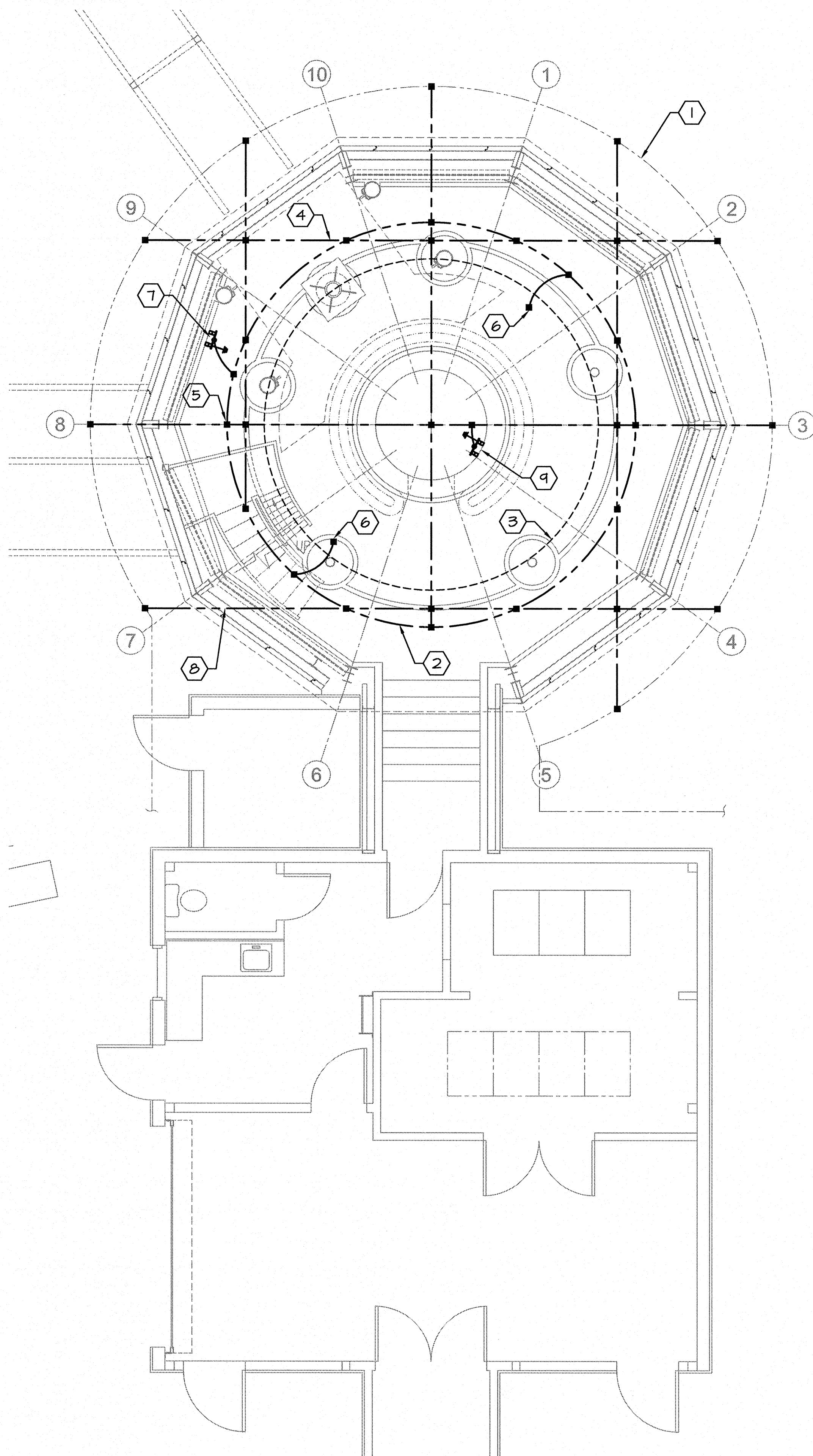
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Drawing Title
ELECTRICAL DEMOLITION PLAN

Sheet Number
ED101

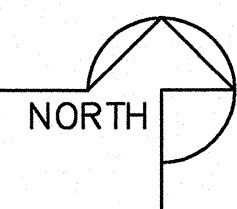
M3PN 100064

Last Update: 7.26.2011



GROUNDING PLAN

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



KEYNOTES

1. EXISTING GROUNDING RING/ELECTRODE SYSTEM. FIELD VERIFY EXACT LOCATION.
2. GROUNDING RING AROUND PIER FOUNDATION.
3. EDGE OF PIER FOUNDATION. SHOWN FOR REFERENCE ONLY.
4. EQUIPOTENTIAL GROUND MESH FABRICATED FROM #3/0 SDBC AND LAID IN CONCRETE BELOW REPAIRS WITH NOMINAL SPACING OF 10'X10'.
5. EXOTHERMIC WELD. TYPICAL.
6. BOND TO REBAR. TYPICAL.
7. 2" X 1/4" X 12" LONG MINIMUM GROUND BUS BAR MOUNTED TO WALL AT 18" AFF TYPICAL.
8. CORE DRILL EXISTING CONCRETE TO ROUTE #3/0 SDBC GROUNDING CONDUCTOR TO MAIN GROUNDING RING.
9. BUS BAR INSIDE PIER TO BE MOUNTED AT 7'-0" AFF OF ENCLOSURE.

GENERAL NOTES

1. REFERENCE TO DRAWING E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS AND GENERAL NOTES.

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Drawing Title
**ELECTRICAL
 GROUNDING
 PLAN**

Sheet Number
EG101

M3PN 100064

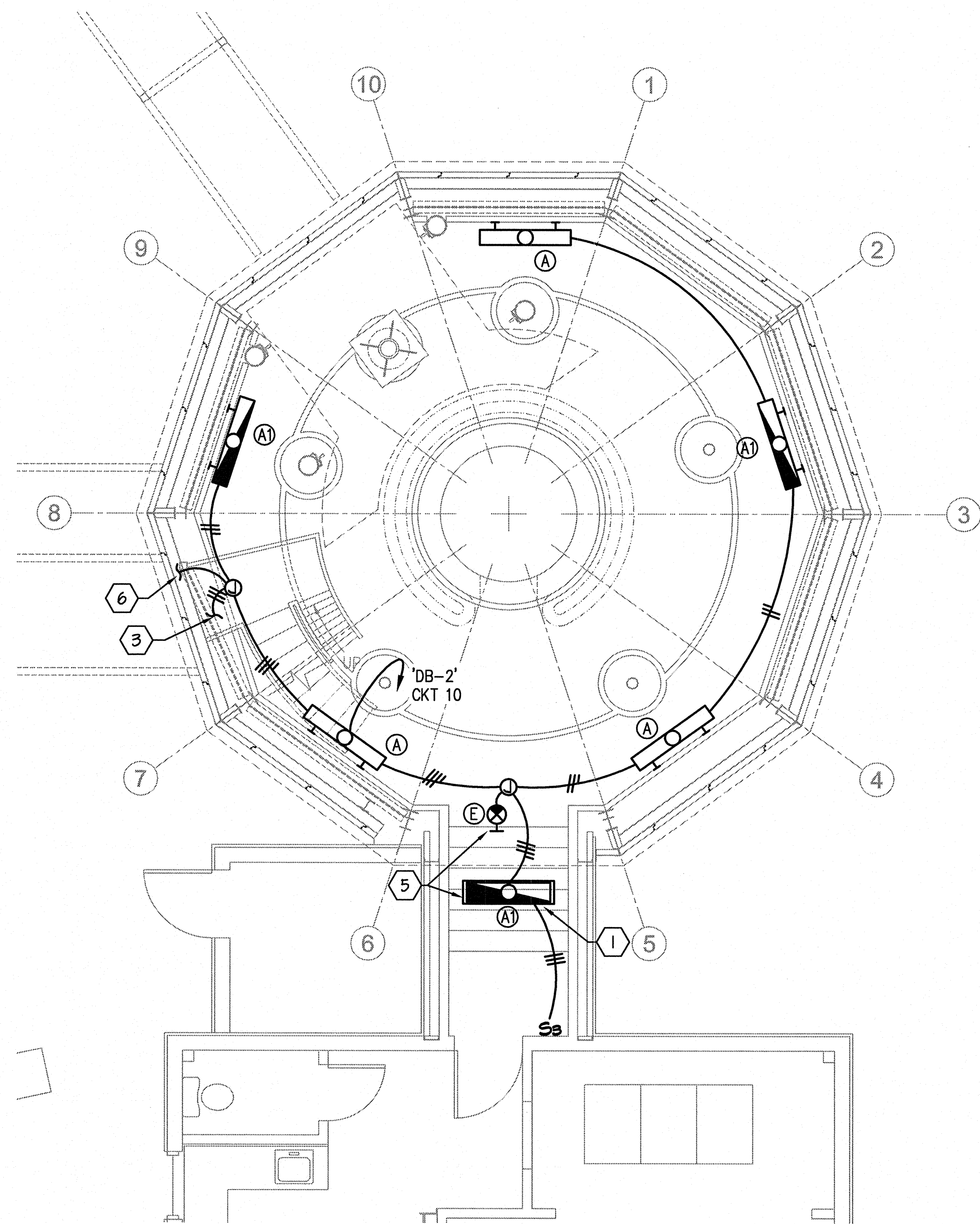
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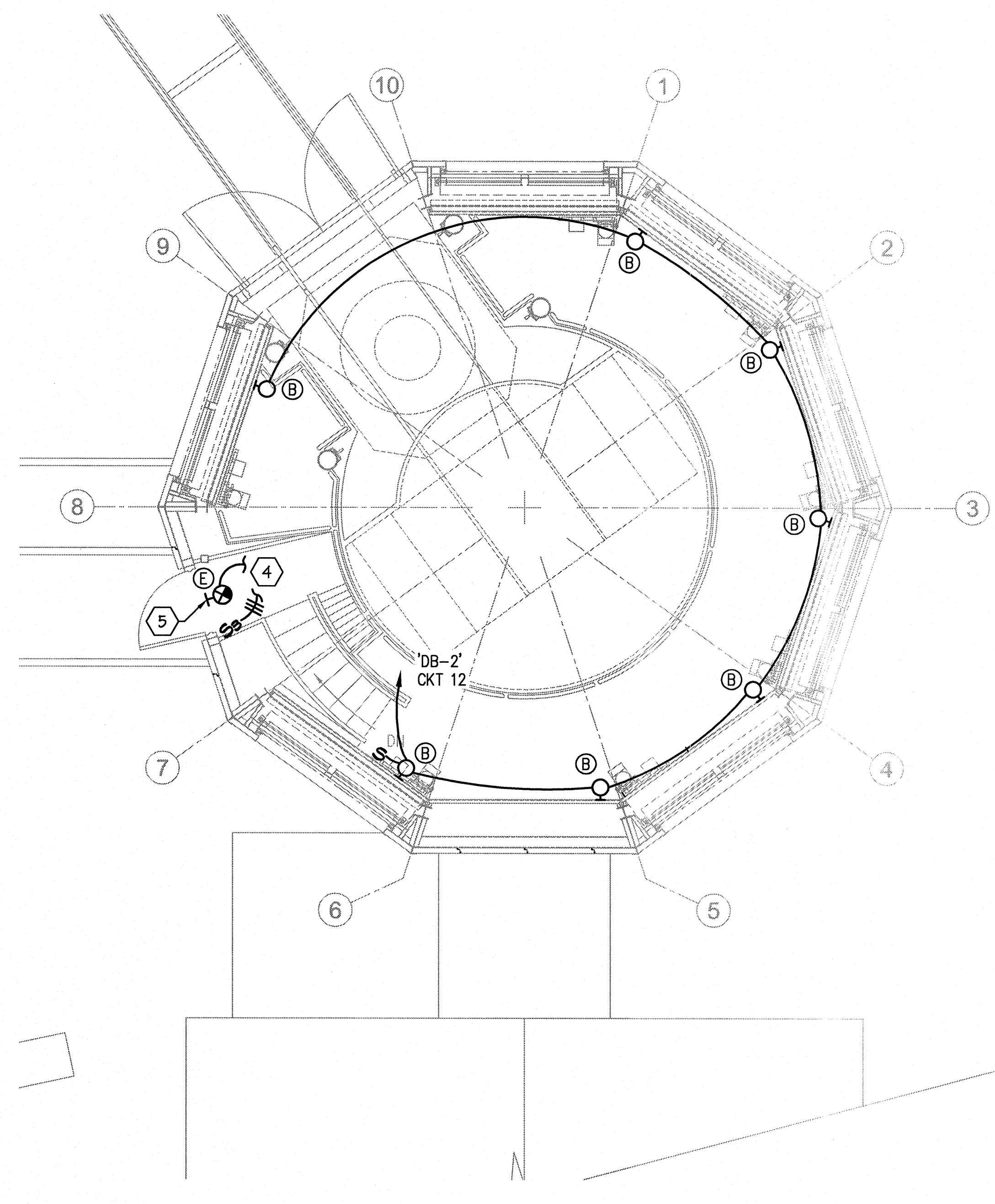
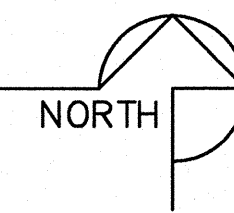
Signature: *Enrico B. Laos*
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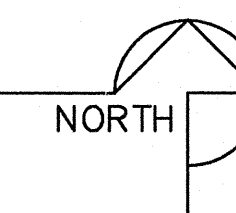
LOWER LEVEL ELECTRICAL LIGHTING PLAN

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



MEZZANINE LEVEL ELECTRICAL LIGHTING PLAN

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



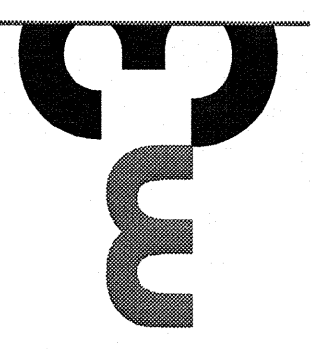
KEYNOTES

1. LIGHT FIXTURE SURFACE MOUNTED ON CEILING.
2. NOT USED.
3. SWITCH CIRCUIT UP TO THREE WAY SWITCH.
4. SWITCH CIRCUIT DOWN TO JUNCTION BOX ON FIRST LEVEL.
5. PROVIDE UN-SWITCHED BRANCH CIRCUIT SERVING EXIT SIGNS AND DESIGNATED EMERGENCY TYPE FIXTURES. TYPICAL.
6. UN-SWITCHED CIRCUIT UP TO EXIT SIGN.

GENERAL NOTES

1. REFERENCE DRAWING E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, GENERAL NOTES.
2. REFERENCE DRAWING EP601 FOR PANEL SCHEDULE.

LIGHT FIXTURE SCHEDULE									
TYPE	MANUFACTURER AND MODEL NO.	DESCRIPTION	VOLTAGE	LAMP(S)	WATTS	MOUNTING	FINISH	OTHER ACCEPTABLE MANUFACTURES	REMARKS
A	COLUMBIA W4-232-E120	SURFACE WRAP W/ EXTRUDED ACRYLIC LENS	120V	2-F032 T8	80W	WALL	WHITE	APPROVED EQUAL	MOUNT ON WALL AT 7'-6" AFF. LOW TEMPERATURE TYPE BALLAST.
A1	COLUMBIA W4-232-E120-EL	SURFACE WRAP W/ EXTRUDED ACRYLIC LENS	120V	2-F032 T8	80W	WALL	WHITE	APPROVED EQUAL	MOUNT ON WALL AT 7'-6" AFF. LOW TEMPERATURE TYPE BALLAST. PROVIDE INTERNAL BATTERY BACK-UP OPTION
B	HUBBELL NV2FG32B5G	ENCLOSED AND GASKETED	120V	1-32W	32W	WALL	GRAY	APPROVED EQUAL	MOUNT TO STEEL CHANNEL 24" AFF LOW TEMPERATURE TYPE BALLAST.
E	DUAL-LITE CV3RAW-2C	EXIT SIGN	120V	LED	N/A	WALL	WHITE	APPROVED EQUAL	PROVIDE INTERNAL BATTERY BACK-UP OPTION



Revisions

Description	Date

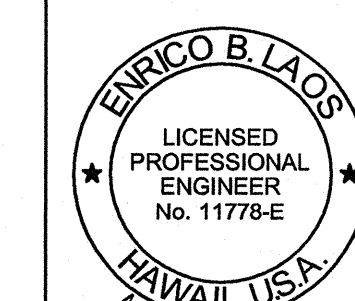
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ELECTRICAL LIGHTING PLAN

Sheet Number
EL101

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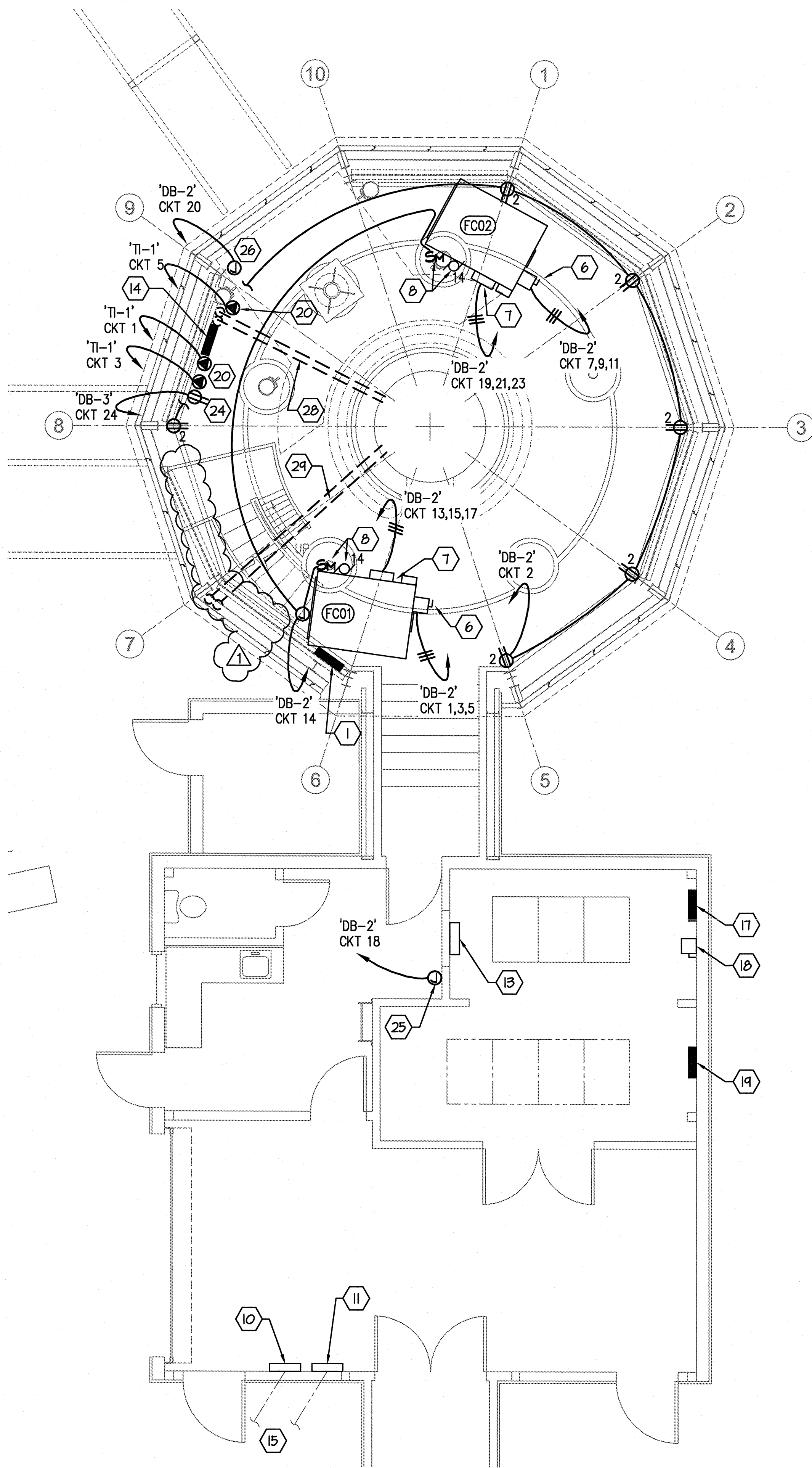
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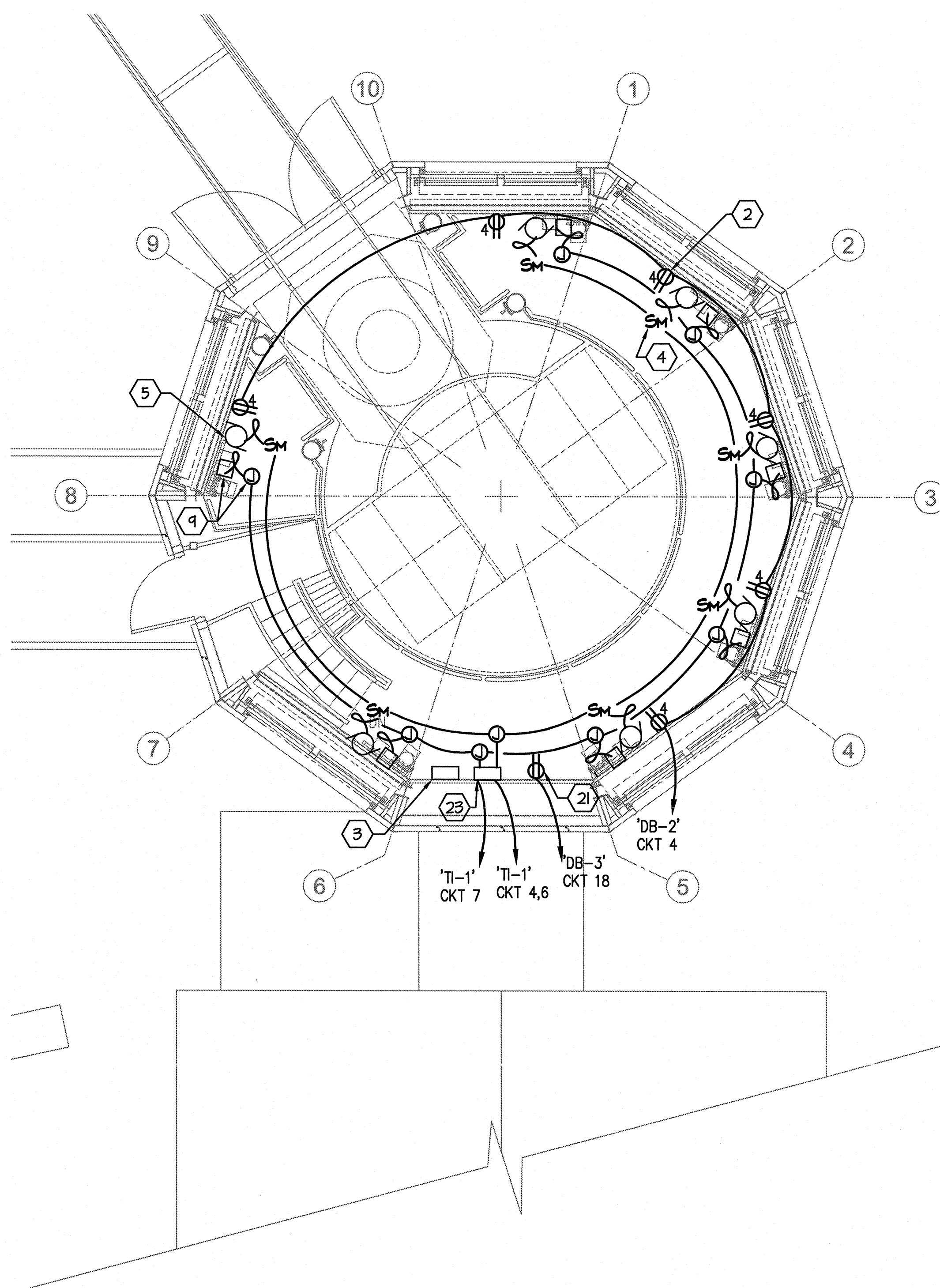
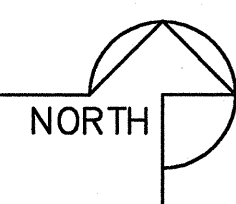
Signature: *Enrico B. Laos*
 Date: 08/12/11

Expiration Date of License: 04/30/2012



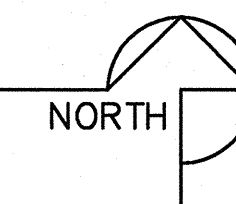
LOWER LEVEL ELECTRICAL POWER PLAN

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



MEZZANINE LEVEL ELECTRICAL POWER PLAN

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



GENERAL NOTES

1. REFERENCE TO DRAWING E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS AND GENERAL NOTES.
2. REFER TO PANEL SCHEDULE, SHEET EP601.
3. REFER TO ONE LINE DIAGRAM, SHEET EP701.
4. VERIFY LOCATION AND REQUIREMENTS FOR MECHANICAL EQUIPMENT, PRIOR TO INSTALLATION.
5. VERIFY AND COORDINATE WITH OWNER EXACT LOCATION AND ROUTES OF ALL CONDUITS PRIOR TO INSTALLATION.

KEYNOTES

27. NOT USED
28. PROVIDE TWO (2) 8" PVC CONDUITS, SCHEDULE 40, FROM INSIDE THE PIER TO STUB UP WITH A 48" RADIUS RGS ELBOW CLOSE TO PANEL 'TI-1'. ROUTE 8" CONDUIT THROUGH 10" SLEEVE PENETRATION AT PIER. SEE STRUCTURAL DRAWINGS SHEET SB201 FOR EXACT LOCATION OF SLEEVE. VERIFY WITH OWNER EXACT LOCATION OF CONDUITS PRIOR TO INSTALLATION.
29. PROVIDE TWO (2) 8" PVC CONDUITS, SCHEDULE 40, FROM INSIDE THE PIER TO STUB UP WITH A 48" RADIUS RGS ELBOW CLOSE TO THE TCS. ROUTE 8" CONDUIT THROUGH 10" SLEEVE PENETRATION AT PEIR. SEE STRUCTURAL DRAWINGS SHEET SB201 FOR EXACT LOCATION OF SLEEVE. VERIFY WITH OWNER EXACT LOCATION OF CONDUITS PRIOR TO INSTALLATION.

KEYNOTES

1. NEW PANEL 'DB-2'. REFER TO ONE LINE DIAGRAM, SHEET EP701 FOR DETAILS.
2. MOUNT RECEPTACLE ON MCF. VERIFY LOCATION PRIOR TO INSTALLATION. TYPICAL.
3. RELOCATE DOME CONTROL PANEL TO LOCATION SHOWN. PROVIDE NEW JUNCTION BOX AND SPLICE. EXISTING WIRING TO EXTEND ALL BRANCH AND CONTROL CIRCUITS TO NEW CONTROL PANEL LOCATION.
4. PROVIDE MOTOR RATED SWITCH FOR DISCONNECTING EQUIPMENT. THE DEVICE SHALL BE SUPPORTED FROM THE MCF OF THE ROLL-UP DOOR MOTOR. VERIFY LOCATION PRIOR TO INSTALLATION. TYPICAL.
5. VENTILATION ROLL-UP DOOR/MOTOR. VERIFY LOCATION PRIOR TO INSTALLATION TYPICAL.
6. PROVIDE A 30A/3P, NEMA 1 FUSED DISCONNECT SWITCH, FUSE PER MANUFACTURER'S REQUIREMENTS. VERIFY REQUIREMENTS AND LOCATION PRIOR TO INSTALLATION
7. WATER HEATER PANEL DH-01/02, COORDINATE EXACT LOCATION WITH MECHANICAL.
8. RECIRCULAR PUMP HP-01/02. PROVIDE MOTOR RATED SWITCH. COORDINATE EXACT LOCATION WITH MECHANICAL.
9. PROVIDE JUNCTION BOX FOR CONNECTION TO VENTILLATION LOUVER ACTUATORS. TOTAL OF FOUR (4) ACTUATORS PER VENTILATION DOOR. VERIFY LOCATION OF JUNCTION BOX AND ACTUATORS PRIOR TO INSTALLATION. TYPICAL.
10. EXISTING PS1 PANEL 'FB'.
11. EXISTING PS1 PANEL 'FA'.
12. NOT USED.
13. RELOCATED HVAC CONTROL PANEL, EXTEND EXISTING CONTROL CIRCUIT TO NEW LOCATION.
14. NEW PANEL 'TI-1'. REFER TO ONE LINE DIAGRAM, SHEET EP701.
15. PS-1 PANEL 'FA' AND PANEL 'FB' EXISTING FEEDERS. REFER TO DRAWING ES101 FOR ELECTRICAL SITE PLAN.
16. NOT USED.
17. NEW PANEL 'CR-2'. VERIFY LOCATION PRIOR TO INSTALLATION.
18. EXISTING DISCONNECT SWITCH, 200A/3P. SHOWN FOR REFERENCE ONLY.
19. EXISTING PANEL 'CR-1'. SHOWN FOR REFERENCE ONLY.
20. PROVIDE TWIST LOCK RECEPTACLES NEMA L5-20 TO CONNECT TELESCOPE CAMERAS. EACH CAMERA HAS ITS OWN CIRCUIT. VERIFY WITH OWNER NEMA TYPE AND LOCATION PRIOR TO PURCHASING AND INSTALLING RECEPTACLES.
21. PROVIDE RECEPTACLE NEMA 5-20. CIRCUIT TO SERVE VACUUM PUMP. VERIFY WITH OWNER NEMA TYPE AND LOCATION PRIOR TO PURCHASING AND INSALLING RECEPTACLE.
22. NOT USED.
23. PROVIDE WALL MOUNT 3-ROW DIN RAIL ENCLOSURE 'CP-1' EQUAL TO SCHNEIDER ELECTRIC CATALOG #08003. THE ENCLOSURE WILL HAVE TWO POWER SOURCES, ONE FOR THE LOUVERS, AND ONE FOR THE ROLL-UP DOORS. ALL LOUVER AND VENTILATION CONTROLS IN THIS ENCLOSURE BY OWNER. VERIFY WITH OWNER PRIOR PURCHASING EQUIPMENT.
24. PROVIDE ONE CIRCUIT FROM PANEL 'DB-3' FOR DUPLEX RECEPTACLES TO SERVE CAMERA ELECTRONICS RACK WITH 120V. VERIFY LOCATION WITH OWNER PRIOR INSTALLATION.
25. PROVIDE CONNECTION TO HVAC CONTROL TOUCHSCREEN INTERFACE.
26. PROVIDE JUNCTION BOX FOR CONNECTION TO HYDRAULIC UNIT CONTROL PANEL. VERIFY LOCATION AND REQUIREMENTS WITH OWNER.

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Revisions

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Drawing Title
**ELECTRICAL
 POWER
 PLAN**

Sheet Number
EP101

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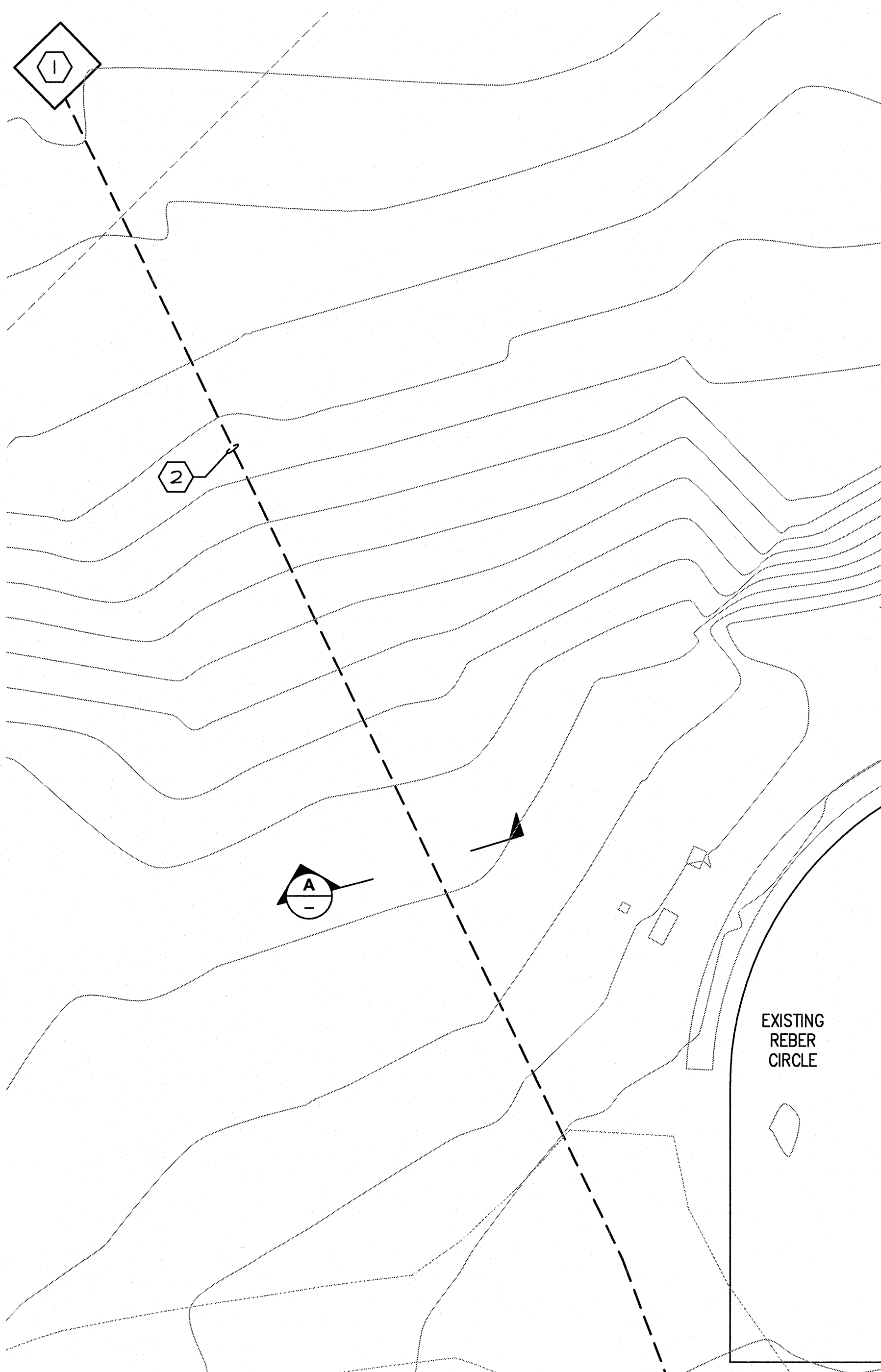
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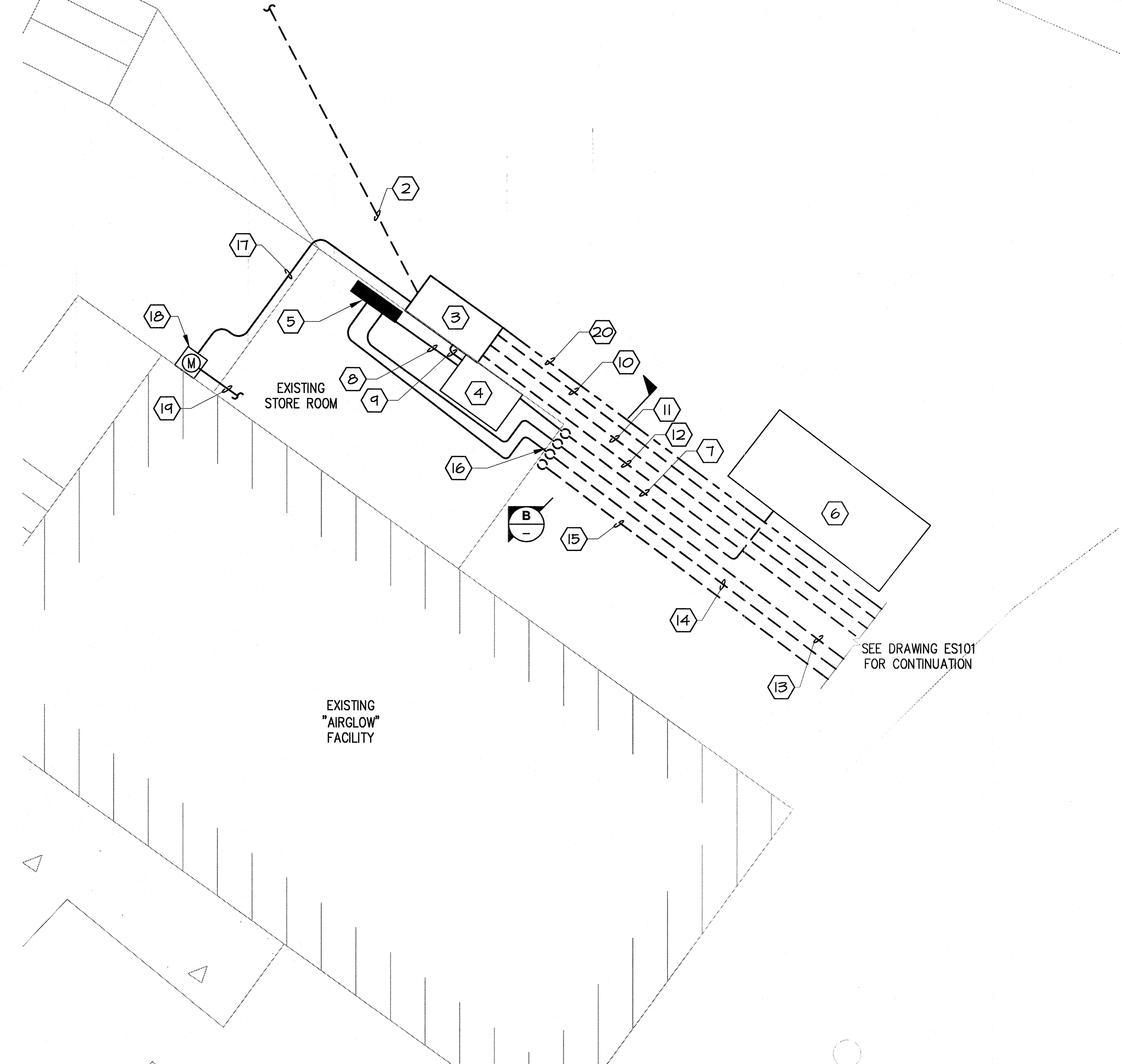
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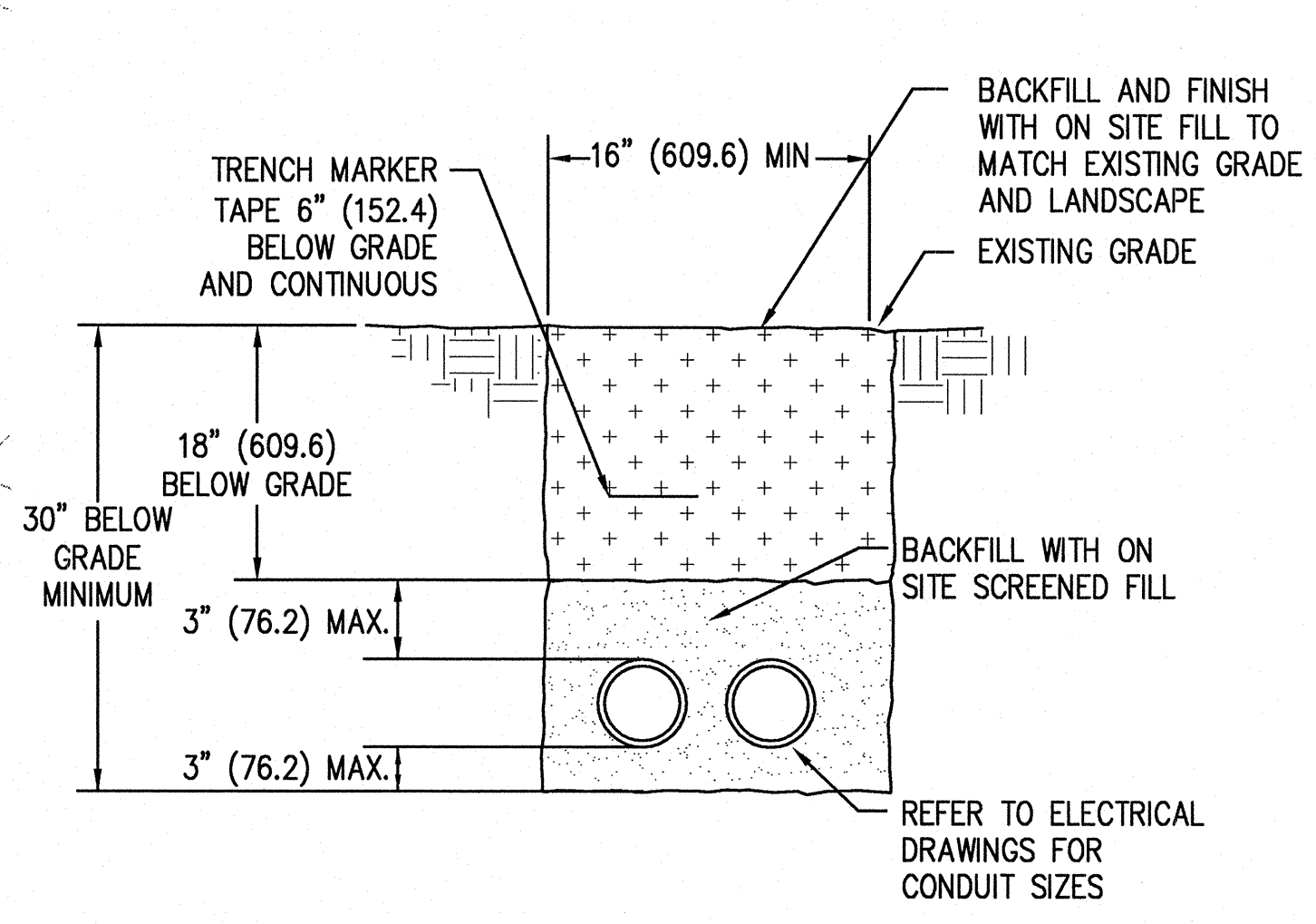
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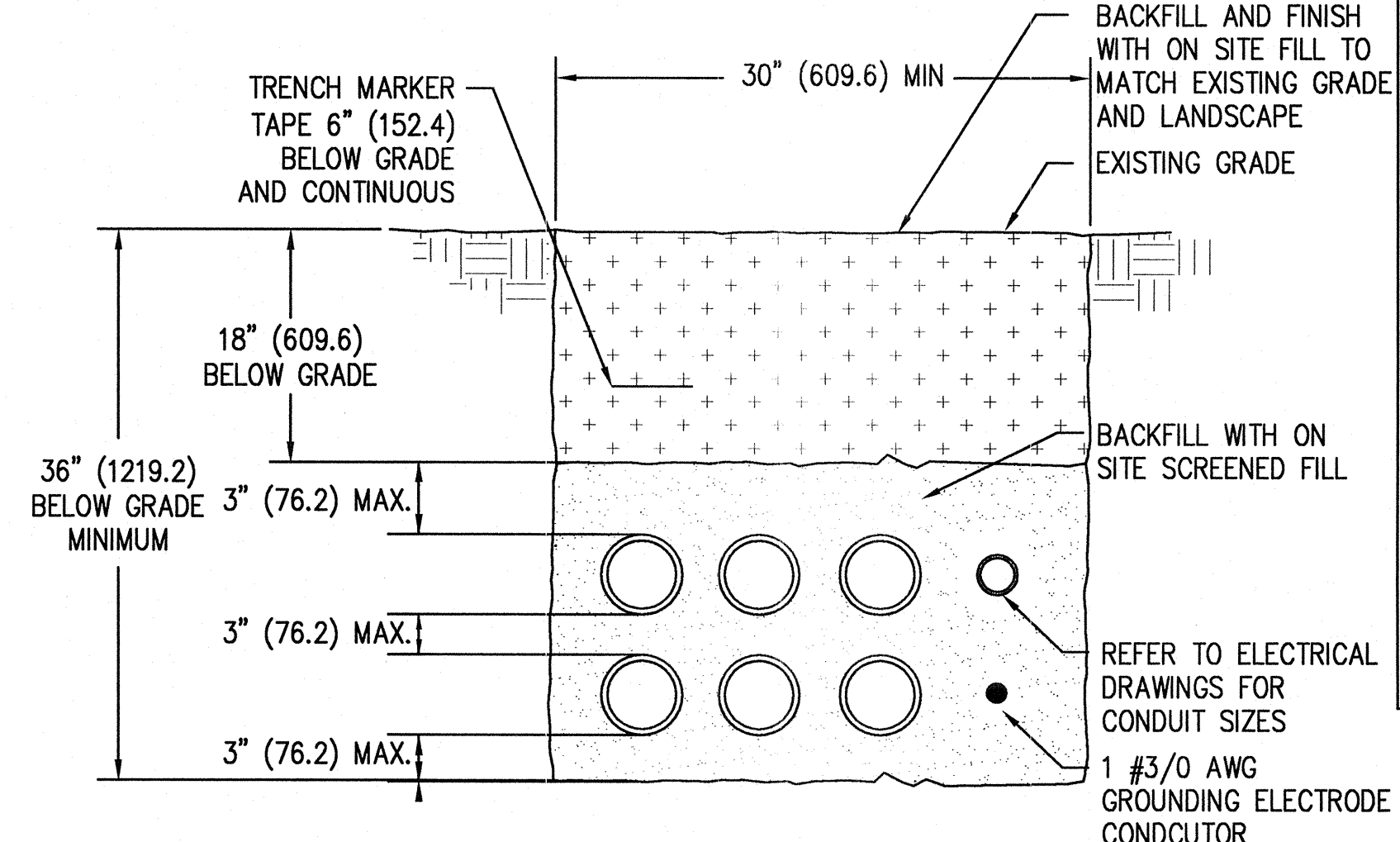
ELECTRICAL SERVICE LATERAL ROUTE PLAN
SCALE: 3/32" = 1'-0"
NORTH



ENLARGED ELECTRICAL AIRGLOW BUILDING POWER PLAN
SCALE: 3/8" = 1'-0"



SERVICE LATERAL DUCT BANK SECTION
NOT TO SCALE



FEEDER DUCT BANK SECTION
NOT TO SCALE

KEYNOTES

- NEW/UPGRADED PAD MOUNTED MECO SERVICE TRANSFORMER LOCATED NEAR AEOS. PROVIDE REINFORCED CONCRETE PAD PER MECOS REQUIREMENTS. CONTRACTOR TO COORDINATE/VERIFY WITH MECO IF NEW TRANSFORMER REQUIRES NEW CONCRETE PAD.
- PROVIDE TWO (2) 4" UNDERGROUND CONDUITS FROM NEW/UPGRADED PAD MOUNTED MECO SERVICE TRANSFORMER FOR SERVICE ENTRANCE LATERAL. VERIFY LOCATION AND ROUTE OF CONDUITS AND EXISTING BURIED UTILITIES PRIOR TO INSTALLATION.
- LOCATION OF PS-2 ELECTRICAL SERVICE ENTRANCE SECTION PANEL 'SES' AND UTILITY REVENUE METER. (SEE PSDC-350-008)
- RELOCATED 300A/3P AUTOMATIC TRANSFER SWITCH (ATS, SEE PSDC-350-008).
- PROVIDE PANEL 'SB'. (SEE PSDC-350-008)
- OWNER FURNISHED, CONTRACTOR INSTALLED 80 KW CUMMINS STAND BY GENERATOR. PROVIDE CONCRETE PAD (SEE PSDC-350-008).
- PROVIDE ONE (1) 4" CONDUIT FOR CONNECTION BETWEEN ATS AND CUMMINS STAND BY GENERATOR. ROUTE CONDUIT FROM STAND BY GENERATOR MAIN CIRCUIT BREAKER AND STUB UP ON OUTSIDE WALL OF AIRGLOW BUILDING STORE ROOM, PULL AND CONNECT WIRING TO ATS (SEE PSDC-350-008).
- PROVIDE ONE (1) 4" CONDUIT FOR CONNECTION BETWEEN ATS AND PANEL 'SB' (SEE PSDC-350-008).
- PROVIDE ONE (1) 4" CONDUIT FROM PANEL 'SES' TO ATS (SEE PSDC-350-008).
- PROVIDE ONE (1) 4" UNDERGROUND CONDUIT FOR CONNECTION BETWEEN PANEL 'SES' TO PANEL 'MSB', PULL AND CONNECT WIRING TO PANELS (SEE PSDC-350-008).
- PROVIDE ONE (1) 2" UNDERGROUND CONDUIT FROM PANEL 'SES' TO EXISTING PS1 PULL BOX FOR EXISTING/MODIFIED AIRSTACK PAD MOUNTED CHILLER NEW FEEDER, PULL AND CONNECT WIRING TO PANEL.
- PROVIDE ONE (1) 4" UNDERGROUND CONDUIT FROM PANEL 'SES' AND COUPLE CONDUIT TO EXISTING 4" CONDUIT FOR PANEL 'FB' NEW FEEDER, PULL AND CONNECT WIRING.
- PROVIDE ONE (1) 4" UNDERGROUND CONDUIT FOR CONNECTION BETWEEN PANEL 'SB' AND PANEL 'DB-1'. STUB UP CONDUIT ON THE OUTSIDE WALL OF AIRGLOW BUILDING STORE ROOM, PULL AND CONNECT WIRING TO PANEL 'SB'.
- PROVIDE ONE (1) 4" UNDERGROUND CONDUIT FROM PANEL 'SB' AND COUPLE CONDUIT TO EXISTING 4" CONDUIT FOR PANEL 'FA' NEW FEEDER. STUB UP CONDUIT ON THE OUTSIDE WALL OF AIRGLOW BUILDING STORE ROOM, PULL AND CONNECT WIRING TO PANEL 'SB'.
- PROVIDE ONE (1) 4" UNDERGROUND SPARE CONDUIT TO EXISTING PS1 PULLBOX. STUB UP CONDUIT 6" ABOVE FINISH GRADE ON THE OUTSIDE WALL OF AIRGLOW BUILDING STORE ROOM, CAP AND MARK FOR FUTURE USE.
- EXISTING AIR LOUVER, ROUGH IN CONDUITS ON RIGHT SIDE OF LOUVER. (SEE PSDC-350-008)
- PROVIDE ONE (1) 1" CONDUIT FROM PANEL 'SES' TO NEW AIRGLOW BUILDING CUSTOMER SUB-METER. VERIFY LOCATION PRIOR TO INSTALLATION.
- PROVIDE AIRGLOW BUILDING SINGLE PHASE, 208V, CUSTOMER SUB-METER EQUAL TO E-MON CLASS 1000 #3208100-SAR KIT IN NEMA 3R ENCLOSURE. CONNECT SUB-METER TO EXISTING 120/208V, SINGLE PHASE, 3 WIRE FEEDER SERVING EXISTING AIRGLOW SUB-PANEL. VERIFY LOCATION PRIOR TO INSTALLATION.
- EXISTING AIRGLOW BUILDING MAIN 120/208V, SINGLE PHASE, 3 WIRE FEEDER. VERIFY LOCATION IN FIELD.
- 1/3/0 GROUNDING ELECTRODE CONDUCTOR FROM PANEL 'SES' TO EXISTING PS-1/2 GROUNDING ELECTRODE SYSTEM.

GENERAL NOTES

- REFERENCE DRAWING E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS AND GENERAL NOTES.
- REFERENCE DRAWING EP701 FOR ONE LINE DIAGRAM.
- REFERENCE DRAWING ES101 FOR ELECTRICAL SITE PLAN.
- VERIFY AND COORDINATE WITH OWNER EXACT LOCATION AND ROUTES OF ALL CONDUITS PRIOR TO INSTALLATION. MAKE ACCORDING TO PSDC-350-008.
- CONTRACTOR SHALL VERIFY ALL EXISTING UNDERGROUND UTILITIES USING A LOCAL LOCATOR SERVICE HAWAII ONE-CALL OR EQUAL, FOR TONING PRIOR TO EXCAVATING.



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SIGNATURE: *Enrico B. Laos*
08/12/11

EXPIRATION DATE OF LICENSE: 04/30/2012

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ELECTRICAL AIR GLOW BUILDING POWER PLAN

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EP102

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Drawing Title
**ELECTRICAL
PANEL
SCHEDULES
SHEET 1**

Sheet Number
EP601

M3PN 100064

Last Update: 4.10.2012

KEYNOTES

- INSTALL NEW CIRCUIT BREAKER TO MATCH EXISTING MANUFACTURER, STYLE AND AIC RATING.
- INSTALL NEW CIRCUIT BREAKER IN AVAILABLE BUSSED SPACE AS INDICATED. MATCH EXISTING MANUFACTURER, STYLE AND AIC RATING.
- CIRCUIT PREVIOUSLY DEDICATED FOR A/C AND HEATER. LABEL CIRCUIT BREAKER AS SPARE.
- TRANSFER EXISTING CIRCUIT BREAKERS AND WIRING TO UPGRADED PANEL 'DB-1'.
- CIRCUITS LABELED VENTILATION ROLL-UP DOOR AND LOUVERS SHALL TO BE WIRED THROUGH THE WALL MOUNTED DIN RAIL PANEL LOCATED AT THE MEZZANINE LEVEL. REFERENCE KEY NOTE 23 ON SHEET EP101.
- VERIFY PANEL BUSSED SPACE AVAILABILITY AND ASSIGN BRANCH CIRCUITS ACCORDINGLY.
- ASSUMED LOAD CIRCUIT ASSIGNMENT, CONTRACTOR SHALL VERIFY ASSIGNMENT, EXISTING LOAD, BRANCH CIRCUIT AND SIZE IN THE FIELD. NOTIFY OWNER ENGINEER OF ANY DISCREPANCIES FOUND.
- RE-LABEL CIRCUIT AS INDICATED.
- CONTRACTOR SHALL VERIFY STATUS OF EXISTING BRANCH CIRCUIT AND LOAD SERVED. IF BRANCH CIRCUIT DOES NOT SERVE THE EXISTING LOAD AS NOTED. RE-LABEL AS 'SPARE'.
- INSTALL CONDUIT, PULL WIRING FOR FC UNITS AND HEATERS, AND CONNECT UP TO EXISTING DB-2 PANEL BREAKERS.

GENERAL NOTES

- REFERENCE TO DRAWING E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, GENERAL NOTES.
- REFERENCE TO DRAWING EP701 FOR ONE LINE DIAGRAM.
- EXISTING INSTALLATION SHOWN LIGHT. NEW SHOWN BOLD.

