

SECTION 26 05 48

SEISMIC CONTROLS FOR ELECTRICAL WORK

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes seismic restraints and other earthquake-damage-reduction measures for electrical components. It complements optional seismic construction requirements in the various electrical component Sections.

1.03 DEFINITIONS

- A. BOCA: BOCA National Building Code.
- B. SBC: Standard Building Code.
- C. UBC: Uniform Building Code.
- D. Seismic Restraint: A fixed device (a seismic brace, an anchor bolt or stud, or a fastening assembly) used to prevent vertical or horizontal movement, or both vertical and horizontal movement, of an electrical system component during an earthquake.
- E. Mobile Structural Element: A part of the building structure such as a slab, floor structure, or wall that may move independent of other mobile structural elements during an earthquake

1.04 SUBMITTALS

- A. Product Data: Illustrate and indicate types, styles, materials, strength, fastening provisions, and finish for each type and size of seismic restraint component used.
  - 1. Anchor Bolts and Studs: Tabulate types and sizes, complete with report numbers and rated strength in tension and shear as evaluated by ICBO Evaluation Service.
- B. Shop Drawings: For anchorage and bracing not defined by details and charts in Drawings. Indicate materials, and show designs and calculations signed and sealed by a professional engineer.
  - 1. Design Analysis: To support selection and arrangement of seismic restraints. Include calculations of combined tensile and shear loads.
  - 2. Details: Detail fabrication and arrangement. Detail attachment of restraints to both structural and restrained items. Show attachment locations, methods, and spacings, identifying components and listing their strengths. Indicate direction and value of forces transmitted to the structure during seismic events.
  - 3. Preapproval and Evaluation Documentation: By ICBO Evaluation Service, showing maximum ratings of restraints and the basis for approval (tests or calculations).

4. Coordination Drawings: Plans and sections drawn to scale and coordinating seismic bracing for electrical components with other systems and equipment, including other seismic restraints, in the vicinity.
- C. Product Certificates: Signed by manufacturers of seismic restraints certifying that products furnished comply with requirements.
- D. Qualification Data: For firms and persons specified in "Quality Assurance" Article.
- E. Material Test Reports: From a qualified testing agency indicating and interpreting test results of seismic control devices for compliance with requirements indicated.

#### 1.05 QUALITY ASSURANCE

- A. Comply with seismic restraint requirements in California Building Code, unless requirements in this Section are more stringent.
- B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing seismic engineering services, including the design of seismic restraints, that are similar to those indicated for this Project.
- C. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, with the experience and capability to conduct the testing indicated.

#### 1.06 PROJECT CONDITIONS

- A. Project Seismic Zone and Zone Factor as Defined in UBC: Zone 4, Zone Factor 0.40.
- B. Occupancy Category as Defined in UBC: IV.

#### 1.07 PROJECT CONDITIONS

- A. Project Seismic Hazard Exposure Group as Defined in BOCA or SBC: III.

#### 1.08 COORDINATION

- A. Coordinate layout and installation of seismic bracing with building structural system and architectural features, and with mechanical, fire-protection, electrical, and other building features in the vicinity.
- B. Coordinate concrete bases with building structural system.

### PART 2 PRODUCTS

#### 2.01 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  1. Amber/Booth Company, Inc.

2. B-Line Systems, Inc.
3. Erico, Inc.
4. GS Metals Corp.
5. Loos & Company, Inc.
6. Mason Industries, Inc.
7. Powerstrut.
8. Thomas & Betts Corp.
9. Unistrut Corporation.

## 2.02 MATERIALS

- A. Use the following materials for restraints:
1. Indoor Dry Locations: Steel, zinc plated.
  2. Outdoors and Damp Locations: Galvanized steel.
  3. Corrosive Locations: Stainless steel.

## 2.03 ANCHORAGE AND STRUCTURAL ATTACHMENT COMPONENTS

- A. Strength: Defined in reports by ICBO Evaluation Service or another agency acceptable to authorities having jurisdiction.
1. Structural Safety Factor: Strength in tension and shear of components used shall be at least two times the maximum seismic forces to which they will be subjected.
- B. Concrete and Masonry Anchor Bolts and Studs: Steel-expansion wedge type.
1. Concrete Inserts: Steel-channel type.
- C. Through Bolts: Structural type, hex head, high strength. Comply with ASTM A 325.
- D. Welding Lugs: Comply with MSS SP-69, Type 57.
- E. Beam Clamps for Steel Beams and Joists: Double sided. Single-sided type is not acceptable.
- F. Bushings for Floor-Mounted Equipment Anchors: Neoprene units designed for seismically rated rigid equipment mountings, and matched to the type and size of anchor bolts and studs used.
- G. Bushing Assemblies for Wall-Mounted Equipment Anchorage: Assemblies of neoprene elements and steel sleeves designed for seismically rated rigid equipment mountings, and matched to the type and size of attachment devices used.

## 2.04 SEISMIC BRACING COMPONENTS

- A. Slotted Steel Channel: 1-5/8-by-1-5/8-inch cross section, formed from 0.1046-inch thick steel, with 9/16-by-7/8-inch slots at a maximum of 2 inches o.c. in webs, and flange edges turned toward web.
1. Materials for Channel: ASTM A 570, GR 33.
  2. Materials for Fittings and Accessories: ASTM A 575, ASTM A 576, or ASTM A 36.
  3. Fittings and Accessories: Products of the same manufacturer as channels and designed for use with that product.
  4. Finish: Baked, rust-inhibiting, acrylic-enamel paint applied after cleaning and phosphate treatment, unless otherwise indicated.

- B. Channel-Type Bracing Assemblies: Slotted steel channel, with adjustable hinged steel brackets and bolts.
- C. Cable-Type Bracing Assemblies: Zinc-coated, high-strength steel wire rope cable attached to steel thimbles, brackets, and bolts designed for cable service.
  - 1. Arrange units for attachment to the braced component at one end and to the structure at the other end.
  - 2. Wire Rope Cable: Comply with ASTM 603. Use 49- or 133-strand cable with a minimum strength of 2 times the calculated maximum seismic force to be resisted.
- D. Hanger Rod Stiffeners: Slotted steel channels with internally bolted connections to hanger rod.

### **PART 3 EXECUTION**

#### **3.01 APPLICATION**

- A. Generator Sets: Comply with Division 15 Section "Mechanical Vibration Controls and Seismic Restraints."

#### **3.02 INSTALLATION**

- A. Install seismic restraints according to applicable codes and regulations and as approved by authorities having jurisdiction, unless more stringent requirements are indicated.

#### **3.03 STRUCTURAL ATTACHMENTS**

- A. Use bolted connections with steel brackets, slotted channel, and slotted-channel fittings to spread structural loads and reduce stresses.
- B. Attachments to New Concrete: Bolt to channel-type concrete inserts or use expansion anchors.
- C. Holes for Expansion Anchors in Concrete: Drill at locations and to depths that avoid reinforcing bars.
- D. Attachments to Solid Concrete Masonry Unit Walls: Use expansion anchors.
- E. Attachments to Hollow Walls: Bolt to slotted steel channels fastened to wall with expansion anchors.
- F. Attachments to Wood Structural Members: Install bolts through members.
- G. Attachments to Steel: Bolt to clamps on flanges of beams or on upper truss chords of bar joists.

#### **3.04 ELECTRICAL EQUIPMENT ANCHORAGE**

- A. Anchor rigidly to a single mobile structural element or to a concrete base that is structurally tied to a single mobile structural element.
- B. Anchor panelboards, motor-control centers, motor controls, switchboards, switchgear, transformers, unit substations, fused power-circuit devices, transfer switches, busways, battery racks, static uninterruptible power units, power conditioners, capacitor units, communication system components, and electronic signal processing, control, and distribution units as follows:

1. Size concrete bases so expansion anchors will be a minimum of 10 bolt diameters from the edge of the concrete base.
2. Concrete Bases for Floor-Mounted Equipment: Use female expansion anchors and install studs and nuts after equipment is positioned.
3. Bushings for Floor-Mounted Equipment Anchors: Install to allow for resilient media between anchor bolt or stud and mounting hole in concrete.
4. Anchor Bolt Bushing Assemblies for Wall-Mounted Equipment: Install to allow for resilient media where equipment or equipment-mounting channels are attached to wall.
5. Torque bolts and nuts on studs to values recommended by equipment manufacturer.

### 3.05 SEISMIC BRACING INSTALLATION

- A. Install bracing according to spacings and strengths indicated by approved analysis.
- B. Expansion and Contraction: Install to allow for thermal movement of braced components.
- C. Cable Braces: Install with maximum cable slack recommended by manufacturer.
- D. Attachment to Structure: If specific attachment is not indicated, anchor bracing to the structure at flanges of beams, upper truss chords of bar joists, or at concrete members.

### 3.06 ACCOMMODATION OF DIFFERENTIAL SEISMIC MOTION

- A. Make flexible connections in raceways, cables, wireways, cable trays, and busways where they cross expansion and seismic control joints, where adjacent sections or branches are supported by different structural elements, and where they terminate at electrical equipment anchored to a different mobile structural element from the one supporting them.

### 3.07 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform the following field quality-control testing:
- B. Testing Agency: Engage a qualified testing agency to perform the following field quality-control testing:
- C. Testing: Test pull-out resistance of seismic anchorage devices.
  1. Provide necessary test equipment required for reliable testing.
  2. Provide evidence of recent calibration of test equipment by a testing agency acceptable to authorities having jurisdiction.
  3. Schedule test with Owner, through Architect, before connecting anchorage device to restrained component (unless post-connection testing has been approved), and with at least seven days' advance notice.
  4. Obtain Architect's approval before transmitting test loads to the structure. Provide temporary load-spreading members.
  5. Test at least four of each type and size of installed anchors and fasteners selected by Architect.
  6. Test to 90 percent of rated proof load of device.
  7. If a device fails the test, modify all installations of same type and retest until satisfactory results are achieved.
  8. Record test results.

END OF SECTION

SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Nameplates.
2. Labels.
3. Wire markers.
4. Conduit markers.
5. Stencils.
6. Underground Warning Tape.
7. Lockout Devices.

B. Related Sections:

1. Section 09 90 00 - Painting and Coating: Execution requirements for painting specified by this section.
2. Section 27 05 53 - Identification for Communications Systems.
3. Section 28 05 53 - Identification for Electronic Safety and Security.

1.02 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Product Data:

1. Submit manufacturer's catalog literature for each product required.
2. Submit electrical identification schedule including list of wording, symbols, letter size, color coding, tag number, location, and function.

C. Manufacturer's Installation Instructions: Indicate installation instructions, special procedures, and installation.

1.03 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

B. Project Record Documents: Record actual locations of tagged devices; include tag numbers.

1.04 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Accept identification products on site in original containers. Inspect for damage.
- C. Accept materials on site in original factory packaging, labeled with manufacturer's identification, including product density and thickness.
- D. Protect insulation from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original wrapping.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.
- B. Install products only when ambient temperature and humidity conditions for adhesive are within range recommended by manufacturer.

1.07 EXTRA MATERIALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for extra materials.

**PART 2 PRODUCTS**

2.01 NAMEPLATES

- A. Furnish materials in accordance with State of California Public Work's standards.
- B. Product Description: Laminated three-layer plastic with engraved black letters on white background color.
- C. Letter Size:
  - 1. 1/8 inch high letters for identifying individual equipment and loads.
  - 2. 1/4 inch high letters for identifying grouped equipment and loads.
- D. Minimum nameplate thickness: 1/8 inch.

2.02 LABELS

- A. Furnish materials in accordance with State of California Public Work's standards.
- B. Labels: Embossed adhesive tape, with 3/16 inch white letters on black background.

2.03 WIRE MARKERS

- A. Furnish materials in accordance with State of California Public Work's standards.
- B. Description: Split sleeve type wire markers.
- C. Legend:

1. Power and Lighting Circuits: Branch circuit or feeder number as indicated on Drawings.
2. Low voltage and Control Circuits: Wire number as indicated on shop drawings.

#### 2.04 CONDUIT AND RACEWAY MARKERS

- A. Furnish materials in accordance State of California Public Work's standards.
- B. Description: Labels fastened with adhesive black lettering on white background.
- C. Legend:
  1. 480 Volt System: 480 VOLTS.
  2. 208 Volt System: 208 VOLTS.

#### 2.05 STENCILS

- A. Furnish materials in accordance with State of California Public Work's standards.
- B. Stencils: With clean cut symbols and letters of following size:
  1. Up to 2 inches Outside Diameter of Raceway: 1/2 inch high letters.
  2. 2-1/2 to 6 inches Outside Diameter of Raceway: 1 inch high letters.
- C. Stencil Paint: As specified in Section 09 90 00, semi-gloss enamel, colors conforming to the following:
  1. Black lettering on white background.

#### 2.06 UNDERGROUND WARNING TAPE

- A. Description: 4 inch wide plastic tape, detectable type, colored yellow with suitable warning legend describing buried electrical lines.

#### 2.07 LOCKOUT DEVICES

- A. Lockout Hasps:
  1. Anodized aluminum hasp with erasable label surface; size minimum 7-1/4 x 3 inches.

### PART 3 EXECUTION

#### 3.01 PREPARATION

- A. Degrease and clean surfaces to receive adhesive for identification materials.
- B. Prepare surfaces in accordance with Section 09 90 00 for stencil painting.

#### 3.02 INSTALLATION

- A. Install identifying devices after completion of painting.
- B. Nameplate Installation:
  1. Install nameplate parallel to equipment lines.



2. Install nameplate for each electrical distribution and control equipment enclosure with corrosive-resistant mechanical fasteners, or adhesive.
3. Install nameplates for each control panel and major control components located outside panel with corrosive-resistant mechanical fasteners, or adhesive.
4. Secure nameplate to equipment front using adhesive.
5. Secure nameplate to inside surface of door on recessed panelboard in finished locations.
6. Install nameplates for the following:
  - a. Switchboards.
  - b. Panelboards.
  - c. Transformers.
  - d. Service Disconnects.

C. Label Installation:

1. Install label parallel to equipment lines.
2. Install label for identification of individual control device stations.
3. Install labels for permanent adhesion and seal with clear lacquer.

D. Wire Marker Installation:

1. Install wire marker for each conductor at panelboard gutters, pull boxes, outlet and junction boxes and each load connection.

E. Stencil Installation:

1. Apply stencil painting in accordance with Section 09 90 00.

F. Underground Warning Tape Installation:

1. Install underground warning tape along length of each underground conduit, raceway, or cable 6 to 8 inches below finished grade, directly above buried conduit, raceway, or cable.

**END OF SECTION**

SECTION 26 05 72

ACCEPTANCE TESTING

PART 1 GENERAL

1.01 SCOPE OF WORK

It is the intent of these acceptance tests to assure that all Contractor supplied equipment and equipment furnished by the Owner are operational and within industry and manufacturer's tolerances and is installed in accordance with designed specifications and as required by Equipment Manufacturer/Owner.

- A. The acceptance tests and inspections shall determine suitability for energization of generator, switchgear and cables.
- B. Items that shall be checked, inspected, and tested include, but are not limited to, the following:
  - 1. Generator.
  - 2. Automatic transfer switch.
  - 3. Switchboard.
  - 4. Panelboards.
  - 5. Lighting and receptacles.
  - 6. 600V rated cable.

1.02 APPLICABLE CODES

- A. All inspections and tests shall be in accordance with the following applicable codes and standards except as provided otherwise herein.
  - 1. California Electrical Code - CEC latest 2007 Edition.
  - 2. National Electrical Manufacturer's Association - NEMA.
  - 3. American Society for Testing and Materials - ASTM.
  - 4. Institute of Electrical and Electronic Engineers - IEEE.
  - 5. National Electrical Testing Association - NET A.
  - 6. American National Standards Institute - ANSI:
    - a. C2, National Electrical Safety Code
    - b. Z244-1, American National Standard for Personnel Protection
  - 7. State Codes and Ordinances.
  - 8. Insulated Cable Engineers Association - ICEA.
  - 9. Association of Edison Illuminating Companies - AEIC.
  - 10. Occupational Safety and Health Administration:
    - a. Part 1910, Subpart S, 1910.30S
    - b. Part 1926, Subpart V, 1926.950 through 1926.960
  - 11. National Fire Protection Association - NFPA:
    - a. ANSI/CECB, Electrical Equipment Maintenance
    - b. CECE, Electrical Safety Requirements for Employee Workplaces
    - c. ANSI/CEC, National Electrical Code 2005 Edition
    - d. ANSI/NFPA 101, Life Safety Code

12. All inspections and tests shall utilize the following references:
  - a. Project Design Specification.
  - b. Project Design Drawings.
  - c. Manufacturer's instruction manuals applicable to each particular apparatus.

#### 1.03 QUALIFICATIONS OF TESTING AGENCY

- A. The testing firm shall be an independent testing organization, which can function as an unbiased testing authority, professionally independent of the manufacturers, suppliers, and installers of equipment or systems evaluated by the testing firm.
- B. The testing firm shall be regularly engaged in the testing of electrical equipment devices, installations, and systems.
- C. The testing firm and all the testing personnel shall have been engaged in such practices for a minimum of ten years.
- D. The testing firm shall meet federal OSHA criteria for accreditation of testing laboratories, Title 29, Parts 1907, 1910, and 1936. Full membership in the National Electrical Testing Association constitutes proof of such criteria.
- E. The lead, on site, technical person shall be currently certified by the National Electrical Testing Associate (NETA) in Electrical Power Distribution System Testing.
- F. Testing firm shall utilize only full-time technicians who are regularly employed by the firm for testing services. Electrically unskilled employees are not permitted to perform testing or assistance of any kind. Electricians may assist, but may not perform testing and/or inspection services.
- G. The testing firm shall submit proof of the above qualifications.
- H. The testing firm shall be an independent organization as defined by OSHA Title 29, Part 1936 and the National Electrical Testing Association.
- I. All instruments used by the testing firm to evaluate electrical performance shall meet NETA's Specifications for Test Instruments. (See Section 1.7 of this specification).
- J. The terms used herewith such as Test Agency, Testing Laboratory, or Contractor Test Company, shall be construed to mean testing firm.

#### 1.04 RESPONSIBILITIES

- A. The Contractor shall notify the Owners Representative prior to commencement of any testing.
- B. Any system, material or workmanship, which is found defective on the basis of acceptance tests, shall be reported.
- C. The testing firm shall maintain a written record of all tests and upon completion of project, assemble and certify a final test report.
- D. A stable source of 60 hertz power shall be provided for testing purposes by the Contractor. Owners Representative shall witness all tests and a minimum of 14 days notice shall be provided.

## 1.05 TEST EQUIPMENT

### A. Test Instrument Calibration

1. The testing firm shall have a calibration program that assures that all applicable test instrumentation is maintained within rated accuracy.
2. The accuracy shall be directly traceable to the National Bureau of Standards.
3. Instruments shall be calibrated in accordance with the following frequency schedule:
  - a. Field instruments: Analog - 6 months maximum  
Digital - 12 months maximum
  - b. Laboratory Instruments - 2 months
  - c. Leased specialty equipment - 12 months (where accuracy is guaranteed by lessor)
4. Dated calibration labels shall be visible on all test equipment.
5. Records must be kept up-to-date which show date and results of instruments calibrated or tested.
6. An up-to-date instrument calibration instruction and procedure will be maintained for each test instrument.
7. Calibrating standard shall be of higher accuracy than that of the instrument tested.

## 1.06 TEST REPORTS

### A. The test report shall include the following:

1. Summary of project.
2. Description of equipment/device tested.
3. Description of test, including date, time, and duration of test.
4. Test results.
5. Conclusions and recommendations.
6. Appendix, including appropriate test forms.
7. Identification of test equipment used.
8. Signature of responsible test organization authority.
9. Signature of the person witnessing the tests.
10. Furnish five copies of the complete report to the Owners Representative no later than thirty (30) days after completion of project unless otherwise directed.

## 1.07 SAFETY AND PRECAUTIONS

### A. Safety practices shall include, but are not limited to, the following requirements:

1. Occupational Safety and Health Act of 1970 - OSHA.
2. Accident Prevention Manual for Industrial Operations, National Safety Council, Chapter 4.
3. Applicable State safety operating procedures.
4. NETA Safety/Accident Prevention Program.
5. District's safety practices.
6. National Fire Protection Association - CECE.
7. ANSI Z244.1 American National Standards for Personnel Protection.

### B. All tests shall be performed with apparatus de-energized except where otherwise specifically required.

### C. The testing firm shall have a designated safety representative on the project to supervise operations with respect to safety.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION**

**3.01 EQUIPMENT VERIFICATIONS, TESTS AND CALIBRATIONS GENERAL**

- A. As part of the contract, the Contractor shall perform tests of installed work as herein specified and specified in other Sections of these Specifications.
- B. The Contractor shall provide all materials, equipment, labor and technical supervision to perform such tests and inspections.
- C. All tests shall be performed in compliance with the recommendations and requirements of the National Electrical Testing Association, Inc. (NETA), and applicable codes and standards.
- D. Upon completion of the tests and inspections noted in these Specifications, a label shall be attached to all serviced devices. These labels shall indicate date serviced and the service company responsible.
- E. The test and inspections shall determine suitability for continued reliable operation.
- F. All tests shall be conducted in the presence of the Owners Representative. Provide a minimum of two weeks notice to the Owners Representative.
- G. Furnish the necessary equipment and personnel to perform all required tests of all wiring and connections for continuity, short circuit, and improper grounds. Included, but not limited to, the following systems: substations, air interrupting switches, low voltage main and feeder circuit breakers, interlocking controls, panelboards, distribution transformers, branch circuits.

**3.02 SWITCHGEAR AND DISTRIBUTION BOARDS**

- A. Visual and mechanical inspection:
  - 1. Inspect for physical damage and code violations.
  - 2. Clean interior and exterior surfaces.
  - 3. Inspect for proper alignment, anchorage, and grounding.
  - 4. Check tightness of accessible bolted bus joints by torque wrench method. Tighten connections in accordance with industry standard torque levels.
  - 5. Make closure attempt on locked open devices. Make opening attempt on locked closed devices.
  - 6. Make exchange with devices operated in off-normal positions.
- B. Electrical tests:
  - 1. Measure insulation resistance of each bus section phase-to-phase and phase-to-ground.
  - 2. Inspect all accessible bus joints and cable connections by infrared scanner to detect loose or high-resistance connections and other circuit anomalies.
  - 3. Inspect correctness of control wiring.

**3.03 LOW VOLTAGE CIRCUIT BREAKERS**

- A. Visual and mechanical inspection:

1. Inspect for physical condition.
2. Inspect alignment and grounding.
3. Perform mechanical operator and contact alignment tests on the breaker and its operating mechanism in accordance with manufacturer's instructions.
4. Perform insulation resistance test on control wiring.
5. Clean mechanism, insulating surfaces and contacts.

B. Electrical tests:

1. Measure contact resistance.
2. Trip overcurrent protective device by operation of each protective device.
3. Perform an insulation resistance test phase-to-ground, phase-to-phase and across open contacts.
4. Perform insulation resistance test in accordance with Doble procedure.
5. Perform timing test with Travel Analyzer to insure proper contact overtravel and pressure.

3.04 CABLES, LOW VOLTAGE (600 VOLTS AND LESS)

A. Visual and mechanical inspections:

1. Inspect cables for physical damage and proper connection.
2. Torque test cable connection. Tighten connections in accordance with industry standards.
3. Perform infrared scan of all connections under loaded conditions.

B. Electrical tests: Perform insulation resistance test of each cable with respect to ground and adjacent cables.

3.05 GROUNDING SYSTEMS

A. Visual and mechanical inspection: Inspect ground system connections for completeness and adequacy.

3.06 GENERATOR AND AUTOMATIC TRANSFER SWITCH

A. Visual and mechanical inspection:

1. Inspect for physical damage and code violations.
2. Clean interior and exterior surfaces.
3. Inspect for proper alignment, anchorage, and grounding.
4. Check tightness of accessible bolted bus joints by torque wrench method. Tighten connections in accordance with industry standard torque levels.
5. Make closure attempt on locked open devices. Make opening attempt on locked closed devices.
6. Make exchange with devices operated in off-normal positions.

B. Electrical tests:

1. Measure insulation resistance of each bus section phase-to-phase and phase-to-ground.
2. Inspect all accessible bus joints and cable connections by infrared scanner to detect loose or high-resistance connections and other circuit anomalies.
3. Inspect correctness of control wiring.

- C. Start-Up and Testing: Coordinate all start-up and testing activities with the Generator supplier, Engineer and Owner. After installation is complete and normal power is available, the manufacturer's local dealer shall perform the following: Perform a 4 hour load bank test at a 1.0 PF at full nameplate rating. Loadbank, cables and other equipment required for this test to be supplied by the genset supplier.
- D. Training (On-Site Training): Provide on-site training to instruct the Owner's personnel in the proper operation and maintenance of the equipment. Review operation and maintenance manuals, parts manuals, and emergency service procedures.

**END OF SECTION**

SECTION 26 09 23

LIGHTING CONTROL DEVICES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Remote control lighting relays.
2. Lighting contactors.
3. Switches.
4. Switch plates.
5. Occupancy sensors.
6. Photocells.
7. Photocell control unit.

B. Related Sections:

1. Section 26 05 03 - Equipment Wiring Connections: Execution requirements for electric connections specified by this section.
2. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables.
3. Section 26 05 33 - Raceway and Boxes for Electrical Systems: Product requirements for raceway and boxes for placement by this section.
4. Section 26 05 53 - Identification for Electrical Systems: Product requirements for electrical identification items for placement by this section.
5. Section 26 24 16 - Panelboards.
6. Section 26 27 26 - Wiring Devices: Product requirements for wiring devices for placement by this section.

1.02 REFERENCES

A. National Electrical Manufacturers Association:

1. NEMA AB 1 - Molded Case Circuit Breakers and Molded Case Switches.
2. NEMA FU 1 - Low Voltage Cartridge Fuses.
3. NEMA ICS 2 - Industrial Control and Systems: Controllers, Contractors, and Overload Relays, Rated Not More Than 2000 Volts AC or 750 Volts DC.
4. NEMA ICS 4 - Industrial Control and Systems: Terminal Blocks.
5. NEMA ICS 5 - Industrial Control and Systems: Control Circuit and Pilot Devices.
6. NEMA ICS 6 - Industrial Control and Systems: Enclosures.
7. NEMA KS 1 - Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum).

1.03 SYSTEM DESCRIPTION

- A. Distributed switching control using self contained individually mounted lighting relays.
- B. Where indicated on drawings or required by applicable code, provide automatic shutoff for lighting inside building larger than 5000 square feet. Control shutoff by method conforming to ICC IECC.



- C. Where indicated on drawings or required by applicable code, provide automatic shutoff for lighting outside building. Control shutoff by method conforming to ICC IECC.

#### 1.04 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Shop Drawings: Indicate dimensioned drawings of lighting control system components and accessories.
  - 1. One Line Diagram: Indicating system configuration indicating panels, number and type of switches or devices.
  - 2. Include typical wiring diagrams for each component.
- C. Product Data: Submit manufacturer's standard product data for each system component.
- D. Manufacturer's Installation Instructions: Submit for each system component.

#### 1.05 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
- B. Project Record Documents: Record the following information:
  - 1. Actual locations of components and record circuiting and switching arrangements.
  - 2. Wiring diagrams reflecting field installed conditions with identified and numbered, system components and devices.
- C. Operation and Maintenance Data:
  - 1. Submit replacement parts numbers.
  - 2. Submit manufacturer's published installation instructions and operating instructions.
  - 3. Recommended renewal parts list.

#### 1.06 QUALITY ASSURANCE

- A. Perform Work in accordance with requirements of NFPA 70.
- B. Maintain one copy of each document on site.

#### 1.07 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.

#### 1.08 PRE-INSTALLATION MEETINGS

- A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.
- B. Convene minimum one week prior to commencing work of this section.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Accept components on site in manufacturer's packaging. Inspect for damage.
- C. Protect components by storing in manufacturer's containers indoor protected from weather.

1.10 WARRANTY

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for warranties.
- B. Furnish five year manufacturer warranty for components.

1.11 EXTRA MATERIALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for extra materials.
- B. Furnish two of each switch type.
- C. Furnish two of each occupancy sensor type.
- D. Furnish two of each photocell type.

**PART 2 PRODUCTS**

2.01 REMOTE CONTROL LIGHTING RELAYS

- A. Manufacturers:
  - 1. GE Electrical.
  - 2. Cutler-Hammer.
  - 3. Square D.
  - 4. Siemens.
  - 5. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: Heavy duty, single-coil momentary contact mechanically held remote control relays.
- C. Contacts: Rated 20 amperes at 277 volts. Rated for lighting applications with high intensity discharge (HID) and fluorescent lamps.
- D. Line Voltage Connections: Clamp type screw terminals.
- E. Enclosure: NEMA ICS 6, to meet conditions. Fabricate enclosure from steel finished with manufacturer's standard gray enamel.
  - 1. Interior Dry Locations: Type 1.
  - 2. Exterior Locations: Type 3R.

2.02 LIGHTING CONTACTORS

- A. Manufacturers:

1. GE Electrical.
  2. Cutler-Hammer.
  3. Square D.
  4. Siemens.
  5. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: NEMA ICS 2, magnetic lighting contactor.
- C. Configuration: Electrically held, 3 wire control.
- D. Coil Operating Voltage: 24 volts, 60 Hertz.
- E. Poles: To match circuit configuration and control function.
- F. Contact Rating: Conductor overcurrent protection, considering derating for continuous loads.
- G. Accessories:
1. Cover Mounted Pilot Devices: NEMA ICS 5, heavy-duty oiltight type with Form Z contacts, rated A150.
  2. Pushbutton: ON/OFF function, with lockable configuration.
  3. Selector Switch: ON/OFF/AUTOMATIC function, with rotary action.
  4. Indicating Light: Green lens, resistor type, with led lamp.
  5. Auxiliary Contacts: One, field convertible in addition to seal-in contact.
  6. Relays: NEMA ICS 2.
  7. Control Power Transformers: 120 volt secondary, 200 VA minimum, in each enclosed contactor. Furnish fused primary and secondary, and bond unfused leg of secondary to enclosure.
- H. Enclosure: NEMA ICS 6, to meet conditions. Fabricate enclosure from steel finished with manufacturer's standard gray enamel.
1. Interior Dry Locations: Type 1.
  2. Exterior Locations: Type 3R.

## 2.03 SWITCHES

- A. Manufacturers:
1. Hubbell Incorporated.
  2. Leviton Manufacturing Co.
  3. Pass and Seymour/Legrand.
  4. Substitutions: Section 01 60 00 - Product Requirements.
- B. Wall Switch: Specification Grade pilot light, momentary pushbutton type for overriding relays.
1. Material: Stainless steel.
  2. Color: White.
- C. Key Switch: Cylinder lock type. Match non-key switch ratings.
- D. Switches with Pilot Lamp: Momentary contact, three position rocker type, ivorycolor, rated 3 amperes at 25 VAC, with integral red pilot light.

## 2.04 SWITCH PLATES

### A. Manufacturers:

1. Hubbell Incorporated.
2. Leviton Manufacturing Co.
3. Pass and Seymour/Legrand.
4. Substitutions: Section 01 60 00 - Product Requirements.

### B. Product Description: Specification Grade.

1. Material: Stainless steel.

## 2.05 OCCUPANCY SENSOR

### A. Manufacturers:

1. Leviton.
2. Douglas Lighting Controls.
3. Novitas.
4. Watt Stopper.
5. Substitutions: Section 01 60 00 - Product Requirements.

### B. Compatible with modular relay panels. Capable of being wired directly to Class 2 wiring without auxiliary components or devices.

### C. Separate sensitivity and time delay adjustments with LED indication of sensed movement. User adjustable time-delay: 30 seconds to 12 minutes.

### D. Furnish with manual override.

### E. Operation: Silent.

### F. Room Sensors: As indicated on Drawings.

### G. Corridor and Hallway Sensors:

1. Capable of detecting motion 14 feet wide and 80 feet long with one sensor mounted 10 feet above floor.
2. Capable of detecting motion in warehouse aisle 10 feet wide and 60 feet long or 100 feet long when mounted 22 feet above floor.
3. Capable of being wired in master-slave configuration to extend area of coverage.

## 2.06 PHOTOCELLS

### A. Manufacturers:

1. Leviton.
2. Douglas Lighting Controls.
3. Novitas.
4. Watt Stopper.
5. Substitutions: Section 01 60 00 - Product Requirements.

- B. General: Consist of sensor mounted with separate control-calibration module. Sensor connected to control-calibration module via single shielded conductor with maximum distance of 500 feet. Control unit powered by 24 VAC.
- C. Control-Calibration Module: Furnish with the following:
  - 1. Capable of being switched between 4 measurement ranges.
  - 2. Separate trip points for high and low response settings.
  - 3. Momentary contact device to override photocell relays.
  - 4. Three minute time delay between switching outputs to avoid nuisance tripping.
- D. Sensor Devices: Each sensor employs photo diode technology to allow linear response to daylight within illuminance range.
  - 1. Exterior Lighting: Hooded sensor, horizontally mounted, employing flat lens, and working range 10-100 footcandles in 10 percent increments. Entire sensor encased in optically clear epoxy resin.
  - 2. Indoor Lighting: Sensor with Fresnel lens providing for 60 degree cone shaped response area to monitor indoor office lighting levels.
  - 3. Atriums: Sensor with translucent dome with 180 degree field of view and respond in range of 100-1,000 footcandles.
  - 4. Skylights: Sensor with translucent dome with 180 degree field of view and respond in range of 1,000-10,000 footcandles.

## 2.07 PHOTOCELL CONTROL UNIT

- A. Manufacturers:
  - 1. Leviton.
  - 2. Douglas Lighting Controls.
  - 3. Novitas.
  - 4. Watt Stopper.
  - 5. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: Photodiode control unit with PHOTOCELL ENABLE and MASTER OVERRIDE inputs for remote control, 3 minute time delay, and with selectable ranges for 1-10 footcandle.

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Mount switches, occupancy sensors, and photocells as indicated on Drawings.
- B. Install wiring in accordance with Section 26 05 19.
- C. Use only properly color coded, stranded wire. Install wire sizes as indicated on Drawings. Install wire in conduit in accordance with Section 26 05 33.
- D. Label each low voltage wire clearly indicating connecting relay panel. Refer to Section 26 05 53.
- E. Mount relay as indicated on Drawings. Wire numbered relays in panel to control power to each load. Install relays to be accessible. Allow space around relays for ventilation and circulation of air.

- F. Identify power wiring with circuit breaker number controlling load. When multiple circuit breaker panels are feeding into relay panel, label wires to indicate originating panel designation.
- G. Label each low voltage wire with relay number at each switch or sensor.

### 3.02 MANUFACTURER'S FIELD SERVICES

- A. Section 01 40 00 - Quality Requirements: Requirements for manufacturer's field services.
- B. Furnish services for minimum of one day for check, test, and start-up. Perform the following services:
  - 1. Check installation of panelboards.
  - 2. Test operation of remote controlled devices.
  - 3. Repair or replace defective components.

### 3.03 ADJUSTING

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for starting and adjusting.
- B. Test each system component after installation to verify proper operation.
- C. Test relays, contactors, and switches after installation to confirm proper operation.
- D. Confirm correct loads are recorded on directory card in each panel.

### 3.04 DEMONSTRATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for demonstration and training.
- B. Demonstrate operation of the following system components:
  - 1. Operation of switches.
  - 2. Operation of each type of occupancy sensors.
  - 3. Operation of each type of photocell.
- C. Furnish 4 hours to instruct Owner's personnel in operation and maintenance of system. Schedule training with Owner, provide at least 7 days notice of training date to Owner.

END OF SECTION

SECTION 26 27 16

ELECTRICAL CABINETS AND ENCLOSURES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Hinged cover enclosures.
2. Cabinets.
3. Terminal blocks.
4. Accessories.

B. Related Requirements:

1. Section 26 05 26 - Grounding and Bonding for Electrical Systems.
2. Section 26 05 29 - Hangers and Supports for Electrical Systems.
3. Section 26 05 33 - Raceway and Boxes for Electrical Systems.
4. Section 27 05 33 - Conduits and Backboxes for Communications Systems.
5. Section 28 05 33 - Conduits and Backboxes for Electronic Safety and Security.

1.02 REFERENCE STANDARDS

A. National Electrical Manufacturers Association:

1. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
2. NEMA ICS 4 - Industrial Control and Systems: Terminal Blocks.

1.03 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Product Data: Submit manufacturer's standard data for enclosures, cabinets, and terminal blocks.

C. Manufacturer's Instructions: Submit application conditions and limitations of use stipulated by product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.04 MAINTENANCE MATERIAL SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for maintenance materials.

B. Extra Stock Materials:

1. Furnish two of each key.

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.

PART 2 PRODUCTS

2.01 HINGED COVER ENCLOSURES

A. Manufacturers:

1. Cooper B-Line.
2. Hammond Stahlin.
3. Hoffman Engineering Company
4. Hubbell Wiring Devices
5. Reliance Electric
6. Substitutions: Section 01 60 00 - Product Requirements.

B. Description: NEMA 250, Type 1 or 3R galvanized steel enclosure.

1. Covers: Continuous hinge, held closed by flush latch operable by key.
2. Furnish interior plywood panel for mounting terminal blocks and electrical components; finish with white enamel.
3. Enclosure Finish: Manufacturer's standard enamel.

2.02 CABINETS

A. Manufacturers:

1. Cooper B-Line.
2. Hammond Stahlin.
3. Hoffman Engineering Company
4. Hubbell Wiring Devices
5. Reliance Electric
6. Substitutions: Section 01 60 00 - Product Requirements.

B. Description:

1. Boxes: Galvanized steel.
2. Box Size: 24 inches wide x 30 inches high x 6 inches deep.
3. Backboard: Furnish 3/4 inch thick plywood backboard for mounting terminal blocks. Paint matte white.
4. Fronts: Steel, flush or surface type with door with concealed hinge, and flush lock.
5. Knockouts: None.

C. Fabrication

1. Furnish metal barriers to form separate compartments wiring of different systems and voltages.
2. Furnish accessory feet for free-standing equipment.

D. Finishes:

1. Finish with gray baked enamel.



## 2.03 TERMINAL BLOCKS

### A. Manufacturer List:

1. Entelec Inc.
2. Phoenix Contact.
3. Weidmuller.
4. Substitutions: Section 01 60 00 - Product Requirements.

### B. Description:

1. Terminal Blocks: NEMA ICS 4.
2. Power Terminals: Unit construction type with closed back and tubular pressure screw connectors, rated 600 volts.
3. Signal and Control Terminals: Modular construction type, suitable for channel mounting, with tubular pressure screw connectors, rated 300 volts.
4. Furnish ground bus terminal block, with each connector bonded to enclosure.

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Install enclosures and boxes plumb. Anchor securely to wall and structural supports at each corner in accordance with Section 26 05 29.
- B. Install cabinet fronts plumb.

### 3.02 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.
- B. Clean electrical parts to remove conductive and harmful materials.
- C. Remove dirt and debris from enclosure.
- D. Clean finishes and touch up damage.

END OF SECTION

**SECTION 26 27 2**

**WIRING DEVICES**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section includes wall switches; wall dimmers; receptacles; multioutlet assembly; and device plates and decorative box covers.
- B. Related Sections:
  - 1. Section 26 05 33 - Raceway and Boxes for Electrical Systems: Outlet boxes for wiring devices.
  - 2. Section 26 05 34 - Floor Boxes for Electrical Systems: Service fittings for receptacles installed on floor boxes.
  - 3. Section 26 05 34 - Floor Boxes for Electrical Systems: Poke-through receptacles.

**1.02 REFERENCES**

- A. National Electrical Manufacturers Association:
  - 1. NEMA WD 1 - General Requirements for Wiring Devices.
  - 2. NEMA WD 6 - Wiring Devices-Dimensional Requirements.

**1.03 SUBMITTALS**

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit manufacturer's catalog information showing dimensions, colors, and configurations.
- C. Samples: Submit two samples of each wiring device and wall plate illustrating materials, construction, color, and finish.

**1.04 QUALIFICATIONS**

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.

**1.05 EXTRA MATERIALS**

- A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.
- B. Furnish 20 of each style, size, and finish wall plate.

**PART 2 PRODUCTS**

**2.01 WALL SWITCHES**

- A. Manufacturers:

1. Cooper Wiring Devices.
  2. Hubbell, Inc.
  3. Leviton Manufacturing Company.
  4. Pass and Seymour.
  5. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: NEMA WD 1, Heavy-Duty, Specification grade decorator serves toggle switch (to match building).
- C. Body and Handle: White plastic with toggle handle.
- D. Indicator Light: Separate pilot strap; red color lens.
- E. Locator Light: Lighted handle type switch; red color handle.
- F. Ratings: Match branch circuit and load characteristics.

## 2.02 WALL DIMMERS

- A. Manufacturers:
1. Cooper Wiring Devices.
  2. Hubbell, Inc.
  3. Leviton Manufacturing Company.
  4. Pass and Seymour.
  5. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: NEMA WD 1, Type I semiconductor dimmer for incandescent lamps.
- C. Body and Handle: White plastic with linear slide.
- D. Voltage: 120 -277 volts.
- E. Power Rating: Match load shown on drawings; 600 watts minimum.
- F. Accessory Wall Switch: Match dimmer appearance.

## 2.03 RECEPTACLES

- A. Manufacturers:
1. Cooper Wiring Devices.
  2. Hubbell, Inc.
  3. Leviton Manufacturing Company.
  4. Pass and Seymour.
  5. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: Heavy-duty specification grade decorator style receptacle (to match building).
- C. Device Body: White plastic.
- D. Configuration: NEMA WD 6, type as indicated on Drawings.

- E. Convenience Receptacle: Type 5-20.
- F. GFCI Receptacle: Convenience receptacle with integral ground fault circuit interrupter to meet regulatory requirements.

#### 2.04 WALL PLATES

- A. Manufacturers:
  - 1. Cooper Wiring Devices.
  - 2. Hubbell, Inc.
  - 3. Leviton Manufacturing Company.
  - 4. Pass and Seymour.
  - 5. Substitutions: Section 01 60 00 - Product Requirements.
- B. Cover Plate: White color smooth nylon style line (to match building).
- C. Weatherproof Cover Plate: Gasketed cast galvanized metal plate with threaded and gasketed device cover.

#### 2.05 MULTIOUTLET ASSEMBLY

- A. Manufacturers:
  - 1. Cooper Wiring Devices.
  - 2. Hubbell, Inc.
  - 3. Leviton Manufacturing Company.
  - 4. Pass and Seymour.
  - 5. Substitutions: Section 01 60 00 - Product Requirements.
- B. Multi-outlet Assembly: Sheet metal channel with fitted cover, with pre-wired receptacles, suitable for use as multi-outlet assembly.
- C. Size: As indicated on Drawings.
- D. Receptacles: Furnish covers and accessories to accept convenience receptacles specified in this Section.
- E. Receptacle Spacing: As indicated on Drawings.
- F. Receptacle Color: Black.
- G. Channel Finish: Ivory enamel.
- H. Fittings: Furnish manufacturer's standard couplings, elbows, and connectors

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify outlet boxes are installed at proper height.

- C. Verify wall openings are neatly cut and completely covered by wall plates.
- D. Verify branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

### 3.02 PREPARATION

- A. Clean debris from outlet boxes.

### 3.03 EXISTING WORK

- A. Disconnect and remove abandoned wiring devices.
- B. Modify installation to maintain access to existing wiring devices to remain active.
- C. Clean and repair existing wiring devices to remain or to be reinstalled.

### 3.04 INSTALLATION

- A. Install devices plumb and level.
- B. Install switches with OFF position down.
- C. Install wall dimmers to achieve full rating specified and indicated after derating for ganging as instructed by manufacturer.
- D. Do not share neutral conductor on load side of dimmers.
- E. Install receptacles with grounding pole on top.
- F. Connect wiring device grounding terminal to outlet box with bonding jumper and branch circuit equipment grounding conductor.
- G. Install wall plates on flush mounted switches, receptacles, and blank outlets.
- H. Install decorative plates on switch, receptacle, and blank outlets in finished areas.
- I. Connect wiring devices by wrapping solid conductor around screw terminal. Install stranded conductor for branch circuits 10 AWG and smaller. When stranded conductors are used in lieu of solid, use crimp on fork terminals for device terminations. Do not place bare stranded conductors directly under device screws.
- J. Use jumbo size plates for outlets installed in masonry walls.
- K. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.

### 3.05 INTERFACE WITH OTHER PRODUCTS

- A. Coordinate locations of outlet boxes provided under Section 26 05 33 to obtain mounting heights as specified or as indicated on drawings.
- B. Install wall switch 48 inches above finished floor.

- C. Install convenience receptacle 18 inches above finished floor.
- D. Install convenience receptacle 6 inches above counter or centered in back splash of counter.
- E. Install top of dimmer 48 inches above finished floor.
- F. Coordinate installation of wiring devices with floor box service fittings provided under Section 26 05 34.

3.06 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements, 01 70 00 - Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Inspect each wiring device for defects.
- C. Operate each wall switch with circuit energized and verify proper operation.
- D. Verify each receptacle device is energized.
- E. Test each receptacle device for proper polarity.
- F. Test each GFCI receptacle device for proper operation.

3.07 ADJUSTING

- A. Section 01 70 00 - Execution and Closeout Requirements: Testing, adjusting, and balancing.
- B. Adjust devices and wall plates to be flush and level.

3.08 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.
- B. Clean exposed surfaces to remove splatters and restore finish.

**END OF SECTION**

**SECTION 26 51 00**  
**INTERIOR LIGHTING**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section includes interior luminaires, lamps, ballasts, and accessories.
- B. Related Sections:
  - 1. Section 26 05 26 - Grounding and Bonding for Electrical Systems.
  - 2. Section 26 05 33 - Raceway and Boxes for Electrical Systems.
  - 3. Section 26 52 00 - Emergency Lighting.

**1.02 REFERENCES**

- A. American National Standards Institute:
  - 1. ANSI C82.1 - American National Standard for Lamp Ballast-Line Frequency Fluorescent Lamp Ballast.
  - 2. ANSI C82.4 - American National Standard for Ballasts-for High-Intensity-Discharge and Low-Pressure Sodium Lamps (Multiple-Supply Type).

**1.03 SUBMITTALS**

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate dimensions and components for each luminaire not standard product of manufacturer.
- C. Product Data: Submit dimensions, ratings, and performance data.

**1.04 QUALIFICATIONS**

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

**1.05 FIELD MEASUREMENTS**

- A. Verify field measurements prior to fabrication.

**1.06 MAINTENANCE MATERIALS**

- A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.
- B. Furnish 20 of each plastic lens type.
- C. Furnish two replacement lamps for each lamp installed.
- D. Furnish 20 of each ballast type.

## PART 2 PRODUCTS

### 2.01 INTERIOR LUMINAIRES

- A. Product Description: Complete interior luminaire assemblies, with features, options, and accessories as scheduled.
- B. Refer to Section 01 60 00 - Product Requirements for product options.

### 2.02 FLUORESCENT BALLASTS

- A. Manufacturers:
  - 1. General Electric.
  - 2. Hubbell Lighting.
  - 3. Magnetek, Inc.
  - 4. Philips Electronics North America.
  - 5. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: Electronic ballast rapid start less than 10 percent THD. High-power-factor type electromagnetic ballast certified by Certified Ballast Manufacturers, Inc. to comply with ANSI C82.1, suitable for lamps specified, with voltage to match luminaire voltage.

### 2.03 HIGH INTENSITY DISCHARGE (HID) BALLASTS

- A. Manufacturers:
  - 1. General Electric.
  - 2. Philips Electronics North America.
  - 3. Siemens Corp.
  - 4. Venture Lighting International, Inc.
  - 5. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: ANSI C82.4, metal halide lamp ballast, suitable for lamp specified, with voltage to match luminaire voltage.

### 2.04 FLUORESCENT DIMMING BALLASTS AND CONTROLS

- A. Manufacturers:
  - 1. Lutron.
  - 2. Magnetek, Inc.
  - 3. General Electric.
  - 4. Hubbell Inc.
  - 5. Pass & Seymour.
  - 6. Thomas Industries.
  - 7. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: Electrical assembly of control unit and ballast to furnish smooth dimming of fluorescent lamps.
- C. Control Unit: Linear slide type, rated 1500 watts at 277 volts.



- D. Ballast: Selected by dimming system manufacturer as suitable for operation with control unit and suitable for lamp type and quantity specified for luminaire.

## 2.05 FLUORESCENT LAMPS

### A. Manufacturers:

1. General Electric Co.
2. Hubbell Inc.
3. Philips Electronics.
4. Substitutions: Section 01 60 00 - Product Requirements.

## 2.06 HID LAMPS

### A. Manufacturers:

1. Duro-Test Corp.
2. General Electric Co
3. Philips Electronic North America
4. RCS Industries North America
5. Siemens Corp.
6. Substitutions: Section 01 60 00 - Product Requirements.

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Install suspended luminaires using pendants supported from swivel hangers. Install pendant length required to suspend luminaire at indicated height.
- B. Support luminaires larger than 2 x 4 foot size independent of ceiling framing.
- C. Locate recessed ceiling luminaires as indicated on Drawings.
- D. Install surface mounted luminaires plumb and adjust to align with building lines and with each other. Secure to prevent movement.
- E. Exposed Grid Ceilings: Support surface-mounted luminaires on grid ceiling directly from building structure. Fasten surface mounted luminaires to ceiling grid members using bolts, screws, rivets, or suitable clips.
- F. Install recessed luminaires to permit removal from below.
- G. Install recessed luminaires using accessories and firestopping materials to meet regulatory requirements for fire rating.
- H. Install clips to secure recessed grid-supported luminaires in place.
- I. Install wall-mounted luminaires at height as indicated on Drawings.
- J. Install accessories furnished with each luminaire.
- K. Connect luminaires to branch circuit outlets provided under Section 26 05 33 using flexible conduit.

- L. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within luminaire.
- M. Install specified lamps in each luminaire.
- N. Ground and bond interior luminaires in accordance with Section 26 05 26.

### 3.02 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements, 01 70 00 - Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Operate each luminaire after installation and connection. Inspect for proper connection and operation.

### 3.03 ADJUSTING

- A. Section 01 70 00 - Execution and Closeout Requirements: Testing, adjusting, and balancing.
- B. Aim and adjust luminaires as indicated on Drawings.

### 3.04 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.
- B. Remove dirt and debris from enclosures.
- C. Clean photometric control surfaces as recommended by manufacturer.
- D. Clean finishes and touch up damage.

### 3.05 PROTECTION OF FINISHED WORK

- A. Section 01 70 00 - Execution and Closeout Requirements: Protecting finished work.
- B. Relamp luminaires having failed lamps at Substantial Completion.

**END OF SECTION**

**SECTION 26 52 00**  
**EMERGENCY LIGHTING**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section includes emergency lighting units and exit signs.
- B. Related Sections:
  - 1. Section 26 05 26 - Grounding and Bonding for Electrical Systems.
  - 2. Section 26 05 33 - Raceway and Boxes for Electrical Systems.
  - 3. Section 26 51 00 - Interior Lighting: Exit signs.

**1.02 REFERENCES**

- A. National Electrical Manufacturers Association:
  - 1. NEMA WD 6 - Wiring Devices-Dimensional Requirements.

**1.03 SYSTEM DESCRIPTION**

- A. Emergency lighting to comply with requirements.

**1.04 SUBMITTALS**

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit dimensions, ratings, and performance data.

**1.05 QUALIFICATIONS**

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum five years documented experience.

**1.06 MAINTENANCE MATERIALS**

- A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.
- B. Furnish 12 replacement lamps for each lamp installed.
- C. Furnish six replacement batteries for each battery type and size.

**PART 2 PRODUCTS**

**2.01 EMERGENCY LIGHTING UNITS**

- A. Products: As shown on schedule on drawings.
  - 1. Substitutions: Section 01 60 00 - Product Requirements.

- B. Product Description: Self-contained emergency lighting unit.
- C. Battery: 12 volt, nickel-cadmium type, with 1.5 hour capacity.
- D. Battery Charger: Dual-rate type, with sufficient capacity to recharge discharged battery to full charge within twelve hours.
- E. Lamps: Hydrogen or LED.

## 2.02 EXIT SIGNS

- A. Products: As shown on schedule on drawings.
  - 1. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: Exit sign fixture suitable for use as emergency lighting unit.
- C. Face: plastic face with green letters on white background
- D. Directional Arrows: Universal type for field adjustment.
- E. Mounting: Universal, for field selection.
- F. Battery: 12 volt, nickel-cadmium type, with 1.5 hour capacity.
- G. Battery Charger: Dual-rate type, with sufficient capacity to recharge discharged battery to full charge within twelve hours.
- H. Lamps: LED, 5 W per side, maximum.
- I. Input Voltage: As shown on schedule on drawings.

## 2.03 FLUORESCENT LAMP EMERGENCY POWER SUPPLY

- 1. Bodine.
- 2. Substitutions: Section 01 60 00 - Product Requirements.
- B. Product Description: Emergency battery power supply suitable for installation in ballast compartment of fluorescent luminaire.
- C. Lamp Ratings: One lamp providing 1100 lumens, minimum.
- D. Battery: Sealed lead calcium type, rated for 10 year life.
- E. Include TEST switch and AC ON indicator light, installed to be operable and visible from outside of assembled luminaire.

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Install suspended exit signs using pendants supported from swivel hangers. Install pendant length required to suspend sign at indicated height.

- B. Install surface-mounted emergency lighting units and exit signs plumb and adjust to align with building lines and with each other. Secure to prevent movement.
- C. Install wall-mounted emergency lighting units and exit signs at height as indicated on Drawings.
- D. Install accessories furnished with each emergency lighting unit and exit sign.
- E. Connect emergency lighting units and exit signs to branch circuit as indicated on Drawings.
- F. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within unit.
- G. Install specified lamps in each emergency lighting unit and exit sign.
- H. Ground and bond emergency lighting units and exit signs in accordance with Section 26 05 26.

### 3.02 FIELD QUALITY CONTROL

- A. Section 01 70 00 - Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Operate each unit after installation and connection. Inspect for proper connection and operation.

### 3.03 ADJUSTING

- A. Section 01 70 00 - Execution and Closeout Requirements: Testing, adjusting, and balancing.
- B. Aim and adjust lamp fixtures as indicated on Drawings.
- C. Position exit sign directional arrows as indicated on Drawings.

### 3.04 PROTECTION OF FINISHED WORK

- A. Section 01 70 00 - Execution and Closeout Requirements: Protecting finished work.
- B. Relamp emergency lighting units and exit signs having failed lamps at Substantial Completion.

**END OF SECTION**

***County of Riverside  
Purchasing and Fleet Service  
Riverside County Innovation Center (RCIC), Tenant Improvements  
RFQ #FMARC-202***



**ADDENDUM NO. 1  
January 9, 2014**

Purchasing and Fleet Services  
Joseph Angelone / Procurement Contract Specialist  
Greg Claflin / Buyer II  
2980 Washington Street  
Riverside, CA 92504  
[joeangelone@rivcoeda.org](mailto:joeangelone@rivcoeda.org)  
[gaclaflin@rivcoeda.org](mailto:gaclaflin@rivcoeda.org)  
(951) 222-3239 Phone  
(951) 955-3730 Fax  
NIGP Code: 96800

**ADDENDUM NO. 1**  
**TO RFQ #FMARC-202**

1.0 This addendum is considered to be part of the RFQ. All other terms of the RFQ remain unchanged and in effect. This addendum is intended to provide additional information and/or to change requirements in the above referenced RFQ. Any information contained herein will be considered part of the RFQ and as such will be used in the evaluation of the bid responses. Attention all potential bidders, if you have already submitted your quote prior to the bid closing date, please review this addendum and re-submit your bid response, should this addendum modify your initial bid response.

2.0 Return your Quote to:

County of Riverside  
Purchasing and Fleet Services  
2980 Washington Street  
Riverside, CA 92504  
Attn: Joseph Angelone  
RFQ # FMARC-202  
**NEW CLOSING DATE January 23, 2014**  
Contact Information:  
Email: [joeangelone@rivcoeda.org](mailto:joeangelone@rivcoeda.org)  
Fax: 951-955-3730

3.0 The information in this addendum is primarily the result of a bidding firm(s) inquires and or County clarifications.

4.0 **Clarifications from the County:**

4.1 Contractors who attended the mandatory bidder's conference on January 7, 2014 and seek an additional site visit (or their sub-contractors) may contact Sergio Pena @ 951.955.2809 or e-mail @ [sepena@rivcoeda.org](mailto:sepena@rivcoeda.org) . The additional site visit to be held on January 14, 2014 at 9:00 a.m. (PST). The location is at the site entrance of 3450 14<sup>th</sup> Street, Riverside, CA 92501.

4.2 The *Deadline for Submission of Questions* has changed From: Deadline for Submission of Questions, Date: January 8, 2014, Time: 10:00 a.m. (PST), To: **DEADLINE FOR SUBMISSION OF QUESTIONS, Date: January 15, 2014, Time: 10:00 a.m. (PST).**

4.3 The *Deadline for Quotations* has changed From: Deadline for Quotations, Date: January 16, 2014 on or before 1:30 p.m. (PST), To: **DEADLINE FOR QUOTATIONS, Date: January 23, 2014 on or before 1:30 p.m., (PST).**

4.4 The contact for submission of questions in Section 3.0 TIMELINES, Item # 4 has changed from [esydow@rivcoeda.org](mailto:esydow@rivcoeda.org) To: [joeangelone@rivcoeda.org](mailto:joeangelone@rivcoeda.org) .

4.5 Delete Paragraph A (Prior to receipt of Bids) in its entirety from Section 01 63 00 – Product Substitution Procedures, Article 1.03 of Proposed Substitution Procedures.

**ALL OTHER ITEMS REMAIN THE SAME**

***County of Riverside***  
***Purchasing and Fleet Service***  
***Riverside County Innovation Center (RCIC), Tenant Improvements***  
***RFQ #FMARC-202***



**ADDENDUM NO. 2**  
**January 21, 2014**

Purchasing and Fleet Services  
Joseph Angelone / Procurement Contract Specialist  
Greg Claffin / Buyer II  
2980 Washington Street  
Riverside, CA 92504  
[joeangelone@rivcoeda.org](mailto:joeangelone@rivcoeda.org)  
[gaclaffin@rivcoeda.org](mailto:gaclaffin@rivcoeda.org)  
(951) 222-3239 Phone  
(951) 955-3730 Fax  
NIGP Code: 96800



**ADDENDUM NO. 2**  
**TO RFQ #FMARC-202**

1.0 This addendum is considered to be part of the RFQ. All other terms of the RFQ remain unchanged and in effect. This addendum is intended to provide additional information and/or to change requirements in the above referenced RFQ. Any information contained herein will be considered part of the RFQ and as such will be used in the evaluation of the bid responses. Attention all potential bidders, if you have already submitted your quote prior to the bid closing date, please review this addendum and re-submit your bid response, should this addendum modify your initial bid response.

2.0 Return your Quote to:

County of Riverside  
Purchasing and Fleet Services  
2980 Washington Street  
Riverside, CA 92504  
Attn: Joseph Angelone  
RFQ # FMARC-202  
**NEW CLOSING DATE January 30, 2014**  
Contact Information:  
Email: [joeangelone@rivcoeda.org](mailto:joeangelone@rivcoeda.org)  
Fax: 951-955-3730

3.0 The information in this addendum is primarily the result of a bidding firm(s) inquires and or County clarifications.

4.0 Clarifications from the County:

4.1 The *Deadline for Quotations* has changed once again From: Deadline for Quotations, Date: January 23, 2014 on or before 1:30 p.m. (PST), To: **DEADLINE FOR QUOTATIONS, Date: January 30, 2014 on or before 1:30 p.m., (PST).**

4.2 Revisions to the Project Manual and Drawings project (noted on pages 3 through 7) of this addendum #2.

4.3 Replace page 5 of 18, Contractors QUOTE of the original bid document with the REVISED Contractors QUOTE, noted on page 8 of this addendum #2.

4.4 Revisions to the Electrical Drawings (ESK-001 through ESK-020 are noted on (pages 9 through 20) of this addendum #2.

4.5 Revisions to the Architectural Drawings (ASK-001 through ASK-021 are noted on (pages 21 through 41) of this addendum #2.

4.6 Revisions to the AV Cabinet (noted on pages 42 through 46) of this addendum #2.

4.7 Revisions to the Door Hardware (noted on pages 47 through 64) of this addendum #2.

4.8 Revisions to the Submittals Procedures (noted on pages 65 through 69) of this addendum #2.

**ALL OTHER ITEMS REMAIN THE SAME**

## Item: Description:

**1.0 NOTICE INVITING BIDS**

## 1.1 Instructions to Bidders:

1.1.0 Additional information: the original building record drawings will be provided to the Contractor for reference purposes.

## 1.2 Contractor's Quote:

1.2.0 Contract time: Bidder agrees to complete work within an additional forty-five (45) calendar days thereafter for Alternates 1 and/or 2. The time for completion of base bid work shall remain forty-five (45) calendar days.

**2.0 PROJECT MANUAL**

## 2.1 SECTION 00 01 10 – TABLE OF CONTENTS

## 2.1.1 Division 6:

2.1.1.1 Revise Section 06 41 00 – Wood Casework to become Section 06 40 00 – Laminate-Clad Wood Casework (title of spec changed only).

## 2.2 SECTION 01 11 00 – SUMMARY OF WORK

2.2.1 Item 1.10 B, normal business working hours shall be 7:00a.m. to 5:00p.m. After hours and weekend work is allowed upon County approval.

## 2.3 SECTION 01 31 13 – COORDINATION

2.3.1 The Owner may occupy some portions of the premises in and around the Project areas of work. Contractor shall coordinate with County for relocation of furniture as required to complete work.

## 2.4 SECTION 01 33 00 – SUBMITTAL PROCEDURES

2.4.1 Replace specification Section 01 33 00 with the attached specification Section 01 33 00 in its entirety (revised Article 1.02 Submittal Requirements to become Electronic Submittals).

## 2.5 SECTION 01 73 29 – CUTTING AND PATCHING

2.5.1 Item 3.03C.4: where painting occurs on patched wall and ceiling surfaces, paint the entire surface area corner-to-corner so that the surface is a uniform finish.

## 2.6 SECTION 01 74 19 – CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

2.6.1 Salvage material as necessary where indicated on the plans. Alert County Project Manager should materials to be salvaged cannot be salvaged.

## 2.7 SECTION 08 71 00 – DOOR HARDWARE

2.7.1 Replace specification Section 08 71 00 with the attached specification Section 08 71 00 in its entirety (revised Related Sections and hardware groups).

## 2.8 SECTION 08 81 00 – GLAZING

2.8.1 In Article 2.01, add Paragraph D to read as follows:

2.1.2.1 "D. Fire-rated Safety Glass: 1/4" glass ceramic safety glazing; UL labeled for fire rated openings. Fire rated as shown on the drawings. Comply with 16 CFR 1201 test requirements."

2.8.2 In Article 2.01, Paragraph B, the tempered glass shall be 1/4" thick, clear color.

## 2.9 SECTION 11 52 13 – PROJECTION SCREENS

2.9.1 Delete specification Section 11 52 13 in its entirety.

## 2.10 SECTION 11 52 16 – VIDEO PROJECTOR ACCESSORIES

2.10.1 Delete specification Section 11 52 16 in its entirety.

**3.0 ARCHITECTURAL DRAWINGS**

**3.1 SHEET A-1.1 – FIRST FLOOR DEMOLITION PLAN****3.1.1 In drawing 2:**

- 3.1.1.1 Delete removal of both double doors (doors 024 and 025) along grid line K between grid lines 5 and 6. The existing doors and frames shall remain in place.
- 3.1.1.2 Remove existing drywall as required for installation of new wall backing (Demolition Key Note 11) at new casework and TV monitor in Training, Cash, and Legal rooms per the attached drawing ASK-005.
- 3.1.1.3 Add Demolition Keynote 2 at the casework in the Customer Service Room per the attached drawing ASK-011.
- 3.1.1.4 Remove existing drywall from wall in Control Room for installation on new low wall framing. See drawing 11/A-9.4 and the attached drawing ASK-013 for location.
- 3.1.1.5 Remove portion of the existing wall at Office Services Room per the attached drawing ASK-020.

**3.2 SHEET A-1.2 – SECOND FLOOR DEMOLITION PLAN****3.2.1 Drawing 2:**

- 3.2.1.1 Delete demo work for new door and wall at door number 007. See also the attached drawing ASK-004.
- 3.2.1.2 Add demo work for new doors and walls at door numbers 026, 027, and 028 per Keynote 6. See also the attached drawing ASK-004.
- 3.2.1.3 Remove existing drywall as required for installation of new wall for TV monitors in Training rooms 201 and 202 per the attached drawing ASK-012
- 3.2.1.4 Remove portions of the existing walls at Training Room 104 and Conference Room 205 per the attached drawing ASK-012.

**3.3 SHEET A-1.4 – FOURTH FLOOR DEMOLITION PLAN****3.3.1 Drawing 2:**

- 3.3.1.1 Delete the demo work for the wall between Open Offices 404 and 416. The new wall was deleted per this Addendum.
- 3.3.1.2 Remove existing wall sheathing, floor finishes, and base materials as required for the new walls on the fourth and fifth floors at Stair 462. See the attached drawings ASK-006 and ASK-010 for locations of new walls.

**3.4 SHEET A-2.1 – FIRST FLOOR CONSTRUCTION PLAN**

3.4.1 In drawing 2, delete new doors 024 and 025 and both adjacent card readers. The existing doors, frames and electric card readers shall remain in place.

**3.4.2 Construction Plan General Notes:****3.4.2.1 Drawing 2:**

- 3.4.2.1.1 Provide new backing for TV wall mount (Keynote 17) in the Training Room. See the attached drawing ASK-017 for location.
- 3.4.2.1.2 In Conference Room 101, add one new A/V cabinet; provide new drywall at exposed locations of existing columns; provide new backing for TV wall mount (Keynote 17) on column. See attached drawing ASK-018 for locations and the attached A/V cabinet spec.
- 3.4.2.1.3 Provide new lintel and jamb framing at wall opening in the Office Services room. See the attached drawing ASK-021 for location.

**3.4.2.2 Add General Note 5 to read as follows:**

"5. Locate rebar locations at general affected areas of work prior to drilling, coring, and cutting of existing concrete slab floors."

- 3.5 SHEET A-2.2 – SECOND FLOOR CONSTRUCTION PLAN
- 3.5.1 Drawing 2:
- 3.5.1.1 Add new doors and frames, new walls, and new walls signs at doors 026, 027, and 028 per the attached drawing ASK-002.
- 3.5.1.2 Provide new backing for TV wall mounts in Training Rooms 201 and 202; add one new A/V cabinet in room 201; provide new lintel and jamb framing at wall openings in rooms 204 and 205. See the attached drawing ASK-019 for locations and the attached A/V cabinet spec.
- 3.5.2 Construction Plan General Notes:
- 3.5.2.1 Add General Note 5 to read as follows:
- “5. Locate rebar locations at general affected areas of work prior to drilling, coring, and cutting of existing concrete slab floors.”
- 3.6 SHEET A-2.3 – THIRD FLOOR CONSTRUCTION PLAN
- 3.6.1 Construction Plan General Notes:
- 3.6.1.1 Add General Note 5 to read as follows:
- “5. Locate rebar locations at general affected areas of work prior to drilling, coring, and cutting of existing concrete slab floors.”
- 3.7 SHEET A-2.4 – FOURTH FLOOR CONSTRUCTION PLAN
- 3.7.1 Construction Plan General Notes:
- 3.7.1.1 Add General Note 5 to read as follows:
- “5. Locate rebar locations at general affected areas of work prior to drilling, coring, and cutting of existing concrete slab floors.”
- 3.7.2 In drawing 2:
- 3.7.2.1 Delete the new door, door frame, and wall between Open Offices 404 and 416; add new wall at Stair #462; revise detail call-out 6/A-9.2 to become 9/A-9.2. See attached drawings ASK-006 and ASK-009.
- 3.7.2.2 Add call-out 9/A-9.2 to the indicated walls shown on the attached drawings ASK-007 and ASK-008.
- 3.7.2.3 Add new wall at Stair #462 per the attached drawings ASK-009 and ASK-010.
- 3.8 SHEET A-2.5 – FIFTH FLOOR CONSTRUCTION PLAN
- 3.8.1 Construction Plan General Notes:
- 3.8.1.1 Add General Note 5 to read as follows:
- “5. Locate rebar locations at general affected areas of work prior to drilling, coring, and cutting of existing concrete slab floors.”
- 3.8.2 In drawing 2, add new wall at Stair #462 per the attached drawings ASK-009 and ASK-010.
- 3.8.3 In drawings 8 and 9, the stud spacing shall be 16” OC in lieu of 24” OC.
- 3.9 SHEET A-2.6 – CONFERENCE CENTER FINISHES PLAN, INTERIOR ELEVATIONS & SCHED.
- 3.9.1 In drawing 2, revise the detail call-out to become 14/A-9.4 in lieu of 4/A-9.4.
- 3.10 SHEET A-3.0 – FIRST THROUGH FIFTH FLOOR DEMOLITION CEILING PLANS
- 3.10.1 The typical existing ceiling heights on the first floor are 14’-6”; the ceiling heights in the Cashier and Cash rooms are 10’-0”.
- 3.10.2 The typical existing ceiling heights on the second, third, fourth and fifth floors are 10’-0”.
- 3.11 SHEET A-9.1 – DOOR SCHEDULE, NOTES AND DETAILS
- 3.11.1 Door Schedule:

- 3.11.1.1 Revise the door type for door number 009 to become type D in lieu of type C.
- 3.11.1.2 Revise the door hardware group for door number 001 to become 02A in lieu of 02. Revise the door hardware group for door number 004 to become 04 in lieu of 02.
- 3.11.1.3 Add doors 026, 027, and 028 to the Door Schedule per the attached drawing ASK-003.
- 3.11.1.4 Delete door numbers 007 and 018.
- 3.11.1.5 All wood doors shall have plastic laminate finishes. Colors to be selected from manufacturer's entire range.
- 3.11.2 Door Notes/Legend:
  - 3.11.2.1 Delete Note 4.
  - 3.11.2.2 Revise Note 1 to read as follows:

"1. All door undercuts for varying finish thicknesses shall be verified and properly coordinated."
- 3.12 SHEET A-9.2 – WALL TYPES AND DETAILS
  - 3.12.1 For detail 3, see also detail 7/A-9.2 for non-rated top of wall connections.
- 3.13 SHEET A-9.4 – DETAILS AND WINDOW SCHEDULE
  - 3.13.1 For detail 11, see the attached drawing ASK-013 for more information.
  - 3.13.2 For details 2, 3, and 4, see the attached drawings ASK-014, ASK-015, and ASK-016 for typical casework anchorage details
  - 3.13.3 In detail 14, provide the 2" diameter cable holes and grommets at 48" OC.
  - 3.13.4 In detail 5, delete the new trench cover and liner assembly and replace with new concrete (to fill the void). Replace new VCT flooring with new carpet flooring. The steel reinforcing shown in detail 1/P0.2 may be used instead at contractor option.
- 4.0 ELECTRICAL
  - 4.1 SHEET E0.2 – ABBREVIATIONS AND LEGEND
    - 4.1.1 Revise card reader device description to 48" mounting height with double gang outlet box and single gang plaster ring. See the attached drawing ESK-001.
  - 4.2 SHEET E2.1 – PARTIAL FIRST FLOOR DEMOLITION & REMODEL PLANS
    - 4.2.1 Add new receptacles and junction boxes for monitors and cameras per ESK-002.
    - 4.2.2 Add additional fire damper smoke damper per ESK-002.
  - 4.3 SHEET E2.2 – PARTIAL SECOND FLOOR DEMOLITION & REMODEL PLANS
    - 4.3.1 Add new receptacles and junction boxes for monitors and cameras per ESK-003.
  - 4.4 SHEET E3.1 – FIRST FLOOR ELECTRICAL PLAN
    - 4.4.1 In drawing 1, delete Keynote 1 at new doors 024 and 025. Delete both adjacent card readers. The existing doors, frames and electric card readers shall remain in place. Work for conduits (Keynote 14) and J-boxes shall remain in bid.
    - 4.4.2 Add new card reader and junction box per ESK-004.
    - 4.4.3 In the keynote list, revise keynote 1 to refer to details 1 and 2 on sheet E4.1 in lieu of E4.3.
  - 4.5 SHEET E3.2 – SECOND FLOOR ELECTRICAL PLAN
    - 4.5.1 Add new card reader and junction box per ESK-005, ESK-006, ESK-007, & ESK-008.
    - 4.5.2 In the keynote list, revise keynote 1 to refer to details 1 and 2 on sheet E4.1 in lieu of E4.3.
  - 4.6 SHEET E3.3 – THIRD FLOOR ELECTRICAL PLAN

- 4.6.1 Add new card reader and junction box per ESK-009.
- 4.6.2 In the keynote list, revise keynote 1 to refer to details 1 and 2 on sheet E4.1 in lieu of E4.3.
- 4.7 SHEET E3.4 – FOURTH FLOOR ELECTRICAL PLAN
  - 4.7.1 Add new card reader and junction box per ESK-010 & ESK-011.
  - 4.7.2 Remove wall and associated electrical components running vertically between grid line 5 & 6 where circuit #17 is shown. Relocate receptacle and data to parallel exterior wall above.
- 4.8 SHEET E3.5 – FIFTH FLOOR ELECTRICAL PLAN
  - 4.8.1 Add new card reader and junction box per ESK-012.
  - 4.8.2 In the keynote list, revise keynote 1 to refer to details 1 and 2 on sheet E4.1 in lieu of E4.3

## 5.0 GENERAL

- 5.1 Boundaries indicated on all drawings as Areas of Work are shown for general locations purposes only. All work shown outside of the boundaries shall be included in the project Scope of Work, unless noted otherwise.
- 5.2 For information purposes: the typical existing concrete floor slab on the first floor is 5 inches thick with #4 bars at 18" OC each way; the typical existing floors on the second, third, fourth, and fifth floors are 3"x20GA vented metal deck with 3.25" light weight concrete cover and 4x4/W4xW4 WWF at center of slabs.
- 5.3 Assure fire ratings of existing assemblies are maintained. Every penetration through fire-rated assemblies are to be appropriately fireproofed or firestopped.
- 5.4 When and where the existing fire alarm systems and fire sprinkler systems are modified, Contractor shall provide and submit for deferred approval to the Riverside County Fire Department per the Deferred Approval requirements on sheet G-0.2 (Item J

**CONTRACTOR'S QUOTE (REVISED)**

Page 1 of 4

The undersigned having carefully examined the proposed site, the drawings and specifications, the Notice Inviting bids, the Instructions to Bidders, the Agreement form, the Bond Forms, the General Conditions and the Supplementary General Conditions for this RFQ hereby proposes and agrees to furnish all tools, equipment, services, apparatus, facilities, transportation, labor and materials necessary to complete the project as outlined in this RFQ in strict conformity with the plans and specifications, including all work specified in Addenda numbered and dated:

Addendum No. \_\_\_\_\_ Date: \_\_\_\_\_

Addendum No. \_\_\_\_\_ Date: \_\_\_\_\_

Addendum No. \_\_\_\_\_ Date: \_\_\_\_\_

**COST SUMMARY**

LABOR \$ \_\_\_\_\_

MATERIALS \$ \_\_\_\_\_

ALL OTHERS \$ \_\_\_\_\_

BASE BID - The undersigned proposes to perform all work of said project for the sum of \$ \_\_\_\_\_

Add Alternate #1; (conference room 101, galley 102, storage room 103) \$ \_\_\_\_\_

Add Alternate #2; (training rooms 201 / 202) \$ \_\_\_\_\_

**Bid Awarded on Base Bid and Alternates**

Basis of award shall be based on base bid and all alternates. The County reserves its right to award any of the alternates. Sum quoted includes all applicable taxes, permits, licenses, insurance and bond costs, if any, and all other costs incidental to the resultant contract.

PAYMENT TERMS: \_\_\_\_\_ Method \_\_\_\_\_ Lump Sum at Completion  
(Prompt Pay Discount) \_\_\_\_\_ Progress Payments

**EXECUTION HEREON IS CERTIFICATION THAT THE UNDERSIGNED HAS READ AND UNDERSTOOD THE INSTRUCTIONS, GENERAL CONDITIONS AND SPECIFICATIONS INCLUDED IN THIS REQUEST FOR QUOTATION AND THAT THE UNDERSIGNED'S PRINCIPAL IS FULLY BOUND AND COMMITTED.**

Prior to issuance of an order, a Certificate of Liability Insurance, including Endorsements, Waiver of Subrogation and required bonds must be on file with the County Purchasing Office. Bidder agrees to commence work within **Ten (10)** calendar days after receipt of purchase order and will complete work within **forty-five (45)** calendar days thereafter.

Company: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

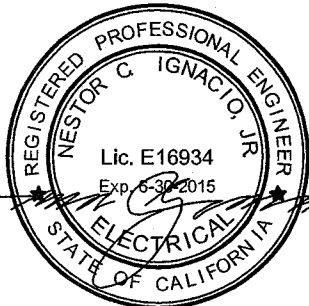
I hereby swear under penalty that the information provided is true and correct.

## SECURITY SYSTEM

- IC
K
 INTERCOM STATION WITH BUILT-IN VIDEO CAMERA WITHOUT AUDIO CONNECTION. WALL MOUNTED AT 42". PROVIDE RECESSED OUTLET BOX AND RUN 3/4"C.O. TO CEILING SPACE
  
- C
 CAMERA, INDOORS – MOBOTIX Q24. PROVIDE RECESSED OUTLET BOX AND RUN 3/4"C. TO CEILING SPACE
  
- CR

CARD READER, WALL MOUNTED AT 48". PROVIDE RECESSED DOUBLE GANG OUTLET BOX WITH SINGLE GANG PLASTER RING AND RUN 3/4"C.O. TO CEILING SPACE

2
  
- IS
 INTERCOM STATION WITH BUILT-IN VIDEO CAMERA AND AUDIO CONNECTION. WALL MOUNTED AT 42". PROVIDE RECESSED OUTLET BOX AND RUN 3/4"C.O. TO CEILING SPACE

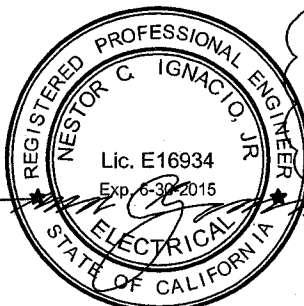
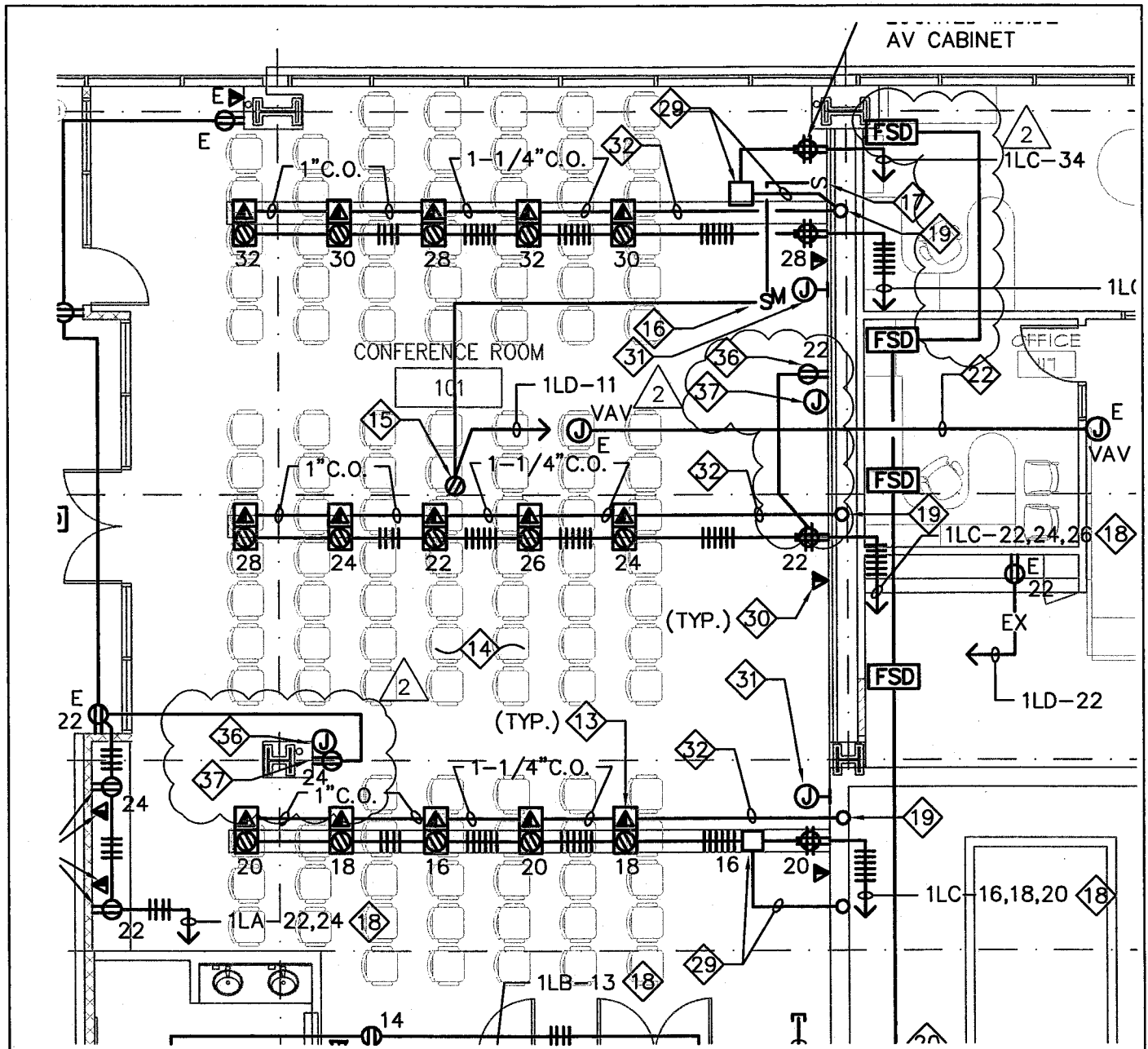


**Note to Contractor:**

The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

<b>DLR Group</b> Architecture Engineering Planning Interiors 4280 Latham Street, Suite H Riverside, CA 92501 (951) 682-0470	<b>ABBREVIATIONS AND LEGEND</b>  RCIT Press Enterprise Tenant Improvements 3450 14th Street Riverside, CA 9250	DLR Group No: 75-13619-00 Permit No.: FM 0811-000-5454 Date: 01/15/14 Reference: E0.2	Sketch No: <h1 style="margin: 0;">ESK-001</h1> Scale: NONE
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- 36 MOUNT DUPLEX RECEPTACLE AT +8'-0" FOR POWER TO MONITOR & CAMERA.
- 37 TWO GANG J-BOX AT +8'-0" WITH (2) 1" C.O. TO CEILING SPACE FOR MONITOR/CAMERA.

**Note to Contractor:**

The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

**DLR Group**

Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

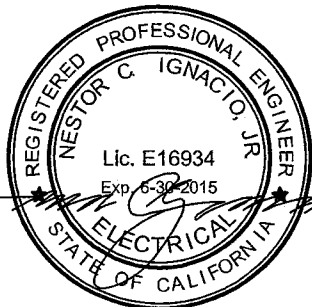
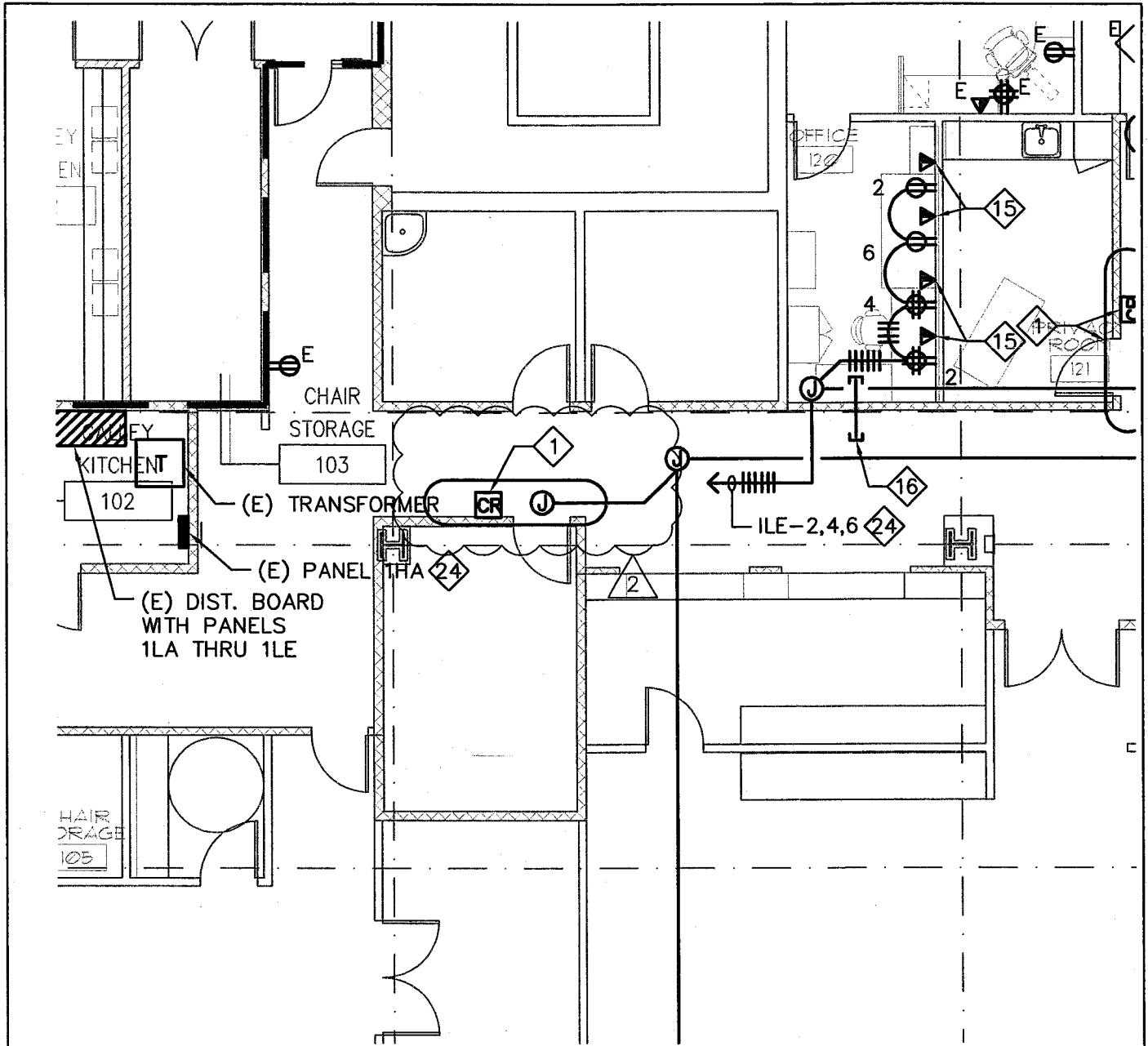
**PARTIAL 1ST FLOOR REMODEL  
 POWER & SIGNAL PLAN**

RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 9250

DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/15/14  
 Reference: 4/E2.1

Sketch No: **ESK-002**  
 Scale: 1/8"=1'-0"





**Note to Contractor:**

The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

**DLR Group**

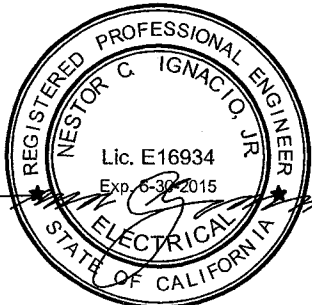
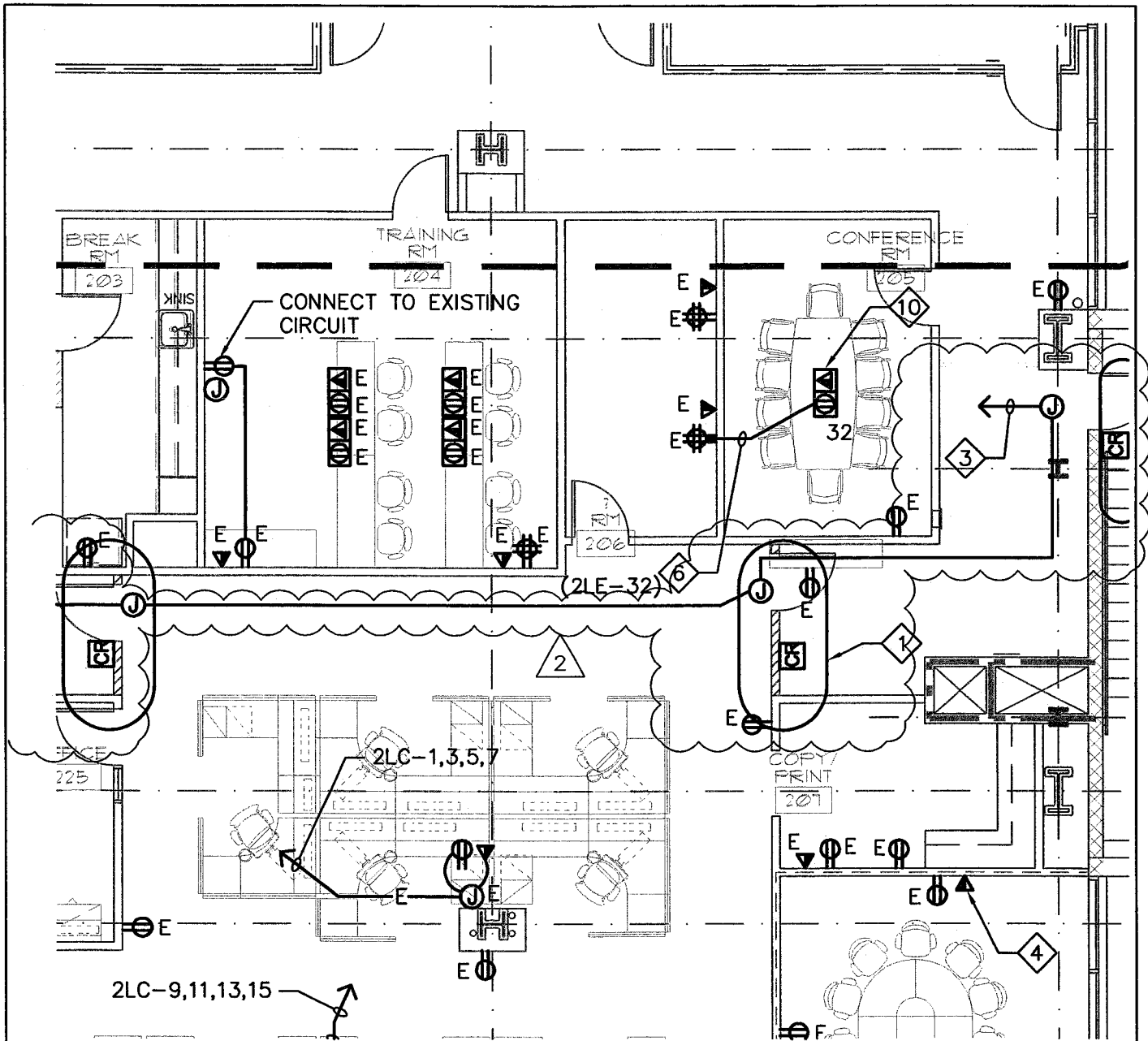
Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

**FIRST FLOOR ELECTRICAL PLAN**

RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 9250

DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/15/14  
 Reference: 1/E3.1

Sketch No: **ESK-004**  
 Scale: 1/8"=1'-0"



**Note to Contractor:**

The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

**DLR Group**

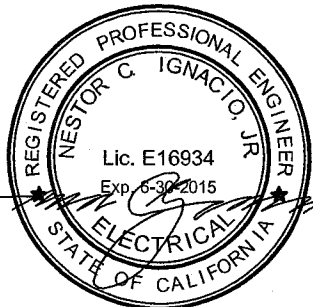
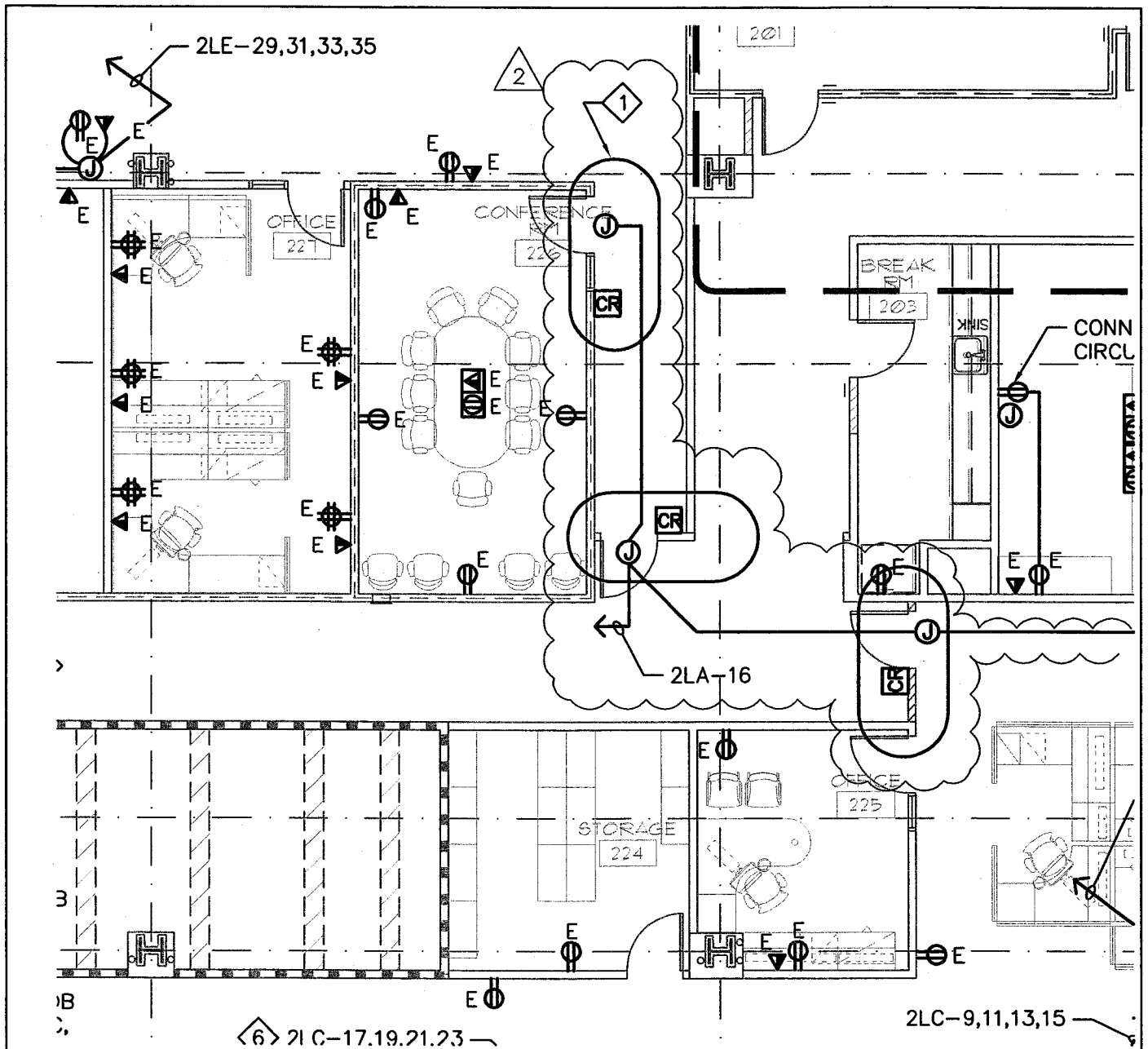
Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

**SECOND FLOOR ELECTRICAL PLAN**

RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 92501

DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/15/14  
 Reference: 1/E3.2

Sketch No: **ESK-005**  
 Scale: 1/8"=1'-0"



**Note to Contractor:**

The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.



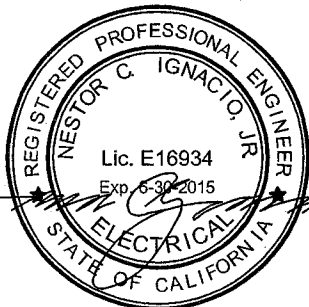
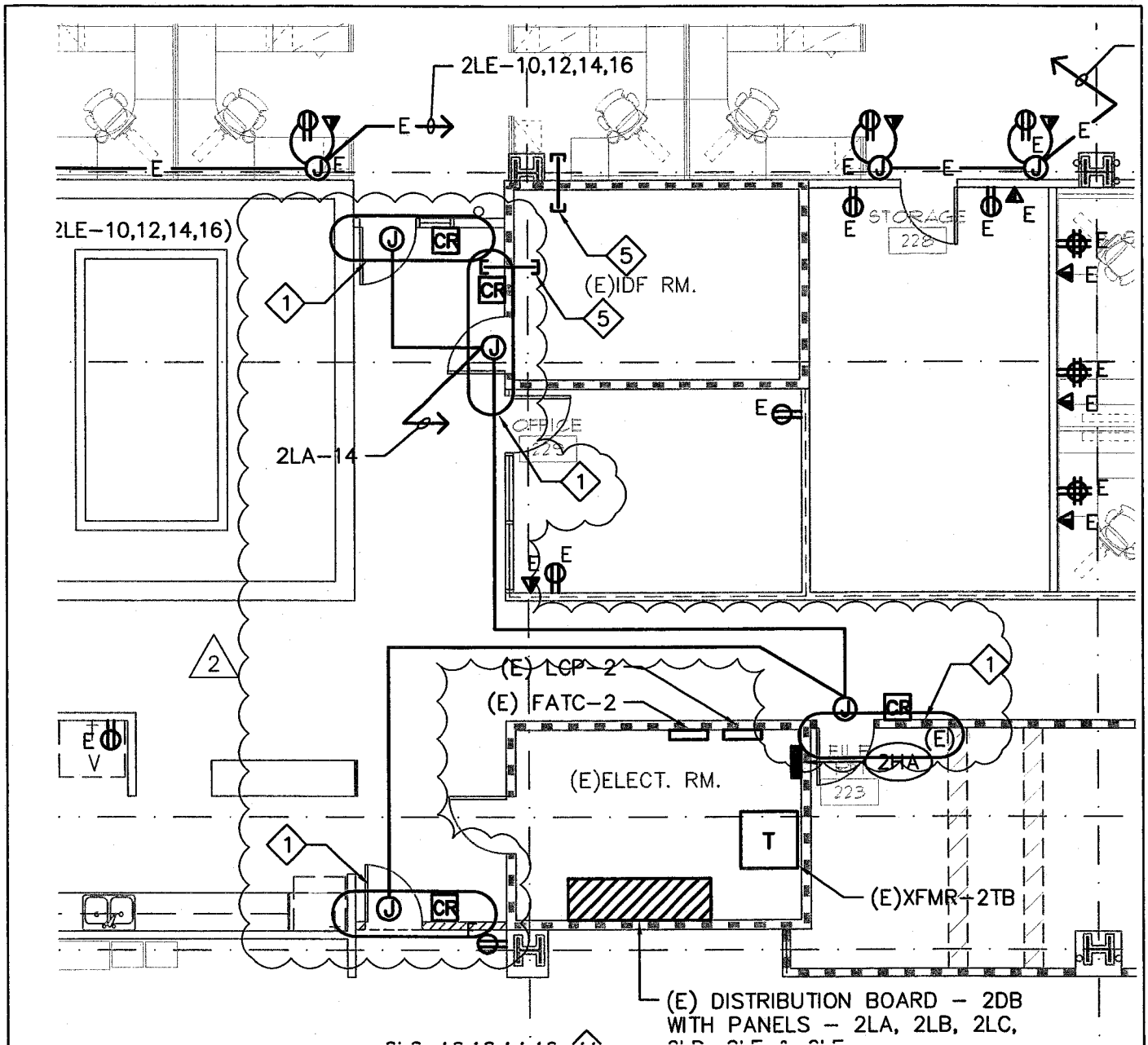
Architecture Engineering Planning Interiors  
4280 Latham Street, Suite H  
Riverside, CA 92501 (951) 682-0470

**SECOND FLOOR ELECTRICAL PLAN**

RCIT Press Enterprise Tenant Improvements  
3450 14th Street  
Riverside, CA 9250

DLR Group No: 75-13619-00  
Permit No.: FM 0811-000-5454  
Date: 01/15/14  
Reference: 1/E3.2

Sketch No: **ESK-006**  
Scale: 1/8"=1'-0"



**Note to Contractor:**

The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.



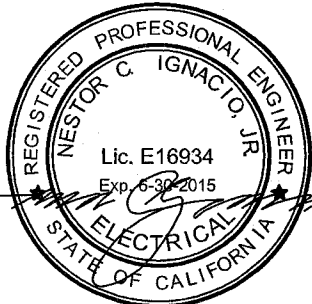
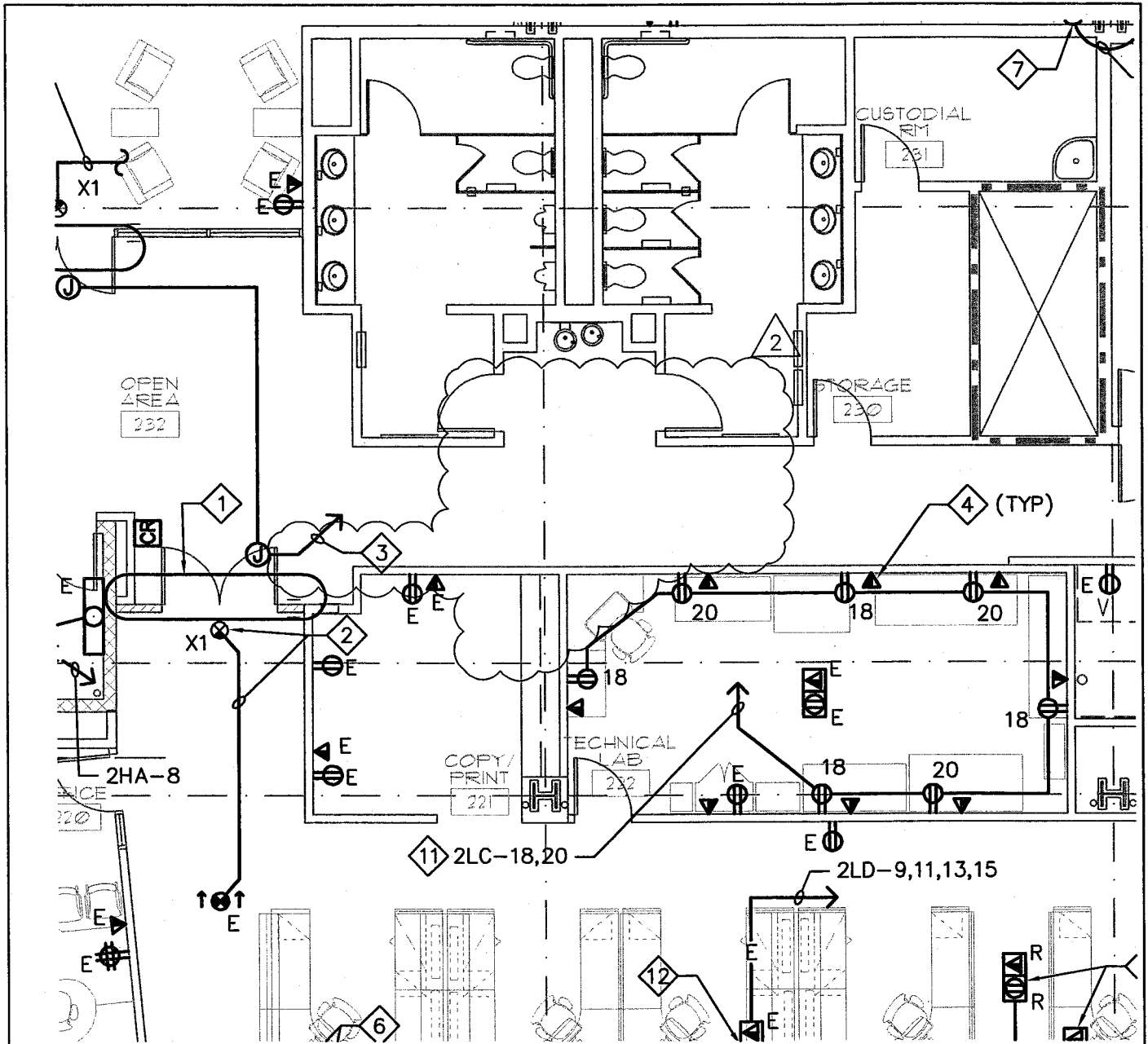
Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

**SECOND FLOOR ELECTRICAL PLAN**

RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 92501

DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/15/14  
 Reference: 1/E3.2

Sketch No: **ESK-007**  
 Scale: 1/8"=1'-0"



**Note to Contractor:**

The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.



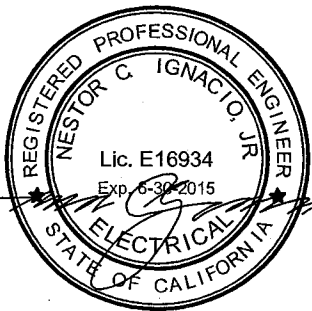
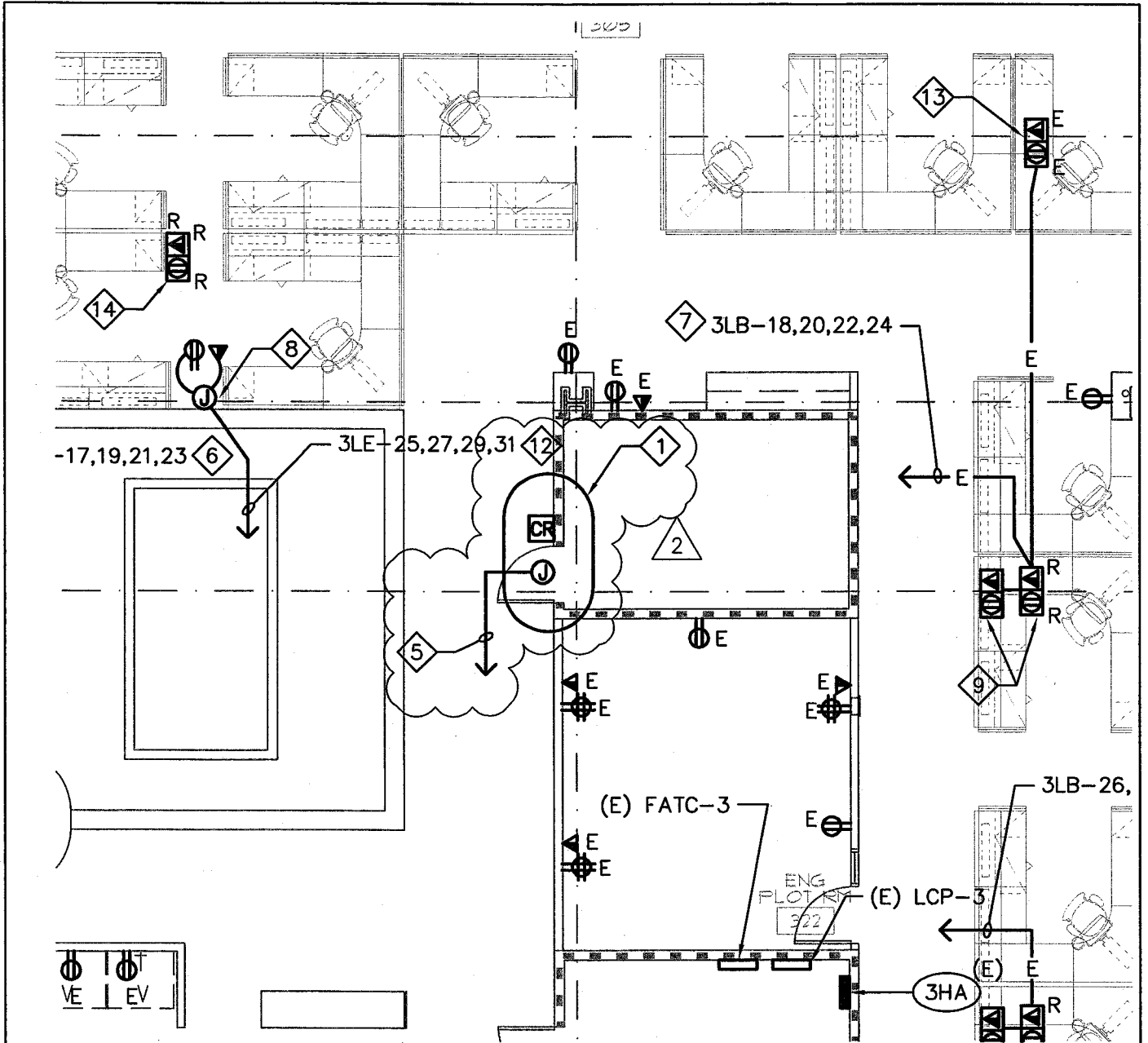
Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

**SECOND FLOOR ELECTRICAL PLAN**

RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 92501

DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/15/14  
 Reference: 1/E3.2

Sketch No: **ESK-008**  
 Scale: 1/8"=1'-0"



**Note to Contractor:**

The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

**DLR Group**

Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

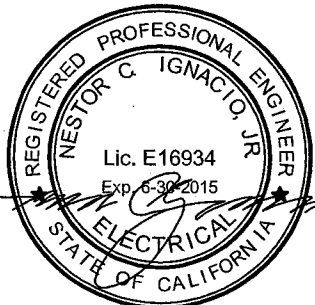
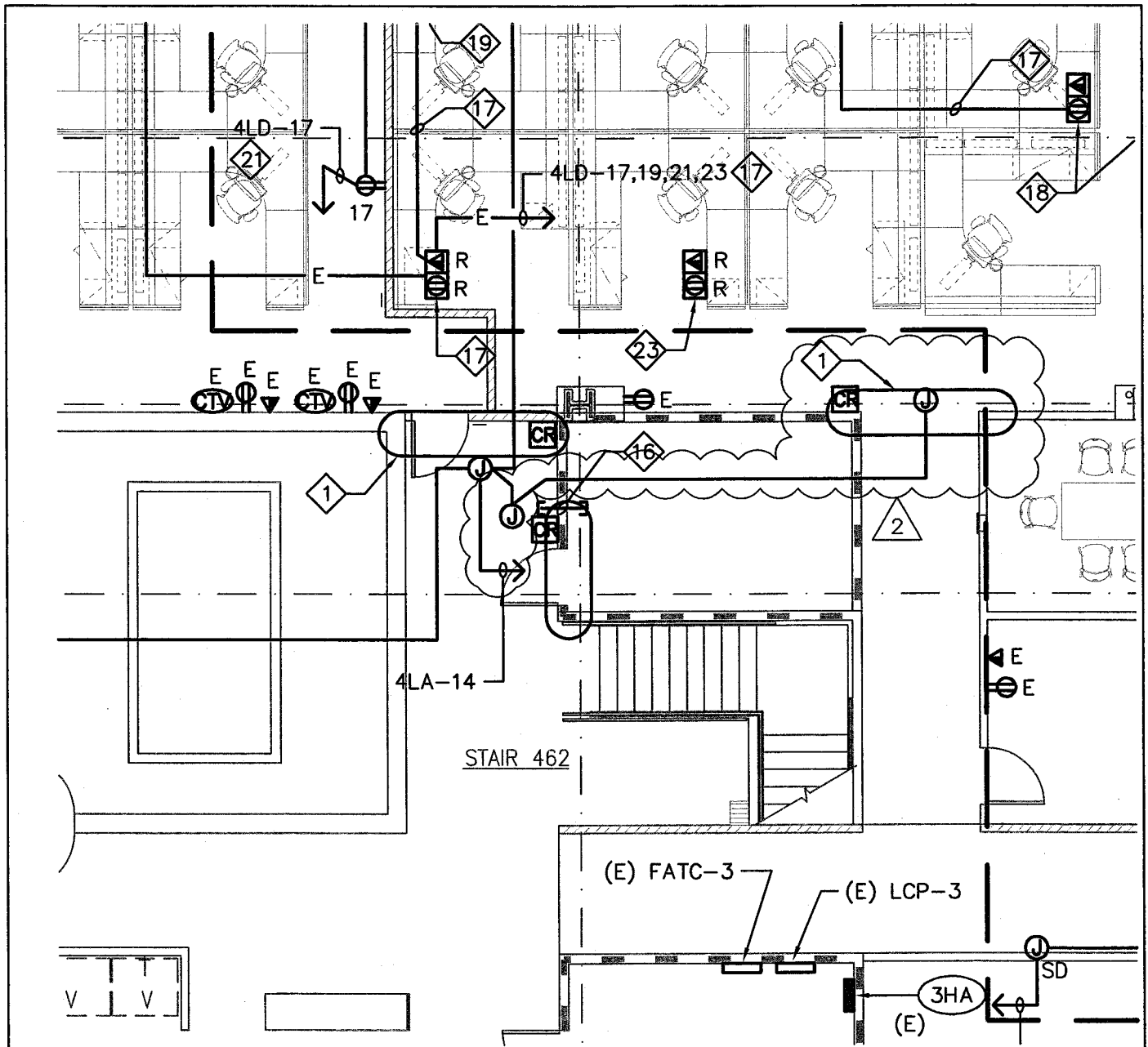
**THIRD FLOOR ELECTRICAL PLAN**

RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 9250

DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/15/14  
 Reference: 1/E3.3

Sketch No: **ESK-009**  
 Scale: 1/8"=1'-0"





**Note to Contractor:**

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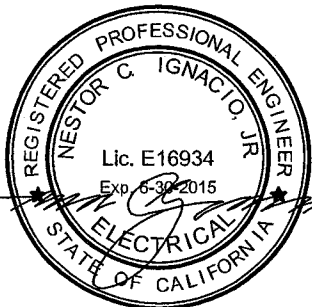
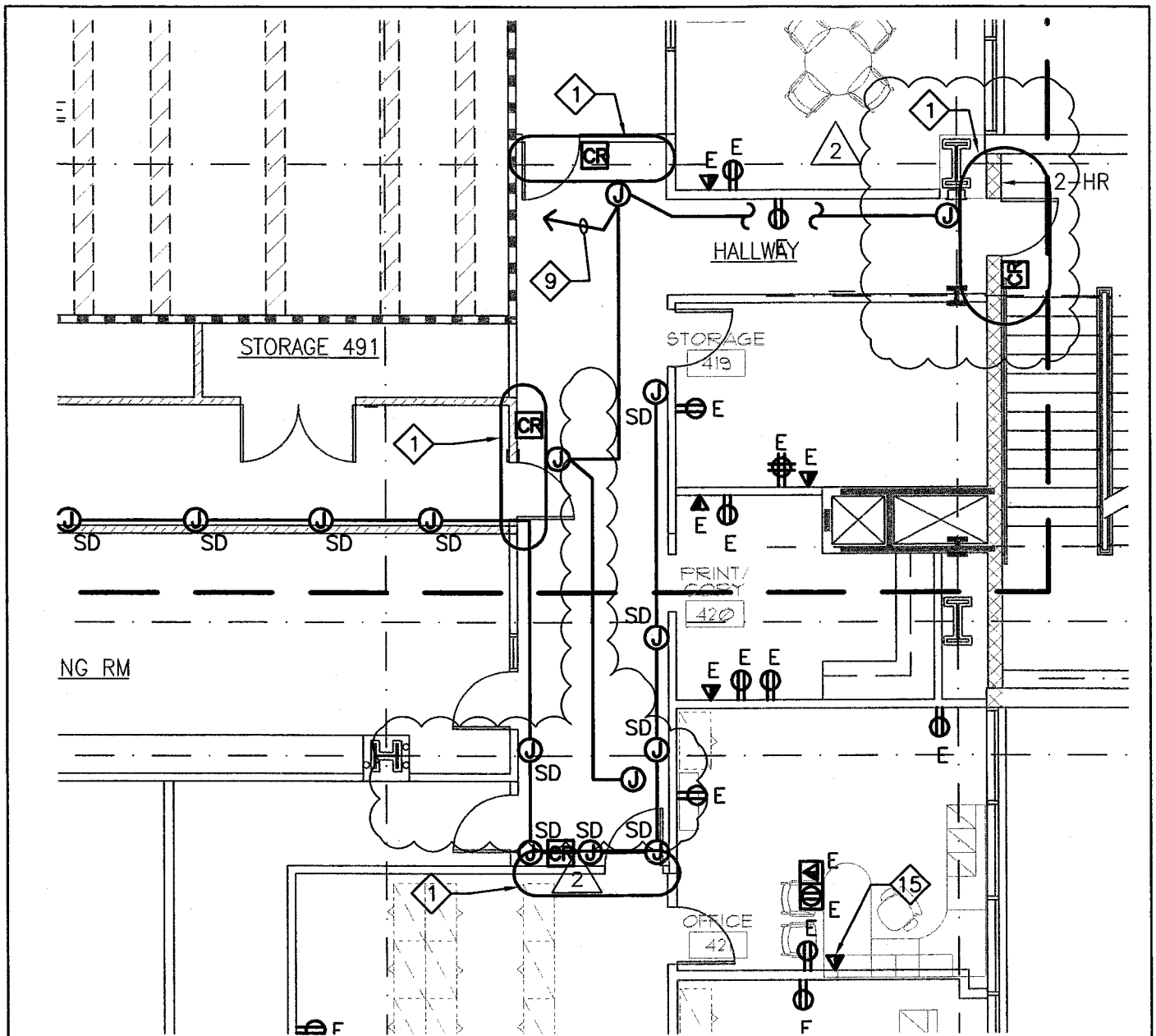
Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

**FOURTH FLOOR ELECTRICAL PLAN**

RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 9250

DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/15/14  
 Reference: 1/E3.4

Sketch No: **ESK-010**  
 Scale: 1/8"=1'-0"



**Note to Contractor:**

The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.



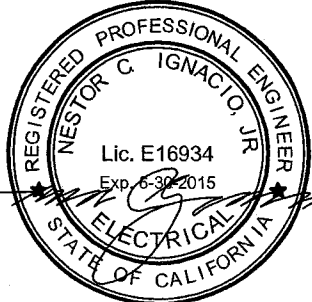
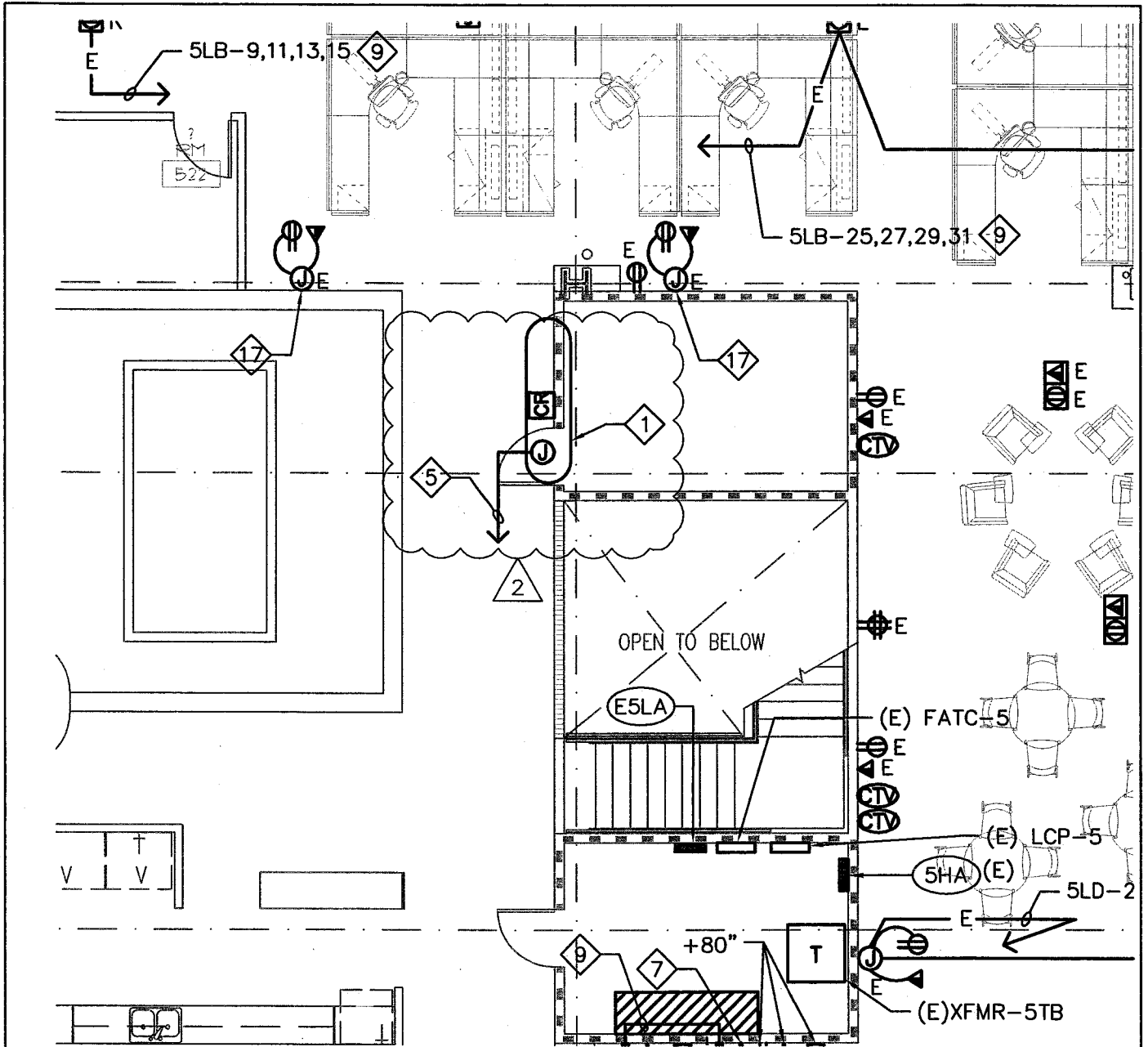
Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

**FOURTH FLOOR ELECTRICAL PLAN**

RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 92501

DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/15/14  
 Reference: 1/E3.4

Sketch No: **ESK-011**  
 Scale: 1/8"=1'-0"



**Note to Contractor:**

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**DLR Group**

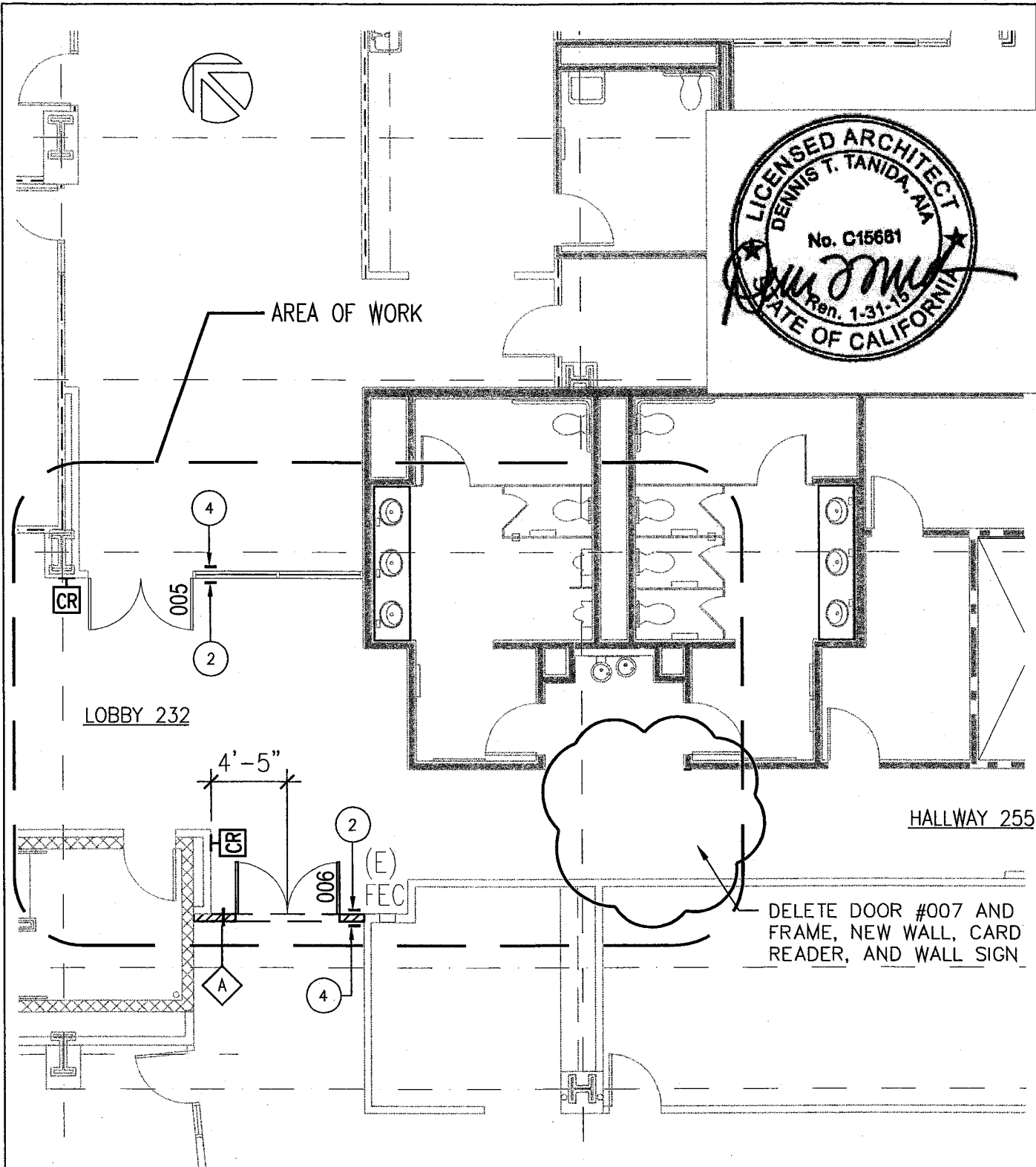
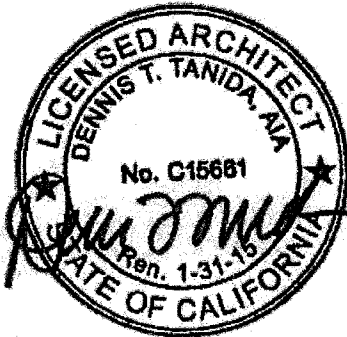
Architecture Engineering Planning Interiors  
4280 Latham Street, Suite H  
Riverside, CA 92501 (951) 682-0470

**FIRST FLOOR ELECTRICAL PLAN**

RCIT Press Enterprise Tenant Improvements  
3450 14th Street  
Riverside, CA 92501

DLR Group No: 75-13619-00  
Permit No.: FM 0811-000-5454  
Date: 01/15/14  
Reference: 1/E3.5

Sketch No: **ESK-012**  
Scale: 1/8"=1'-0"



DELETE DOOR #007 AND FRAME, NEW WALL, CARD READER, AND WALL SIGN

**Note to Contractor:**

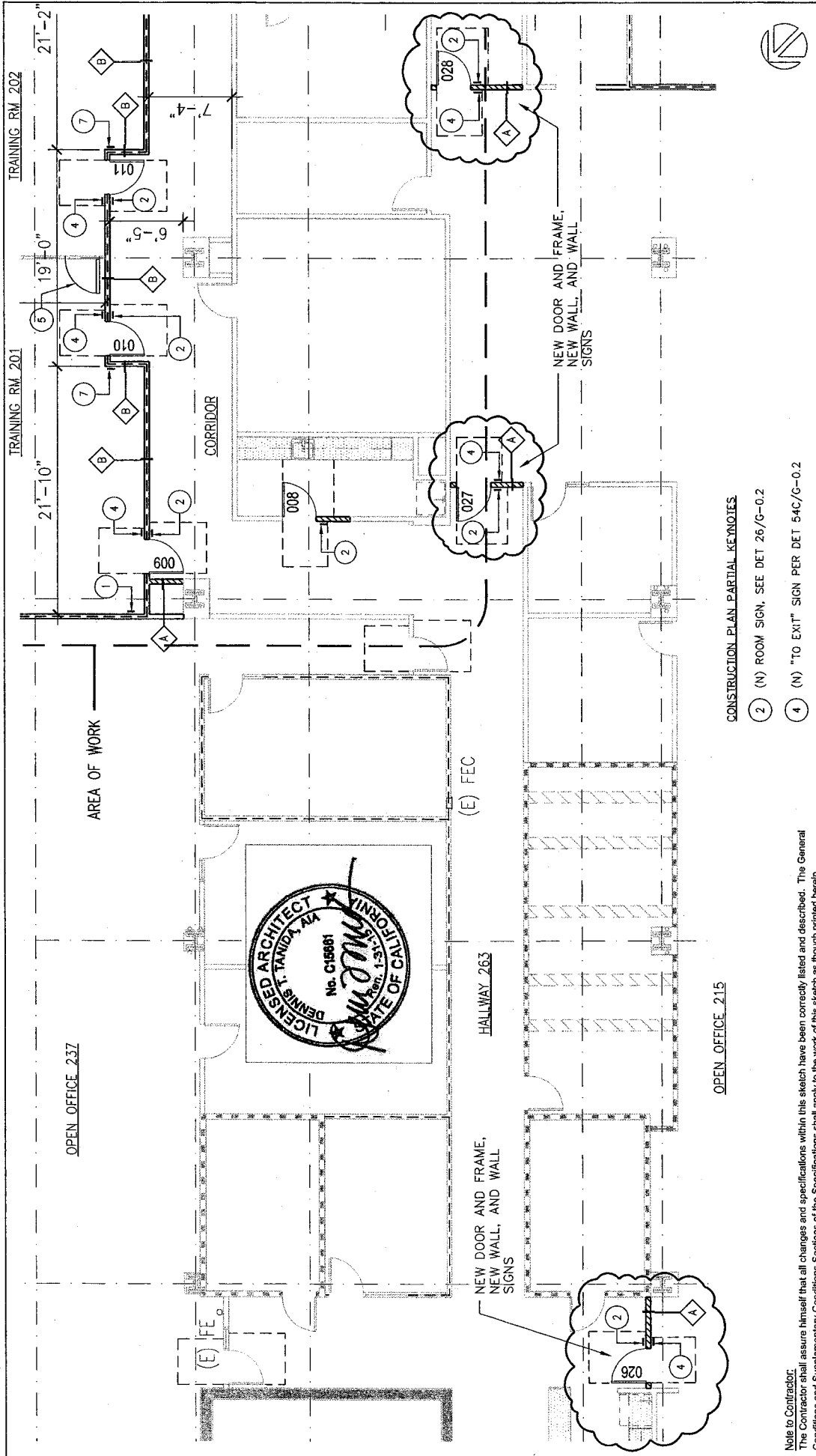
The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

**DLR Group**  
 Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

**SECOND FLOOR REVISIONS  
 AT HALLWAY 255**  
 RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 9250

DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/05/14  
 Reference: 2/A-2.2

Sketch No: **ASK-001**  
 Scale: 1/8"=1'-0"



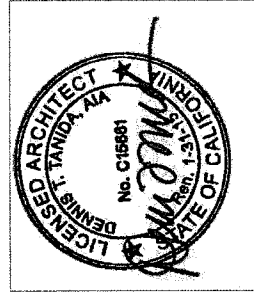
**CONSTRUCTION PLAN PARTIAL KEYNOTES**

- ② (N) ROOM SIGN, SEE DET 26/G-0.2
- ④ (N) "TO EXIT" SIGN PER DET 54C/G-0.2

**Note to Contractor:**  
 The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

<b>DLR Group</b> Architecture Engineering Planning Interiors 4280 Lahram Street, Suite H Riverside, CA 92501 (951) 682-0470	<b>SECOND FLOOR REVISIONS</b>		Sketch No: <b>ASK-002</b> Scale: 1/8"=1'-0"
	RCIT Press Enterprise Tenant Improvements 3450 14th Street Riverside, CA 92501		DLR Group No: 75-13619-00 Permit No.: FM 0811-000-5454 Date: 01/06/14 Reference: 2/A-2.2

DOOR NUMBER	DOOR TYPE	DOOR					FRAME					DETAILS				HARDWARE GROUP (SEE SPECS)	RATING	GLAZING	PANIC	REMARKS
		OPENING SIZE WIDTH X HEIGHT	THICKNESS	CORE/FACE	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB	THRESHOLD	TYPE	FINISH	TYPE	MATERIAL					
026	A	3'-0" x 8'-0"	1 3/4"	SC/W	FF	KD	STEEL	FF	14/-	13/-	13/-	07	-	YES	-	1/4" THICK TEMPERED GLASS				
027	A	3'-0" x 8'-0"	1 3/4"	SC/W	FF	KD	STEEL	FF	14/-	13/-	13/-	07	-	YES	-	1/4" THICK TEMPERED GLASS				
028	A	3'-0" x 8'-0"	1 3/4"	SC/W	FF	KD	STEEL	FF	14/-	13/-	13/-	07	-	YES	-	1/4" THICK TEMPERED GLASS				

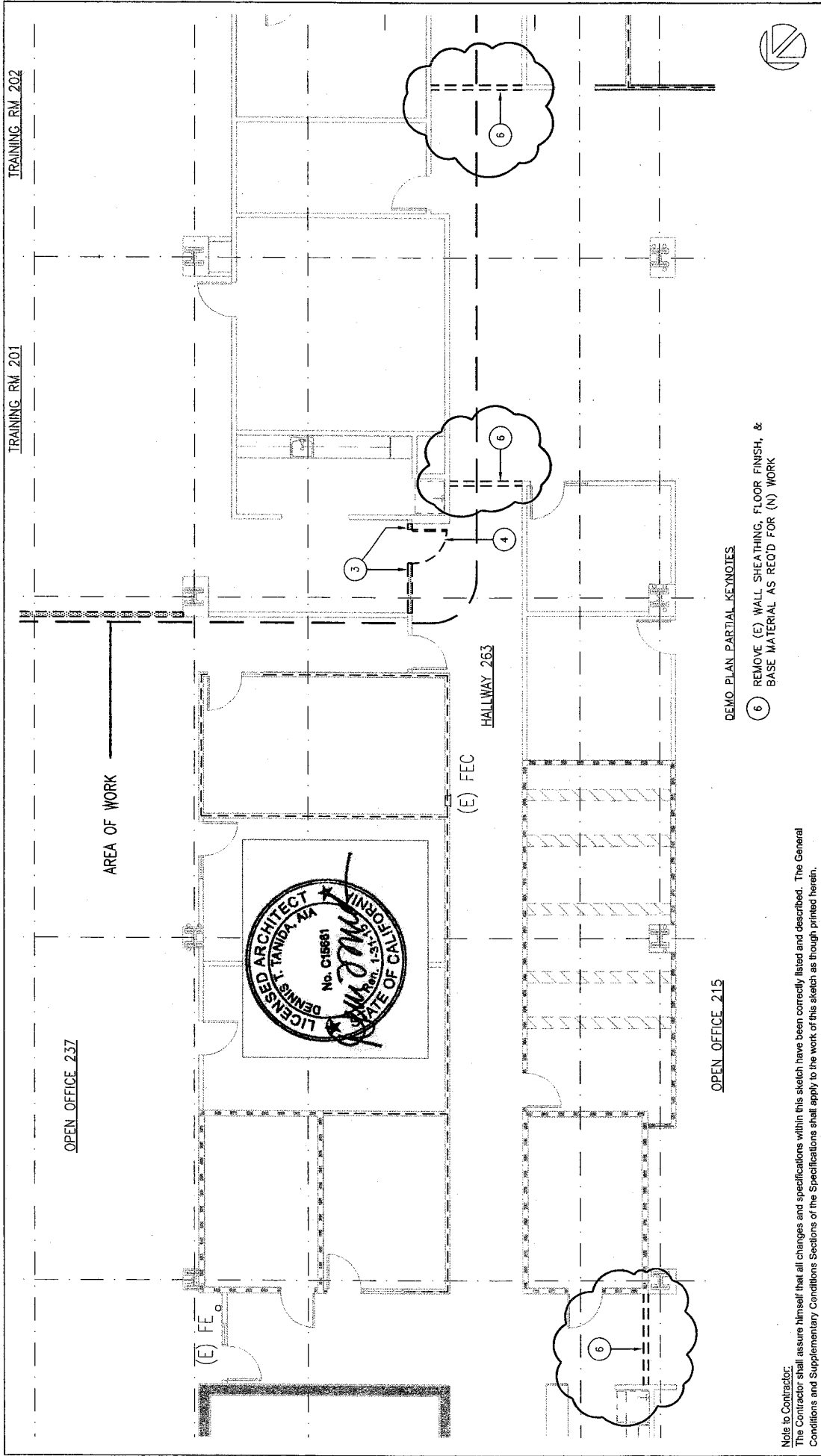


Note to Contractor:  
 The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

**DLR Group**  
 Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 882-0470

**DOOR SCHEDULE REVISIONS**  
 RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 92501

DLR Group No: 75-13619-00  
 Permit No.: FW 0811-000-5654  
 Date: 07/08/14  
 Reference: 1/A-3.1  
 Sketch No: **ASK-003**  
 Scale: NONE

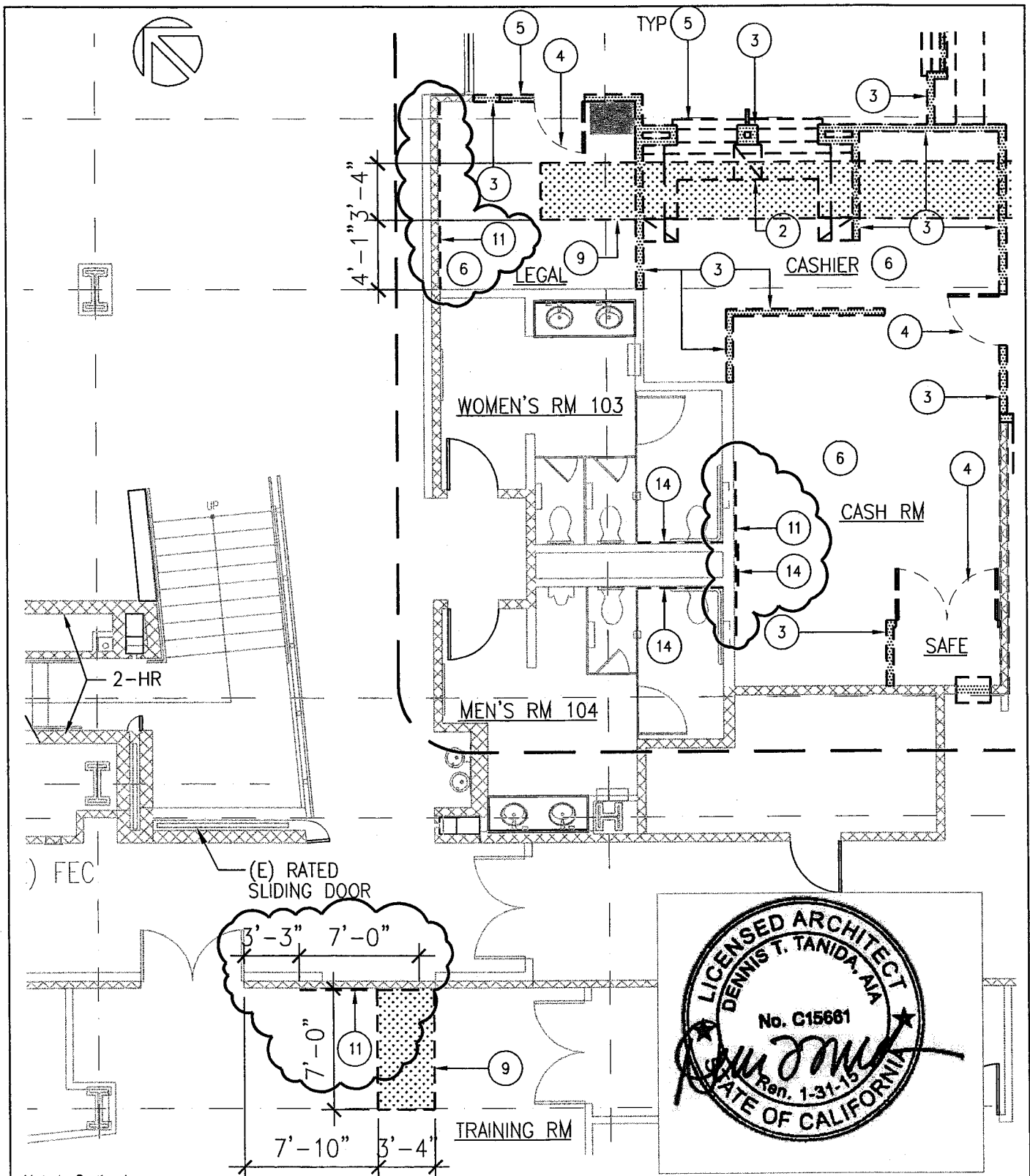


DEMO PLAN PARTIAL KEYNOTES

6 REMOVE (E) WALL SHEATHING, FLOOR FINISH, & BASE MATERIAL AS REQ'D FOR (N) WORK


**Note to Contractor:**  
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<b>DLR Group</b> Architecture Engineering Planning Interiors 4280 Latham Street, Suite H Riverside, CA 92501 (951) 682-0470	<b>SECOND FLOOR DEMO PLAN REVISIONS</b> RCIT Press Enterprise Tenant Improvements 3460 14th Street Riverside, CA 92504	DLR Group No: 75-13619-00 Permit No.: FM 0811-000-5454 Date: 01/08/14 Reference: 2/A-1.2	Sketch No: <b>ASK-004</b> Scale: 1/8"=1'-0"
	24 of 69		

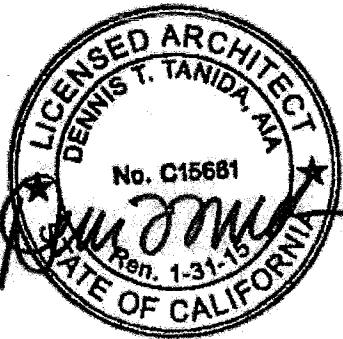


**Note to Contractor:**

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 <p><b>DLR Group</b>          Architecture Engineering Planning Interiors          4280 Latham Street, Suite H          Riverside, CA 92501 (951) 682-0470</p>	<p><b>FIRST FLOOR DEMOLITION          PLAN REVISIONS</b>          RCIT Press Enterprise Tenant Improvements          3450 14th Street          Riverside, CA 9250</p>	<p>DLR Group No: 75-13619-00          Permit No.: FM 0811-000-5454          Date: 01/13/14          Reference: 2/A-1.1</p>	<p>Sketch No:  <b>ASK-005</b>          Scale: 1/8"=1'-0"</p>
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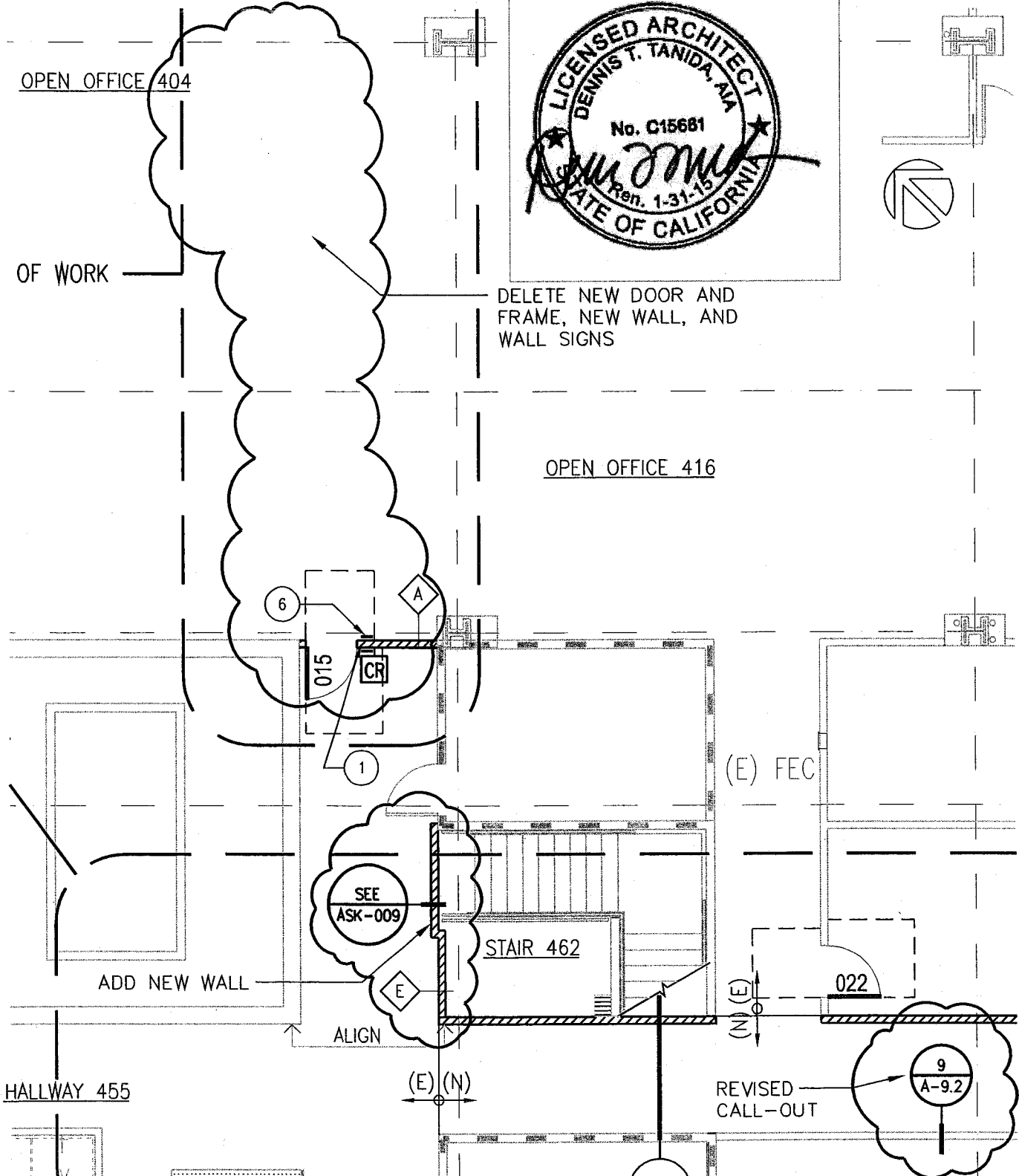


OPEN OFFICE 404

OF WORK

DELETE NEW DOOR AND FRAME, NEW WALL, AND WALL SIGNS

OPEN OFFICE 416



**Note to Contractor:**

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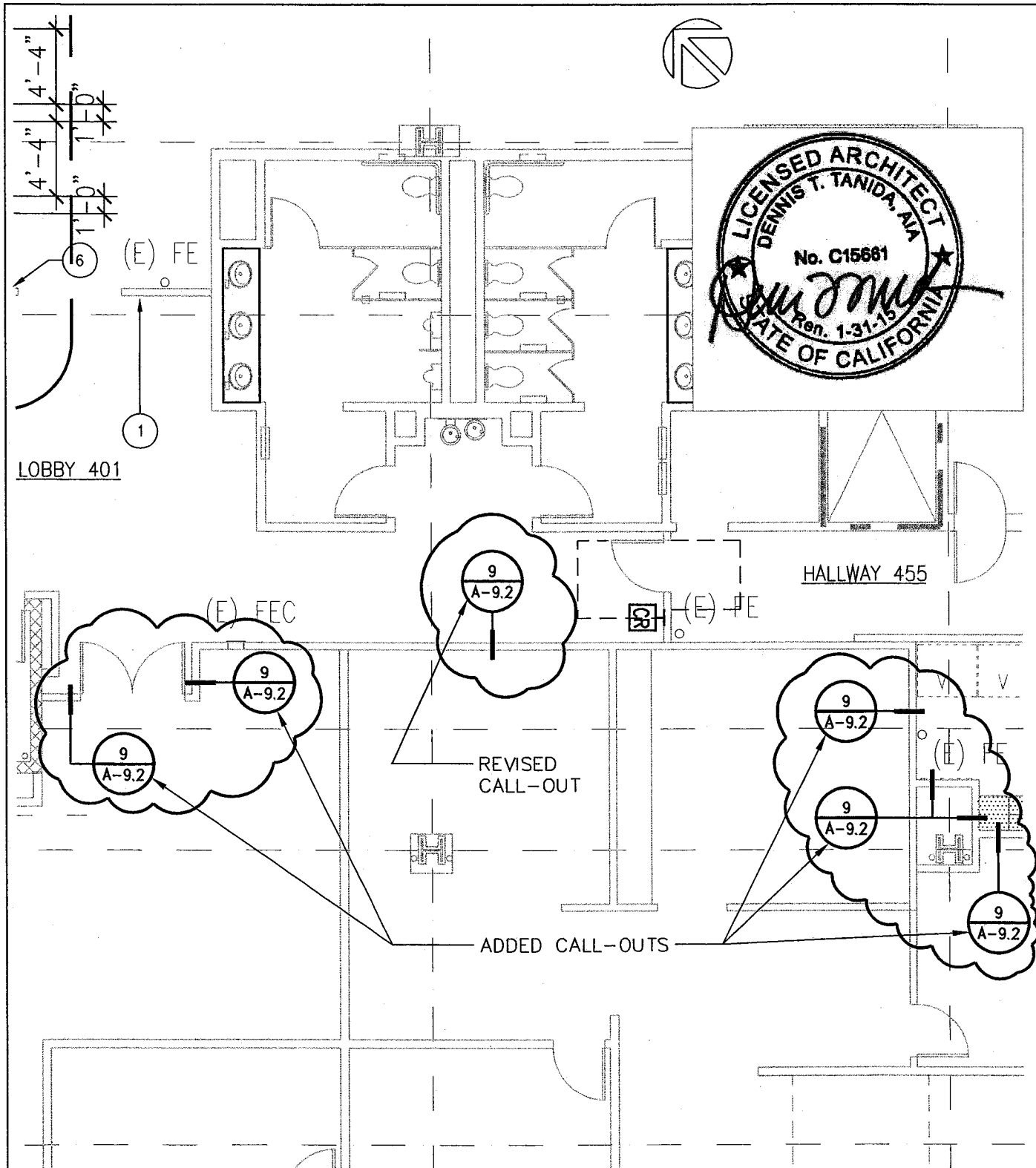
Architecture Engineering Planning Interiors  
4280 Latham Street, Suite H  
Riverside, CA 92501 (951) 682-0470

**FOURTH FLOOR PLAN  
REVISIONS**

RCIT Press Enterprise Tenant Improvements  
3450 14th Street  
Riverside, CA 9250

DLR Group No: 75-13619-00  
Permit No.: FM 0811-000-5454  
Date: 01/14/14  
Reference: 2/A-2.4

Sketch No: **ASK-006**  
Scale: 1/8"=1'-0"



**Note to Contractor:**

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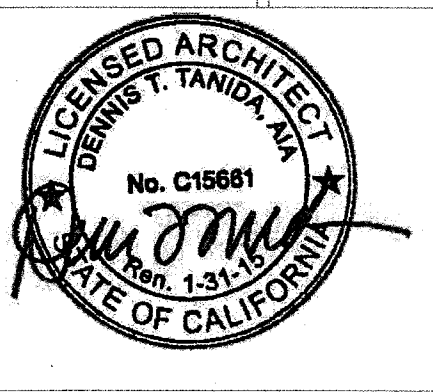
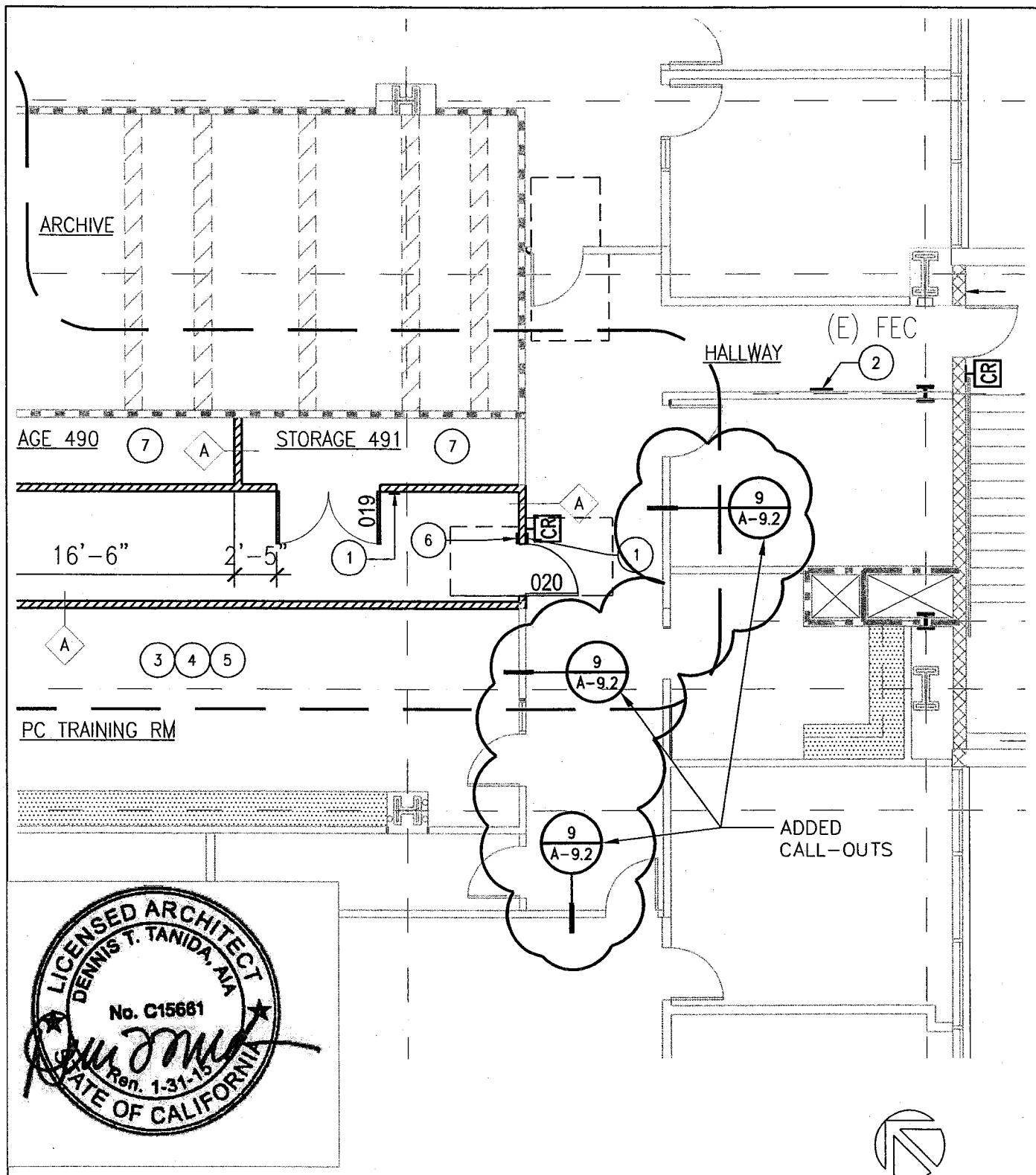
Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

**FOURTH FLOOR PLAN REVISIONS**

RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 9250

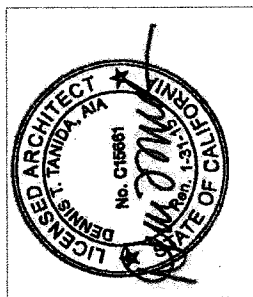
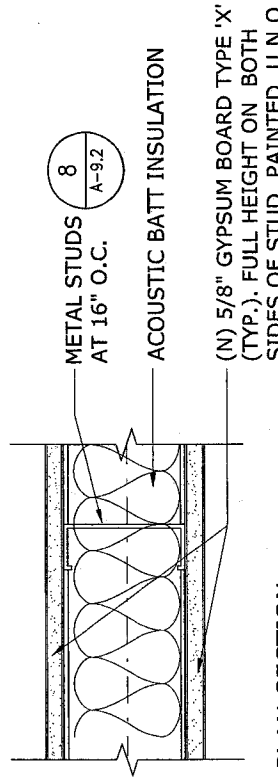
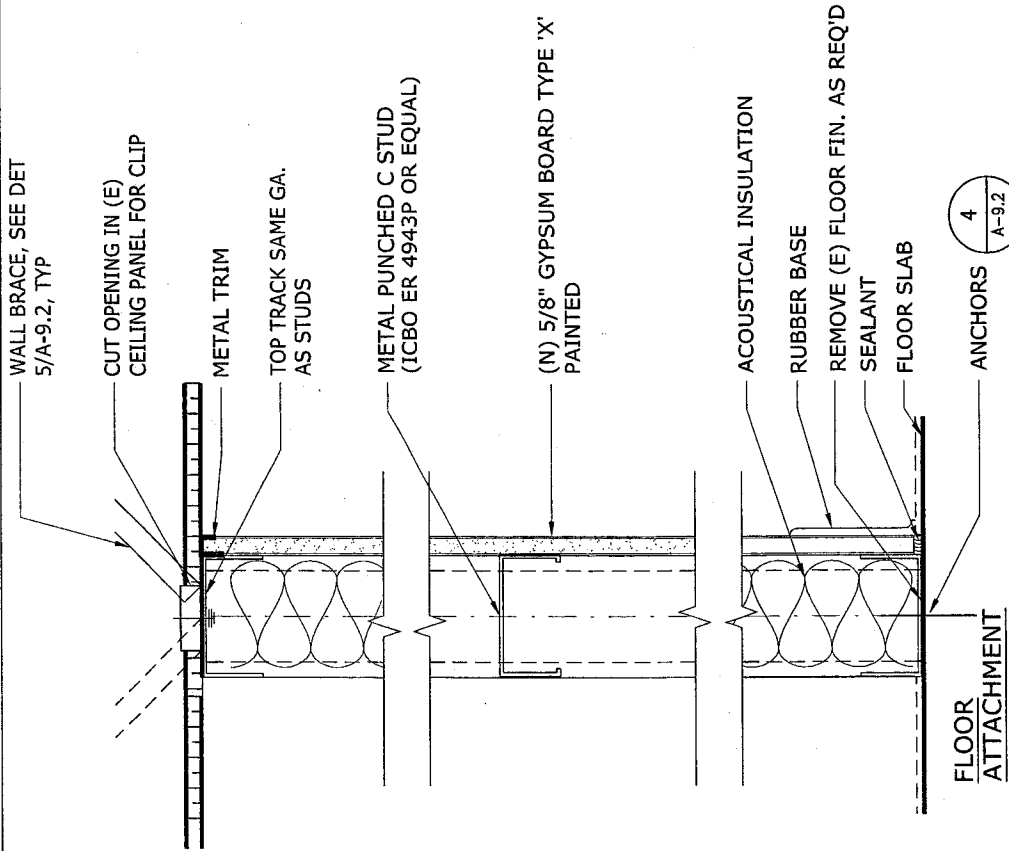
DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/14/14  
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Sketch No: **ASK-007**  
 Scale: 1/8"=1'-0"



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 <b>DLR Group</b> Architecture Engineering Planning Interiors 4280 Latham Street, Suite H Riverside, CA 92501 (951) 682-0470	<b>FOURTH FLOOR PLAN REVISIONS</b> RCIT Press Enterprise Tenant Improvements 3450 14th Street Riverside, CA 9250	DLR Group No: 75-13619-00 Permit No.: FM 0811-000-5454 Date: 01/14/14 Reference: 2/A-2.4	Sketch No: <b>ASK-008</b> Scale: 1/8"=1'-0"
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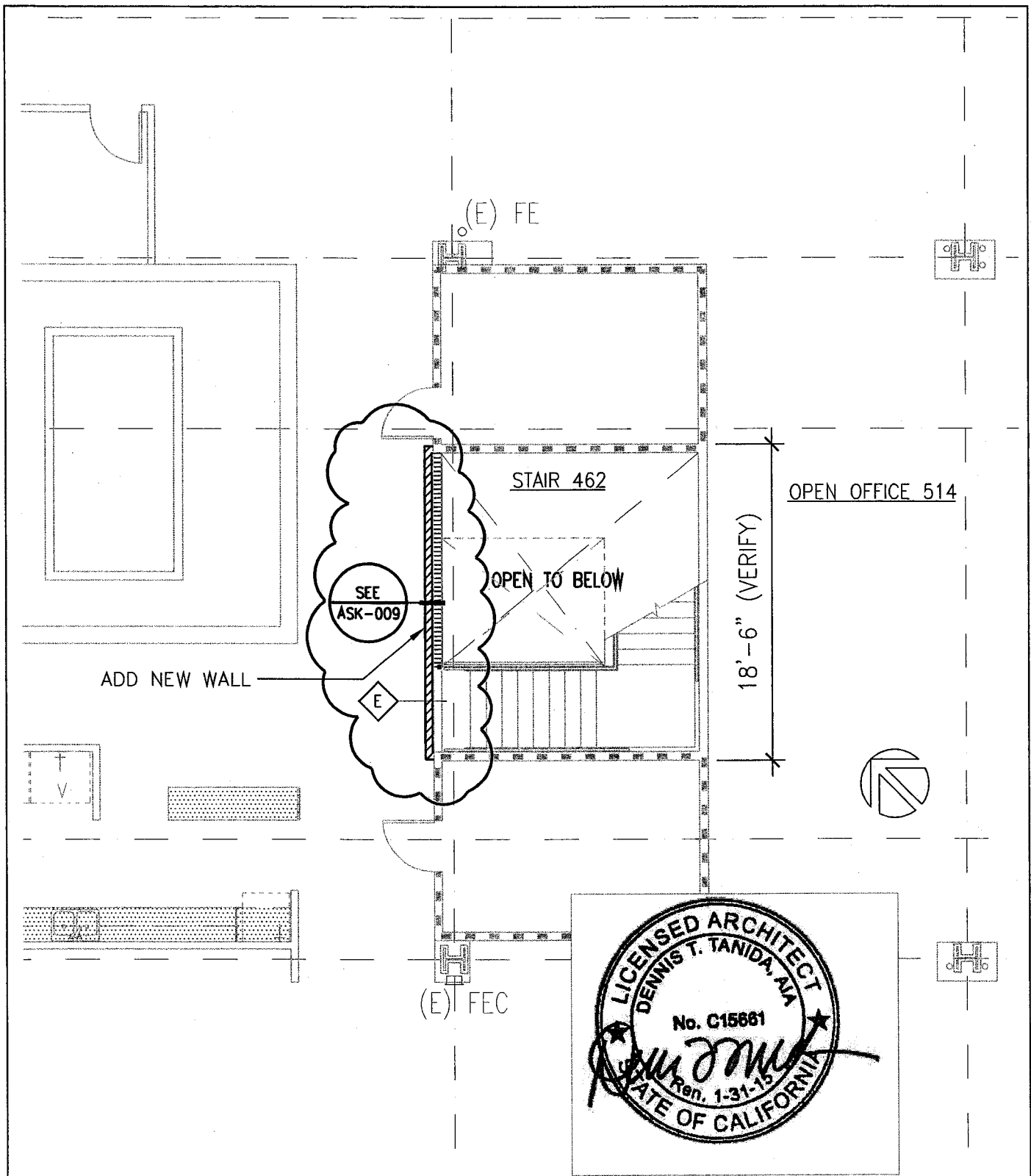


**Note to Contractor:**  
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**DLR Group**  
 Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-4470

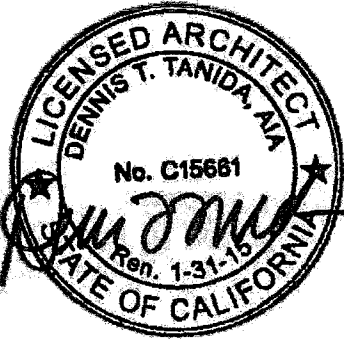
**WALL TYPE - E (NON-RATED)**  
 RCT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 92504

DLR Group No: 75-13619-00  
 Permit No: FM 0811-000-5454  
 Date: 01/14/14  
 Reference:  
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 Scale: 3"=1'-0"

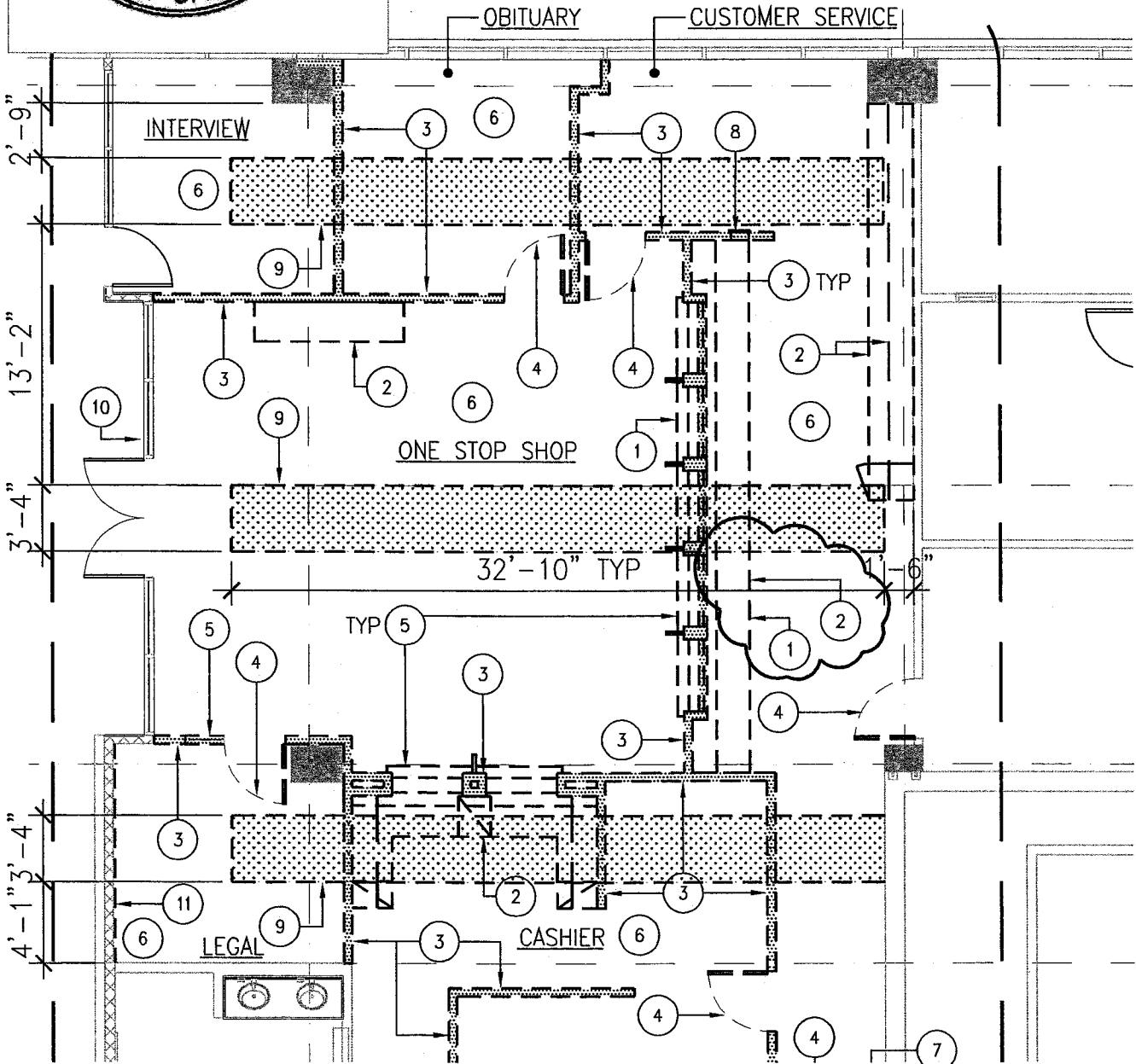


**Note to Contractor:**  
 The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

 <b>DLR Group</b> Architecture Engineering Planning Interiors 4280 Latham Street, Suite H Riverside, CA 92501 (951) 682-0470	<b>FIFTH FLOOR PLAN REVISIONS</b>  RCIT Press Enterprise Tenant Improvements 3450 14th Street Riverside, CA 9250	DLR Group No: 75-13619-00 Permit No.: FM 0811-000-5454 Date: 01/14/14 Reference: 2/A-2.5	Sketch No: <b>ASK-010</b> Scale: 1/8"=1'-0"
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AREA OF WORK



**Note to Contractor:**

The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.



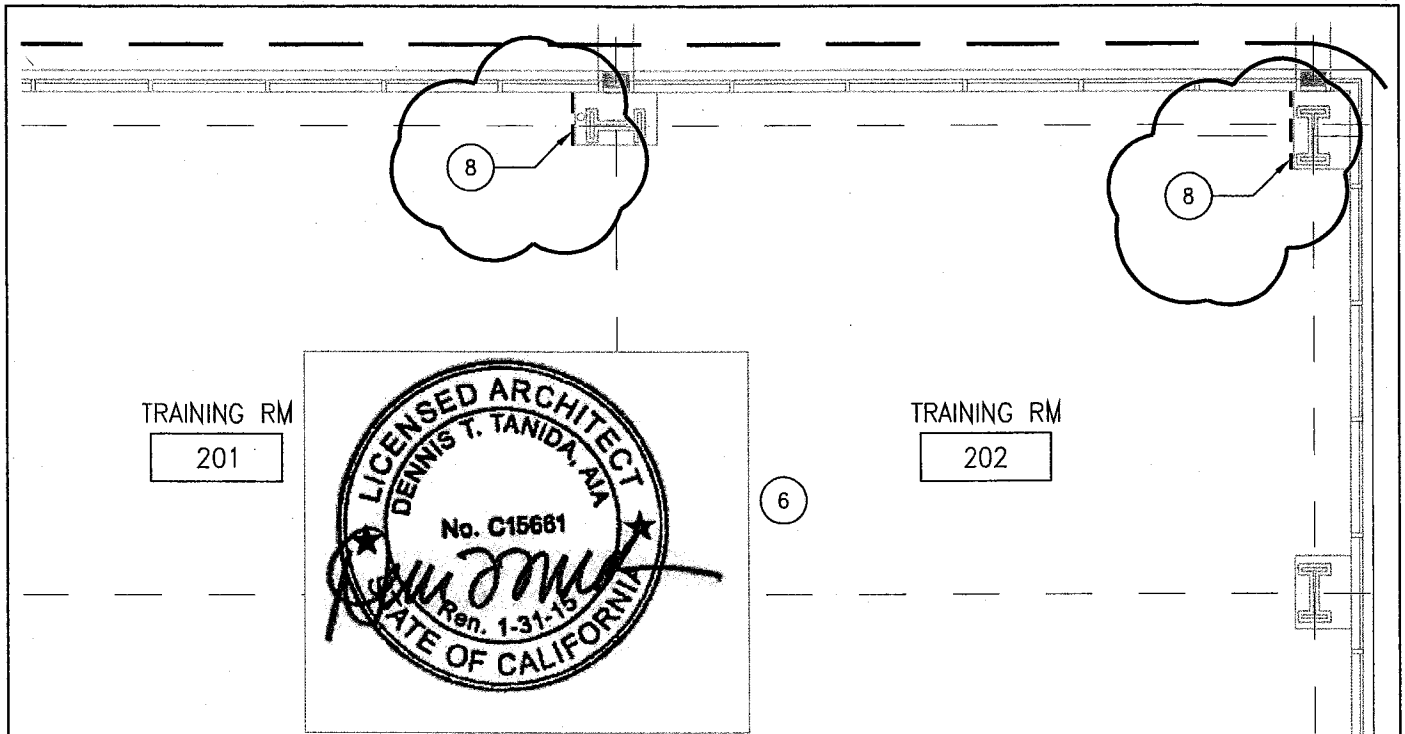
Architecture Engineering Planning Interiors  
4280 Latham Street, Suite H  
Riverside, CA 92501 (951) 682-0470

**FIRST FLOOR DEMOLITION  
PLAN REVISIONS**

RCIT Press Enterprise Tenant Improvements  
3450 14th Street  
Riverside, CA 9250

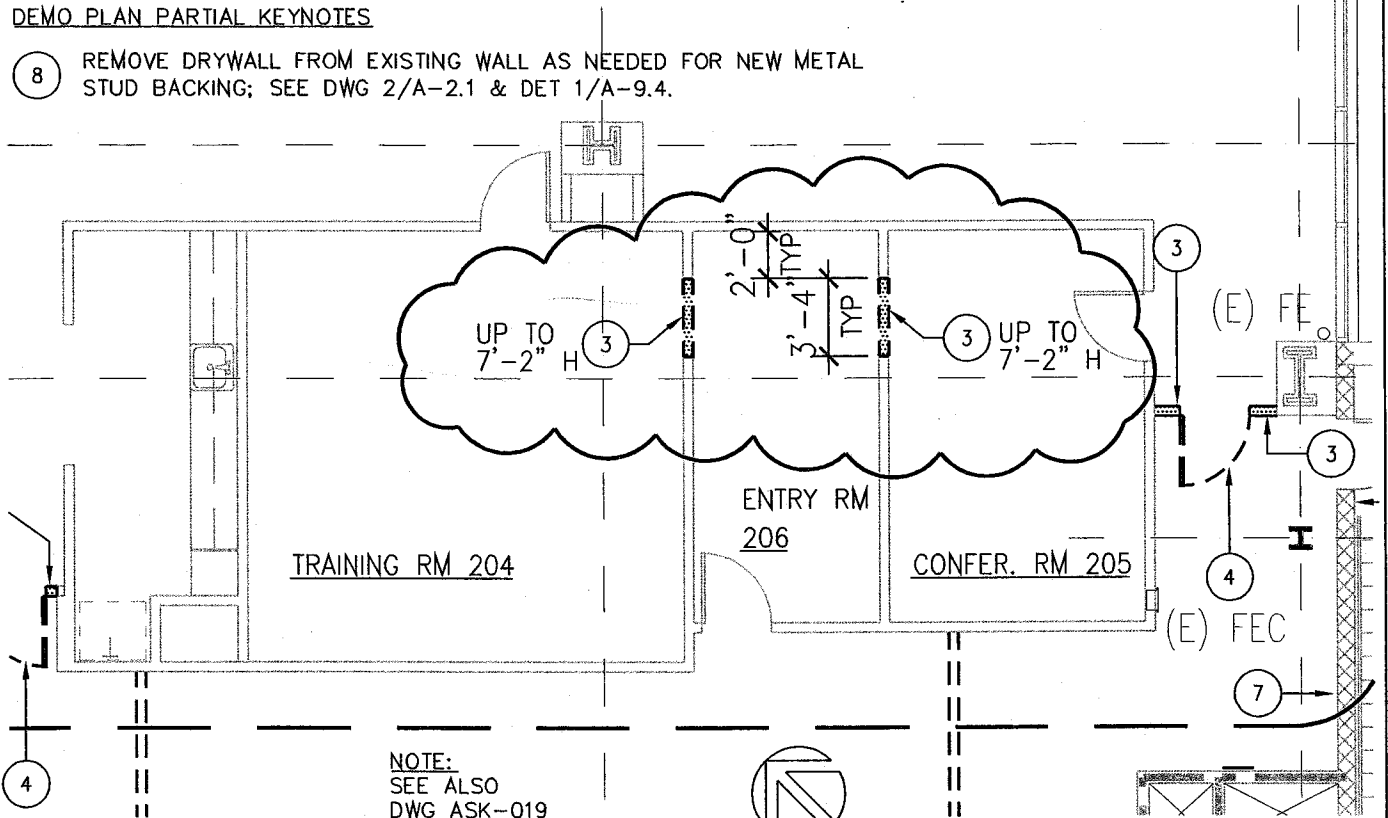
DLR Group No: 75-13619-00  
Permit No.: FM 0811-000-5454  
Date: 01/14/14  
Reference: 2/A-1.1

Sketch No: **ASK-011**  
Scale: 1/8"=1'-0"



**DEMO PLAN PARTIAL KEYNOTES**

- 8 REMOVE DRYWALL FROM EXISTING WALL AS NEEDED FOR NEW METAL STUD BACKING; SEE DWG 2/A-2.1 & DET 1/A-9.4.



**NOTE:**  
SEE ALSO  
DWG ASK-019

**Note to Contractor:**

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**DLR Group**

Architecture Engineering Planning Interiors  
4280 Latham Street, Suite H  
Riverside, CA 92501 (951) 682-0470

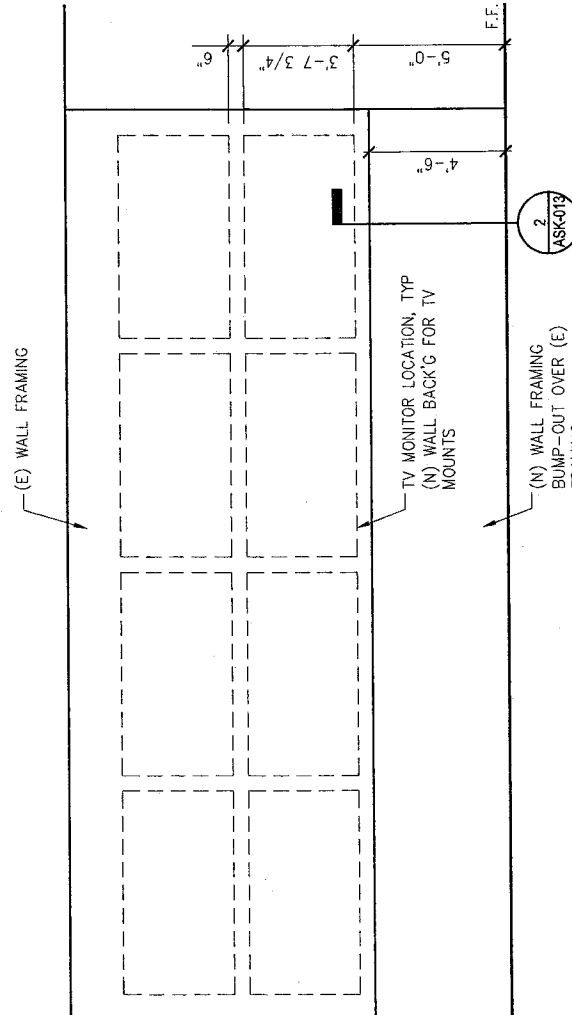
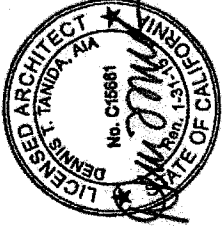
**SECOND FLOOR DEMO PLAN REVISIONS**

RCIT Press Enterprise Tenant Improvements  
3450 14th Street  
Riverside, CA 92501

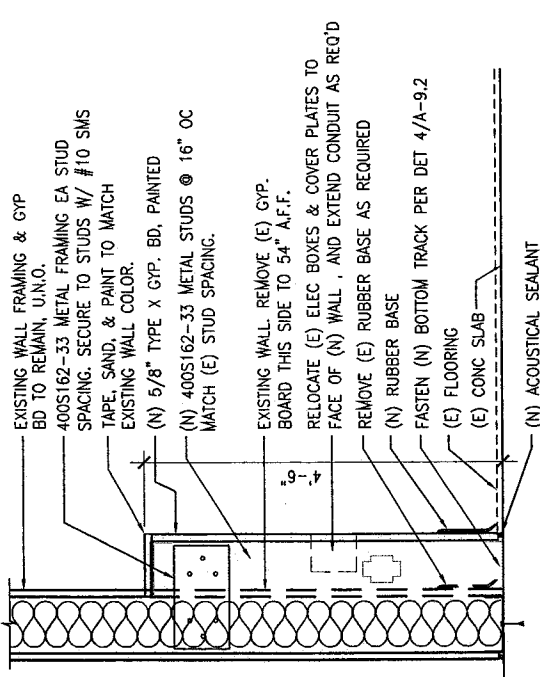
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Permit No.: FM 0811-000-5454  
Date: 01/15/14  
Reference: -2/A-1.2

Sketch No: **ASK-012**

Scale: 1/8"=1'-0"



1 CONTROL ROOM WALL ELEVATION  
 ASK-013 SCALE: 1/4" = 1'-0"



2 LOW WALL SECTION  
 ASK-013 SCALE: 1 1/2" = 1'-0"

Note to Contractor:  
 The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

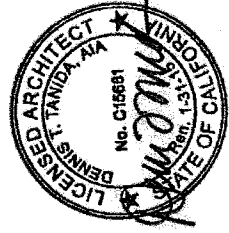
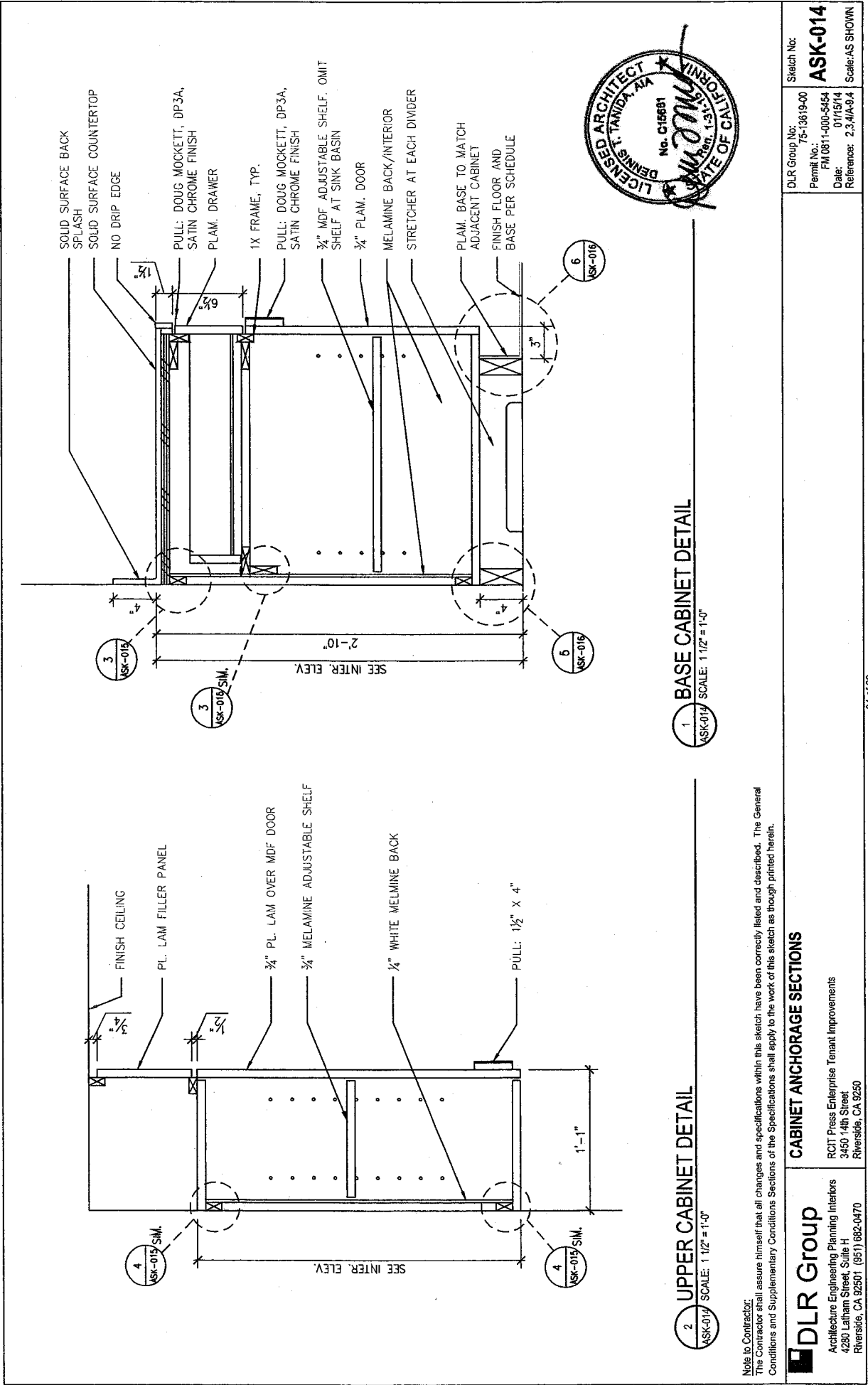
**DLR Group**  
 Architecture Engineering Planning Interiors  
 4280 Lathrain Street, Suite H  
 Riverside, CA 92501 (951) 662-9470

**(N) CONTROL ROOM LOW WALL**  
 RCTI Press Enterprise Tenant Improvements  
 3460 14th Street  
 Riverside, CA 92501

DLR Group No. 75-13619-00  
 Permit No.: FM 081-1-000-5454  
 Date: 07/15/14  
 Reference: 11/A-9.4

Sketch No.: **ASK-013**  
 Scale: AS NOTED



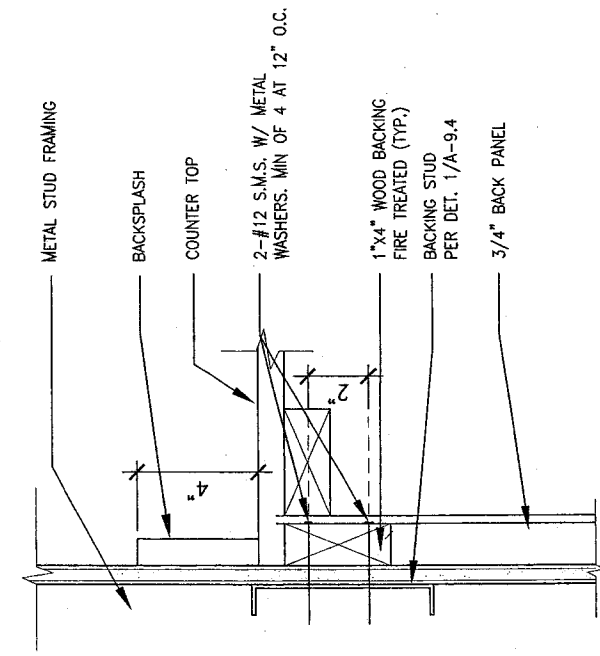
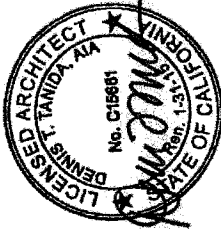


1 BASE CABINET DETAIL  
ASK-019 SCALE: 1 1/2" = 1'-0"

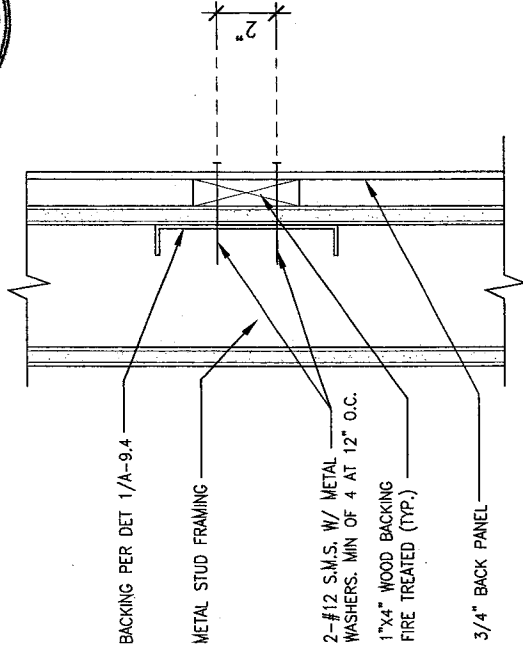
2 UPPER CABINET DETAIL  
ASK-019 SCALE: 1 1/2" = 1'-0"

Note to Contractor:  
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<b>DLR Group</b> Architecture Engineering Planning Interiors 4280 Latham Street, Suite H Riverside, CA 92501 (951) 682-0470	<b>CABINET ANCHORAGE SECTIONS</b>		DLR Group No: 75-13819-00 Permit No.: FM 0811-000-5464 Date: 07/15/14 Reference: 2,3,4/A-9.4
	Sketch No: <b>ASK-014</b> Scale: AS SHOWN		



3 TOP ANCHOR DETAIL  
ASK-015 SCALE: 1 1/2" = 1'-0"



4 MIDDLE ANCHOR DETAIL  
ASK-015 SCALE: 3" = 1'-0"

Note to Contractor:  
The Contractor shall assure himself that all changes and specifications within this sketch have been correctly filed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

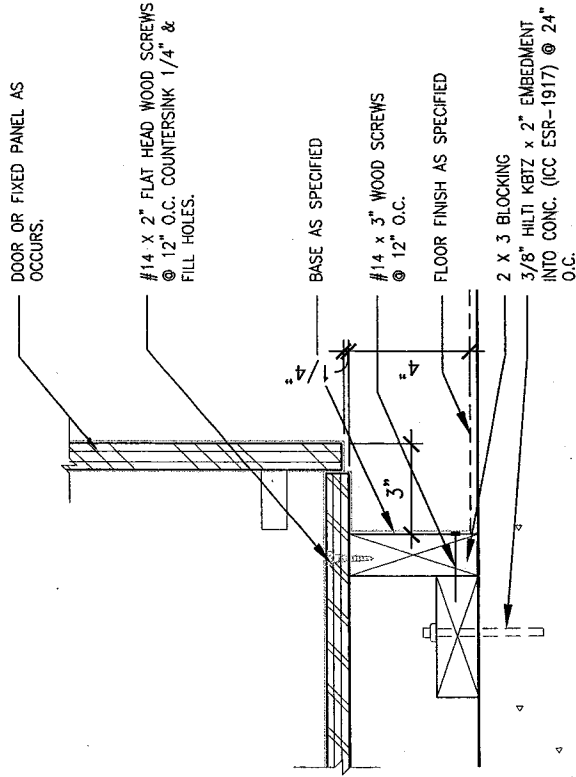
**DLR Group**  
Architecture Engineering Planning Interiors  
4280 Latham Street, Suite H  
Riverside, CA 92501 (951) 682-0470

**CABINET ANCHORAGE DETAILS**

RCIT Press Enterprise Tenant Improvements  
3450 14th Street  
Riverside, CA 92501

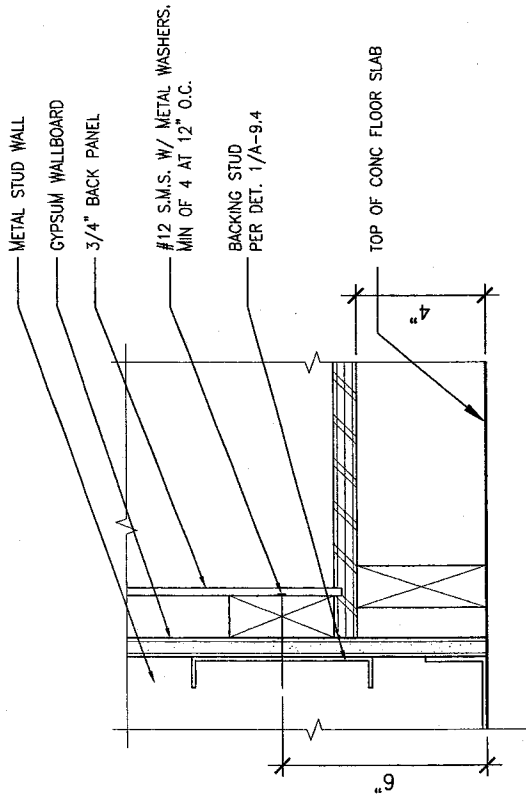
DLR Group No: 75-13619-00  
Permit No.: FM 081-000-5454  
Date: 01/15/14  
Reference:

Sketch No: **ASK-015**  
Scale: AS SHOWN



6 CABINET BASE ANCHOR DETAIL

ASK-016 SCALE: 3" = 1'-0"



5 BASE ANCHOR DETAIL

ASK-016 SCALE: 3" = 1'-0"

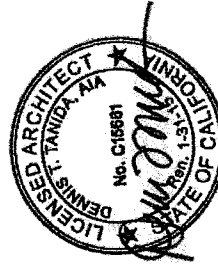
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The Contractor shall assure himself that all changes and specifications within this sketch have been correctly listed and described. The General Conditions and Supplementary Conditions Sections of the Specifications shall apply to the work of this sketch as though printed herein.

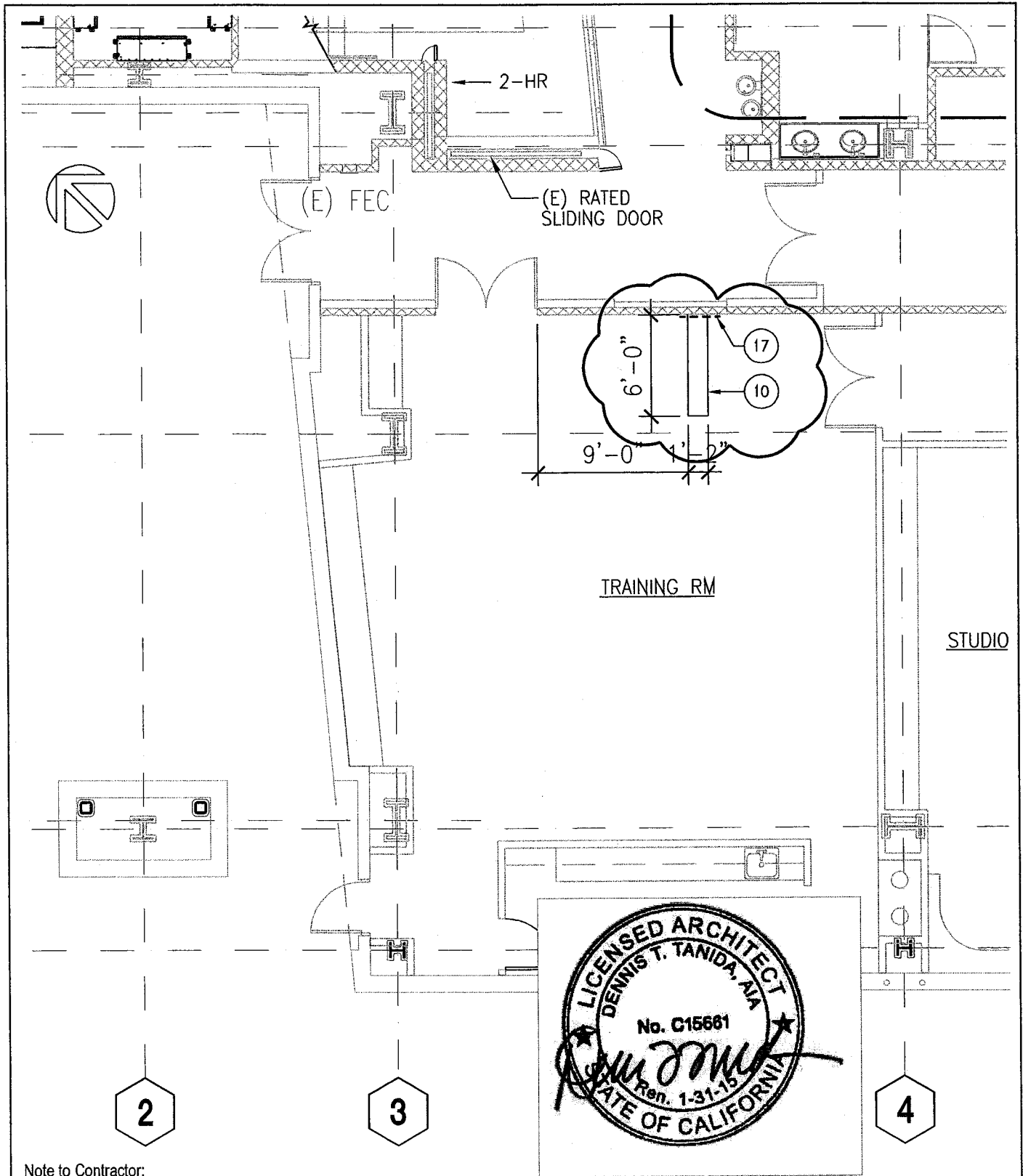
**DLR Group**  
Architecture Engineering Planning Interiors  
4280 Latham Street, Suite H  
Riverside, CA 92501 (951) 682-0470

**CABINET ANCHORAGE DETAILS**

RCIT Press Enterprise Tenant Improvements  
3450 14th Street  
Riverside, CA 92501

DLR Group No: 75-13619-00  
Permit No.: FM 081-000-5454  
Date: 01/15/14  
Reference:  
Sketch No: **ASK-016**  
Scale: AS SHOWN





**Note to Contractor:**

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**DLR Group**

Architecture Engineering Planning Interiors  
 4280 Latham Street, Suite H  
 Riverside, CA 92501 (951) 682-0470

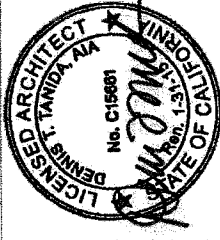
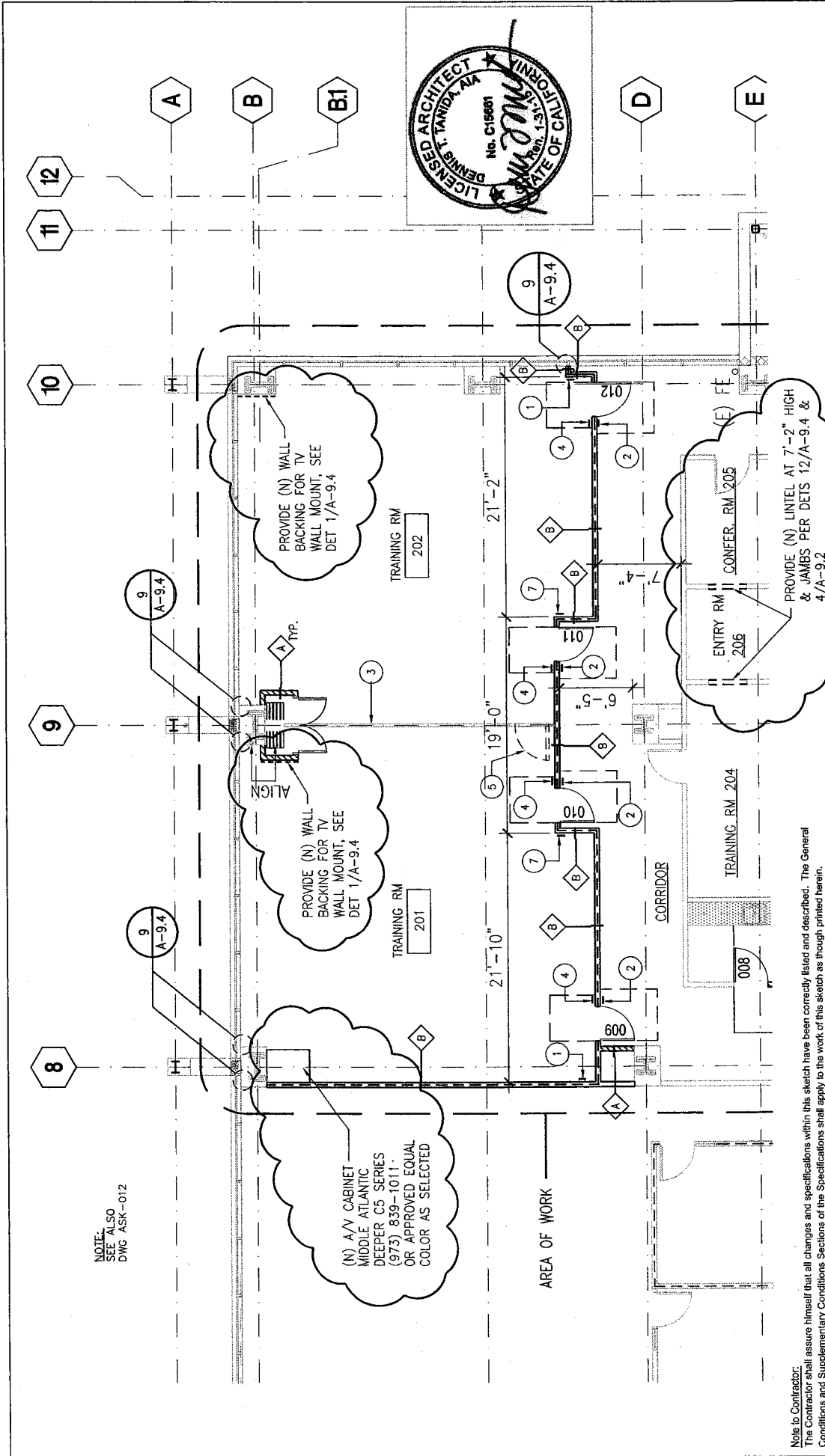
**NEW WALL BACKING FOR TV WALL MOUNT**

RCIT Press Enterprise Tenant Improvements  
 3450 14th Street  
 Riverside, CA 9250

DLR Group No: 75-13619-00  
 Permit No.: FM 0811-000-5454  
 Date: 01/15/14  
 Reference: 2/A-2.1

Sketch No: **ASK-017**  
 Scale: 1/8"=1'-0"





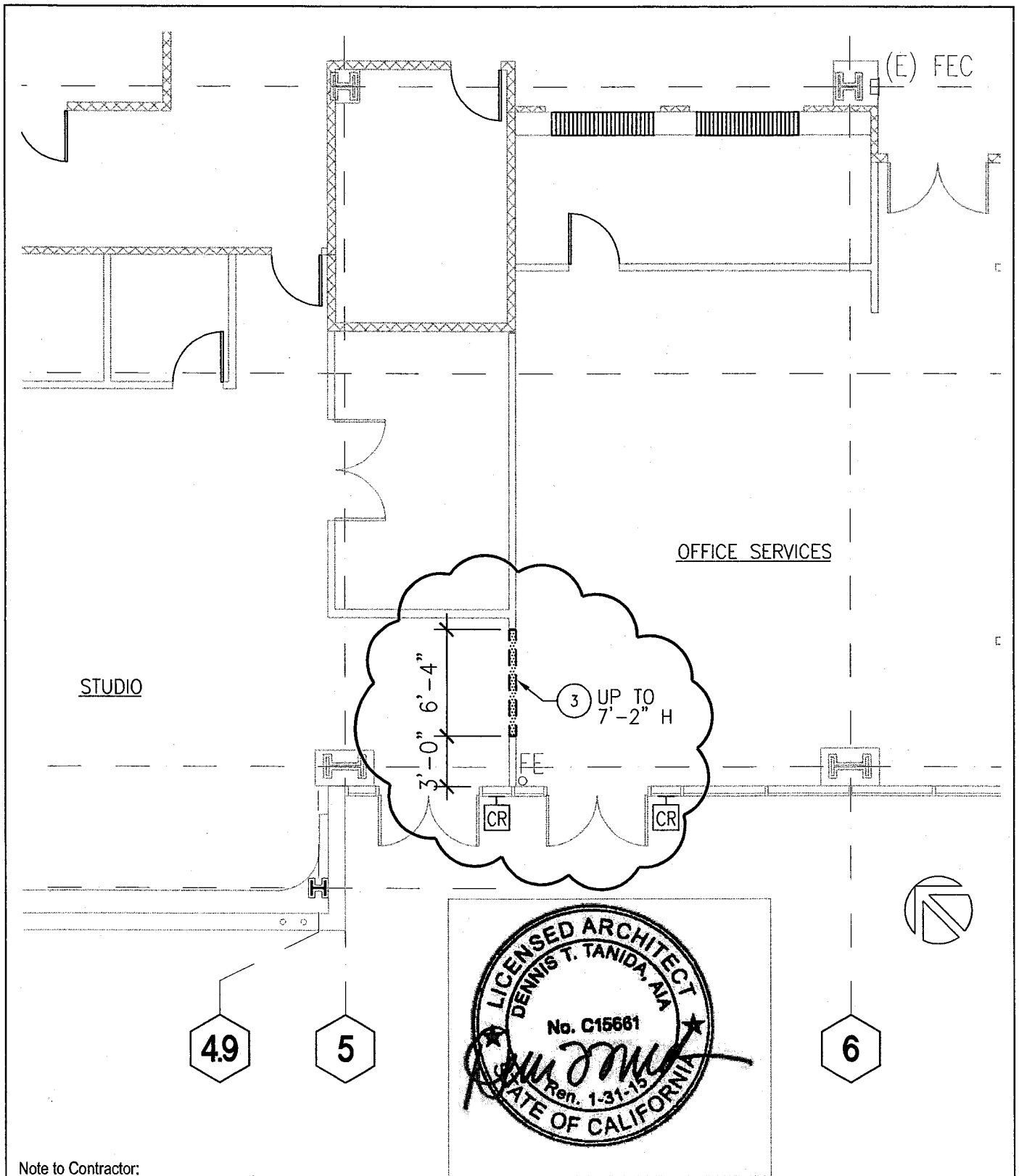
NOTE:  
SEE ALSO  
DWG ASK-012

Note to Contractor:  
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**FLOOR PLAN REVISIONS AT  
TRAINING ROOMS 201 & 202**  
RCIT Press Enterprise Tenant Improvements  
3450 14th Street  
Riverside, CA 92504

**DLR Group**  
Architecture Engineering Planning Interiors  
4230 Latham Street, Suite H  
Riverside, CA 92504 (951) 882-0470

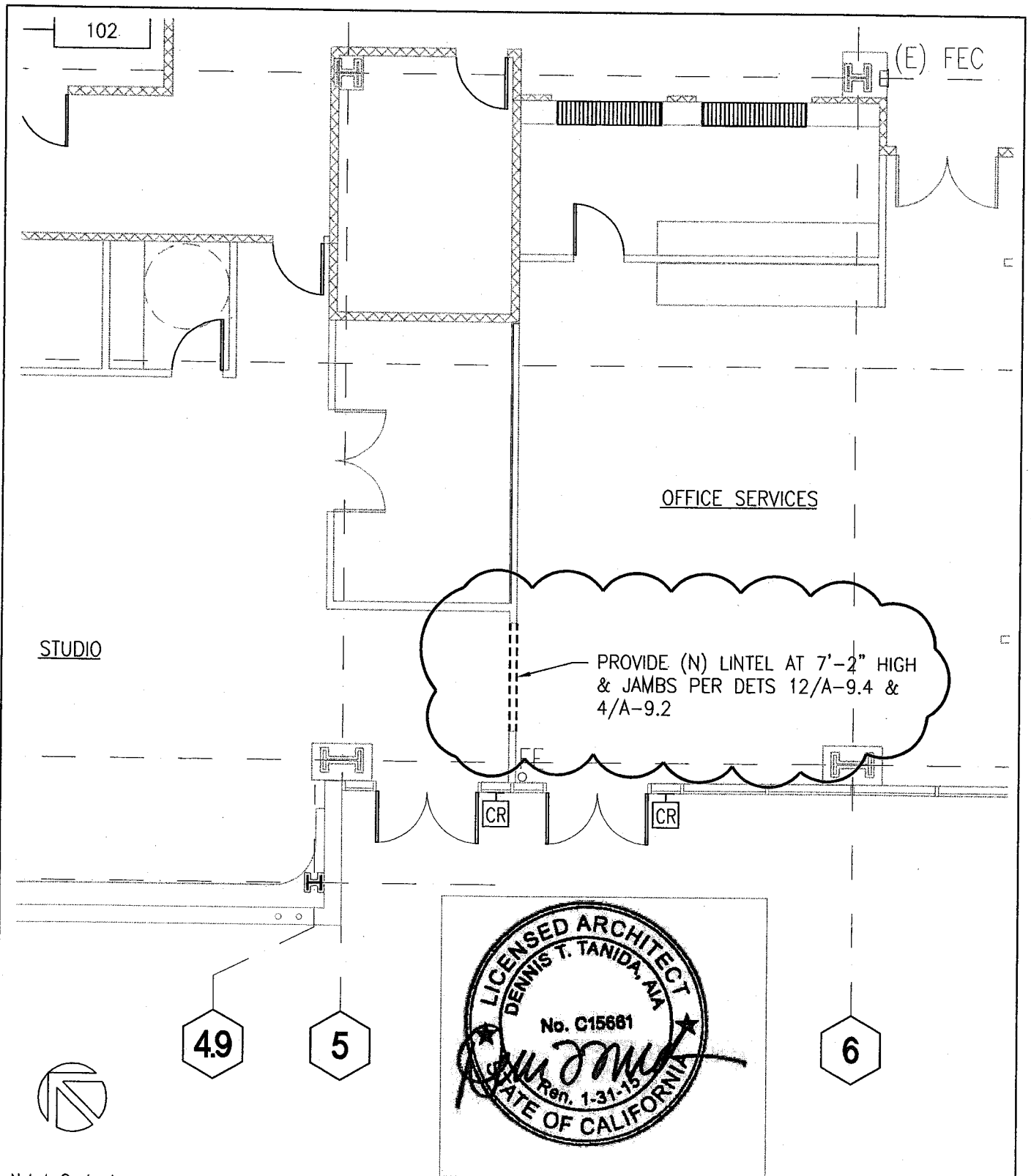
DLR Group No: 75-13619-00  
Permit No.: FM 0811-000-5454  
Date: 01/15/14  
Reference: 2/A-2.2  
Sketch No: **ASK-019**  
Scale: 1/8"=1'-0"



**Note to Contractor:**

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 <p><b>DLR Group</b>          Architecture Engineering Planning Interiors          4280 Latham Street, Suite H          Riverside, CA 92501 (951) 682-0470</p>	<p><b>FIRST FLOOR DEMOLITION          PLAN REVISIONS</b>          RCIT Press Enterprise Tenant Improvements          3450 14th Street          Riverside, CA 9250</p>	<p>DLR Group No: 75-13619-00          Permit No.: FM 0811-000-5454          Date: 01/16/14          Reference: 2/A-1.1</p>	<p>Sketch No: <b>ASK-020</b>          Scale: 1/8"=1'-0"</p>
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**Note to Contractor:**

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**DLR Group**

Architecture Engineering Planning Interiors  
4280 Latham Street, Suite H  
Riverside, CA 92501 (951) 682-0470

**NEW LINTEL OPENING AT EXISTING WALL**

RCIT Press Enterprise Tenant Improvements  
3450 14th Street  
Riverside, CA 9250

DLR Group No: 75-13619-00  
Permit No.: FM 0811-000-5454  
Date: 01/16/14  
Reference: 2/A-2.1

Sketch No:

**ASK-021**

Scale: 1/8"=1'-0"





Middle Atlantic Products

EXCEPTIONAL SUPPORT &amp; PROTECTION™

# Deeper C5 Series A/V Credenza Rack

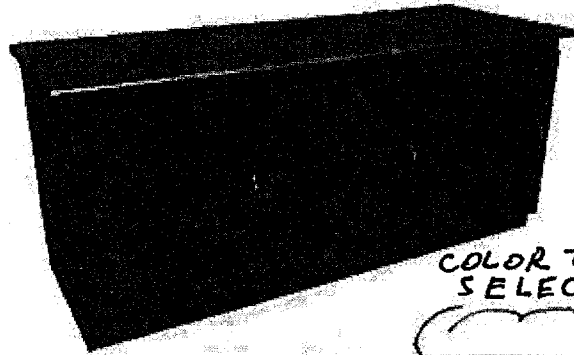


EIA/TIA Compliant

**Unique Design with Integrated Thermal Management  
Simplifies System Design and Minimize Delays**

## Features

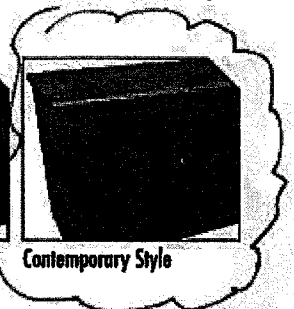
- Fully assembled frames ship separately from furniture-grade panels
- Integrated, thermostatically controlled cooling quietly protects active electronics
- Available in 1, 2 and 3 bay models
- Unique design allows panels to be replaced quickly and easily
- Available in Contemporary and Traditional Styles
- 12 standard finishes to match all environments



COLOR TO BE SELECTED



Traditional Style



Contemporary Style

PROVIDE SAMPLES

## Architects' and Engineers' Specifications

EIA Compliant 19" A/V Credenza Rack shall be Middle Atlantic Products model # CSF...D (refer to chart). Credenza Rack shall be available in 1, 2 or 3 bay configurations. Overall dimensions shall be 31-1/2" H x \_\_\_ W" x 28-1/8" D (refer to chart). Usable height shall be 14 rackspaces per bay. Rack frames shall ship fully assembled and be constructed of steel. Total weight capacity with Middle Atlantic finishing kit shall be 600 lbs., with a maximum of 350 lbs. to be placed on the top surface. Total weight capacity of the frame only (must take into account the weight of the customer supplied finishing kit) shall be 800 lbs. Each rack bay shall come equipped with 2 pairs of 11-gauge steel rackrail topped with 10-32 mounting holes in universal EIA spacing, black a-coat finish and numbered rackspaces. Credenza rack shall have one 50 CFM thermostatically controlled blower per bay. Exhaust air shall exit the front of the credenza for unrestricted air flow. Thermostatically controlled fans shall be powered on at 87°F and turn off at 85°F. Credenza rack shall have venting on the top and bottom of the face of the rack. Credenza rack shall include two adjustable side mounted horizontal lacing bars for enhanced cable management. Credenza rack shall have a steel rear access panel. Credenza rack shall be finished in a durable black powder coat. Top, sides, front doors and kick plate shall ship separately from rack frame and be model # CSK...D. Top, sides, front doors and kick plate to accept large format monitor mount shall be model # CSK...MT. (available for 2 and 3 bay Credenzas only). Top shall be constructed of 1-1/8" thick triple refined MDF, sides shall be constructed of 1" thick triple refined MDF, front doors shall be constructed of 3/4" thick triple refined MDF, and kick plate shall be constructed of 1/2" thick triple refined MDF. Top, sides and front doors shall be available in a traditional or contemporary style. Front doors shall be solid or plexi. Top, sides and front doors shall be available in a Wenge, Dark Cherry, Dark Pecan, Ebony Ash, Aged Cherry, Honey Maple, Light Walnut, Maple, Shark Gray, Pepperstone, Graystone or Darkstone RTF thermolaminate finish. Credenza rack shall include 4 fine floor casters. Credenza rack shall be GREENGUARD Indoor Air Quality Certified and GREENGUARD Gold Certified. Credenza rack shall comply with the requirements of RoHS EU Directive 2002/95/EC. Credenza rack shall be manufactured by an ISO 9001 and ISO 14001 registered company. Credenza Rack frame shall be warranted to be free from defects in material or workmanship under normal use and conditions for the lifetime of the rack, fans shall be warranted for a period of three years and wood panels shall be warranted for a period of 7 years.

### OPTIONS

- Shelf System Insert shall be model # CS-SH-SYS
- Cable Grommet shall be model # CS-CG
- Flip up side shelf shall be model # CSD-SDSH-\_\_\_ (C for Contemporary, T for traditional, specify color)
- Waste and Recycle Bin Insert shall be model # CS-WB
- Millwork Kit, for which includes specifications and hardware needed to create a customized finishing kit shall be model # CS-MK\_ (1, 2 or 3, determined by the number of bays in CS series credenza)
- Slide out rotating rack bay shall have 12 rackspaces and be model CSD-SRSR12
- Single Mount for 42" to 70" monitors shall be CSMM1-4270S, Dual Mount for 42" to 55" monitors shall be CSMM1-4255D, Dual Mount for 56" to 65" monitors shall be CSMM1-5665D
- Camera mount shall mount to monitor mount, and be model CSCMM-88 (mounts between monitors), CSCMTB-128 (12"x8" platform to mount above or below monitors), CSCMTB-88 (8"x8" platform to mount above or below monitors)

PROVIDE

CUSTOMIZABLE SPECIFICATION CLIPS AVAILABLE AT MIDDLEATLANTIC.COM

42 of 69

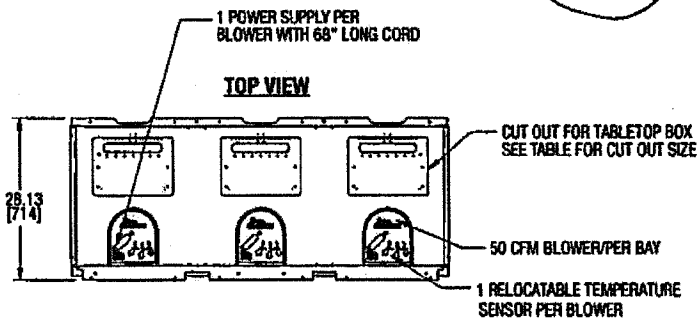
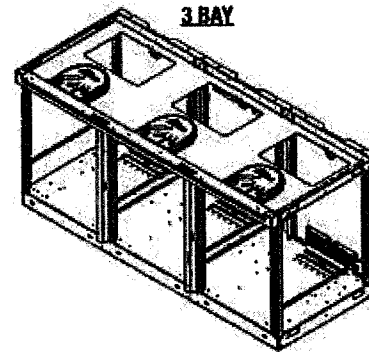
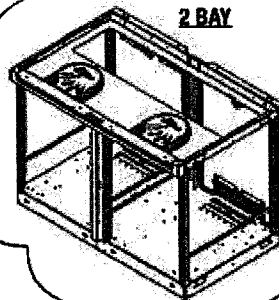
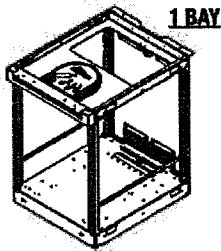
US: New Jersey • California • Illinois • Voice: 973-839-1011 Fax: 973-839-1976 • middleatlantic.com  
Canada: Ontario • British Columbia • Voice: 613-836-2501 Fax: 613-836-2690 • middleatlantic.ca

# C5 Frame basic dimensions

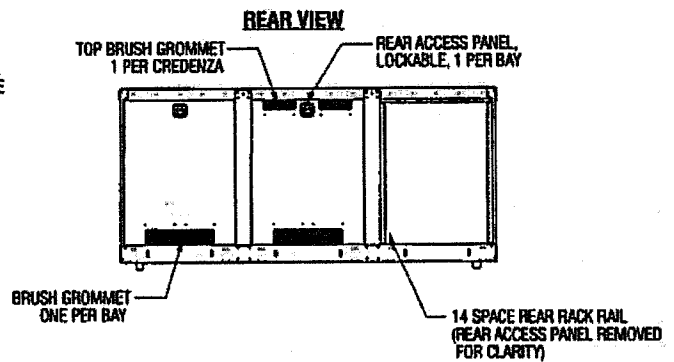
All dimensions in inches unless otherwise noted [All dimensions in brackets are in millimeters]



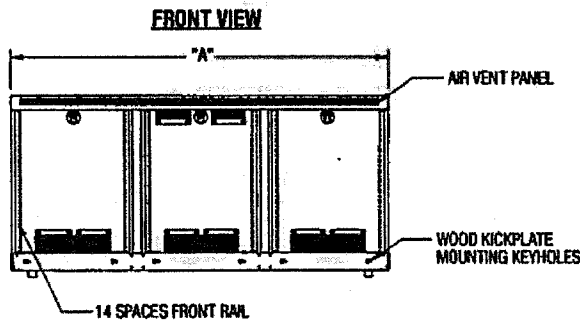
PROVIDE



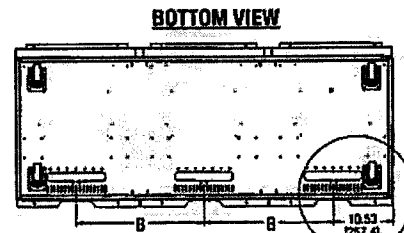
TOP VIEW



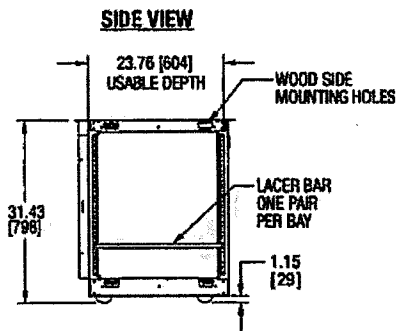
REAR VIEW



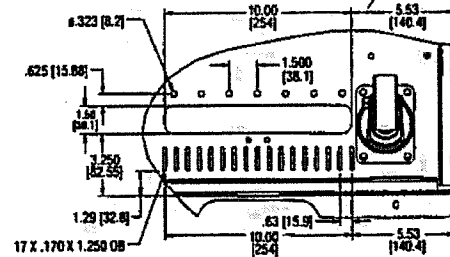
FRONT VIEW



BOTTOM VIEW



SIDE VIEW



Part#	"A" Width	"B" Center Distance	Cut Out Size	QTY of Cut Outs	DBA	Fan Free Air Rated CFM	Actual Installed CFM
CSF1-D	21.05 [535]	N/A	10.00 [254] x 17.05 [433]	1	33	50	46
CSF2-D	43.39 [1102]	22.35 [568]	10.00 [254] x 39.39 [1001]	1	34	100	91
CSF3-D	65.75 [1670]	22.35 [568]	10.00 [254] x 14.00 [356]	3	36	150	138

Thermal Load	Temp Change (°F) CSF1-D / 1CSF1-D	Temp Change (°F) CSF2-D / 1CSF2-D	Temp Change (°F) CSF3-D / 1CSF3-D
0.8A-100W	3.3	18	1.3
1.7A-200W	7.4	4.6	3.7
2.5A-300W	9.9	6.5	4.7
3.3A-400W	14.5	7.2	5.3
4.2A-500W	17.8	10.0	7.8
5.0A-600W	21.2	11.3	9.0
5.8A-700W	25.8	14.5	12.2
6.7A-800W	26.6	15.0	10.1
7.5A-900W	31.5	17.7	13.3
8.3A-1000W	33.3	19.5	15.6

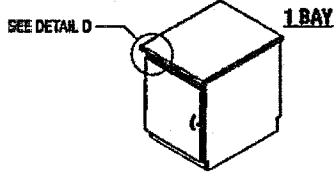
# C5 Finishing Kit basic dimensions

All dimensions in inches unless otherwise noted [All dimensions in brackets are in millimeters]

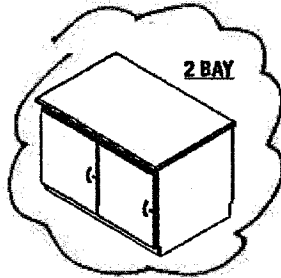


## C5 DEEP CREENZA FINISHING KITS (CONTEMPORARY STYLE W/ SOLID DOORS SHOWN)

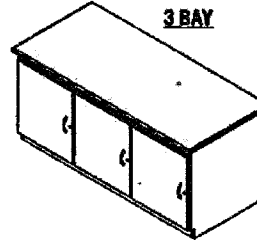
PROVIDE



1 BAY



2 BAY

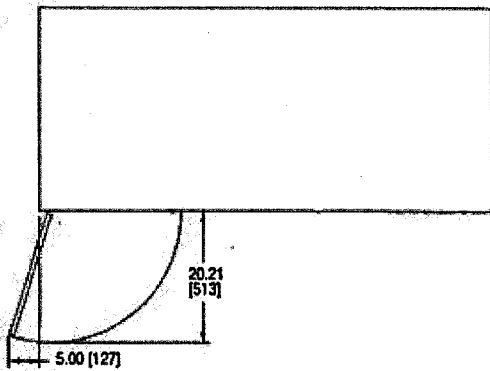


3 BAY

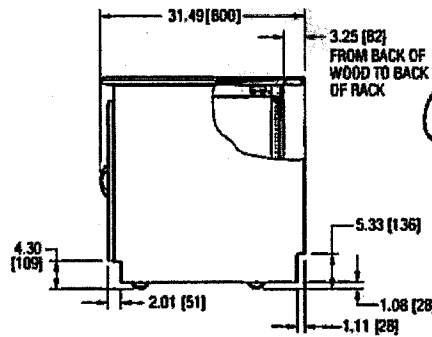


DETAIL D  
CONTEMPORARY  
W/ SOLID DOOR

TOP VIEW



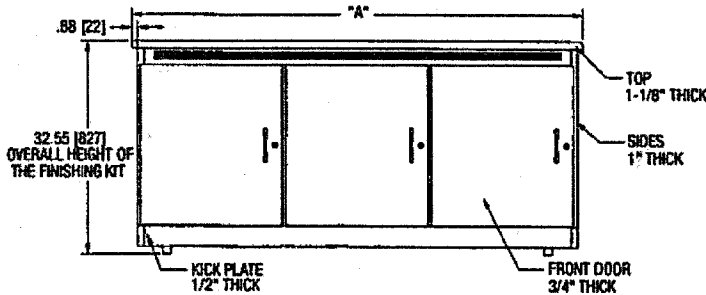
SIDE VIEW



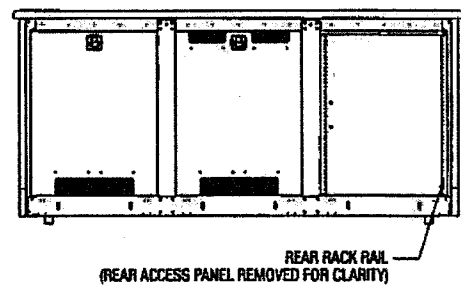
Finishing Kit	Finishing Kit for use w/ monitor mount	"A" Width
CSK1-D-XXX-XX		24.00 (620)
CSK2-D-XXX-XX	CSK2-D-XXXMI-XX	42.34 (1097)
CSK3-D-XXX-XX	CSK3-D-XXXMI-XX	69.50 (1765)

CSK2-D-CPD-XX  
PROVIDE

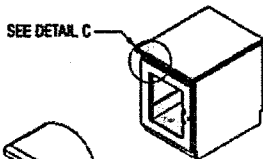
FRONT VIEW



REAR VIEW



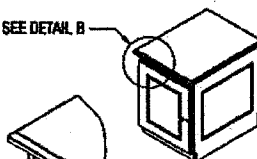
SEE DETAIL C



CONTEMPORARY  
W/ PLEXIGLASS DOOR

DETAIL C

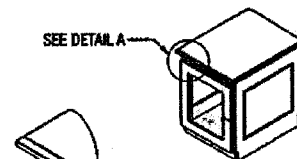
SEE DETAIL B



TRADITIONAL  
W/ SOLID DOOR

DETAIL B

SEE DETAIL A



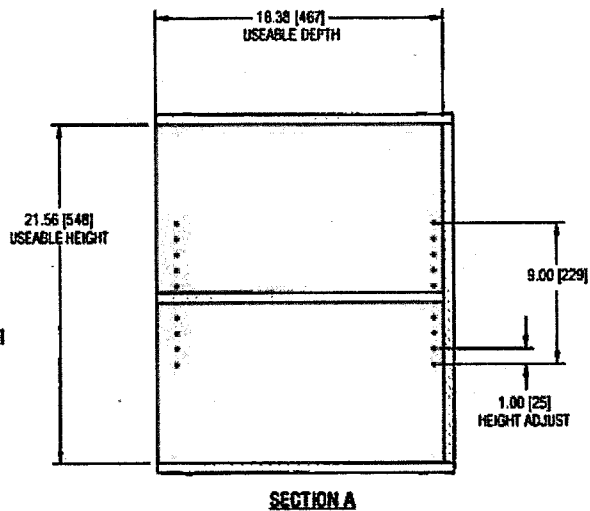
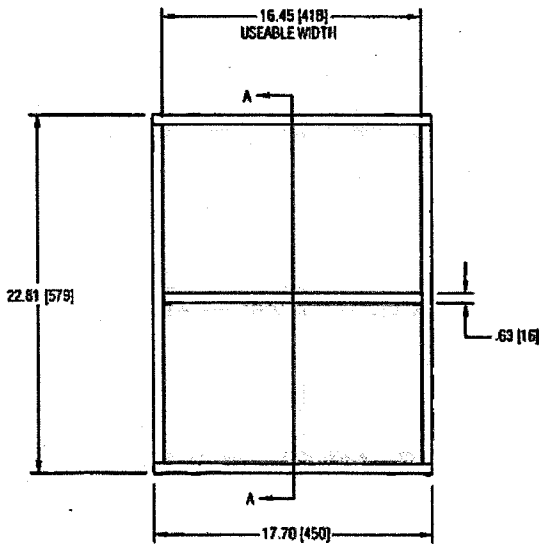
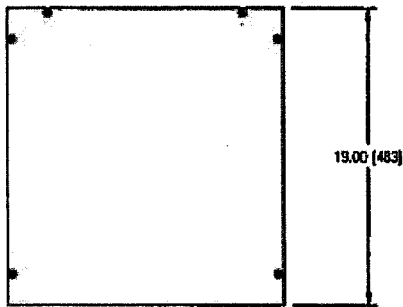
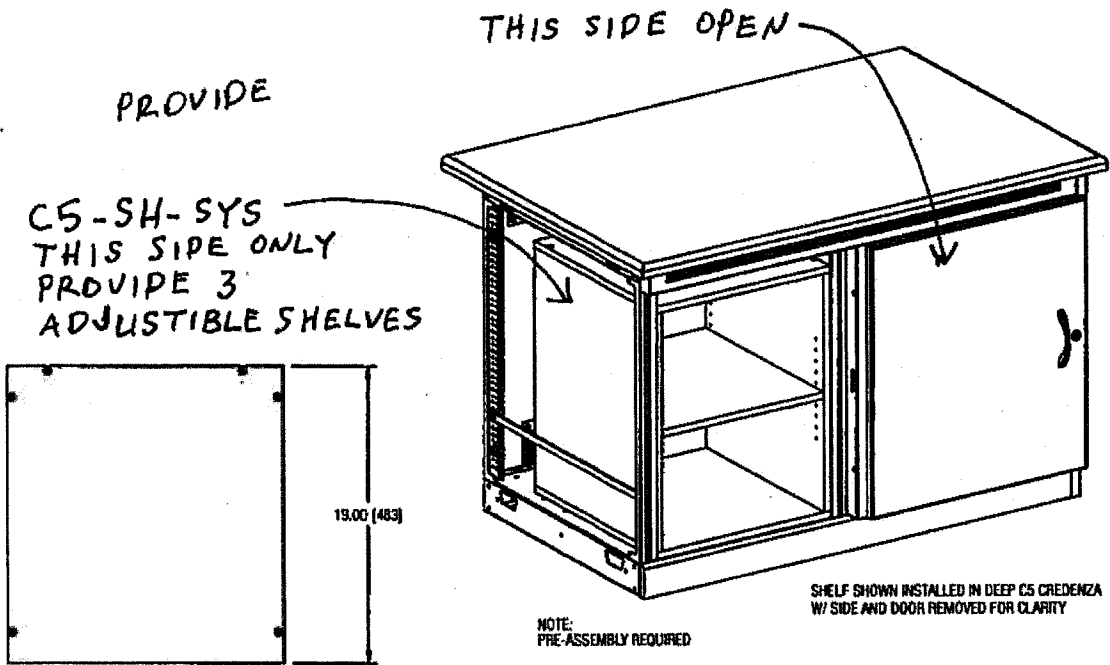
TRADITIONAL  
W/ PLEXIGLASS DOOR

DETAIL A

PROVIDE

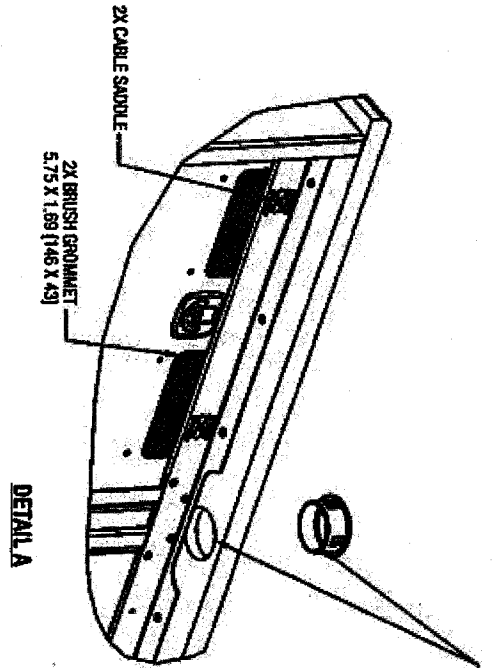
## C5 Shelf Insert basic dimensions

All dimensions in inches unless otherwise noted [All dimensions in brackets are in millimeters]

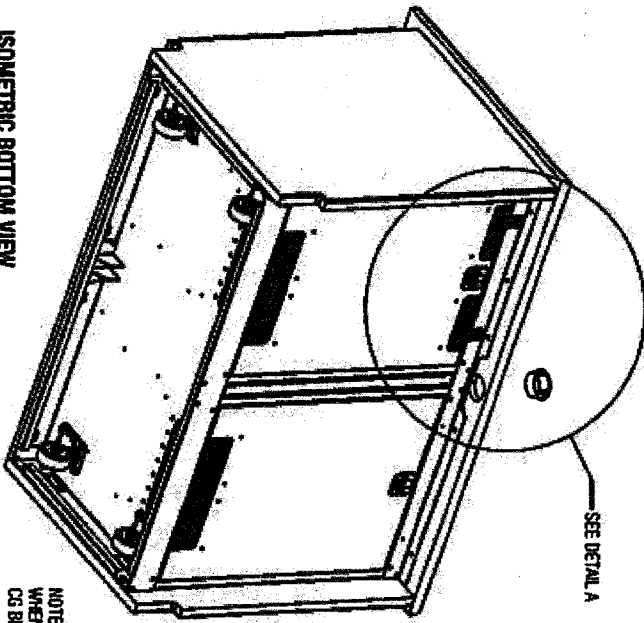


# C5 Cable Grommet basic dimensions

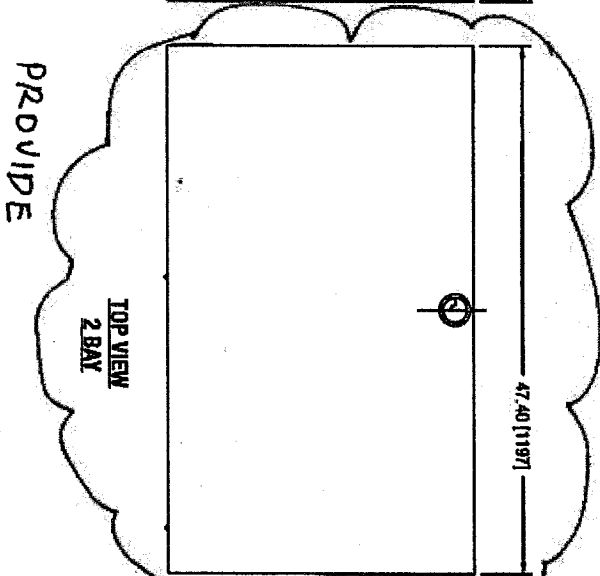
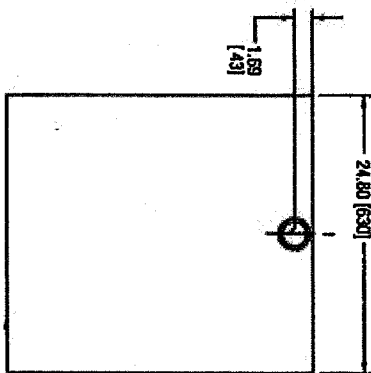
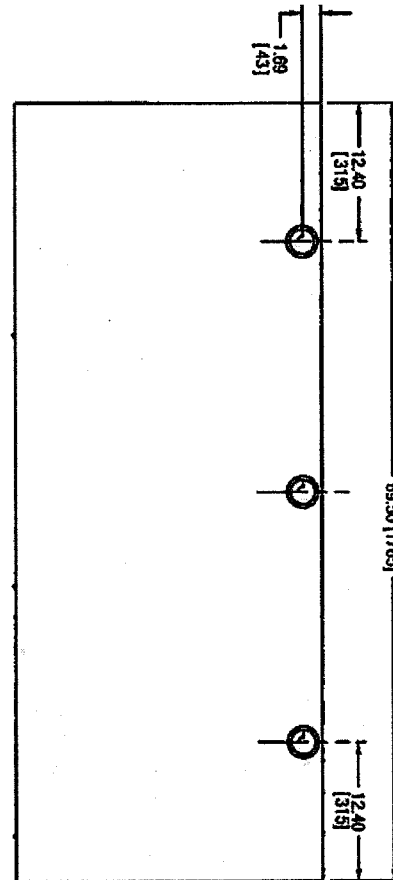
All dimensions in inches unless otherwise noted. [All dimensions in brackets are in millimeters]



2.30" [58MM] DIA CABLE GROMMET  
PRESS FIT FROM TOP AFTER DRILLING  
THROUGH EXISTING BLIND HOLE



NOTE  
WHEN OPTIONAL MONITOR MOUNT TOP IS USED  
CG BLIND HOLE IS ELIMINATED WHERE MONITOR IS PLACED.



**SECTION 08710**  
**DOOR HARDWARE**

**PART 1 - GENERAL**

**1.1 SUMMARY**

A. Section Includes:

1. Door Hardware, including electric hardware.
2. Storefront and entrance door hardware.
3. Power supplies for electric hardware.
4. Wiring diagrams for electric hardware.

B. Related Sections:

1. Section 06 10 00 - Rough Carpentry: Finish Hardware Installation
2. Section 07 90 05 - Joint Sealers – exterior thresholds
3. Section 08 12 17 - Prefinished Steel Door Frames
4. Section 08 14 16 - Flush Wood Doors
5. Section 10 22 26 - Operable Partitions
6. Section 26 05 19 – Low-Voltage Electrical Power Conductors and Cables

**1.2 REFERENCES:**

Use date of standard in effect as of Bid date.

- A. American National Standards Institute – ANSI 156.18 – Materials and Finishes.
- B. BHMA – Builders Hardware Manufacturers Association
- C. DHI – Door and Hardware Institute
- D. NFPA – National Fire Protection Association
  1. NFPA 80 – Fire Doors and Windows
  2. NFPA 105 – Smoke and Draft Control Door Assemblies
  3. NFPA 252 – Fire Tests of Door Assemblies
- E. UL – Underwriters Laboratories
  1. UL10C – Positive Pressure Fire Tests of Door Assemblies.
  2. UL 305 – Panic Hardware
- F. WHI – Warnock Hersey Incorporated
- G. 2010 State of California Building Code

- H. Local applicable codes
- I. SDI – Steel Door Institute
- J. WI – Woodwork Institute
- K. AWI – Architectural Woodwork Institute
- L. NAAMM – National Association of Architectural Metal Manufacturers

**1.3 SUBMITTALS & SUBSTITUTIONS**

- A. **SUBMITTALS:** Submit six copies of schedule per Section 01330. Only submittals printed one sided will be accepted and reviewed. Organize vertically formatted schedule into “Hardware Sets” with index of doors and headings, indicating complete designations of every item required for each door or opening. Include following information:
  - 1. Type, style, function, size, quantity and finish of hardware items.
  - 2. Use BHMA Finish codes per ANSI A156.18.
  - 3. Name, part number and manufacturer of each item.
  - 4. Fastenings and other pertinent information.
  - 5. Description of door location using space names and numbers as published in the drawings.
  - 6. Explanation of abbreviations, symbols, and codes contained in schedule.
  - 7. Mounting locations for hardware.
  - 8. Door and frame sizes, handing, materials, fire-rating and degrees of swing.
  - 9. List of manufacturers used and their nearest representative with address and phone number.
  - 10. Catalog cuts.
  - 11. Wiring Diagrams.
  - 12. Manufacturer’s technical data and installation instructions for electronic hardware.
  - 13. Date of jobsite visit.
- B. Bid and submit manufacturer’s updated/improved item if scheduled item is discontinued.
- C. Deviations: Highlight, encircle or otherwise identify deviations from “Schedule of Finish Hardware” on submittal with notations clearly designating those portions as deviating from this section.
- D. If discrepancy between drawings and scheduled material in this section, bid the more expensive of the two choices, note the discrepancy in the submittal and request direction from Architect for resolution.

- E. Substitutions per Division 1. Include product data and indicate benefit to the Project. Furnish operating samples on request.
- F. Furnish as-built/as-installed schedule with closeout documents, including keying schedule, wiring diagrams, manufacturers' installation, adjustment and maintenance information, and supplier's final inspection report.

**1.4 QUALITY ASSURANCE:**

**A. Qualifications:**

- 1. Hardware supplier: direct factory contract supplier who employs a certified architectural hardware consultant (AHC), available at reasonable times during course of work for project hardware consultation to Owner, Architect and Contractor.
  - a) Responsible for detailing, scheduling and ordering of finish hardware. Detailing implies that the submitted schedule of hardware is correct and complete for the intended function and performance of the openings.

B. Hardware: Free of defects, blemishes and excessive play. Obtain each kind of hardware (latch and locksets, exit devices, hinges and closers) from one manufacturer.

C. Exit Doors: Operable from inside with single motion without the use of a key or special knowledge or effort.

D. Fire-Rated Openings: NFPA 80 compliant. Hardware UL10C / California State Fire Marshal Standard 12-7-4 (positive pressure) compliant for given type/size opening and degree of label. Provide proper latching hardware, non-flaming door closers, approved-bearing hinges, and resilient seals. Coordinate with wood door section for required intumescent seals. Furnish openings complete.

- 1. Note: scheduled resilient seals may exceed selected door manufacturer's requirements.
- 2. See 2.6.E for added information regarding resilient and intumescent seals.

E. Furnish hardware items required to complete the work in accordance with specified performance level and design intent, complying with manufacturers' instructions.

F. Pre-Installation Meetings: Initiate and conduct with supplier, installer and related trades, coordinate materials and techniques, and sequence complex hardware items and systems installation. Include manufacturers' representatives of locks, panic hardware and door closers in the meetings. Convene prior to commencement of related work.

**1.5 DELIVERY, STORAGE AND HANDLING:**

A. Delivery: coordinate delivery to appropriate locations (shop or field).



1. Permanent keys and cores: secured delivery direct to Owner's representative.
- B. Acceptance at Site: Items individually packaged in manufacturers' original containers, complete with proper fasteners and related pieces. Clearly mark packages to indicate contents, locations in hardware schedule and door numbers.
- C. Storage: Provide securely locked storage area for hardware, protect from moisture, sunlight, paint, chemicals, dust, excessive heat and cold, etc.

**1.6 PROJECT CONDITIONS AND COORDINATION:**

- A. Where exact types of hardware specified are not adaptable to finished shape or size of members requiring hardware, provide suitable types having as nearly as practical the same operation and quality as type specified, subject to Architect's approval.
- B. Coordination: Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents. Furnish related trades with the following information:
  1. Location of embedded and attached items to concrete.
  2. Location of wall-mounted hardware, including wall stops.
  3. Location of finish floor materials and floor-mounted hardware.
  4. Locations for conduit and raceways as needed for electrical, electronic and electro-pneumatic hardware items. Fire/life-safety system interfacing. Point-to-point wiring diagrams plus riser diagrams to related trades.
  5. Manufacturer templates to door and frame fabricators.
- C. Check Shop Drawings for doors and entrances to confirm that adequate provisions will be made for proper hardware installation. Do not order hardware until the submittal has been reviewed by the frame and door suppliers for compatibility with their products.
- D. Prior to submittal, carefully inspect existing conditions at each opening to verify finish hardware required to complete Work, including sizes, quantities, existing hardware scheduled for re-use, and sill condition material. If conflict or incompatibility between the specified/scheduled hardware and existing conditions, submit request for direction from Architect. Include date of jobsite visit in the submittal.
  1. Submittals prepared without thorough jobsite visit by qualified hardware expert will be rejected as non-compliant.

**1.7 WARRANTY:**

A. Part of respective manufacturers' regular terms of sale. Provide manufacturers' written warranties:

- |    |                                    |   |
|----|------------------------------------|---|
| 1. | Locksets:                          | Three years                                   |
| 2. | Extra Heavy Duty Cylindrical Lock: | Seven Years                                   |
| 3. | Exit Devices:                      | Three years mechanical<br>One year electrical |
| 4. | Closers:                           | Ten years mechanical<br>Two years electrical  |
| 5. | Hinges:                            | One year                                      |
| 6. | Other Hardware                     | Two years                                     |

**1.8 COMMISSIONING:**

A. Conduct these tests prior to request for certificate of substantial completion:

1. With installer present, test door hardware operation with climate control system and stairwell pressurization system both at rest and while in full operation.
2. With installer, access control contractor and electrical contractor present, test electrical, electronic and electro-pneumatic hardware systems for satisfactory operation.
3. With installer and electrical contractor present, test hardware interfaced with fire/life-safety system for proper operation and release.

**PART 2 PRODUCTS**

**2.1 MANUFACTURERS:**

- A. Listed acceptable alternate manufacturers: submit for review products with equivalent function and features of scheduled products.

ITEM:	MANUFACTURER:	ACCEPTABLE SUB:
Hinges	(IVE) Ives	Bommer
Continuous Hinges	(IVE) Ives	Zero
Key System	(SCH) Schlage	District Standard
Locks	(SCH) Schlage	District Standard
Exit Devices	(VON) Von Duprin	District Standard
Closers	(LCN) LCN	District Standard
Auto Flush Bolts	(IVE) Ives	DCI
Coordinators	(IVE) Ives	DCI
Silencers	(IVE) Ives	Hiawatha
Push & Pull Plates	(IVE) Ives	Hiawatha
Kickplates	(IVE) Ives	Hiawatha
Stops & Holders	(IVE) Ives	Hiawatha
Overhead Stops	(GLY) Glynn-Johnson	None available
Thresholds	(NGP) NGP	Zero
Seals & Bottoms	(NGP) NGP	Zero

**2.2 HINGING METHODS:**

- A. Drawings typically depict doors at 90 degrees, doors will actually swing to maximum allowable. Use wide-throw conventional or continuous hinges as needed up to 8 inches in width to allow door to stand parallel to wall for true 180-degree opening. Advise architect if 8-inch width is insufficient.
- B. Conform to manufacturer's published hinge selection standard for door dimensions, weight and frequency, and to hinge selection as scheduled. Where manufacturer's standard exceeds the scheduled product, furnish the heavier of the two choices, notify Architect of deviation from scheduled hardware.
- C. Conventional Hinges: Steel or stainless steel pins and concealed bearings. Hinge open widths minimum, but of sufficient throw to permit maximum door swing.

1. Outswinging exterior doors: non-ferrous with non-removable (NRP) pins and security studs.
2. Non-ferrous material exteriors and at doors subject to corrosive atmospheric conditions.

**2.3 LOCKSETS, LATCHSETS, DEADBOLTS:**

A. Mortise Locksets and Latch sets: as scheduled.

1. Chassis: cold-rolled steel, handing field-changeable without disassembly.
2. Latch bolts: 3/4 inch throw stainless steel anti-friction type.
3. Lever Trim: through-bolted, accessible design, cast lever or solid extruded bar type levers as scheduled. Filled hollow tube design unacceptable.
  - a) Spindles: security design independent breakaway. Breakage of outside lever does not allow access to inside lever's hubworks to gain wrongful entry.
4. Furnish solid cylinder collars with wave springs. Wall of collar to cover rim of mortise cylinder.
5. Thumb turns: accessible design not requiring pinching or twisting motions to operate.
6. Deadbolts: stainless steel 1-inch throw.
7. Electric operation: Manufacturer-installed continuous duty solenoid.
8. Strikes: 16 gage curved steel, bronze or brass with 1 inch deep box construction, lips of sufficient length to clear trim and protect clothing.
9. Scheduled Lock Series and Design: Schlage L series, 17A design. Verify existing design at site and provide the matching lever design.
10. Certifications:
  - a) ANSI A156.13, 1994, Grade 1 Operational, Grade 1 Security.
  - b) ANSI/ASTM F476-84 Grade 31 UL Listed.

**2.4 EXIT DEVICES / PANIC HARDWARE**

A. General features:

1. Independent lab-tested 1,000,000 cycles.
2. Push-through push-pad design. No exposed push-pad fasteners, no exposed cavities when operated. Return stroke fluid dampeners and rubber bottoming dampeners, plus anti-rattle devices.
3. 0.75-inch throw deadlocking latchbolts.

4. End caps: impact-resistant, flush-mounted. No raised edges or lips to catch carts or other equipment.
5. No exposed screws to show through glass doors.
6. Non-handed basic device design with center case interchangeable with all functions, no extra parts required to effect change of function.
7. Releasable in normal operation with 15-lb. maximum operating force per California State Fire Marshal Standard 12-10-3, and with 32 lb. maximum pressure under 250-lb. load to the door.
8. Exterior doors scheduled with XP-series devices: Static load force resistance of at least 2000 pounds.
9. Where devices span over door lite frame and the face of the selected lite manufacturer's frame is raised from the face of the door, furnish panic hardware manufacturer's fitted shims or glass-bead kits at no additional cost to the project.
10. Comply with CBC Section 1003.3.1.9.

B. Specific features:

1. Non-Fire Rated Devices: cylinder dogging.
2. Lever Trim: breakaway type, forged brass or bronze escutcheon min .130" thickness, compression spring drive, match lockset lever design.
3. Rod and latch guards with sloped full-width kickplates for doors fitted with surface vertical rod devices with bottom latches.
4. Fire-Labeled Devices: UL label indicating "Fire Exit Hardware". Vertical rod devices less bottom rod (LBR) unless otherwise scheduled.
5. Electrically Operated Devices: Single manufacturer source for electric latch retraction devices, electrically controlled trim, power transfers, power supplies, monitoring switches and controls.

**2.5 CLOSERS**

A. Surface Closers: [4041XP]

1. Full rack-and-pinion type cylinder with removable non-ferrous cover and cast iron body. Double heat-treated pinion shaft, single piece forged piston, chrome-silicon steel spring.
2. ISO 2000 certified. Units stamped with date-of-manufacture code.
3. Independent lab-tested 10,000,000 cycles.
4. Non-sized, non-handed, and adjustable. Place closer inside building, stairs, and rooms.
5. Plates, brackets and special templating when needed for interface with particular header, door and wall conditions and neighboring hardware.

6. Adjustable to open with not more than 5.0lbs pressure to open at exterior doors and 5.0lbs at interior doors. As allowed per California Building Code, Section 1133B.2.5, local authority may increase the allowable pressure for fire doors to achieve positive latching, but not to exceed 15lbs.
7. Separate adjusting valves for closing speed, latching speed and backcheck, fourth valve for delayed action where scheduled.
8. Extra-duty arms (EDA) at exterior doors scheduled with parallel arm units.
9. Exterior door closers: tested to 100 hours of ASTM B117 salt spray test, furnish data on request.
10. Exterior doors: seasonal adjustments not required for temperatures from 120 degrees F to -30 degrees F, furnish checking fluid data on request.
11. Non-flaming fluid, will not fuel door or floor covering fires.
12. Pressure Relief Valves (PRV) not permitted.

## 2.6 OTHER HARDWARE

- A. Automatic Flush Bolts: Low operating force design.
- B. Overhead Stops: Non-plastic mechanisms and finished metal end caps. Field-changeable hold-open, friction and stop-only functions.
- C. Kick Plates: Four beveled edges, .050 inches minimum thickness, height and width as scheduled. Sheet-metal screws of bronze or stainless steel to match other hardware.
- D. Door Stops: Provide stops to protect walls, casework or other hardware.
  1. Unless otherwise noted in Hardware Sets, provide floor type with appropriate fasteners. Where floor type cannot be used, provide wall type. If neither can be used, provide overhead type.
  2. Locate overhead stops for maximum possible opening. Consult with Owner for furniture locations. Minimum: 90deg stop / 95deg deadstop. Note degree of opening in submittal.
- E. Seals: Finished to match adjacent frame color. Resilient seal material: polyurethane, polypropylene, nylon brush, silicone rubber or solid high-grade neoprene as scheduled. Do not furnish vinyl seal material. UL label applied to seals on rated doors. Substitute products: certify that the products equal or exceed specified material's thickness and durability.
  1. Proposed substitutions: submit for approval.
  2. Solid neoprene: MIL Spec. R6855-CL III, Grade 40.
  3. Non-corroding fasteners at in-swinging exterior doors.

4. Sound control openings: Use components tested as a system using nationally accepted standards by independent laboratories. Ensure that the door leafs have the necessary sealed-in-place STC ratings. Fasten applied seals over bead of sealant.
  5. Fire-rated Doors, Resilient Seals: UL10C / UBC Standard 7-2 compliant. Coordinate with selected door manufacturers' and selected frame manufacturers' requirements. Where rigid housed resilient seals are scheduled in this section and the selected door manufacturer only requires an adhesive-mounted resilient seal, furnish rigid housed seal at minimum, or both the rigid housed seal plus the adhesive applied seal. Adhesive applied seals alone are deemed insufficient for this project where rigid housed seals are scheduled.
  6. Fire-rated Doors, Intumescent Seals: Furnished by selected door manufacturer. Furnish fire-labeled opening assembly complete and in full compliance with UL10C / UBC Standard 7-2. Where required, intumescent seals vary in requirement by door type and door manufacture -- careful coordination required
- F. Automatic door bottoms: low operating force units. Doors with automatic door bottoms plus head and jamb seals cannot require more than two pounds operating force to open when closer is disconnected.
- G. Thresholds: As scheduled and per details. Comply with CBC Section 1133B.2.4.1. Substitute products: certify that the products equal or exceed specified material's thickness. Proposed substitutions: submit for approval.
1. Exteriors: Seal perimeter to exclude water and vermin. Use sealant complying with requirements in Division 7 "Thermal and Moisture Protection". Non-ferrous 1/4inch fasteners and lead expansion shield anchors, or Red-Head #SFS-1420 (or approved equivalent) Flat Head Sleeve Anchors (SS/FHSL).
  2. Fire-rated openings, 90min or less duration: use thresholds to interrupt floor covering material under the door where that material has a critical radiant flux value less than 0.22 watts per square centimeter, per NFPA 253. Use threshold unit as scheduled. If none scheduled, request direction from Architect.
  3. Fire-rated openings, 3hour duration: Thresholds, where scheduled, to extend full jamb depth.
  4. Acoustic openings: Set units in full bed of Division-7-compliant, leave no air space between threshold and substrate.
  5. Plastic plugs with wood or sheet metal screws are not an acceptable substitute for specified fastening methods.

6. Fasteners: Generally, exposed screws to be Phillips or Robertson drive. Pinned TORX drive at high security areas. Flat head sleeve anchors (FHSL) may be slotted drive. Sheet metal and wood screws: full-thread. Sleeve nuts: full length to prevent door compression.
- H. Exposed Through-Bolts: Do not use SNB, grommet nuts, sleeve nuts or other such clamping type fasteners, intent is for minimal exposed hardware. Coordinate with wood doors; ensure provision of proper blocking to support wood screws for mounting panic hardware and door closers. Coordinate with metal doors and frames; ensure provision of proper reinforcement to support machine screws for mounting panic hardware and door closers.
- I. Silencers: Interior hollow metal frames, 3 for single doors, 4 for pairs of doors. Omit where adhesive mounted seal occurs. Leave no unfilled/uncovered pre-punched silencer holes.

**2.7 FINISH:**

- A. Generally BHMA 626 Satin Chromium.
  1. Areas using BHMA 626 to have push-plates, pulls and protection plates of BHMA 630, Satin Stainless Steel, unless otherwise noted.
- B. Door closers: factory powder coated to match other hardware, unless otherwise noted.
- C. Aluminum items: match predominant adjacent material. Seals to coordinate with frame color.

**2.8 KEYING REQUIREMENTS:**

- A. Key System: Schlage Everest D family utility-patented keyway or Classic Restricted keyway , interchangeable core. Utility patent protection to extend at least until 2014. Key blanks available only from factory-direct sources, not available from after-market key blank manufacturers. For estimate use factory GMK charge. Initiate and conduct meeting(s) with Owner to determine system keyway(s), keybow styles, structure and degree of geographic exclusivity. Furnish Owner's written approval of the system. Keys
  1. New factory registered master key system.
  2. Construction keying: furnish temporary keyed-alike cores. Remove at substantial completion and install permanent cylinders/cores in Owner's presence. Demonstrate that construction key no longer operates.
  3. Furnish 10 construction keys.
  4. Furnish 2 construction control keys.
- B. Key Cylinders: furnish utility patented, 6-pin solid brass construction.



- C. Cylinder cores: furnish keyed at factory of lock manufacturer where permanent records are maintained. Locks and cylinders same manufacturer.
- D. Permanent keys: use secured shipment direct from point of origination to Owner.
  - 1. For estimate: 3 keys per change combination, 5 master keys per group, 5 grand-master keys, 3 control keys.
  - 2. For estimate: VKC stamping plus "Do Not Duplicate".
- E. Bitting List: use secured shipment direct from point of origination to Owner upon completion.

### **PART 3 - EXECUTION**

#### **3.1 ACCEPTABLE INSTALLERS:**

- A. Can read and understand manufacturers' templates, suppliers' hardware schedules and printed installation instructions. Can readily distinguish drywall screws from manufacturers' furnished fasteners. Available to meet with manufacturers' representatives and related trades to discuss installation of hardware.

#### **3.2 PREPARATION:**

- A. Ensure that walls and frames are square and plumb before hardware installation. Make corrections before commencing hardware installation.
- B. Locate hardware per SDI-100 and applicable building, fire, life-safety, accessibility, and security codes.
  - 1. Notify Architect of code conflicts before ordering material.
  - 2. Locate levers, key cylinders, t-turn pieces, touchbars and other operable portions of latching hardware between 30 inches to 44 inches above the finished floor, per CBC Section 1133B.2.5.1.
  - 3. Where new hardware is to be installed near existing doors/hardware scheduled to remain, match locations of existing hardware.
- C. Overhead stops: before installing, determine proposed locations of furniture items, fixtures, and other items to be protected by the overhead stop's action.

#### **3.3 INSTALLATION**

- A. Install hardware per manufacturer's instructions and recommendations. Do not install surface-mounted items until finishes have been completed on substrate. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate for proper installation and operation. Remove and reinstall or replace work deemed defective by Architect.
  - 1. Gaskets: install jamb-applied gaskets before closers, overhead stops, rim strikes, etc; fasten hardware over and through these seals. Install sweeps across bottoms of doors before astragals, cope sweeps around bottom pivots, trim astragals to tops of sweeps.
  - 2. When hardware is to be attached to existing metal surface and insufficient reinforcement exists, use RivNuts, NutSerts or similar anchoring device for screws.
  - 3. Use manufacturers' fasteners furnished with hardware items, or submit Request for Substitution with Architect.
  - 4. Replace fasteners damaged by power-driven tools.
- B. Locate floor stops no more that 4 inches from walls and not within paths of travel. See paragraph 2.2 regarding hinge widths, door should be well clear of point of wall reveal. Point of door contact no closer to the hinge edge than half the door width. Where situation is questionable or difficult, contact Architect for direction.
- C. Core concrete for exterior door stop anchors. Set anchors in approved non-shrink grout.
- D. Locate overhead stops for minimum 90 degrees and maximum allowable degree of swing.
- E. Drill pilot holes for fasteners in wood doors and/or frames. Centerpunch hole locations before using self-drilling type screws to prevent skating. Replace screws that are not centered in their holes.
- F. Lubricate and adjust existing hardware scheduled to remain. Carefully remove and give to Owner items not scheduled for reuse.

#### 3.4. ADJUSTING

- A. Adjust and check for proper operation and function. Replace units, which cannot be adjusted to operate freely and smoothly.
  - 1. Hardware damaged by improper installation or adjustment methods: repair or replace to Owner's satisfaction.
  - 2. Adjust doors to fully latch with no more than 1 pound of pressure.
  - 3. Adjust delayed-action closers on fire-rated doors to fully close from fully-opened position in no more than 10 seconds.
  - 4. Adjust door closers per 1.9 this section.

- B. Inspection: Use hardware supplier's consultant or consultant's agent. Include supplier's report with closeout documents.
- C. Final inspection: Installer to provide letter to Owner that upon completion installer has visited the Project and has accomplished the following:
  - 1. Re-adjust hardware.
  - 2. Evaluate maintenance procedures and recommend changes or additions, and instruct Owner's personnel.
  - 3. Identify items that have deteriorated or failed.
  - 4. Submit written report identifying problems

**3.5 DEMONSTRATION:**

- A. Demonstrate mechanical hardware and electrical, electronic and pneumatic hardware systems, including adjustment and maintenance procedures.

**3.6 PROTECTION/CLEANING:**

- A. Cover installed hardware, protect from paint, cleaning agents, weathering, carts/barrows, etc. Remove covering materials and clean hardware just prior to substantial completion.
- B. Clean adjacent wall, frame and door surfaces soiled from installation/reinstallation process.

**3.7 SCHEDULE OF FINISH HARDWARE**

- A. See door schedule in drawings for hardware set assignments.
- B. No hardware shall be ordered until Finished Hardware has been reviewed and approved by Architect's hardware consultant.
- C. Provide Factory order numbers for all products supplied on this project as part of close out documents for Owner's warranty records.
- D. Verify and match the existing lock design as approve by the County of Riverside.
- E. Miscellaneous Material:

SpeXtra # 71221-2

Heading 01

1	PR	Door 005	ELEVATOR LOBBY / SUITE
1	PR	Door 006	ELEVATOR LOBBY / SUITE
1	PR	Door 013	ELEVATOR LOBBY / OFFICE
1	PR	Door 023	ELEVATOR LOBBY / SUITE

Each Assembly to have:

7	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	ELECTRIC HINGE	3CB1 4.5 X 4.5 TW8	652	IVE
1	EA	EU STOREROOM LOCK	L9080TEU 17A	626	SCH
1	EA	COORDINATOR	COR X FL	628	IVE
2	EA	MOUNTING BRACKET	MB	689	IVE
2	EA	SURFACE CLOSER	4040XP EDA	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
2	EA	WALL STOP	WS401CCV	626	IVE
1	SET	SEALS	5050B	BRN	NGP
1	EA	POWER SUPPLY	PS904 900-4RL	LGR	SCE
1	EA	NOTE	CREDENTIAL READER BY SECURITY CONTRACTOR		

Heading 02A

1	SGL	Door 001	CORRIDOR / CONFERENCE ROOM
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Each Assembly to have:

4	EA	HINGE	3CB1 4.5 X 4.5 NRP	652	IVE
1	EA	FIRE EXIT HARDWARE	98-L-F-2SI-996-06-SNB	626	VON
2	EA	RIM CYLINDER	20-057-ICX	626	SCH
1	EA	FSIC CORE	23-030	626	SCH
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS401CCV	626	IVE
1	SET	SEALS	5050B	BRN	NGP

Heading 03

1	PR	Door 003	CONFERENCE ROOM / CHAIR STORAGE
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Each Assembly to have:

8	EA	HINGE	3CB1 4.5 X 4.5 NRP	652	IVE
1	SET	CONST LATCHING BOLT	FB61P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	CLASSROOM LOCK	L9070T 17A	626	SCH
1	EA	FSIC CORE	23-030	626	SCH
2	EA	OH STOP & HOLDER	450H	630	GLY
2	EA	WALL STOP	WS401CCV	626	IVE
1	EA	ASTRAGAL	158NA	CL	NGP