ADDENDUM NO. D

BIDDING AND CONTRACT DOCUMENTS

FOR

FALKIRK APARTMENTS SITE AND SEISMIC IMPROVEMENT PROJECT
PROJECT NO. 956390
CONTRACT NO. 956390-LF-2019-139

UCR | Planning, Design & Construction

July 3, 2019

The following changes, additions, or deletions shall be made to the following documents as indicated for this Project; and all other terms and conditions shall remain the same. Each bidder is responsible for transmitting this information to all affected subcontractors and suppliers before the Bid Deadline.

1. ADVERTISEMENT FOR BIDS

Replace the existing Request for Bids with the one issued in this Addendum.

2. SPECIFICATIONS

a. **Replace** the existing Specification Table of Contents with the one issued in this Addendum.

b. **Replace** the existing Specification Section 05 52 13 Pipe and Tube Railings with the one issued in this Addendum.

c. **Add** Specification Section 07 81 23 Intumescent Fireproofing issued in this Addendum.

3. LIST OF DRAWINGS

a. **Replace** the existing List of Drawings with the one issued in this Addendum.

4. DRAWINGS

Replace existing **Drawings** with the ones issued in this Addendum.

SHEET NO.	TITLE	DATE
T0.01	***Title Sheet***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A1.1	***Overall Site Plan***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A7-2.1	***Building 7 – Floor Plan- Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A7-2.2	***Building 7 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A8-2.1	***Building 8 – Floor Plan - Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A8-2.2	***Building 8 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A9-2.1	***Building 9 – Floor Plan – Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***

A9-2.2	***Building 9 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A14-2.1	***Building 14 – Floor Plan – Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A14-2.2	***Building 14 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A15-2.1	***Building 15- Floor Plan Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A15-2.2	***Building 15 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A16-2.1	***Building 16 – Floor Plan – Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A16-2.2	***Building 16 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A20-2.1	***Building 20 – Floor Plan Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A20-2-2	***Building 20 – Floor Plan***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A9.1	***Enlarged Stair Plans & Sections***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A9.2	***Exterior Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A9.3	***Enlarged Balcony Plans & Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
E-0.1	***Electrical Legends & Notes***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
E-0.2	***Luminaire Schedule & Title 24 Forms***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
E-0.3	***Single Line Diagram & Panel Schedules***	~~06/14/2019~~ ***Addendum 2 06/28/2019***

E-1.0	***Electrical Site Plan***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
E-2.1	***Electrical Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S0.1	***General Notes***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S1.1	***Typical Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S7-2.1	***Building 7 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S8-2.1	***Building 8 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S9-2.1	***Building 9 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S14-2.1	***Building 14 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S15-2.1	***Building 15 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S16-2.1	***Building 16 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S20-2.1	***Building 20 (Rec Ctr) Foundation & Roof Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S3.1	***Stair Framing Plans & Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S3.2	***Balcony Framing Plans & Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S4.1	***Foundation Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S5.1	***Framing Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***

MF-1	***Frame Elevation Drawing***	~~08/17/2018~~ ***Addendum 2 06/28/2019***
MF-2	***Frame Elevation Drawing***	~~08/17/2018~~ ***Addendum 2 06/28/2019***
SMF2	***SMF Foundation Details***	~~08/17/2018~~ ***Addendum 2 06/28/2019***
SMF3	***SMF Installation Details***	~~08/17/2018~~ ***Addendum 2 06/28/2019***
SMF4	***SMF Installation Details***	~~08/17/2018~~ ***Addendum 2 06/28/2019***
FA-0.1	***Fire Alarm Legends & Notes***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA-0.2	***Riser Diagram***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA-0.3	***Fire Alarm Calculations***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA-1.0	***Fire Alarm Site Plan***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA7-2.1	***Fire Alarm Floor Plan – Building 7***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA8-2.1	***Fire Alarm Floor Plan – Building 8***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA9-2.1	***Fire Alarm Floor Plan – Building 9***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA20-2.1	***Fire Alarm Floor Plan – Building 20***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA-3.1	***Fire Alarm Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***

5. REQUESTS FOR CLARIFICATION

RFI No.	QUESTIONS / ANSWERS
1-6	**Question: Please confirm that all buildings are empty when construction starts.** **Answer:** Residences will be vacated in buildings 7-9, & 15-16.
1-7	**Question: Please advise of total amount of permits and fees to be paid by the General Contractor.** **Answer:** Please review Division 1 Specifications for this information.

END OF ADDENDUM

ADVERTISEMENT FOR BIDS

Subject to conditions prescribed by the University of California, Riverside, sealed bids for a lump sum contract are invited for the following Project:

Falkirk Apartments Site and Seismic Improvement Project
PROJECT NO. 956390
CONTRACT NO. 956390-LF-2019-139
UNIVERSITY OF CALIFORNIA, RIVERSIDE
RIVERSIDE, CALIFORNIA

The University of California, Riverside is requiring ADA Accessibility, Fire Alarm Upgrade, and Seismic improvements of the Falkirk Apartments complex buildings 7, 8, 9, 14, 15, 16 and the Community Room. The fire alarm system will be upgraded to current code, as well as fully addressable. The decks and stairs will be improved and strengthened to a new standard that extends their useful life, while minimizing risk. The seismic improvements of the soft story units of 14 thru 16 will meet the University of California Seismic Safety Policy ("UCSSP").

Estimated construction cost: **$2,000,000**

Bidding and Contract Documents will be available at **Tuesday, June 18, 2019, at 2:00 PM**, and will issued only at:

IB Reprographics
3363 Durahart Street
Riverside, CA 92507
Phone: (951) 682-1850
Fax: (951) 682-2315
www.ibrepro.com

Each set of Bidding and Contract Documents will require a non-refundable payment to **IB Reprographics**. If paying by check, make your checks payable to "**IB Reprographics**." Bidding and Contract Documents will be mailed/shipped at the requestor's expense.

PRE-BID CONFERENCE & SITE VISIT

Bidders must attend a **mandatory** Pre-Bid Conference and Site Visit at, **Wednesday, June 19, 2019** on **10:00 AM**, at:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
1223 University Avenue, Suite 210-16
Riverside, CA 92507

(Located in University Village, corner of University Avenue and Iowa Avenue.)

Phone: (951) 827-2528 Fax: (951) 827-4556

Bidders must provide their contact information and sign the Pre-Bid Conference and Site Visit attendance sheet. Only bidders who sign the attendance sheet will be eligible to submit bids for the Project as prime contractors.

Any bidder who enters the Pre-Bid Conference after 10:10 AM will be precluded from bidding as a prime contractor and may only bid as a subcontractor. Subcontractors are not required to attend; however we encourage their attendance.

UCR Planning, Design & Construction, will provide parking validation to anyone attending the Conference. We suggest that you arrive early to allow time to park and walk to the Conference location.

BID DEADLINE

Sealed bids must be received on or before **2:00 PM,** on ~~Tuesday, July 9, 2019~~, ***Thursday, July 11, 2019*****,** Bids will be received only at:

Planning, Design & Construction
UNIVERSITY OF CALIFORNIA, RIVERSIDE
1223 University Avenue, Suite 240
Riverside, CA 92507

Immediately following the Bid Deadline, bids will be opened at the same location.

Bid Security in the amount of 10% of the Lump Sum Base Bid shall accompany each Bid. The Surety issuing the Bid Bond shall be, on the Bid Deadline, an admitted surety insurer (as defined in California Code of Civil Procedure Section 995.120).

The successful Bidder and its subcontractors will be required to follow the nondiscrimination requirements set forth in the Bidding and Contract Documents and to pay prevailing wage rates at the location of the Work.

Every effort will be made to ensure that all persons have equal access to contracts and other business opportunities with the University within the limits imposed by law or University policy. Each Bidder may be required to show evidence of its equal employment opportunity policy. The successful Bidder and its subcontractors will be required to follow the nondiscrimination requirements set forth in the Bidding Documents and to pay prevailing wage at the location of the work.

The successful Bidder must have the following State of California Contractor's license current and active at the time of submission of the Bid: **B General Building**.

The work described in the contract is a public work subject to section 1771 of the California Labor Code.

No contractor or subcontractor, regardless of tier, may be listed on a Bid for, or engage in the performance of, any portion of this project, unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 and 1771.1.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The successful Bidder shall pay all persons providing construction services and/or any labor on site, including any University location, no less than the UC Fair Wage (defined as $13 per hour as of 10/1/15, $14 per hour as of 10/1/16, and $15 per hour as of 10/1/17) and shall comply with all applicable federal, state and local working condition requirements.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
University of California, Riverside
Publication Dates: May 22, 2019 – June 5, 2019

SPECIFICATIONS

TABLE OF CONTENTS

Division 01 – General Requirements

Initial Issue	Revision	Section #	Title
		01 7100	**Examination and Preparation**
		01 7123	**Field Engineering**
		01 7329	**Cutting and Patching**
		01 7400	**Cleaning and Waste Management**
		01 7700	**Contract Closeout**
		01 7839	**As-Built Documents**
		01 9113	**General Commissioning Requirements**
Division 2 – Existing Conditions			
		02 4116	**Structure Demolition**
		02 4119	**Selective Demolition**
Division 3 – Concrete			
		03 2000	**Concrete Reinforcement**
		03 3300	**Cast-In-Place Concrete**
		03 4800	**Precast Concrete Stair Treads**
Division 5 – Metals			
		05 1200	**Structural Steel Framing**
Addendum D		***05 5213***	***Pipe and Tube Railings***
Division 6 – Wood, Plastic, and Composites			
		06 1000	**Rough Carpentry**
Division 7 – Thermal and Moisture Protection			
		07 1800	**Traffic-Bearing Roof Deck Surfacing**
		07 6200	**Sheet Metal Flashing and Trim**
		07 8413	**Penetration Firestopping**
	Addendum D	***07 8123***	***Intumescent Fireproofing***
		07 9200	**Joint Sealants**
Division 9 – Finishes			
		09 2116	**Gypsum Board Assemblies**
		09 2400	**Portland Cement Plastering**
		09 9113	**Exterior Painting**

Initial Issue	Revision	Section #	Title

Division 26 – Electrical

END OF SPECIFICATIONS
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SECTION 05 52 13
PIPE AND TUBE RAILINGS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Steel pipe and tube railings.

1.2 ACTION SUBMITTALS

A. Product Data: For the following:

1. Manufacturer's product lines of mechanically connected railings.
2. Railing brackets.
3. Grout, anchoring cement, and paint products.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Samples: For each type of exposed finish required.

1.3 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For pipe and tube railings, for tests performed by a qualified testing agency, according to ASTM E894 and ASTM E935.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Steel Pipe and Tube Railings:

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
   a. Wagner, R & B, Inc.

2.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:
   a. Uniform load of 50 lbf/ ft. applied in any direction.
   b. Concentrated load of 200 lbf applied in any direction.
   c. Uniform and concentrated loads need not be assumed to act concurrently.
2. 2. Infill of Guards:
   a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft..

b. Infill load and other loads need not be assumed to act concurrently.

2.3 STEEL AND IRON

A. Tubing: ASTM A500 (cold formed) or ASTM A513.

B. Pipe: ASTM A53/A53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.

C. Plates, Shapes, and Bars: ASTM A36/A36M.

2.4 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.

C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

D. Shop Primers: Provide primers that comply with Section 099113 "Exterior Painting".

E. Shop Primer for Galvanized Steel: Primer formulated for exterior use over zinc-coated metal and compatible with finish paint systems indicated.

F. Epoxy Intermediate Coat: Complying with MPI #77 and compatible with primer and topcoat.

G. Polyurethane Topcoat: Complying with MPI #72 and compatible with undercoat.

H. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.

I. Non-shrink, Nonmetallic Grout: Factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.5 MISCELLANEOUS MATERIALS

A. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

B. Form work true to line and level with accurate angles and surfaces.

C. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.

4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.

D. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.

E. Form changes in direction by bending.

F. For changes in direction made by bending, use jigs to produce uniform curvature for each repetitive configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

G. Close exposed ends of railing members with prefabricated end fittings.

H. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated.

I. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

2.6 MISCELLANEOUS MATERIALS

A. Galvanized Railings:

1. Hot-dip galvanize exterior steel railings, including hardware, after fabrication.
2. Comply with ASTM A123/A123M for hot-dip galvanized railings.
3. Comply with ASTM A153/A153M for hot-dip galvanized hardware.

B. Preparing Galvanized Railings for Shop Priming: After galvanizing, thoroughly clean railings of grease, dirt, oil, flux, and other foreign matter, and treat with etching cleaner.

C. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with SSPC-SP6/NACE No. 3, "Commercial Blast Cleaning."

D. Primer Application: Apply shop primer to prepared surfaces of railings unless otherwise indicated. Comply with requirements in SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel," for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.

PART 3 EXECUTION

3.1 INSTALLATION, GENERAL

A. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.

1. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
3. Align rails so variations from level for horizontal members and variations from parallel with

rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.

B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1. Coat, with a heavy coat of bituminous paint, concealed surfaces of aluminum that are in contact with grout, concrete, masonry, wood, or dissimilar metals.

3.2 ANCHORING POSTS

A. Use metal sleeves preset and anchored into concrete for installing posts. After posts are inserted into sleeves, fill annular space between post and sleeve with non-shrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions.

B. Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with non-shrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions.

C. Anchor posts to metal surfaces with oval flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members.

3.3 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 requirements for touching up shop-painted surfaces.

B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A780/A780M.

END OF SECTION

SECTION 07 81 23
INTUMESCENT FIREPROOFING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions Specification Sections apply to this section.

1.2 DEFINITIONS

A. Intumescent coatings: Material or combination of fireproofing materials used to help retain the structural integrity of steel members by maintaining an effective thermal barrier to provide fire resistance rating as documented by listings from accredited test laboratories.

1.3 GENERAL DESCRIPTION OF THE WORK IN THIS SECTION

A. Intumescent coatings applied to primary and secondary structural steel members to provide specified fire resistance rating.

1.4 RELATED WORK

A. Coordinate work of this section with work of other sections as required to properly execute the work and as necessary to maintain satisfactory progress of the work of other sections, including:

1. Section 03 30 00 – Cast-In-Place Concrete
2. Section 05 12 00 – Structural Steel Framing
3. Section 09 91 13 – Exterior Painting

1.5 REFERENCES

A. Underwriters Laboratories Inc. (UL) Fire Resistance Directory

B. Test Requirements and Reference Standards:

1. ASTM E119, “Standard Test Methods for Fire Tests of Building Construction and Materials”
2. ASTM E84, “Standard Test Method for Surface Burning Characteristics of Building Materials”
3. ASTM D2240, “Standard Test Method for Rubber Property—Durometer Hardness”
4. ASTM D2794, “Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)”
5. ASTM D4060, “Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser”
6. ASTM D4541, “Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers”
7. ASTM E329-09, “Standard Specification for Agencies Engaged in Construction Inspection and Testing”
8. National Fire Protection Association, NFPA 251

9. Underwriters Laboratories Inc. (UL) ANSI/UL263
10. Underwriters Laboratories of Canada (ULc) CAN/ULC S101-M
11. Association of the Wall and Ceiling Industry, AWCI Technical Manual 12-B, current edition.

C. Building codes: International Building Code (IBC)

D. Industry References:

1. Underwriters Laboratories (UL), www.ul.com
2. National Fireproofing Contractors Association (NFCA), www.nfca-online.org/
3. The Society for Protective Coatings (SSPC), www.sspc.org/
4. Association of the Wall and Ceiling Industry (AWCI), www.awci.org

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company responsible for the manufacture of fire protection materials with local direct technical employee(s) (as distinct from distributors or authorized agents) readily available at the project site. Intumescent coatings shall be manufactured under the follow-up services program of Underwriter's Laboratories (UL) or UL Canada (ULc) and bear the UL (and/or ULc) label (mark). Manufacturer's technical representative to be on site during start of installation and be generally available on site as requested during the application process.

B. Installer Qualifications: Engage experienced Installer certified, licensed, or otherwise qualified by the intumescent coatings manufacturer as having the necessary training to install manufacturer's products, and otherwise have the experience and staff to properly perform the installation. Installer shall be trained by the intumescent coatings manufacturer's direct employee(s) (as distinct from distributors or authorized agents).

C. Installation: Verify steel members have been properly prepared, including the use of a compatible primer, and install intumescent coatings in accordance with manufacturer's written recommendations published in their product technical literature and/or provided by manufacturer.

D. Product Identification: Label packages (pail or bucket) with manufacturer name, product name, expiration date, freeze tag, UL or ULc label (mark).

E. Special Inspection: Owner to employ a qualified independent inspection and testing agency to perform field quality control testing services in accordance with AWCI Technical Manual 12-B, local building code and Authority Having Jurisdiction requirements.

F. Inspection and Testing Agency Qualifications: ASTM E329-09, "Standard Specification for Agencies Engaged in Construction Inspection and Testing" and AWCI Technical Manual 12-B.

G. Field Constructed Mockups: Prior to installing intumescent coatings, Installer shall apply products specified for exposed applications to demonstrate aesthetic qualities and workmanship. Build mockups to comply with the following requirements, using materials indicated for final unit of Work.

1. Location: As indicated on drawings.
2. Extent of Mockups: Approximately 5 sq. ft. of surface for each product indicated.
3. Notify architect one week in advance of the dates and times when mockups will be built.
4. Obtain architect's written acceptance of mockups before start of actual unit of work.
5. Retain and maintain mockups during construction in undisturbed condition as a standard for judging completed units of work.
    a. Accepted mockups in undisturbed condition at time of substantial completion may become part of completed unit of work.

1.7 SUBMITTALS

A. Product data for each intumescent coating indicated on drawings.

B. Product certificates from manufacturer documenting intumescent coatings comply with specified requirements including those for fire test response characteristics and compatibility with adhesives, primers, and other surface coatings on substrates indicated to receive intumescent coatings.

C. Fire Resistance Rating Listings: UL, ULc, or other accredited testing agency indicating type and size of steel member to receive intumescent coatings and minimum dry thickness (mils) to achieve specified fire resistance rating.

D. Qualification Data: Installer to demonstrate capabilities and experience on completed projects which are comparable in size and scope by providing the following information:

1. Project location: City, State, and Country
2. Scope of work: project type, contract valuation
3. Completion date
4. Architect: firm and contact information
5. Owner: name and contact information

E. LEED Submittals:

1. Product Data for Credit EQ c4.2: Low emitting materials – Adhesives and sealants, documentation including printed statement of VOC content.
2. VOC content: 0 g/L according to EPA method 24.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to Project site in original, unopened packages with manufacturer’s labels intact and legible.

B. Install intumescent coatings prior to expiration date included on packaging. Properly discard expired product.

C. Store intumescent coatings protected from direct sunlight and maintained at a temperature as specified by the manufacturer. The product must not be frozen, or stored at freezing temperatures. Verify proper storage of material as indicated by the freeze indicator label attached to the pail. Identify and label material damaged due to improper storage, remove

from Project site and properly discard.

1.9 PROJECT CONDITIONS

A. Environmental Conditions:

1. Do not install Intumescent Coatings when ambient or substrate temperatures are, or prior to full cure will be, outside the manufacturer's recommended installation temperatures, unless temporary protection and heating/cooling is provided to maintain temperatures within the prescribed range for the period specified by the manufacturer.
2. Do not install intumescent coatings when relative humidity is outside the limits established by the manufacturer. Consult manufacturer to determine precautions that may be implemented to prevent condensation from forming on the steel during application of fireproofing.
3. Do not install intumescent coatings when relative humidity exceeds 80%. Consult manufacturer to determine precautions that may be implemented to prevent condensation from forming on the steel during application of fireproofing.

B. Ventilation: Ventilate areas where intumescent coatings will be installed by natural means or, where this is inadequate, forced air circulation during and after application until fireproofing dries thoroughly.

1.10 SEQUENCING

A. Sequence and coordinate application of intumescent coatings with related work specified in other Sections to comply with the following requirements:

1. Coordinate installation of intumescent coatings with other items of work that may interfere with proper installation of coatings.
2. Do not begin applying intumescent coatings until clips, hangers, supports, and other welded connections have been installed. Intumescent coatings manufacturer must approve in writing any clips, hangers, supports or connections that may installed over coating using mechanical or adhesive devices.
3. Provide temporary enclosures as necessary to prevent deterioration of intumescent coatings due to exposure to unfavorable environmental conditions.
4. Take appropriate steps to avoid abrasion and other damage to the applied intumescent coatings during construction operations.
5. Do not protect or conceal structural members to which intumescent coatings have been applied until each area has been inspected, tested, and corrections have been made to any deficient areas.

PART 2 PRODUCTS

2.1 FIREPROOFING

A. Intumescent coatings: Factory mixed formulation consisting of a modified heavy bodied coating, water based, with inorganic reinforcing fibers (non-asbestos, non fiber-glass) for spray application.

1. Products: Subject to compliance with requirements, provide the following:
   a. Hilti Fire Finish CFP-SP WB by Hilti, Inc., (800) 879-8000, www.us.hilti.com or equal approved product.

B. Physical Characteristics:

1. Surface Burning Characteristics of Building Materials, ASTM E 84 (UL 723, CAN/ULC-S102): Class A Rating.
   a. Flame Spread: 0
   b. Smoke Development 45
2. Durometer Hardness, ASTM D2240: 96 Shore A
3. Impact Resistance, ASTM D2794: 93 in-lb
4. Abrasion Resistance, ASTM D4060: 0.140 g/1000 cycles
5. Adhesion, ASTM D4541: 507 psi

2.2 AUXILIARY FIREPROOFING MATERIALS

A. General: Provide auxiliary fireproofing materials that are compatible with intumescent coating products and substrates and are approved by UL or other accredited testing agencies acceptable to authorities having jurisdiction for use in the fire resistive designs indicated.

B. Substrate Primers: For use on each different substrate, provide primer that complies with the following requirements:

1. Primer approved in writing by manufacturer of intumescent coatings, and applied in full compliance with the primer manufacturer's recommendations. Primer must be fully cured prior to installation of the intumescent coating.

C. Topcoats: Suitable for application over applied intumescent coatings; of type recommended in writing by intumescent coatings manufacturer for each fire resistance design. Color of topcoat shall be as selected by the architect. Colors shall not be limited to manufacturer's standard colors.

PART 3 EXECUTION

3.1 PREPARATION

A. Cover other work subject to damage from fall out or overspray of intumescent coatings materials during application. Provide temporary enclosure as required to confine spraying operations, protect the environment, and ensure maintaining adequate ambient conditions for temperature and ventilation.

B. Clean substrates of substances that could impair bond of fireproofing, including oil, grease, rolling compounds, incompatible primers, and loose mill scale.

C. Prime substrates except where compatible shop primer has been applied and is in satisfactory condition to receive intumescent coatings. Primer must be fully cured prior to applying intumescent coatings.

D. Apply intumescent coatings: Protect intumescent coatings from rain, direct sunlight, high humidity, strong wind (with dirt, dust or sand) during the application and drying phases. Do not apply an additional coat of intumescent coating until previous layer has fully cured.

E. For applications visible upon completion of project, repair substrates to remove surface imperfections that could affect uniformity of texture and thickness in finished surface of fireproofing. Remove minor projections that would telegraph through fire resistive products after application.

3.2 INSTALLATION, GENERAL

A. Coordinate application of intumescent coatings with other construction to allow for proper application and minimize need to repair damage.

B. Comply with intumescent coatings manufacturer's instructions for mixing materials, application procedures, and types of equipment used to convey and install products, as applicable to the particular conditions of installation and as required to achieve fire resistance ratings indicated.

C. Coat substrates with primer and allow proper cure time prior to applying intumescent coatings as recommended by intumescent coatings manufacturer for material and application indicated.

D. Apply intumescent coatings identical to mock-ups.

3.3 INSTALLING INTUMESCENT FIREPROOFING

A. Apply intumescent coatings in thicknesses required to achieve fire resistance ratings designated for each condition.

B. Provide a uniform finish complying with description indicated for type of material and matching finish approved for field erected mockup.

3.4 FIELD QUALITY CONTROL

A. Inspection and Testing Agency: Coordinate installation of fireproofing with owner’s independent inspection and testing agency.

B. Inspection & testing shall be in accordance with AWCI Technical Manual 12-B.

C. Testing agency will promptly report test results in writing to the installer and architect.

D. Remove and replace intumescent coatings where test results indicate that fireproofing does not comply with specified requirements for adhesion.

E. Apply additional intumescent coatings per manufacturer's directions where test results indicate that the thickness does not comply with specified requirements.

F. Additional Testing: Where intumescent coatings are removed and replaced or repaired, Owner’s inspection and testing agency shall perform additional testing to determine compliance with specified requirements.

3.5 CLEANING, REPAIR, AND PROTECTION

A. Cleaning: Immediately after completing spraying operations in each containable area of Project, remove product over spray and fall out from surfaces of other construction and clean exposed surfaces to remove evidence of soiling.

B. Cure intumescent coatings according to manufacturer's recommendations.

C. Protect intumescent coatings from damage during construction.

D. Repair or replace work that was not properly protected from damage during construction in accordance with manufacturer’s recommendations.

E. Ensure full curing of intumescent coating prior to application of top coat.

END OF SECTION

LIST OF DRAWINGS

SHEET NO.	TITLE	DATE
T0.01	***Title Sheet***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A1.1	***Overall Site Plan***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A7-2.1	***Building 7 – Floor Plan- Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A7-2.2	***Building 7 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A8-2.1	***Building 8 – Floor Plan - Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A8-2.2	***Building 8 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A9-2.1	***Building 9 – Floor Plan – Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A9-2.2	***Building 9 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A14-2.1	***Building 14 – Floor Plan – Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A14-2.2	***Building 14 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A15-2.1	***Building 15- Floor Plan Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A15-2.2	***Building 15 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A16-2.1	***Building 16 – Floor Plan – Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A16-2.2	***Building 16 – Floor Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***

A20-2.1	***Building 20 – Floor Plan Demolition***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A20-2-2	***Building 20 – Floor Plan***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A9.1	***Enlarged Stair Plans & Sections***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A9.2	***Exterior Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
A9.3	***Enlarged Balcony Plans & Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
E-0.1	***Electrical Legends & Notes***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
E-0.2	***Luminaire Schedule & Title 24 Forms***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
E-0.3	***Single Line Diagram & Panel Schedules***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
E-1.0	***Electrical Site Plan***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
E-2.1	***Electrical Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S0.1	***General Notes***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S1.1	***Typical Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S7-2.1	***Building 7 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S8-2.1	***Building 8 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S9-2.1	***Building 9 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***

S14-2.1	***Building 14 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S15-2.1	***Building 15 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S16-2.1	***Building 16 Foundation & 2nd Floor Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S20-2.1	***Building 20 (Rec Ctr) Foundation & Roof Framing Plans***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S3.1	***Stair Framing Plans & Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S3.2	***Balcony Framing Plans & Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S4.1	***Foundation Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
S5.1	***Framing Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
MF-1	***Frame Elevation Drawing***	~~08/17/2018~~ ***Addendum 2 06/28/2019***
MF-2	***Frame Elevation Drawing***	~~08/17/2018~~ ***Addendum 2 06/28/2019***
SMF2	***SMF Foundation Details***	~~08/17/2018~~ ***Addendum 2 06/28/2019***
SMF3	***SMF Installation Details***	~~08/17/2018~~ ***Addendum 2 06/28/2019***
SMF4	***SMF Installation Details***	~~08/17/2018~~ ***Addendum 2 06/28/2019***
FA-0.1	***Fire Alarm Legends & Notes***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA-0.2	***Riser Diagram***	~~06/14/2019~~ ***Addendum 2 06/28/2019***

FA-0.3	***Fire Alarm Calculations***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA-1.0	***Fire Alarm Site Plan***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA7-2.1	***Fire Alarm Floor Plan – Building 7***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA8-2.1	***Fire Alarm Floor Plan – Building 8***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA9-2.1	***Fire Alarm Floor Plan – Building 9***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA20-2.1	***Fire Alarm Floor Plan – Building 20***	~~06/14/2019~~ ***Addendum 2 06/28/2019***
FA-3.1	***Fire Alarm Details***	~~06/14/2019~~ ***Addendum 2 06/28/2019***

END OF LIST OF DRAWINGS

UC RIVERSIDE
UNIVERSITY OF CALIFORNIA

FALKIRK SITE & SEISMIC IMPROVEMENTS PROJECT

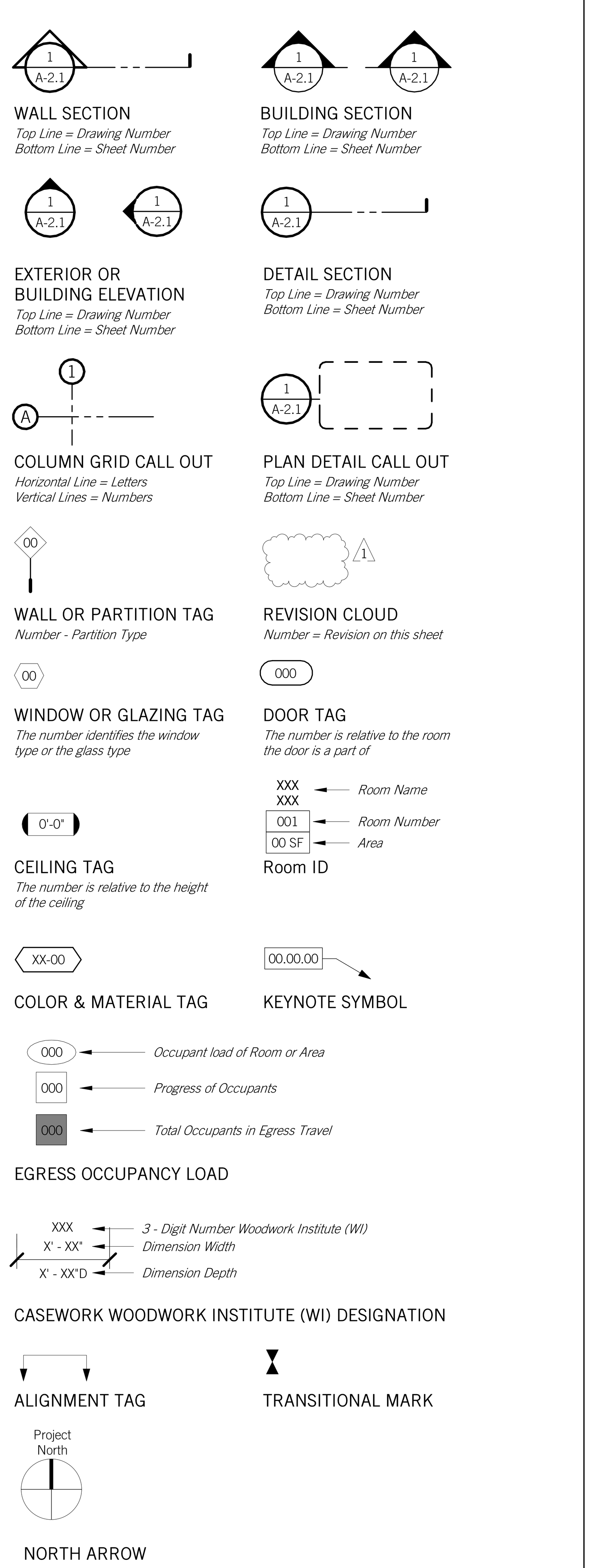
UNIVERSITY OF CALIFORNIA RIVERSIDE

RIVERSIDE, CALIFORNIA UCR PROJECT #956390, CAAN#P5673

Construction Documents:
JUNE 2019

PROJECT ADDRESS:
3429 Canyon Crest Drive
Riverside, CA 92507

DRAWING SYMBOLS



DEFERRED SUBMITTALS

1. FIRE ALARM
2. PRECAST CONCRETE STAIR TREADS (SEE: S0.1 NOTES)
3. MOMENT FRAMES (SEE: S0.1 NOTES)

(2)

ABBREVIATIONS

#	Pound or Number	ID	Inside Diameter
&	And	INSUL	Insulated or Insulation
@	At	INT	Interior
		INV	Invert
	Angle		
		JT	Joint
Ø	Diameter		
	Perpendicular	KIT	Kitchen
	Parallel		
		LAB	Laboratory
		LAV	Lavatory
AB	Anchor Bolt	LVR	Louver
ABV	Above		
AC	Air Conditioning	MATL	Material
ACC	Accessible	MAX	Maximum
ACT	Acoustic Ceiling Tile	MECH	Mechanical
ACP	Asphalt Concrete Paving	MFR	Manufacturer
ADJ	Adjacent or Adjustable	MIN	Minimum
AFF	Above Finished Floor	MTL	Metal
AFS	Above Finished Surface	MTD	Mounted
APPROX	Approximately		
ALUM	Aluminum	N	North
ANOD	Anodized	(N)	New
		NAT	Natural
BD	Board	NG	Natural Grade
BET	Between	NIC	Not In Contract
BLDG	Building	NO	Number
BLKG	Blocking	NOM	Nominal
BM	Beam	NTS	Not to Scale
BTM	Bottom		
BYND	Beyond	O/	Over
		OC	On Center
CAB	Cabinet	OD	Outside Diameter
CB	Catch Basin	OFCI	Owner furnished Contractor Installed
CF	Curb Face	OH	Opposite Hand
CI	Cast Iron	OFOI	Owner Furnished Owner Installed
CIP	Cast In Place	OSA	Outside Air
CJ	Control Joint	OZ	Ounce
CL	Centerline		
CLG	Ceiling	PCC	Pre-Cast Concrete
CLR	Clear	PH	Panic Hardware
CMU	Concrete Masonry Unit	PL	Property Line
COL	Column	PLAM	Plastic Laminated
CONC	Concrete	PT	Pressure Treated
CONT	Continuous	PNT	Paint or Painted
CORR	Corridor	PVC	Polyvinyl Chloride
CPT	Carpet	PWD	Plywood
CT	Ceramic Tile		
CUST	Custodian		
		R	Riser (Stairs)
DBL	Double	RAD	Radius or Radiused
DEMO	Demolish or Demolition	RB	Rubber Base
DF	Douglas Fir	REF	Reference
DFN	Drinking Fountain	REIN	Reinforcing
DG	Decomposed Granite	RCP	RCP
DIA	Diameter	RD	RD
DIM	Dimension	RDW	RDW
DN	Down	REQD	REQD
DR	Door	RM	RM
DRS	Dry Standpipe	RO	RO
DS	Downspout	RSFL	RSFL
DWG	Drawing		
		S	South
E	East	SB	Splash Block
(E)	Existing	SC	Solid Core
EA	Each	SD	Storm Drain
EJ	Expansion Joint	SG	Semi Gloss
EL	Elevation	SHT	Sheet
ELEC	Electrical	SHTG	Sheathing
ELEV	Elevator	SJ	Saw Joint
EMER	Emergency	SQ	Square
ENCL	Enclosed/Enclosure	SIM	Similar
EPL	Exterior Plaster	SPEC	Specified OR Specification
EPDM	Ethylene Propylene Diene M-Class (Roofing)	SPK	Speaker
		SS	Stainless Steel
EQ	Equal	STC	Sound Transmission Coefficient
EQUIP	Equipment	STD	Standard
EXIST	Existing	STL	Steel
EXP	Expansion	SUSP	Suspended
EJ	Expansion Joint	SYM	Symmetrical
EXT	Exterior		
		T	Tread (Stairs)
FD	Floor Drain	TC	Top of Curb
FE	Fire Extinguisher Wall Hung	TG	Top of Grate
FEC	Fire Extinguisher & Cabinet	T&G	Tongue And Groove
FG	Finished Grade	TOP	Top Of Parapet
FIN	Finish	TOB	Top of Beam
FIXT	Fixture	TOC	Top Of Concrete
FLR	Floor	TOS	Top Of Sheathing
FM	Filled Metal	TOW	Top of Wall
FOC	Face of Concrete	TYP	Typical
FOF	Face of Finish		
FOM	Face of Masonry	UNO	Unless Noted Otherwise
FOS	Face of Stud		
FND	Foundation	VERT	Vertical
FRP	Fiberglass Reinforced Panel	VP	Vision Panel
FS	Finished Surface	VTR	Vent thru Roof
FT	Foot or Feet	VCT	Vinyl Composition Tile
FLF	Fluorescent Light Fixture	VTS	Vinyl Covered Tack Surface
FLT	Floor Tile		
FURR	Furring	W	West
FV	Field Verify	W/	With
		WBP	Wood base, painted
GA	Gauge	WC	Water Closet
GB	Gypsum Board	WD	Wood
GALV	Galvanized	WP	Weather-Proof
GL	Glass or Glazing	WR	Water-Resistant
GWB	Gypsum Wall Board	WLT	Wall Tile
HB	Hose Bibb	XMER	Transformer
HC	Hollow Core		
HI	High		
HM	Hollow Metal		
HORIZ	Horizontal		
HP	High Point		
HR	Hour		
HT	Height		
HVAC	Heating, Ventilating, And Air Conditioning		

SCOPE OF WORK

THE BIDDING CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATEIALS NECESSARY TO CONSTRUCT AND INSTALL ALL COMPONENTS IDENTIFIED IN THE CONSTRUCTION DOCUMENTS HEREIN. IT IS UNDERSTOOD THAT THE ACCOMPANYING BOOK SPECIFICATIONS ARE PART OF THE CONSTRUCTION DOCUMENTS. THE WORK SHALL INCLUDE, BUT NOT BE LIMITED TOO; THE FOLLOWING:

SUMMER 2019 SCOPE:

A. BUILDINGS 7-9 & 14-16: REMOVE ALL POT SHELVES AND EYEBROWS. (2)
B. BUILDINGS 7-9 & 15: REPLACE ALL STAIRS, THIRTEEN TOTAL.
C BUILDINGS 7-9: REPLACE ALL 2ND FLOOR BALCONIES WITH POST AND BEAM FRAMING, TWENTY TOTAL
D. BUILDINGS 14-16: SOFT STORY SEISMIC RETROFIT (LONGITUDINAL AND TRANSVERSE DIRECTIONS)
E. RECREATION CENTER: SEISMIC RETROFIT (ADDITION OF PLYWOOD SHEAR WALLS, HOLDOWNS, SILL BOLTS, INCLUDING THE TOWER STRUCTURE OF THE BUILDING).
F. FIRE ALARM UPGRADES AT BUILDINGS 7, 8, 9 AND RECREATION CENTER.
G. ALL STRUCTURAL COLUMNS AND FRAMING SHALL HAVE REQUIRED INTUMESCENT PAINT AND FIRE PROOFING TO MEET CBC AND CFC MINIMUM REQUIREMENTS. (1)

BUILDING ANALYSIS

OCCUPANCY GROUP (2016 CBC, Section 302)	R-2	
CONSTRUCTION TYPE (2016 CBC, Section 602)	VB	
BUILDING	SQFT	BALCONY SQFT
BLDG 7	10,449 SF	376 SF (8 TYPE A)
BLDG 8	5,231 SF	188 SF (4 TYPE A)
BLDG 9	14,066 SF	1,064 SF (4 TYPE B/ 8 TYPE C/ 4 TYPE D)
BLDG 14	4,366 SF	-
BLDG 15	6,145 SF	-
BLDG 16	6,248 SF	-
BLDG 20	889 SF	-

(1)

PROJECT DIRECTORY

ARCHITECT:
Formillus Architecture
3080 12th Street, Suite 105
Riverside, California 92507
O: 951.530.8778

STRUCTURAL:
Miyamoto International, Inc.
1901 East Alton Avenue, Suite 160
Santa Ana, California 92705
O: 949.579.1170

ELECTRICAL:
Design West Engineering
275 W. Hospitality Lane Suite 100
San Bernardino, CA 92408
O: 909.890.3700

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2017*:

2016 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
(2015 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
(2014 NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R.
(2015 UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
(2015 UNIFORM PLUMBING CODE AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
2016 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 C.C.R.
(2015 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.
2016 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
2013 ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS

PARTIAL LIST OF APPLICABLE STANDARDS:

NFPA 13	AUTOMATIC FIRE SPRINKLER SYSTEMS	2016 EDITION
NFPA 14	STANDPIPE AND HOSE SYSTEMS	2013 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 17A	WET CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 20	STATIONARY PUMPS FOR FIRE PROTECTION	2016 EDITION
NFPA 22	WATER TANKS FOR PRIVATE FIRE PROTECTION	2013 EDITION
NFPA 24	PRIVATE FIRE MAINS & THEIR APPURTENANCES	2016 EDITION
NFPA 25	STANDARD FOR INSPECTION, TESTING AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS	2013 EDITION
NFPA 72	NATIONAL FIRE ALARM & SIGNALING CODE	2016 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2015 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2015 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION
ICC 300	ICC STANDARDS ON BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRAND STANDS	2012 EDITION
UL 300	FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS	2005 EDITION
UL 464	AUDIBLE SIGNAL APPLIANCES	2003 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS- 2016 CBC (SFM) CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

*ALL PARTS OF THE 2016 CALIFORNIA BUILDING CODE BECOME EFFECTIVE JANUARY 1, 2017 EXCEPT THE EFFECTIVE DATE FOR THE USE OF THE 2013 BUILDING ENERGY EFFICIENCY STANDARDS (TITLE 24, PART 1, CHAPTER 10 AND PART 6, AND AFFECTED PROVISIONS IN PART 11 [CAL. GREEN BUILDING STANDARDS CODE]) IS JULY 1, 2014

AND THE EFFECTIVE DATE FOR CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 IS FEBRUARY 2016.

GENERAL NOTES

1. FIELD VERIFICATION - THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE START OF ANY WORK TO VERIFY ALL EXISTING AND PROPOSED DIMENSIONS, LOCATIONS OF EXISTING UTILITIES, JOB SITE CONDITIONS AND EXISTING TOPOGRAPHY WITH THE WORK SHOWN ON THESE DRAWINGS HEREIN. THE INTENT SHALL BE TO PROVIDE ADEQUATE DRAINAGE AWAY FROM NEW AND EXISTING BUILDINGS OR STRUCTURES. THE ARCHITECT SHALL BE IMMEDIATELY NOTIFIED OF ANY CONDITIONS REQUIRING MODIFICATION OR CHANGE OF THESE DOCUMENTS HEREIN.

2. UTILITY VERIFICATION - LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN GRADING AND/OR EXCAVATING TO AVOID DAMAGE TO UNDERGROUND SERVICES. PER CURRENT CALIFORNIA LAW, GOVERNMENT CODE 4216, THE CONTRACTOR SHALL BE REQUIRED TO CONTACT DIG-ALERT @ (811) PRIOR TO COMMENCING ANY WORK ON SITE. HIGHLIGHTS OF THE LAW ARE AS FOLLOWS:

   a. DELINEATION OF THE PROPOSED EXCAVATION SITE IS MANDATORY. MARK THE AREA TO BE EXCAVATED WITH WATER-SOLUBLE OR CHALK BASED WHITE PAINT ON PAVED SURFACES OR WITH OTHER SUITABLE MARKINGS SUCH AS FLAGS OR STAKES ON UNPAVED AREAS.
   b. CONTACT DIG-ALERT AT LEAST TWO (2) FULL WORKING DAYS PRIOR TO DIGGING.
   c. YOUR PERMIT FOR DIGGING WILL NOT BE VALID WITHOUT A DIG-ALERT TICKET NUMBER.
   d. IF THE MEMBERS HAVE FACILITIES WITHIN THE WORK AREA, THEY WILL MARK THEM PRIOR TO THE START OF YOUR EXCAVATION AND IF NOT, THEY WILL LET YOU KNOW THERE IS NO CONFLICT.
   e. THE LAW REQUIRES YOU TO HAND EXPOSE TO THE POINT OF NO CONFLICT 24" ON EITHER SIDE OF THE UNDERGROUND FACILITY, SO YOU KNOW ITS EXACT LOCATION BEFORE USING POWER EQUIPMENT.

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL UTILITIES, SERVICES AND SUBSTRUCTURES WITHIN THE LIMITS OF WORK, WHETHER SHOWN ON PLANS OR NOT. THE CONTRACTOR SHALL BEAR THE FULL EXPENSE OF ANY REPAIRS OR DAMAGES CAUSED BY HIS OR HER OPERATIONS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED.

3. DRAWING SCOPE & COORDINATION - PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE BETWEEN ALL TRADES REQUIRED FOR THE NEW WORK AND VERIFY THAT THE REQUIREMENTS OF ALL DRAWINGS AND SPECIFICATIONS HEREIN SATISFACTORILY RELATE TO ONE ANOTHER. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY REGARDING ANY ITEMS THAT CANNOT BE COORDINATED.

4. CODES & STANDARDS - ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL GOVERNING CODES, ORDINANCES, REGULATIONS AND LAWS. IN THE EVENT THAT A CONFLICT OCCURS BETWEEN THESE RULES, THE MOST STRINGENT RULES SHALL APPLY. ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

5. EXISTING FINISHES & REPAIRS - WHERE EXISTING FINISHES, FACILITIES OR SURFACES ARE DISTURBED, DAMAGED OR REMOVED AS A RESULT OF INCORPORATING NEW WORK HEREIN, THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPLACING THESE FINISHES TO MATCH EXISTING IN ALL ASPECTS.

6. UNFORESEEN CONDITIONS - DURING CONSTRUCTION, SHOULD THE CONTRACTOR ENCOUNTER OR DISCOVER EXISTING CONDITIONS, SUCH AS DETERIORATION, TERMITE DAMAGE, DRY ROT, WATER DAMAGE OR NON-COMPLYING CONSTRUCTION, WHICH IS NOT COVERED BY THE WORK HEREIN, HE OR SHE SHALL NOTIFY THE ARCHITECT, PROJECT MANAGER, AND IOR FOR REQUIRED ACTION. THE ARCHITECT SHALL WORK WITH THE CONTRACTOR AND OWNER TO FIND THE MOST APPROPRIATE AND COST EFFECTIVE SOLUTION. A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS DETAILING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO, AND APPROVED BY THE GOVERNING CODE AUTHORITY, BEFORE PROCEEDING WITH THE REPAIR WORK.

7. DIMENSIONS - NOTED DIMENSIONS SHALL ALWAYS TAKE PRECEDENCE OVER SCALED DRAWINGS. INTERIOR WALL DIMENSIONS SHALL BE TO THE "FACE OF STUD" (FOS) OR CENTERLINE OF WALLS, UNLESS SPECIFIED OTHERWISE. ALL EXTERIOR DIMENSIONS SHALL BE AS SHOWN OR CALLED OUT ON PLANS, SECTIONS AND DETAILS. CLEAR INTERIOR DIMENSIONS SHALL BE TO THE FACE OF FINISH. CONTRACTOR TO REVIEW PLANS, SECTIONS AND DETAILS PRIOR TO LAYOUT AND NOTIFY ARCHITECT OF ANY DISCREPANCIES THAT OCCUR WITH THESE DRAWINGS PRIOR TO COMMENCING WORK.

8. SHOP DRAWINGS - SUBMIT ALL MANUFACTURES SPECIFICATIONS AND CUT SHEETS FOR REVIEW AND APPROVAL FOR ALL MATERIALS, EQUIPMENT AND ANY PRODUCTS USED ON THIS PROJECT AND REFERRED TO HEREIN. ALL WORK REQUIRING SHOP DRAWINGS, SUBMITTAL OR SAMPLE REVIEWS SHALL BE APPROVED BY THE ARCHITECT BEFORE COMMENCING ANY WORK.

9. ACCESSORY FRAMING - CONTRACTOR SHALL PROVIDE ALL NECESSARY BACKING, BLOCKING, AND FRAMING FOR THE COMPLETE INSTALLATION OF ALL EQUIPMENT, FIXTURES AND ACCESSORIES REPRESENTED WITHIN THESE PLANS, WHETHER EXPRESSED OR NOT.

10. ACCESS PANELS - CONTRACTOR SHALL PROVIDE ACCESS PANELS TO ALL CONCEALED SPACES, VALVES AND EQUIPMENT AS REQUIRED BY GOVERNING CODES. CONTRACTOR IS TO VERIFY TYPE, IF NOT SPECIFIED, WITH THE ARCHITECT PRIOR TO INSTALLATION.

11. AS-BUILT/RECORD DWGS - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND DOCUMENTING ALL CHANGES THAT OCCUR DURING THE COURSE OF CONSTRUCTION. ALL MARK-UPS MUST BE CLEARLY MARKED AND LEGIBLE, AND TURNED OVER TO OWNER AT THE END OF CONSTRUCTION. THESE RECORD DRAWINGS SHALL BE SUBMITTED TO THE OWNER IN DIGITAL FORMAT PRIOR TO FINAL PAYMENT.

12. PERMITS - EXCEPT IN THE CASE OF DSA, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR CONSTRUCTION FROM LOCAL MUNICIPALITIES, COUNTIES AND AGENCIES HAVING JURISDICTION OVER THE WORK. BASED ON THE SCOPE OF WORK, THE CONTRACTOR SHALL INCLUDE THESE COSTS IN HIS/HER BID FOR THE WORK.

13. NEW WORK - ALL ITEMS IN THESE DRAWINGS ARE NEW UNLESS OTHERWISE NOTED.

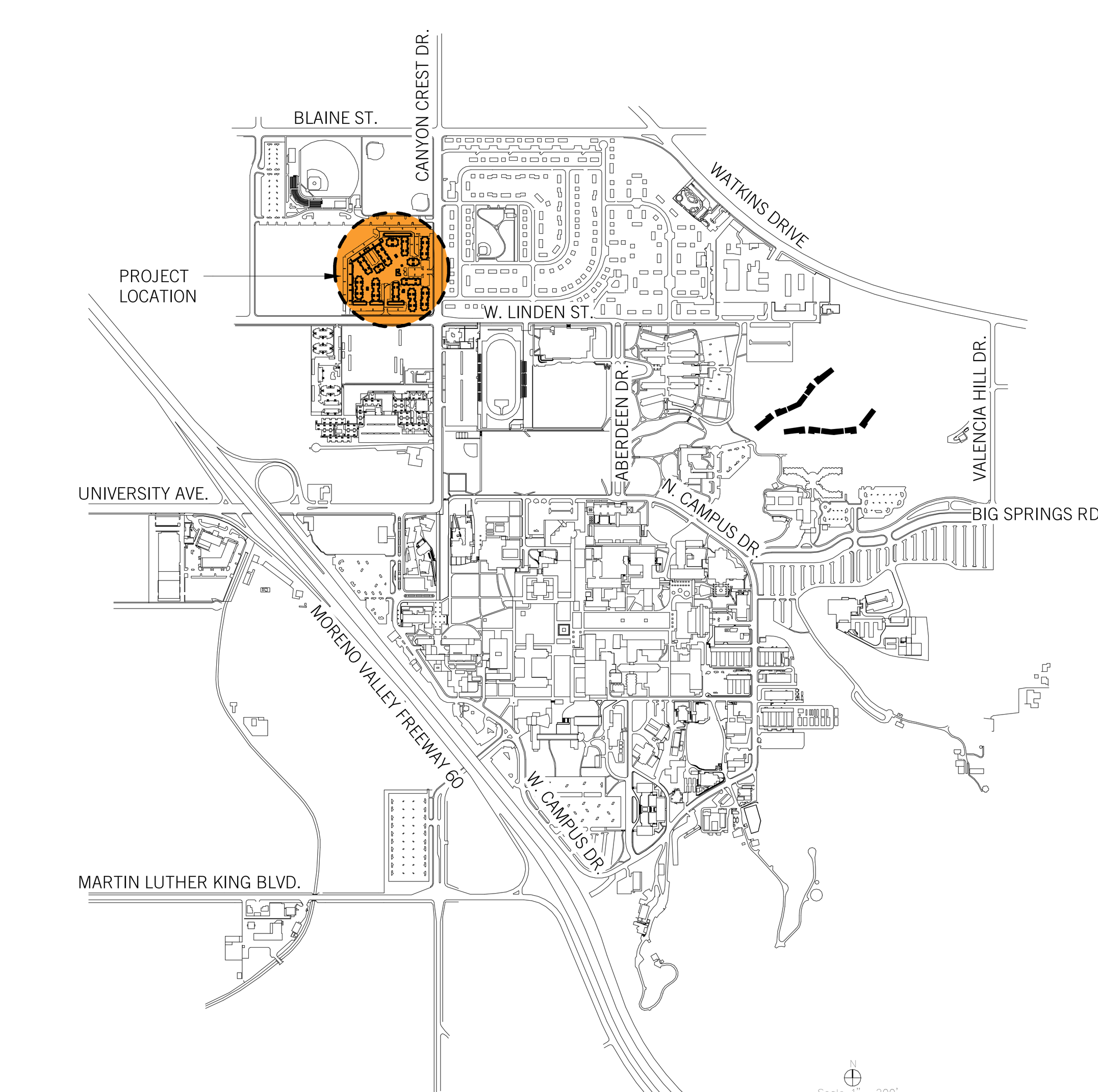
14. JOB SITE CONDITIONS & SAFETY - THE CONTRACTOR IS RESPONSIBLE FOR CONTINUOUS CLEAN-UP OF THE JOBSITE AND REMOVAL OF ALL DEBRIS CREATED BY THE WORK. THE CONTRACTOR SHALL CONTAIN ALL DUST AND DEBRIS TO THE JOBSITE OR WORK AREA. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR, AND PROVIDE ALL MEASURES NECESSARY, TO PROTECT STRUCTURES, CONSTRUCTION PERSONNEL, PEDESTRIANS AND ADJACENT TRAFFIC IN ACCORDANCE WITH CBC CHAPTER 44. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TEMPORARY FACILITIES, POWER, LIGHTING, FENCING, FIRE EXTINGUISHERS AND DRINKING WATER TO THE SITE.

15. CONDUCT ON SITE - WHEN WORKING ON SITE, THERE SHALL BE NO INAPPROPRIATE BEHAVIOR OR DRESS. SMOKING, DRUGS AND ALCOHOL ARE STRICTLY PROHIBITED. FAILURE TO COMPLY WILL RESULT IN IMMEDIATELY DISMISSAL FROM THE JOBSITE.

16. SITE CONSTRUCTION - ALL EXISTING SOLID FILL AND ALL ORGANIC MATTER ARE TO BE EXCAVATED AND REPLACED AS REQUIRED WITH PROPERLY COMPACTED FILL. WHERE NATURAL SOIL IS EXCAVATED, VERIFY WITH SOILS ENGINEER TO SEE IF IT CAN BE USED FOR FILL. ALL FILLING, BACK FILLING, RECOMPACTION, ETC., IS REQUIRED TO BE ACCOMPLISHED UNDER THE SUPERVISION OF THE SOILS ENGINEER

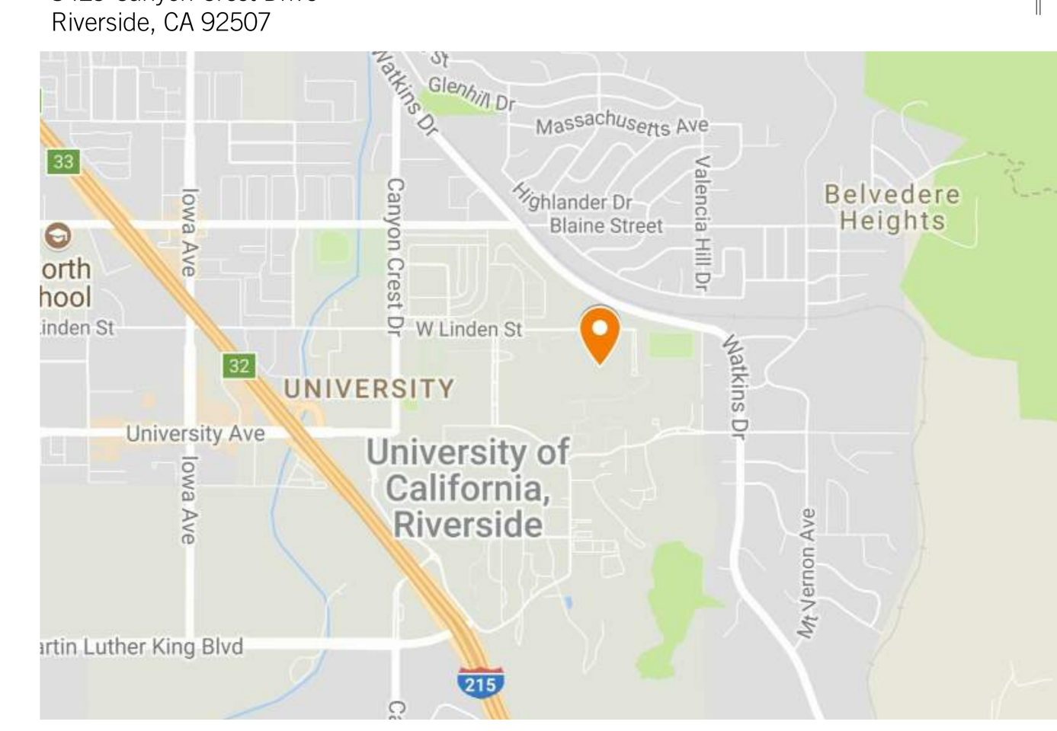
SHEET INDEX

CAMPUS MAP



VICINITY MAP

3429 Canyon Crest Drive
Riverside, CA 92507



INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CFORMS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
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Reviewed by: [signature]
Fire and Life Safety Division South

miyamoto.
1901 East Alton Avenue, Suite 160
Santa Ana, CA 92705
M1904011.00
T: (949) 579-1170
miyamotointernational.com

LICENSED ARCHITECT
Michael A. Benn
NO. C 32707
REN. 12-31-19
STATE OF CALIFORNIA

Formillus ARCHITECTURE
3080 12th Street, Suite 105
Riverside, California 92507
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E: info@formillus.com
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Building relationships, transforming environments.

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

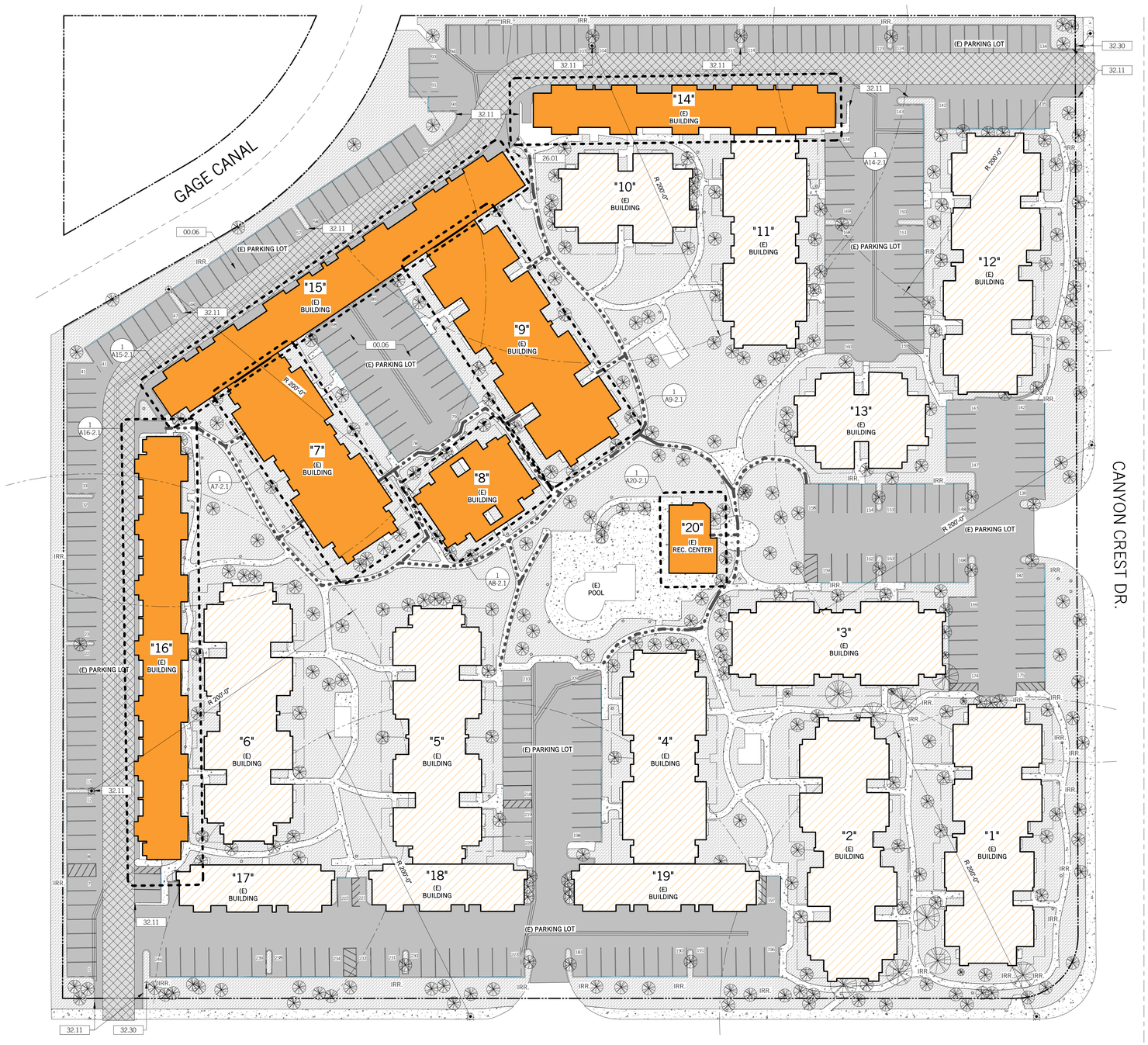
1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-28-2019
DRAWN:	LR

TITLE SHEET

T0.01

PLOT DATE: 6/28/2019 12:47:43 PM PLOTTED BY: LR



KEYNOTES

00.00

00.06 (E) PARKING LOT TO BE FENCED AND USED AS MATERIAL LAY DOWN AREA.

26.01 (E) LIGHT FIXTURE.

32.11 (E) FIRE LANE CURB PAINT.

32.30 (E) SITE ENTRY SIGN.

LEGENDS AND SYMBOLS

- IDENTIFIES BUILDINGS OR STRUCTURES THAT ARE PART OF THE SCOPE OF WORK FOR THIS PROJECT
- IDENTIFIES (E) BUILDINGS OR STRUCTURES
- (E) CONCRETE PAVING
- (E) ASPHALT PAVING
- (E) LANDSCAPE AREA
- INDICATES MINIMUM 20'-0" WIDE FIRE LANE
- (E) FIRE HYDRANT.
- FIRE HYDRANT RADIUS: 350' PER CITY MEASUREMENTS

North

OVERALL SITE PLAN
1" = 30'-0"
1

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
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Reviewed by:
Fire and Life Safety Division South

Designer:
miyamoto.
191 East Alton Avenue, Suite 160
Santa Ana, CA 92705
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T: (949) 679-1170
miyamotointernational.com

Stamp:
LICENSED ARCHITECT
Michael A. Benn
NO. C 32707
REN. 12-31-19
STATE OF CALIFORNIA

3890 12th Street, Suite 105
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W: formillus.com
FormIllus ARCHITECTURE
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Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019

3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS:

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2	ADDENDUM 2	6/28/19

UCR PROJECT #: 956390
UCR CAAN #: P5673
DATE: 06-28-2019
DRAWN: LR

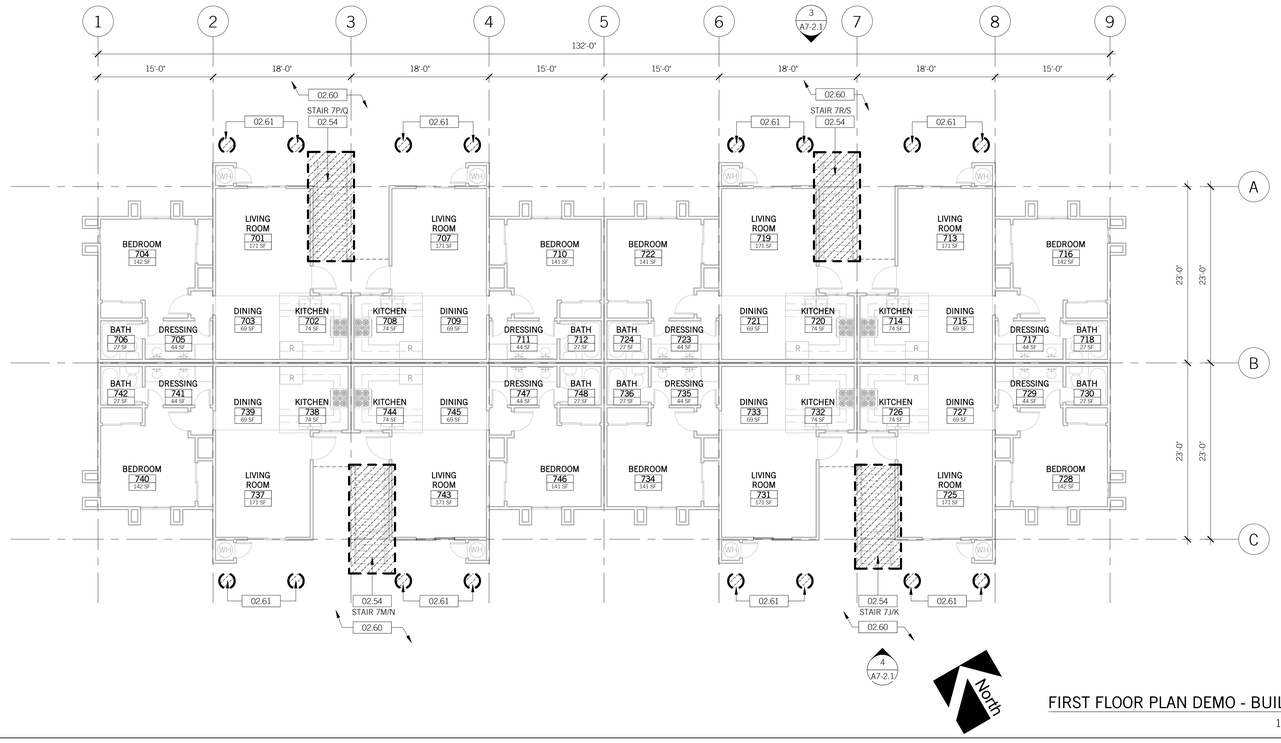
OVERALL SITE PLAN

A1.1

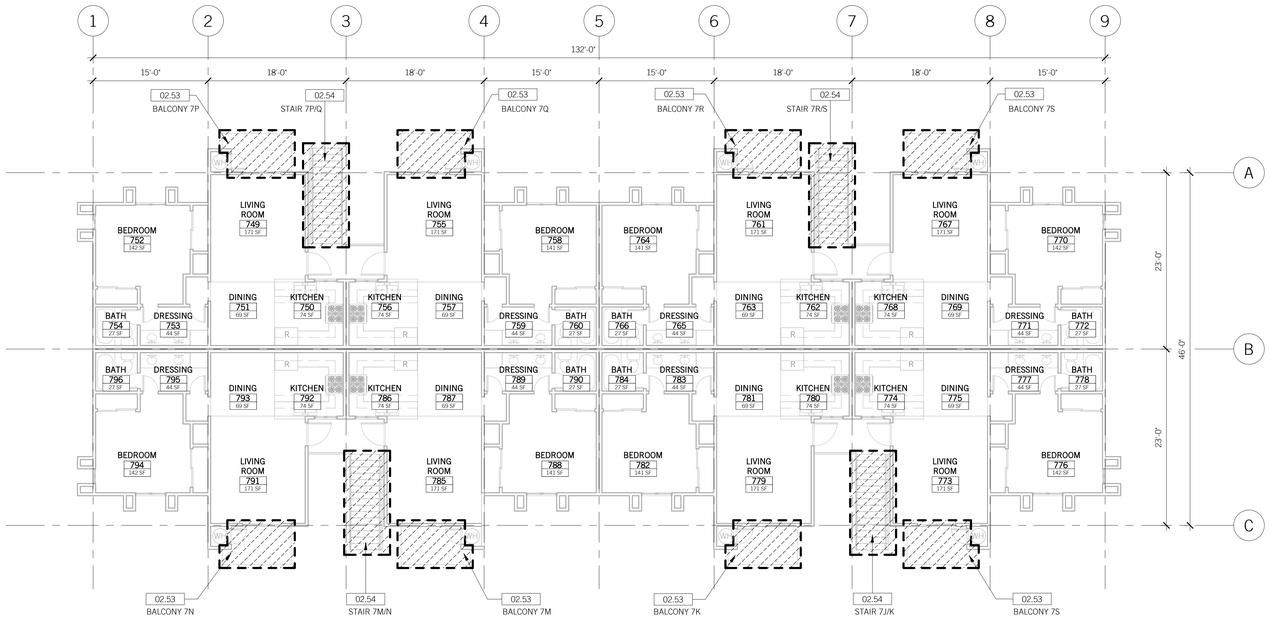
PLOTTED BY: LR
PLOT DATE: 6/28/2019 8:42:25 AM

TYP. STAIR "B" - BLDG 7 (3)

TYP. STAIR "B" - BLDG 7 (4)



FIRST FLOOR PLAN DEMO - BUILDING 7 (1)
1/8" = 1'-0"



SECOND FLOOR PLAN DEMO - BUILDING 7 (2)
1/8" = 1'-0"

KEYNOTES 00.00

02.53 REMOVE (E) WOOD DECK. SEE: STRUCTURAL DRAWINGS.
02.54 REMOVE (E) STAIRS, (E) FOOTING, (E) STEEL ATTACHMENTS AND WOOD HANDRAILS ATTACHED TO STUCCO AND WOOD SIDING CONDITIONS. DO NOT DEMO ANY SECOND FLOOR LANDING FRAMING OR POSTS. NOTIFY SEOR FOR ANY EXISTING MEMBERS IN QUESTION. PATCH AND REPAIR WALL FINISH AND (E) WALKWAY SLAB AFFECTED BY DEMO WORK TO MATCH EXISTING.
02.60 REMOVE AND REROUTE (E) SPRINKLER LINES AS NECESSARY.
02.61 REMOVE (E) PAVEMENT AS NECESSARY FOR NEW POST FOOTINGS. SEE: STRUCTURAL DRAWINGS.

WALL LEGEND

(E) STUD WALL, PROTECT IN PLACE.

LEGEND

(E) DOOR, FRAME AND ALL HARDWARE, PROTECT IN PLACE.

(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

AREA OF DEMOLITION.

miyamoto.
Engineer
1901 East Alton Avenue, Suite 160
Santa Ana, CA 92705
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T: (949) 579-1170
miyamotointernational.com

LICENSED ARCHITECT Michael A. Benn NO. C 32757 REN. 12-31-19 STATE OF CALIFORNIA
Stamp:

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Consultant

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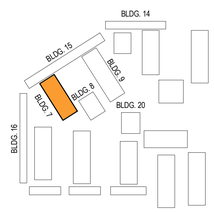
REVISIONS
1 ADDENDUM 1 6/14/19
2 ADDENDUM 2 6/28/19



KEY PLAN

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Buck T. Bellow
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE OCDINS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature:
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
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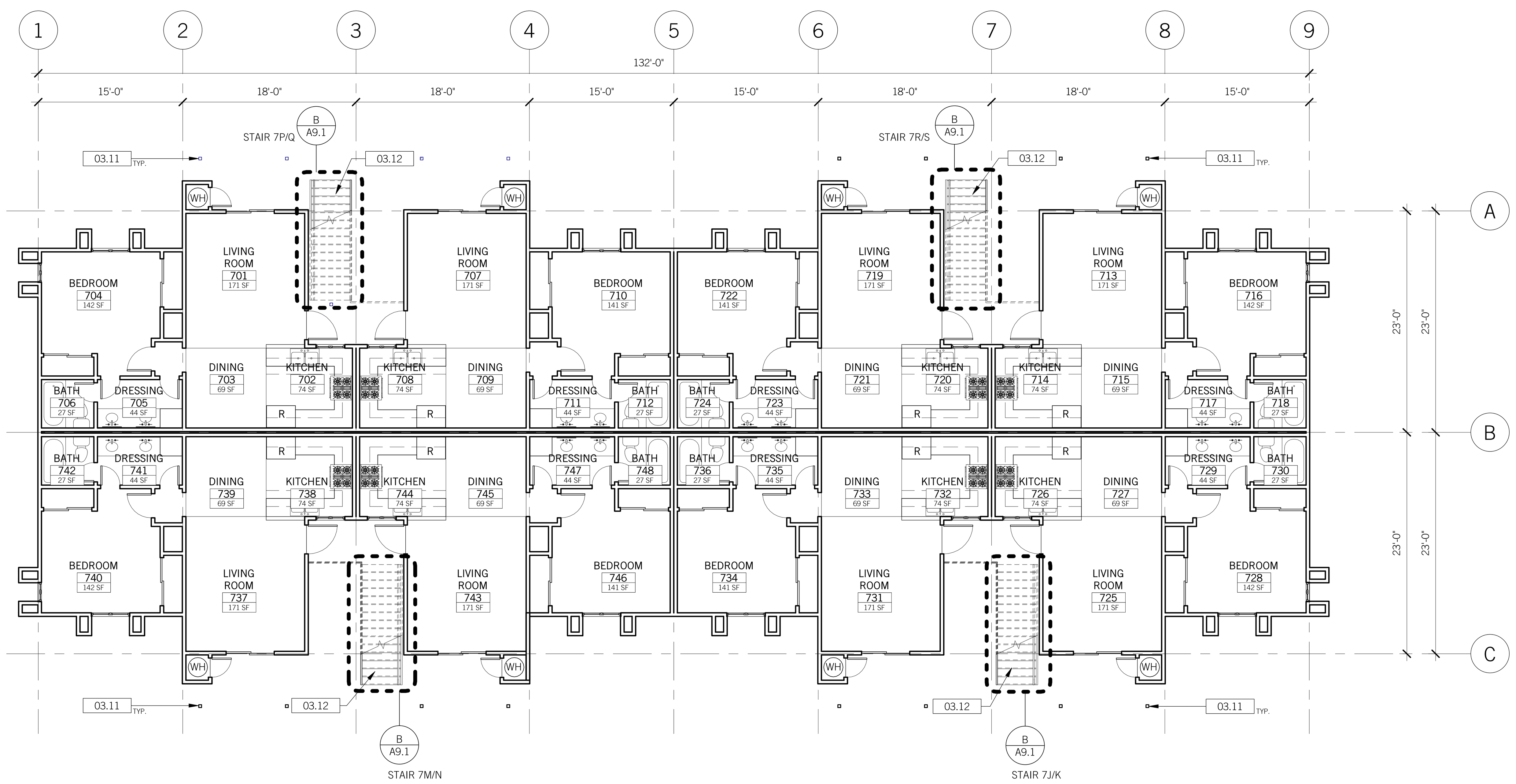
Reviewed by:
Fire and Life Safety Division, South

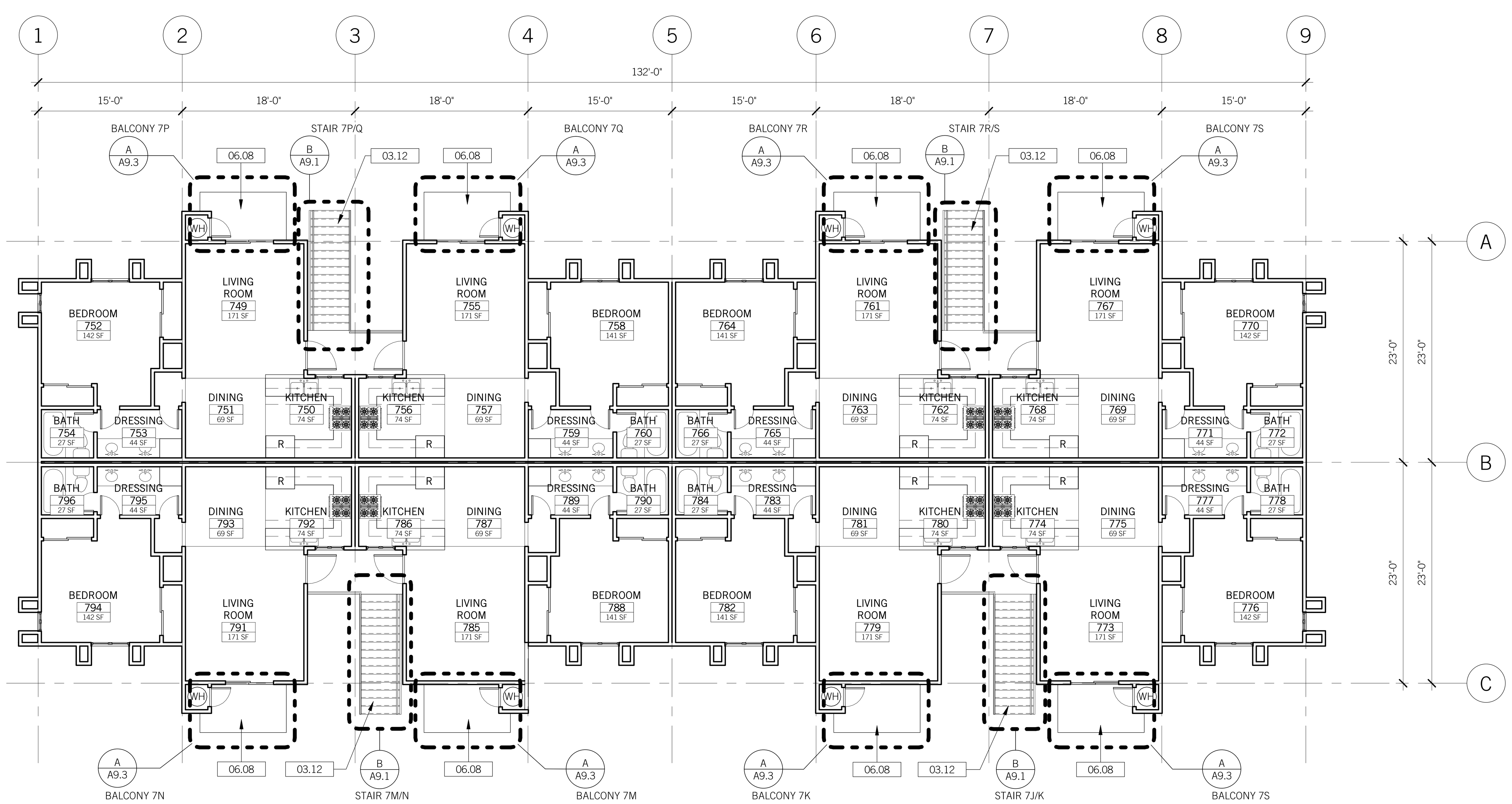
UCR PROJECT #: 956390
UCR CAAN #: P5673
DATE: 06-28-2019
DRAWN: LR

BUILDING 7 - FLOOR PLAN - DEMOLITION
A7-2.1

PLOT DATE: 6/28/2019 8:46:31 AM PLOTTED BY: LR



FIRST FLOOR PLAN - BUILDING 7 (1)
1/8" = 1'-0"



SECOND FLOOR PLAN - BUILDING 7 (2)
1/8" = 1'-0"

KEYNOTES

00.00

03.11 (N) CONCRETE FOOTING AND COLUMN. SEE: STRUCTURAL DRAWINGS.
03.12 (N) CONCRETE PRECAST STAIR TREADS. SEE: STRUCTURAL DRAWINGS.
06.08 (N) WOOD BALCONY DECKING. PROVIDE NEW WATER-PROOFING, FLASHING AND DEX-O-TEX, SLIP-RESISTANT FINISH OVER NEW BALCONY DECKING.SEE: STRUCTURAL DRAWINGS.

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LEGEND

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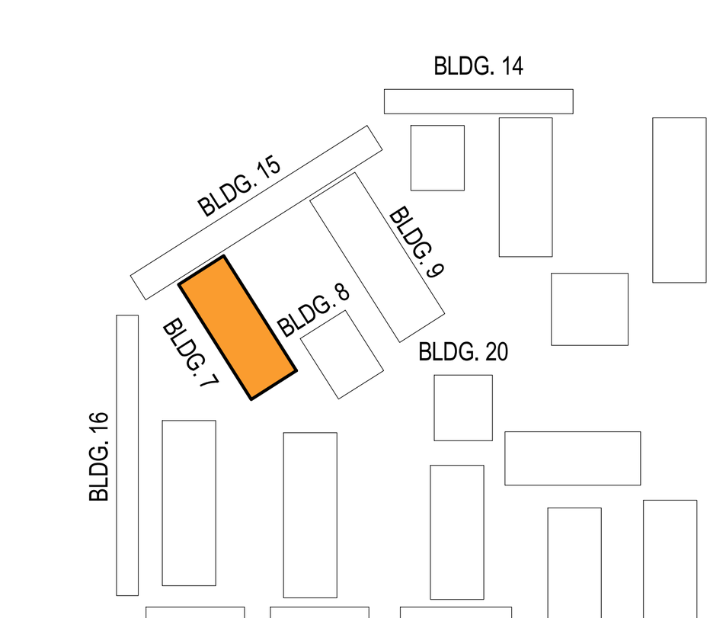

KEY PLAN

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT

APPROVED
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Reviewed by:
Fire and Life Safety Division South

miyamoto.
Engineer:
1901 East Alton Avenue, Suite 160
Santa Ana, CA 92705
M1904011.00
T: (949) 579-1170
miyamotointernational.com

Stamp: LICENSED ARCHITECT, Michael A. Beer, NO. C 32757, REN. 12-31-19, STATE OF CALIFORNIA

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Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019

3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

1	ADDENDUM 1	6/14/19
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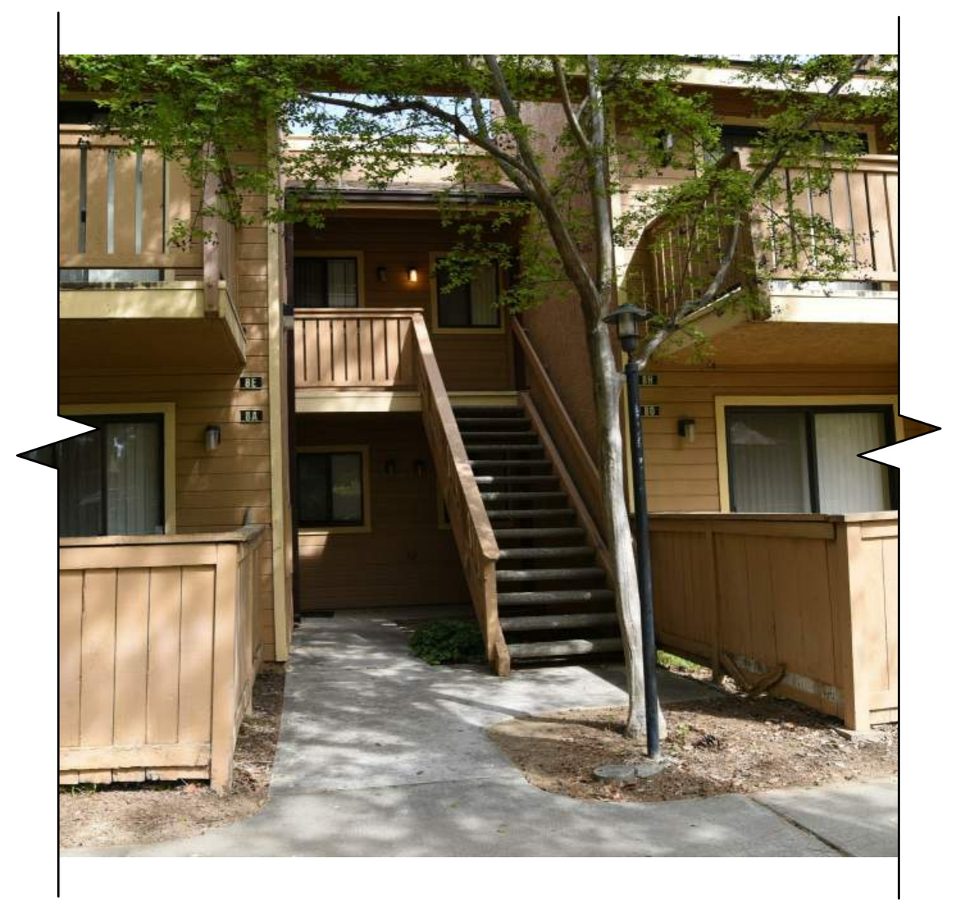
UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-28-2019
DRAWN:	LR

BUILDING 7 - FLOOR PLANS

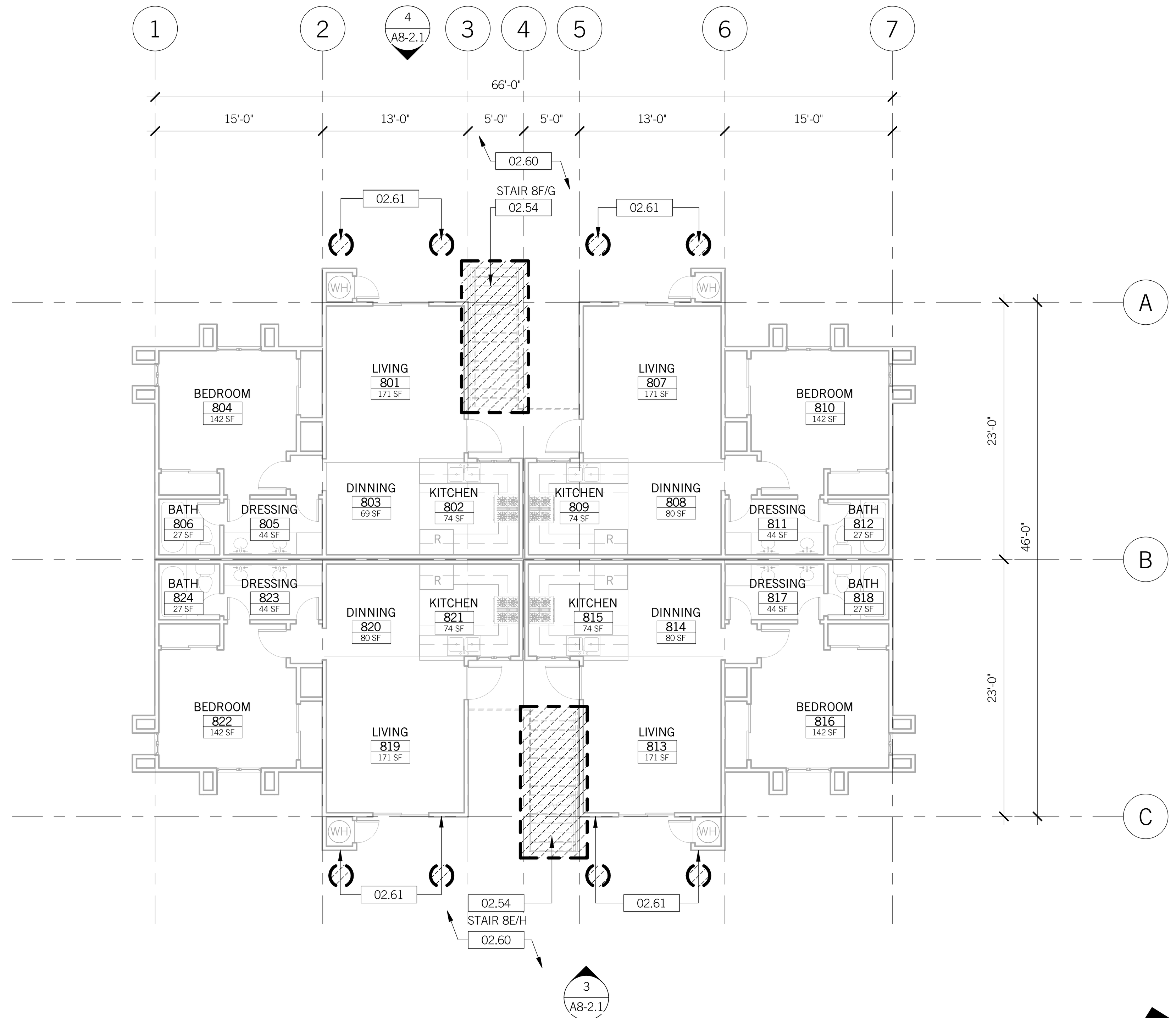
A7-2.2

PLOTTED BY: LR
PLOT DATE: 6/28/2019 8:46:35 AM



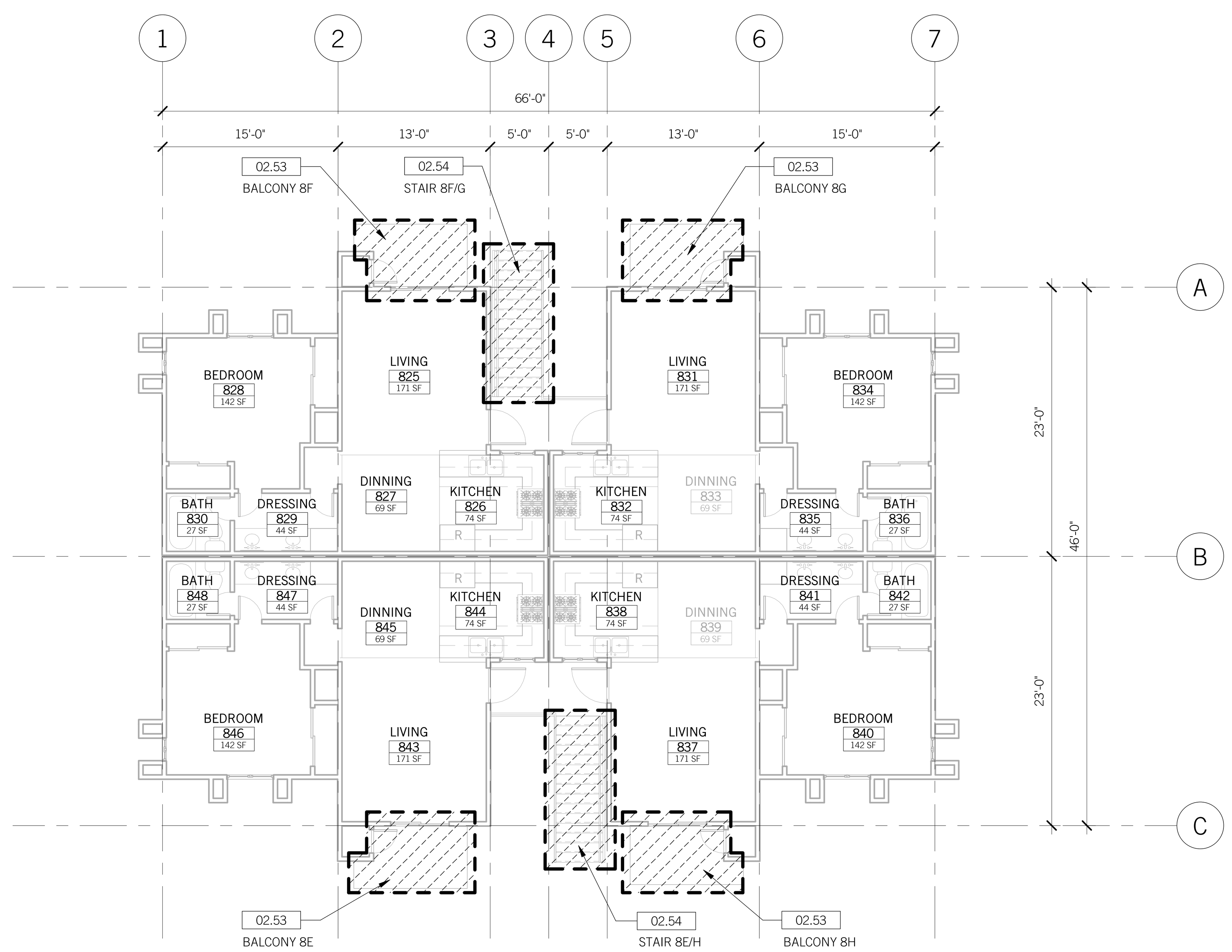
TYP. STAIR "B" - BLDG 8 (3)

TYP. STAIR "B" - BLDG 8 (4)



FIRST FLOOR PLAN DEMO- BUILDING 8 (1)

1/8" = 1'-0"



SECOND FLOOR PLAN DEMO- BUILDING 8 (2)

1/8" = 1'-0"

KEYNOTES

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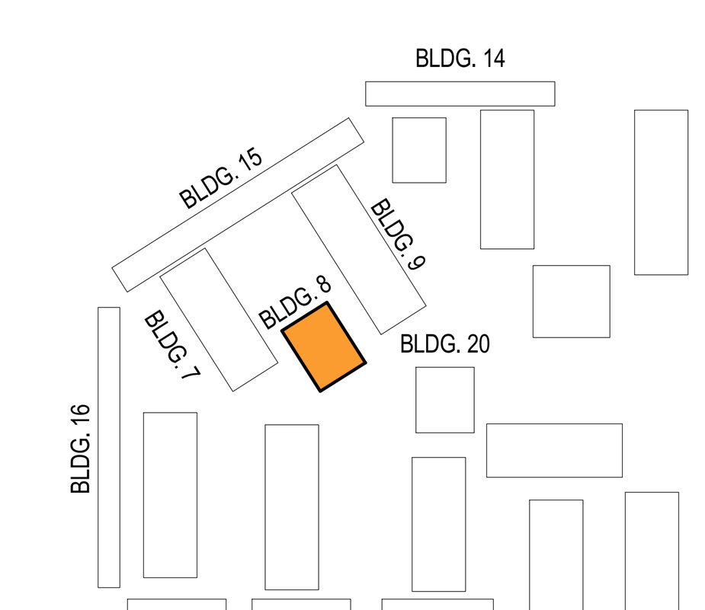
AREA OF DEMOLITION.



KEY PLAN

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
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APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
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Reviewed by: Scott Jackson
Fire and Life Safety Division South

miyamoto.
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Santa Ana, CA 92705
M1904011.00
T: (949) 579-1170
miyamotointernational.com
Engineer:

LICENSED ARCHITECT
Michael A. Beam
NO. C 32757
REN. 12-31-19
STATE OF CALIFORNIA
Stamp:

3080 12th Street, Suite 105
Riverside, California 92507
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Consultant:

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UCR PROJECT #:	956390
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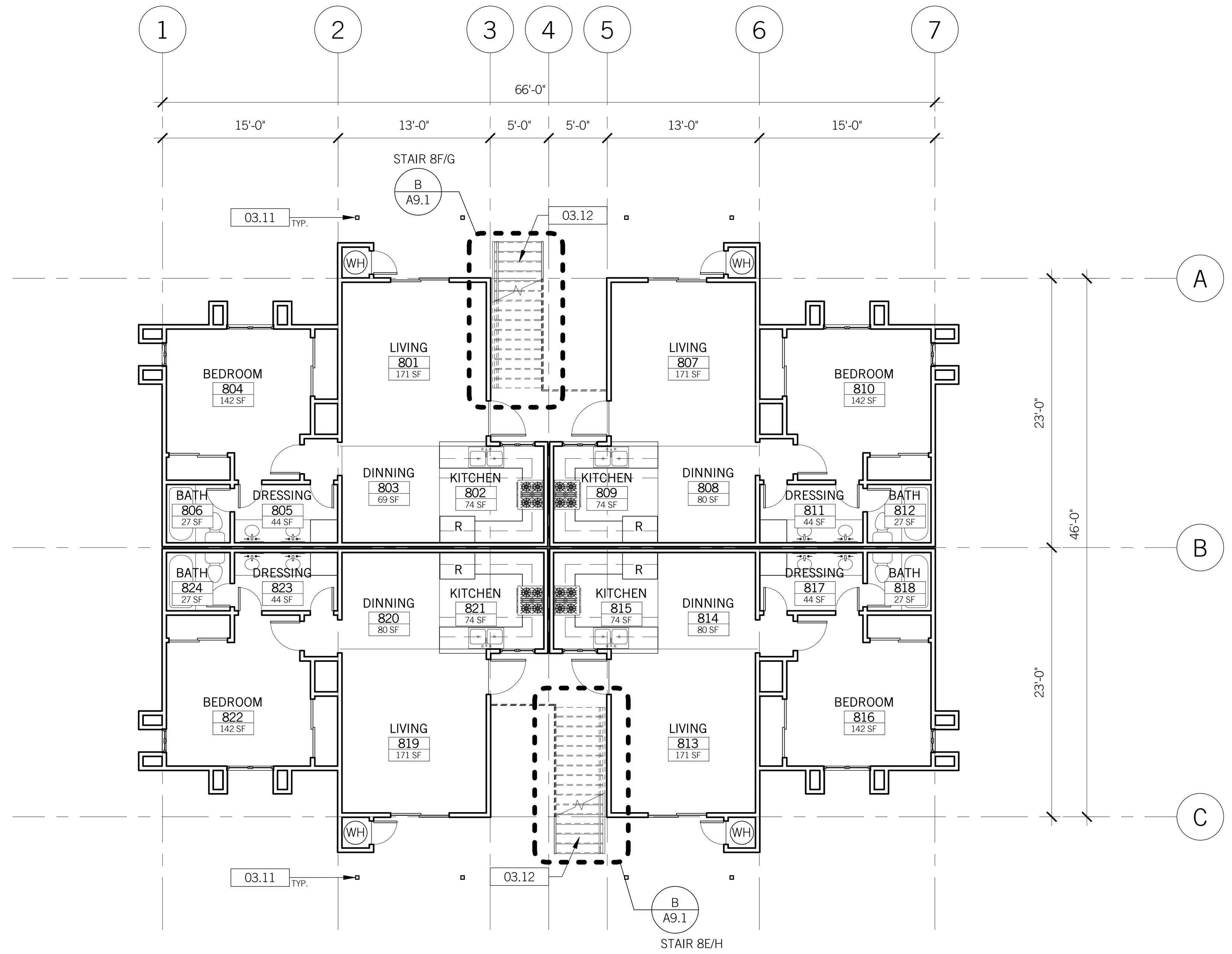
DATE:	06-28-2019
DRAWN:	LR

BUILDING 8 - FLOOR PLAN - DEMOLITION

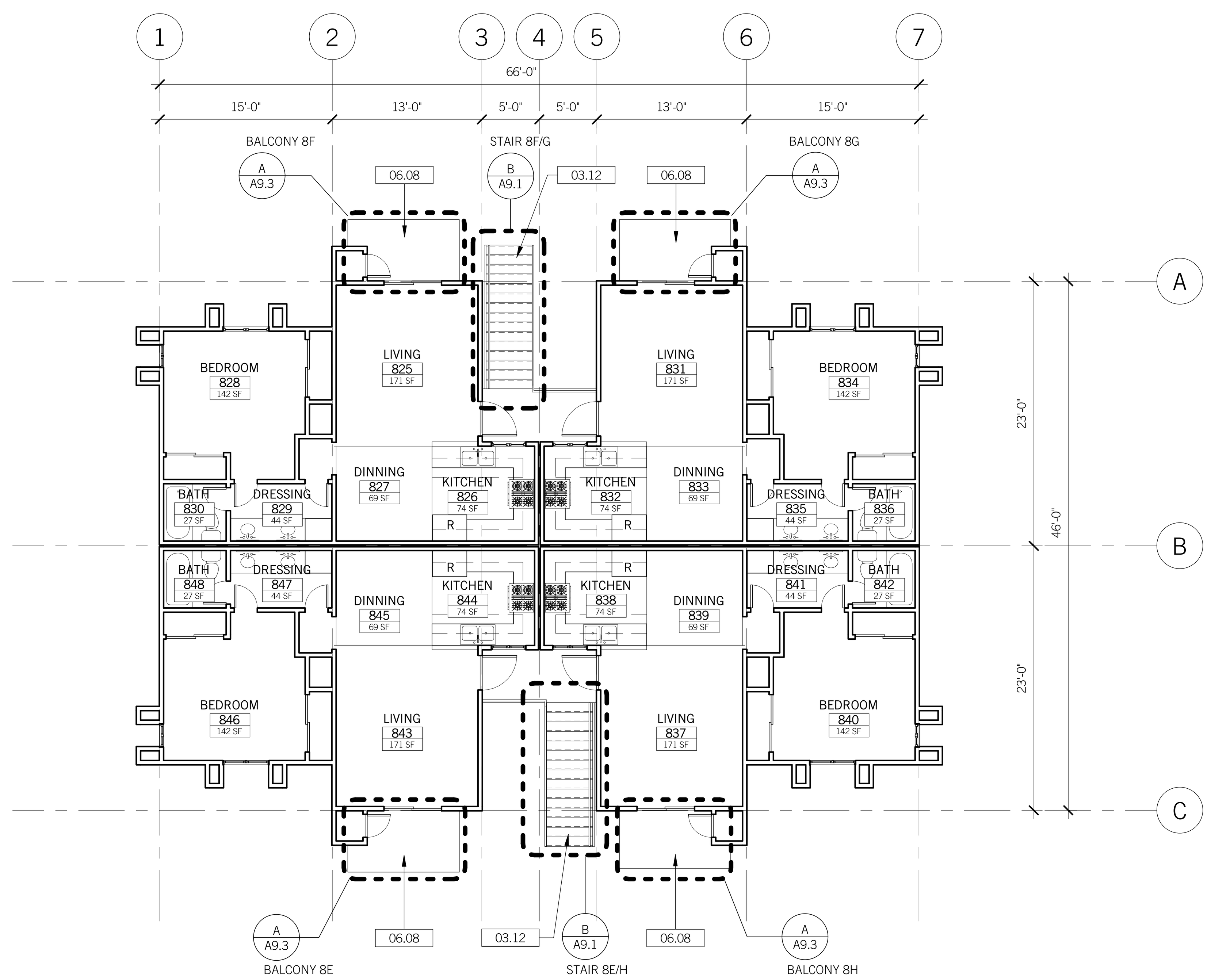
A8-2.1

PLOT DATE: 6/28/2019 8:47:25 AM PLOTTED BY: LR



FIRST FLOOR PLAN - BUILDING 8 (1)

1/8" = 1'-0"



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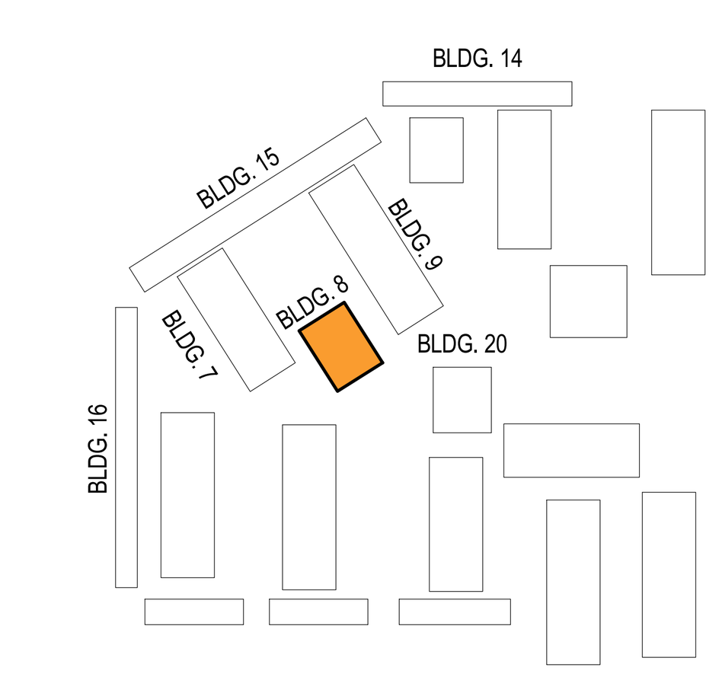

KEY PLAN

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
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APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

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miyamoto.
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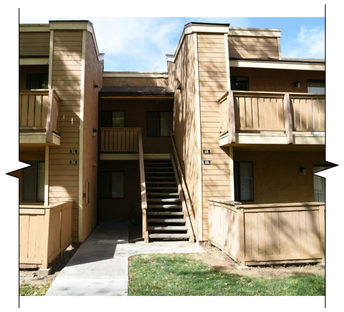
DATE:	06-28-2019
DRAWN:	LR

BUILDING 8 - FLOOR PLANS

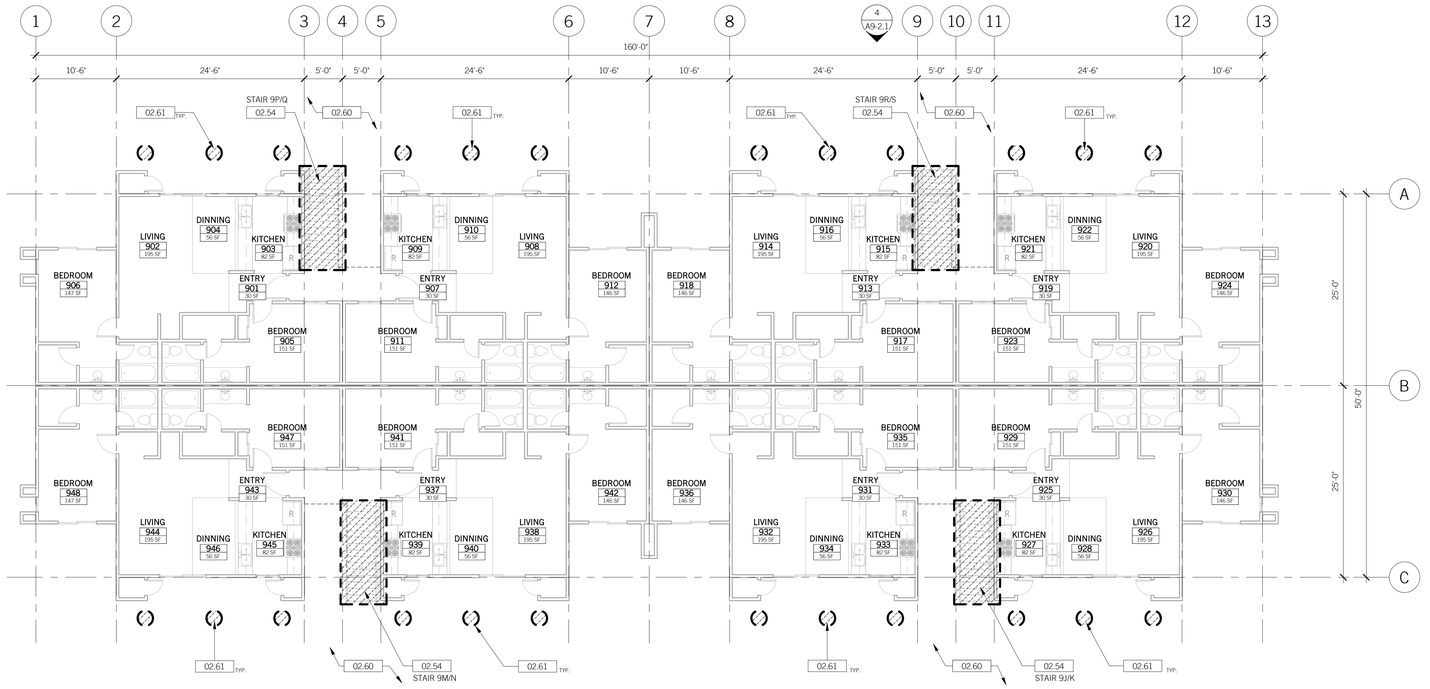
A8-2.2

PLOTTED BY: LR
PLOT DATE: 6/28/2019 8:47:27 AM

TYP. ROOF EYEBROW 3

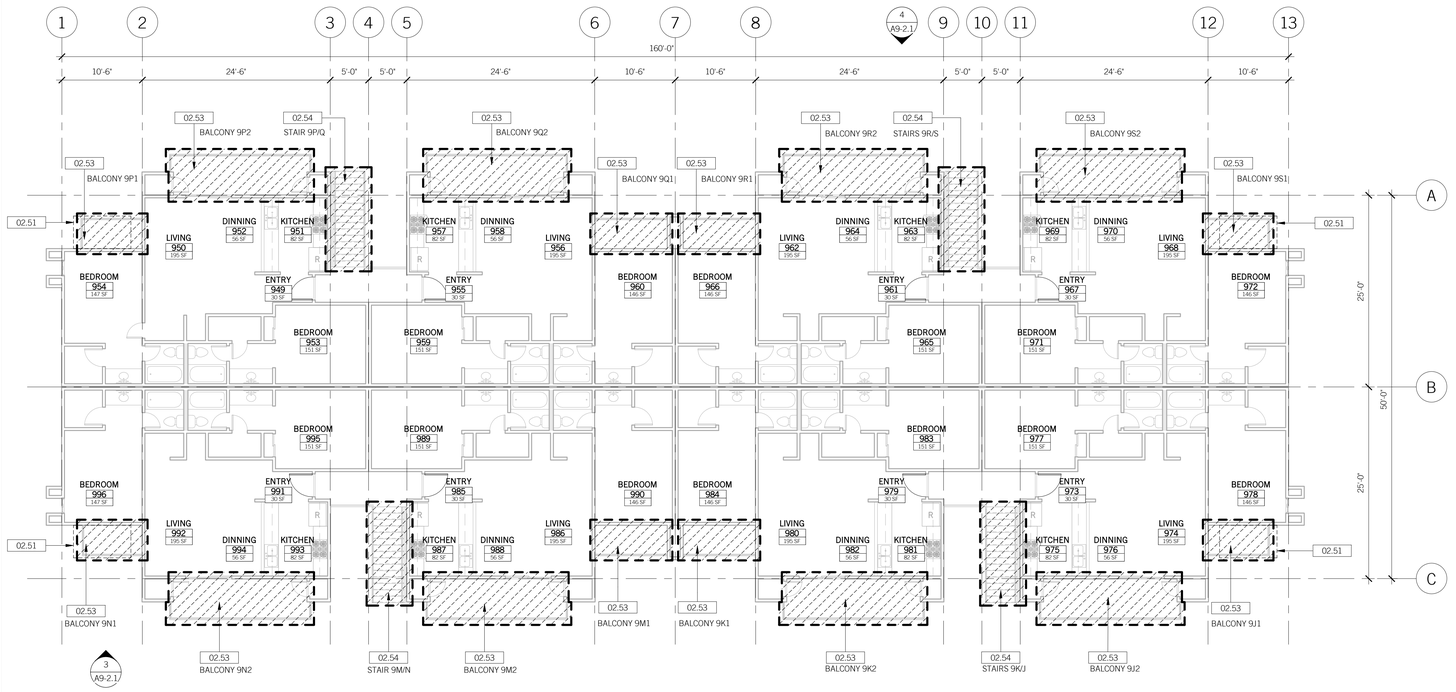


TYP. STAIR "B" - BLDG 9 4



North

FIRST FLOOR PLAN DEMO - BUILDING 9 1
1/8" = 1'-0"



North

SECOND FLOOR PLAN DEMO - BUILDING 9 2
1/8" = 1'-0"

KEYNOTES 00.00

02.51 REMOVE (E) WOOD EYEBROW AND ALL FASTENERS. USE WEATHER-RESISTANT, PAINTABLE WOOD FILLER TO PATCH HOLES.
02.53 REMOVE (E) WOOD DECK. SEE: STRUCTURAL DRAWINGS.
02.54 REMOVE (E) STAIRS, (E) FOOTING, (E) STEEL ATTACHMENTS AND WOOD HANDRAILS ATTACHED TO STUCCO AND WOOD SIDING CONDITIONS. DO NOT DEMO ANY SECOND FLOOR LANDING FRAMING OR POSTS. NOTIFY SEOR FOR ANY EXISTING MEMBERS IN QUESTION. PATCH AND REPAIR WALL FINISH AND (E) WALKWAY SLAB AFFECTED BY DEMO WORK TO MATCH EXISTING.
02.60 REMOVE AND REROUTE (E) SPRINKLER LINES AS NECESSARY.
02.61 REMOVE (E) PAVEMENT AS NECESSARY FOR NEW POST FOOTINGS. SEE: STRUCTURAL DRAWINGS.

WALL LEGEND

(E) STUD WALL, PROTECT IN PLACE.

LEGEND

(E) DOOR, FRAME AND ALL HARDWARE, PROTECT IN PLACE.

(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

AREA OF DEMOLITION.

Designer
miyamoto.
191 East Alton Avenue, Suite 160
Santa Ana, CA 92705
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T: (949) 679-1170
miyamotointernational.com

LICENSED ARCHITECT Michael A. Benn NO. C 32707 REN. 12-31-19 STATE OF CALIFORNIA
Stamp:

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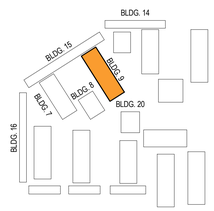
W: formillus.com
FormIllus ARCHITECTURE
Building relationships, transforming environments.
Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS
1 ADDENDUM 1 6/14/19
2 ADDENDUM 2 6/28/19



KEY PLAN

INSPECTIONS REQUIRED
By: RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Brad T. Bellows
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE ODDBOX SYSTEM

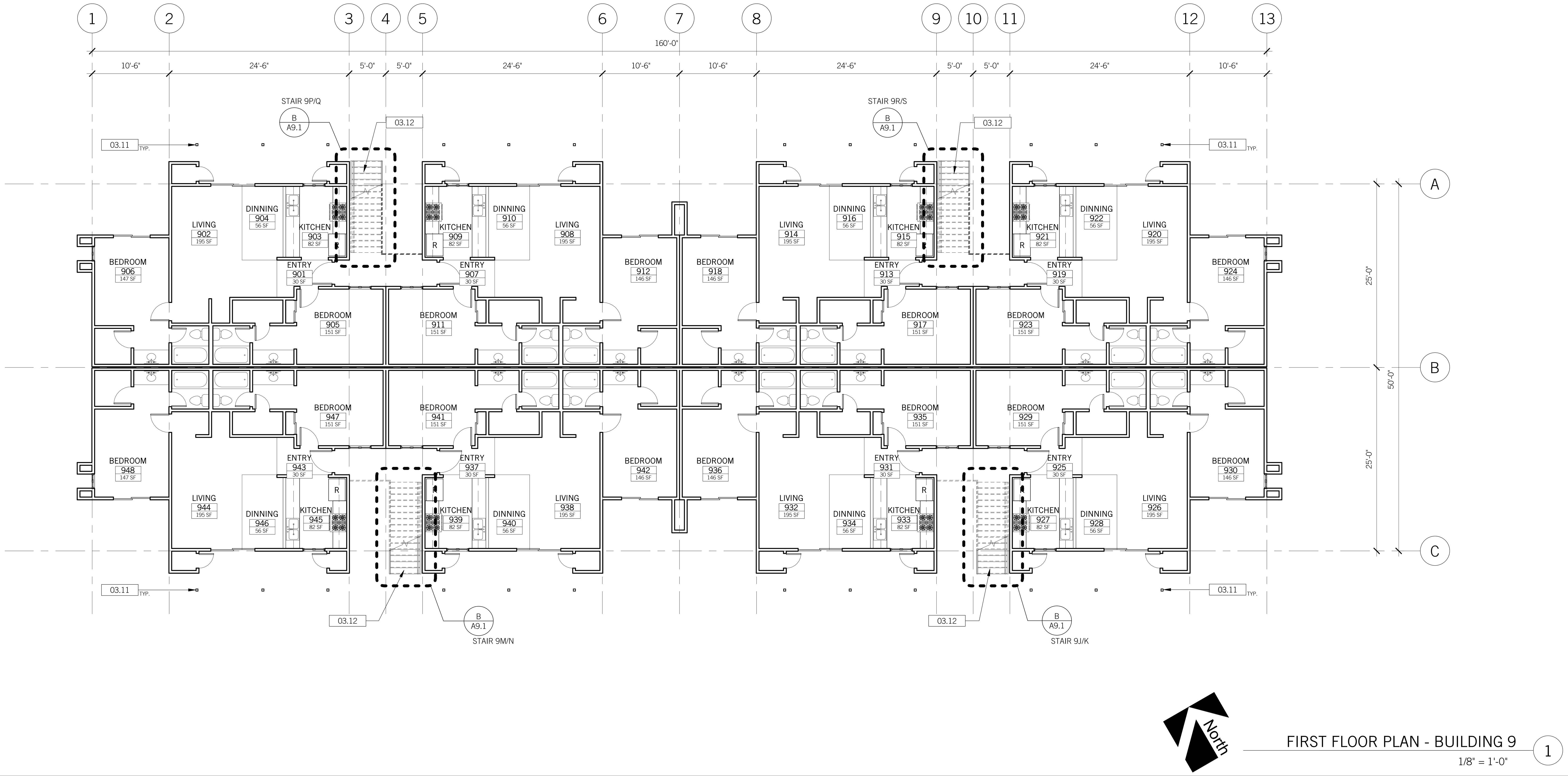
APPROVED
By: Riverside
Planning, Design and Construction
Campus Building Official
Signature: Brad T. Bellows
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Fire and Life Safety Division, South

UCR PROJECT #: 956390
UCR CAAN #: P5673
DATE: 06-28-2019
DRAWN: LR

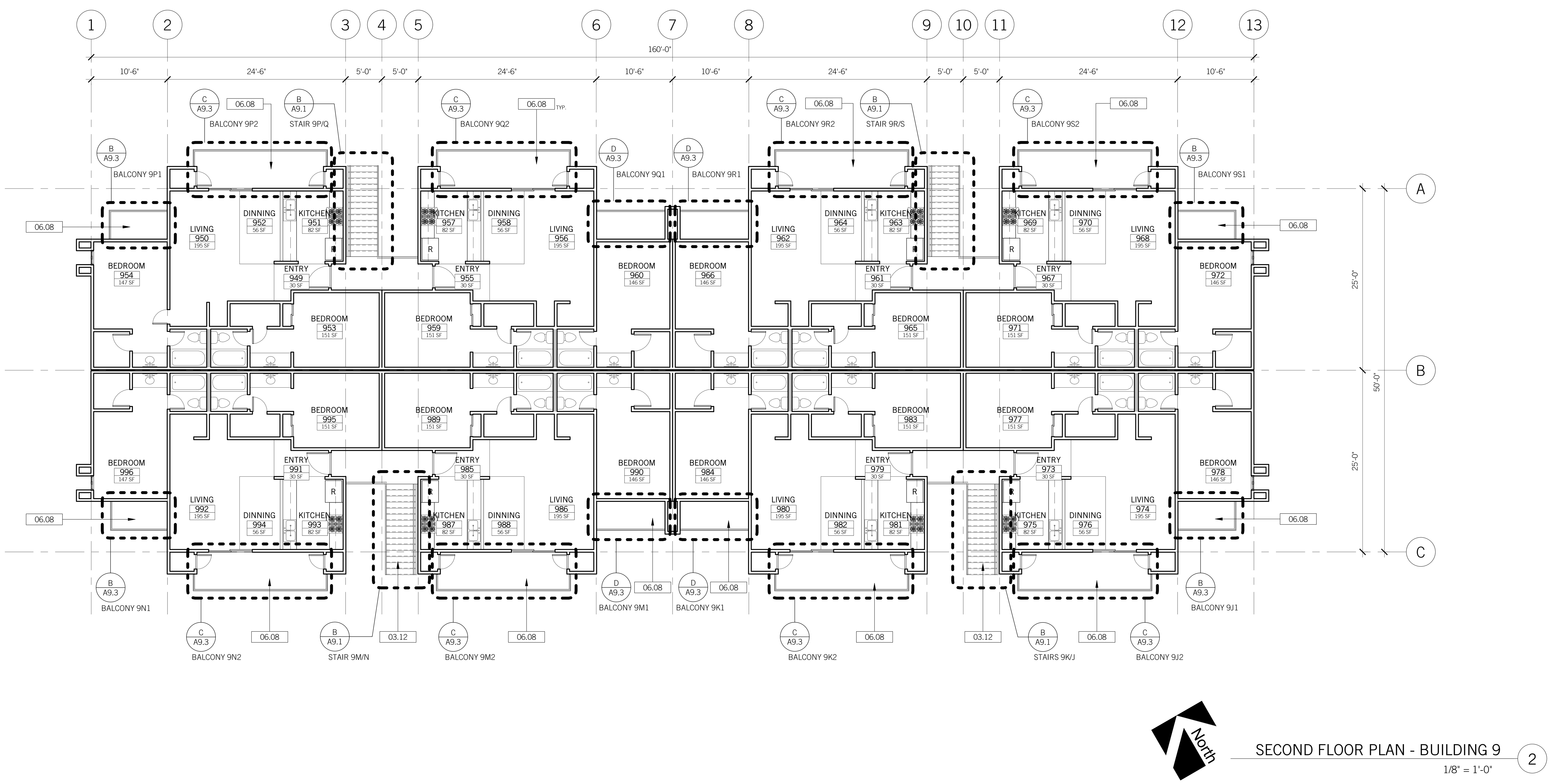
BUILDING 9 - FLOOR PLAN - DEMOLITION
A9-2.1

PLOT DATE: 6/28/2019 8:48:20 AM PLOTTED BY: LR



FIRST FLOOR PLAN - BUILDING 9 (1)

1/8" = 1'-0"



SECOND FLOOR PLAN - BUILDING 9 (2)

1/8" = 1'-0"

KEYNOTES

03.11	(N) CONCRETE FOOTING AND COLUMN. SEE: STRUCTURAL DRAWINGS.
03.12	(N) CONCRETE PRECAST STAIR TREADS. SEE: STRUCTURAL DRAWINGS.
06.08	(N) WOOD BALCONY DECKING. PROVIDE NEW WATER-PROOFING, FLASHING AND DEX-O-TEX, SLIP-RESISTANT FINISH OVER NEW BALCONY DECKING.SEE: STRUCTURAL DRAWINGS.

WALL LEGEND

(E) STUD WALL, PROTECT IN PLACE.

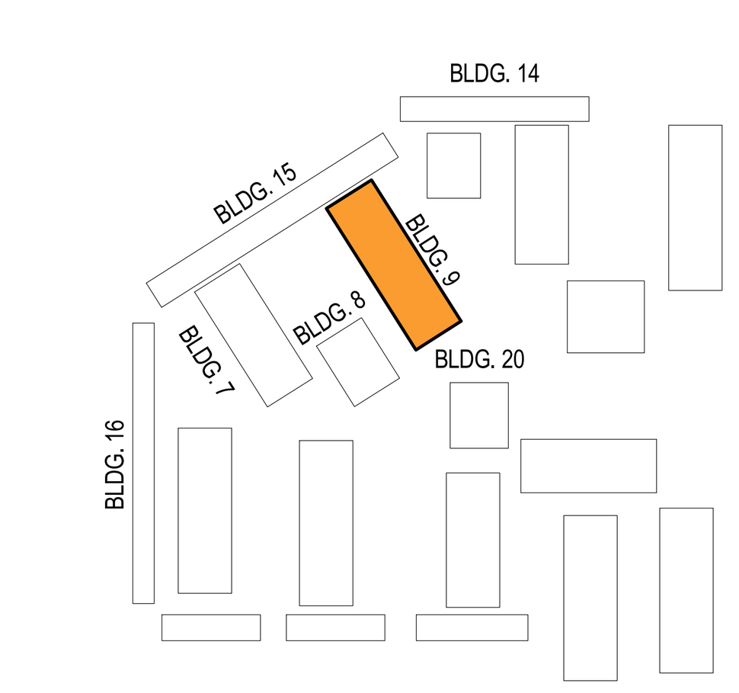
LEGEND

(E) DOOR, FRAME AND ALL HARDWARE, PROTECT IN PLACE.

(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

FINISH REPAIR NOTE

1. WHERE EXISTING EXTERIOR/INTERIOR FINISHES HAVE BEEN DISTURBED AS A RESULT OF THE WORK SCOPE REQUIRED HEREIN, THE CONTRACTOR SHALL REPAIR THOSE FINISHES TO MATCH AS CLOSELY AS POSSIBLE, EXISTING ADJACENT FINISH. IN ADDITION, THE CONTRACTOR SHALL PREP, PRIME AND PAINT THE ENTIRE WALL, FLOOR OR CEILING SURFACE, TO THE NEAREST PAINT BREAK. THIS MAY INCLUDE, BUT NOT BE LIMITED TOO; INSIDE OR OUTSIDE WALL CORNERS, WALL TO CEILING OR FLOOR, LEDGER BEAMS, DIFFERENT MATERIALS NOT DISTURBED BY THE WORK, ETC... IT SHALL BE THE BIDDING CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL SCENARIOS AND CONDITIONS, AND WALK THE SITE BEFORE PROVIDING HIS/HER BID.



KEY PLAN

INSPECTIONS REQUIRED — UC RIVERSIDE Office of Planning, Design & Construction — CAMPUS BUILDING PERMIT

APPROVED — UC Riverside Planning, Design and Construction — Building & Safety Division — Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL APPROVED FIRE AND PANIC ONLY — 07/02/2019 — Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times. — Fire and Life Safety Division South

Engineer: miyamoto.
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miyamotointernational.com

Stamp: LICENSED ARCHITECT Michael A. Bem NO. C 32757 REN. 12-31-19 STATE OF CALIFORNIA

Consultant: Formillus ARCHITECTURE
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Building relationships, transforming environments.

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019

3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

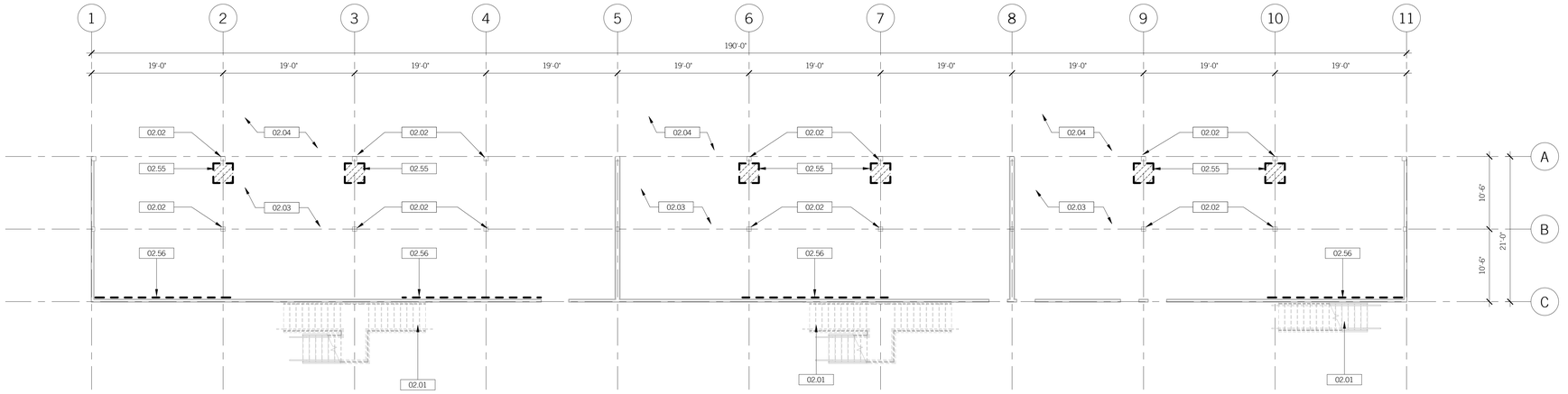
1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-28-2019
DRAWN:	LR

BUILDING 9 - FLOOR PLANS

A9-2.2

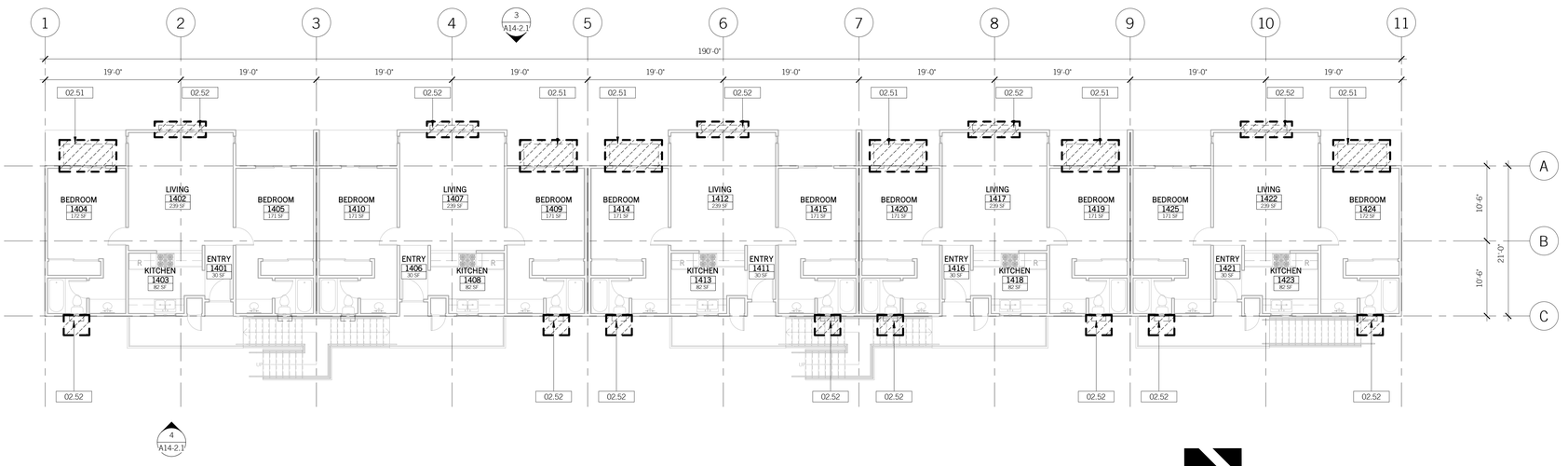
PLOT DATE: 6/28/2019 8:48:24 AM — PLOTTED BY: LR



North

FIRST FLOOR PLAN DEMO - BUILDING 14 (1)

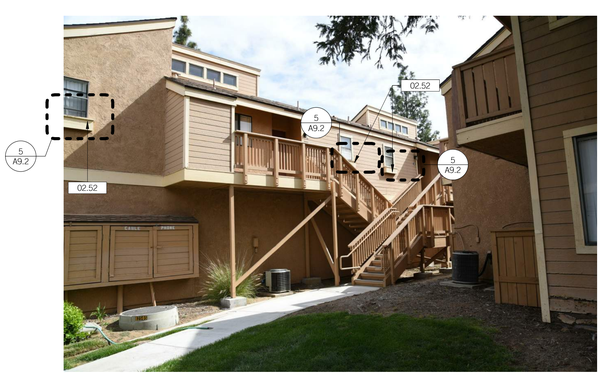
1/8" = 1'-0"



North

SECOND FLOOR PLAN DEMO - BUILDING 14 (2)

1/8" = 1'-0"



ROOF EYEBROW & POT SHELF (4)

12" = 1'-0"

TYP. ROOF EYEBROW & POT SHELF (3)

KEYNOTES 00.00

02.01	(E) STAIRS TO REMAIN, PROTECT IN PLACE.
02.02	(E) COLUMN, PROTECT IN PLACE.
02.03	(E) CONCRETE PAVING, PROTECT IN PLACE.
02.04	(E) ASPHALTIC PAVING, PROTECT IN PLACE.
02.51	REMOVE (E) WOOD EYEBROW AND ALL FASTENERS. USE WEATHER-RESISTANT, PAINTABLE WOOD FILLER TO PATCH HOLES.
02.52	REMOVE (E) POT SHELF AND ALL FASTENERS. USE WEATHER-RESISTANT, PAINTABLE WOOD FILLER TO PATCH HOLES.
02.55	SAWCUT AND REMOVE (E) CONCRETE SLAB AS REQUIRED FOR NEW FOOTINGS. SEE: STRUCTURAL DRAWINGS.
02.56	REMOVE (E) GYPSUM BOARD AND/OR WALL FINISH 12" MIN. BEYOND WORK OR TO CLOSEST CONTROL JOINT TO ALLOW FOR INSTALLATION OF NEW STRUCTURAL WORK. SEE: STRUCTURAL DRAWINGS.

WALL LEGEND

(E) STUD WALL, PROTECT IN PLACE.

LEGEND

(E) DOOR, FRAME AND ALL HARDWARE, PROTECT IN PLACE.

(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

AREA OF DEMOLITION.

Designer:
miyamoto.
1901 East Alton Avenue, Suite 160
Santa Ana, CA 92705
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T: (949) 579-1170
miyamotointernational.com

Stamp:
LICENSED ARCHITECT
Michael A. Benn
NO. C 32707
REN. 12-31-19
STATE OF CALIFORNIA

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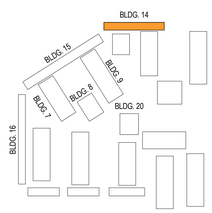
Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019

3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19



KEY PLAN

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Brian T. Tellner
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CBSMS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Brian T. Tellner
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
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Reviewed by:
Fire and Life Safety Division South

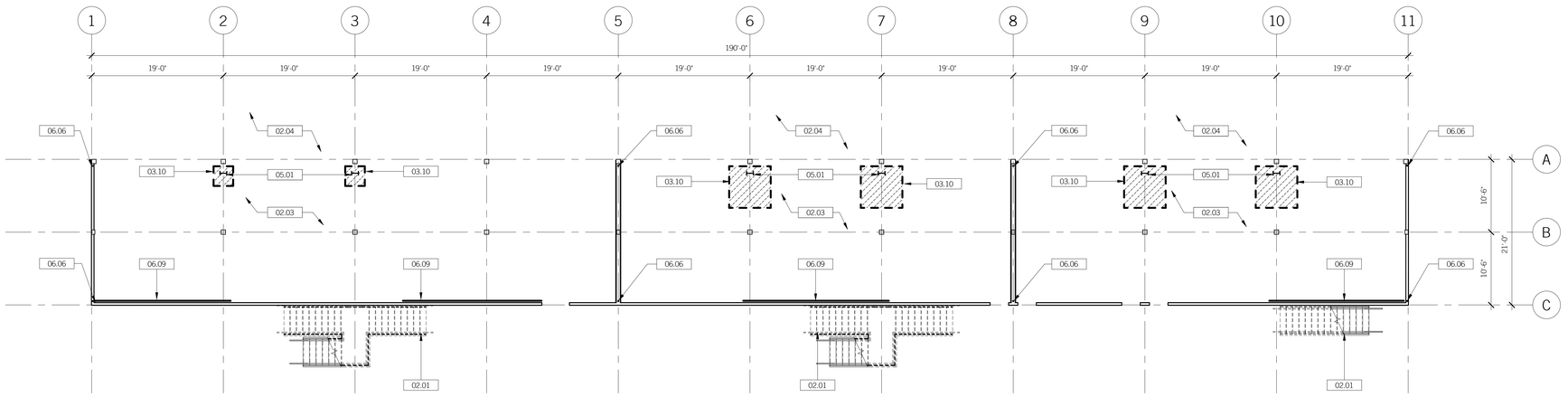
UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-28-2019
DRAWN:	LR

BUILDING 14 - FLOOR PLAN - DEMOLITION

A14-2.1

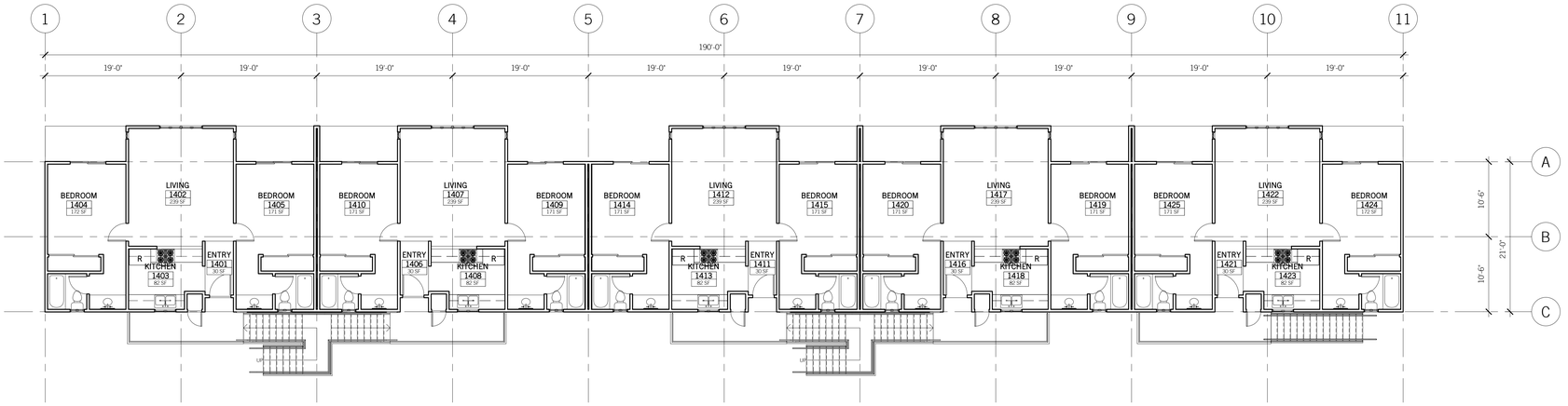
PLOTTED BY: LR
PLOT DATE: 6/28/2019 8:53:26 AM

07/02/2019



North

FIRST FLOOR PLAN - BUILDING 14 (1)
1/8" = 1'-0"



North

SECOND FLOOR PLAN - BUILDING 14 (2)
1/8" = 1'-0"

KEYNOTES 00.00

02.01 (E) STAIRS TO REMAIN, PROTECT IN PLACE.
02.03 (E) CONCRETE PAVING, PROTECT IN PLACE.
02.04 (E) ASPHALTIC PAVING, PROTECT IN PLACE.

03.10 (N) CONCRETE FOOTINGS FOR STRUCTURAL COLUMN REPAIR WORK, PATCH TO MATCH (E) CONC. SLOPES. SEE: STRUCTURAL DRAWINGS.

05.01 ALL EXPOSED COLUMN AND BRACING TO RECEIVE INTUMESCENT PAINT. ARCHITECT TO SELECT COLOR. SEE: STRUCTURAL DRAWINGS.

06.06 (N) SIMPSON "HOLDOWN" PER PLAN. SEE: STRUCTURAL DRAWINGS. (1)
06.09 (N) PLYWOOD SHEAR PANEL. REPAIR & PAINT TO MATCH (E) ADJACENT WALL SURFACE. SEE: STRUCTURAL DRAWINGS.

WALL LEGEND

(E) STUD WALL, PROTECT IN PLACE.

LEGEND

(E) DOOR, FRAME AND ALL HARDWARE, PROTECT IN PLACE.

(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

FINISH REPAIR NOTE

1. WHERE EXISTING EXTERIOR/INTERIOR FINISHES HAVE BEEN DISTURBED AS A RESULT OF THE WORK SCOPE REQUIRED HEREIN, THE CONTRACTOR SHALL REPAIR THOSE FINISHES TO MATCH AS CLOSELY AS POSSIBLE, EXISTING ADJACENT FINISH. IN ADDITION, THE CONTRACTOR SHALL PREP, PRIME AND PAINT THE ENTIRE WALL, FLOOR OR CEILING SURFACE, TO THE NEAREST PAINT BREAK. THIS MAY INCLUDE, BUT NOT BE LIMITED TOO; INSIDE OR OUTSIDE WALL CORNERS, WALL TO CEILING OR FLOOR, LEDGER BEAMS, DIFFERENT MATERIALS NOT DISTURBED BY THE WORK, ETC... IT SHALL BE THE BIDDING CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL SCENARIOS AND CONDITIONS, AND WALK THE SITE BEFORE PROVIDING HIS/HER BID.

FIRE FINISH NOTE:

1. ALL BUILDING STRUCTURAL STEEL FRAME WITHIN GARAGE SPACE TO BE COATED WITH INTUMESCENT PAINT TO ACHIEVE 1-HR FIRE RATING. (1)

miyamoto.
Engineer:
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Santa Ana, CA 92705
MI19040I1.00
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miyamotointernational.com

LICENSED ARCHITECT Michael A. Benn NO. C 32707 REN. 12-31-19 STATE OF CALIFORNIA
Stamp:

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Building relationships, transforming environments.
Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS
1 ADDENDUM 1 6/14/19
2 ADDENDUM 2 6/28/19

KEY PLAN

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Brian T. Bellows
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE ODDBIS SYSTEM

APPROVED
UC RIVERSIDE
Planning, Design and Construction
Campus Building Official
Signature:
Building & Safety Division
Campus Building Permit

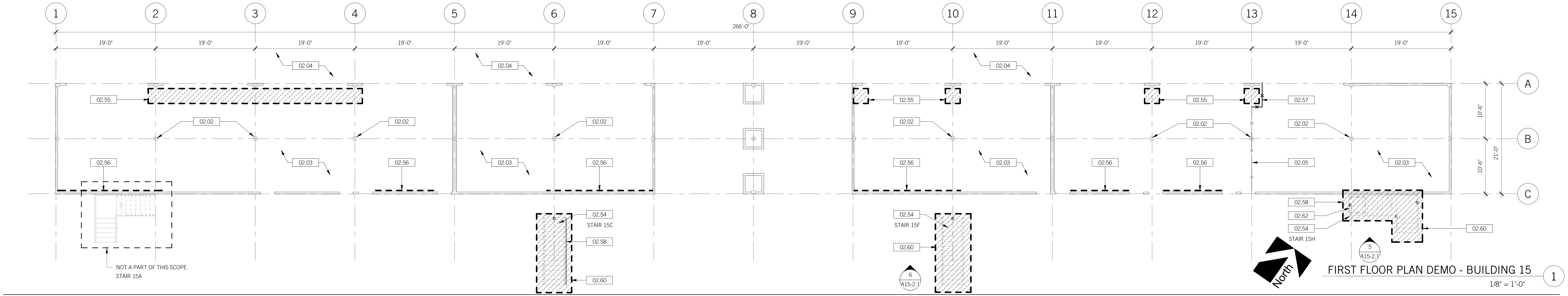
OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Fire and Life Safety Division South

UCR PROJECT #: 956390
UCR CAAN #: P5673
DATE: 06-28-2019
DRAWN: LR

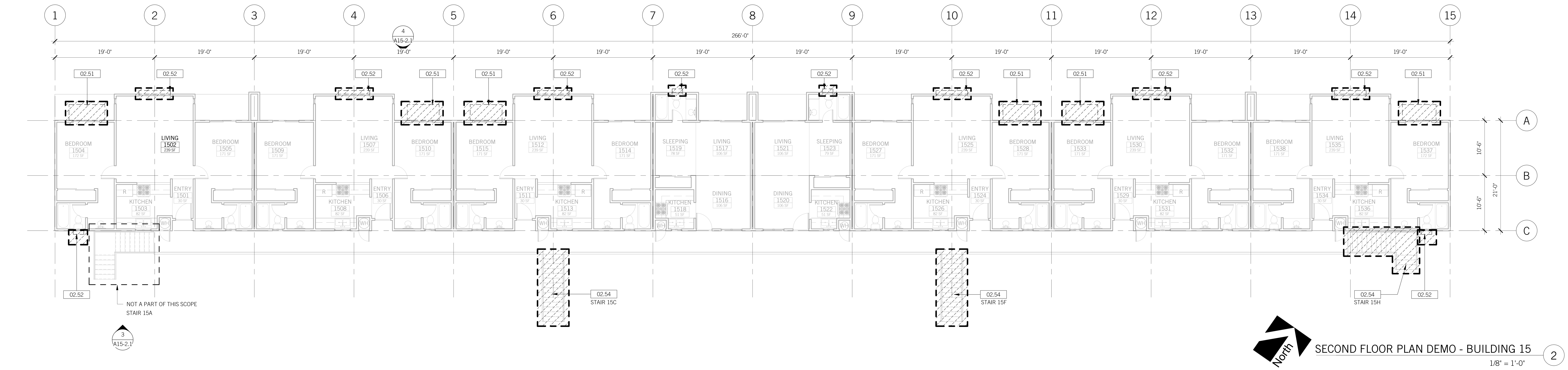
BUILDING 14 - FLOOR PLANS

A14-2.2

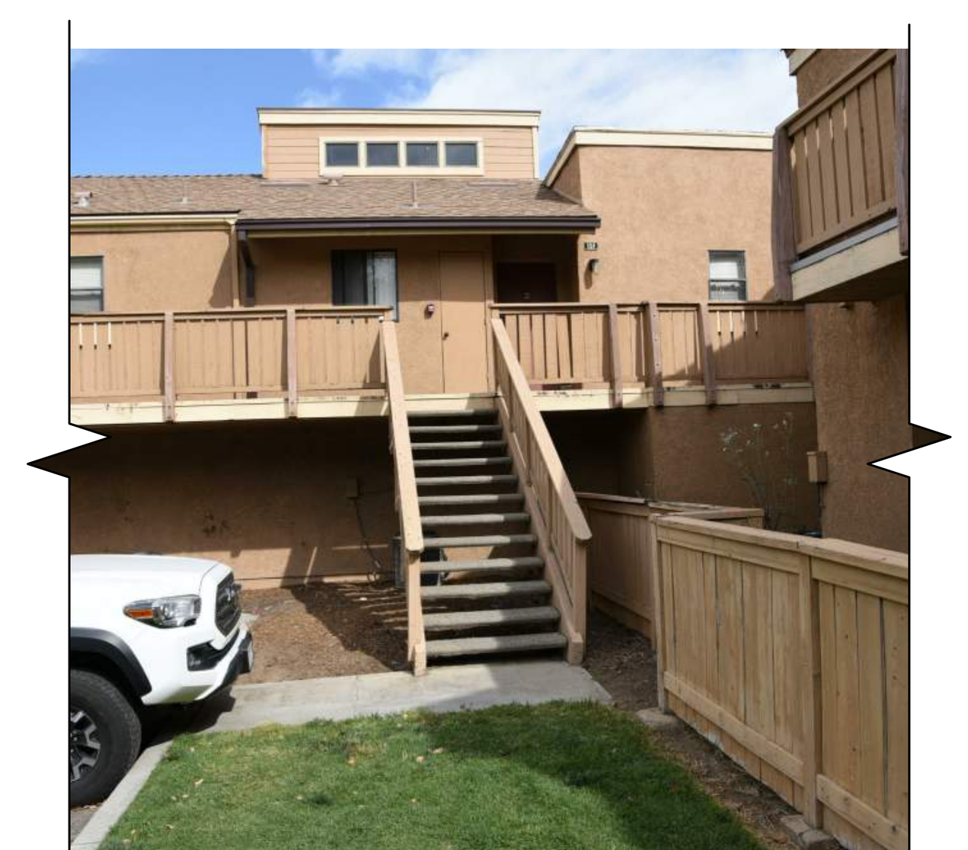
PLOTTED BY: LR
PLOT DATE: 6/28/2019 8:53:27 AM



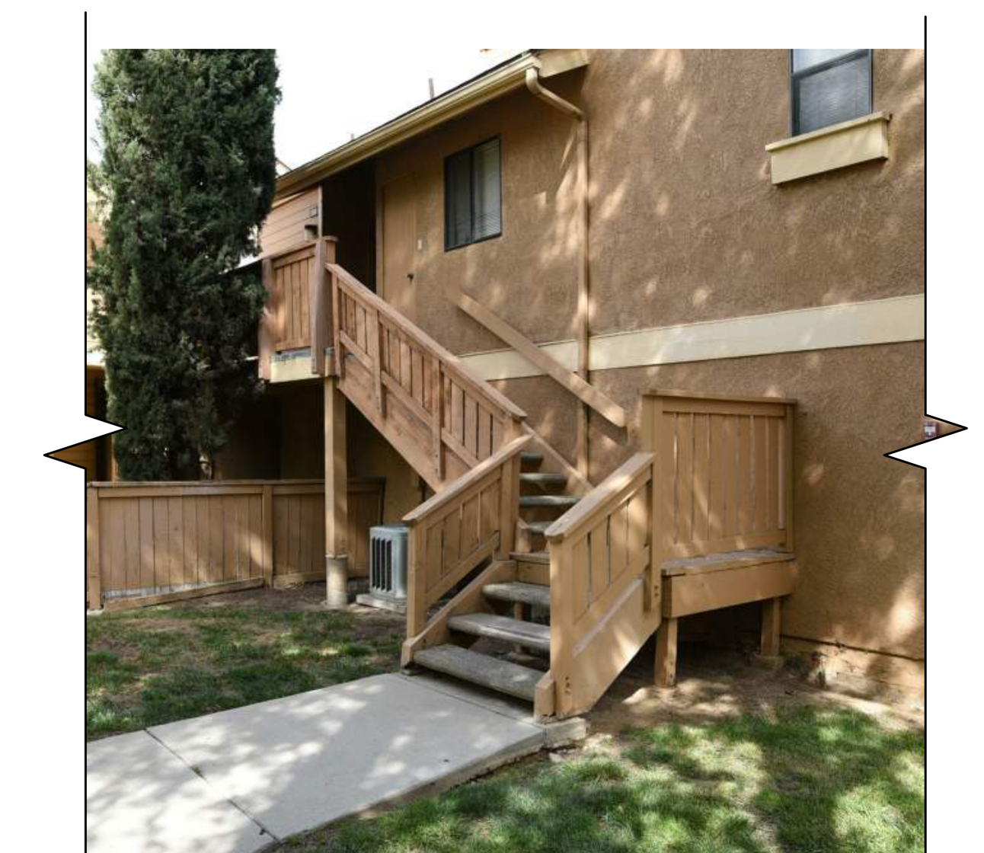
FIRST FLOOR PLAN DEMO - BUILDING 15 (1)
1/8" = 1'-0"



SECOND FLOOR PLAN DEMO - BUILDING 15 (2)
1/8" = 1'-0"



TYP. STAIR "C" - BLDG 15 (6)
12" = 1'-0"



TYP. STAIR "A" - BLDG 15 (5)
12" = 1'-0"

TYP. ROOF EYEBROW & POT SHELF (4)

ROOF EYEBROW & POT SHELF (3)

KEYNOTES 00.00

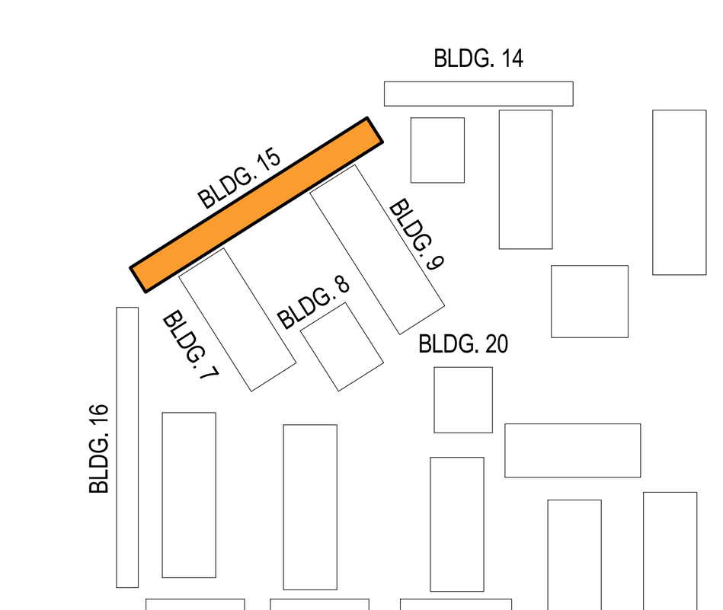
02.02 (E) COLUMN, PROTECT IN PLACE.
02.03 (E) CONCRETE PAVING, PROTECT IN PLACE.
02.04 (E) ASPHALTIC PAVING, PROTECT IN PLACE.
02.05 (E) CHAIN LINK FENCE, PROTECT IN PLACE.
02.51 REMOVE (E) WOOD EYEBROW AND ALL FASTENERS. USE WEATHER-RESISTANT, PAINTABLE WOOD FILLER TO PATCH HOLES.
02.52 REMOVE (E) POT SHELF AND ALL FASTENERS. USE WEATHER-RESISTANT, PAINTABLE WOOD FILLER TO PATCH HOLES.
02.54 REMOVE (E) STAIRS, (E) FOOTING, (E) STEEL ATTACHMENTS AND WOOD HANDRAILS ATTACHED TO STUCCO AND WOOD SIDING CONDITIONS. DO NOT DEMO ANY SECOND FLOOR LANDING FRAMING OR POSTS. NOTIFY SEOR FOR ANY EXISTING MEMBERS IN QUESTION. PATCH AND REPAIR WALL FINISH AND (E) WALKWAY SLAB AFFECTED BY DEMO WORK TO MATCH EXISTING.
02.55 SAWCUT AND REMOVE (E) CONCRETE SLAB AS REQUIRED FOR NEW FOOTINGS. SEE: STRUCTURAL DRAWINGS.
02.56 REMOVE (E) GYPSUM BOARD AND/OR WALL FINISH 12" MIN. BEYOND WORK OR TO CLOSEST CONTROL JOINT TO ALLOW FOR INSTALLATION OF NEW STRUCTURAL WORK. SEE: STRUCTURAL DRAWINGS.
02.57 REMOVE END OF CHAIN LINK FENCE AND REBUILD/ REPLACE AFTER MANUFACTURER INSTALLATION.
02.58 REMOVE AND REPLACE ELECTRICAL CONDUIT ON EXISTING STAIR.
02.60 REMOVE AND REROUTE (E) SPRINKLER LINES AS NECESSARY.
02.62 REMOVE (E) AC UNIT AND ACCESSORY PARTS ASSOCIATED WITH REPLACEMENT. SEE: ELECTRICAL DRAWINGS.

WALL LEGEND

LEGEND

(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

AREA OF DEMOLITION.



KEY PLAN

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT

APPROVED
UC Riverside
Planning, Design and Construction
Signature:
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Fire and Life Safety Division South

PLOT DATE: 6/28/2019 12:43:57 PM PLOTTED BY: LR

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E: info@formillus.com
W: formillus.com
Building relationships, transforming environments.

LICENSED ARCHITECT
Michael A. Bern
NO. C 32757
REN. 12-31-19
STATE OF CALIFORNIA

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

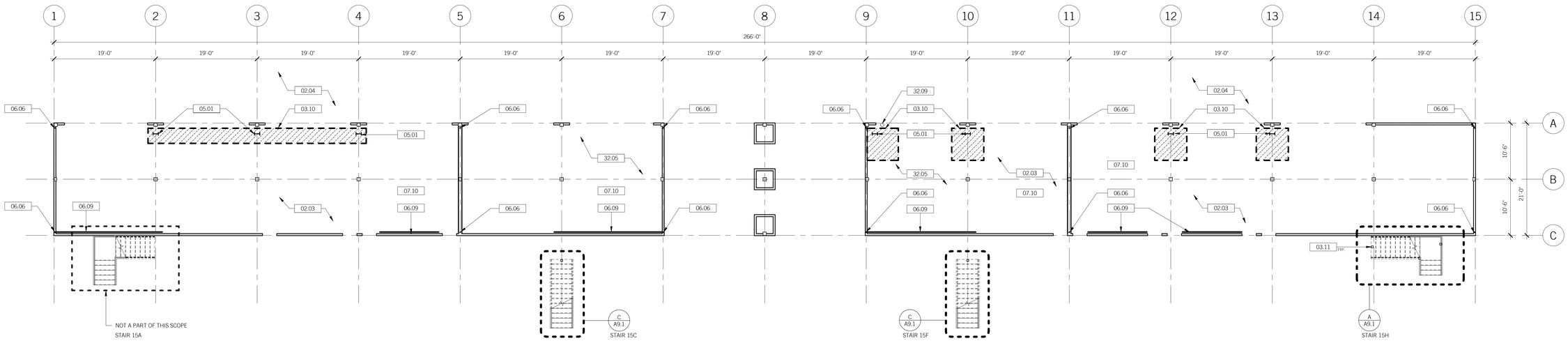
REVISIONS

1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-28-2019
DRAWN:	LR

BUILDING 15 - FLOOR PLAN DEMOLITION

A15-2.1

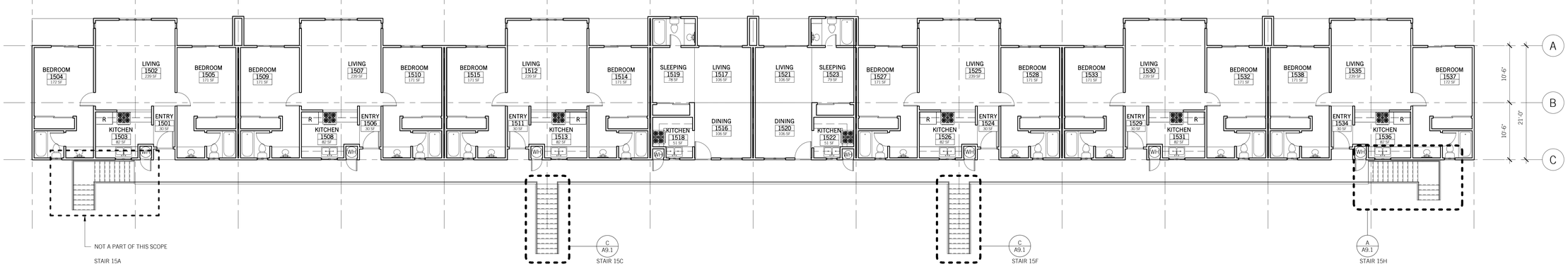


North

FIRST FLOOR PLAN - BUILDING 15

1/8" = 1'-0"

1



North

SECOND FLOOR PLAN - BUILDING 15

1/8" = 1'-0"

2

KEYNOTES

00.00

02.03 (E) CONCRETE PAVING, PROTECT IN PLACE.
02.04 (E) ASPHALTIC PAVING, PROTECT IN PLACE.

03.10 (N) CONCRETE FOOTINGS FOR STRUCTURAL COLUMN REPAIR WORK, PATCH TO MATCH (E) CONC. SLOPES. SEE: STRUCTURAL DRAWINGS.
03.11 (N) CONCRETE FOOTING AND COLUMN. SEE: STRUCTURAL DRAWINGS.

05.01 ALL EXPOSED COLUMN AND BRACING TO RECEIVE INTUMESCENT PAINT. ARCHITECT TO SELECT COLOR. SEE: STRUCTURAL DRAWINGS. 1

06.06 (N) SIMPSON 'HOLDOWN' PER PLAN. SEE: STRUCTURAL DRAWINGS.
06.09 (N) PLYWOOD SHEAR PANEL. REPAIR & PAINT TO MATCH (E) ADJACENT WALL SURFACE. SEE: STRUCTURAL DRAWINGS.

07.10 WHERE SLAB/WALL PENETRATION OCCURS, SEE: 8/A9.2. 2

32.05 (N) 4" WIDE PARKING STRIPING W/ WHITE PAVEMENT PAINT.
32.09 (N) CONCRETE VEHICLE & SAFETY BOLLARD AT 0" CURB. SEE: 4/A1.2.

WALL LEGEND

LEGEND

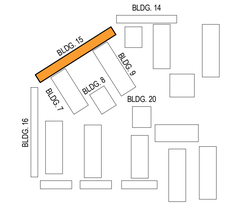
(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

FINISH REPAIR NOTE

1. WHERE EXISTING EXTERIOR/INTERIOR FINISHES HAVE BEEN DISTURBED AS A RESULT OF THE WORK SCOPE REQUIRED HEREIN, THE CONTRACTOR SHALL REPAIR THOSE FINISHES TO MATCH AS CLOSELY AS POSSIBLE, EXISTING ADJACENT FINISH. IN ADDITION, THE CONTRACTOR SHALL PREP, PRIME AND PAINT THE ENTIRE WALL, FLOOR OR CEILING SURFACE, TO THE NEAREST PAINT BREAK. THIS MAY INCLUDE, BUT NOT BE LIMITED TOO; INSIDE OR OUTSIDE WALL CORNERS, WALL TO CEILING OR FLOOR, LEDGER BEAMS, DIFFERENT MATERIALS NOT DISTURBED BY THE WORK, ETC... IT SHALL BE THE BIDDING CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL SCENARIOS AND CONDITIONS, AND WALK THE SITE BEFORE PROVIDING HIS/HER BID.

FIRE FINISH NOTE:

1. ALL BUILDING STRUCTURAL STEEL FRAME WITHIN GARAGE SPACE TO BE COATED WITH INTUMESCENT PAINT TO ACHIEVE 1-HR FIRE RATING. 1



KEY PLAN

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert E. Wallace
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE SCHEDULE SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert E. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Fire and Life Safety Division South

miyamoto.
Designer
191 East Alton Avenue, Suite 160
Santa Ana, CA 92705
MI19040I1.00
T: (949) 679-1170
miyamotointernational.com

LICENSED ARCHITECT Michael A. Benn NO. C 32757 REN. 12/31/19 STATE OF CALIFORNIA

Stamp:

3990 12th Street, Suite 105
Riverside, CA 92507
O: 951.530.8778
E: info@formillus.com
W: formillus.com
FormIllus ARCHITECTURE
Building relationships, transforming environments.

Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

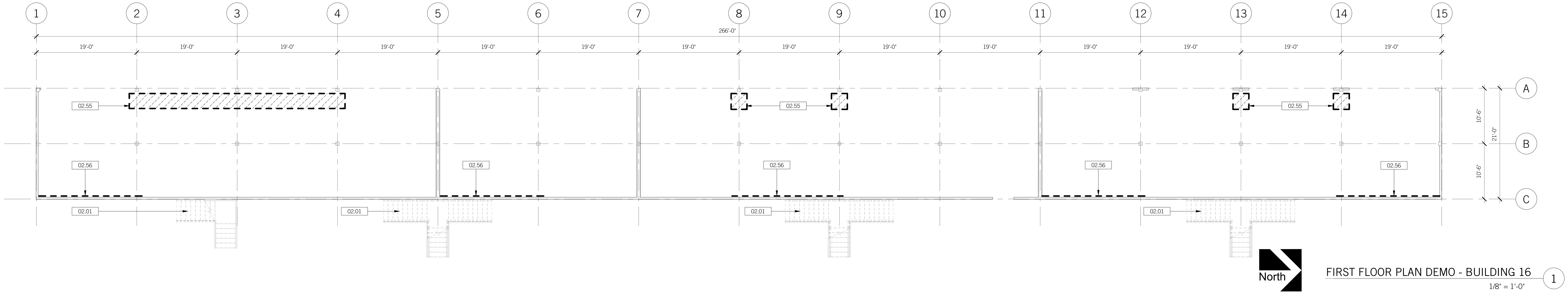
1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #: 956390
UCR CAAN #: P5673
DATE: 06-28-2019
DRAWN: LR

BUILDING 15 - FLOOR PLANS

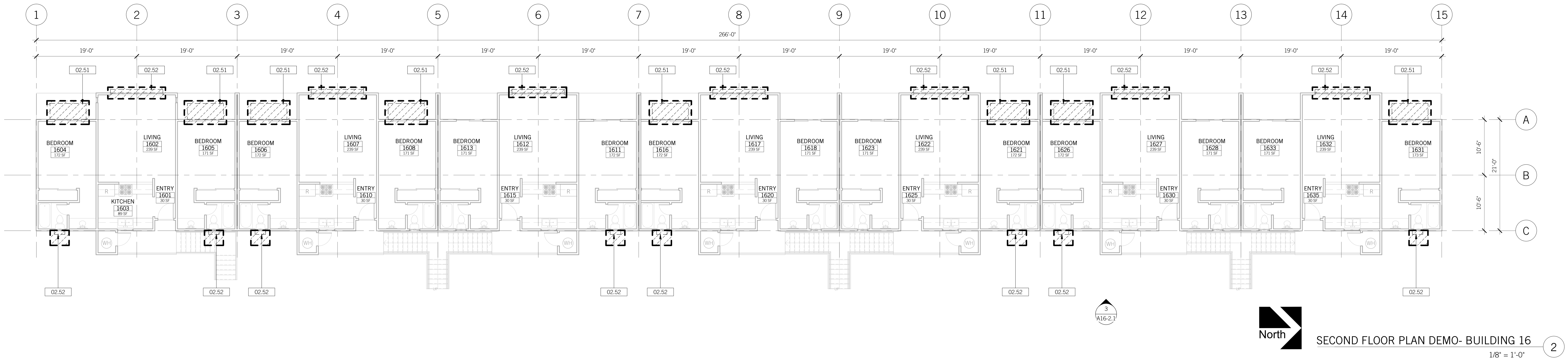
A15-2.2

PLOTTED BY: LR
PLOT DATE: 6/28/2019 12:43:58 PM



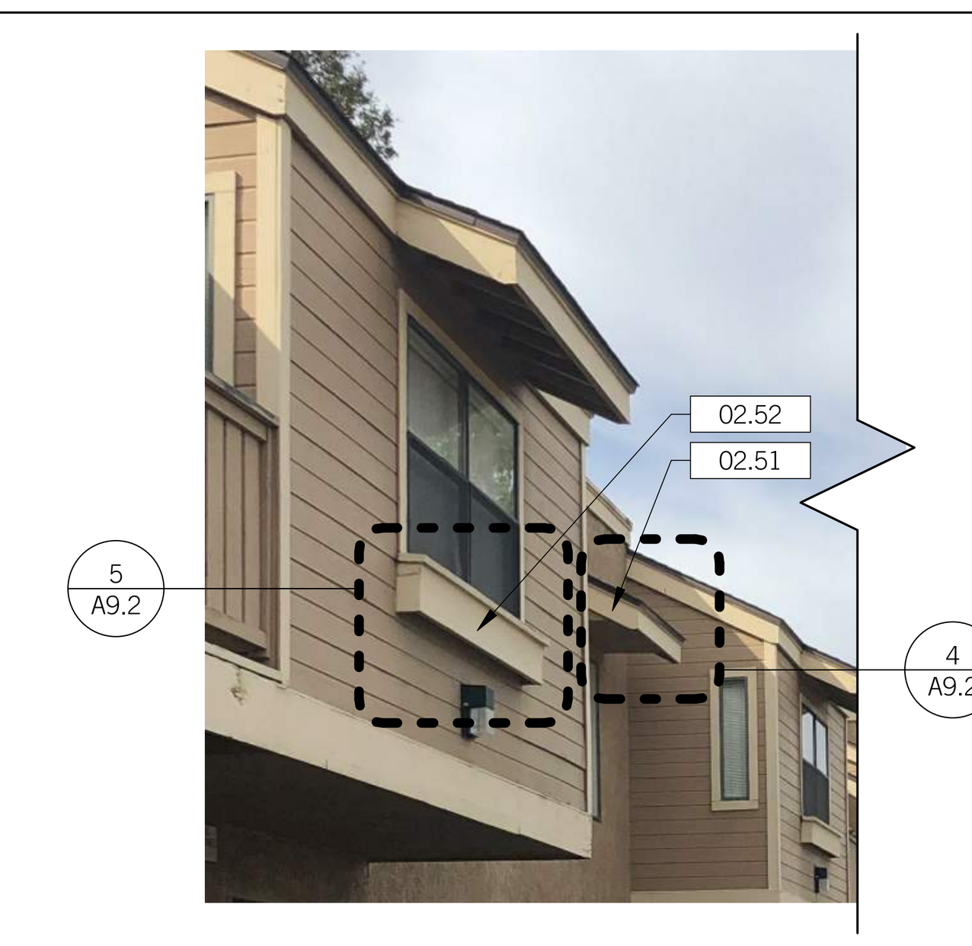
FIRST FLOOR PLAN DEMO - BUILDING 16 (1)

1/8" = 1'-0"



SECOND FLOOR PLAN DEMO- BUILDING 16 (2)

1/8" = 1'-0"



TYP. ROOF EYEBROW & POT SHELF (3)

KEYNOTES

00.00

- 02.01 (E) STAIRS TO REMAIN, PROTECT IN PLACE.
- 02.51 REMOVE (E) WOOD EYEBROW AND ALL FASTENERS. USE WEATHER-RESISTANT, PAINTABLE WOOD FILLER TO PATCH HOLES.
- 02.52 REMOVE (E) POT SHELF AND ALL FASTENERS. USE WEATHER-RESISTANT, PAINTABLE WOOD FILLER TO PATCH HOLES.
- 02.55 SAWCUT AND REMOVE (E) CONCRETE SLAB AS REQUIRED FOR NEW FOOTINGS. SEE: STRUCTURAL DRAWINGS.
- 02.56 REMOVE (E) GYPSUM BOARD AND/OR WALL FINISH 12" MIN. BEYOND WORK OR TO CLOSEST CONTROL JOINT TO ALLOW FOR INSTALLATION OF NEW STRUCTURAL WORK. SEE: STRUCTURAL DRAWINGS.

WALL LEGEND

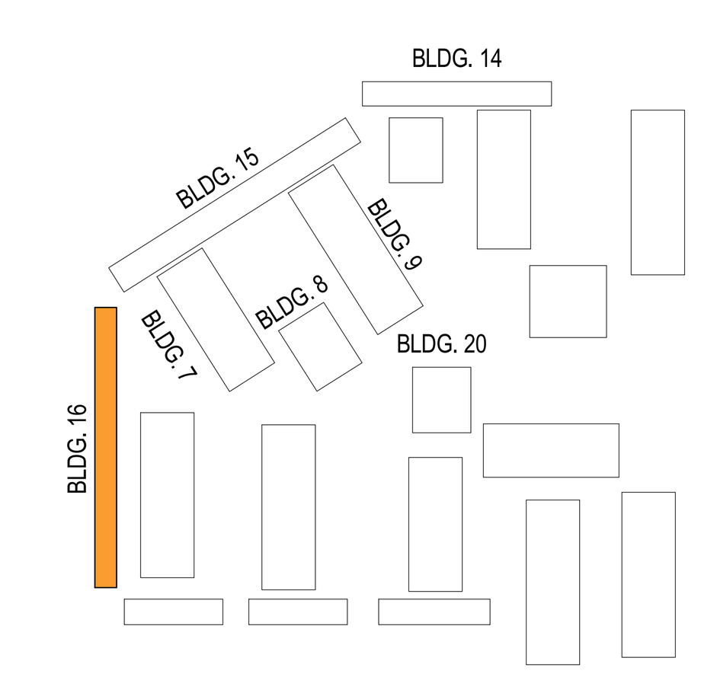
(E) STUD WALL, PROTECT IN PLACE.

LEGEND

(E) DOOR, FRAME AND ALL HARDWARE, PROTECT IN PLACE.

(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

AREA OF DEMOLITION.



KEY PLAN

INSPECTIONS REQUIRED — UC RIVERSIDE Office of Planning, Design & Construction — Building, Safety and Compliance Division — CAMPUS BUILDING PERMIT

APPROVED 07/02/2019 — UC Riverside Planning, Design and Construction — Building & Safety Division — Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL APPROVED FIRE AND PANIC ONLY 07/02/2019

PLOTTED BY: LR

PLOT DATE: 6/28/2019 8:55:25 AM

Engineer: miyamoto. 1901 East Alton Avenue, Suite 160, Santa Ana, CA 92705, MI1904011.00, T: (949) 579-1170, miyamotointernational.com

Stamp: LICENSED ARCHITECT, Michael A. Bern, NO. C 32757, REN. 12-31-19, STATE OF CALIFORNIA

Formillus ARCHITECTURE, 3080 12th Street, Suite 105, Riverside, California 92507, O: 951.530.8778, E: info@formillus.com, W: formillus.com

Building relationships, transforming environments.

Consultant:

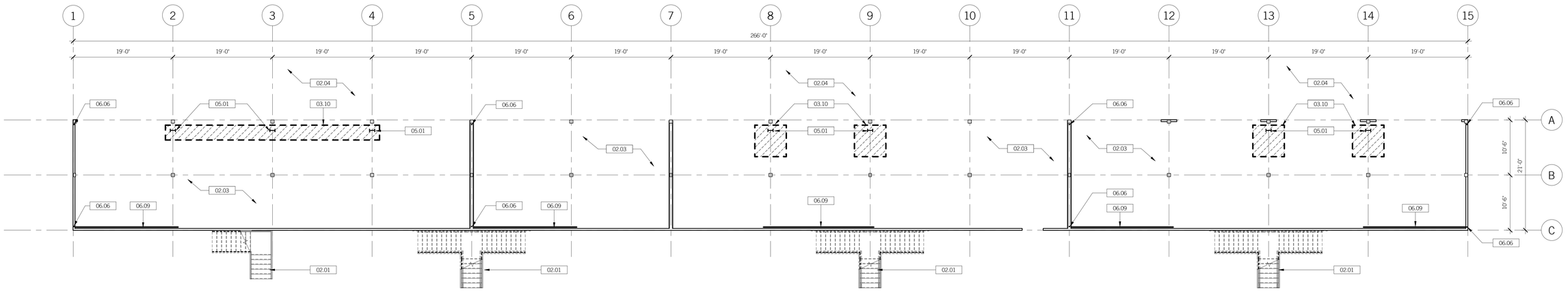
UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS
1 ADDENDUM 1 6/14/19
2 ADDENDUM 2 6/28/19

UCR PROJECT #: 956390
UCR CAAN #: P5673
DATE: 06-28-2019
DRAWN: LR

BUILDING 16 - FLOOR PLAN - DEMOLITION

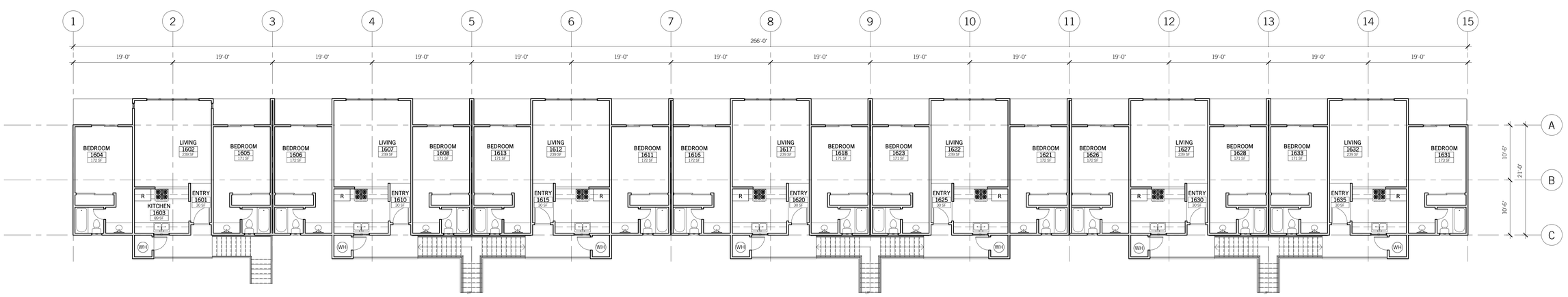
A16-2.1



North

FIRST FLOOR PLAN - BUILDING 16 (1)

1/8" = 1'-0"



North

SECOND FLOOR PLAN - BUILDING 16 (2)

1/8" = 1'-0"

KEYNOTES 00.00

02.01 (E) STAIRS TO REMAIN, PROTECT IN PLACE.
02.03 (E) CONCRETE PAVING, PROTECT IN PLACE.
02.04 (E) ASPHALTIC PAVING, PROTECT IN PLACE.

03.10 (N) CONCRETE FOOTINGS FOR STRUCTURAL COLUMN REPAIR WORK, PATCH TO MATCH (E) CONC. SLOPES. SEE: STRUCTURAL DRAWINGS.

05.01 ALL EXPOSED COLUMN AND BRACING TO RECEIVE INTUMESCENT PAINT. ARCHITECT TO SELECT COLOR. SEE: STRUCTURAL DRAWINGS. 1

06.06 (N) SIMPSON 'HOLDOWN' PER PLAN. SEE: STRUCTURAL DRAWINGS.
06.09 (N) PLYWOOD SHEAR PANEL. REPAIR & PAINT TO MATCH (E) ADJACENT WALL SURFACE. SEE: STRUCTURAL DRAWINGS.

WALL LEGEND

(E) STUD WALL, PROTECT IN PLACE.

LEGEND

(E) DOOR, FRAME AND ALL HARDWARE, PROTECT IN PLACE.

(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

FINISH REPAIR NOTE

1. WHERE EXISTING EXTERIOR/INTERIOR FINISHES HAVE BEEN DISTURBED AS A RESULT OF THE WORK SCOPE REQUIRED HEREIN, THE CONTRACTOR SHALL REPAIR THOSE FINISHES TO MATCH AS CLOSELY AS POSSIBLE, EXISTING ADJACENT FINISH. IN ADDITION, THE CONTRACTOR SHALL PREP, PRIME AND PAINT THE ENTIRE WALL, FLOOR OR CEILING SURFACE, TO THE NEAREST PAINT BREAK. THIS MAY INCLUDE, BUT NOT BE LIMITED TOO; INSIDE OR OUTSIDE WALL CORNERS, WALL TO CEILING OR FLOOR, LEDGER BEAMS, DIFFERENT MATERIALS NOT DISTURBED BY THE WORK, ETC... IT SHALL BE THE BIDDING CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL SCENARIOS AND CONDITIONS, AND WALK THE SITE BEFORE PROVIDING HIS/HER BID.

FIRE FINISH NOTE:

1. ALL BUILDING STRUCTURAL STEEL FRAME WITHIN GARAGE SPACE TO BE COATED WITH INTUMESCENT PAINT TO ACHIEVE 1-HR FIRE RATING. 1

KEY PLAN

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Stetson
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE SCHEDULE SYSTEM

APPROVED
UC RIVERSIDE
Office of Planning, Design & Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
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Reviewed by:
Fire and Life Safety Division South

miyamoto.
Engineer:
191 East Alton Avenue, Suite 160
Santa Ana, CA 92705
MI19040I1.00
T: (949) 679-1170
miyamotointernational.com

LICENSED ARCHITECT
Michael A. Benn
NO. C 32757
REN. 12-31-19
STATE OF CALIFORNIA

Stamp:

3990 12th Street, Suite 105
Riverside, California 92507
O: 951.530.8778
E: info@formillus.com
W: formillus.com
FormIllus ARCHITECTURE
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Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS
1 ADDENDUM 1 6/14/19
2 ADDENDUM 2 6/28/19

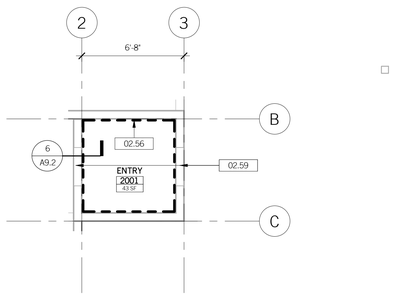
UCR PROJECT #: 956390
UCR CAAN #: P5673
DATE: 06-28-2019
DRAWN: LR

BUILDING 16 - FLOOR PLANS

A16-2.2

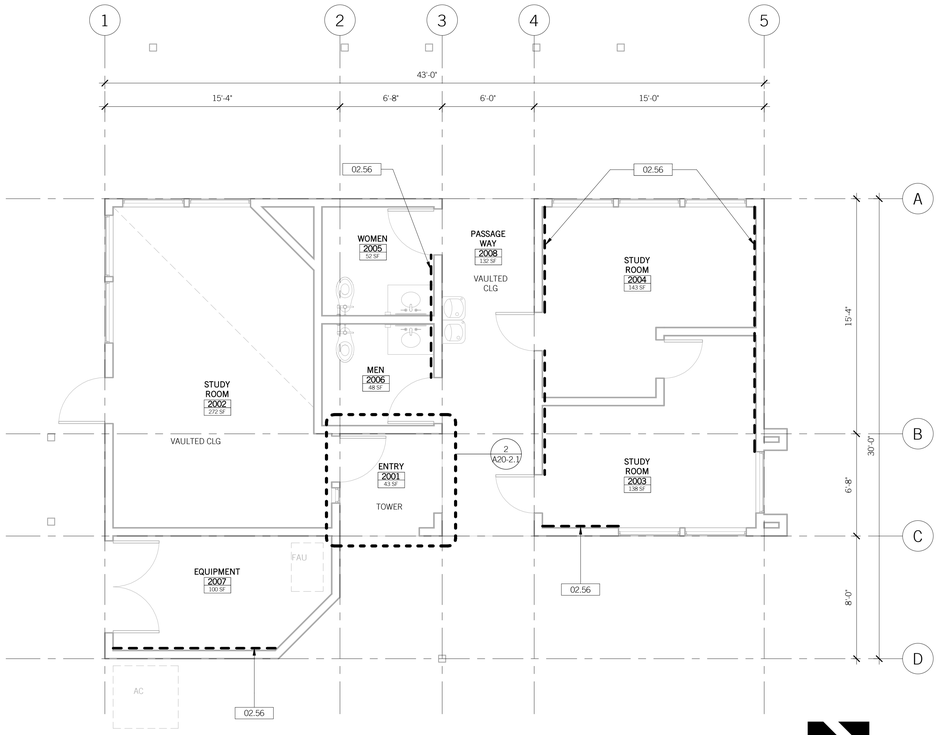
PLOTTED BY: LR
PLOT DATE: 6/28/2019 8:55:26 AM

07/02/2019



ENTRY 2001 - ROOF FRAMING PLAN DEMO 2

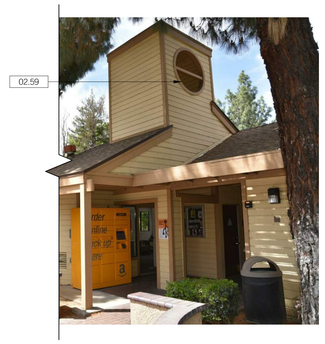
1/4" = 1'-0"



North

FIRST FLOOR PLAN DEMO - BUILDING 20 1

1/4" = 1'-0"



ENTRY 2001 OPENING 3

KEYNOTES

00.00

02.56 REMOVE (E) GYPSUM BOARD AND/OR WALL FINISH 12" MIN. BEYOND WORK OR TO CLOSEST CONTROL JOINT TO ALLOW FOR INSTALLATION OF NEW STRUCTURAL WORK. SEE: STRUCTURAL DRAWINGS.

02.59 REMOVE (E) OPENING COMPONENETS AND INFILL. PAINT TO MATCH. SEE: STRUCTURAL DRAWINGS.

WALL LEGEND

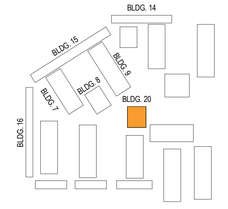
(E) STUD WALL, PROTECT IN PLACE.

LEGEND

(E) DOOR, FRAME AND ALL HARDWARE, PROTECT IN PLACE.

(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

AREA OF DEMOLITION.



KEY PLAN

INSPECTIONS REQUIRED
for RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Bob F. Bellew
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE OPDMS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert Williams
Building & Safety Division
Campus Building Permit

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Reviewed by:
Fire and Life Safety Division

miyamoto.
Engineer
1901 East Alton Avenue, Suite 160
Santa Ana, CA 92705
MI1904011.00
T: (949) 579-1170
miyamotointernational.com

LICENSED ARCHITECT Michael A. Benn NO. C 32737 REN. 12-31-19 STATE OF CALIFORNIA
Stamp:

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O: 951.530.8778
E: info@formillus.com
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FormIllus ARCHITECTURE
Consultant

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FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

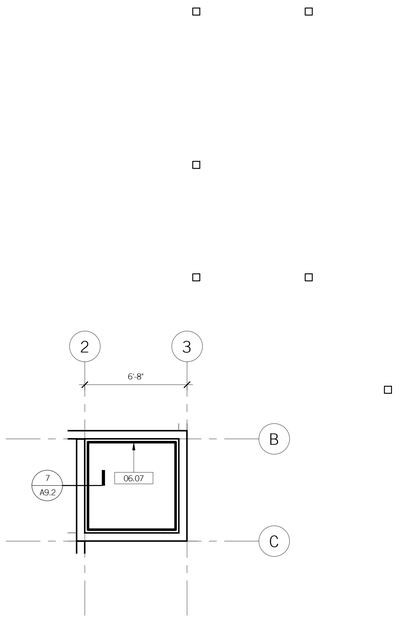
1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-28-2019
DRAWN:	LR

BUILDING 20 - FLOOR PLAN DEMOLITION

A20-2.1

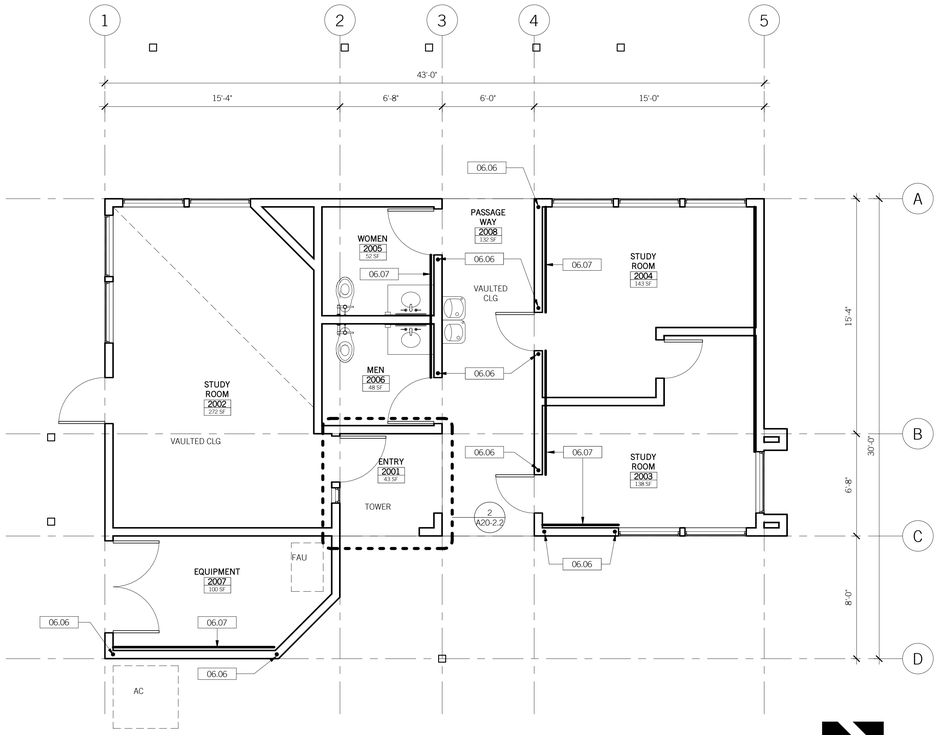
PLOTTED BY: LR
PLOT DATE: 6/28/2019 8:56:04 AM



ENTRY 2001 - ROOF FRAMING PLAN

1/4" = 1'-0"

2



FIRST FLOOR PLAN - BUILDING 20

1/4" = 1'-0"

1

North

KEYNOTES

00.00

06.06 (N) SIMPSON "HOLDOWN" PER PLAN. SEE: STRUCTURAL DRAWINGS.

06.07 (N) WOOD SIDING TO MATCH ORIGINAL AS CLOSE AS POSSIBLE. PRIME AND PAINT SIDING TO MATCH ADJACENT FINISHES OR BUILDING THEME. SEE: FINISH REPAIR NOTE THIS SHEET.

WALL LEGEND

(E) STUD WALL, PROTECT IN PLACE.

LEGEND

(E) DOOR, FRAME AND ALL HARDWARE, PROTECT IN PLACE.

(E) WINDOWS AND SYSTEMS, PROTECT IN PLACE.

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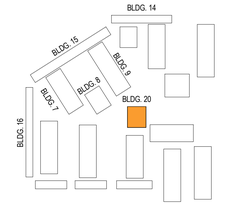

KEY PLAN

INSPECTIONS REQUIRED
for RIVERSIDE
Office of Planning, Design & Construction
Signed CBC: Back 9: Below
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE ODDBIS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature:
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
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Reviewed by:
Fire and Life Safety Division South

miyamoto.
Engineer
1901 East Alton Avenue, Suite 160
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MI19040I1.00
T: (949) 579-1170
miyamotointernational.com

LICENSED ARCHITECT
Michael A. Benn
NO. C 32707
REN. 12-31-19
STATE OF CALIFORNIA
Stamp:

3990 12th Street, Suite 105
Riverside, California 92507
O: 951.530.8778
E: info@formillus.com
W: formillus.com
Formillus ARCHITECTURE
Consultant

Building relationships, transforming environments.

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

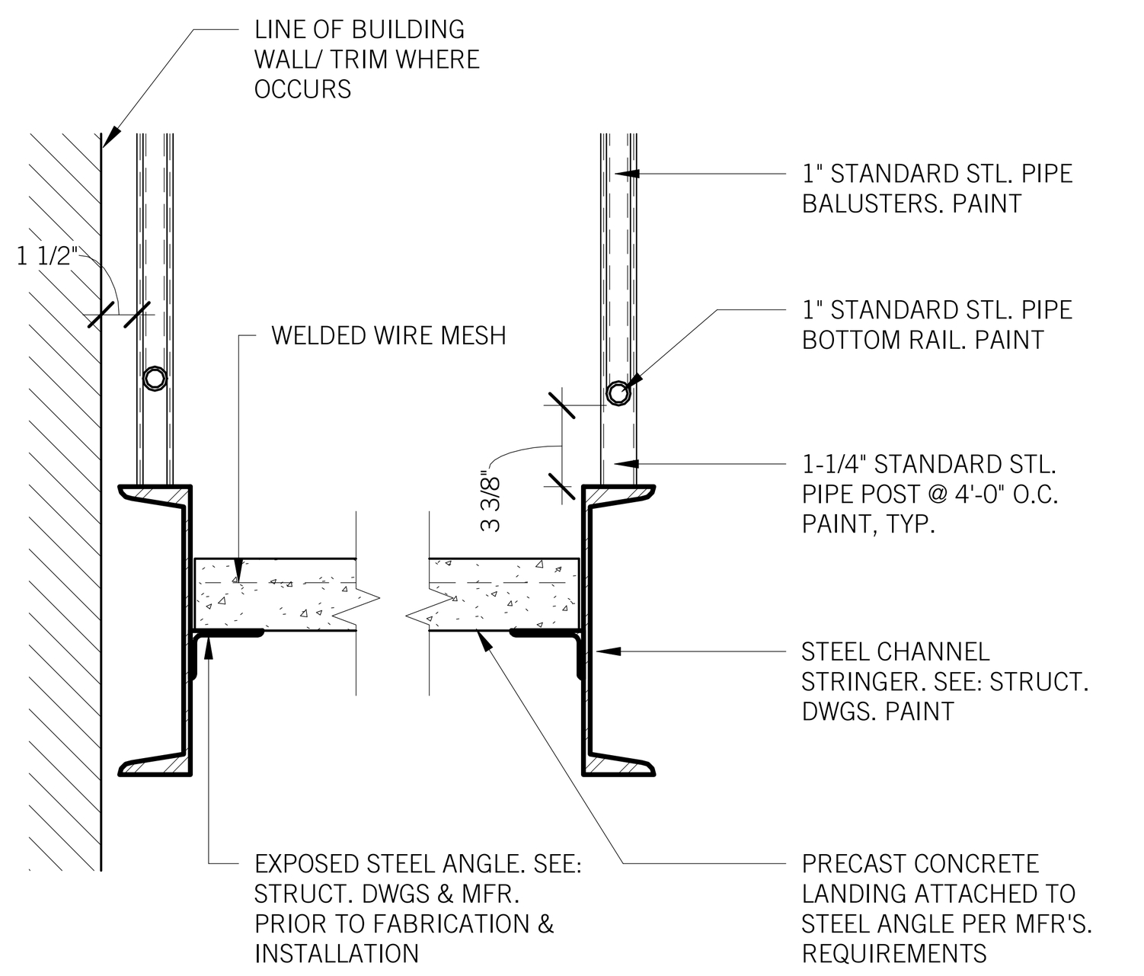
1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #: 956390
UCR CAAN #: P5673
DATE: 06-28-2019
DRAWN: LR

BUILDING 20 - FLOOR PLAN

A20-2.2

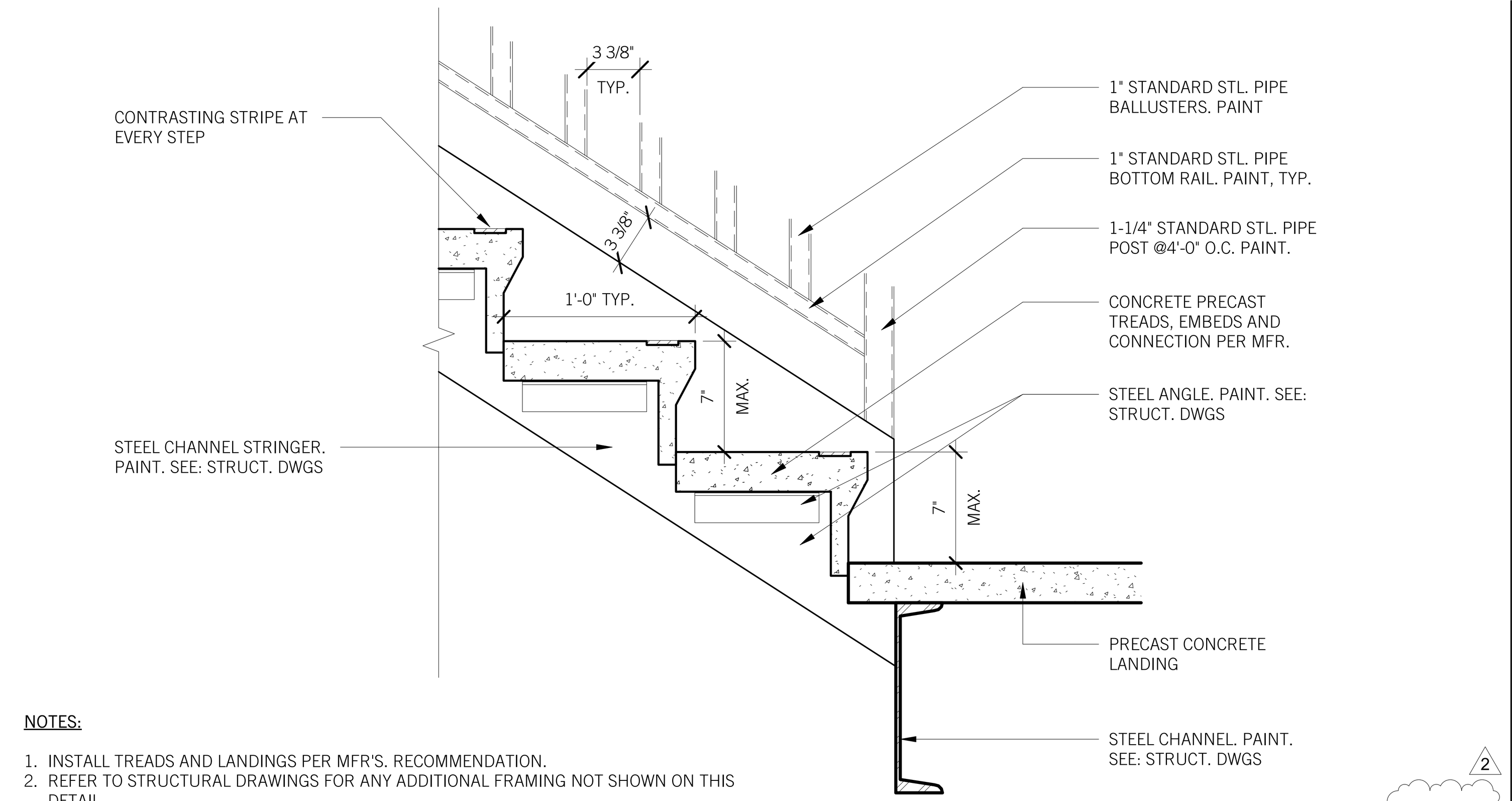
PLOT DATE: 6/28/2019 8:56:04 AM
PLOTTED BY: LR



NOTES:

1. INSTALL TREADS AND LANDINGS PER MFR'S. RECOMMENDATION.
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.

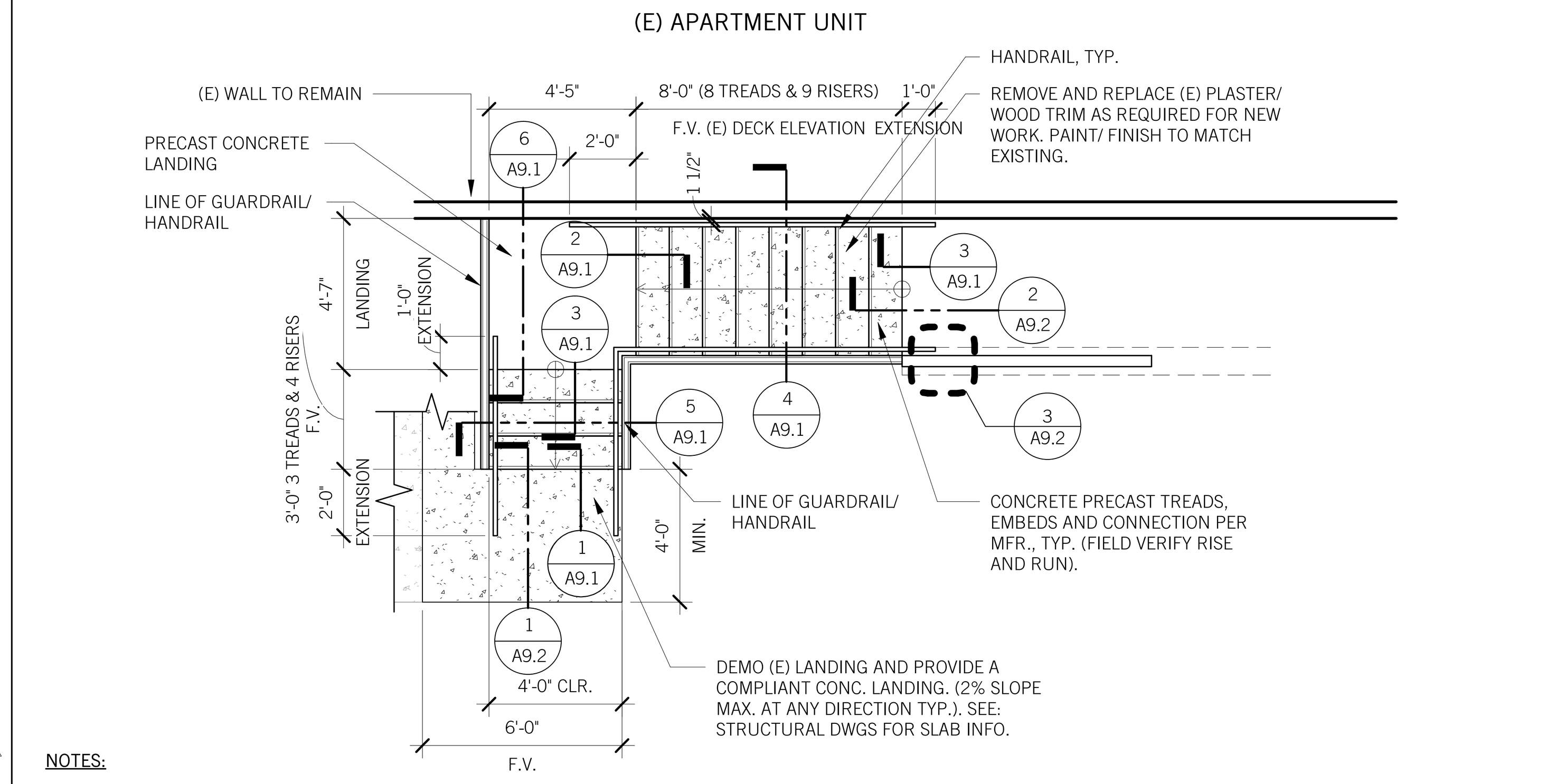
BOLT ON LANDING 6
1 1/2" = 1'-0"



NOTES:

1. INSTALL TREADS AND LANDINGS PER MFR'S. RECOMMENDATION.
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.

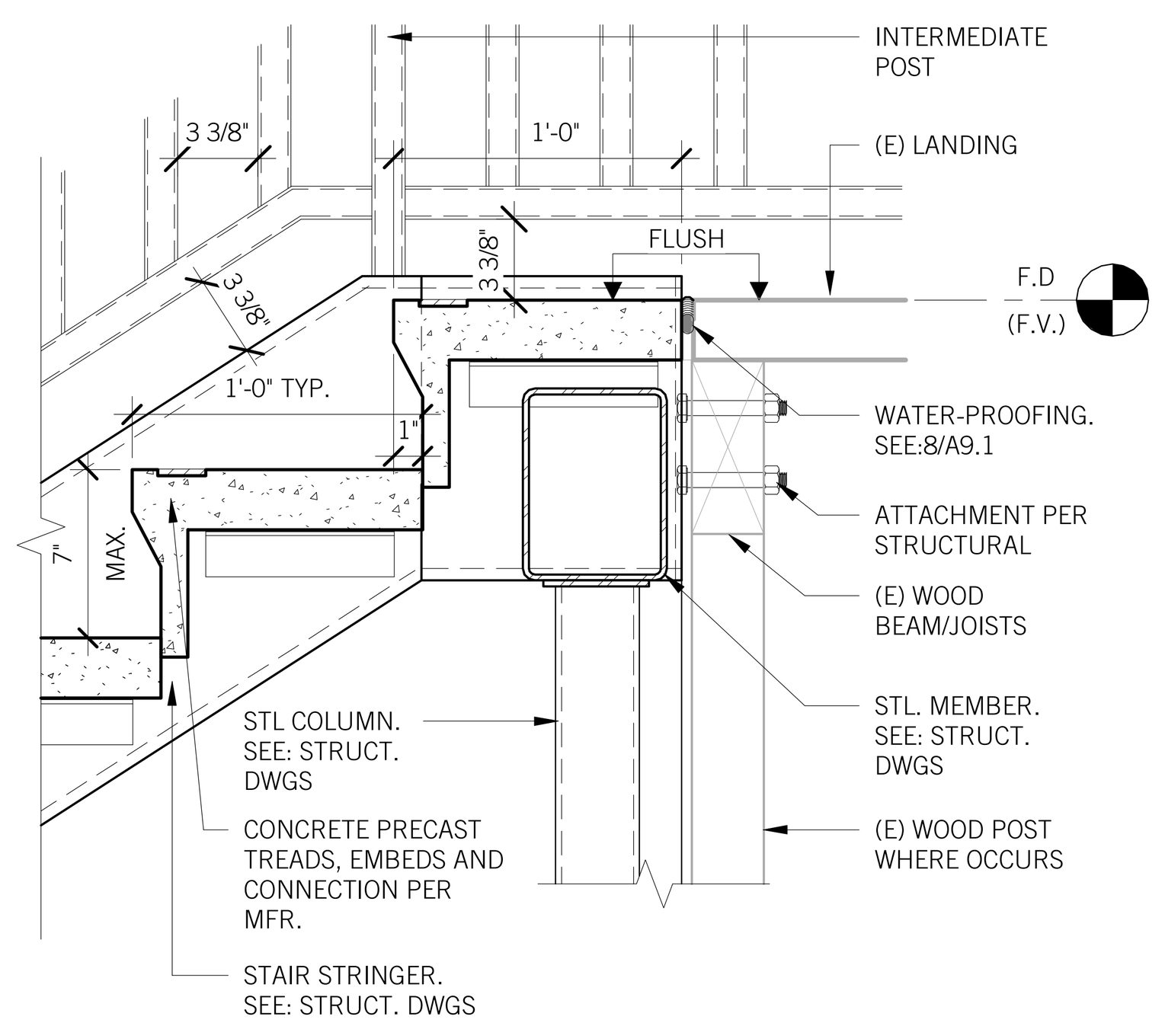
STAIR - INTERMEDIATE LANDING 2
1 1/2" = 1'-0"



NOTES:

1. INSTALL TREADS AND LANDINGS PER MFR'S. RECOMMENDATION.
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.

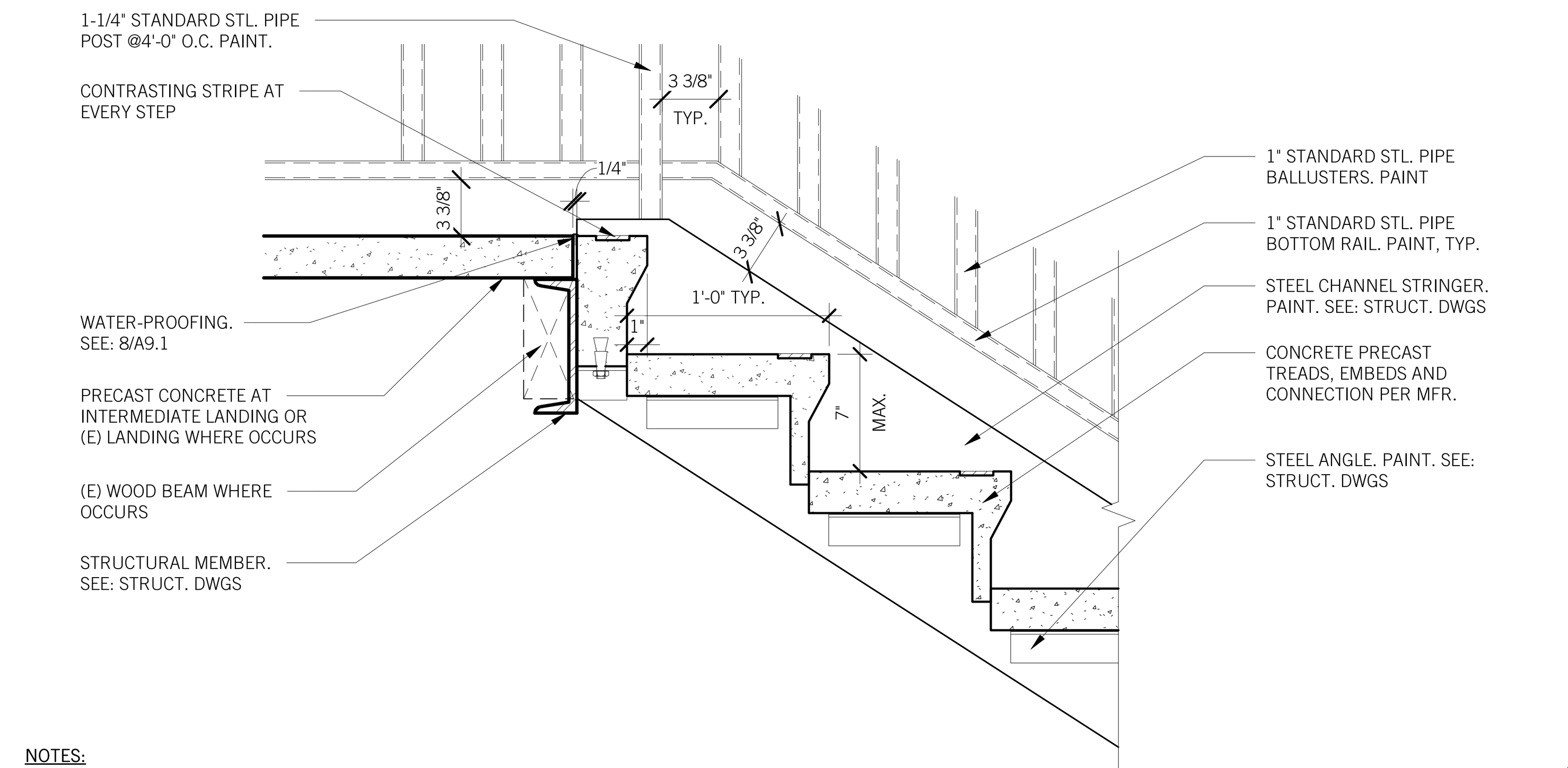
STAIR TYPE "A" (BLDG 15) A
1/4" = 1'-0"



NOTES:

1. INSTALL TREADS AND LANDINGS PER MFR'S. RECOMMENDATION.
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.

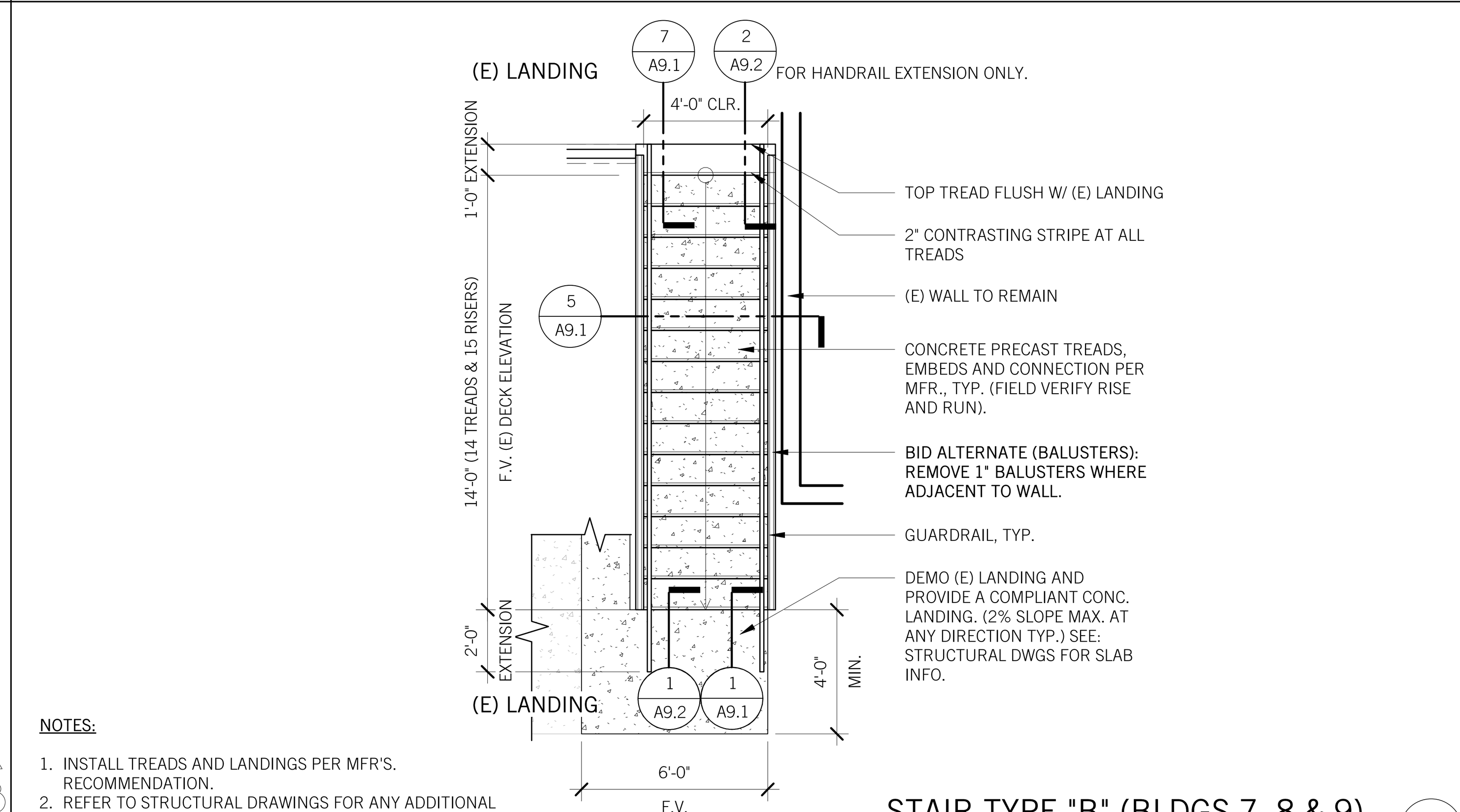
STRINGER AT WOOD LANDING 7
1 1/2" = 1'-0"



NOTES:

1. INSTALL TREADS AND LANDINGS PER MFR'S. RECOMMENDATION.
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.

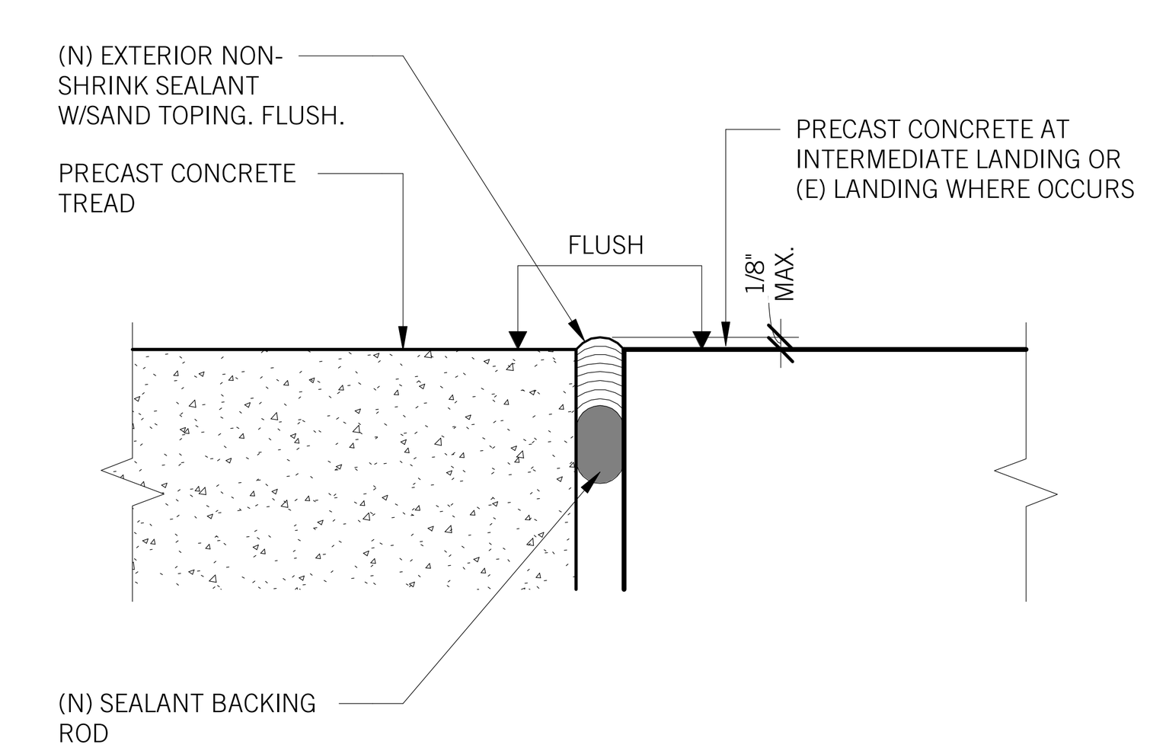
STAIR - UPPER & INTERMEDIATE LANDING 3
1 1/2" = 1'-0"



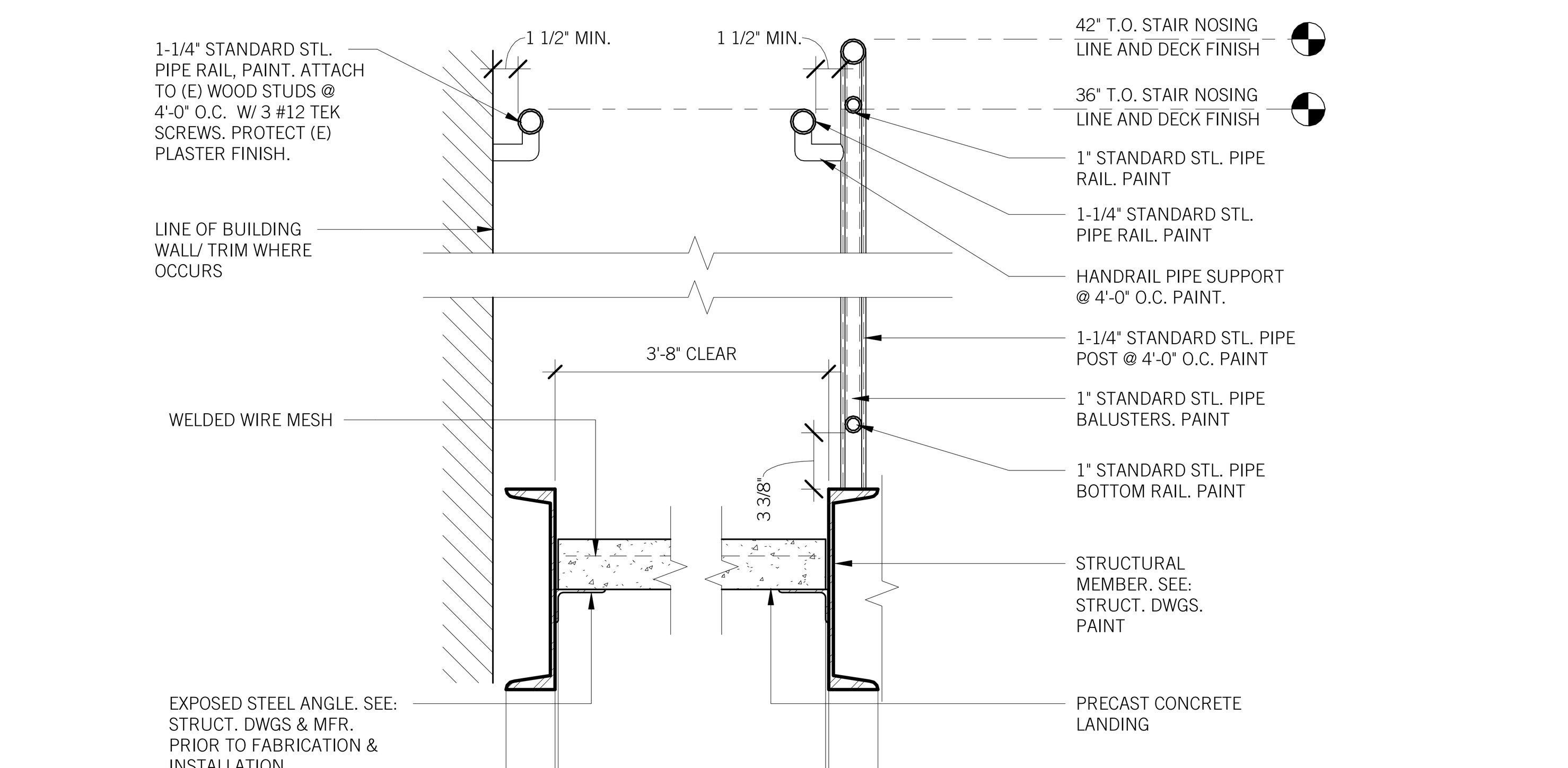
NOTES:

1. INSTALL TREADS AND LANDINGS PER MFR'S. RECOMMENDATION.
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.

STAIR TYPE "B" (BLDGS 7, 8 & 9) B
1/4" = 1'-0"



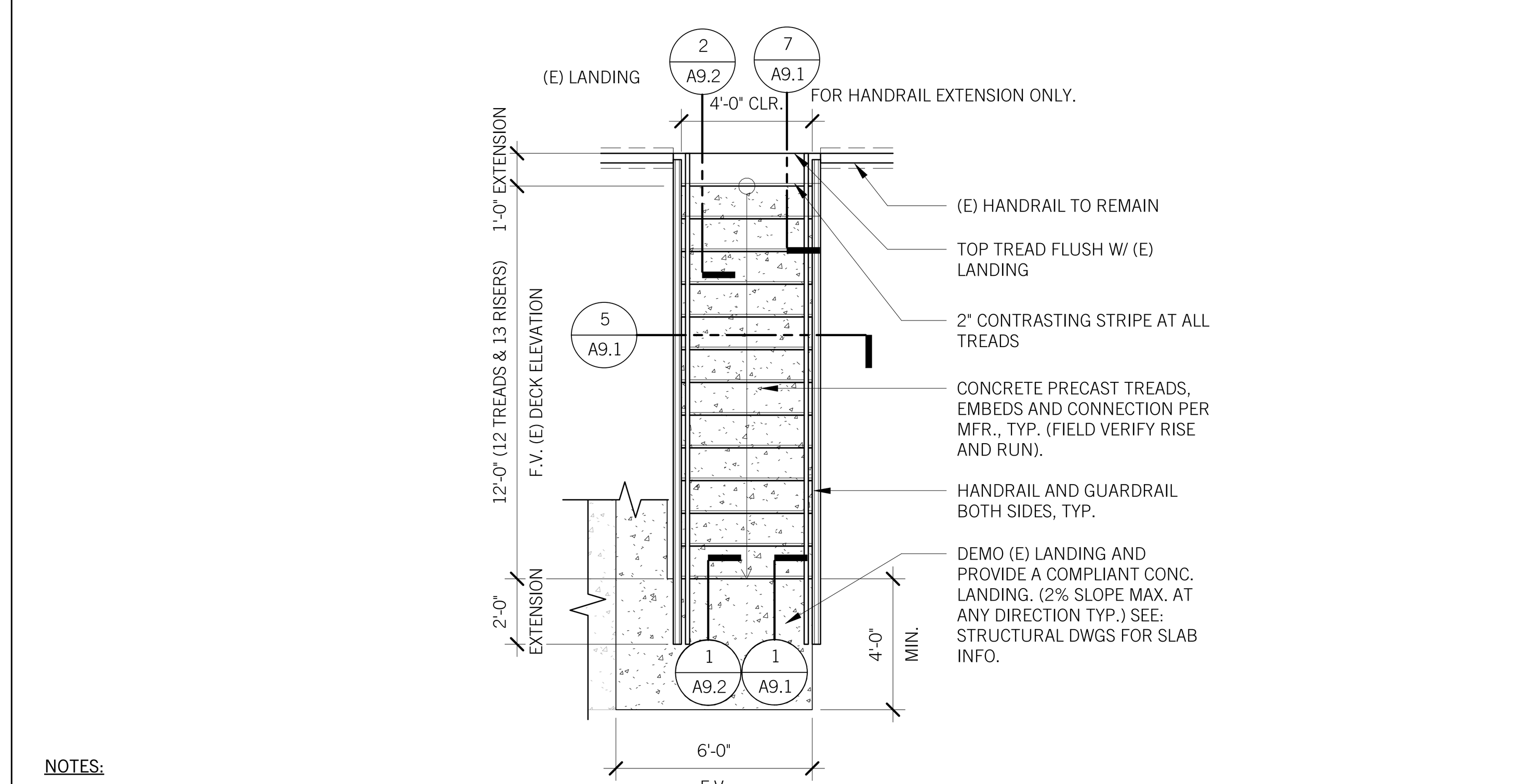
WATER-PROOFING AT LANDING 8
6" = 1'-0"



NOTES:

1. INSTALL TREADS AND LANDINGS PER MFR'S. RECOMMENDATION.
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.

SECTION AT STAIRS 4
1 1/2" = 1'-0"



NOTES:

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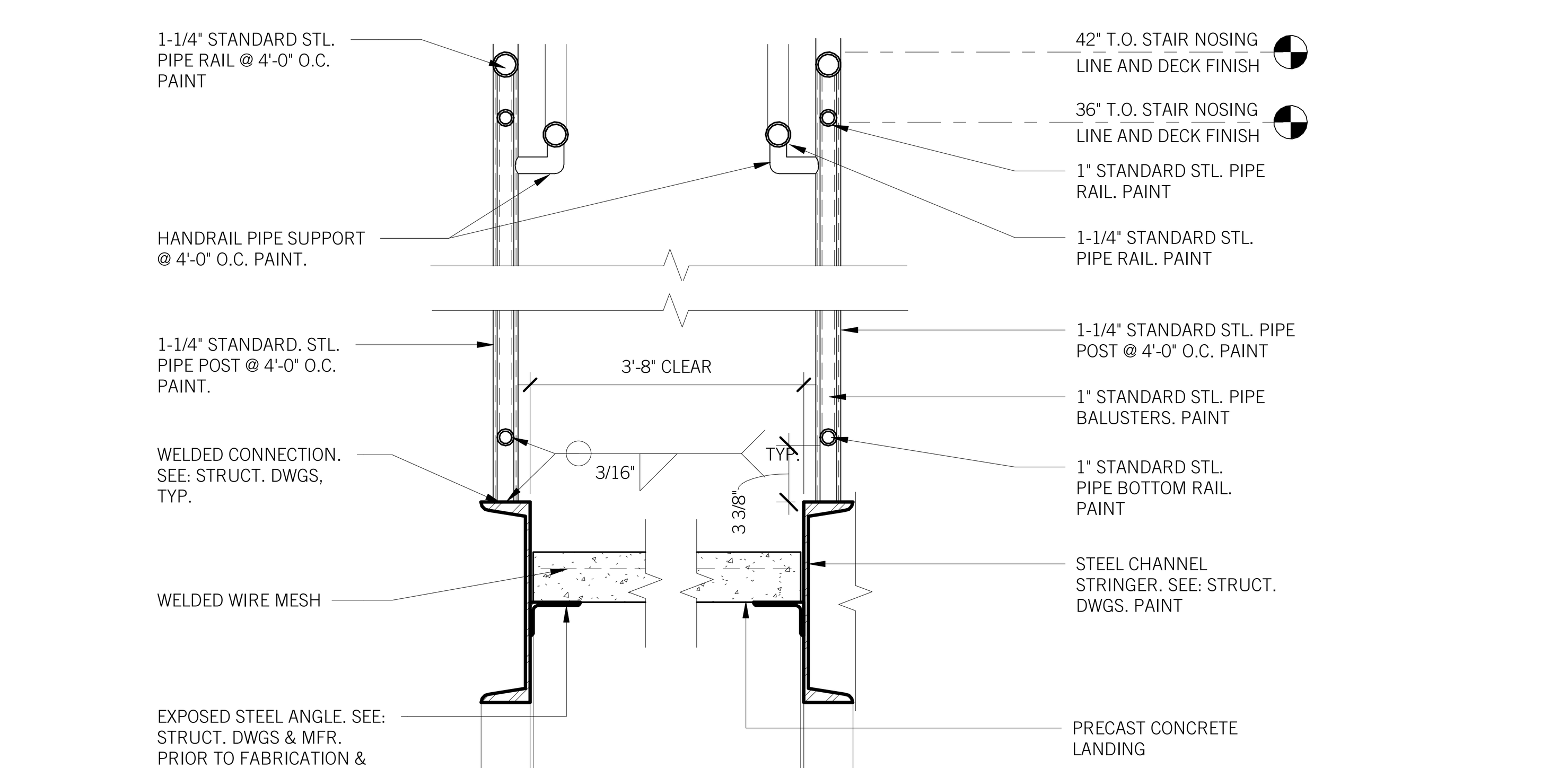
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.

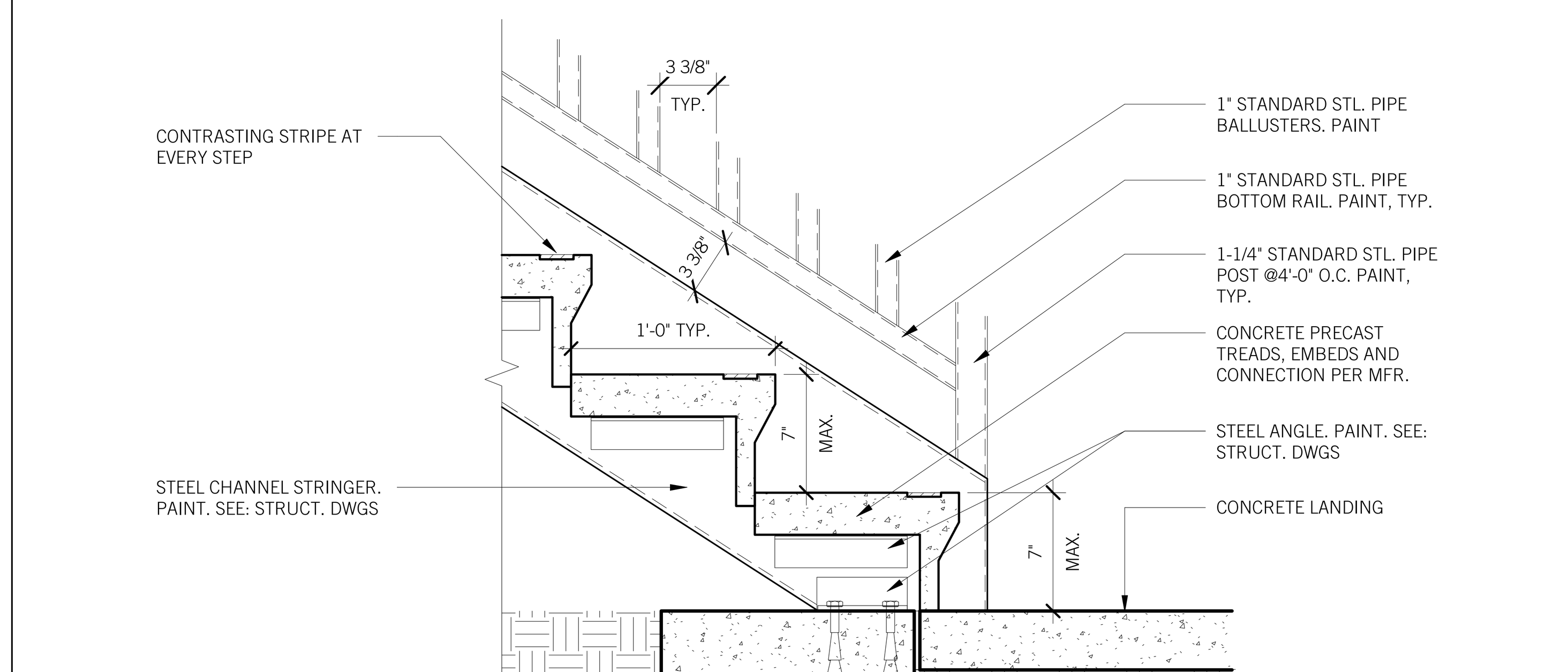
STAIR TYPE "C" (BLDG 15) C
1/4" = 1'-0"



NOTES:

1. INSTALL TREADS AND LANDINGS PER MFR'S. RECOMMENDATION.
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.
3. BID ALTERNATE (BALUSTERS): REMOVE 1" BALUSTERS WHERE ADJACENT TO WALL.

SECTION AT STAIRS 5
1 1/2" = 1'-0"



NOTES:

1. INSTALL TREADS AND LANDINGS PER MFR'S. RECOMMENDATION.
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.
3. ALL ITEMS THIS DETAIL ARE NEW.

STAIR AT GROUND 1
1 1/2" = 1'-0"

KEYNOTES

00.00

STAIR NOTES

1. STAIR TREADS SHALL BE NO LESS THAN 11" DEEP, MEASURED FROM RISER TO RISER: BE SLIP RESISTANT, HAVE SMOOTH, ROUNDED OR CHAMFERED EXPOSED EDGES, AND HAVE NO ABRUPT EDGES AT THE NOSING.
2. NOSING SHALL NOT PROJECT MORE THAN 1-1/4" PAST THE FACE OF THE RISER ABOVE. (CBC 11B-504)
3. STAIR RISERS SHALL BE NO LESS THAN 4" HIGH AND NO GREATER THAN 7" HIGH MEASURED FROM TREAD TO TREAD.
4. OPEN RISERS ARE NOT PERMITTED.
5. ALL EXPOSED STRINGERS, GUARDS AND RAILING SYSTEM COMPONENTS SHALL BE PAINTED WITH HIGH-PREFORMANCE COATING A MINIMUM OF 1-COAT PRIME, 2-COATS PAINT AND PER SPECIFICATIONS. ARCHITECT TO SELECT COLOR.
6. ALL WELDS SHALL BE GROUND SMOOTH AND PROPERLY PREPARED PRIOR TO FINISHING.
7. ALL RAILING, STRINGERS, PANS, AND MISCELLANEOUS METALS SHALL BE SANDED, CLEANED TO BE FREE OF BURRS AND SHARP EDGES.
8. CONTRACTOR TO PROVIDE FULL SHOP DRAWINGS FOR APPROVAL PRIOR TO PROCURING ANY MATERIALS.
9. ALL ITEMS ARE CONSIDERED TO BE NEW UNLESS OTHERWISE NOTED.

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Building relationships, transforming environments.
Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-28-2019
DRAWN:	LR

ENLARGED STAIR PLANS & SECTIONS
A9.1

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
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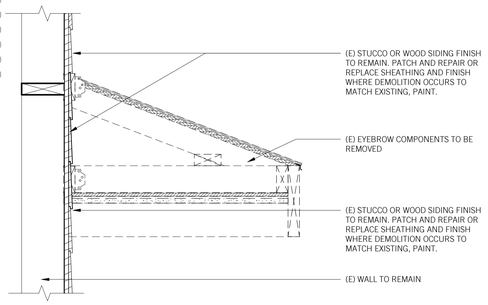
Reviewed by:
Fire and Life Safety Division South

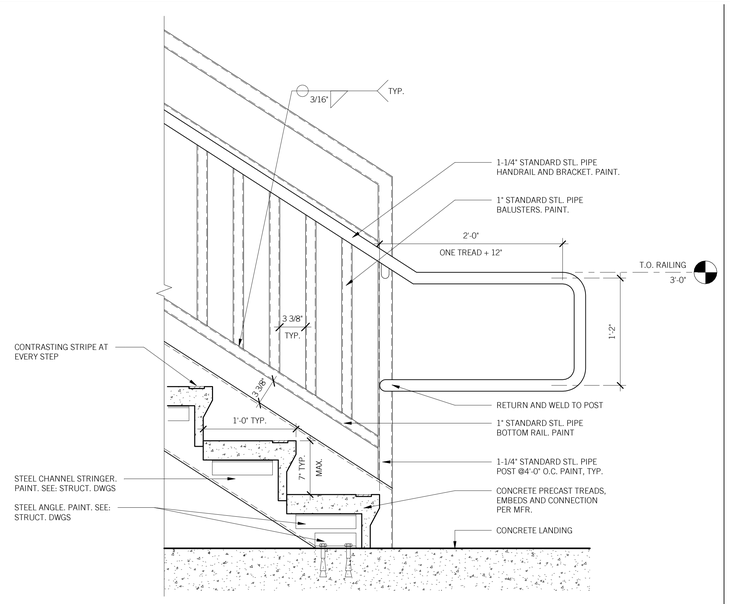
PLOT DATE: 6/28/2019 12:44:47 PM
PLOTTED BY: LR

FINISH AND WATERPROOFING NOTES:

1. WALLS TO RECEIVE SIDING REPAIR SHALL BE PAINTED IN THEIR ENTIRETY TO FIRST INSIDE OR OUTSIDE CORNER OR TRIM BREAK.
2. WOOD SIDING UNDERLAYMENT REPAIR (30# BUILDING PAPER) SHALL EXTEND 6" UNDER AND 6" OVER EXISTING UNDERLAYMENT.



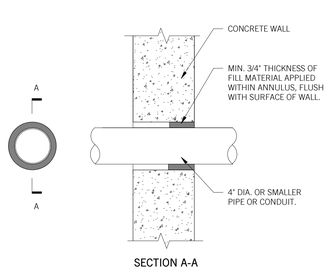
ROOF EYEBROW TYP. DETAIL - DEMO 4
1 1/2" = 1'-0"



NOTES:

1. INSTALL TREADS AND LANDINGS PER MFR'S. RECOMMENDATION.
2. REFER TO STRUCTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING NOT SHOWN ON THIS DETAIL.

BOTTOM RUN HANDRAIL 1
1 1/2" = 1'-0"

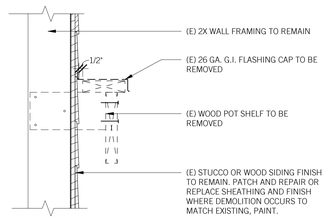


SECTION A-A

NOTES:

1. U.L. SYSTEM NO. C-AJ-1013

WALL PENETRATION 8
1 1/2" = 1'-0"



FINISH AND WATERPROOFING NOTES:

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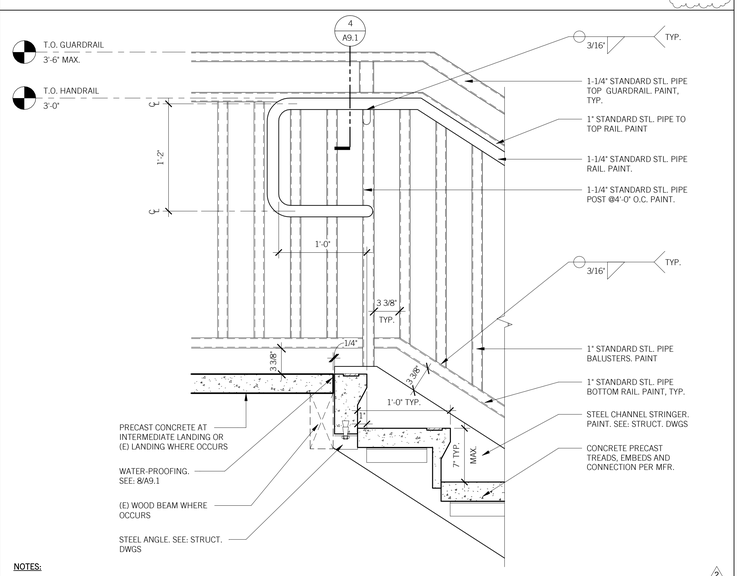
2. WOOD SIDING UNDERLAYMENT REPAIR (30# BUILDING PAPER) SHALL EXTEND 6" UNDER AND 6" OVER EXISTING UNDERLAYMENT.

POT SHELF DETAIL - DEMO 5
1 1/2" = 1'-0"



NOTES:

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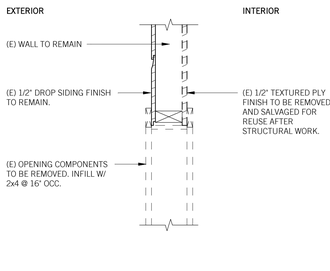
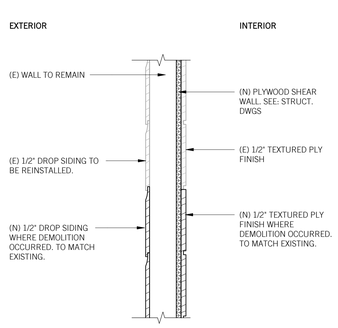
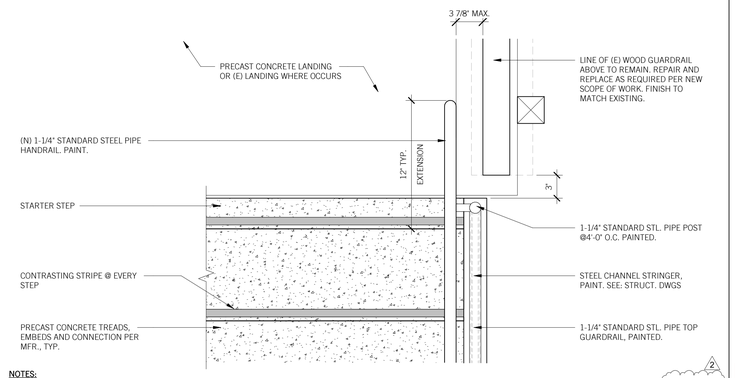
UPPER OR INT. HANDRAIL EXTENSION 2
1 1/2" = 1'-0"



OPENING DEMO 6
1 1/2" = 1'-0"



OPENING INFILL 7
1 1/2" = 1'-0"



NOTES:

1. WHERE REQUIRED PROVIDE NEW FLOOR JOIST AT STAIR FLIGHT AND LANDING TRANSITION

(N) STAIR TO (E) STAIR 3
1 1/2" = 1'-0"

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE ORANGE SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

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Reviewed by:
Fire and Life Safety Division South

miyamoto.
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miyamotointernational.com

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Stamp:

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FormillusARCHITECTURE
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REVISIONS

1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

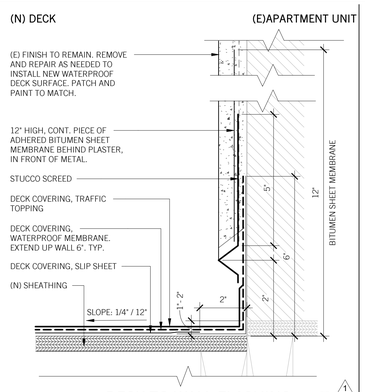
UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-28-2019
DRAWN:	LR

EXTERIOR DETAILS

A9.2

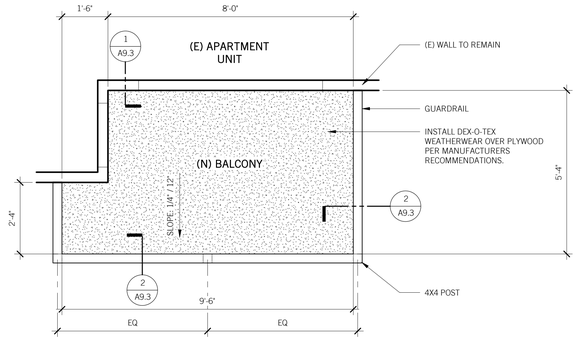
PLOT DATE: 6/28/2019 12:49:39 PM PLOTTED BY: LR

07/02/2019



DECK TO WALL FLASHING 1

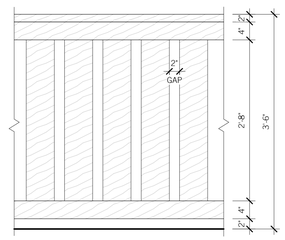
6" = 1'-0"

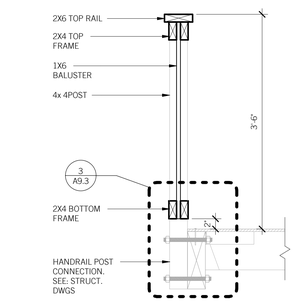


TYPE A BALCONY A

1/2" = 1'-0"

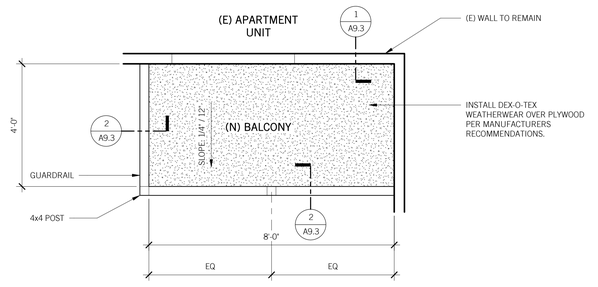
KEYNOTES 00.00





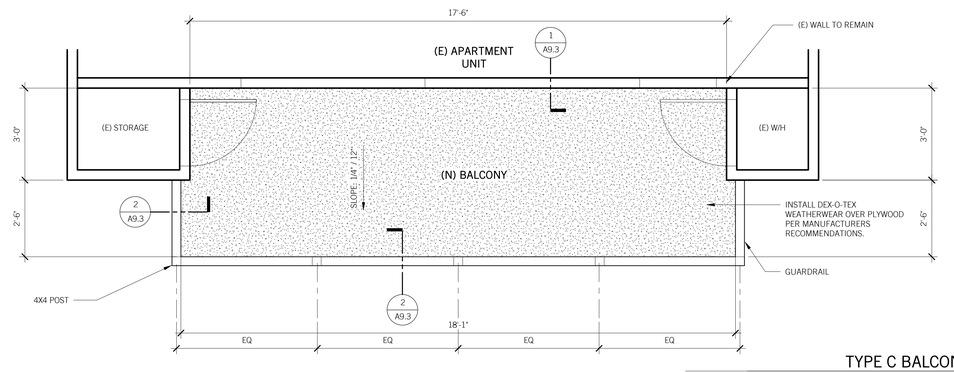
GUARDRAIL SECTION & ELEVATION 2

1" = 1'-0"



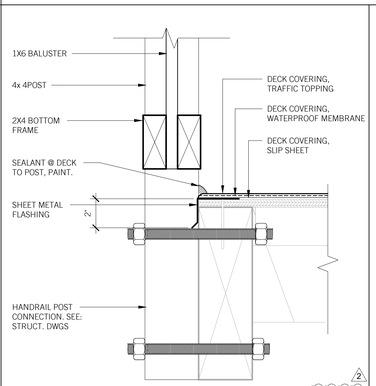
TYPE B BALCONY B

1/2" = 1'-0"



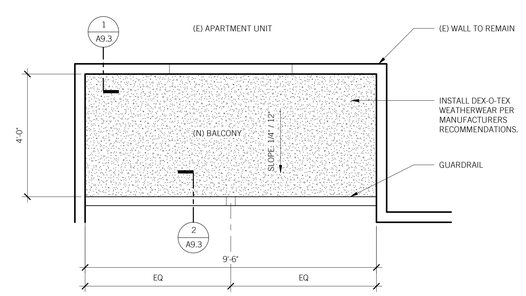
TYPE C BALCONY C

1/2" = 1'-0"



FLASHING AT BALCONY 3

3" = 1'-0"



TYPE D BALCONY D

1/2" = 1'-0"

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REVISIONS:

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UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-28-2019
DRAWN:	LR

ENLARGED BALCONY PLANS&DETAILS

A9.3

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
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APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
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Reviewed by:
Fire and Life Safety Division South

PLOT DATE: 6/28/2019 12:44:48 PM PLOTTED BY: LR

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST CALIFORNIA CODE OF REGULATIONS (CCR), NATIONAL ELECTRICAL CODE EDITION AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
2. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE TO UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
3. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF MECHANICAL, PLUMBING AND OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ANY WORK.
5. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
6. LOCATION OF LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS. AT OR NEAR DOORS, INSTALL SWITCHES ON SIDE OPPOSITE TO DOOR HINGE. VERIFY FINAL HINGE LOCATION IN FIELD PRIOR TO ANY WORK.
7. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND MINIMUM CODE REQUIRED WORKING CLEARANCES AT ALL TIMES.
8. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL OUTLET BOXES FOR SWITCHES, BELL/STROBES, FIRE ALARM PULL STATIONS. RECEPTACLES ETC. WITH CABINETS, FURNITURE, EQUIPMENT ETC., TO AVOID CONFLICT.
9. WHERE ELECTRIC MOTORS OR HEATERS ARE INSTALLED IN HUNG CEILINGS, PROVIDE DISCONNECT SWITCH IN HUNG CEILING WITHIN REACH FROM ACCESS POINT.
10. FURNISH APPROVED EXPANSION FITTINGS WHERE RACEWAY CROSSES BUILDING EXPANSION JOINTS.
11. FURNISH PULL STRING IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
12. NOT MORE THAN THREE LIGHTING OR CONVENIENCE OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT, PROVIDE SEPARATE CONDUIT FOR EACH HOMERUN INDICATED ON THE DRAWING, UNLESS INDICATED OTHERWISE.
13. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT. PULL BOXES SHALL BE ACCESSIBLE. THE SIZE OF PULL BOX SHALL COMPLY WITH N.E.C. REQUIREMENTS.
14. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILING SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURES.
15. SEE MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATION FOR ADDITIONAL CONNECTION REQUIREMENTS TO CONTROL PANELS, CONTROL TRANSFORMERS, POWER FOR CONTROL SYSTEM EP AND PE SWITCHES, TIME CLOCKS, VALVES, STATS, RELAYS, DUCT SMOKE DETECTOR LOCATIONS, ETC. INDICATED ON CONTROL WIRING DIAGRAMS. ELECTRICAL CONTRACTOR SHALL VERIFY FINAL CONTROL WIRING REQUIREMENTS WITH MECHANICAL AND PLUMBING CONTRACTORS PRIOR TO ANY WORK AND PROVIDE ALL NECESSARY DEVICES AND CONNECTIONS AS REQUIRED.
16. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT (UP TO 16') SHALL BE WEATHERPROOF TYPE, NEMA 3R.
17. NO CONDUIT RUNS SHALL BE ALLOWED IN CONCRETE SLABS. ALL CONDUITS WILL BE PLACED ABOVE ACCESSIBLE CEILING SPACES UNLESS SPECIFICALLY INDICATED TO BE UNDERGROUND.
18. LIGHTING, POWER, TELEPHONE AND COMMUNICATIONS OUTLETS SHALL NOT BE PLACED BACK-TO-BACK.
19. WHERE MORE THAN ONE LIGHT SWITCH OCCURS AT SAME LOCATION, SWITCHES SHALL BE MOUNTED IN A MULTIPLE GANG BOX UNDER A SINGLE COVER PLATE. PLATES WITH MORE THAN (3) LIGHT SWITCHES SHALL BE LABELED TO INDICATE THE LIGHT FIXTURES CONTROLLED.
20. DISCONNECT SWITCHES SHALL BE MOUNTED ON INDIVIDUAL SUPPORTS, OR OTHERWISE DIRECTLY ON EQUIPMENT, PROVIDED NO MODIFICATION TO EQUIPMENT IS NECESSARY.
21. ALL ELECTRICAL POWER LIGHTING, TELEPHONE OR SIGNAL WIRING IN FIRE RATED WALL IS TO BE INSTALLED IN A METALLIC CONDUIT SYSTEM.
22. ALL ELECTRIC MATERIAL SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
23. CONTACT UTILITY COMPANIES FOR SCOPE OF WORK PRIOR TO SUBMITTING BID; INCLUDE UTILITY CHARGES IF ANY.
24. ALL DISTRIBUTION AND CONTROL EQUIPMENT (SUCH AS CB's, SWITCHES, CONTACTORS, ETC.), TERMINATIONS SHALL BE FULLY RATED PER UL AS FOLLOWS:

    a. 125A OR LESS : 60°C OR MORE;
    b. MORE THAN 125A : 75°C OR MORE.

25. CONDUCTORS SHALL HAVE UNDERWRITER'S LABORATORIES, INC.(UL) LISTED, 600 VOLT INSULATION OF TYPE SPECIFIED BELOW OR ELSEWHERE IN THE SPECIFICATIONS. CONDUCTORS SHALL BE COPPER.

    1. BRANCH CIRCUITS - LIGHTING AND POWER.

    a. #10 AWG AND SMALLER, SOLID WIRE TYPE THW OR THHN/THWN, THHW(THHN FOR DRY LOCATION ONLY).
    b. #8 AWG TO #2 AWG, STRANDED TYPE THW OR THHN/THHW.
    c. #1 AWG AND LARGER, STRANDED TYPE XHHW.

    2. FEEDERS : TYPE THW OR THHN/THWN, OR XHHW.

26. PROVIDE GREEN INSULATED GROUNDING CONDUCTOR IN EACH RACEWAY INCLUDING CONDUITS, PLUG STRIPS, WIREMOLD. SIZE OF GROUNDING SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE ARTICLE 250.
27. WIRING METHOD SHALL BE EMT ABOVE GROUND AND MOUNTED IN CONCEALED SPACES AND SCHEDULE-40 PVC FOR UNDERGROUND INSTALLATION. USE RIGID WHEN ENCASED IN CONCRETE OR SUSCEPTIBLE TO DAMAGE.
28. USE 10AWG CONDUCTORS FOR 20 AMPERE, 120V BRANCH CIRCUITS LONGER THAN 75 FEET.
    USE 10AWG CONDUCTORS FOR 20 AMPERE, 277V BRANCH CIRCUITS LONGER THAN 200 FEET.
29. PROVIDE 110V OUTLET, CFL LIGHT & SWITCH FOR LIGHT @ FAU IN ATTIC, WHERE APPLICABLE.
30. ALL FLUORESCENT LUMINAIRES THAT UTILIZE DOUBLE ENDED LAMPS THAT CONTAIN BALLAST(S) THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS EITHER INTERNAL OR EXTERNAL TO EACH LUMINAIRE. THE LINE SIDE TERMINALS OF THE DISCONNECTING MEANS SHALL BE GUARDED. [CEC 410.130(G)(1)].
31. ALL SWITCH LOCATIONS ARE REQUIRED TO HAVE A NEUTRAL CONDUCTOR PROVIDED AT THE SWITCH LOCATION PER CEC 404.2(C).

ABBREVIATIONS

A	AMPERE
AF	AMPERE FRAME RATING (CIRCUIT BREAKER)
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFU	AMPERE FUSE RATING (FUSE)
AIC	AMPERE INTERRUPTING CAPACITY
AS	AMPERE SWITCH RATING (FUSE)
AT	AMPERE TRIP RATING (CIRCUIT BREAKER)
AWG	AMERICAN WIRE GAUGE
BKBD	BACKBOARD
BLDG	BUILDING
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CFSD	COMBINATION FIRE SMOKE DAMPER
CO	CONDUIT ONLY
CONC	CONCRETE
CT	CURRENT TRANSFORMER
CU	COPPER
CL	CENTERLINE
DISC	DISCONNECT
DSBN	DISTRIBUTION SECTION
DN	DOWN
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EXIST, (E)	EXISTING
EXO	EXTERNAL OPERABLE DISCONNECT
F	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FF	FINISHED FLOOR
FG	FINISHED GRADE
FLA	FULL LOAD CURRENT
FLUOR	FLUORESCENT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HV	HIGH VOLTAGE
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED/INSULATED GROUND
INCAND	INCANDESCENT
ISC	SHORT CIRCUIT CURRENT AVAILABLE IN RMS SYMMETRICAL AMPERES
J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KW	KILOWATT
KV	KILO VOLT
KVA	KILO VOLT-AMPERE
LDC	LOCAL DISTRIBUTION CABINET
LDF	LOCAL DISTRIBUTION FRAME
LCL	LONG CONTINUOUS LOAD
LTG	LIGHTING
LV	LOW VOLTAGE
MFR	MANUFACTURER
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MH	MANHOLE / METAL HALIDE
M/M	METER AND MAIN SECTION
MULTI	MULTI-METER SECTION
MV	MEDIUM VOLTAGE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NEW (N)	NEW, TO BE FURNISHED AND INSTALLED BY CONTRACTOR
NF	NON-FUSED
NIC	NOT IN CONTRACT
N/L	NIGHT LIGHT
NO	NUMBER, NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
P	POLE
PB	PULL BOX
PF	POWER FACTOR
PNL	PANEL
POC	POINT OF CONNECTION
PP	POWER POLE
PWR	POWER
PVC	POLYVINYL CHLORIDE
QUAD	QUADRUPLEX
QTY	QUANTITY
REQD	REQUIRED
REQMT	REQUIREMENT
RGS	RIGID GALVANIZED STEEL
RMC	RIGID METALLIC CONDUIT
RM	ROOM
RNC	RIGID NONMETALLIC CONDUIT
SHT	SHEET
SN	SOLID NEUTRAL
SPEC	SPECIFICATIONS
SPDT	SINGLE POLE, DOUBLE THROW
SPST	SINGLE POLE, SINGLE THROW
SW	SWITCH
SWBD	SWITCHBOARD
TC	TIME CLOCK
TEL	TELEPHONE
TERM	TERMINAL
TP	TEMPORARY POLE
TYP	TYPICAL
UGPS	UNDERGROUND PULL SECTION
UL	UNDERWRITERS LABORATORY
UPS	UNINTERRUPTIBLE POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
V	VOLT, VOLTAGE
VA	VOLT-AMPERE
VFC	VARIABLE FREQUENCY CONTROLLER
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WH	WATT-HOUR
WP	WEATHERPROOF
WT	WEATHERTIGHT
WW	WIREWAY
XP	EXPLOSION PROOF
Z	IMPEDANCE
4W	FOUR-WIRE
3W	THREE-WIRE
5S	JUNCTION BOX (4 11/16" SQUARED X2 1/8" DEEP)
Ø	DIAMETER, PHASE
#	NUMBER
°C	DEGREE CELSIUS
(E)	EXISTING DEVICE TO REMAIN
(R)	REMOVE EXISTING DEVICE AND ASSOCIATED CONDUIT AND WIRE
(E)	REMOVE EXISTING DEVICE AND RELOCATE AS SHOWN ON PLAN
(NL)	NEW LOCATION OF RELOCATED DEVICE

POWER LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
200-D	CONDUIT WIRING DESCRIPTION PER FEEDER SCHEDULE ON OTHER PLAN
200-Y	CONDUIT WIRING DESCRIPTION PER FEEDER SCHEDULE ON OTHER PLAN
PB	CONCRETE ELECTRICAL PULL BOX WITH LID APPROPRIATE FOR INSTALLATION LOCATION. LID SHALL BE LABELED "ELECTRICAL" OR "COMM" ACCORDING TO USE.
	SMOKE FIRE DAMPER
DD	DUCT MOUNTED SMOKE DETECTOR.
T	THERMOSTAT SUPPLIED BY MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR SHALL STUB 3/4" C.O. 6" ABOVE CEILING SPACE, PROVIDE BUSHING AND PULL WIRE. IF INSTALLED IN AREA WITH EXPOSED STRUCTURE ABOVE OR HARDLID CEILING, PROVIDE 3/4" C.O. BACK TO ASSOCIATED HVAC UNIT. REFER TO MECHANICAL DETAILS FOR T-STAT MOUNTING HEIGHT REQUIREMENTS. VERIFY LOCATIONS WITH HVAC CONTRACTOR PRIOR TO ROUGH IN.
CO	CARBON MONOXIDE SENSOR SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE 3/4" GALVANIZED RIGID CONDUIT WITH PULL STRING BACK TO HEAD END CARBON MONOXIDE PANEL. REFER TO MECHANICAL DRAWINGS FOR EXACT EQUIPMENT LOCATIONS AND WIRING DETAILS.
P	CEILING MOUNTED PLUG LOAD CONTROLLER.
HCS	CONTACT SENSOR FOR HVAC SHUTDOWN. 4S BOX, MOUNTED ABOVE DOOR OR WINDOW, U.O.N. STUB 3/4" C.O. 6" ABOVE CEILING SPACE. PROVIDE BUSHING AND PULL WIRE. IF INSTALLED IN AREA WITH EXPOSED STRUCTURE ABOVE OR HARD LID CEILING, PROVIDE 3/4" C.O. BACK TO LOCATION OF ASSOCIATED HVAC THERMOSTAT.

GENERAL DEMOLITION NOTES

1. THE DEMOLITION NOTE REFERENCE PERTAIN TO ALL RELATED SHEETS WHERE EXISTING ELECTRICAL WORK IS INDICATED.
2. THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND MAKE THEMSELVES COMPLETELY FAMILIAR WITH THE EXISTING INSTALLED CONDITIONS.
3. ALL EQUIPMENT OR WORK REQUIRED TO CARRY OUT THE DEMOLITION SCOPE OF WORK IS CONSIDERED TO BE PART OF THE CONTRACTOR SCOPE OF WORK. NO EXTRAS WILL BE CONSIDERED TO PERFORM THE REQUIRED WORK.
4. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE FACILITY DIRECTOR PRIOR TO THE SCHEDULING OF ANY POWER OUTAGE. SUCH PERMISSION MUST BE OBTAINED IN WRITING AND BE GRANTED AT LEAST 7 DAYS PRIOR TO ANY SCHEDULE SHUT DOWN. THE SHUT DOWN SHALL NOT EXCEED A DURATION OF 4 HOURS.
5. THE CONTRACTOR SHALL NOT STORE ON SITE ANY ITEMS THAT WERE DEMOLISHED FOR ANY EXTENDED PERIOD OF TIME, WITHOUT THE WRITTEN PERMISSION OF THE CAMPUS FACILITY DIRECTOR.
6. ALL ELECTRICAL ITEMS DESIGNATED AS EXISTING TO REMAIN SHALL AS PART OF THIS SCOPE OF WORK BE CLEANED AND TESTED, TO INSURE PROPER OPERATION. ANY ITEMS THAT FAIL TO PASS THE TEST SHALL BE BROUGHT TO THE ATTENTION OF THE FIELD INSPECTOR AND THE ENGINEER OF RECORD FOR RESOLUTION.
7. THE CONTRACTOR SHALL REMOVE ALL EXISTING SWITCHBOARDS, DISTRIBUTION BOARDS, PANEL BOARDS, LIGHTING FIXTURES, CONDUITS, WIRES AND OTHER ELECTRICAL APPARATUS DESIGNATED AS EXISTING TO BE REMOVED. DEMOLITION ITEMS, IF NOT REQUIRED TO BE SALVAGED BY OWNER, BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN AN APPROPRIATE MANNER.
8. THE CONTRACTOR SHALL REMOVE ALL CONDUITS SERVING DEVICES WHICH ARE DESIGNATED AS EXISTING TO BE REMOVED, BACK TO THE SOURCE WHEN POSSIBLE. IF THE NATURE OF THE EXISTING INSTALLATION WILL NOT ALLOW REMOVAL THE CONTRACTOR SHALL REMOVE ALL EXPOSED CONDUIT AND ABANDON THE REMAINDER AFTER REMOVING ALL CONDUCTORS.
9. DEMOLITION AND/OR REMOVAL OF ELECTRICAL EQUIPMENT IN AREAS TO BE REMODELED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
10. WHERE OUTLETS ARE REMOVED IN EXISTING WALL, REMOVE DEVICES, OUTLETS AND WIRING BACK TO PANELBOARD OR BACK TO NEAREST OUTLET WITH OTHER EXISTING LOAD TO REMAIN.
11. WHERE EXISTING CONDUIT AND CONDUCTORS ARE TO BE REMOVED AND CONDUIT IS INSTALLED IN GROUND OR EMBEDDED IN CONCRETE, REMOVE WIRE AND CUT CONDUIT TO BELOW FLOOR, PLUG CONDUIT, PATCH FLOOR AND ABANDON CONDUIT.
12. WHERE ELECTRICAL DEVICES ARE TO BE REMOVED, REMOVE ALL CONDUIT AND CONDUCTORS BACK TO SOURCE, TERMINAL CABINETS AND RACKS, PROVIDE BLANK COVER PLATE FOR ABANDONED JUNCTION BOXES.
13. REMOVE ALL CONTROL PANELS, EQUIPMENT RACKS, PULL-BOXES, TERMINAL CABINETS, ETC. FOR SYSTEMS TO BE DEMOLISHED EXCEPT WHERE ANY OF THE EXISTING DEVICES, SYSTEMS, CONSOLES, ETC. ARE TO BE REUSED FOR UPGRADE.
14. PROVIDE BLANK COVER PLATE FOR ALL EMPTY OUTLET BOXES WHERE DEVICES AND/OR CONDUCTORS HAVE BEEN REMOVED AS PART OF THIS CONTRACT.
15. AFTER REMOVAL OF WIREMOLD AND ASSOCIATED FITTINGS, PATCH, REPAIR AND PAINT AFFECTED SURFACES TO MATCH EXISTING.
16. EXISTING CONDUIT CAN BE REUSED PROVIDING IT IS CHECKED FOR CONTINUITY OF GROUND, BLOWN FREE OF DEBRIS, AND DOES NOT INTERFERE WITH NEW CONSTRUCTION.
17. REMOVALS AND REPAIRS TO EXISTING ELECTRICAL WORK REQUIRED TO AVOID CONFLICTS WITH NEW CONSTRUCTION TO MEET MINIMUM CODE REQUIREMENTS.
18. A FIELD SURVEY VERIFICATION IS MANDATORY IN ORDER TO SUBMIT AN ELECTRICAL BID, FAILURE TO DO SO SHALL NOT RELIEVE THIS CONTRACTOR FROM PERFORMING THE WORK OF THIS CONTRACT.

APPLICABLE CODES

1. 2016 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2. 2016 CALIFORNIA BUILDING CODE (CBC),PART 2, TITLE 24 C.C.R. (IBC WITH AMENDMENTS)
3. 2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (NEC WITH AMENDMENTS)
4. 2016 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (UMC WITH AMENDMENTS)
5. 2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (UPC WITH AMENDMENTS)
6. 2016 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (IFC WITH AMENDMENTS)
7. 2016 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
8. 2016 TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
9. 2016 CALIFORNIA ENERGY CODE (PART 6, TITLE 24 C.C.R.)
10. 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSG), PART 11, TITLE 24 C.C.R.

NOTE TO CONTRACTOR

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

POWER LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	DOUBLE DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS, GFCI TYPE) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) WITH MOUNTING HEIGHT HORIZONTALLY ABOVE COUNTER TOP PER ARCHITECTURAL PLANS OR APPROVAL.
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS, GFCI TYPE) WITH MOUNTING HEIGHT HORIZONTALLY ABOVE COUNTER TOP PER ARCHITECTURAL PLANS OR APPROVAL.
	CA TITLE 24 COMPLIANT DUPLEX RECEPTACLE OUTLET, HALF-CONTROLLED, CONVENIENCE, WITH PERMANENT MARKING. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	CA TITLE 24 COMPLIANT DOUBLE DUPLEX RECEPTACLE OUTLET, HALF-CONTROLLED, CONVENIENCE, WITH PERMANENT MARKING. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	SIMPLEX RECEPTACLE OUTLET, CONVENIENCE WITH (2)USB PORTS. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N. LEVITON MODEL #T5832.
WP	WEATHERPROOF DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	SIMPLEX RECEPTACLE OUTLET ON DEDICATED CIRCUIT. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
D	DUPLEX RECEPTACLE OUTLET ON DEDICATED CIRCUIT. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	DUPLEX RECEPTACLE OUTLET, SINGLE SPLIT-CIRCUIT SWITCHED. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	SURFACE MOUNTED DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	RECESSED CEILING MOUNTED DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) U.O.N.
J	ABOVE CEILING, CONCEALED, JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 314.16(A)/(B), 4" SQUARE DEEP, WITH PLASTER RING.
J	RECESSED WALL MOUNTED JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 314.16(A)/(B), 4" SQUARE DEEP, WITH PLASTER RING.
	DUPLEX RECEPTACLE, FLUSH IN FLOOR, WATERTIGHT JUNCTION BOX (HINGED BRASS COVER: 20 AMP, 120 VOLT, 2-POLE, 3-WIRE) U.O.N.
	DOUBLE DUPLEX RECEPTACLE, FLUSH IN FLOOR, WATERTIGHT JUNCTION BOX (20 AMP, 120 VOLT, 2-POLE, 3-WIRE) U.O.N.
J	JUNCTION BOX, FLUSH IN FLOOR, WATERTIGHT (HINGED BRASS COVER: 20 AMP, 120 VOLT, 2-POLE, 3-WIRE) U.O.N.
L5-30R	SPECIALTY OUTLET. VERIFY NEMA CONFIGURATION AS NOTED ON PLANS.
OR	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (SURFACE MOUNTED)
	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (RECESSED MOUNTED)
	MAIN SWITCHBOARD, POWER OR LIGHT, FLOOR STANDING ENCLOSURE, (SEE SINGLE LINE DIAGRAM AND LOAD SUMMARY)
F	DISCONNECT SWITCH H.P. RATED 600 VOLTS RATED. "F" INDICATES FUSE TYPE. FUSES PER APPROVED MANUFACTURERS SHOP DRAWINGS.
#2	MAGNETIC MOTOR STARTER H.P. RATED (NUMBER INDICATES NEMA SIZE)
+96" OR 7'-6" AFF	MOUNTING HEIGHT FROM FINISHED FLOOR TO BOTTOM LINE OF OUTLET OR EQUIPMENT. FOR LIGHT FIXTURES, IT IS TO BOTTOM OF FIXTURE.
	CONDUIT TURNED DOWN
	CONDUIT TURNED UP
	CONDUIT STUBBED AND CAPPED
	RACEWAY CONCEALED IN WALLS OR ABOVE CEILING
	CONDUIT CONCEALED IN OR UNDER FLOOR, COORDINATE WITH G.C.: OR, BURIAL CONDUIT UNDERGROUND IN SCHEDULE - 40 PVC UNLESS NOTED OTHERWISE. VERIFY DEPTH AND TRENCHING WITH G.C.
DETAIL No. / SHEET No.	DETAIL REFERENCE
EQUIPMENT ID. No.	EQUIPMENT REFERENCE
(E)	EXISTING CONDUIT AND WIRING TO REMAIN
(R)	PULL-OUT WIRES AND ABANDON CONDUIT. CUT AND CAPPED FLUSH WALL OR SLAB.
E	EXISTING CONDUIT TO REMAIN
R	EXISTING CONDUIT AND WIRE TO BE REMOVED
PR	ELECTRICAL UTILITY PRIMARY
SC	ELECTRICAL UTILITY SECONDARY
T	UTILITY TELEPHONE
OH	TEMPORARY OVERHEAD CABLING
A-1,3	HOMERUN TO CIRCUITS #1 AND #3 IN PANEL "A". (CROSSMARKS INDICATE NUMBER OF PHASES AND NEUTRAL. PROVIDE GROUND WIRE.)
	3/4" CONDUIT WITH 2 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 3 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 4 #12 & 1 #12 GND WIRES
	3/4" CONDUIT WITH 5 #12 & 1 #12 GND WIRES
#10	3/4" CONDUIT WITH 2 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 3 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 4 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	3/4" CONDUIT WITH 5 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
#10	1" CONDUIT WITH 6 #10 & 1 #10 GND WIRES (#10 INDICATING WIRE SIZE)
	GROUND WELL
	EXISTING (DASH INDICATES) ELECTRICAL EQUIPMENT
	TELEPHONE BACKBOARD 2'X4'X3/4" PLYWOOD. PROVIDE 2" CONDUIT TO TELEPHONE POC.
	MOLDED CASE CIRCUIT BREAKER
	SWITCH AND FUSE ASSEMBLY
	UTILITY COMPANY PULL SECTION LUGS
	GROUNDING CONNECTION TO MAIN BUILDING GROUND SYSTEM U.O.N.
N / G	GROUNDING CONNECTION AT SWITCHGEAR/DISTRIBUTION BOARD WITH NEUTRAL BONDING.
M	IN-LINE UTILITY COMPANY METER
M	UTILITY METER WITH CIRCUIT TRANSFORMERS (CT'S) METER
SS	SOLID STATE DEVICE CONNECTED TO THE POWER DISTRIBUTION SYSTEM
GFP	GROUND FAULT PROTECTION DEVICE CONNECTED TO THE POWER DISTRIBUTION SYSTEM
T OR	TRANSFORMER WITH SECONDARY GROUND
G	ON-SITE GENERATOR SET

(CONCEALED IN WALL OR CEILING — applies to the homerun and conduit-with-wires entries)

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CFORMS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: Scott Jackson
Fire and Life Safety Division South

miyamoto.
1901 East Alton Avenue, Suite 160
Santa Ana, CA 92705
MI1904011.00
T: (949) 579-1170
miyamotointernational.com
Engineer:

REGISTERED PROFESSIONAL ENGINEER
LEONARD P. MAY
No. E19480
EXP. 6-30-2019
ELECTRICAL
STATE OF CALIFORNIA
Stamp:

DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS
275 W. Hospitality Lane, Suite #100
San Bernardino, CA 92408
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Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-14-2019
DRAWN:	S.V

ELECTRICAL LEGENDS & NOTES

E-0.1

LUMINAIRE SCHEDULE

TYPE	VOLTS	WATTAGE	LUMENS	LAMPS	MOUNTING	FIXTURE DESCRIPTION	MFR.	CATALOG #	NOTES	SYMBOL
S1	120	25	1476	LED 5000K	WALL	WALL MOUNT LED FIXTURE WITH INTEGRAL PHOTOELECTRIC CELL	LITHONIA LIGHTING	TWS LED P1 50K 120 PE		⯐

LUMINAIRE SCHEDULE NOTES

1. EQUALS SHALL BE CONSIDERED UPON SUBMITTAL REVIEW AND APPROVAL. PLEASE NOTE THAT IF AN ALTERNATE IS CONSIDERED:
   a. THE CONTRACTOR IS COMPLETELY AND SOLELY RESPONSIBLE FOR ALL ASPECTS OF THE SUBSTITUTION INCLUDING UPDATING CONSTRUCTION DOCUMENTS, OBTAINING APPROVALS AND PERMITS FROM LOCAL AUTHORITY, AND COORDINATING WITH ALL TRADES TO ENSURE CHANGES TO AFFECTED BUILDING SYSTEM ARE ACCOUNTED FOR AND ACCEPTABLE TO THE ENGINEERING TEAM. CONTRACTOR SHALL ENSURE SUBSTITUTED EQUIPMENT MEETS OR EXCEEDS DESIGN INTENT REGARDING RATINGS, PERFORMANCE, DIMENSIONAL CLEARANCES, PHYSICAL DIMENSIONS (MAX/MIN), WEIGHT LIMITATIONS, AND OTHER ASPECTS, PROVING SUBSTITUTION IS SUITABLE TO THE APPLICATION. ENGINEERS WILL REVIEW THE RATING AND PERFORMANCE OF SUBSTITUTED EQUIPMENT ONLY AND WILL NOT ASSUME RESPONSIBILITY FOR SUBSTITUTION AT ANY LEVEL.
   b. IF CONTRACTOR CANNOT MAKE SUBSTITUTED EQUIPMENT WORK IN THIS PROJECT, CONTRACTOR SHALL REVERT TO REQUIREMENTS OF PERMITTED CONSTRUCTION DOCUMENTS AT THEIR EXPENSE.
   c. IT IS UNDERSTOOD BY ALL PARTIES THAT ANY SUBSTITUTIONS OF SPECIFIED PRODUCTS ARE DONE FOR THE PURPOSE OF COST SAVINGS TO THE OWNER. THEREFORE, ANY MATERIAL SUBSTITUTION OR DEVIATIONS PROPOSED BY THE CONTRACTOR SHALL BE INCLUDED WITH THE INITIAL BID AND SHALL SHOW A LINE ITEMS CREDIT TO THE OWNER FOR EACH SUBSTITUTION IN LIEU OF SPECIFIED PRODUCTS.
2. THE FIXTURE SCHEDULE INDICATES GENERAL DESCRIPTION OF LIGHTING FIXTURES AND MANUFACTURERS CATALOG NUMBERS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE CORRECT CEILING CONFIGURATION AND PROVIDE THE FIXTURES WITH ALL NECESSARY TRIMS AND MOUNTING HARDWARE SO THAT BOTH THE CEILING SYSTEM AND THE FIXTURE CONSTRUCTION MATCHES. PROVIDE SEISMIC HANGERS AS REQUIRED.
3. IT SHALL BE CONTRACTORS RESPONSIBILITY TO VERIFY THE EXACT LOCATION OF ALL LIGHTING FIXTURES AND TYPE OF CEILING WITH ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ANY WORK. SEE ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ANY WORK. SEE ARCHITECTURAL ELEVATION DRAWING FOR MOUNTING HEIGHTS OF WALL MOUNTED FIXTURES.
4. A JUNCTION BOX MUST BE PROVIDED WITH ALL EXIT LIGHTS CONNECTED TO MORE THAN ONE SET OF CONDUCTORS UNLESS THE EXIT LIGHT FIXTURE IS FURNISHED WITH AN APPROVED OUTLET BOX FOR THROUGH WIRING.
5. A COMPLETE TITLE 24 COMPLIANT LIGHTING CONTROL SYSTEM SHALL BE PROVIDED TO CONTROL ALL INTERIOR AND EXTERIOR LIGHTING SYSTEMS. REFER TO LIGHTING CONTROL DIAGRAMS, SCHEDULES AND DETAILS.
6. BATTERY PACK EMERGENCY TEST SWITCHES SHALL BE INTEGRAL TO LIGHT FIXTURE. COORDINATION OF SWITCH LOCATION IS REQUIRED WITH DESIGN TEAM IF INTEGRAL INSTALLATION IS NOT POSSIBLE.
7. FIXTURES DESIGNATED AS EMERGENCY SHALL BE SUPPLIED WITH INTEGRAL BATTERY PACK CAPABLE OF POWERING TWO T8 LAMPS FOR 90 MINUTES WITH A TOTAL LIGHT OUTPUT OF 1100 LUMENS OR ONE F13 BIAX FOR 90 MINUTES WITH A TOTAL LIGHT OUTPUT OF 520 LUMENS.
8. PROVIDE ALL REQUIRED MOUNTING HARDWARE ANCHORAGE AND SUPPORTS TO INSTALL LIGHTING FIXTURES.
9. PROVIDE SWIVEL BASE AND STEMS. LENGTHS AS REQUIRED TO MOUNT THE PENDANT MOUNTED FIXTURES. THE INSTALLATION SHALL COMPLY WITH TITLE 24 SEISMIC AND APPLICABLE UBC REQUIREMENTS.
10. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERABLE LIGHTING SYSTEM AS PART OF THIS BUILDING CONTRACT.
11. SUSPENSION SYSTEM FOR LIGHT FIXTURES WHICH HAVE PASSED SHAKING TABLE TESTS APPROVED BY THE OFFICE OF THE STATE OF ARCHITECT, OR WHICH, AS INSTALLED, ARE FREE TO SWING A MINIMUM OF 45' FROM THE VERTICAL IN ALL DIRECTIONS WITHOUT CONTACTING OBSTRUCTIONS. SHALL BE ASSUMED TO COMPLY WITH THE LATERAL FORCE REQUIREMENTS FOR SECTION 2305, PART 2, TITLE 24, CCR. UNLESS OF THE CABLE TYPE FREE SWING SUSPENSION SYSTEM SHALL HAVE A SAFETY WIRE OR CABLE ATTACHED TO THE FIXTURE AND STRUCTURE AT EACH SUPPORT CAPABLE OF SUPPORTING FOUR TIMES THE SUPPORTED LOAD.
12. FOR SUSPENDED AND SURFACE MOUNTED LIGHT FIXTURES, THE PRODUCT OF ICP NEED NOT EXCEED 12 FOR ANY VALUE OF 1.
13. PROVIDE DISCONNECTING MEANS FOR ALL FLUORESCENT BALLASTS PER CEC 410.130(G).
14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE FIXTURE BALLAST OR DRIVER VOLTAGE MATCHES THE CIRCUIT VOLTAGE SUPPLYING FIXTURE PRIOR TO ORDERING.
15. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY BALLAST/DRIVER DIMMING CONFIGURATION IS COMPATIBLE WITH CONTROLS BEING PROVIDED PRIOR TO ORDERING FIXTURES. EX. 2 WIRE, 3 WIRE, 4 WIRE, 0-10V, CAT 5, ETC.
16. LED LIGHT FIXTURES SHALL BE IN ACCORDANCE WITH IES, NFPA, UL, AS SHOWN ON THE DRAWINGS, AND AS SPECIFIED.
17. LED LIGHT FIXTURES SHALL BE REDUCTION OF HAZARDOUS SUBSTANCES (ROHS)-COMPLIANT.
18. LED DRIVERS SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
   - MINIMUM EFFICIENCY: 85% AT FULL LOAD.
   - MINIMUM OPERATING AMBIENT TEMPERATURE: -20 DEG C. (-4 DEG F.)
   - INPUT VOLTAGE: 120 - 277V (±10%) AT 60 HZ., UNLESS OTHERWISE INDICATED.
   - INTEGRAL SHORT CIRCUIT, OPEN CIRCUIT, AND OVERLOAD PROTECTION.
   - POWER FACTOR: >=0.95.
   - TOTAL HARMONIC DISTORTION: <=20%.
   - COMPLY WITH FCC 47 CFR PART 15.

22. LED MODULES SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
   - COMPLY WITH IES LM-79 AND LM-80 REQUIREMENTS.
   - MINIMUM CRI 80 AND COLOR TEMPERATURE 4000K UNLESS OTHERWISE SPECIFIED IN LUMINAIRE SCHEDULE.
   - MINIMUM RATED LIFE: 50,000 HOURS PER IES L70.
   - LIGHT OUTPUT LUMENS AS INDICATED IN THE LUMINAIRE SCHEDULE.

23. LED DOWNLIGHTS:
   - HOUSING, LED DRIVER, AND LED MODULE SHALL BE PRODUCTS OF THE SAME MANUFACTURER.

24. LED TROFFERS:
   - LED DRIVERS, MODULES, AND REFLECTOR SHALL BE ACCESSIBLE, SERVICEABLE, AND REPLACEABLE FROM BELOW THE CEILING.
   - HOUSING, LED DRIVER, AND LED MODULE SHALL BE PRODUCTS OF THE SAME MANUFACTURER.

25. ALL FIXTURES MOUNTED OUTDOORS SHALL BE UL LISTED FOR WET LOCATION.

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miyamotointernational.com
Engineer:

Stamp: REGISTERED PROFESSIONAL ENGINEER — LEONARD P. MAYA — No. E19480 — EXP. 6-30-2019 — ELECTRICAL — STATE OF CALIFORNIA

DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS
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San Bernardino, CA 92408
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Email: cadd@designwesteng.com
Consultant:

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FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
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RIVERSIDE, CA 92507

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Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CFORMS SYSTEM

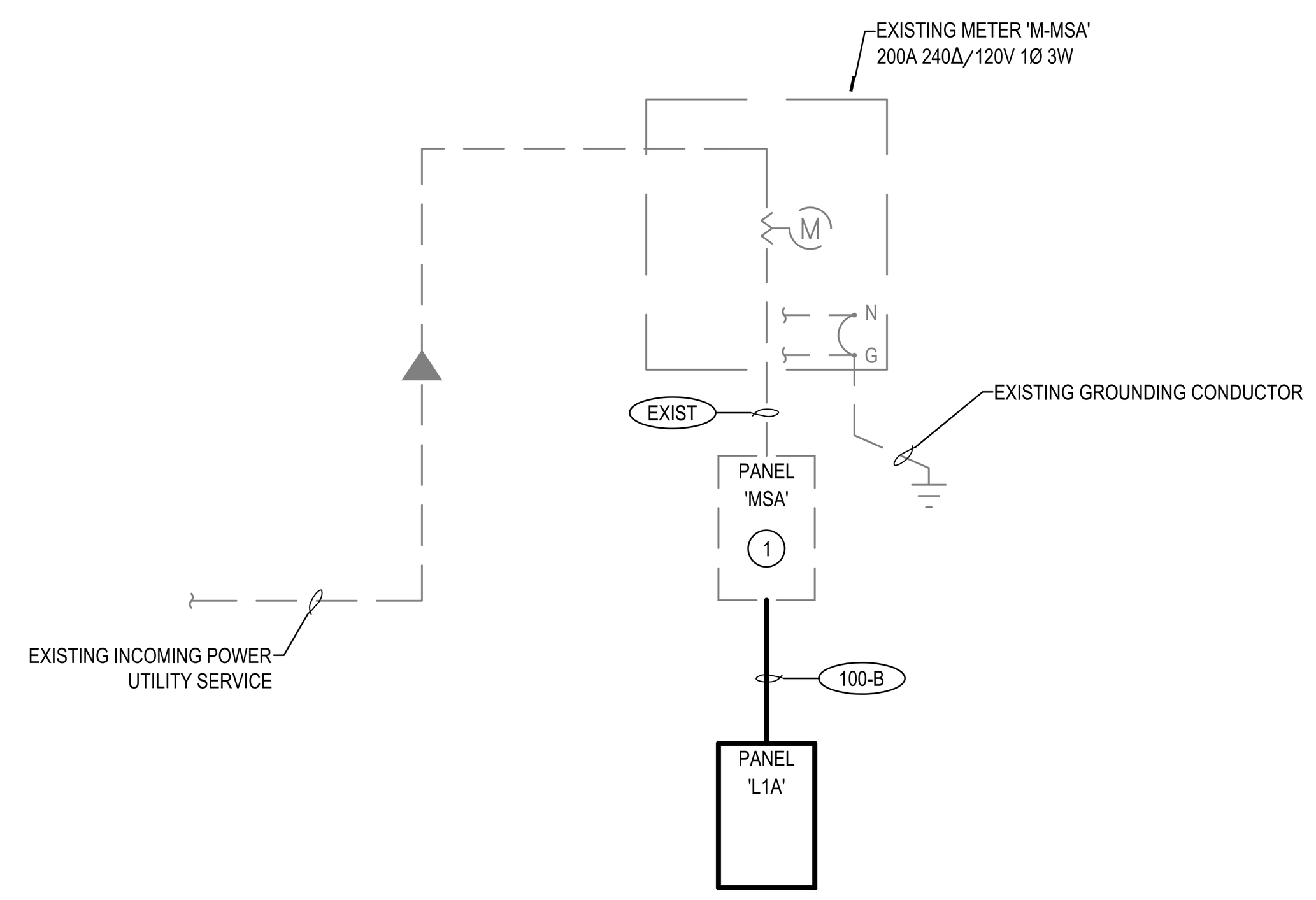
APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: [signature]
Fire and Life Safety Division South

LUMINAIRE SCHEDULE & NOTES

E-0.2

- 1



600V FEEDER SCHEDULE 1Ø 3W

LABEL	TYPE	SETS	PHASE	NEUTRAL	GROUND	CONDUIT
20-B	20A-3W	1	2 # 12	1 # 12	1 # 12	3/4"
30-B	30A-3W	1	2 # 10	1 # 10	1 # 10	3/4"
40-B	40A-3W	1	2 # 8	1 # 10	1 # 10	1"
50-B	50A-3W	1	2 # 6	1 # 6	1 # 10	1"
60-B	60A-3W	1	2 # 6	1 # 6	1 # 10	1"
70-B	70A-3W	1	2 # 4	1 # 4	1 # 8	1-1/4"
80-B	80A-3W	1	2 # 4	1 # 4	1 # 8	1-1/4"
90-B	90A-3W	1	2 # 2	1 # 2	1 # 8	1-1/4"
100-B	100A-3W	1	2 # 1	1 # 1	1 # 8	1-1/2"
125-B	125A-3W	1	2 # 1	1 # 1	1 # 6	1-1/2"
150-B	150A-3W	1	2 # 1/0	1 # 1/0	1 # 6	1-1/2"
175-B	175A-3W	1	2 # 2/0	1 # 2/0	1 # 6	2"
200-B	200A-3W	1	2 # 3/0	1 # 3/0	1 # 6	2"

NOTE:
ALL CONDUCTOR SIZES ARE BASED ON TYPE THHN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. THE AMPACITY OF CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C FOR CONDUCTOR SIZE #14 THROUGH #1 AWG OR 75°C FOR CONDUCTOR SIZE OVER #1 AWG AS PER NEC 110.14(C).

600V FEEDER SCHEDULE 1Ø 2W

LABEL	TYPE	SETS	PHASE	NEUTRAL	GROUND	CONDUIT
20-S	20A-2W	1	2 # 12	N/A	1 # 12	3/4"
30-S	30A-2W	1	2 # 10	N/A	1 # 10	3/4"
40-S	40A-2W	1	2 # 8	N/A	1 # 10	1"
50-S	50A-2W	1	2 # 6	N/A	1 # 10	1"
60-S	60A-2W	1	2 # 6	N/A	1 # 10	1"
70-S	70A-2W	1	2 # 4	N/A	1 # 8	1"
80-S	80A-2W	1	2 # 4	N/A	1 # 8	1-1/4"
90-S	90A-2W	1	2 # 2	N/A	1 # 8	1-1/4"
100-S	100A-2W	1	2 # 1	N/A	1 # 8	1-1/4"
125-S	125A-2W	1	2 # 1	N/A	1 # 6	1-1/2"
150-S	150A-2W	1	2 # 1/0	N/A	1 # 6	1-1/2"
175-S	175A-2W	1	2 # 2/0	N/A	1 # 6	2"
200-S	200A-2W	1	2 # 3/0	N/A	1 # 6	2"

NOTE:
ALL CONDUCTOR SIZES ARE BASED ON TYPE THHN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. THE AMPACITY OF CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C FOR CONDUCTOR SIZE #14 THROUGH #1 AWG OR 75°C FOR CONDUCTOR SIZE OVER #1 AWG AS PER NEC 110.14(C).

SINGLE LINE DIAGRAM 1

PANEL L1A

MOUNTING: SURFACE
FED FROM: MSA
NEMA: 1
AIC RATING: 10,000

PANEL
L1A
(NEW)
LOCATION: LAUNDRY ROOM

VOLTAGE: 120/240V 1PH 3W
BUS: 100 A
MAIN: 100 A
FEEDER: 100 -B

NOTE	DESCRIPTION	A	B	TYPE	POLE	AMP	AWG/PH	LENGTH	V.D. %		PHASE		V.D. %	LENGTH	AWG/PH	AMP	POLE	TYPE	A	B	DESCRIPTION	NOTE
	SPARE				1	20				1	A -	2	0.67	80	#12	20	1	N	300		REMOTE POWER SUPPLY	
	SPARE				1	20				3	- B	4	0.83	100	#12	20	1	N		300	REMOTE POWER SUPPLY	
	SPARE				1	20				5	A -	6	1.00	120	#12	20	1	N	300		REMOTE POWER SUPPLY	
	SPARE				1	20				7	- B	8				20	1				SPARE	
	SPARE				1	20				9	A -	10				20	1				SPARE	
	SPARE				1	20				11	- B	12				20	1				SPARE	
	SPARE				1	20				13	A -	14				20	1				SPARE	
	SPARE				1	20				15	- B	16				20	1				SPARE	
	SPARE				1	20				17	A -	18				20	1				SPARE	
	SPARE				1	20				19	- B	20				20	1				SPARE	
	SPARE				1	20				21	A -	22				20	1				SPARE	
	SPARE				1	20				23	- B	24				20	1				SPARE	
	SUBTOTALS	0	0																600	300		

CEC LOAD CALC:	CONNECTED	DEM.	DEM.	DEMAND
LOAD TYPE	VA	FACT.	VA	AMPS
(L) LIGHTING	0	1.25	0	0
(R) RECEPTACLE	0	220.44	0	0
(M) MOTOR	0	1.25	0	0
LARGEST MOTOR		0.25	0	0
(C) CONTINUOUS	0	1.25	0	0
(N) NON-CONTINUOUS	900	1.00	900	4
(K) KITCHEN (NEC 220.56)	0	0.65	0	0
(S) SPECIAL DEMAND	0	1.00	0	0
TOTALS	900		900	

TOTAL AMPS CONNECTED AT 120/208V 1PH 3W WITH LCL 4 A

SUBTOTALS:	PHASE
600 VA	A
300 VA	B
900 VA	TOTAL
4	AMPS

NOTES:

PANEL SCHEDULE 2

GENERAL NOTES

1. REFER TO 'GENERAL NOTES' ON ELECTRICAL LEGENDS AND NOTES SHEET FOR WIRING METHODS, MATERIALS, AND REQUIREMENTS.
2. ALL CIRCUIT BREAKERS, PANELBOARDS AND TRANSFORMERS SHALL BE OF THE SAME MANUFACTURER.
3. ALL GROUND CONNECTIONS SHALL BE CADWELD.
4. AVAILABLE FAULT AT SERVICE POINT SHALL BE CONSIDERED AT 65,000 RMS SYM.
5. ALL PANELBOARDS SHALL BE FULLY RATED FOR THE AVAILABLE FAULT UNLESS OTHERWISE NOTED.
6. WHEN APPLICABLE, OVERCURRENT DEVICE ENCLOSURES SHALL BE IDENTIFIED AS SERIES RATED AND LABELED IN ACCORDANCE WITH NEC 110- 22. THE OVERCURRENT DEVICES SHALL BE AIC RATED PER MANUFACTURERS LABELING OF THE ELECTRICAL EQUIPMENT.
7. THE FEEDER LENGTHS SHOWN ON THESE DRAWINGS ARE FOR CALCULATION PURPOSES ONLY AND ARE NOT VALID FOR BIDDING.
8. CONTRACTOR SHALL UPDATE ALL MODIFIED PANEL DIRECTORIES OR CREATE A NEW TYPED DIRECTORY, IF ONE DOES NOT EXIST, IDENTIFYING EACH CIRCUIT AND INSTALLED CIRCUIT LOADS, MOUNTED IN GLASS OR PLASTIC INSIDE DOOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING DIRECTORIES TO INDICATE ALL NEW CIRCUITS AND ACTUAL AREA SERVED WHICH IS NOT NECESSARILY THE DESCRIPTION INDICATED ON THE BID DOCUMENTS. USE A COMPUTER OR TYPEWRITER TO CREATE DIRECTORY; HANDWRITTEN DIRECTORIES ARE NOT ACCEPTABLE.

CONSTRUCTION NOTES

1. REMOVE (3) SINGLE POLE BREAKERS FROM EXISTING PANEL AND REFEED FROM NEW L1A PANEL.

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REGISTERED PROFESSIONAL ENGINEER
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EXP. 6-30-2019
ELECTRICAL
STATE OF CALIFORNIA

Consultant:
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UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

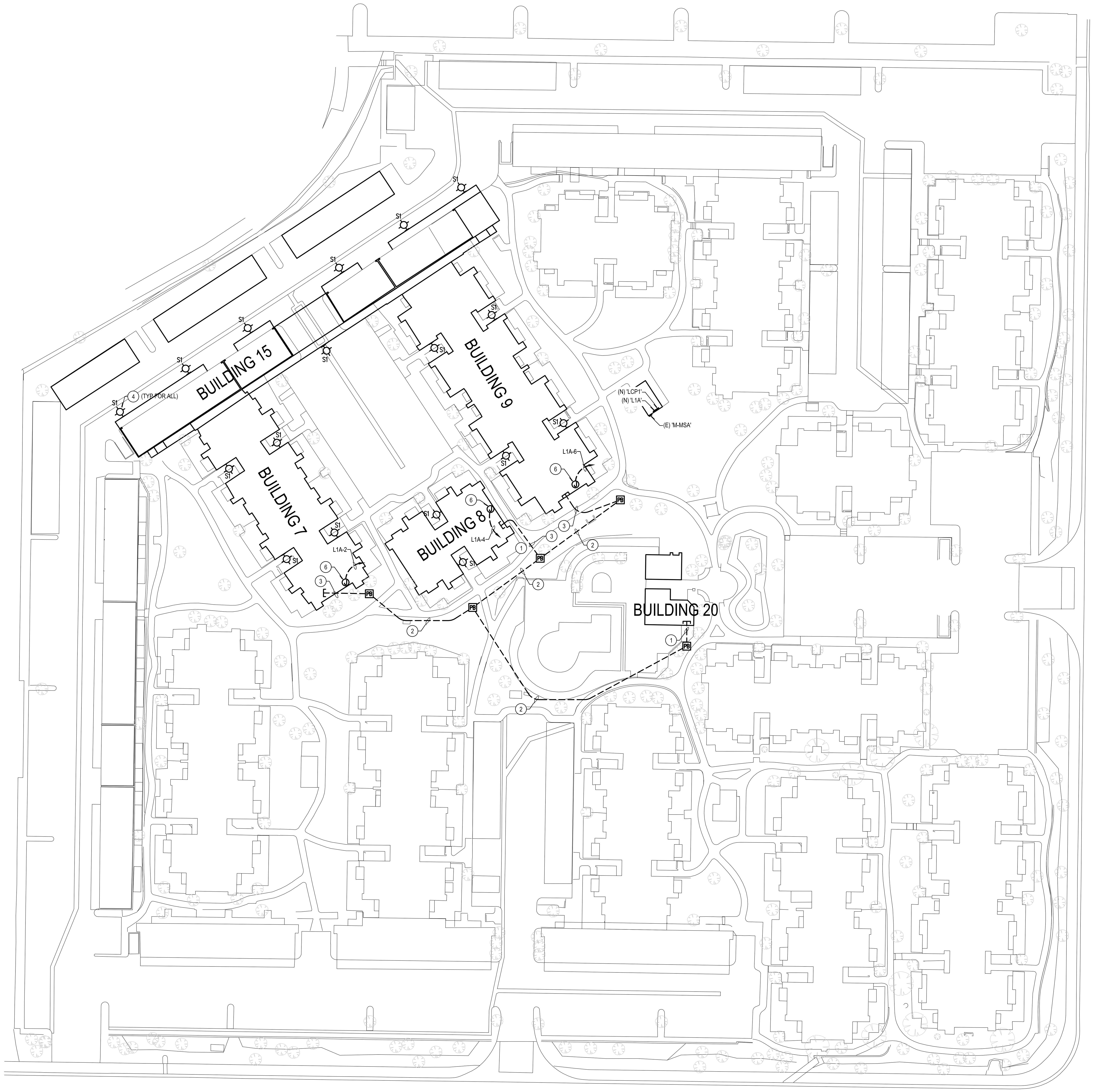
REVISIONS
1 ADDENDUM 1 6/14/19
2 ADDENDUM 2 6/28/19

UCR PROJECT #: 956390
UCR CAAN #: P5673
DATE: 06-14-2019
DRAWN: S.V

SINGLE LINE DIAGRAM & PANEL SCHEDULES

E-0.3

CAMPUS BUILDING PERMIT NUMBER B19-194



GENERAL NOTES

1. THE CONTRACTOR SHALL INSPECT AND VERIFY ALL FIELD CONDITIONS PRIOR TO INSTALLATION.
2. COORDINATE TRENCH ROUTING AND EQUIPMENT LOCATIONS WITH EXISTING CONDITIONS AND NEW WORK.
3. ALL SITE BRANCH CIRCUIT WIRING SHALL BE #10 AWG. OR LARGER.
4. SITE CONDUIT LAYOUT IS DIAGRAMMATICAL ONLY. CONTRACTOR SHALL USE SHORTEST DISTANCE POSSIBLE FOR TRENCHING PURPOSES.
5. FIRE ALARM CONDUIT SHALL HAVE NO MORE THAN (2) 90 DEGREE BENDS OR A TOTAL OF 180 DEGREES BETWEEN PULL BOX INSTALLATION.

CONSTRUCTION NOTES

(1) STUB (2) 2" C.O. INTO MULTI PURPOSE ROOM'S FIRE ALARM PANEL LOCATION. REFERENCE FIRE ALARM DRAWINGS FOR EXACT LOCATION.

(2) (2) 2" C.O. FOR FIRE ALARM WIRING. REFERENCE FIRE ALARM DRAWINGS FOR EXACT WIRING REQUIREMENTS.

(3) STUB (2) 2" C.O. INTO EXISTING ELECTRICAL CLOSET. STUB CONDUIT IN CLOSE PROXIMITY TO NEW REMOTE FIRE ALARM POWER SUPPLY. REFERENCE FIRE ALARM DRAWINGS FOR EXACT LOCATION.

(4) REPLACE EXISTING WALLPACKS WITH NEW LED WALLPACKS WITH INTEGRAL PHOTOCELL CONTROLS.

(5) NOT USED.

(6) PROVIDE 120V POWER FOR FIRE ALARM REMOTE POWER SUPPLY. REFERENCE FIRE ALARM DRAWINGS FOR EXACT LOCATION.

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miyamotointernational.com

Stamp:
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RIVERSIDE, CA 92507

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2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-14-2019
DRAWN:	S.V

ELECTRICAL SITE PLAN

E-1.0

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Fire and Life Safety Division South

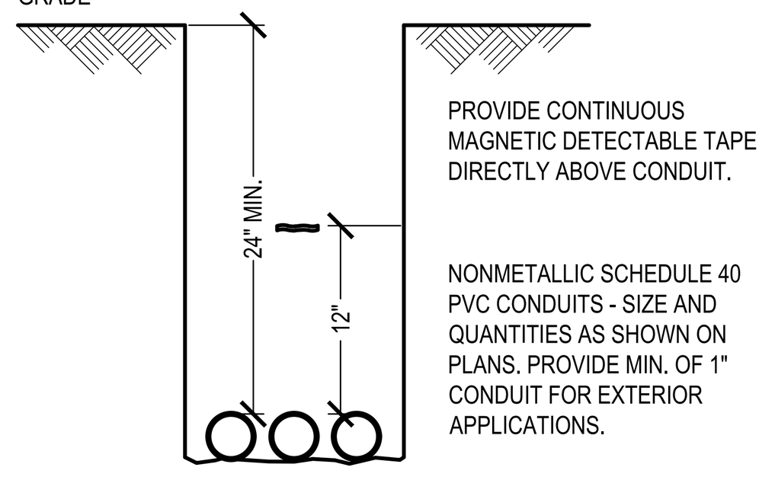
APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT

ELECTRICAL SITE PLAN | SCALE: 1/8" = 1'-0" | 1

07/02/2019

BRANCH CIRCUIT CONDUIT BURIAL | 1



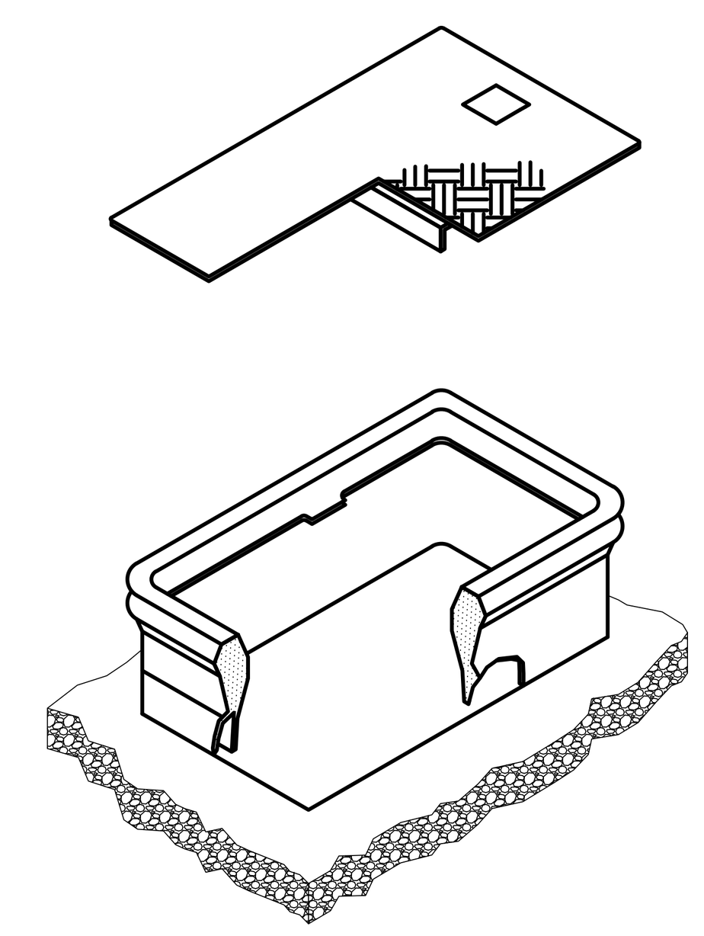
GENERAL NOTES:

1. PLACE CONDUIT IN TRENCH, FILL, AND COMPACT TO 90%. REPAIR AREA TO MATCH SURROUNDING. BACK FILL IS TO BE FREE OF LARGE ROCK, PAVING MATERIALS, ETC., THAT MAY CAUSE PHYSICAL DAMAGE TO CONDUIT. PROVIDE GRANULAR MATERIAL WITH A SAND EQUIVALENT (SE) GREATER THAN 30.
2. PROVIDE 30" MINIMUM COVER WHERE CONDUIT IS PLACED UNDER STREETS, HIGHWAYS, ROADS, ALLEYS, DRIVEWAYS, AND PARKING LOTS.
3. CONDUITS PLACED UNDER OR IN STRUCTURAL FOOTINGS SHALL BE GALVANIZED RIGID METAL (RMC) WRAPPED WITH 20 MIL PVC TAPE. THE COUPLINGS CONNECTED TO THE RMC ELBOW SHALL BE GALVANIZED MATERIAL.
4. MINIMUM TRENCH WIDTH TO BE 24".

PULLBOX INSTALLATION | 2

PROVIDE BOLT DOWN COVER. COVER TO BE HEAVY DUTY TRAFFIC RATED WHERE INSTALLED IN AREAS SUBJECT TO VEHICULAR TRAFFIC.

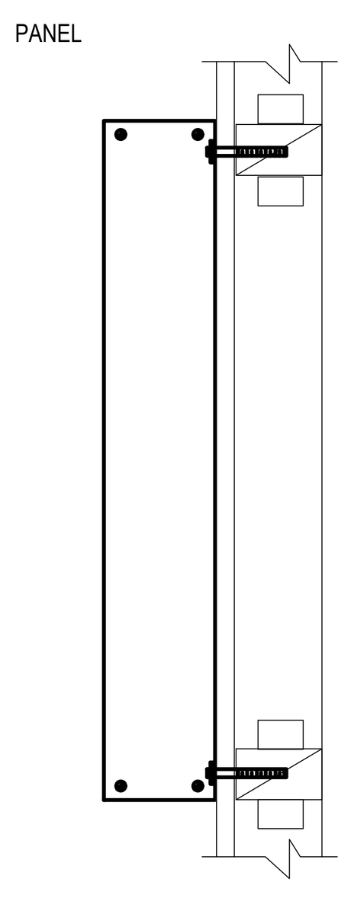
PROVIDE 3/4" CRUSHED ROCK 6" OUT FROM ALL SIDES OF PULLBOX AND 12" DEEP.



GENERAL NOTES:

1. PULLBOX TO BE SIZED PER NEC, U.O.N.
2. PROVIDE COVER LABELED WITH "POWER" OR "DATA" DESIGNATION.

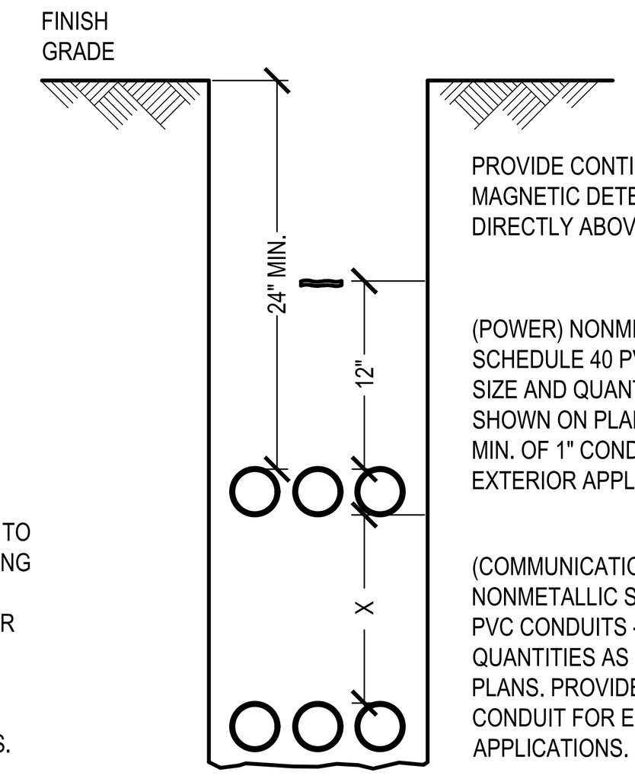
SURFACE MOUNTED PANEL ON WOOD WALL | 3



FIRE ALARM AND POWER CONDUIT BURIAL | 4

SEPARATION (X) BETWEEN AC AND COMMUNICATION CONDUIT FOR SAME TRENCH INSTALLATIONS.

SEPARATION TYPE	'X'
CONCRETE	3 INCHES
MASONRY	4 INCHES
WELL TAMPERED EARTH	12 INCHES



GENERAL NOTES:

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2. PROVIDE 30" MINIMUM COVER WHERE CONDUIT IS PLACED UNDER STREETS, HIGHWAYS, ROADS, ALLEYS, DRIVEWAYS, AND PARKING LOTS.
3. CONDUITS PLACED UNDER OR IN STRUCTURAL FOOTINGS SHALL BE GALVANIZED RIGID METAL (RMC) WRAPPED WITH 20 MIL PVC TAPE. THE COUPLINGS CONNECTED TO THE RMC ELBOW SHALL BE GALVANIZED MATERIAL.
4. MINIMUM TRENCH WIDTH TO BE 24".

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CFORMS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
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Reviewed by: Scott Jackson
Fire and Life Safety Division South

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- | 14

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- | 16

Engineer:
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FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
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REVISIONS

1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-14-2019
DRAWN:	S.V

ELECTRICAL DETAILS

E-2.1

R:_PROJECT\2019\19-101 FALKIRK FA AND ADA IMPROVEMENTS\19-101 E-DETAILS - 2019-06-28 - SAMUEL VELA

CAMPUS BUILDING PERMIT NUMBER B19-194

STRUCTURAL OBSERVATIONS

010000-0007 (07/07/14)

1. VISUAL OBSERVATIONS WILL BE PERFORMED AT THE DISCRETION OF THE OWNER, ARCHITECT, EOR, AND AS REQUIRED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE BUILDING CODE. VISUAL OBSERVATIONS SHALL NOT BE CONSIDERED AS A SUBSTITUTE FOR THE SPECIAL INSPECTION REQUIREMENTS.
2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY THE EOR AS TO WHEN EACH MAJOR PHASE OF CONSTRUCTION IS READY FOR OBSERVATION A MINIMUM OF FIVE (5) WORKING DAYS IN ADVANCE.
3. THE FOLLOWING MAJOR PHASES OF CONSTRUCTION REQUIRE A SITE VISIT AND STRUCTURAL OBSERVATION REPORT FROM THE SEOR:
    - FOUNDATION REBAR AND ANCHORS - PRIOR TO FIRST POUR OF CONCRETE
    - STRUCTURAL FRAMING - AFTER ERECTION AND PRIOR TO CLOSING IN
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT NAILING, REINFORCEMENT, WELDS, CONNECTIONS, ETC. ARE VISIBLE FOR OBSERVATION WHEN THE SEOR IS ON SITE AND FOR ANY SCHEDULING DELAYS DUE TO NONCOMPLIANT ITEMS FOUND DURING THE OBSERVATION.
5. AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVERS' KNOWLEDGE, HAVE NOT BEEN RESOLVED.

SHEAR WALL SCHEDULE NOTES

1. INTERMEDIATE NAILING SHALL BE 10d @ 12"OC.
2. FRAMING, INCLUDING BLOCKING, AT ADJOINING PANEL EDGES SHALL BE 3x MIN AND NAILS SHALL BE STAGGERED WHERE SHEARWALL CAPACITY PER SHEAR WALL SCHEDULE EXCEEDS 350 PLF.
3. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6"OC (152 mm) ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3" (76 MM) NOMINAL OR THICKER AND NAILS ON EACH SIDE SHALL BE STAGGERED.
4. USE OF MACHINE NAILING IS SUBJECT TO APPROVAL BY THE PROJECT STRUCTURAL ENGINEER, WITH APPROVAL, THE MACHINE NAILING IS SUBJECT TO THE DEMONSTRATION OF CONTINUOUS SATISFACTORY JOBSITE PERFORMANCE. IF NAIL HEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER, OR IF MINIMUM EDGE DISTANCE ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.
5. NO PANEL LESS THAN 12" WIDE SHALL BE USED IN VERTICAL PLYWOOD SHEAR WALLS.
6. ALL SILL BOLTS SHALL HAVE A 0.229" x 3" SQ MIN PLATE WASHER UNDER NUT. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE(S) WITH SHEATHING.
7. NAILS SHALL BE COMMON OR GALVANIZED (HOT-DIPPED OR TUMBLED) BOX AND SHALL BE LOCATED 3/8" MINIMUM FROM PANEL EDGES.
8. PLYWOOD EN AND SN SHALL BE STAGGERED.
9. FOUNDATION SILL PLATES ARE THOSE PLACED AGAINST CONCRETE AND RECEIVING BOLTING.
10. SDS SCREWS SHALL BE USED WHERE 16d NAILS DO NOT HAVE MIN PENETRATION OF 1.25" INTO MAIN MEMBER. SDS SCREWS SHALL HAVE MIN 2" PENETRATION INTO MAIN MEMBER.
11. MAXIMUM STUD SPACING SHALL BE 24"OC.

NAILING SCHEDULE

061000-0001 (05/31/17)

(UNLESS OTHERWISE NOTED ON PLANS)

COMMON NAILS SHALL BE USED FOR NAILING AT TYPICAL CONNECTIONS NOTED BELOW (UNO).

CONNECTION, NAIL TYPE	NAILING
JOISTS TO SILL OR GIRDER, TOENAIL	(3) 8d
JOISTS TO RIM JOIST, FACE NAIL	(3) 16d
BRIDGING TO JOIST, TOENAIL EACH END	(2) 8d
BLOCKING BETWEEN JOISTS/RAFTERS TO TOP PLATE, TOENAIL	(3) 8d
1" x 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	(2) 8d
WIDER THAN 1" x 6" SUBFLOOR TO EACH JOIST, BLIND & FACE NAIL	(3) 8d
2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	(2) 16d
SILL PLATE TO JOIST OR BLOCKING, FACE NAIL	16d @ 16" OC
TOP PLATE TO STUD, END NAIL	(2) 16d, TYP, UNO (4) 16d @ 2x10 STUDS
STUD TO SILL PLATE	(4) 8d, TOENAIL OR (2) 16d, END NAIL, TYP, UNO (7) 8d, TOE NAIL OR (4) 16d, END NAIL @ 2x10 STUDS (2) 20d END NAIL @ 3x SILL PLATE
DOUBLE STUDS, FACE NAIL	16d @ 24" OC
DOUBLE TOP PLATES, FACE NAIL	16d @ 16"OC
TOP PLATES, LAPS, FACE NAIL	(8) 16d, UNO (18) 16d @ SHEARWALL LOCATIONS, UNO
TOP PLATES AT INTERSECTIONS, FACE NAIL	(2) 16d
CONTINUOUS HEADER, TWO PIECES	16d @ 16"OC ALONG EA EDGE
CEILING JOISTS TO PLATE, TOENAIL	(3) 8d
CONTINUOUS HEADER TO STUD, TOENAIL	(4) 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	(3) 16d
RAFTER TO PLATE, TOENAIL	(3) 8d
RIM JOIST TO TOP PLATE, TOENAIL	8d @ 6" OC
JACK RAFTER TO HIP, FACE NAIL	(2) 16d
1" BRACE TO EACH STUD & PLATE, FACE NAIL	(2) 8d
ROOF RAFTER TO 2x RIDGE BEAM, FACE NAIL	(2) 16d
1"x8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	(3) 8d
WIDER THAN 1"x8" SHEATHING TO EACH BEARING, FACE NAIL	(3) 8d
2" PLANKS	16d @ EA BEARING
BUILT-UP CORNER STUDS	16d @ 24" OC
BUILT-UP GIRDERS AND BEAMS	20d @ 32" OC @ TOP & BOTT & STGRD (2) 20d @ ENDS & @ EA SPLICE (2) 16d @ EA BEARING

NAIL SCHEDULE (COMMON NAILS)

SIZE	DIAMETER (IN)	LENGTH (IN)
8d	0.131	2 1/2
10d	0.148	3
12d	0.148	3 1/4
16d	0.162	3 1/2
20d	0.192	4

STATEMENT OF SPECIAL INSPECTIONS

010000-0003 (06/06/17)

1. THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. ALL SPECIAL INSPECTION SERVICE FIRMS SHALL BE HIRED AND APPROVED BY THE UCR-CBO.
2. SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVED FABRICATORS MUST SUBMIT A CERTIFICATE OF COMPLIANCE FOR OFFSITE FABRICATIONS SUCH AS STRUCTURAL STEEL, PRECAST CONCRETE, GLUED LAMINATED TIMBER, ETC. PROVIDE APPROVALS AND DOCUMENTATION OF SHOP TO THE CBO FOR APPROVAL.
3. ALL INSPECTIONS SHALL BE PERFORMED BY INDEPENDENT SPECIAL INSPECTORS. JOB SITE VISITS BY THE STRUCTURAL ENGINEER OR BUILDING OFFICIAL DO NOT CONSTITUTE AND ARE NOT A SUBSTITUTE FOR INSPECTIONS BY A SPECIAL INSPECTOR.
4. ALL INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND EOR. THE FINAL REPORTS BY THE SPECIAL INSPECTOR(S) MUST CERTIFY THAT THE ENTIRE STRUCTURAL SYSTEM COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS.
5. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT THESE INSPECTIONS ARE PERFORMED.
6. WORK REQUIRING SPECIAL INSPECTION SHALL BE INSPECTED BY THE SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS PERFORMED AND AT THE COMPLETION OF WORK. CONTINUOUS INSPECTION CONSISTS OF FULL-TIME INSPECTION; PERIODIC INSPECTION CONSISTS OF PART-TIME OR INTERMITTENT INSPECTION.
7. THE FOLLOWING SPECIAL INSPECTIONS ARE IN ADDITION TO INSPECTIONS BY THE BUILDING OFFICIAL. THIS LIST IS NOT INTENDED TO BE ALL INCLUSIVE.

STRUCTURAL CONCRETE

PERIODIC: VERIFY USE OF REQUIRED DESIGN MIX

CONT: SAMPLING FRESH CONCRETE & PERFORMING SLUMP AND AIR CONTENT TESTS & DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS

CONT: INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES

PERIODIC: INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUE

PERIODIC: VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS

PERIODIC: INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED

PERIODIC: POST-INSTALLED AND ADHESIVE ANCHORS

ROUGH CARPENTRY / WOOD

PERIODIC: NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF THE SEISMIC FORCE-RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, DRAG STRUTS, BRACES, SHEAR PANELS AND HOLD-DOWNS WHERE THE FASTENER SPACING OF THE SHEATHING IS 4 INCHES ON CENTER OR LESS.

STRUCTURAL STEEL

PERIODIC: HIGH-STRENGTH BOLTS, NUTS, AND WASHERS IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS, MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED

PERIODIC: INSPECTION OF HIGH-STRENGTH BOLTING BEARING-TYPE CONNECTIONS

PERIODIC: INSPECTION OF SLIP-CRITICAL CONNECTIONS USING TURN-OF-NUT METHOD WITH MATCHMARKING, DIRECT TENSION INDICATOR METHOD, OR TWIST OFF BOLTS

CONT: INSPECTION OF SLIP-CRITICAL CONNECTIONS USING CALIBRATED WRENCH METHOD OR TURN-OF-NUT WITHOUT MATCHMARKING

PERIODIC: STRUCTURAL STEEL IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS

PERIODIC: STRUCTURAL STEEL MANUFACTURER'S CERTIFIED MILL TEST REPORTS REQUIRED

PERIODIC: INSPECTION OF STEEL FRAME BRACING & STIFFENER DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS

PERIODIC: STEEL FRAME MEMBER LOCATIONS

PERIODIC: APPLICATIONS OF JOINT DETAILS AT EACH CONNECTION

WELDING

CONT: COMPLETE AND PARTIAL PENETRATION GROOVE WELDS

CONT: FILLET WELDS > 5/16" AND MULTIPASS FILLET WELDS

PERIODIC: FILLET WELDS ≤ 5/16"

PERIODIC: WELD FILLER MATERIAL IDENTIFICATION MARKINGS TO CONFORM TO AWS STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS, MANUFACTURER'S CERTIFICATION OF COMPLIANCE REQUIRED

CONT: WELDING OF REINFORCEMENT STEEL RESISTING SEISMIC FORCES, INDICATED ON PLANS AND DETAILS AS LFRS ELEMENTS OR CONNECTIONS

PERIODIC: VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706

CONT: WELDING OF STIRRUPS, HOOPS OR TIES

PERIODIC: ALL OTHER REINFORCEMENT WELDS, UNO

POST-INSTALLED ANCHORS

030500-0000 (02/15/17)

UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE FOLLOWING APPLIES TO ALL POST-INSTALLED ANCHORAGE INTO HARDENED CONCRETE OR MASONRY WHICH INCLUDES TYPES SUCH AS EXPANSION, WEDGE, SLEEVE, ADHESIVE/EPOXY, SHOT-PIN, SCREW AND UNDERCUT.

1. INSTALL PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) EXCEPT AS OTHERWISE STATED IN THE SPECIFIED PRODUCT REPORTS. USE INSTALLATION PROCEDURES FOR CRACKED CONCRETE CONDITIONS. DO NOT USE CORE DRILL BITS FOR ANCHOR HOLES WITHOUT PRIOR EOR APPROVAL. COPIES OF INSTALLATION INSTRUCTIONS SHALL BE MAINTAINED ON SITE.
2. CLEAN OUT ANCHOR HOLES AND SET ANCHORS PER THE PRODUCT'S ICC REPORT FOR THE APPROPRIATE CONDITIONS. INSTALL UNDER SUPERVISION OF THE SPECIAL INSPECTOR WHERE REQUIRED.
3. PROVIDE CARBON STEEL ANCHORS AT DRY INTERIOR LOCATIONS AND STAINLESS STEEL TYPE 304 OR 316 AT EXTERIOR / DAMP INTERIOR LOCATIONS, REINFORCEMENT BARS TO RECEIVE CONCRETE COVER MAY BE UNCOATED. ANCHORS SHALL BE CLEAN AND FREE OF DEBONDING SUBSTANCES.
4. EMBEDMENT REFERS TO THE FINAL INSTALLED EFFECTIVE DEPTH "Hef" AS DEFINED IN THE PRODUCT REPORT, REQUIRED ANCHOR HOLE DEPTH FOR INSTALLATION MAY BE DEEPER.
5. MAINTAIN A MINIMUM OF 2 INCHES FROM EXISTING REINFORCEMENT, CONDUIT, POST-TENSIONING (WHERE OCCURS), ETC. PRIOR TO DRILLING, CORING OR SHOOTING PINS INTO EXISTING CONCRETE OR MASONRY. USE NON DESTRUCTIVE TESTING TO LOCATE SUCH ITEMS, FOR INSTALLATION DEEPER THAN 3 INCHES USE GROUND PENETRATING RADAR OR X-RAY METHODS.
6. WHEN THE FULL ANCHOR EMBEDMENT DEPTH, SPACING OR EDGE DISTANCE CANNOT BE OBTAINED, NOTIFY THE EOR AND IOR.
7. FILL ABANDONED HOLES WITH EPOXY AND PATCH SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. CLEAR DISTANCE BETWEEN NEW HOLES AND ABANDONED HOLES SHALL BE 2" OR TWO ANCHOR DIAMETERS, WHICHEVER IS GREATER, UNLESS OTHERWISE SPECIFIED BY EOR. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.
8. INSTALL IN DRY CONCRETE OR MASONRY HAVING A MINIMUM AGE OF 21 DAYS.
9. ADHESIVE/EPOXY ANCHORS ON THIS PROJECT ARE NOT DESIGNED TO SUPPORT OR INTENDED TO RESIST SUSTAINED TENSION LOADS UNLESS NOTED OTHERWISE.

ABBREVIATIONS

010000-0002-ALT1 (04/30/18)

AB	ANCHOR BOLT	CONN	CONNECTION	EXP	EXPANSION	HT	HEIGHT	OC	ON CENTER	SIM	SIMILAR
ABV	ABOVE	CONT	CONTINUOUS	EXT	EXTERIOR	ID	INSIDE DIAMETER	OD	OUTSIDE DIAMETER	SMS	SHEET METAL SCREW
ADDL	ADDITIONAL	CP	COMPLETE PENETRATION	FIN	FINISH	I.F.	INSIDE FACE	O.F.	OUTSIDE FACE	SN	SILL NAIL
ADJ	ADJACENT	CSK	COUNTERSINK	FLG	FLANGE	IN	INCH	OH	OPPOSITE HAND	SOG	SLAB ON GRADE
AFF	ABOVE FINISH FLOOR	CTR(D)	CENTER(ED)	FLR	FLOOR	INT	INTERIOR	OPNG	OPENING	SQ	SQUARE
ALT	ALTERNATE	D_B	BAR OR BOLT DIAMETER	FN	FIELD NAILING	IOR	INSPECTOR OF RECORD	PDF	POWDER/POWER DRIVEN FASTENER	SS	STAINLESS STEEL
ARCH	ARCHITECT(URAL)	DBL	DOUBLE	FND	FOUNDATION	JST	JOIST	PJ	PANEL JOINT	STD	STANDARD
BLDG	BUILDING	DEMO	DEMOLITION	F.O.	FACE OF	JT	JOINT	PJP	PARTIAL JOINT PENETRATION	STGRD	STAGGERED
BLK	BLOCK	DET	DETAIL	FS	FAR SIDE OR FIELD SCREW	KLF	KIPS PER LINEAR FOOT	PL	PLATE	STIFF	STIFFENER
BLKG	BLOCKING	DIA	DIAMETER	FRMG	FRAMING	KSF	KIPS PER SQUARE FOOT	PLC(S)	PLACE(S)	STL	STEEL
BLW	BELOW	DIAG	DIAGONAL	FRP	FIBER REINFORCED POLYMER	KSI	KIPS PER SQUARE INCH	PLF	POUNDS PER LINEAR FOOT	STRUCT	STRUCTURAL
BM	BEAM	DIM	DIMENSION	FT	FOOT OR FEET	L	ANGLE	PLYWD	PLYWOOD	T&B	TOP & BOTTOM
BN	BOUNDARY NAILING	DIR	DIRECTION	FTG	FOOTING	LFRS	LATERAL FORCE RESISTING SYSTEM	PREFAB	PREFABRICATED	THK	THICK
B.O.	BOTTOM OF	DO	DITTO	G	GIRDER			PSF	POUNDS PER SQUARE FOOT	THRD	THREADED
BOTT	BOTTOM	DWG	DRAWING	GA	GAGE	LLH	LONG LEG HORIZONTAL	PSI	POUNDS PER SQUARE INCH	T.O.	TOP OF
BRB	BUCKLING-RESTRAINED BRACE	(E)	EXISTING	GALV	GALVANIZED	LLV	LONG LEG VERTICAL	PT	PRESSURE TREATED OR POST TENSION	TRANS	TRANSVERSE
BRG	BEARING	EA	EACH	GB	GRADE BEAM	LONG	LONGITUDINAL			TYP	TYPICAL
BS	BOTH SIDES	EF	EACH FACE	GC	GENERAL CONTRACTOR	LP	LOW POINT	QTY	QUANTITY	UNO	UNLESS NOTED OTHERWISE
BTWN	BETWEEN	EJ	EXPANSION JOINT	GLB	GLUED-LAMINATED BEAM	LWC	LIGHT WEIGHT CONCRETE	RAD, R	RADIUS	VERT	VERTICAL
C	CAMBER	EMBED	EMBEDMENT	HAB	HEADED ANCHOR BOLT	MAX	MAXIMUM	REF	REFERENCE	VIF	VERIFY IN FIELD
CIP	CAST IN PLACE	ELEC	ELECTRICAL	HD	HOLDOWN	MB	MACHINE BOLT	REINF	REINFORCING	W/	WITH
CJ	CONTROL/CONSTRUCTION JOINT	ELEV	ELEVATION OR ELEVATOR	HDR	HEADER	MECH	MECHANICAL	REQD	REQUIRED	W/O	WITHOUT
CJP	COMPLETE JOINT PENETRATION	EN	EDGE NAILING	HGR	HANGER	MFR	MANUFACTURER	(S)	"SIMPSON" STRONG TIE CO. OR "USP" W/ EQUIVALENT ICC VALUES	WF, W	WIDE FLANGE
CL	CENTERLINE	E.O.	EDGE OF	HK	HOOK	MIN	MINIMUM			WLD	WELDED
CLG	CEILING	EOR	ENGINEER OF RECORD	HORIZ	HORIZONTAL	MTL	METAL	SB	SILL BOLT	WO	WHERE OCCURS
CLR	CLEAR	EQ	EQUAL	HP	HIGH POINT	(N)	NEW	SC	SAW CUT OR SLIP CRITICAL	WP	WORK POINT
CMU	CONCRETE MASONRY UNIT	EQUIP	EQUIPMENT	HS	HIGH STRENGTH	NS	NEAR SIDE OR NON-SHRINK	SCHED	SCHEDULE	WT	WEIGHT
COL	COLUMN	ES	EACH SIDE OR EDGE SCREW	HSB	HIGH STRENGTH BOLT	NTS	NOT TO SCALE	SEOR	STRUCTURAL ENGINEER OF RECORD	WWF	WELDED WIRE FABRIC
CONC	CONCRETE	EW	EACH WAY	HSS	HOLLOW STRUCTURAL STEEL	NWC	NORMAL WEIGHT CONCRETE	SHTG	SHEATHING		

ROUGH CARPENTRY / WOOD

061000-0000 (04/21/17)

1. ALL GRADES SPECIFIED ARE MINIMUM GRADES REQUIRED. DOUGLAS FIR (DF) SHALL BE GRADED BY THE WESTERN WOOD PRODUCTS ASSOCIATION GRADING RULES, AND ASTM D245. REDWOOD SHALL BE GRADED BY THE CALIFORNIA REDWOOD ASSOCIATION, REDWOOD INSPECTION SERVICE. WOOD SPECIES SPECIFICATIONS ("DF" INDICATES 'DOUGLAS FIR-LARCH CONFORMING TO DOC PS20):

    NON-LOAD BEARING STUDS, TOP PLATES, BLOCKING, FURRING AND BRACING .... DF #2
    JOISTS, RAFTERS, PURLINS, BEAMS & POSTS .... DF #1 (UNO)
    LOAD BEARING STUDS (UNO ON PLAN):
    STUDS 0-15' .... DF #2
    STUDS >15' .... DF #1

2. MOISTURE CONTENT OF SAWN LUMBER SHALL NOT EXCEED 19% WHEN FRAMING STARTS OR SHEATHING IS APPLIED. ANY NONCOMPLIANT WORK SHALL BE REJECTED AND REFRAMED WITH ACCEPTABLE LUMBER.
3. ARCHITECTURALLY EXPOSED TIMBERS 4" NOMINAL IN THE LEAST DIMENSION SHALL NOT CONTAIN BOXED HEART.
4. WOOD MEMBERS SHALL BE PRESERVATIVE-TREATED (PT) OR NATURALLY DURABLE (WITH APPROVAL OF SEOR) WHERE EXPOSED TO WEATHER AND IN ACCORDANCE WITH CBC SECTION 2304.12. SILL PLATES SHALL BE PRESERVATIVE-TREATED DOUGLAS FIR #2. END CUTS AND HOLES IN PT SILL PLATES SHALL BE TREATED.
5. FASTENERS FOR PRESERVATIVE-TREATED WOOD, WOOD EXPOSED TO WEATHER, AND FIRE RETARDANT-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A 153.

    EXCEPTION: FASTENERS OTHER THAN NAILS, TIMBER RIVETS, WOOD SCREWS AND LAG SCREWS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B 695, CLASS 55 MINIMUM.

6. ALL CONNECTORS THAT ARE EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED, STAINLESS STEEL OR AN EQUIVALENT APPROVED BY THE SEOR.
7. UNLESS NOTED OTHERWISE, SILL FASTENERS FOR INTERIOR NON-STRUCTURAL WALLS MAY BE 0.157" DIAMETER x 1 1/4" EMBED PDF's AT 16"OC.
8. SILL PLATES SHALL BE BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS AT 48" OC MAX, UNO, WITH A BOLT BETWEEN 7 x BOLT DIAMETER (4 3/8" MIN) TO 12" FROM THE END OF EACH PIECE OF SILL (2 BOLTS MIN EACH PIECE). PIECE OF SILL SHALL BE CONSIDERED ENDED WHERE PLATE IS CUT OUT OVER ONE-THIRD OF CROSS-SECTION.
9. ANCHOR BOLTS FOR BEARING WALLS SHALL HAVE 9" EMBEDMENT (UNO) MEASURED FROM TOP OF SLAB.
10. ALL BOLTS IN WOOD SHALL BE ASTM A307 STANDARD BOLTS, UNO. BOLTS AND SCREWS SHALL BE TIGHTENED AT TIME OF ERECTION AND RETIGHTENED BEFORE CLOSING IN OR AT THE COMPLETION OF THE JOB. HOLES IN WOOD AND STEEL MEMBERS FOR BOLTS SHALL BE THE NOMINAL BOLT DIAMETER PLUS 1/16".
11. NAIL SPACING SHALL NOT BE LESS THAN THE REQUIRED PENETRATION. EDGE DISTANCES AND END DISTANCES SHALL NOT BE LESS THAN HALF OF THE REQUIRED PENETRATION. ALL NAIL SPACING, EDGE DISTANCES, AND END DISTANCES SHALL BE SUCH AS TO AVOID SPLITTING OF THE WOOD. HOLES FOR NAILS, WHERE NECESSARY TO PREVENT SPLITTING, SHALL BE BORED OF A DIAMETER SMALLER THAN THAT OF THE NAILS.
12. HOLES IN WOOD FOR LAG SCREWS SHALL BE FIRST BORED TO THE SAME DIAMETER AND DEPTH AS THE SHANK. HOLES FOR THE THREADED PORTION SHALL BE BORED WITH A BIT DIAMETER EQUAL TO 40% TO 70% OF THE SHANK DIAMETER IN DOUGLAS FIR. FOR OTHER WOOD, SEE THE NDS.
13. LAG SCREWS AND SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE.
14. STANDARD CUT STEEL WASHERS SHALL BE PROVIDED UNDER HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS WHICH BEAR ON WOOD. SEE SHEAR WALL SCHEDULE FOR WASHER REQUIREMENTS AT SHEAR WALL SILL BOLTS WHERE OCCUR.
15. STUD BEARING WALLS AND PARTITIONS SHALL HAVE DOUBLE TOP PLATES LAPPED AT WALL AND PARTITION INTERSECTIONS. JOINTS IN UPPER AND LOWER MEMBERS OF DOUBLE TOP PLATES SHALL BE STAGGERED AT LEAST 4'-0".
16. NOTCHING AND HOLES SHALL NOT BE ALLOWED EXCEPT AS DETAILED ON THESE PLANS OR AS APPROVED BY THE EOR.

SAWN LUMBER LEGEND

17. ALL STRUCTURAL FLOOR, ROOF AND WALL SHEATHING SHALL BE APA RATED AND SHALL CONFORM TO DOC PS1 OR PS2. FLOOR SHEATHING SHALL BE T&G WITH MINIMUM 48/24 SPAN RATING.
18. WOOD MEMBERS SHALL BE PRESERVATIVE-TREATED OR NATURALLY DURABLE WHERE EXPOSED TO WEATHER AND IN ACCORDANCE WITH CBC SECTION 2304.12. ALL DECK WOOD MEMBERS SHALL BE TREATED TO AWPA USE CATEGORY TYPE UC4A.
19. ALL CONNECTORS THAT ARE EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED, STAINLESS STEEL OR A SEOR APPROVED EQUIVALENT.

REINFORCING STEEL

032000-0000 (04/21/17)

1. REINFORCING GRADES FOR CONCRETE OR MASONRY:
    A. ALL BARS EXCEPT THOSE TO BE WELDED.......... ASTM A615, GRADE 60
    B. TIES AND STIRRUPS .... ASTM A615, GRADE 60
    C. WELDED WIRE FABRIC .... ASTM A1064
    D. ALL BARS TO BE WELDED .... ASTM A706, GRADE 60

    NOTE: ALL BARS SHALL BE DEFORMED.

2. MAINTAIN MINIMUM CONCRETE COVER FROM FACE OF CONCRETE TO EDGE OF ALL REINFORCEMENT AS FOLLOWS (UNO):

CONDITION	COVER
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
FORMED AND EXPOSED TO EARTH OR WEATHER	
- #6 BARS AND LARGER	2"
- #5 BARS AND SMALLER	1 1/2"
UNEXPOSED RAISED SLABS AND WALL FACES (#11 BARS AND SMALLER)	3/4"
UNEXPOSED COLUMNS AND BEAMS	1 1/2"
STRUCTURAL SLABS ON GRADE	
- FROM BOTTOM OF SLAB	2"
- FROM TOP OF SLAB	1 1/2"
OTHER CONCRETE NOT EXPOSED TO WEATHER OR EARTH FOR #11 BARS AND SMALLER	3/4"

PROVIDE THE LARGEST COVER REQUIRED FOR ALL APPLICABLE CONDITIONS. WHERE #3 STIRRUPS OR TIES ARE USED, ENSURE THAT THE COVER FOR LONGITUDINAL BARS IS ADEQUATE.

3. REINFORCEMENT SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE". EACH REINFORCING BAR SHALL BE WIRED TO A CROSS BAR AT A MAXIMUM SPACING OF 24"OC. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING IN POSITIONS SHOWN ON THE PLANS. DO NOT USE WOOD OR BRICK TO SUPPORT REINFORCING.
4. SPLICES IN CONTINUOUS REINFORCEMENT AS USED IN WALLS, WALL FOOTINGS, ETC., SHALL HAVE A CLASS "B" LAP (1'-6" MIN) AND THE SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 5'-0" APART. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. BARS MAY BE WIRED TOGETHER AT SPLICES OR LAPS EXCEPT FOR TOP REINFORCING OF BEAMS AND SLABS OR WHERE SPECIFICALLY DETAILED TO BE SEPARATED. WELDED WIRE FABRIC SHALL BE LAPPED 12" MINIMUM.
5. ALL DOWELS, ANCHOR BOLTS AND OTHER HARDWARE TO BE SET IN CONCRETE SHALL BE TIED IN PLACE PRIOR TO PLACEMENT OF CONCRETE. NO WET SETTING, STABBING, RODDING OR OTHER MOVEMENT OF EMBEDDED ITEMS SHALL BE PERFORMED DURING PLACEMENT OF CONCRETE.
6. BEND REINFORCING BARS COLD.
7. STEEL SHALL BE KEPT CLEAN AND FREE OF RUST.
8. DOWELS BETWEEN FOOTING AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING AS THE MAIN REINFORCING UNO.
9. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN PLACE INSPECTION IS MADE.
10. CHAIRS OR SPACERS FOR REINFORCING SHALL BE PLASTIC WHEN RESTING ON EXPOSED SURFACES.
11. WHERE LONGITUDINAL REINFORCING BARS ARE PLACED IN 2 OR MORE LAYERS, BARS IN THE UPPER LAYERS SHALL BE PLACED DIRECTLY ABOVE BARS IN THE BOTTOM LAYER.
12. ALL BENDS WITHIN STIRRUPS, HOOPS, AND CROSS-TIES SHALL ENGAGE A LONGITUDINAL BAR. PROVIDE #4 SPACER BAR WHERE A LONGITUDINAL BAR IS NOT SPECIFICALLY DETAILED.
13. WELDING OF REINFORCING BARS SHALL BE PERFORMED PER AMERICAN WELDING SOCIETY (AWS) D1.4 USING E90XX ELECTRODES FOR A615 REINFORCING AND E80XX ELECTRODES FOR A706 REINFORCING.

STRUCTURAL STEEL

051200-0000 (04/21/17)

1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS AND STANDARD OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), AS CONTAINED IN THE LATEST EDITION OF "AISC MANUAL OF STEEL CONSTRUCTION".
2. ALL STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND SHALL BE LEFT IN PLACE UNTIL OTHER MEANS IS PROVIDED TO ADEQUATELY BRACE THE STRUCTURE.
3. PROVIDE THE FOLLOWING MATERIALS FOR STRUCTURAL STEEL UNO:

SHAPE	MATERIAL/GRADE
WIDE FLANGE SECTIONS & TEES	ASTM A992
PLATES, ANGLES, CHANNELS	ASTM A36
SQUARE OR RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE C (F_y=50 KSI) OR ASTM A1085
ROUND HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE C (F_y=46 KSI) OR ASTM A1085
PIPES	ASTM A53 TYPE E OR S, GRADE B, (F_y=35 KSI)
MACHINE BOLTS (MB)	ASTM A307
HIGH STRENGTH BOLTS (HSB)	ASTM A325 TYPE N
WELDED HEADED STUDS	ASTM A108
THREADED RODS FOR ANCHOR BOLTS	ASTM F1554, GRADE 55
HIGH STRENGTH PLATE	ASTM A572 GRADE 50

    a. EXCEPT AS OTHERWISE NOTED, ALL BOLTS SHALL BE HIGH STRENGTH BOLTS.
    b. WHERE WELDING TO GRADE 55 THREADED ANCHOR RODS IS REQUIRED, USE ASTM F1554 GRADE 55 WITH SUPPLEMENT S1.

4. ALL CONNECTIONS NOT SHOWN SHALL CONFORM TO THE "AISC MANUAL OF STEEL CONSTRUCTION" AND SHALL BE SUBMITTED ON SHOP DRAWINGS FOR REVIEW BY EOR PRIOR TO FABRICATION.
5. ALL WELDED HEADED STUDS, THREADED STUDS, AND DEFORMED BARS SHALL BE NELSON, OR EQUIVALENT, AND WELDED (IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS BY CERTIFIED WELDERS) SO AS TO FULLY DEVELOP THE TENSILE CAPACITY OF THE CONNECTOR.
6. BOLTS WITH UPSET THREADS ARE NOT ALLOWED. USE THE APPROPRIATE NUT AND WASHER TYPE FOR THE SPECIFIED BOLT.
7. ALL STEEL FABRICATION SHALL BE PERFORMED BY A LICENSED FABRICATOR.
8. ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL PERMANENTLY EXPOSED TO THE ELEMENTS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION UNLESS A WEATHER PROOF COATING IS SPECIFIED BY THE ARCHITECT, UNO. STAINLESS AND WEATHERING STEELS, WHERE SPECIFIED, ARE EXEMPT FROM THIS REQUIREMENT. GALVANIZED SURFACES SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE REPAIRED AS NECESSARY. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10.
9. SEE ARCHITECTURAL DRAWINGS FOR NAILER HOLES, WELDED STUDS OR OTHER ITEMS NOT SHOWN IN THESE DRAWINGS.
10. WHERE STEEL IS EMBEDDED IN CONCRETE OR MASONRY, PROVIDE HOLES AS REQUIRED FOR PASSAGE OF CONTINUOUS REINFORCING BARS WHERE INDICATED ON DRAWINGS.
11. DO NOT CUT HOLES IN STRUCTURAL STEEL WITHOUT APPROVAL OF THE SEOR.
12. PLACE NON-SHRINK OR DRYPACK GROUT UNDER ALL BASE PLATES AND ALLOW TO CURE BEFORE APPLYING LOADS.
13. ALL WORK SHALL BE IN CONFORMANCE WITH ANY AND ALL TESTING, INSPECTION, QUALIFICATION, AND QUALITY ASSURANCE PROVISIONS AS REQUIRED BY THE BUILDING CODE AND ANY APPLICABLE STANDARDS. THESE STANDARDS INCLUDE, BUT ARE NOT LIMITED TO THE LATEST VERSION OF THE FOLLOWING: AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"; AISC 341 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS", AWS D1.1 "STRUCTURAL WELDING CODE - STEEL"; AWS D1.8 "STRUCTURAL WELDING CODE - SEISMIC SUPPLEMENT"; AND RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". CONFORMANCE TO SUPPLEMENTS TO THESE STANDARDS, IF PUBLISHED ON OR BEFORE THE DATE OF PERMIT ISSUANCE, IS ALSO REQUIRED. ALTHOUGH THESE CONTRACT DOCUMENTS INCLUDE GENERAL REFERENCES TO CODES AND STANDARDS, AND REFERENCES TO OR INCLUSIONS OF SPECIFIED PROVISIONS, OMISSIONS OF ANY APPLICABLE CODE, STANDARD, OR PROVISION DOES NOT RELIEVE THE GENERAL CONTRACTOR FROM COMPLIANCE TO THE APPLICABLE REQUIREMENTS. COORDINATION OF QUALITY CONTROL AND QUALITY ASSURANCE IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

HIGH-STRENGTH BOLTS

051200-0000 (04/21/17)

1. SEE STRUCTURAL STEEL NOTES THIS SHEET FOR ADDITIONAL INFORMATION.
2. JOINT ASSEMBLIES USING HIGH-STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE "AISC (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
3. ALL HIGH-STRENGTH BOLTS SHALL CONFORM TO ASTM A-325 OR ASTM A-490, NUTS SHALL CONFORM TO ASTM A-563 AND WASHERS SHALL CONFORM TO ASTM F-436.
4. PAINT SHALL NOT BE PERMITTED ON CONTACT SURFACES UNLESS NOTED OTHERWISE. CONTACT SURFACES OF BOLTED PARTS SHALL BE DESCALED AND FREE OF DIRT, OIL, BURRS, PITS, AND OTHER DEFECTS WHICH PREVENT SOLID SEATING OF PARTS.
5. ALL HIGH-STRENGTH BOLTS SHALL BE TIGHTENED TO THE AISC SNUG TIGHT CONDITION UNLESS SPECIFIED AS SLIP-CRITICAL.
6. SLIP-CRITICAL BOLTS SHALL HAVE CLASS "A" FAYING SURFACES. SLIP-CRITICAL JOINT ASSEMBLIES SHALL BE FULLY PRE-TENSIONED BY TURN-OF-NUT TIGHTENING, TENSION CONTROL CALIBRATED WRENCH TIGHTENING, TWIST-OFF BOLTS CONFORMING TO ASTM F1852, OR BY DIRECT TENSION INDICATOR TIGHTENING CONFORMING TO ASTM F959.

WELDING

051200-0000 (04/21/17)

1. WELDING PROCEDURES, ELECTRODES AND WELDER QUALIFICATIONS SHALL CONFORM TO THE "CODE FOR WELDING IN BUILDING CONSTRUCTION", AMERICAN WELDING SOCIETY (AWS), D1.1 AND THE AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS STANDARD QUALIFICATION TESTS, AND SHALL BE CERTIFIED FOR THE WORK THEY ARE PERFORMING.
3. PROJECT WELDING SHALL BE PERFORMED ONLY IN ACCORDANCE WITH WELDING PROCEDURE SPECIFICATIONS (WPS) SUBMITTED BY THE CONTRACTOR AND REVIEWED BY THE EOR AND PROJECT WELDING INSPECTOR. THE WPS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE APPLICABLE AWS.
4. WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED PER AWS D1.1 USING E70XX ELECTRODES UNLESS OTHERWISE NOTED.
5. ALL FULL PENETRATION WELDS SHALL BE ULTRA-SONIC TESTED PER AWS D1.1 AND D1.8 REQUIREMENTS AS APPLICABLE.
6. ALL GROOVE OR BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS, UNO. ALL EXPOSED BUTT WELDS SHALL BE GROUND SMOOTH.
7. ALL EXPOSED WELDS ON ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10.
8. FIELD WELDS HAVE BEEN INDICATED WHERE THEY ARE EXPECTED TO OCCUR. THE CONTRACTOR SHALL DETERMINE THE ACTUAL FIELD WELDING NECESSARY TO COMPLETE THE PROJECT AND INCLUDE ALL ASSOCIATED COSTS WITHIN THE BASE BID.

DEFERRED APPROVALS

010000-0005 (04/24/17)

WHERE DEFERRED APPROVAL ITEMS ARE DESIGN-BUILD (OR BIDDER-DESIGNED), THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND CALCULATIONS STAMPED AND SIGNED BY AN ENGINEER LICENSED IN THE STATE OF CALIFORNIA. SUBMITTAL DOCUMENTS FOR THE FOLLOWING DEFERRED APPROVAL ITEMS SHALL BE REVIEWED BY THE ARCHITECT OR ENGINEER OF RECORD AND THEN SUBSEQUENTLY REVIEWED AND APPROVED BY THE BUILDING OFFICIAL PRIOR TO INSTALLATION:

1. PRECAST CONCRETE STAIR TREADS:
    a. DESIGN FOR LIVE LOADS PROVIDED IN GENERAL NOTES AND CONFIGURATIONS SHOWN ON PLANS
    b. SHOP DRAWINGS, ERECTION DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ARCHITECT & ENGINEER FOR REVIEW PRIOR TO FABRICATION. ALL REQUIRED BRACING, SHORING, CONNECTIONS AND BEARING IMPROVEMENTS SHALL BE SHOWN ON THE SHOP DRAINGS, CALCULATIONS AND DRAWINGS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
    c. DEFLECTIONS SHALL NOT EXCEED L/360 FOR LIVE LOADS.
    d. ALL PRECAST CONCRETE ELEMENTS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF, F'C =4000 PSI.
2. MOMENT FRAMES:
    a. SIMPSON STRONG FRAME BOLTED SPECIAL STEEL MOMENT FRAME (ESR-2802).
    b. FINAL DESIGN TO BE CONFIRMED PER MANUFACTURER.
    c. ALL DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED.

STRUCTURAL CONCRETE

033100-0000 (04/18/18)

1. CONCRETE SHALL BE MIXED, PLACED AND CURED IN ACCORDANCE WITH ACI 318 AND ACI 301 LATEST EDITION, AND PROJECT SPECIFICATIONS.
2. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. IN SUCH CASES, HOPPERS AND VERTICAL CHUTES OR TRUNKS SHALL BE USED. CHUTES OR TRUNKS SHALL BE OF VARIABLE LENGTHS SO THAT FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED SIX FEET. A SUFFICIENT NUMBER OF CHUTES OR TRUNKS SHALL BE USED TO ENSURE THE CONCRETE IS KEPT LEVEL AT ALL TIMES.
3. CONSTRUCTION JOINTS SHALL BE CLEANED AND ROUGHENED BY REMOVING THE ENTIRE SURFACE TO EXPOSE CLEAN AGGREGATE SOLIDLY EMBEDDED IN THE MORTAR MATRIX. SEE PLANS AND DETAILS FOR LOCATION AND TYPE OF CONSTRUCTION JOINT. LOCATIONS OF ADDITIONAL CONSTRUCTION JOINTS NOT SHOWN ON THESE PLANS SHALL BE SUBMITTED FOR APPROVAL TO THE EOR PRIOR TO PLACING ANY CONCRETE.
4. STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING DESIGN CRITERIA:

LOCATION	MIN 28-DAY COMP STRENGTH	CONC TYPE	MAX AGGREGATE SIZE	MAX W/C RATIO
FOUNDATIONS	4000 PSI	NWC	1 1/2"	0.55
ALL OTHER STRUCTURAL CONCRETE NOT NOTED ABOVE	3000 PSI	NWC	1"	0.50

    a. MAXIMUM AIR DRY UNIT WEIGHT OF LIGHTWEIGHT CONCRETE SHALL NOT EXCEED 110 PCF, UNLESS APPROVED BY EOR.
    b. WHEN THE USE OF PLASTICIZER (ASTM C1017, TYPE I OR II) OR WATER REDUCER (ASTM C494, TYPE F OR G) IS USED, MAXIMUM SLUMP SHALL BE 4" PRIOR TO ADMIXTURE AND 8" INCLUDING ADMIXTURE AT THE POINT OF DELIVERY. IN THE ABSENCE OF PLASTICIZER AND WATER REDUCER, SLUMP AT THE POINT OF DELIVERY SHALL NOT EXCEED 4".
    c. W/C RATIO INDICATES WATER TO CEMENTITIOUS MATERIALS RATIO.
    d. FOR INTERIOR SLABS ON GRADE AND ALL OTHER SLABS RECEIVING ADHERED FLOORING FINISHES (I.E., GLUED, ETC.), THE MAXIMUM W/C RATIO SHALL NOT EXCEED 0.46. CURING COMPOUNDS USED ON CONCRETE THAT IS TO RECEIVE FINISHES SHALL BE COMPATIBLE WITH TILE AND ADHESIVES OR GROUTS IN ACCORDANCE WITH MANUFACTURER'S DATA AND BE APPROVED BEFORE USE.
    e. SLABS ON GRADE, TOPPING SLABS, AND ELEVATED CONCRETE FLOORS SHALL HAVE A MAXIMUM SHRINKAGE RATE OF 0.04% AT 28 DAYS PER ASTM C 157 (CURING TEST SPECIMENS TO BE CONSISTENT WITH FIELD CONDITIONS), OR USING EMBEDDED VIBRATING WIRE STRAIN GAUGES. RESULTS OF TESTING SHALL BE SUBMITTED TO ENGINEER.
    f. SEE ACI 318 FOR ADDITIONAL REQUIREMENTS REGARDING MAXIMUM AGGREGATE SIZE.
    g. AGGREGATE GRADATION OF 3/8" MAXIMUM (PEA GRAVEL) SHALL NOT BE USED WHERE FINISHED CONCRETE SURFACE IS EXPOSED TO VIEW.

5. CONCRETE MIX DESIGN AND TESTING SHALL MEET THE REQUIREMENTS OF THE BUILDING CODE, AND SPECIFICATIONS. ALL CONCRETE MIXES SHALL BE DESIGNED PER ACI 318 SECTION 5.2 BY A RECOGNIZED TESTING LAB STAMPED AND SIGNED BY A LICENSED CALIFORNIA CIVIL ENGINEER AND SUBMITTED TO THE EOR FOR REVIEW PRIOR TO CONCRETE PLACEMENT. STRUCTURAL CONCRETE MIXES SHALL CONSIST OF 5 SACK MINIMUM UNO.
6. AGGREGATES IN NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C-33 (HARDROCK). AGGREGATES IN LIGHT WEIGHT CONCRETE SHALL CONFORM TO ASTM C-330.
7. COMPRESSIVE STRENGTH TEST REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND THE EOR.
8. PORTLAND CEMENT SHALL BE TYPE II AND SHALL CONFORM TO ASTM C150, LOW ALKALI. MILL TESTS WITH CERTIFICATES OF COMPLIANCE SHALL BE SUBMITTED.
9. FLY ASH OR OTHER POZZOLANS CONFORMING TO ASTM C618 CLASS F MAY BE USED AS A PARTIAL SUBSTITUTION FOR PORTLAND CEMENT UP TO A MAXIMUM OF 25% TOTAL CEMENTITIOUS MATERIALS BY WEIGHT IF THE MIX DESIGN IS PROPORTIONED BY FIELD EXPERIENCE OR TRIAL MIXTURES.
10. CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C94.
11. LEAN CONCRETE, WHERE SPECIFICALLY INDICATED, SHALL CONTAIN 2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
12. DRYPACK OR NONSHRINK GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI, AND CONSIST OF MASTERFLOW 713, EUCON NS GROUT, SIKA GROUT 212, OR APPROVED EQUAL. FOR THICK GROUT LAYERS FOLLOW MANUFACTURER'S GUIDELINES TO ATTAIN THE REQUIRED STRENGTH, WHICH MAY INCLUDE THE ADDITION OF PEA GRAVEL. FOR BASE PLATES LARGER THAN 6 SQUARE FEET, USE HI-FLOW GROUT OR MASTERFLOW 928.
13. DO NOT USE ANY CONCRETE OR GROUT CONTAINING CHLORIDES. WATER USED IN MIX SHALL BE CLEAN AND POTABLE.
14. PRIOR TO ERECTING ANY ELEMENTS THAT LOAD THE FOUNDATION, CONCRETE MUST REACH AN UNCONFINED COMPRESSION STRENGTH OF 2000 PSI MINIMUM AS DETERMINED BY TESTING OR PREVIOUSLY DOCUMENTED DATA FOR THE MIX DESIGN USED UNDER SIMILAR CONDITIONS, AND MUST BE ALLOWED TO CURE FOR A MINIMUM OF 3 DAYS.
15. MAINTAIN CONCRETE ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT UNLESS OTHERWISE ACCEPTED BY EOR.
16. SEE ARCHITECTURAL DRAWINGS FOR WALL OPENINGS, WALL OFFSETS, CHAMFERS, KERFS, DRIPS AND FOR EXTENT OF DEPRESSIONS, RAMPS, ETC.
17. PROVIDE SLEEVES FOR ALL PIPES THROUGH CONCRETE WALLS AND FOOTINGS WHERE SHOWN ON THESE DRAWINGS. CORING IS NOT PERMITTED WITHOUT PRIOR APPROVAL BY THE EOR.
18. EXPOSED CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH 3/4" CHAMFER OR 1/2" RADIUS TOOLED EDGE, UNO.

FOUNDATIONS AND SLABS ON GRADE

033100-0001 (04/21/17)

1. ALLOWABLE SOIL PRESSURES FOR FOOTINGS:
    DEAD LOAD + LIVE LOAD .... 1500 PSF (CODE MIN)
    DEAD LOAD + LIVE LOAD + LATERAL LOAD .... 2000 PSF (CODE MIN)
2. ALLOWABLE LATERAL SOIL BEARING PRESSURE PER FOOT OF DEPTH .... 100 PSF (CODE MIN)
3. ALLOWABLE LATERAL SLIDING RESISTANCE, COHESION.......... 130 PSF (CODE MIN)
10. SPREAD FOOTINGS ARE CENTERED UNDER WALLS AND COLUMNS, UNO.
11. FOOTING ELEVATIONS ARE NOTED ON THE PLANS AND DETAILS AND SHALL BE USED FOR BIDDING.
12. ALL TRENCHES SHALL COMPLY WITH APPLICABLE OSHA REQUIREMENTS. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS WITH THE APPROVAL OF THE GEOTECHNICAL ENGINEER. FLOODING IS NOT PERMITTED.
13. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED BUT NOT BEHIND RETAINING WALLS BEFORE CONCRETE OR MASONRY ATTAINS ITS FULL DESIGN STRENGTH.
14. THE DESIGN OF ALL RETAINING WALLS AND SUBTERRANEAN BUILDING WALLS INDICATED ON THESE DRAWINGS IS BASED ON DRAINED SOILS.
15. CONSTRUCTION JOINTS (CJ) AND SAWCUT (SC) JOINTS IN SLABS SHALL OCCUR WHERE LOCATED ON PLANS AND DETAILS. CJ'S SHALL HAVE FORMED POUR STOPS. CONSTRUCTION JOINTS IN WALLS AND FOOTINGS NEED NOT OCCUR AT THE SAME LOCATION, UNO.
16. SEE ARCHITECT'S PLANS FOR LOCATIONS OF SLAB SLOPES, DEPRESSIONS, CURBS, DRAINS, NON-STRUCTURAL PARTITIONS AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL PLANS.
17. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING. THE ARCHITECT AND ENGINEERS ARE NOT RESPONSIBLE FOR THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE DRAWINGS. THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD ANY SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES WHICH MAY RESULT FROM FAILURE TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES.
18. THE SLAB ON GRADE IS NOT DESIGNED TO SUPPORT TRAFFIC FROM CRANES OR OTHER HEAVY CONSTRUCTION VEHICLES. CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED CONCRETE SLABS.

SHEET INDEX

GENERAL

010000-0000 (03/12/18)

1. REFER TO THE TYPICAL DETAIL SHEETS FOR TYPICAL DETAILS OF CONSTRUCTION. TYPICAL DETAILS APPLY TO ALL CONSTRUCTION UNLESS SPECIFICALLY NOTED OR SHOWN OTHERWISE. WHERE CONDITIONS REQUIRE MODIFICATIONS OF A TYPICAL DETAIL, THE CONTRACTOR SHALL SUBMIT MODIFIED DETAIL FOR APPROVAL BY THE ENGINEER OF RECORD PRIOR TO FABRICATION AND INSTALLATION. DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE OF SAME NATURE AS THOSE SHOWN FOR SIMILAR CONSTRUCTION.
2. CONTRACTOR SHALL CONSIDER THE PROJECT SPECIFICATIONS A PART OF THE CONTRACT DOCUMENTS. WHERE INFORMATION IS CONFLICTING, SPECIFIC DETAILS SHALL GOVERN OVER TYPICAL DETAILS WHICH SHALL GOVERN OVER THESE NOTES WHICH SHALL GOVERN OVER SPECIFICATIONS.
3. ALL DIMENSIONS ON STRUCTURAL DRAWINGS SHALL BE CHECKED AGAINST ARCHITECTURAL DIMENSIONS. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE OMITTED OR NOT CLEAR, CONTACT THE ARCHITECT (ARCH) OR ENGINEER OF RECORD (EOR). ALL DIMENSIONS RELATED TO EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. DIMENSIONS ARE TO THE FACE OF STUDS, AND TO CENTERLINE OF COLUMNS UNO.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY NOTIFY THE EOR OF ANY CONFLICTS BETWEEN THE STRUCTURAL DRAWINGS AND OTHER DRAWINGS; OR EXISTING CONDITIONS NOT SHOWN OR DIFFERENT FROM THOSE SHOWN ON DRAWINGS PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE SCOPE THAT IS IN CONFLICT UNTIL THE CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES.
5. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN THEY DO NOT INDICATE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE CONSTRUCTION AND ALL ADJACENT PROPERTIES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO BRACING, SHORING OF LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR EOR SHALL NOT INCLUDE OBSERVATION OF THE ABOVE ITEMS.
6. SUBSTITUTION REQUESTS FOR MATERIALS SPECIFIED ON THE STRUCTURAL DRAWINGS MAY BE CONSIDERED WITH MATERIALS HAVING EQUIVALENT OR GREATER CAPACITY AND PERFORMANCE. CURRENT EVALUATION REPORTS AND PRODUCT INFORMATION SHALL BE PROVIDED TO THE STRUCTURAL ENGINEER DEMONSTRATING THE REQUIRED CAPACITY AND PERFORMANCE OF THE MATERIAL TO BE SUBSTITUTED. WRITTEN APPROVAL FROM THE EOR SHALL BE OBTAINED PRIOR TO THE SUBSTITUTION OF ANY MATERIAL SPECIFIED ON THE STRUCTURAL DOCUMENTS.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT. THE ARCHITECT, EOR, AND THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
8. ALL WORK IS NEW (N) UNLESS INDICATED AS EXISTING (E).
9. CONSTRUCTION MATERIALS SHALL BE DISTRIBUTED WHEN PLACED ON THE STRUCTURE SUCH THAT LOADS DO NOT EXCEED DESIGN LIVE LOADS OR RESULT IN AN UNBALANCED CONDITION.
10. REFER TO THE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS AND SUBMITTALS. SHOP DRAWINGS SHALL BE SUBMITTED TO THE EOR (ALLOW FOR A REVIEW DURATION OF 10 BUSINESS DAYS), AND SHALL CONSIST OF EITHER ELECTRONIC FILES OR ONE SET FOR OUR RECORDS AND ONE REPRODUCIBLE SET. REVIEW OF SHOP DRAWINGS AND SUBMITTALS BY THE EOR IS FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR WILL REMAIN RESPONSIBLE FOR ALL ERRORS OF DETAILING, FABRICATION, AND FOR CORRECT FITTING OF ALL STRUCTURAL MEMBERS, INCLUDING COORDINATION WITH OTHER TRADES. SHOP DRAWINGS AND SUBMITTALS DO NOT CONSTITUTE CHANGE ORDERS. ANY PROPOSED CHANGES TO THE STRUCTURAL DOCUMENTS MUST BE SUBMITTED IN WRITING AS A REQUEST FOR SUBSTITUTION TO THE ARCHITECT AND EOR FOR APPROVAL. SEE "STRUCTURAL SUBMITTALS" FOR MORE INFORMATION.
11. CORE DRILLS REQUIRED SHALL NOT CUT ANY REINFORCING. THE CONTRACTOR IS TO COORDINATE WORK OF ALL TRADES TO ENSURE COMPLIANCE. ALL CORE DRILLS ARE TO BE PRESENTED TO THE INSPECTOR OF RECORD (IOR) FOR VERIFICATION. THE IOR IS TO DOCUMENT CORES EXAMINED INDICATING AN ABSENCE OF REINFORCING.
12. STRUCTURAL JOINT DIMENSIONS SHOWN ON PLANS (EXPANSION, SEISMIC, SEPARATION, ETC) (WHERE OCCURS) INDICATE THE MINIMUM CLEAR DISTANCE REQUIRED. SEE PLANS, DETAILS, AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

STRUCTURAL DESIGN CRITERIA

010000-0001 (03/02/17)

1. CODES:
    ALL NEW WORK SHALL BE IN CONFORMANCE WITH THE CALIFORNIA BUILDING CODE (CBC) 2016 EDITION (TITLE 24, PART 2), INCLUDING ALL AMENDMENTS. ALL STANDARDS USED SHALL BE THE LATEST VERSION APPROVED BY THE CODE ENFORCEMENT AGENCY ON THE DATE OF THE PERMIT ISSUANCE UNLESS SPECIFICALLY NOTED OTHERWISE. THE PURPOSE OF THIS CODE IS TO, IN PART, ESTABLISH THE MINIMUM REQUIREMENTS TO SAFEGUARD THE PUBLIC HEALTH, SAFETY AND GENERAL WELFARE THROUGH STRUCTURAL STRENGTH AND STABILITY. STRUCTURES DESIGNED IN ACCORDANCE WITH THE CODE ARE LIKELY TO HAVE A LOW PROBABILITY OF COLLAPSE BUT MAY SUFFER SERIOUS STRUCTURAL AND NON-STRUCTURAL DAMAGE IF SUBJECTED TO THE DESIGN EARTHQUAKE.
2. GRAVITY DESIGN LOADS:

    LIVE LOADS (REDUCIBLE, UNO):

a. ROOF, UNIFORM	20 PSF
b. FLOOR(S)	
PRIVATE ROOMS AND CORRIDORS	40 PSF
BALCONIES AND DECKS	60 PSF
STAIRS AND EXITS	100 PSF
OR, CONCENTRATED IN 2"x2"	300 LBS

3. WIND DESIGN INFORMATION:

    RISK CATEGORY II EXPOSURE C
    BASIC WIND SPEED (3 SEC GUST), V_{ult} = 110 MPH

4. SEISMIC DESIGN INFORMATION:

    $I_e = 1.0$ RISK CATEGORY II DESIGN CAT. D SITE CLASS D
    $S_S = 1.500g$ $S_1 = 0.613g$ $S_{DS} = 1.000g$ $S_{D1} = 0.613g$
    EQUIVALENT LATERAL FORCE PROCEDURE
    LIGHT FRAMED WOOD BEARING SHEAR WALLS AND STEEL SPECIAL MOMENT FRAMES △1
    $R = 6.5$ $C_S = 0.154$
    MAX STORY DRIFT $\Delta = 0.025\ h$

5. PROJECT SCOPE:
    A. FIRST FLOOR ONLY SEISMIC RETROFIT IN BOTH DIRECTIONS OF BLDGS. 14-16.
        I. MOMENT FRAMES ALONG OPEN FRONT LONGITUDINAL DIRECTION.
        II. PLYWOOD SHEAR WALLS ALONG ADJACENT LONGITUDINAL WALL LINE.
        III. HOLDOWNS AT EXISTING TRANSVERSE SHEAR WALLS.
    B. SEISMIC RETROFIT OF BLDG. 20 (RECREATION CENTER) OF PLYWOOD SHEAR WALLS, HOLDOWNS AND SILL BOLTS.
    C. NEW STAIRS AT BLDGS. 7-9 AND 15.
    D. NEW SECOND FLOOR BALCONIES AT BLDGS. 7-9.

    SCOPE A & B SEISMIC RETROFIT MEETS 2016 CBC AND ASCE 7-10 REQUIREMENTS FOR A NEW BUILDING AND UCSSP EARTHQUAKE PERFORMANCE LEVEL III.

EXISTING CONDITIONS

020000-0000 (05/31/17)

1. SEE "AS BUILT" DRAWINGS FOR EXISTING BUILDING ITEMS NOT SHOWN OR NOTED.
2. FIELD VERIFY ALL CONDITIONS & DIMENSIONS PRIOR TO SHOP DRAWING PRODUCTION AND FABRICATION OF STRUCTURAL ELEMENTS.
3. WHERE ALL OTHER EXISTING CONDITIONS VARY SIGNIFICANTLY FROM THOSE SHOWN ON THESE DRAWINGS, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED PRIOR TO CONTINUED CONSTRUCTION RELATED TO SUBJECT CONDITIONS.
4. SHORE ALL EXISTING CONSTRUCTION AS REQUIRED, INCLUDING WHERE WELDING TO EXISTING STEEL FRAMING. SHORING DESIGN BY OTHERS.
5. ALL EXISTING CONCRETE SURFACES TO BE IN CONTACT WITH NEW CONCRETE SHALL BE CLEANED AND ROUGHENED TO 1/4" MINIMUM AMPLITUDE. USE ICC APPROVED BONDING AGENT ON EXISTING CONCRETE PRIOR TO PLACING NEW CONCRETE.
6. VERIFY LOCATION OF EXISTING REBAR BEFORE FABRICATION USING NON-DESTRUCTIVE TESTING. EXISTING REINFORCING SHALL BE AVOIDED WHERE DRILLING FOR POST-INSTALLED ANCHORS OR CONCRETE DOWELS.
7. THE GENERAL CONTRACTOR SHALL COORDINATE THE WEIGHT AND SPECIFIC LOCATION OF ALL MECHANICAL EQUIPMENT WITH THE STRUCTURAL FRAMING. IF THE EQUIPMENT DEVIATES IN WEIGHT OR LOCATION FROM THOSE INDICATED IN THE DRAWINGS, THE STRUCTURAL ENGINEER'S APPROVAL MUST BE OBTAINED PRIOR TO INSTALLATION OF THE UNITS.
8. ALL EXISTING WOOD FRAMING MEMBERS SUPPORTING NEW MECHANICAL UNITS SHALL BE INSPECTED FOR DAMAGE AND DETERIORATION PRIOR TO INSTALLATION OF THE UNITS. NOTIFY THE STRUCTURAL ENGINEER IF DAMAGE OR DETERIORATION IS DISCOVERED.

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CFORMS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: Scott Jackson
Fire and Life Safety Division South

miyamoto.
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T: (949) 579-1170
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Engineer:

JONATHAN K. BUCKEY
S 6402

Stamp:

Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

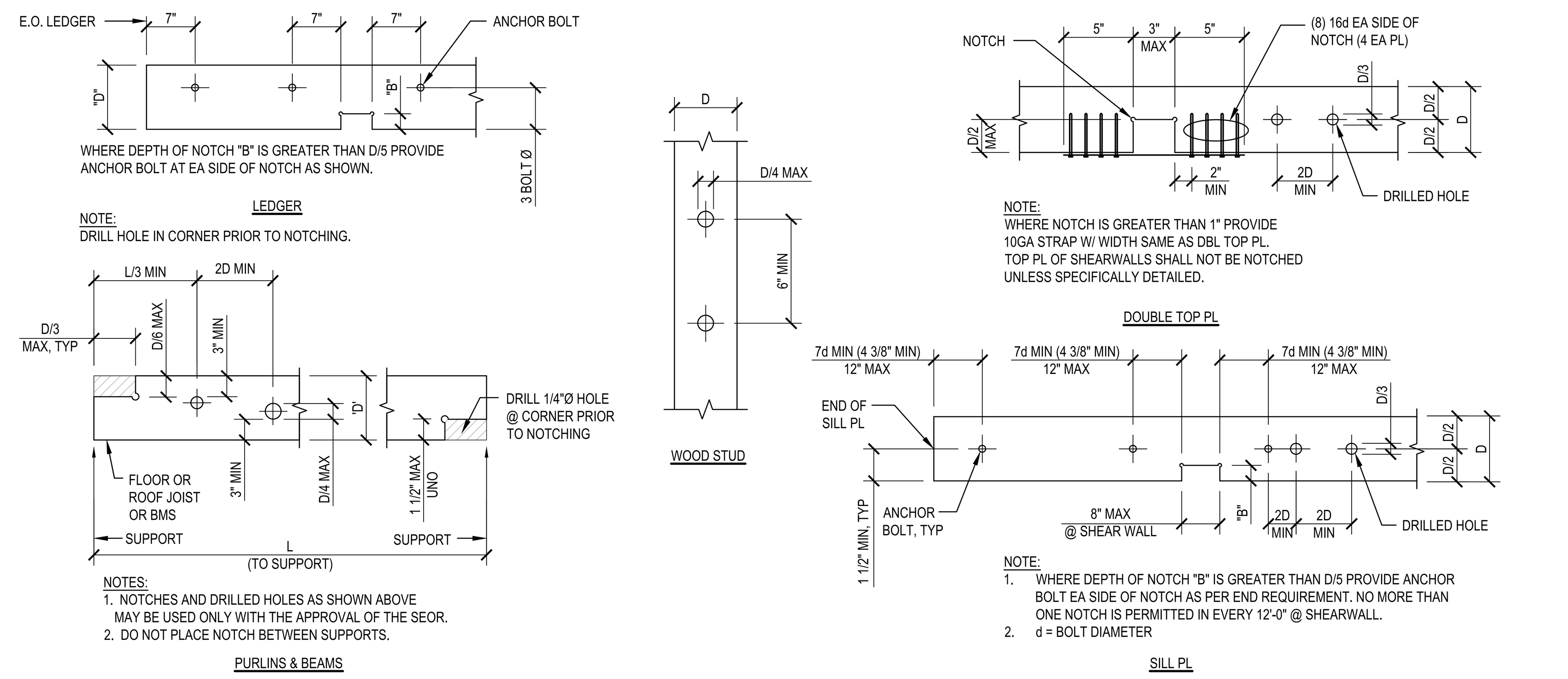
△1	ADDENDUM 1	6/14/19
△2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	05-10-2019
DRAWN:	M.B.V.

GENERAL NOTES

S0.1

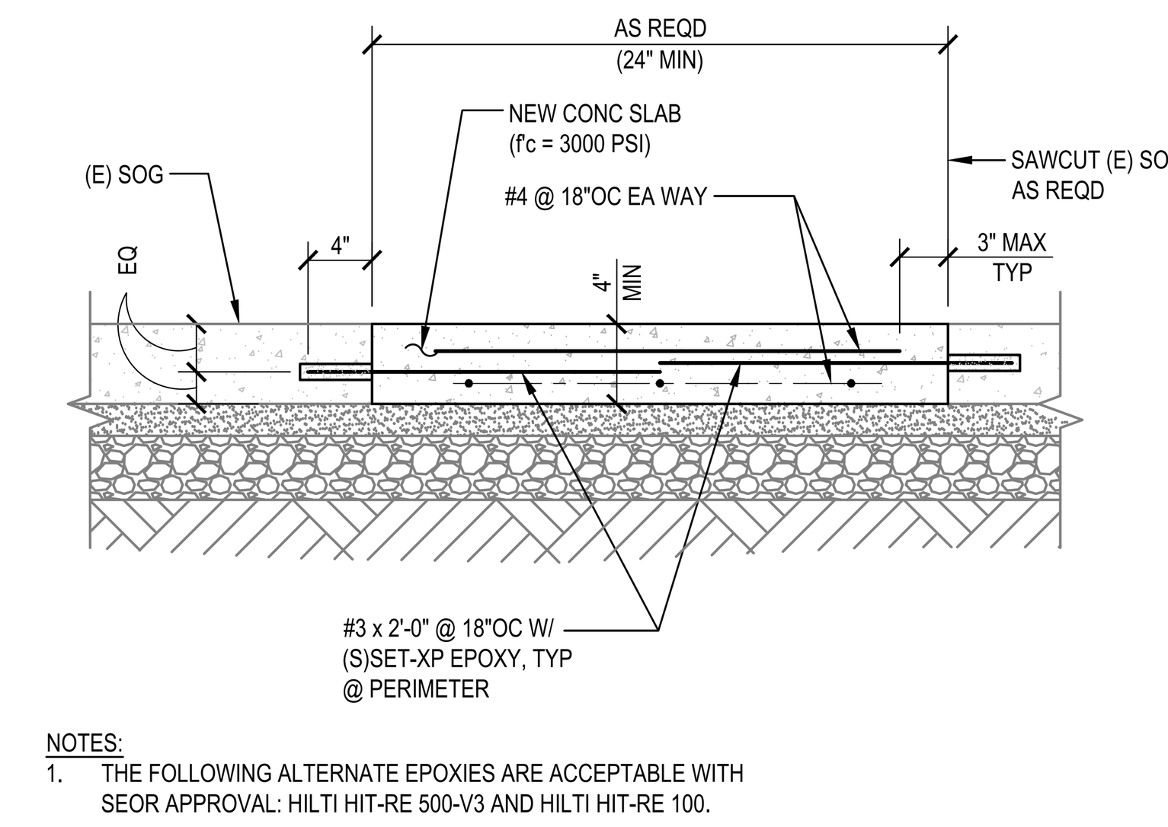
07/02/2019



13 HOLES & NOTCHING IN WOOD FRAMING

NTS

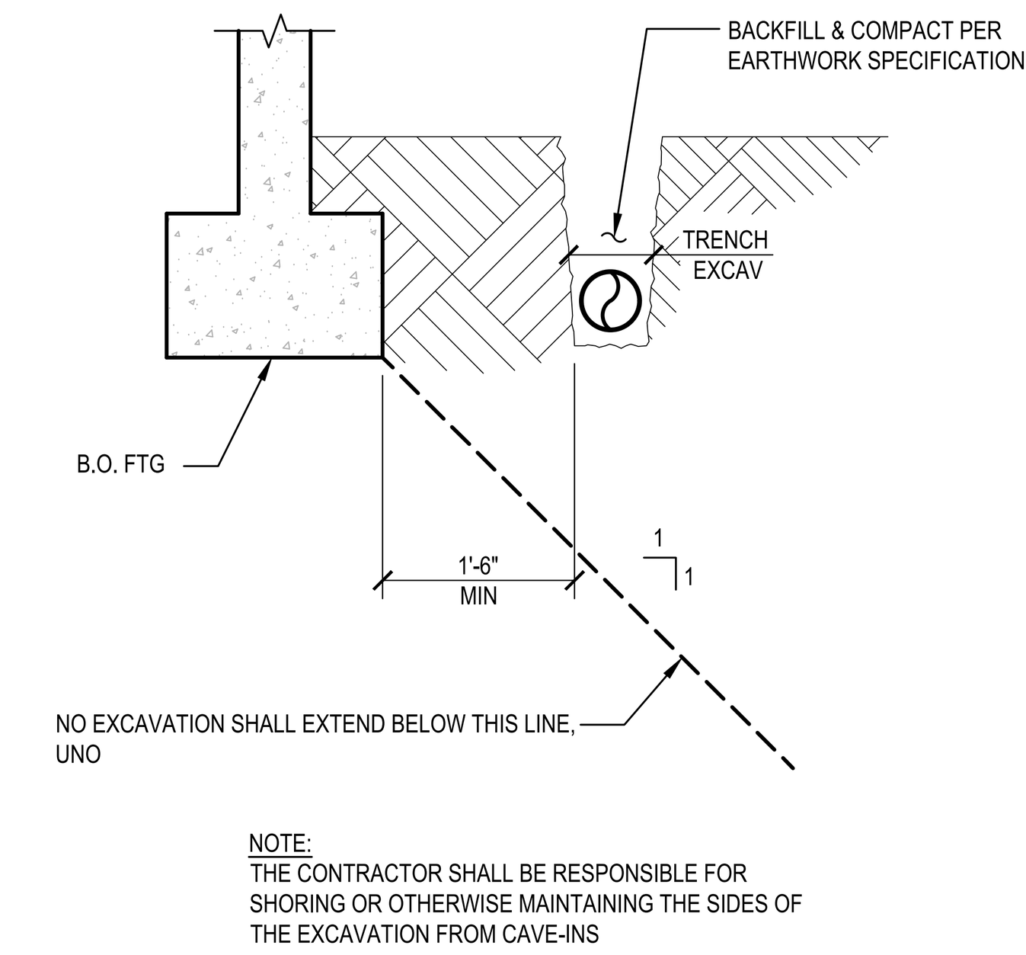
061000.00-0100 (16) (07/27/16)



5 TYPICAL INTERIOR CUT IN (E) SLAB (24" MIN)

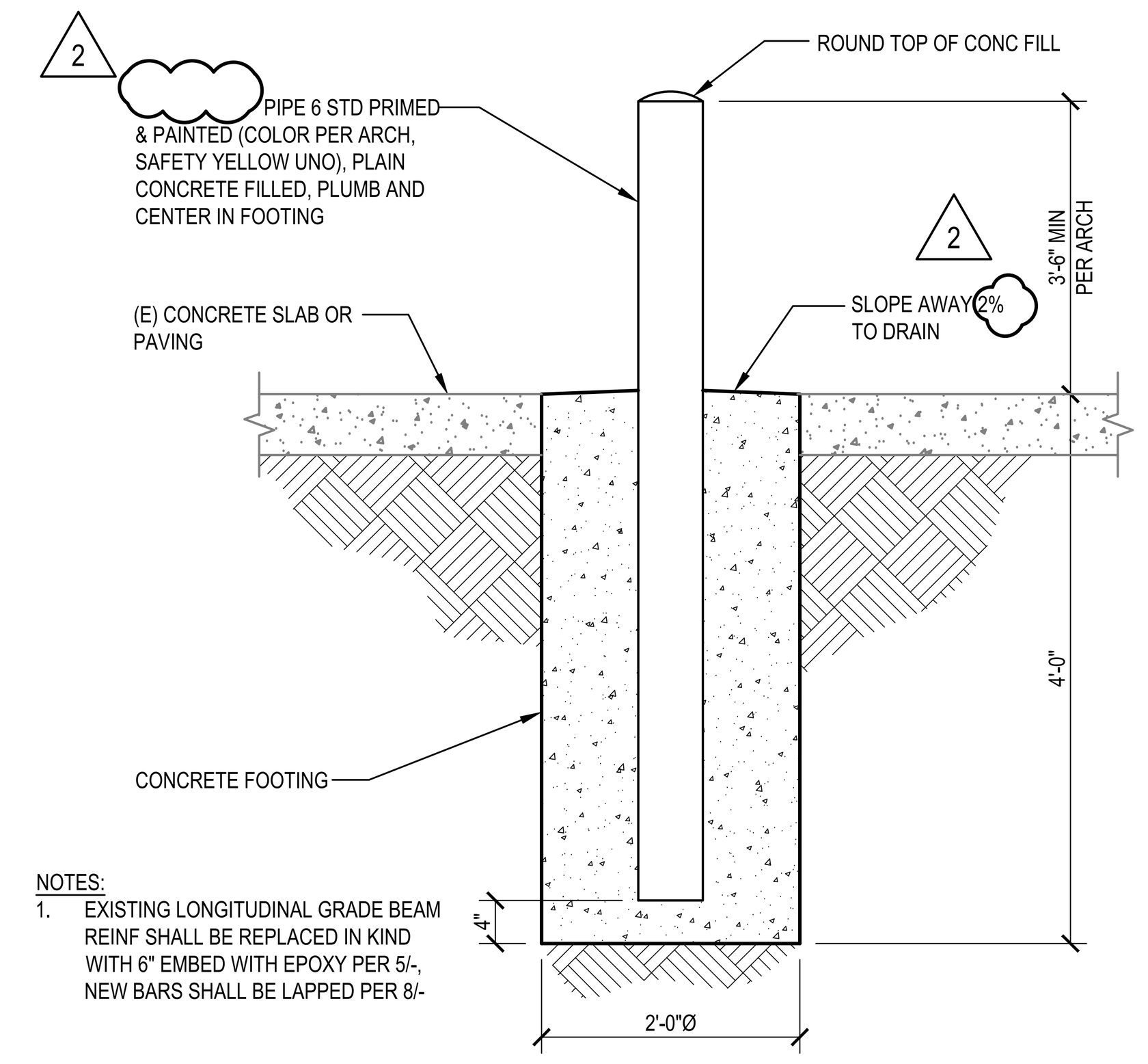
N.T.S.

030000-0106 (12) (08/18/14)



1 EXCAVATION PARALLEL TO FOOTINGS

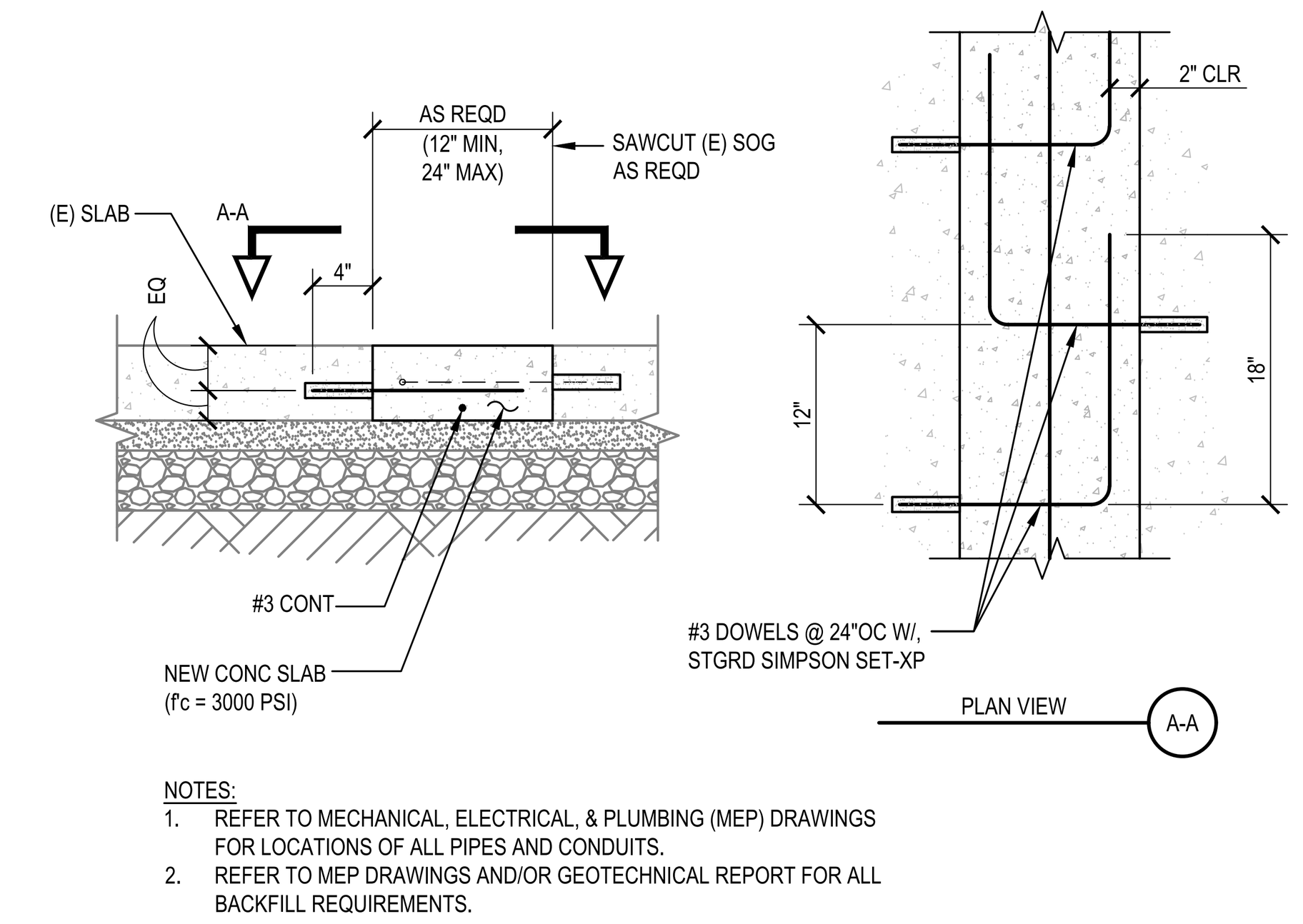
N.T.S.



10 BOLLARD AT GRADE

N.T.S.

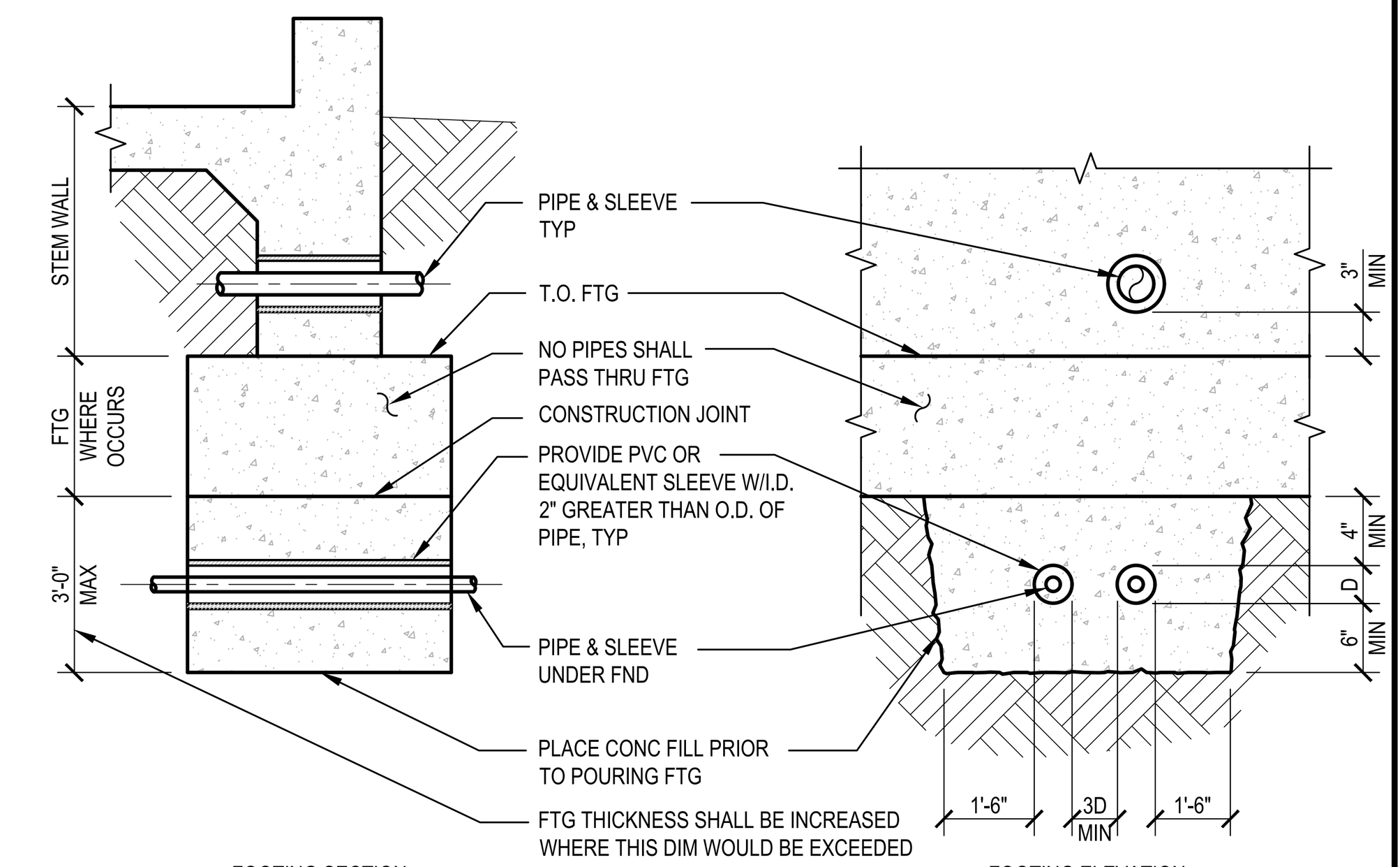
347113-0100 (16) (08/20/14)



6 TYPICAL INTERIOR SAW CUT IN (E) SLAB (12" MIN)

N.T.S.

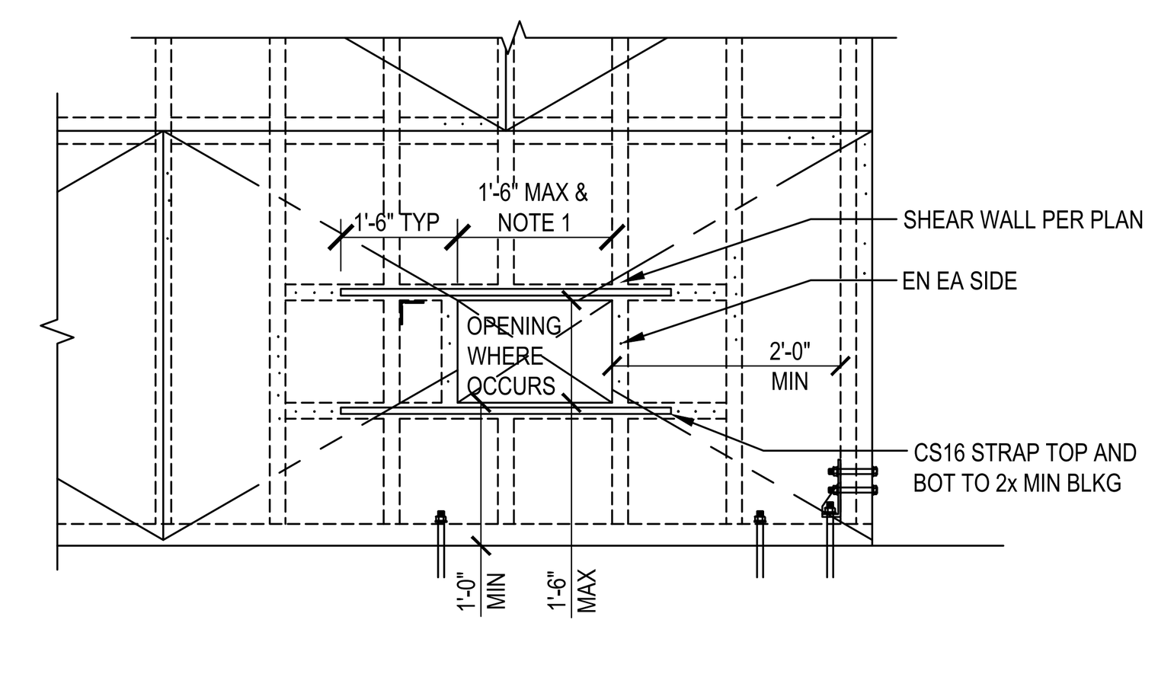
030000-0107 (12) (08/18/14)



NOTES:
1. PIPES GREATER THAN 8" IN SIZE, BUNDLES OR BANKS NOT SPECIFICALLY SHOWN ON THE STRUCTURAL PLANS ARE NOT ALLOWED TO BE PLACED WITHOUT OBTAINING EOR APPROVAL.
2. CONTRACTOR SHALL COORDINATE ALL PIPE LOCATION WITH BUILDING FOUNDATION REQUIREMENTS.
3. "D" INDICATES DIAMETER OF SLEEVE.
4. CONDUIT MAY BE RUN THROUGH STEM OR ENCASEMENT UNDER FOOTING WITHOUT SLEEVE.

2 PIPE THROUGH/BELOW FOOTING

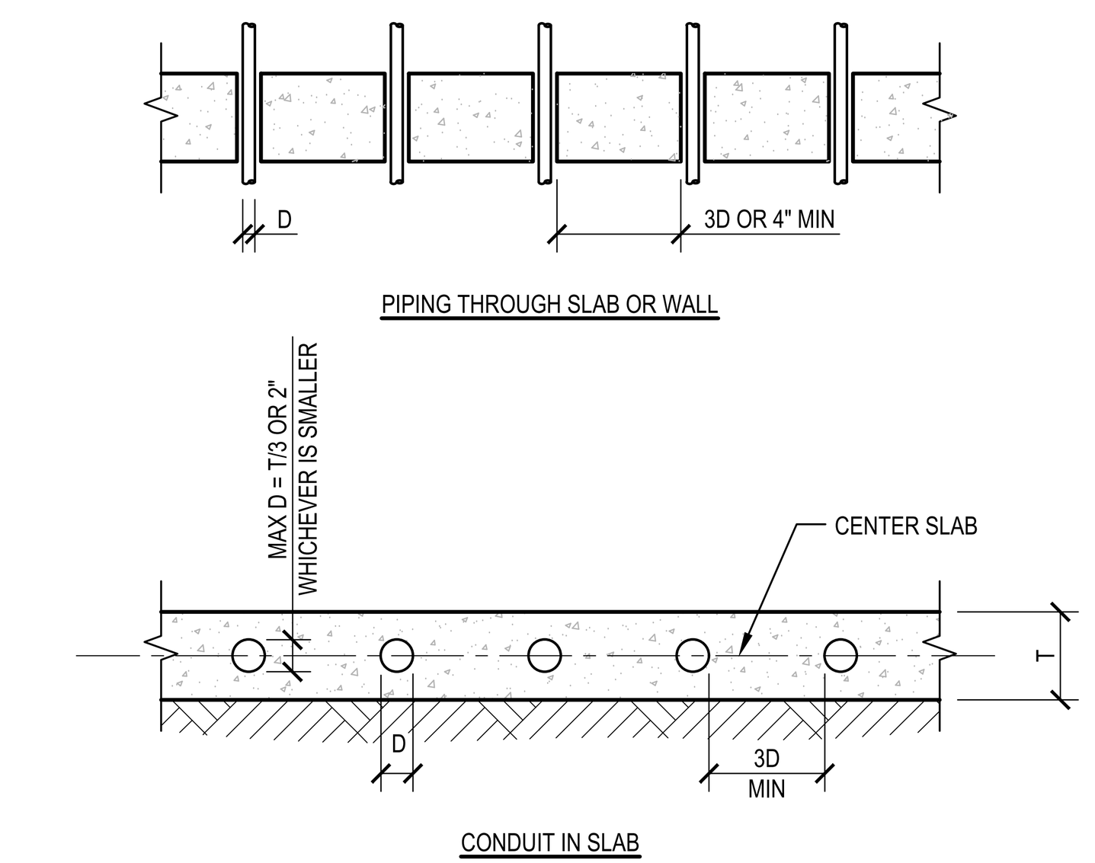
N.T.S.



NOTES:
1. MAX WIDTH OF OPENING LIMITED TO 10% OF TOTAL SHEAR WALL LENGTH.

7 SMALL OPENING IN SHEAR WALLS

N.T.S.

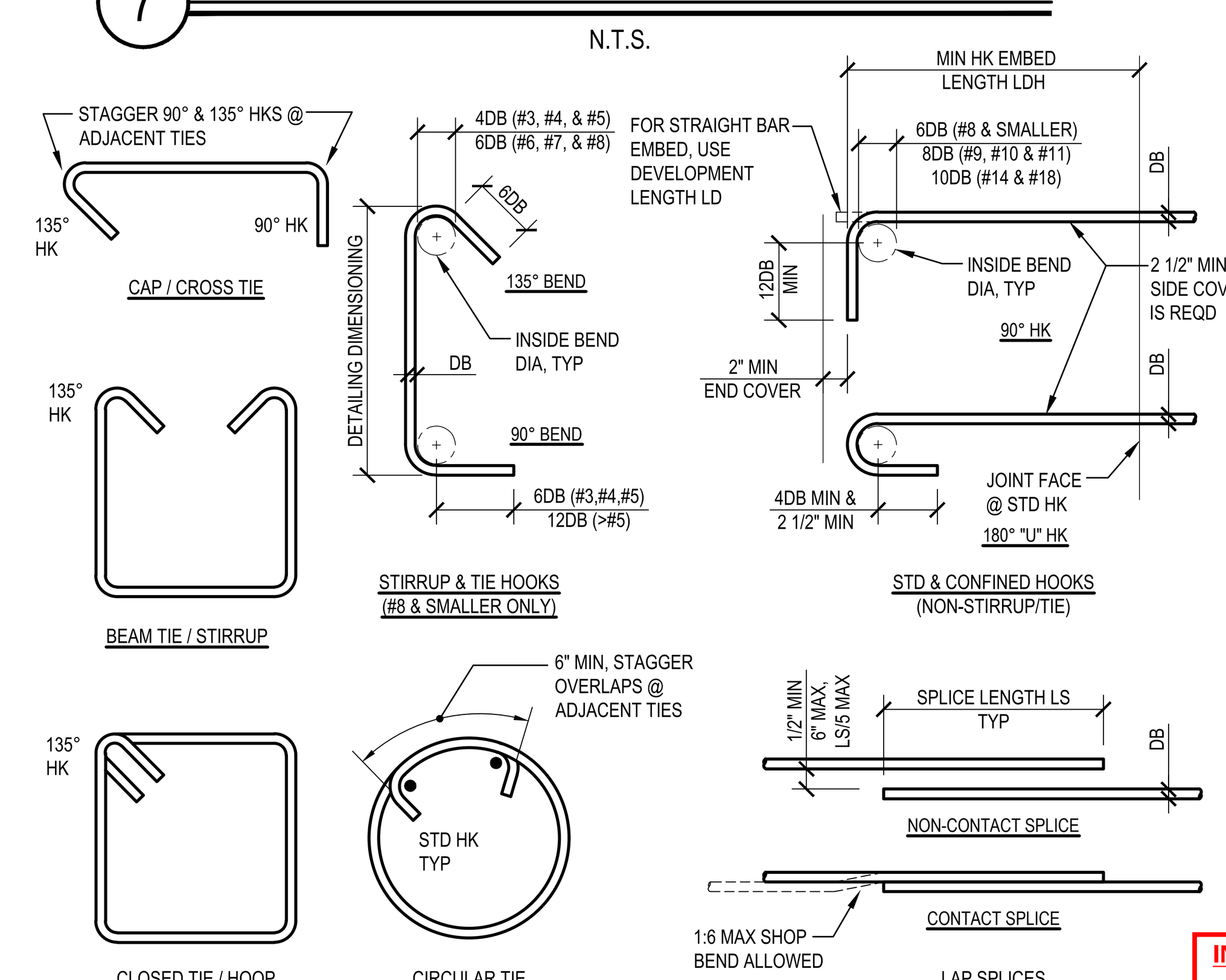


NOTES:
1. NO CONDUIT SHALL BE ALLOWED IN SLABS UNLESS "T" IS A MINIMUM OF 6".
2. WHERE CLEAR DISTANCE BETWEEN SLEEVES CANNOT BE ACHIEVED, THIS AREA SHALL BE TREATED AS A SLAB OPENING PER TYPICAL OPENING IN SLAB ON GRADE DETAIL.
3. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION.

3 PIPES & CONDUITS IN OR THROUGH SLAB & WALL

N.T.S.

033100.00-0100 (12) (08/06/14)



HOOKS, LAPS & DEVELOPMENT LENGTHS						
	BAR SIZE	STD HOOK DEVELOPMENT LENGTH LDH (IN)	CLASS B LAP SPLICE LS (IN) BOTT	CLASS B LAP SPLICE LS (IN) TOP	DEVELOPMENT LENGTH LD (IN) BOTT	DEVELOPMENT LENGTH LD (IN) TOP
3000 PSI NWC	#3 #4	6 8	22 29	28 37	17 22	22 29
	#5 #6	10 12	36 43	47 56	28 33	36 43
	#7 #8	14 16	63 72	81 93	48 55	63 72
	#9 #10 #11	18 20 22	81 91 101	105 118 131	62 70 78	81 91 101
4000 PSI NWC	#3 #4	6 7	19 25	24 32	15 19	19 25
	#5 #6	9 10	31 37	40 48	24 29	31 37
	#7 #8	12 14	54 62	70 80	42 48	54 62
	#9 #10 #11	15 17 19	70 79 87	91 102 113	54 61 67	70 79 87
5000 PSI NWC	#3 #4	6 6	17 22	22 29	13 17	17 22
	#5 #6	8 9	28 33	36 43	22 26	28 33
	#7 #8	11 12	49 55	63 72	37 43	[illegible]
	#9 #10 #11	14 15 17	63 70 78	81 91 101	48 54 60	63 70 78

NOTES:
1. SEE BUILDING CODE AND ACI LATEST VERSION FOR ALL REQUIREMENTS NOT NOTED.
2. FOR LIGHTWEIGHT CONCRETE MULTIPLY LDH, LS AND LD VALUES SHOWN BY 1.33.
3. "TOP" BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW BARS. ALL OTHER BARS ARE "BOTT" BARS.
4. WHERE REQUIRED LS CANNOT BE OBTAINED WITH STRAIGHT BARS, EXTEND REINFORCING AS FAR AS POSSIBLE (LDH MINIMUM) AND PROVIDE STANDARD HOOK, WHERE LDH CANNOT BE OBTAINED, CONSULT SEOR.
5. VALUES SHOWN ARE FOR GRADE 60 (FY=60 KSI) REINFORCEMENT.
6. SPLICE LENGTHS SHOWN ARE FOR CLEAR SPACING NOT LESS THAN 2DB, CONCRETE COVER NOT LESS THAN DB.
7. FOR EPOXY-COATED AND/OR BUNDLED REINFORCEMENT CONSULT SEOR.
8. WHERE BARS OF DIFFERENT SIZES ARE LAP SPLICED IN TENSION, SPLICE LENGTH SHALL BE THE LARGER OF: LD OF THE LARGER BAR AND LS OF THE SMALLER BAR.

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CFORMS SYSTEM

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UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

8 REINFORCEMENT DETAILS & DEVELOPMENT LENGTHS

NTS

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07/02/2019
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Reviewed by:
Fire and Life Safety Division South

032000-0100 (1) (08/23/16)

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Engineer:
REGISTERED PROFESSIONAL ENGINEER JONATHAN K. BUCKLEY S 6407 STRUCTURAL STATE OF CALIFORNIA
Stamp:
Consultant:

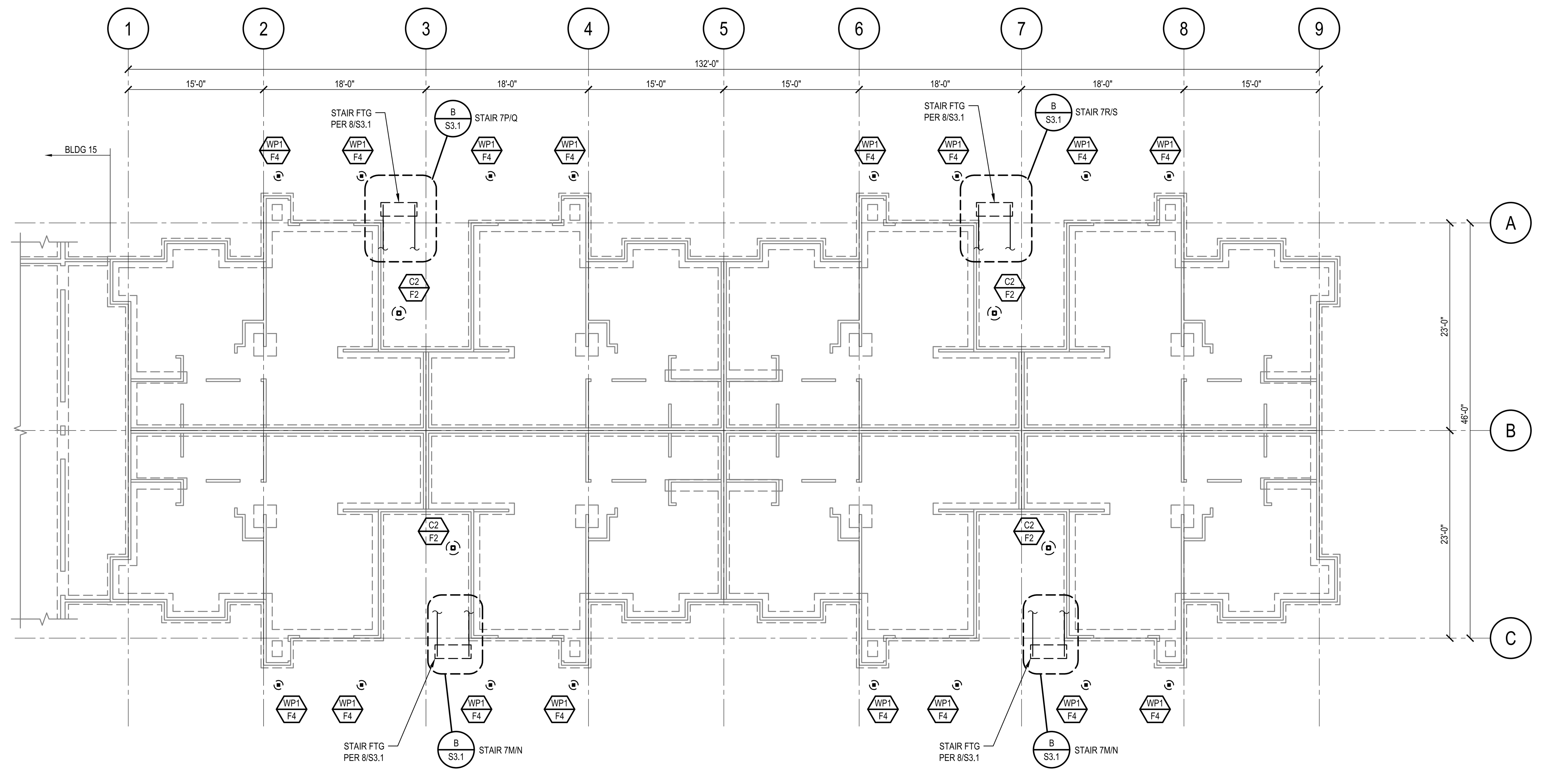
UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS
1 ADDENDUM 1 6/14/19
2 ADDENDUM 2 6/28/19

UCR PROJECT #: 956390
UCR CAAN #: P5673
DATE: 05-10-2019
DRAWN: M.B.V.

TYPICAL DETAILS

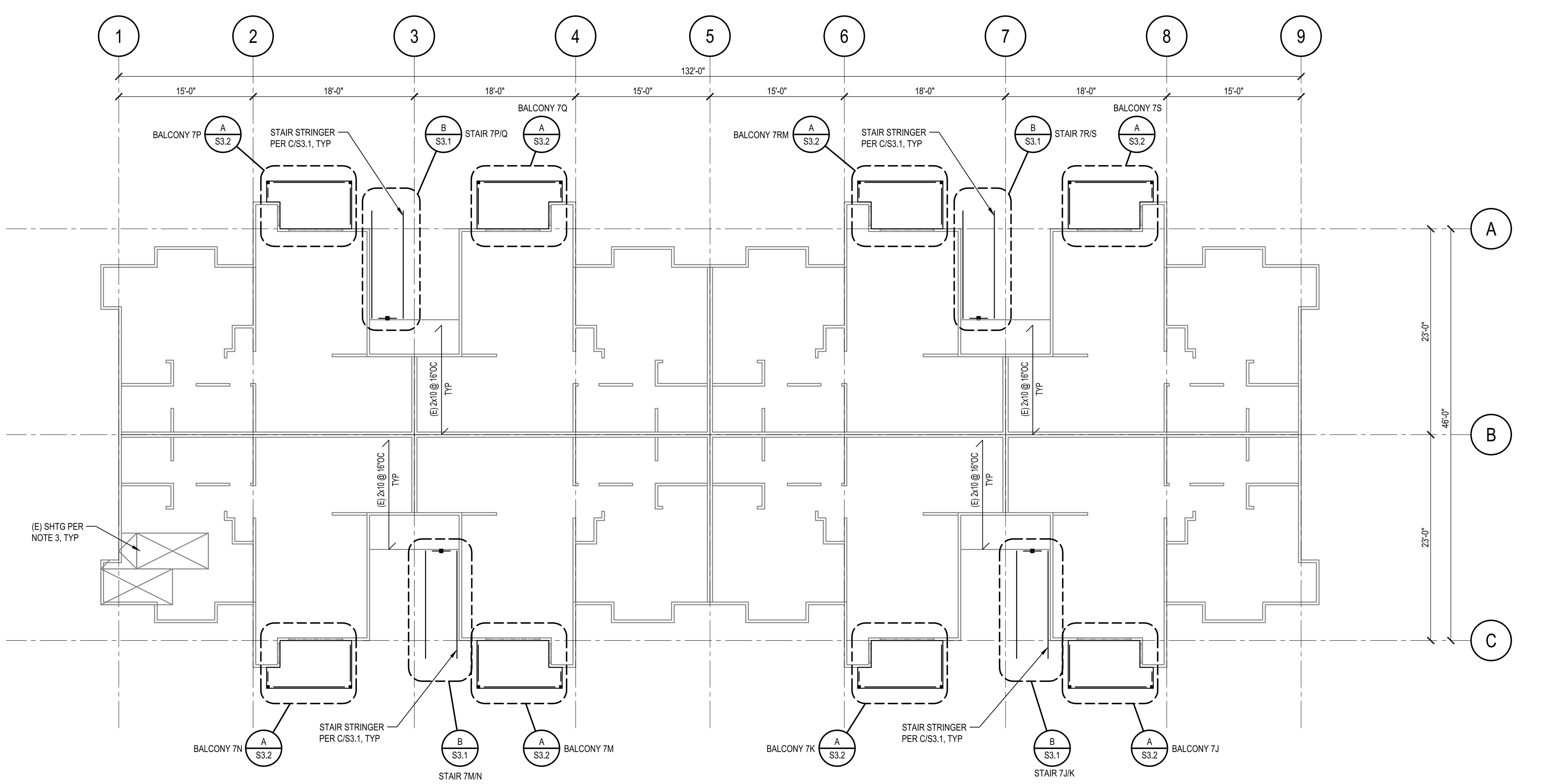
S1.1



A FOUNDATION PLAN - BUILDING 7

1/8" = 1'-0"

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.



B SECOND FLOOR FRAMING PLAN - BUILDING 7

1/8" = 1'-0"

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.

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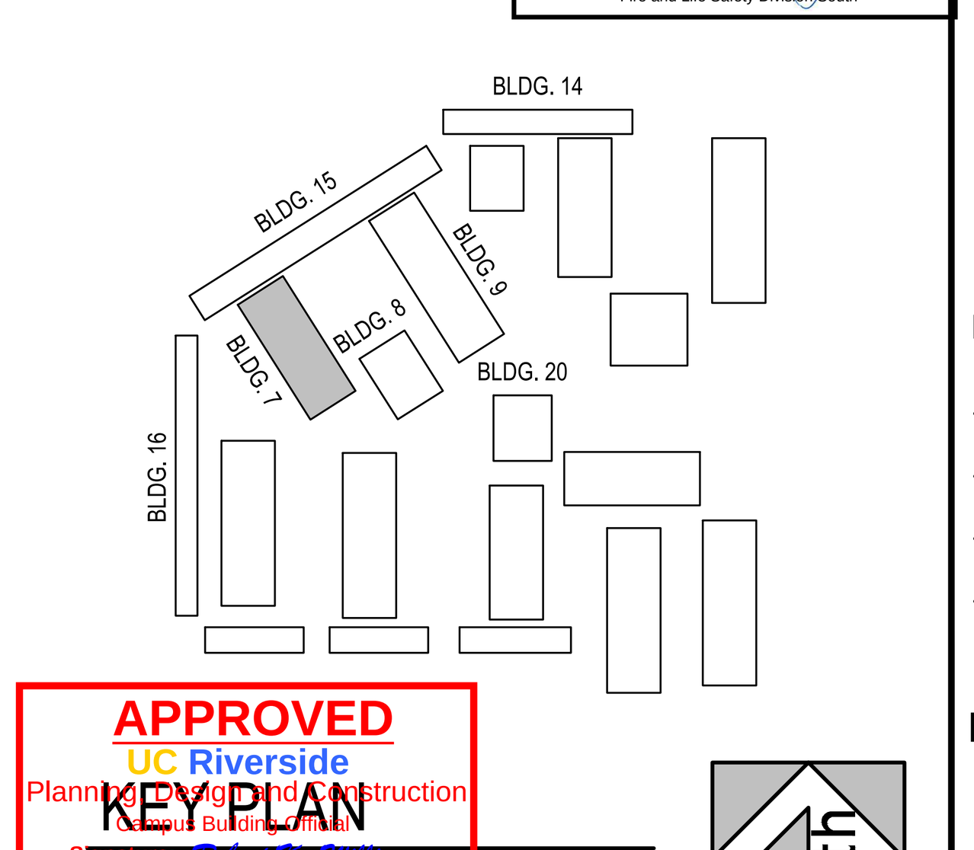

KEY PLAN

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UC RIVERSIDE
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Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
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miyamoto.
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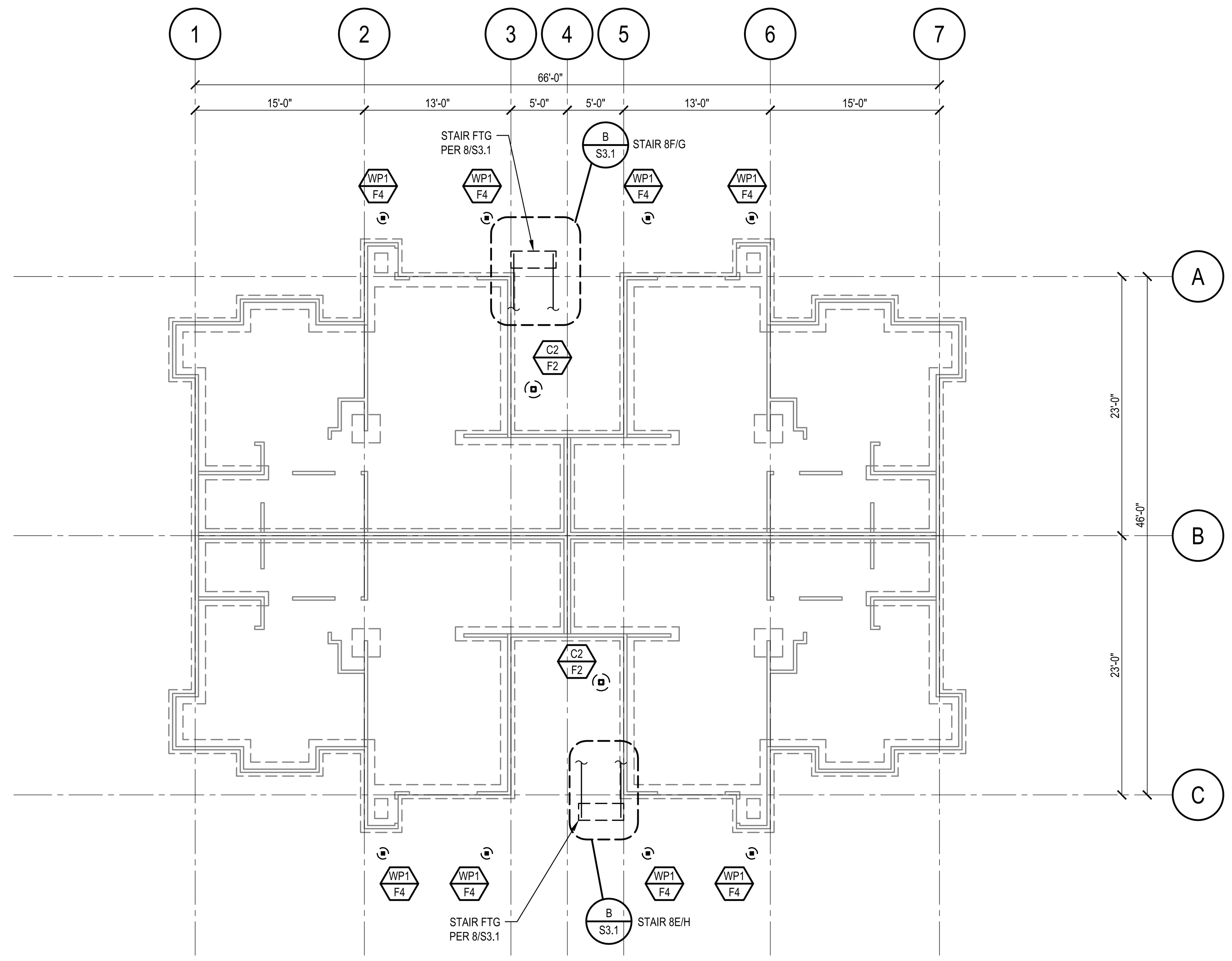
DATE:	05-10-2019
DRAWN:	M.B.V.

BUILDING 7
FOUNDATION & 2ND FLOOR FRAMING PLANS

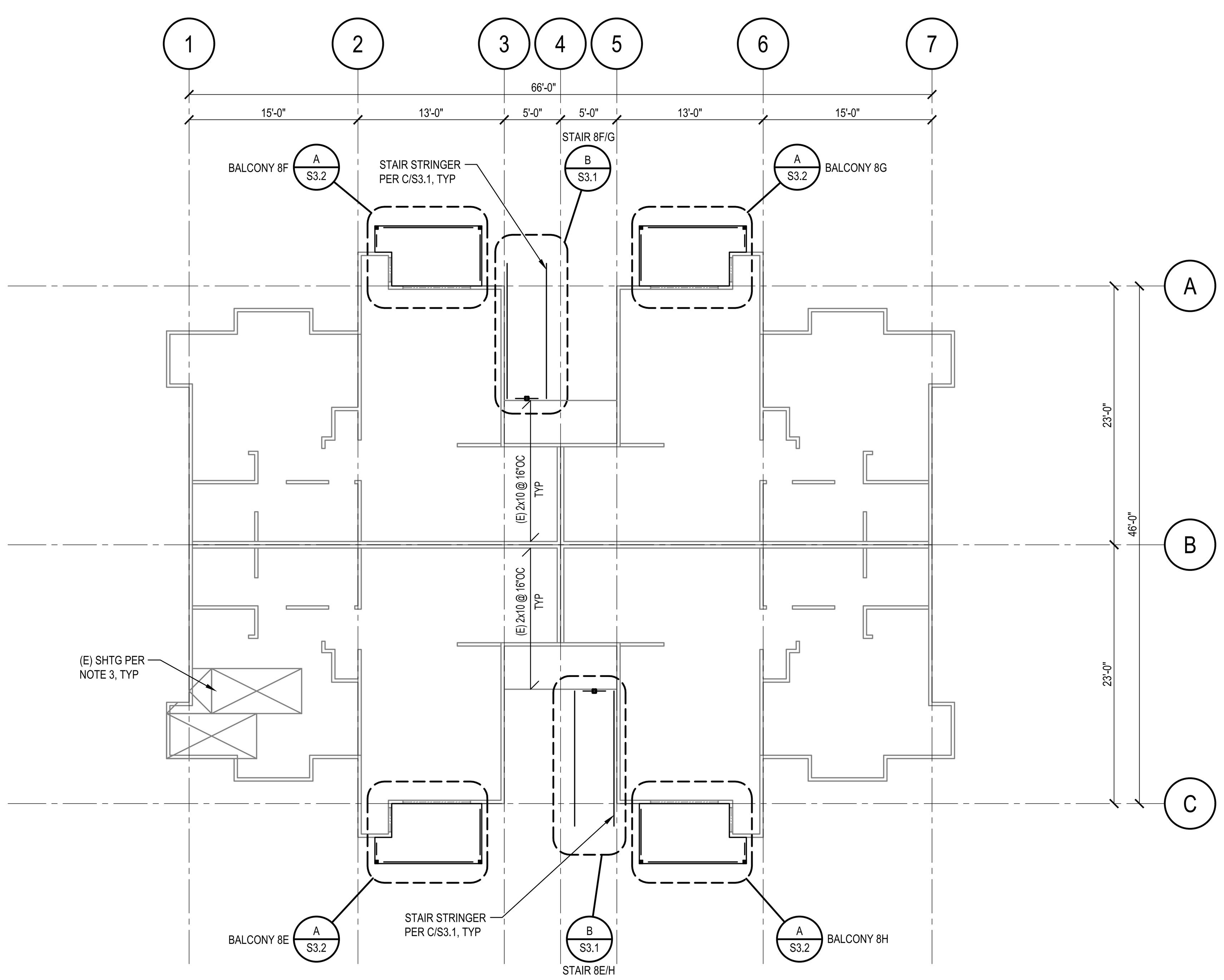
S7-2.1



A FOUNDATION PLAN - BUILDING 8

1/8" = 1'-0"

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.



B SECOND FLOOR FRAMING PLAN - BUILDING 8

1/8" = 1'-0"

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.

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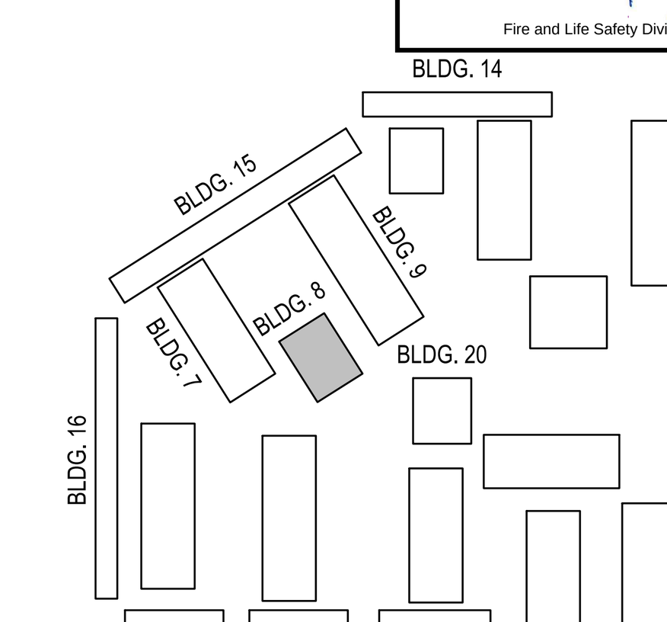

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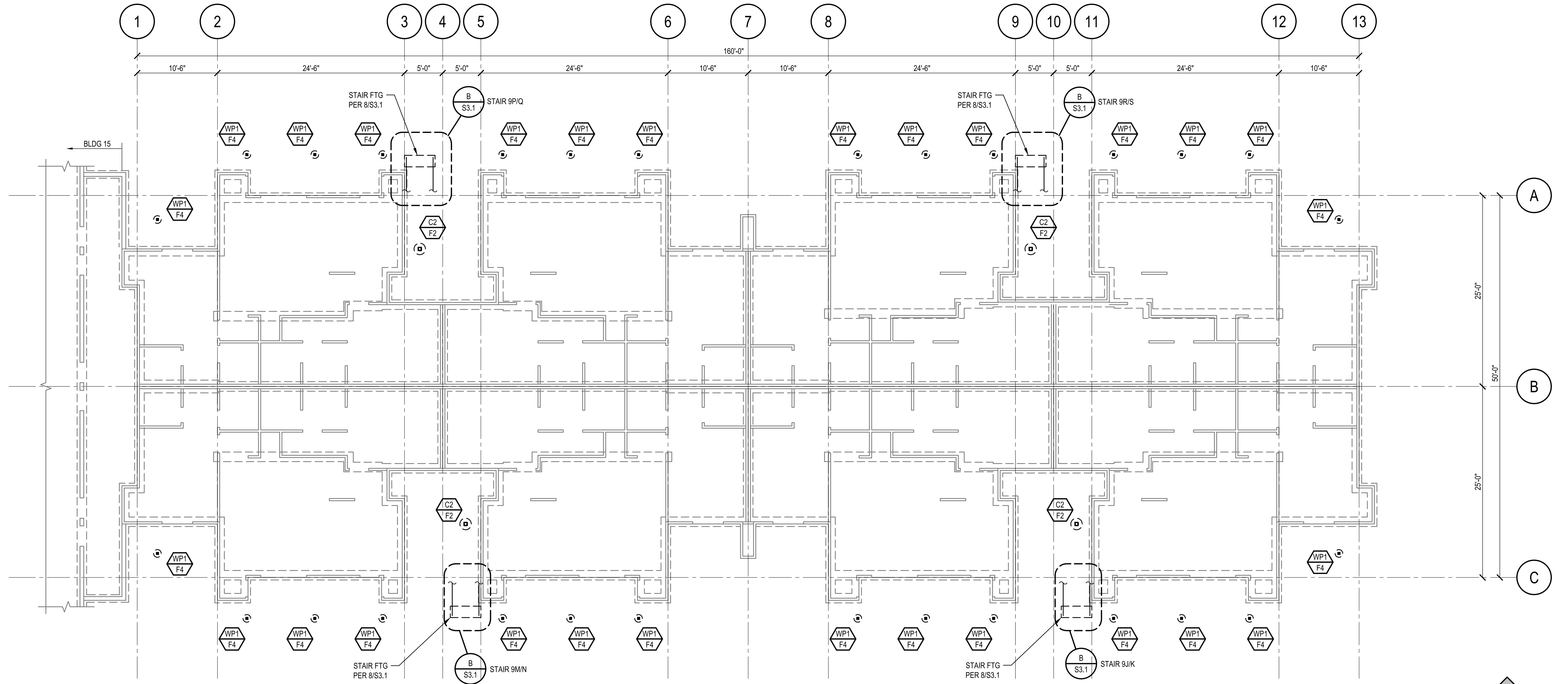
DATE:	05-10-2019
DRAWN:	M.B.V.

BUILDING 8 FOUNDATION & 2ND FLOOR FRAMING PLANS

S8-2.1

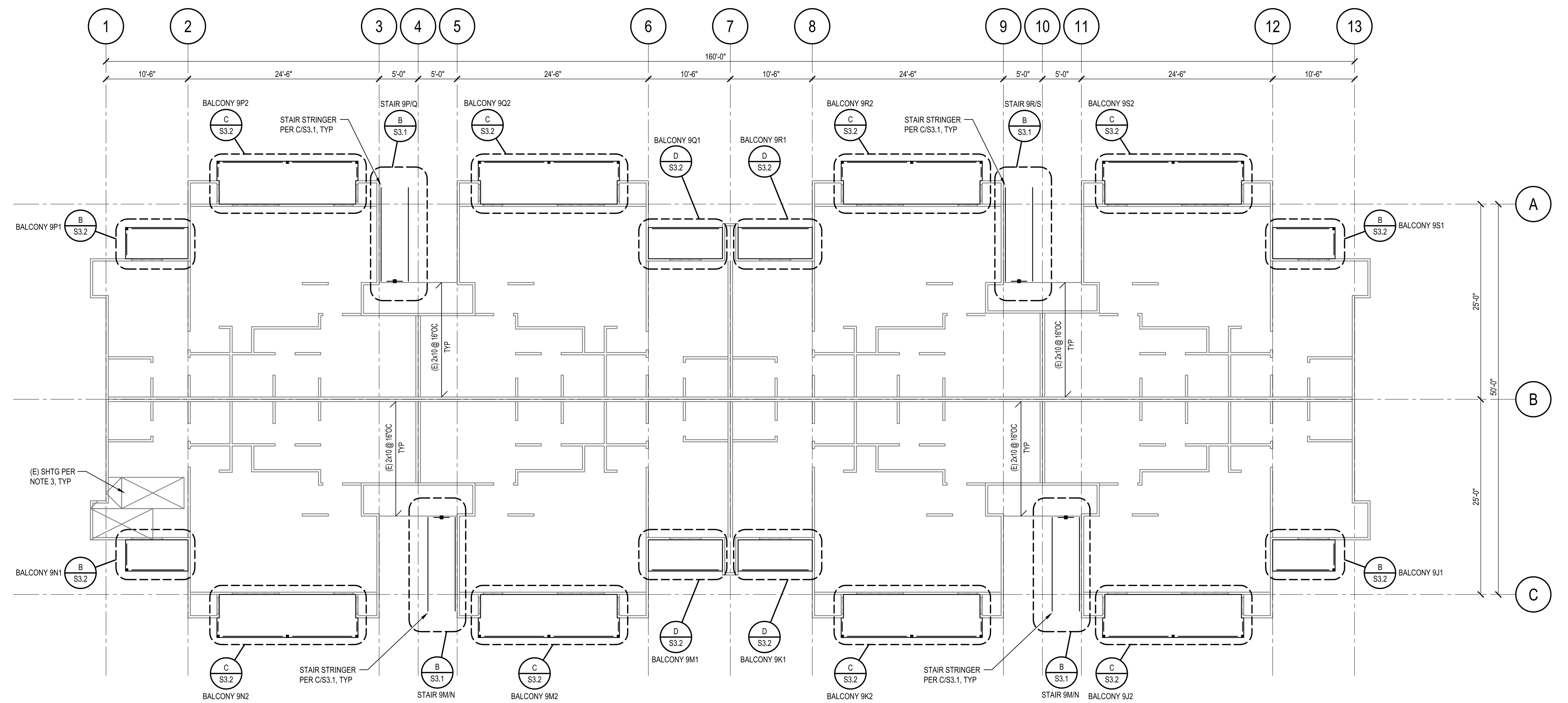
07/02/2019



A FOUNDATION PLAN - BUILDING 9

1/8" = 1'-0"

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.



B SECOND FLOOR FRAMING PLAN - BUILDING 9

1/8" = 1'-0"

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.

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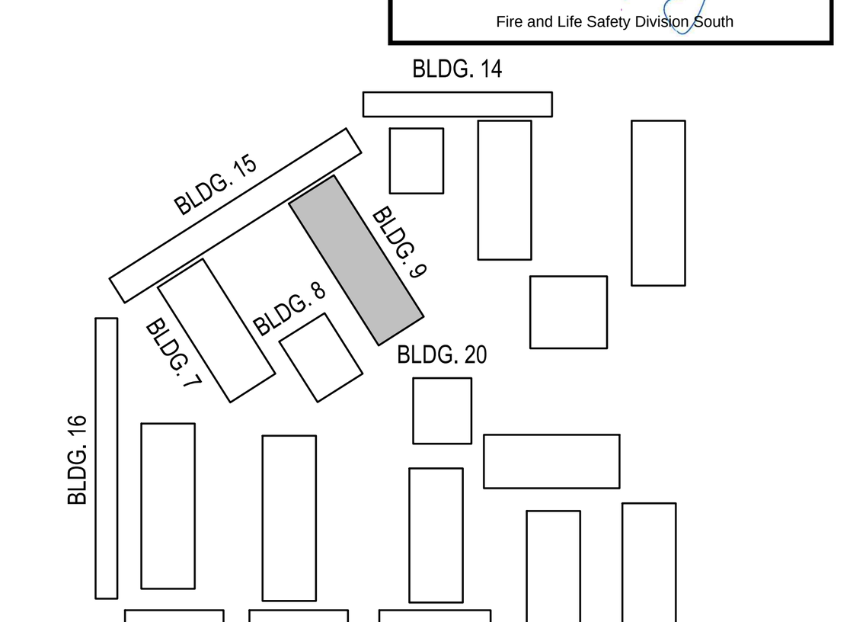

KEY PLAN

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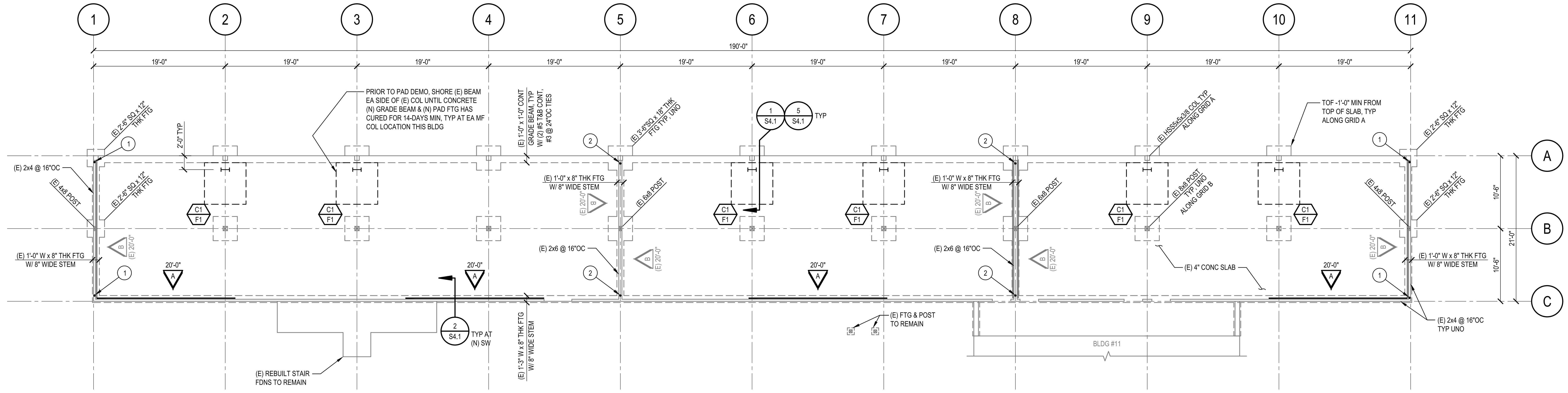
BUILDING 9
FOUNDATION &
2ND FLOOR
FRAMING PLANS

S9-2.1

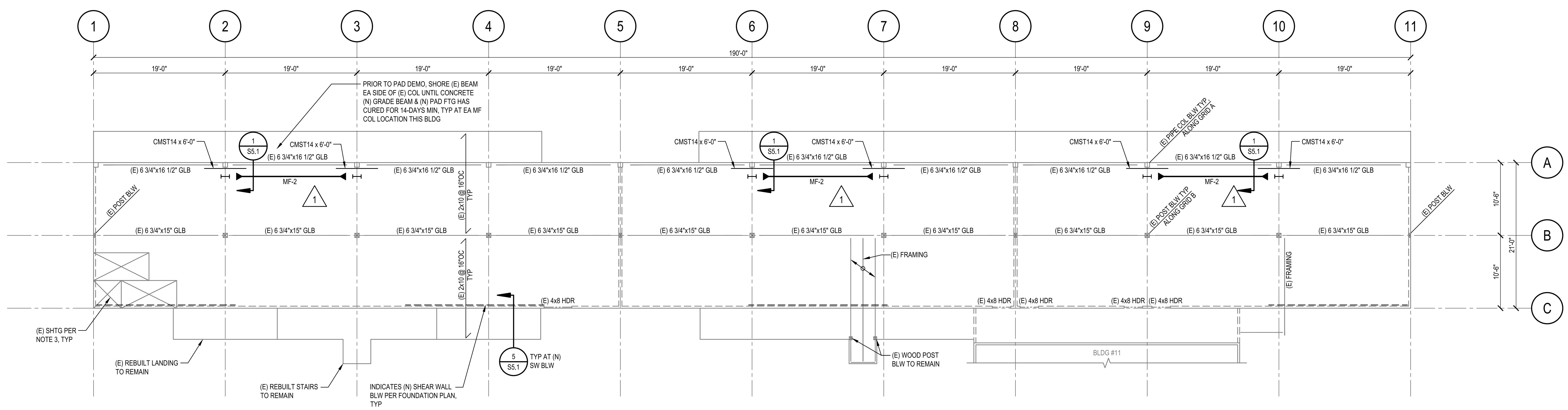


A FOUNDATION PLAN - BUILDING 14

1/8" = 1'-0"

north

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.



B SECOND FLOOR FRAMING PLAN - BUILDING 14

1/8" = 1'-0"

north

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.

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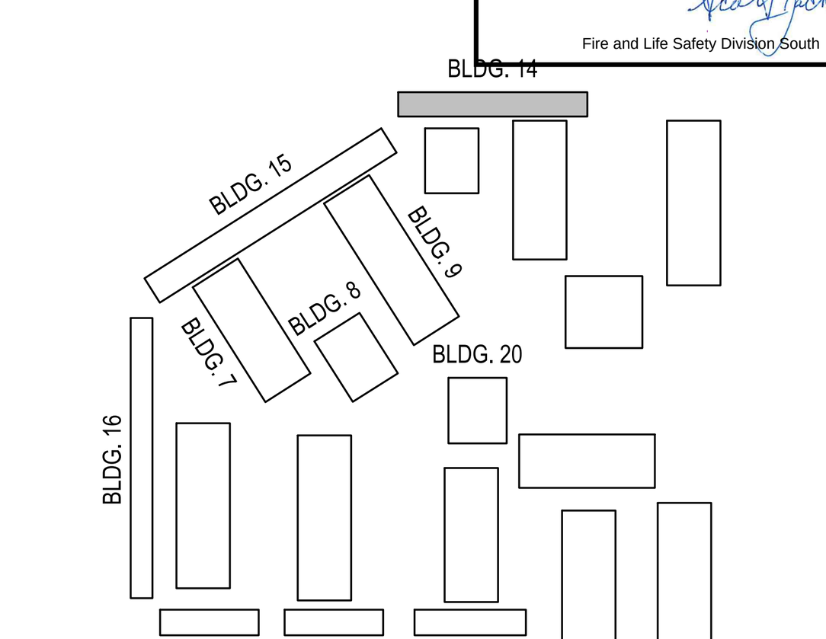

KEY PLAN

north

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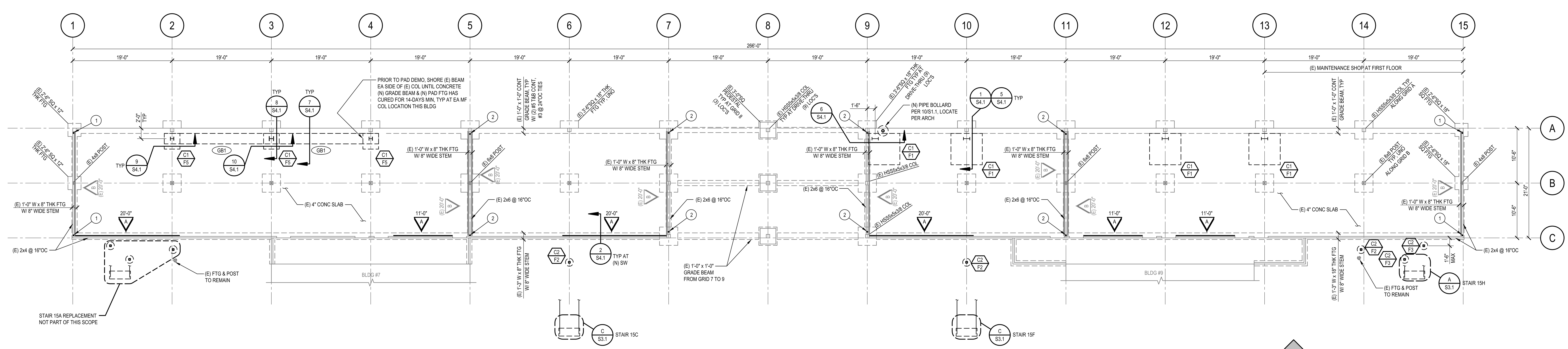
BUILDING 14
FOUNDATION &
2ND FLOOR
FRAMING PLANS

S14-2.1



A FOUNDATION PLAN - BUILDING 15

1/8" = 1'-0"

NOTES:

1. SEE S0.1 FOR GENERAL NOTES AND S1.1 FOR TYPICAL DETAILS.
2. ALL EXISTING DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN FIELD.
3. EXISTING SLAB ON GRADE ELEVATION VARIES.
4. (N) SLAB ON GRADE SHALL BE 5" THICK MIN W/ #4 @ 18"OC EA WAY, TYP UNO.
5. SEE ARCH FOR ALL DEMO, FINISH REMOVAL AND REPLACEMENT, AND DIMENSIONS AND ELEVATIONS NOT SHOWN.

LEGEND:

- X'-X" A — INDICATES NEW PLYWOOD SHEAR WALL TYPE AND MINIMUM LENGTH PER SCHEDULE THIS SHEET.
- (E) X'-X" B — INDICATES EXISTING PLYWOOD SHEAR WALL AND LENGTH. PER SCHEDULE THIS SHEET
- C# — INDICATES COLUMN / POST TYPE PER SCHEDULE THIS SHEET.
- F# — INDICATES PAD FOOTING TYPE PER SCHEDULE THIS SHEET.
- 1 — INDICATES HOLDOWN PER SCHEDULE THIS SHEET.
- ⊠ — INDICATES WOOD POST.

SHEAR WALL SCHEDULE

MARK	PLYWOOD OR OSB SHEATHING	EDGE NAILING (EN)	SILL BOLTING (SB)	BLKG & STUD AT ADJOINING PANEL EDGES	RIM JOIST OR BLOCKING CONN TO TOP PLATE BELOW	CAPACITY (ASD)
A	15/32" C-D	10d @ 6"OC	5/8"Ø x 7" EMBED @ 48"OC TITEN HD	2x	A35/LTP4 @ 16"OC	310 PLF
B (E)	1/2" CDX	10d @ 2 1/2"OC	(E)	3x	(E)	680 PLF
C (E)	3/8" STRUCT I	8d @ 6"OC	(E)	2x	(E)	280 PLF

NOTES:

1. SEE GENERAL NOTES ON S0.1 FOR SHEAR WALL SCHEDULE NOTES.
2. SHEATHING SHALL EXTEND AND NAIL TO (E) OR (N) FULL HEIGHT STUD EACH END OF WALL
3. ALL NAILING AND INFO FOR (E) SHEAR WALLS ARE EXISTING, UNLESS WHERE NOTED ON PLANS/DETAILS. DO NOT DAMAGE OR MODIFY (E) SHEAR WALLS.
4. (N) TYPE A SHEAR WALLS AT BLDGS 14-16 MAY BE SHIFTED ±10'-0" AS NECESSARY. NOTIFY SEOR OF ANY LOCATION CHANGES GREATER THAN 10'-0"
5. PROVIDE TOP PLATE CONNECTION WHERE EXISTING SHEAR TRANSFER NAILING DOES NOT OCCUR, SEE FRAMING DETAILS.

COLUMN SCHEDULE

MARK	SIZE	BASE PLATE	REMARKS
C1 / -	MF COL PER MANUF	-	-
C2 / -	HSS5x5x1/4	-	SEE 7/S3.1
WP1 / -	4x4 DF #1	-	SEE 1/S3.2

FOOTING SCHEDULE

MARK	SIZE	REINFORCING
- / F1	6'-0" SQ x 1'-6" THK	(7) #5 T&B EA WAY, SEE 1/S4.1
- / F2	1'-6" DIA x 6'-0" DP	SEE 7/S3.1
- / F3	1'-6" DIA x 3'-0" DP	SEE 7/S3.1
- / F4	1'-6" DIA x 1'-6" DP	SEE 1/S3.2
- / F5	3'-0" SQ x 1'-6" THK	(3) #5 BOT EA WAY

HOLDOWN SCHEDULE

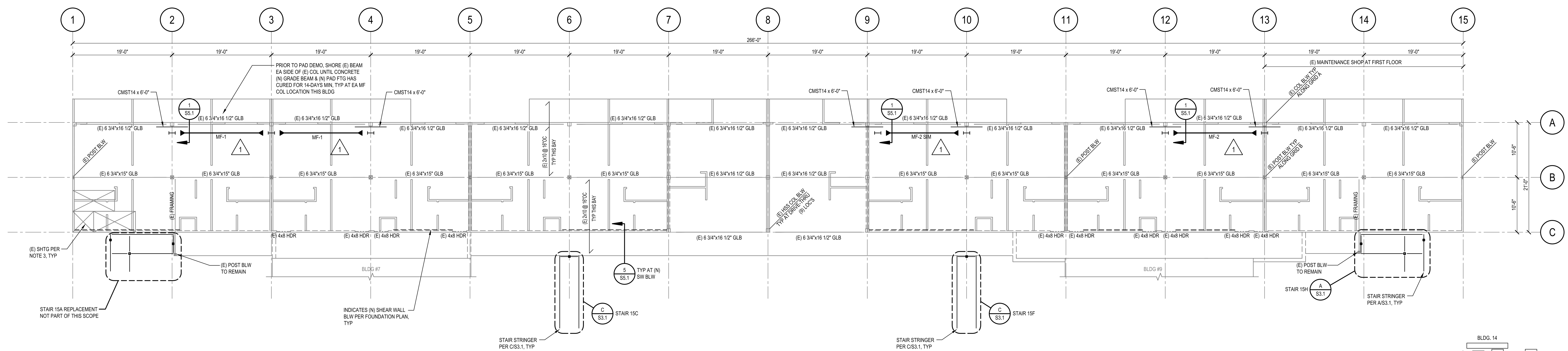
MARK	HOLDOWN	ANCHOR RODS	POST (UNO)	DETAIL	CAPACITY (ASD)	TEST LOADS
1	(S) HDU2-SDS2.5	5/8"Ø x 10" MIN EMBED	(2)2x OR 4x	BLDG 14-16: 3/S4.1 BLDG 20: 12/S4.1	3075 LBS	3700 LBS
2	(S) HDU5-SDS2.5	5/8"Ø x 18" MIN EMBED	(2)2x OR 4x	3/S4.1	5645 LBS	6400 LBS

NOTES:

1. NAIL DOUBLE STUDS TOGETHER W/ 16d @ 6"OC STAGGERED.
2. WHERE EXISTING END POST DOES NOT MEET MINIMUM, PROVIDE ADDITIONAL 2x FOR MIN OF (2) 2x NAILED PER NOTE 1.
3. PROVIDE THE SPECIFIED TEST LOAD AT EACH ANCHOR ROD TO VERIFY ANCHOR CAPACITY.
4. ANCHOR RODS SHALL BE EPOXIED WITH SIMPSON SET-XP. SEE 5/S1.1 FOR ALLOWABLE ALTERNATES.

GRADE BEAM SCHEDULE

MARK	SIZE (WxH)	REINFORCEMENT
GB1	2'-0"x2'-3"	(4) #6 CONT T&B, #4 CLOSED TIES @ 12"OC



B SECOND FLOOR FRAMING PLAN - BUILDING 15

1/8" = 1'-0"

NOTES:

1. SEE S0.1 FOR GENERAL NOTES AND S1.1 FOR TYPICAL DETAILS.
2. ALL EXISTING DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN FIELD.
3. EXISTING FLOOR SHEATHING IS 5/8" T&G CDX PLYWOOD WITH 10d @ 6"OC BN & EN AND 10"OC FN.
4. WALL ABOVE NOT SHOWN FOR CLARITY. WALL BELOW INDICATED WITH DASH.
5. SEE ARCH FOR ALL DEMO, FINISH REMOVAL AND REPLACEMENT, AND DIMENSIONS AND ELEVATIONS NOT SHOWN.

LEGEND:

- INDICATES (E) HEADER
- INDICATES SIMPSON STRONG FRAME MOMENT FRAME BEAM
- MF-1 INDICATES FRAME MF-1 ON SHEET MF-1
- MF-2 INDICATES FRAME MF-2 ON SHEET MF-2
- 1 (triangle)

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Fire and Life Safety Division South

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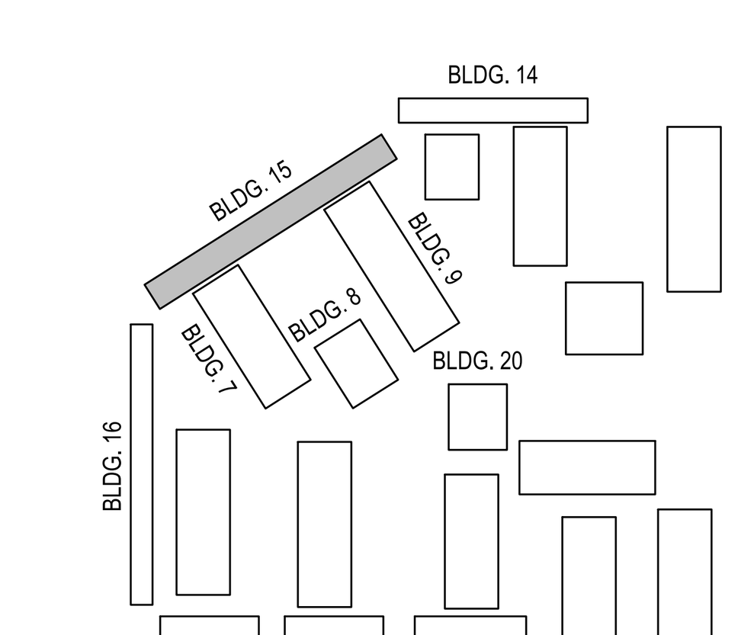

KEY PLAN

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REGISTERED PROFESSIONAL ENGINEER JONATHAN K. BUCKALEW S 6402 STRUCTURAL STATE OF CALIFORNIA

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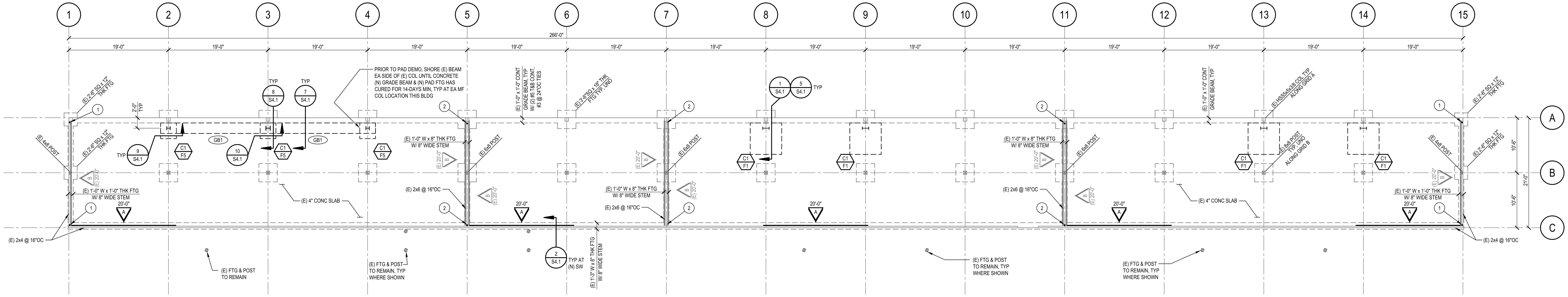
DRAWN:	M.B.V.

BUILDING 15 FOUNDATION & 2ND FLOOR FRAMING PLANS

S15-2.1

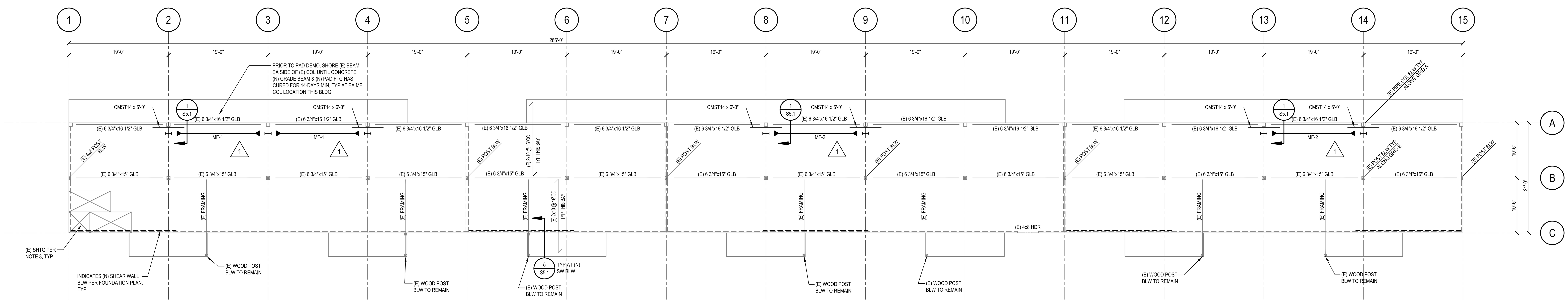


A FOUNDATION PLAN - BUILDING 16

1/8" = 1'-0"

north

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.

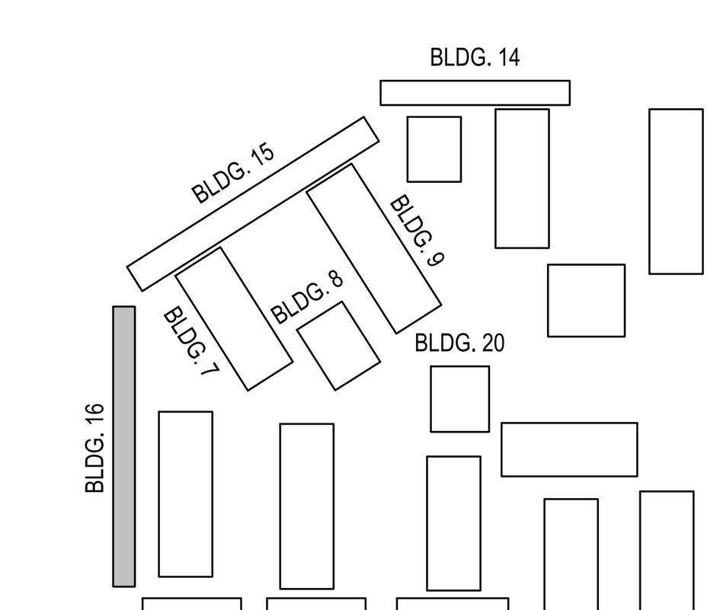


B SECOND FLOOR FRAMING PLAN - BUILDING 16

1/8" = 1'-0"

north

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.



KEY PLAN

north

OFFICE OF THE STATE FIRE MARSHAL APPROVED FIRE AND PANIC ONLY
07/02/2019

INSPECTIONS REQUIRED

APPROVED
UC Riverside
Building & Safety Division
Campus Building Permit

miyamoto.
1901 East Alton Avenue, Suite 160
Santa Ana, CA 92705
T: (949) 579-1170
miyamotointernational.com
M1904011.00

Engineer

Stamp

Consultant

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019

3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

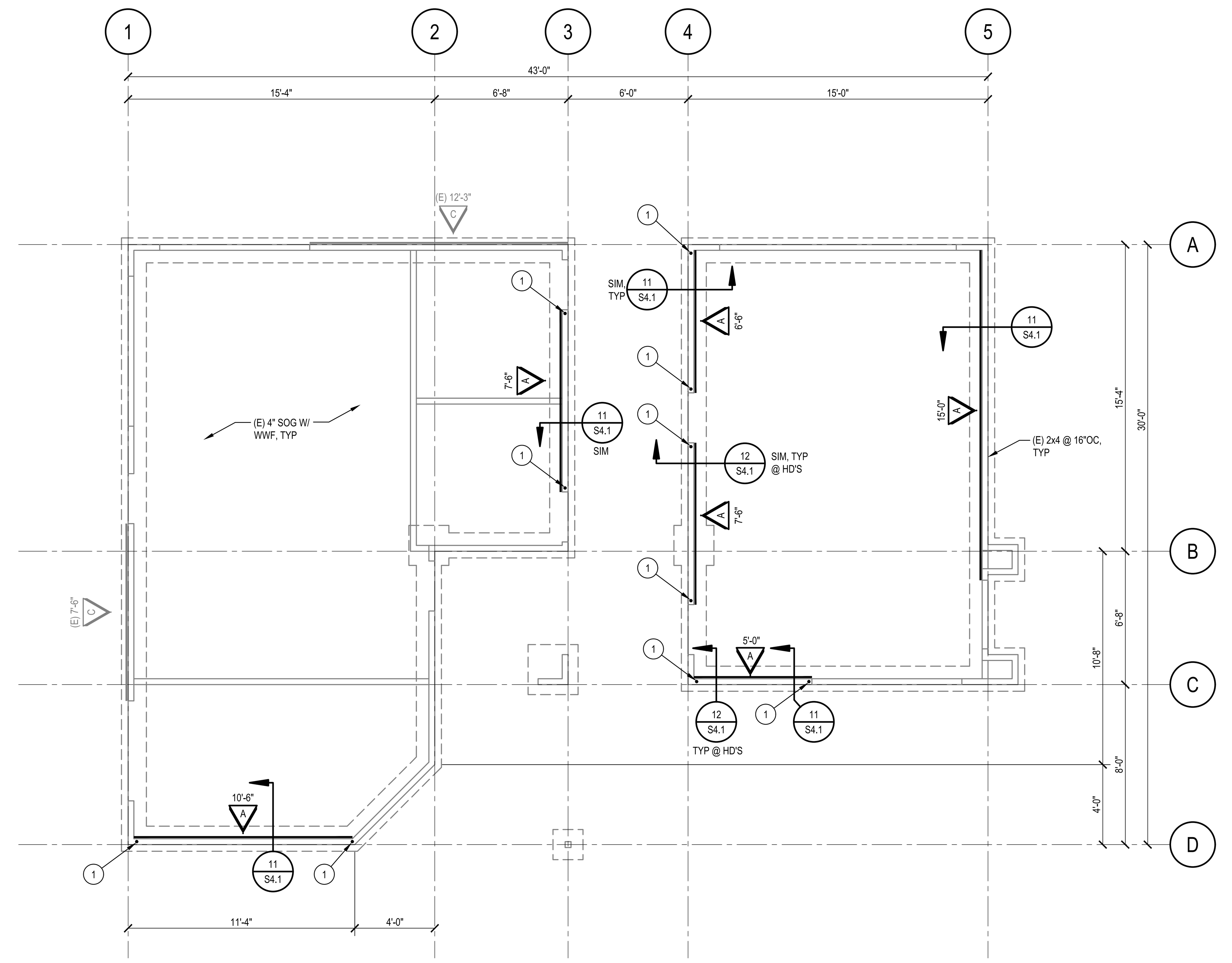
REVISIONS

1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	05-10-2019
DRAWN:	M.B.V.

BUILDING 16
FOUNDATION &
2ND FLOOR
FRAMING PLANS

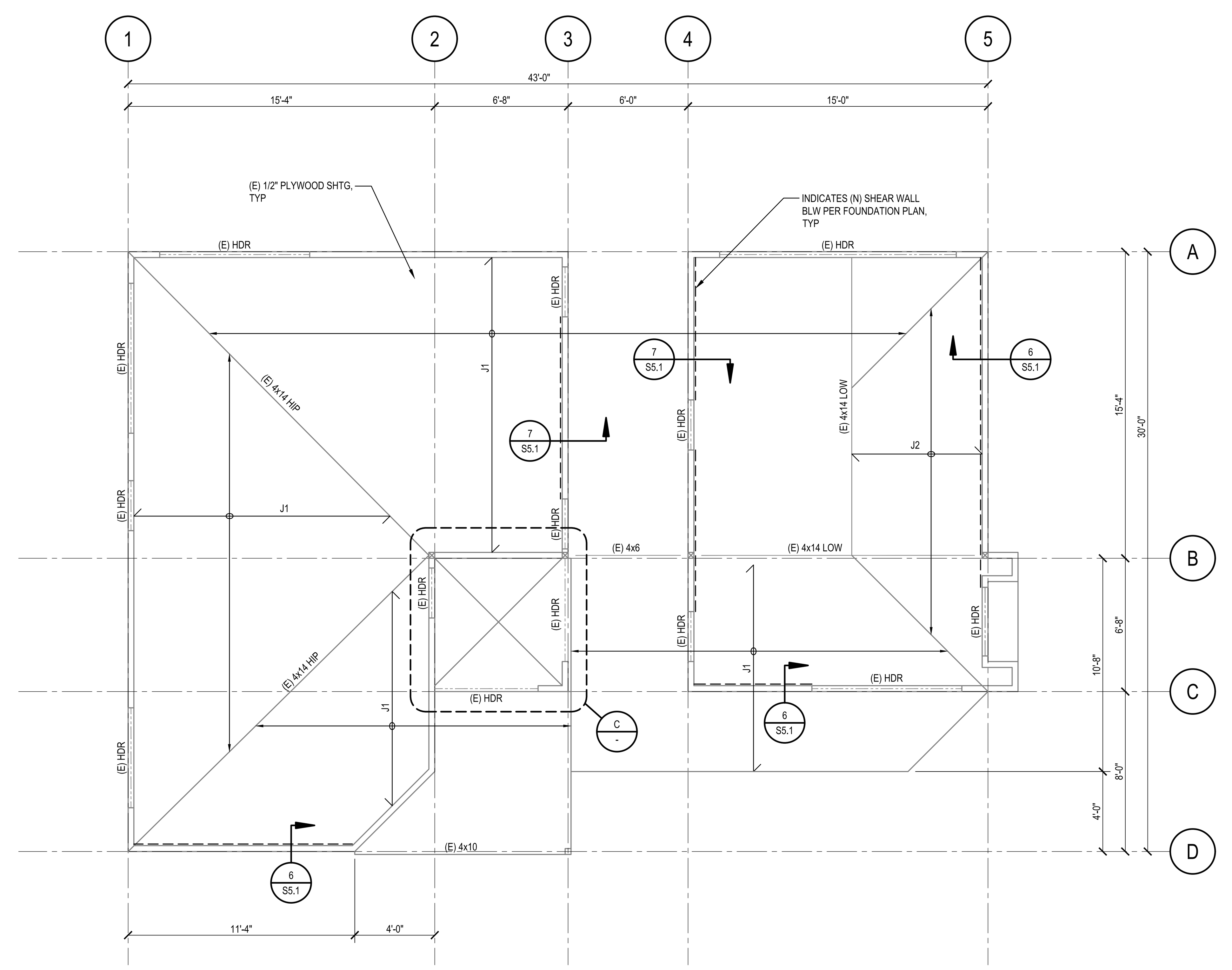
S16-2.1

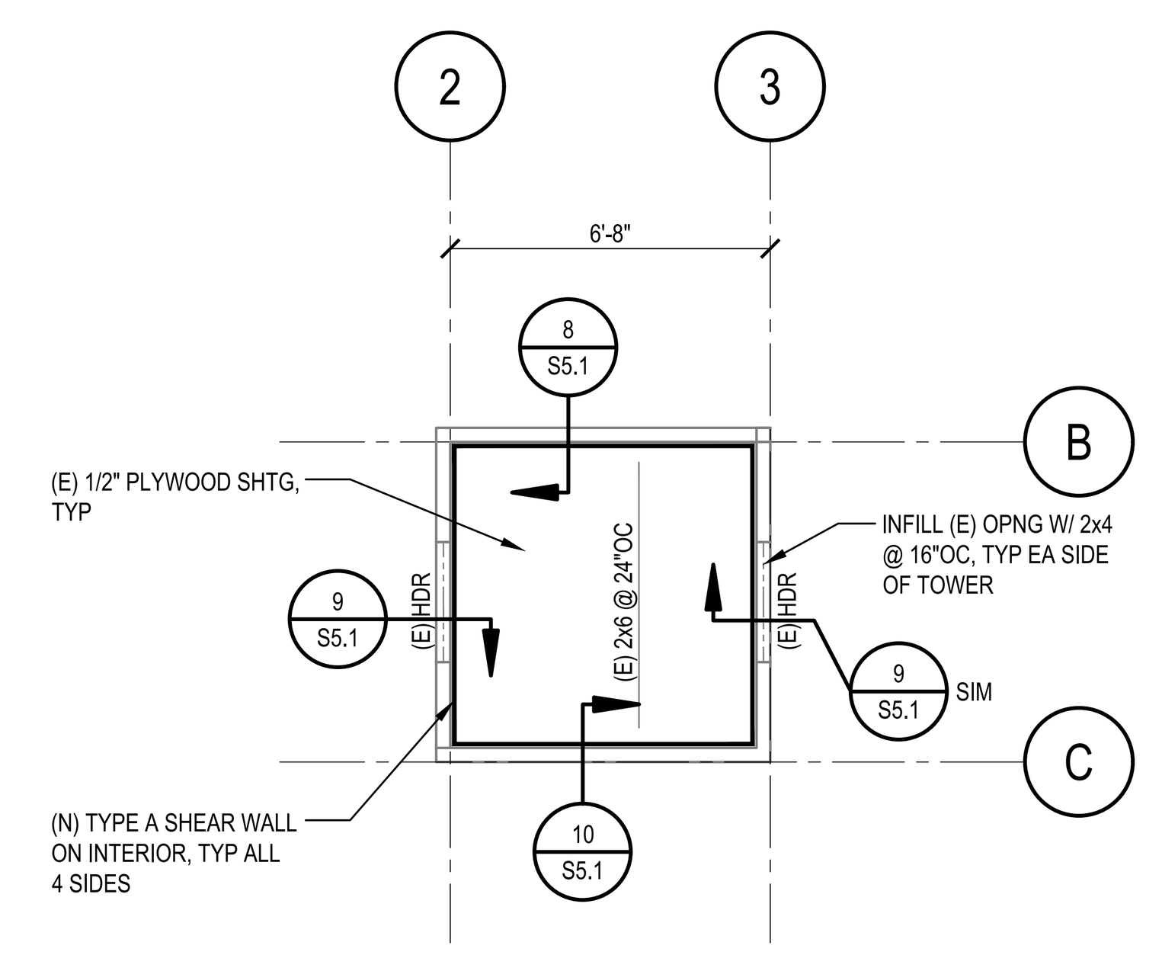


A FOUNDATION PLAN - BUILDING 20 (RECREATION CENTER)

1/4" = 1'-0"

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.





C TOWER HIGH ROOF FRAMING PLAN

1/4" = 1'-0"

(E) FRAMING SCHEDULE	
MARK	SIZE
J1	2x8 @ 16"OC
J2	2x8 @ 24"OC

OFFICE OF THE STATE FIRE MARSHAL
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07/02/2019
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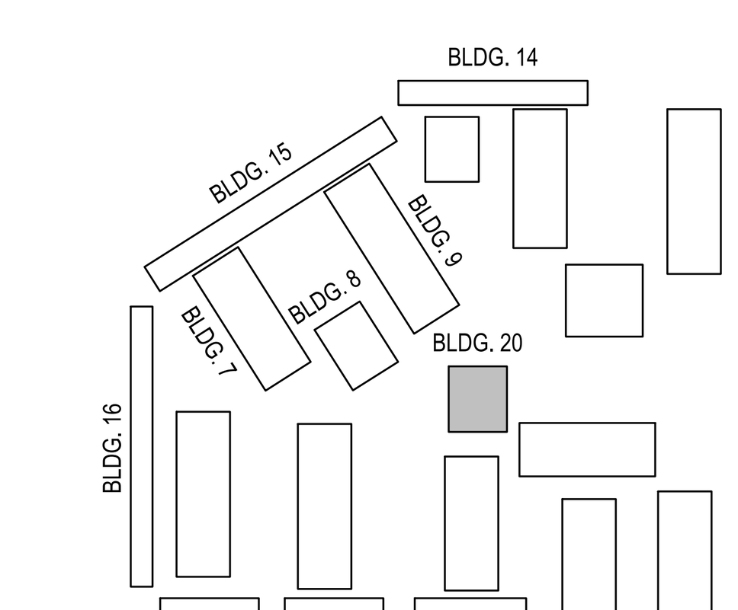
Reviewed by:
Fire and Life Safety Division South



KEY PLAN

B ROOF FRAMING PLAN - BUILDING 20 (RECREATION CENTER)

1/4" = 1'-0"

NOTES:
1. SEE 15-S2.1 FOR SCHEDULES, LEGEND AND PLAN NOTES.

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CFORMS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

miyamoto.
1901 East Alton Avenue, Suite 160
Santa Ana, CA 92705
MI1904011.00
T: (949) 579-1170
miyamotointernational.com
Engineer:
Stamp: REGISTERED PROFESSIONAL ENGINEER JONATHAN K. BUCKALEW S 6407 STRUCTURAL STATE OF CALIFORNIA
Consultant:

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019

3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

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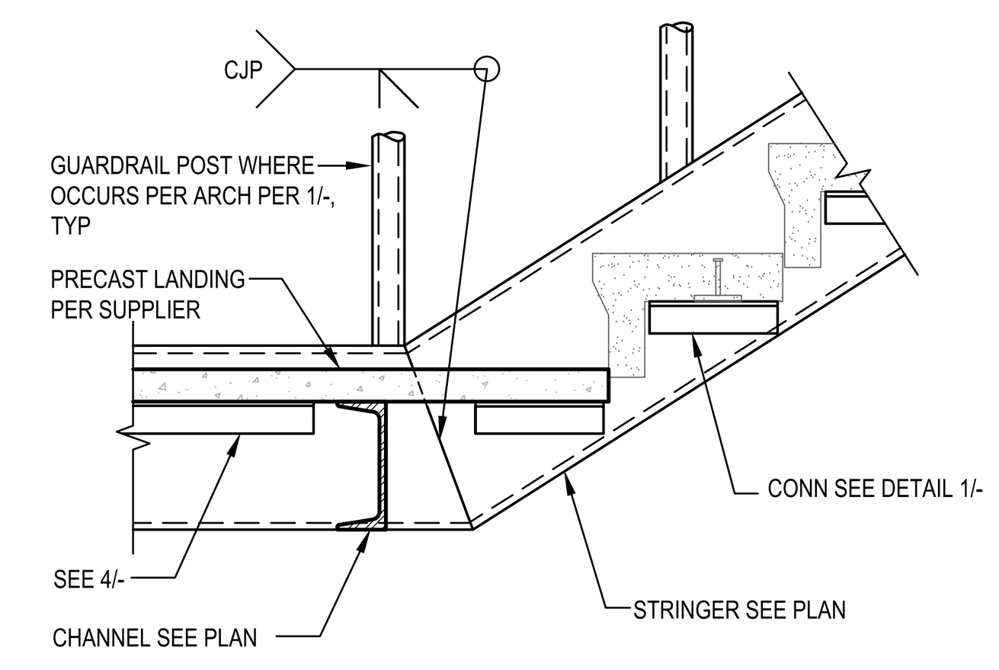
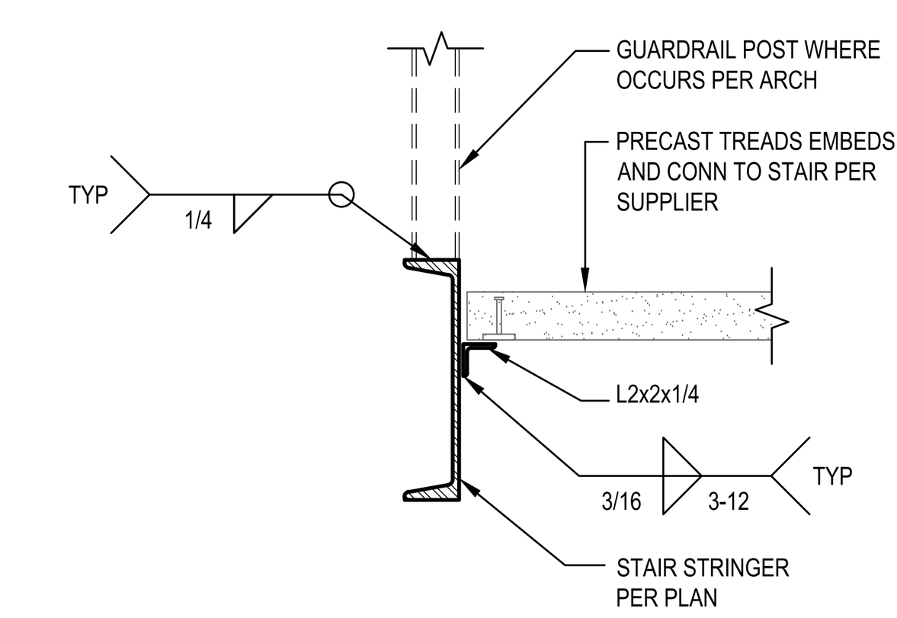
UCR CAAN #:	P5673
DATE:	05-10-2019
DRAWN:	M.B.V.

BUILDING 20 (REC CTR) FOUNDATION & ROOF FRAMING PLANS

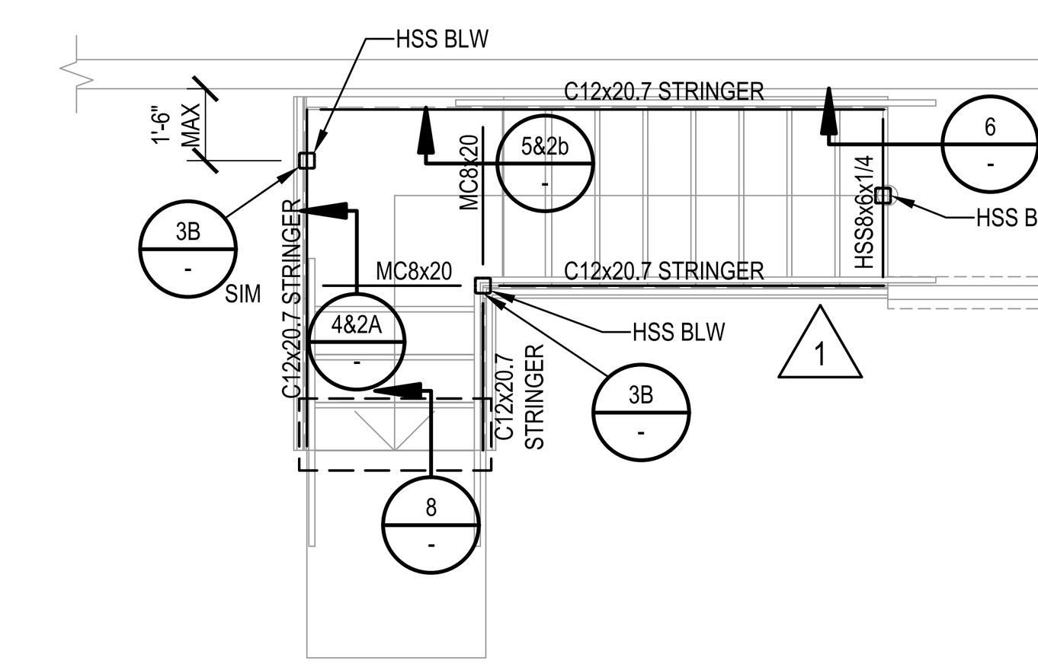
S20-2.1



5 TYP PRECAST TREAD AT STRINGER
1"=1'-0"

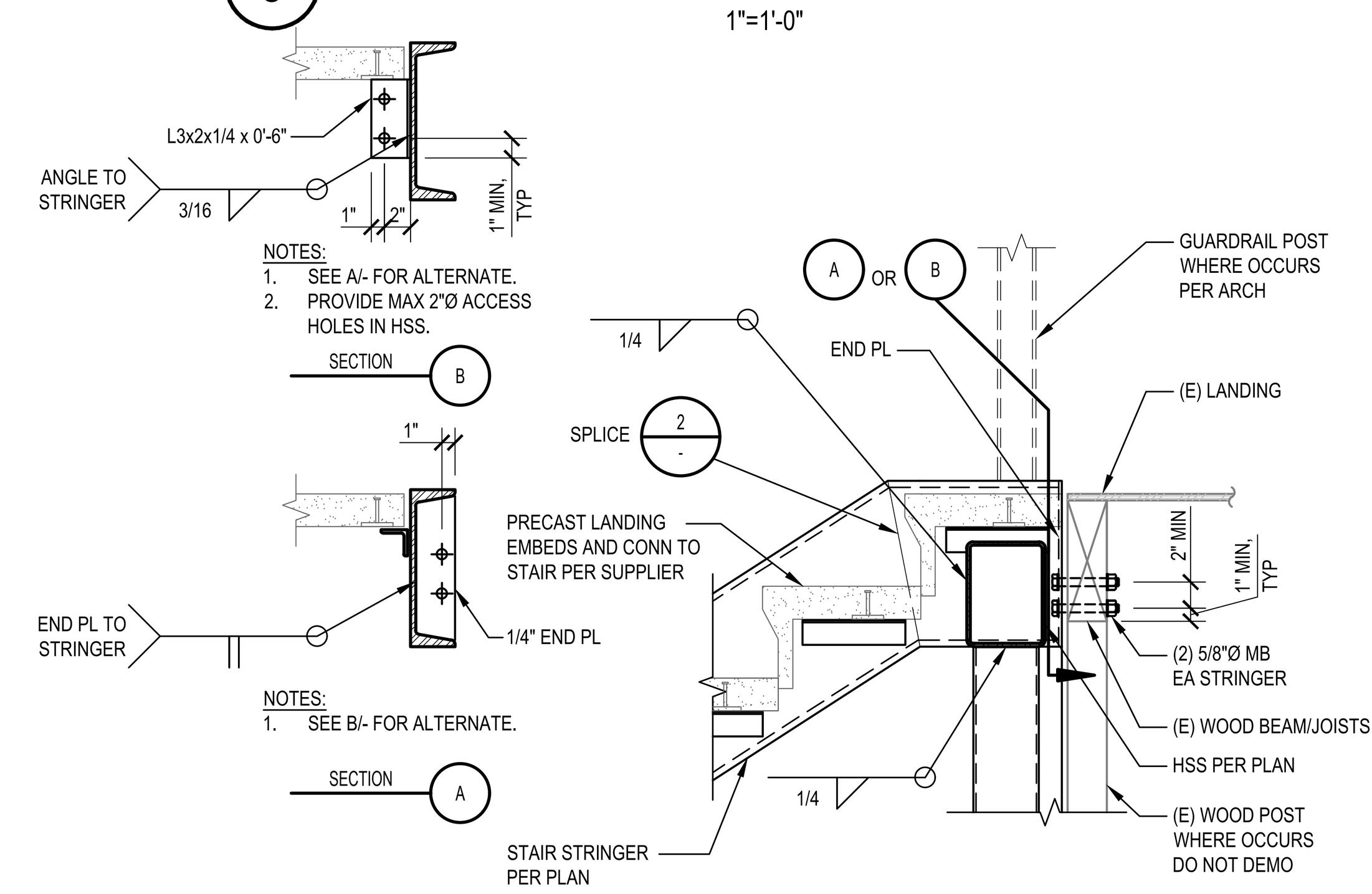


1 TYP PRECAST TREAD AT STRINGER
1"=1'-0"



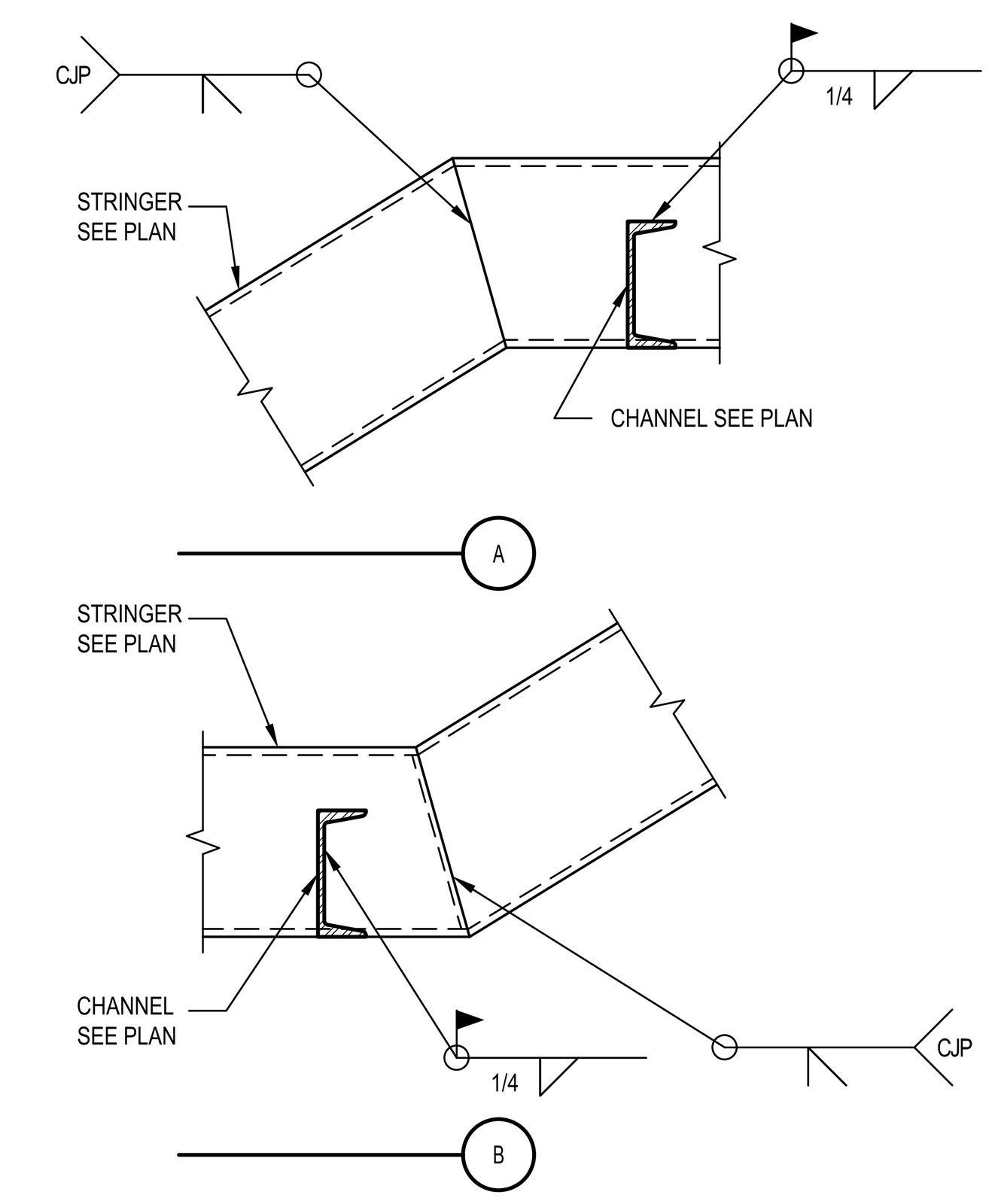
NOTES:
1. SEE FOUNDATION PLANS FOR COLUMN AND FOOTING SIZES NOT SHOWN
2. SEE ARCH FOR ALL STAIR DIMENSIONS AND FINISHES
3. ALL EXISTING DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN FIELD.
4. SEE TYPICAL DETAILS THIS SHEET.
5. SEE ARCH FOR ALL DEMO INCLUDING EXISTING STAIRS.
6. DO NOT DEMO ANY 2ND FLOOR LANDING FRAMING OR ANY 2ND FLOOR LANDING POSTS. NOTIFY SEOR FOR ANY EXISTING MEMBERS IN QUESTION.

A TYPE-A STAIR FRAMING PLAN
1/4"=1'-0"

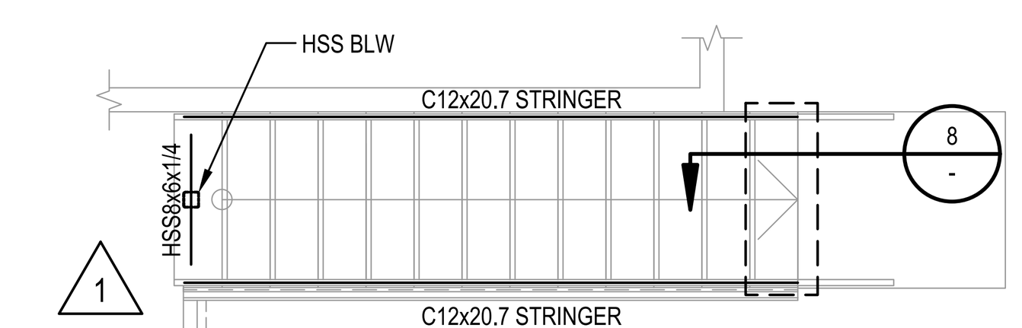


NOTES:
1. IN LIEU OF BOLTS, PROVIDE 5/8"Ø LAG SCREWS WITH 3" MIN EMBED INTO (E) WOOD.

6 STRINGER AT WOOD LANDING
1"=1'-0"

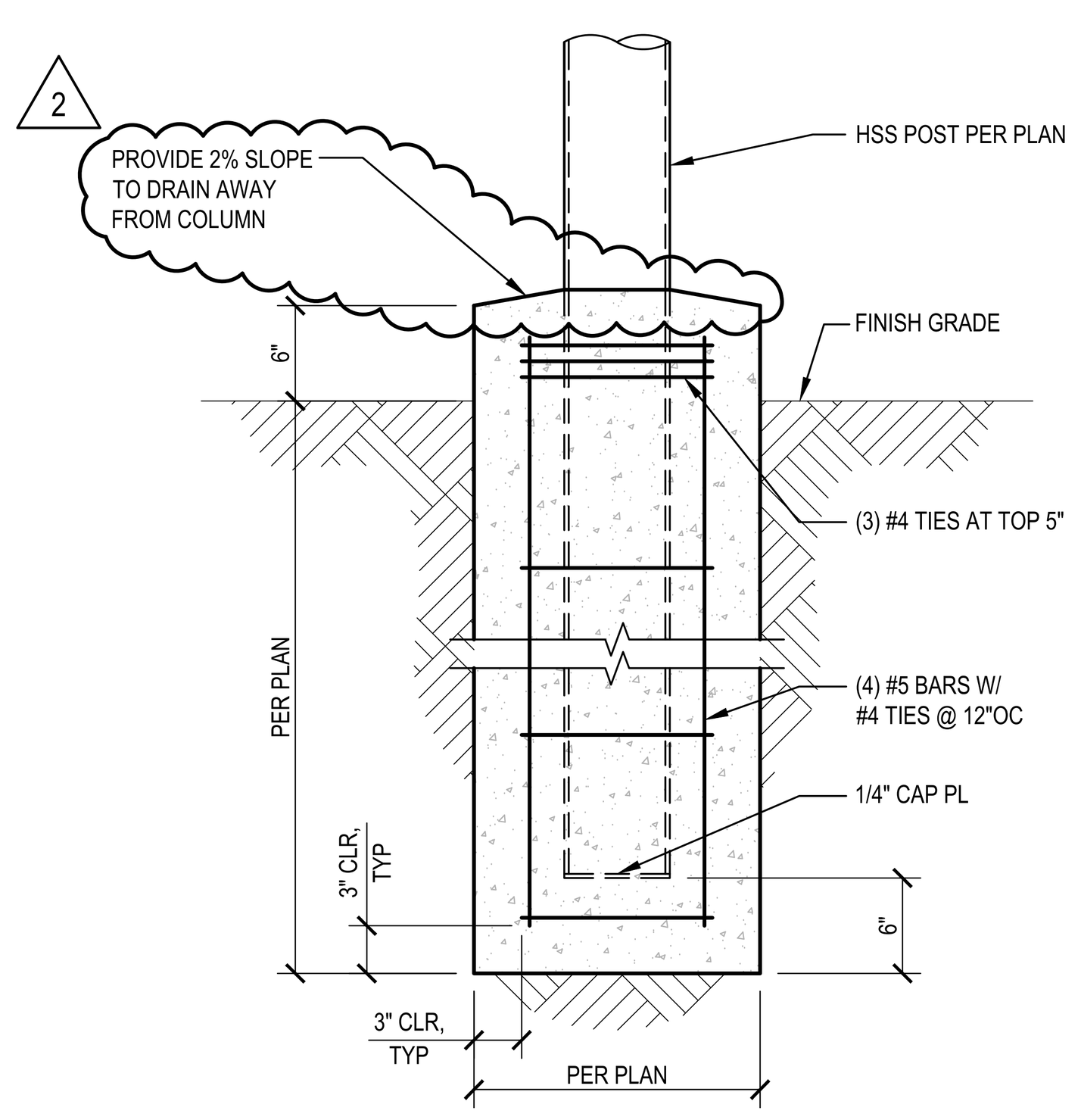


2 TYP BENT STRINGER CONNECTIONS
1"=1'-0"

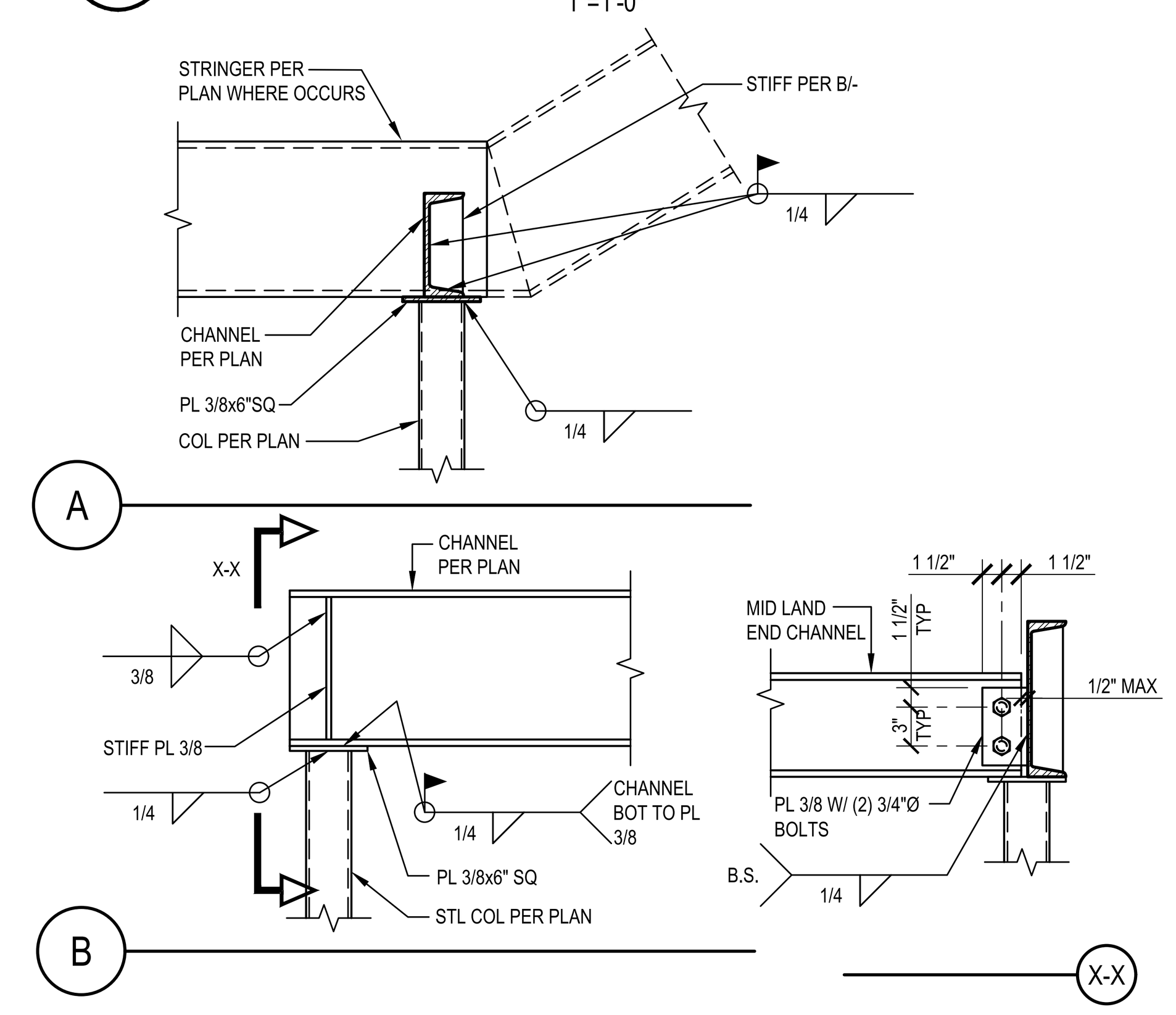


NOTES:
1. SEE A/- FOR NOTES AND TYPICAL DETAIL REFERENCES.

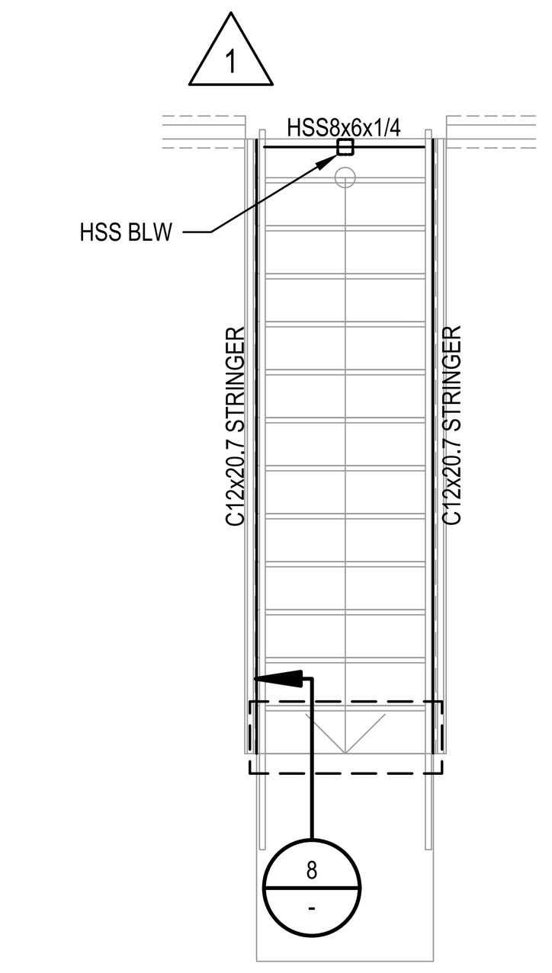
B TYPE-B STAIR FRAMING PLAN
1/4"=1'-0"



7 POST FOOTING DETAIL
1"=1'-0"

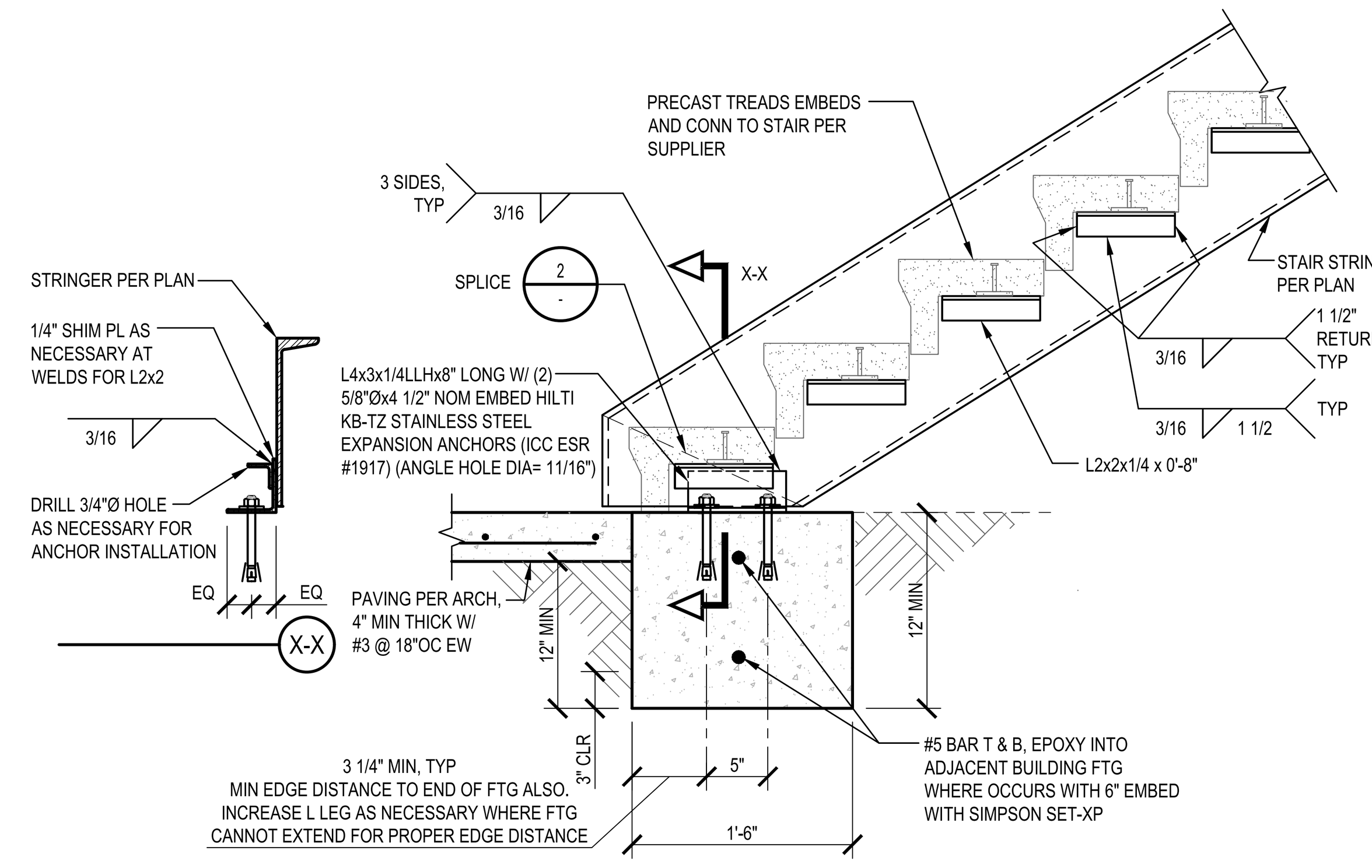


3 TYPICAL STRINGER POST DETAIL
1"=1'-0"

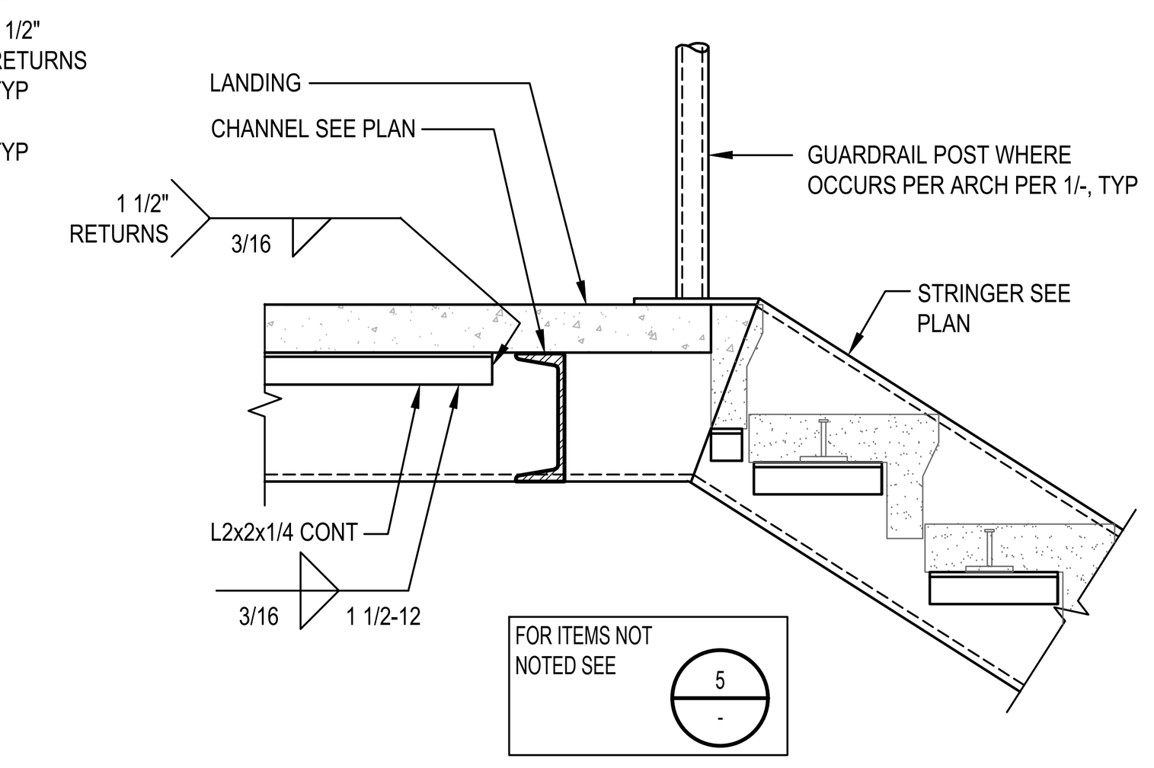


NOTES:
1. SEE A/- FOR NOTES AND TYPICAL DETAIL REFERENCES.

C TYPE-C STAIR FRAMING PLAN
1/4"=1'-0"



8 STRINGER AT FOUNDATION
1"=1'-0"



4 STAIRS AT MID LANDING
1"=1'-0"

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DRAWN:	M.B.V.

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Building & Safety Division
Campus Building Permit

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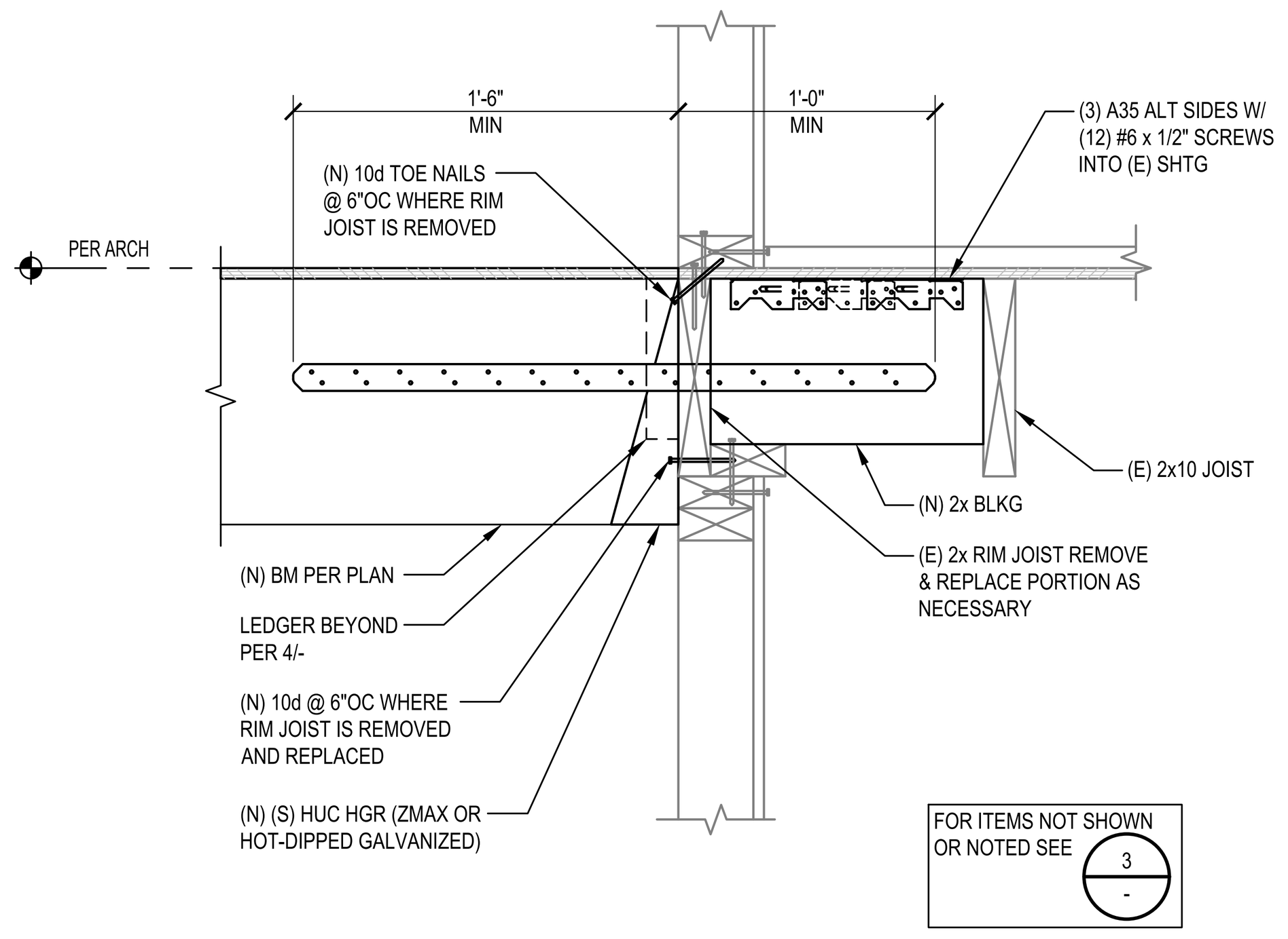
STAIR FRAMING PLANS & DETAILS

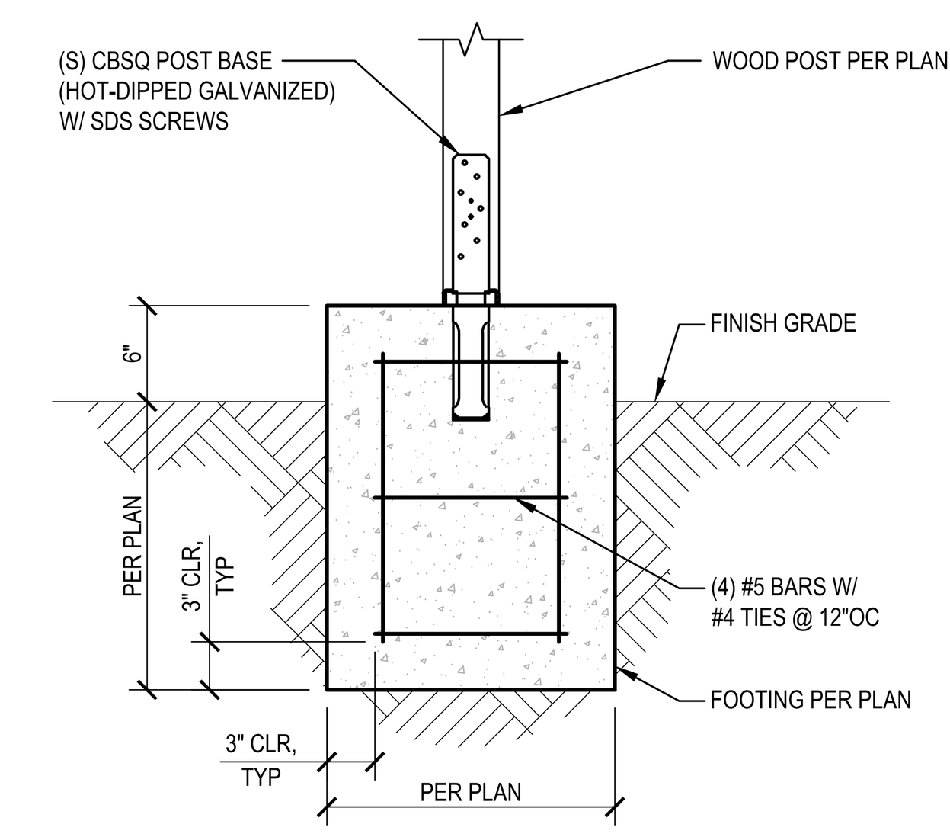
S3.1

CAMPUS BUILDING PERMIT NUMBER B19-194



5 BALCONY BEAM TO (E) WALL AND (E) PERPENDICULAR JOISTS

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

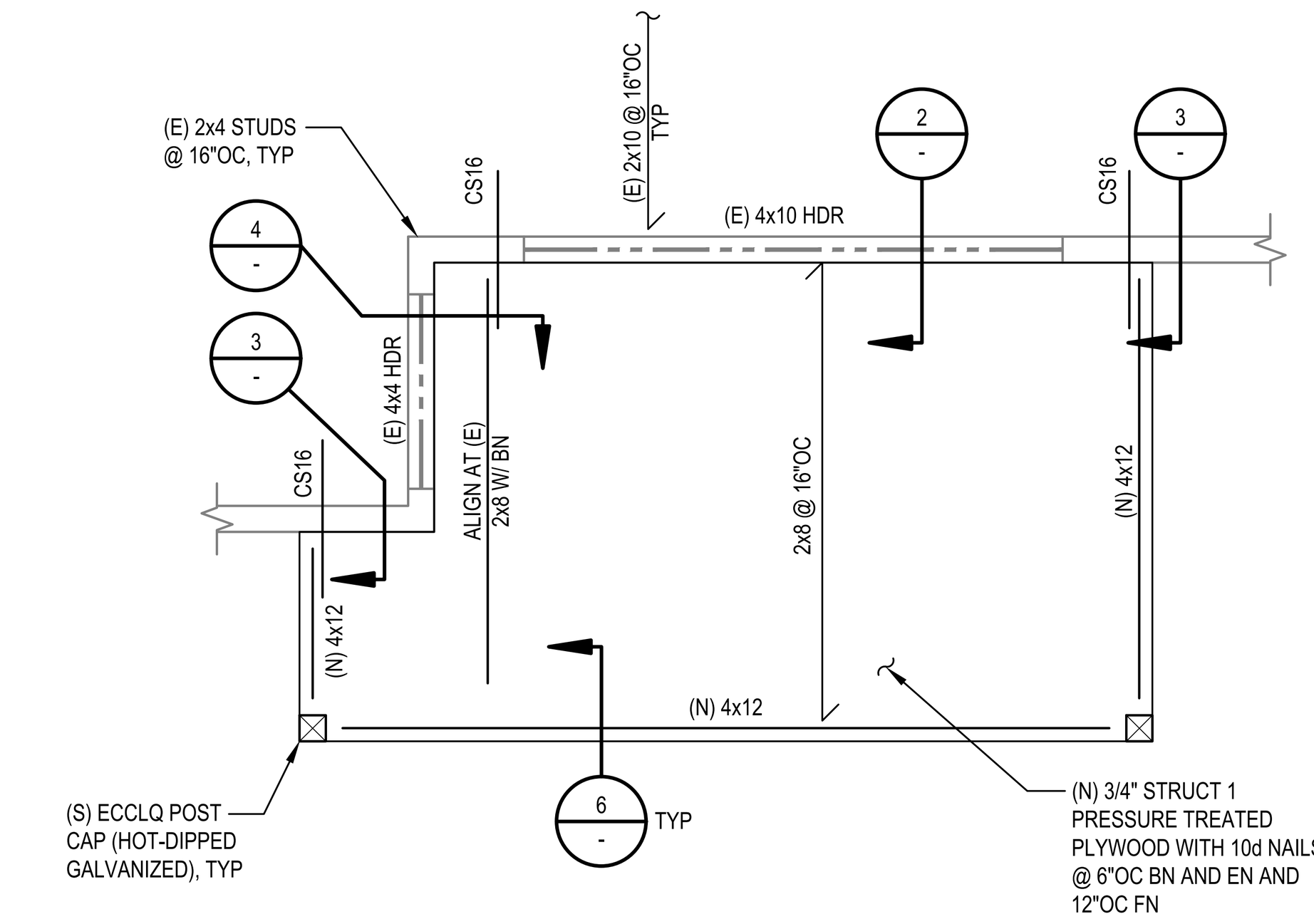


1 POST FOOTING DETAIL

1"=1'-0"

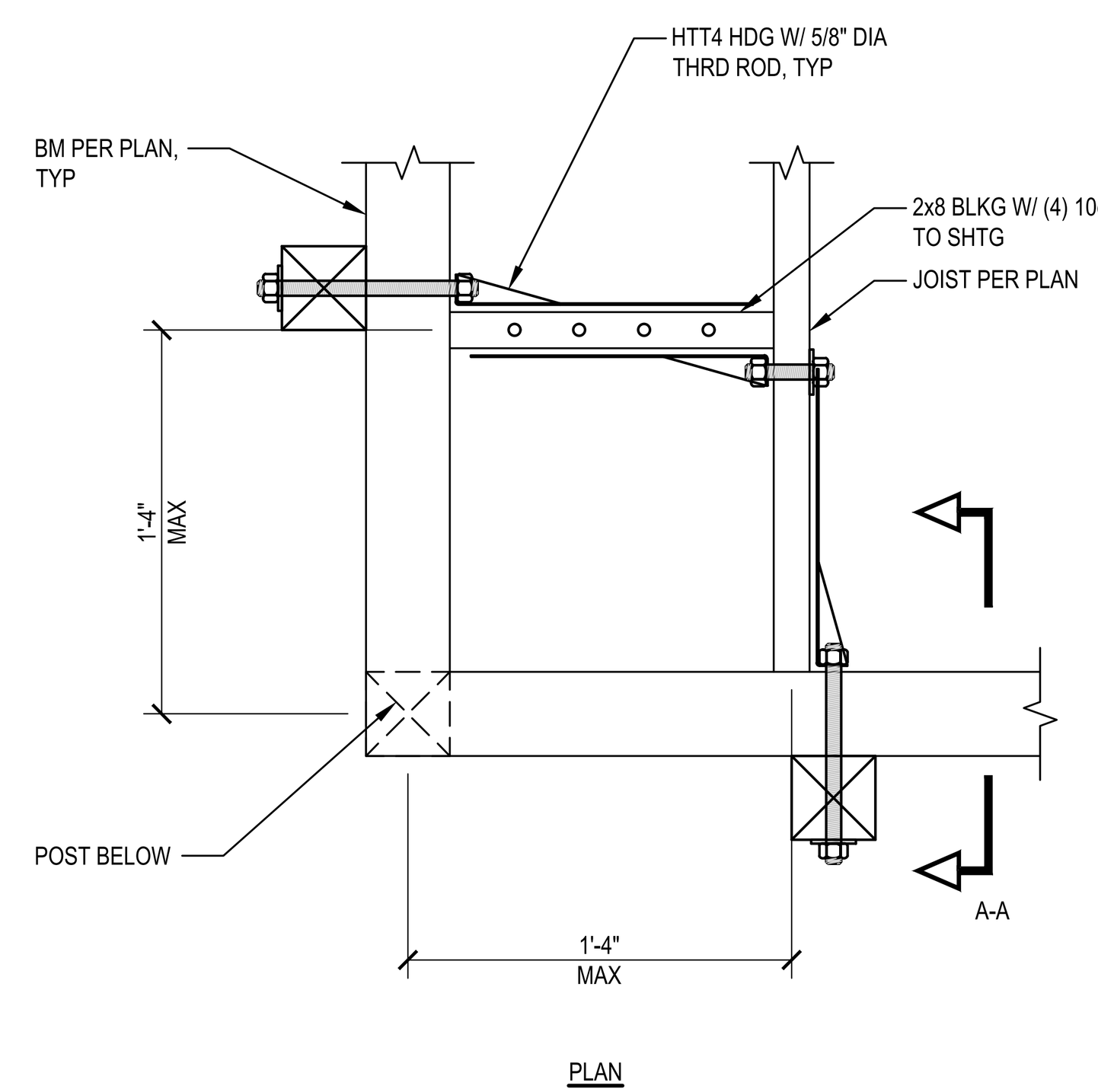
FRAMING PLAN NOTES

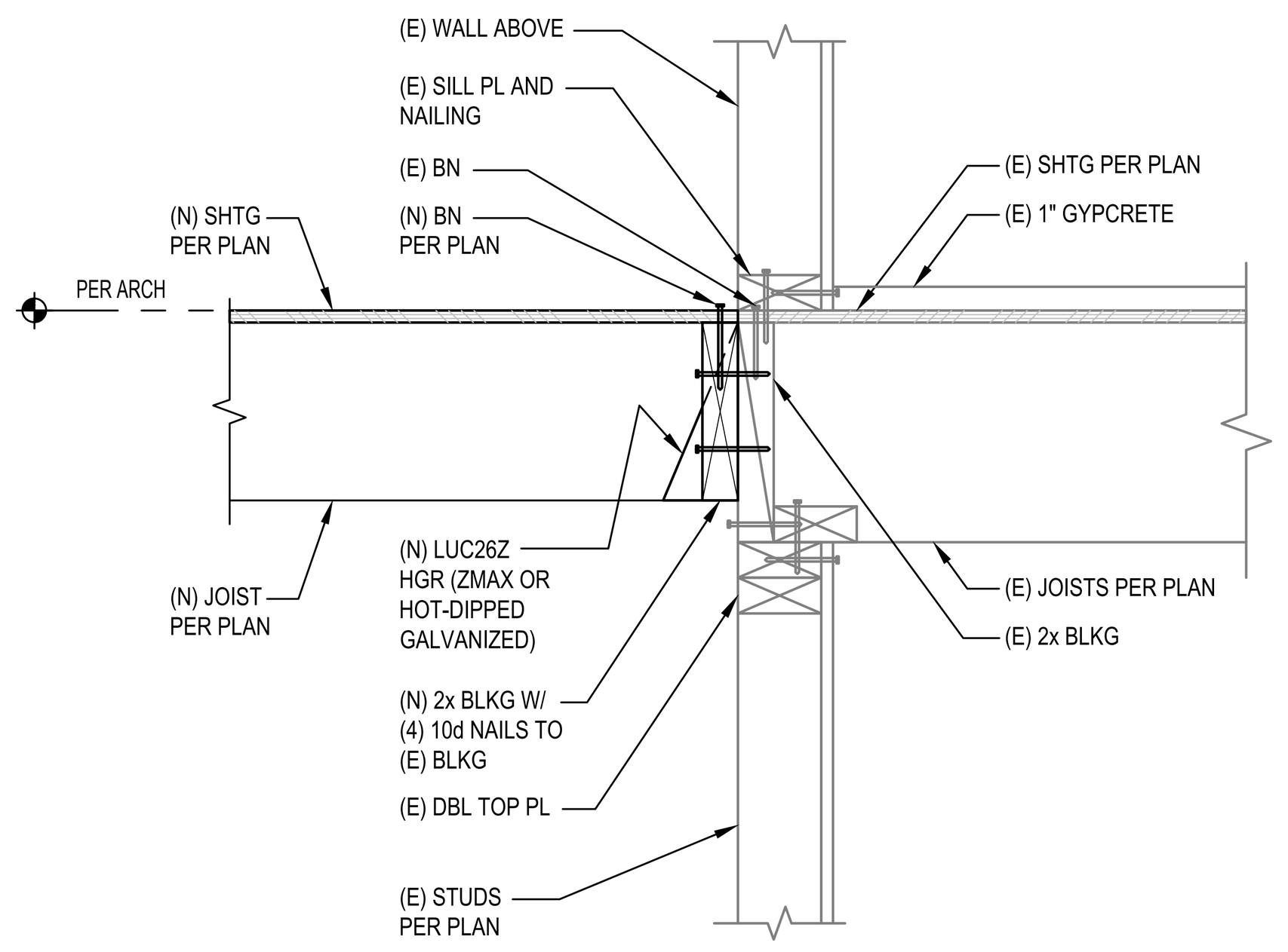
1. SEE S0.1 FOR GENERAL NOTES AND S1.1 AND THIS SHEET FOR TYPICAL DETAILS.
2. SEE S0.1 WOOD GENERAL NOTES FOR WOOD AND CONNECTORS EXPOSED TO THE ELEMENTS.
2. SEE FOUNDATION PLANS FOR COLUMN AND FOOTING SIZES NOT SHOWN.
3. SEE ARCH FOR ALL BALCONY DIMENSIONS, ELEVATIONS, FINISHES, WATERPROOFING AND DEMO.
4. EXISTING DIMENSIONS, ELEVATIONS AND FRAMING SHALL BE VERIFIED IN FIELD.



A TYPE-A BALCONY FRAMING PLAN (BLDG 7&8)

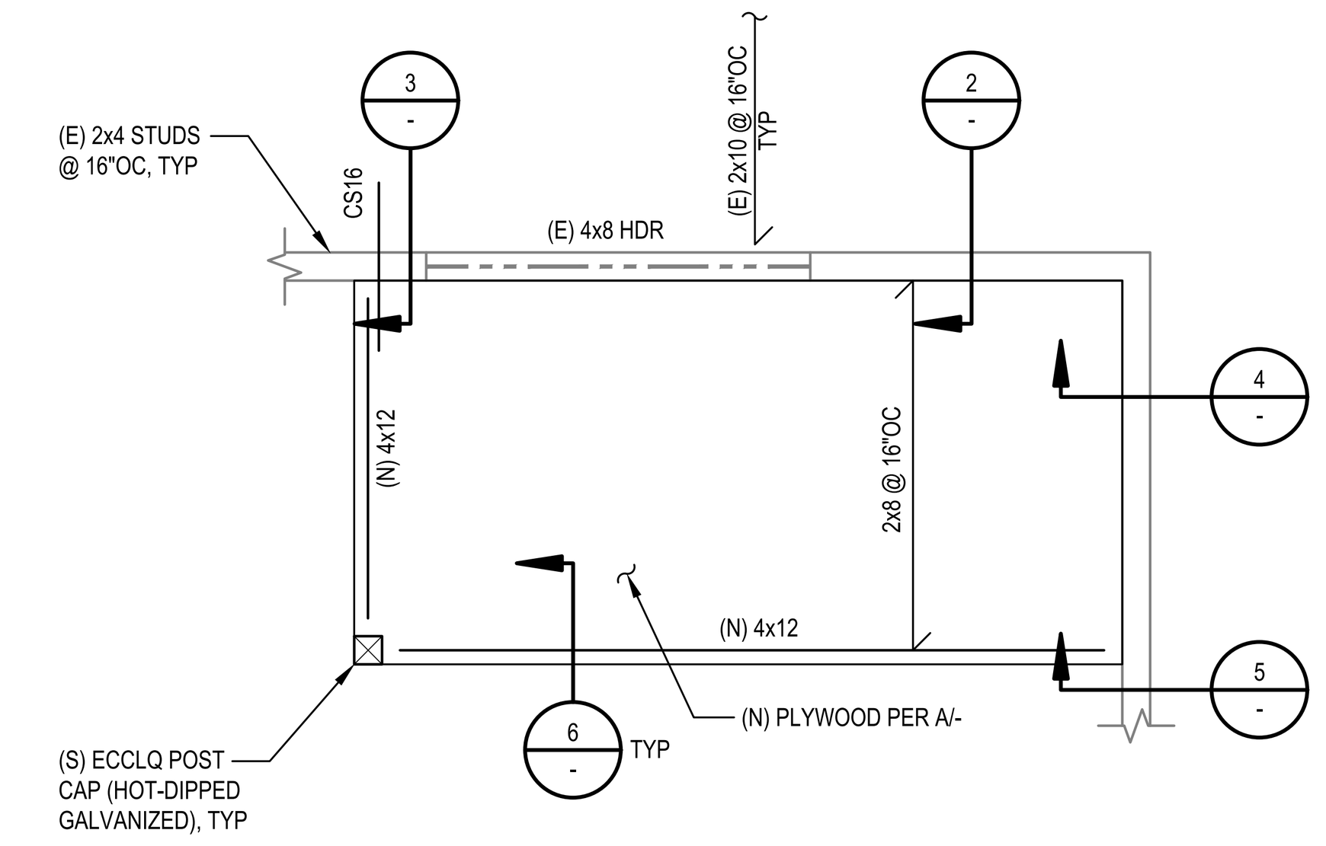
1/2"=1'-0"





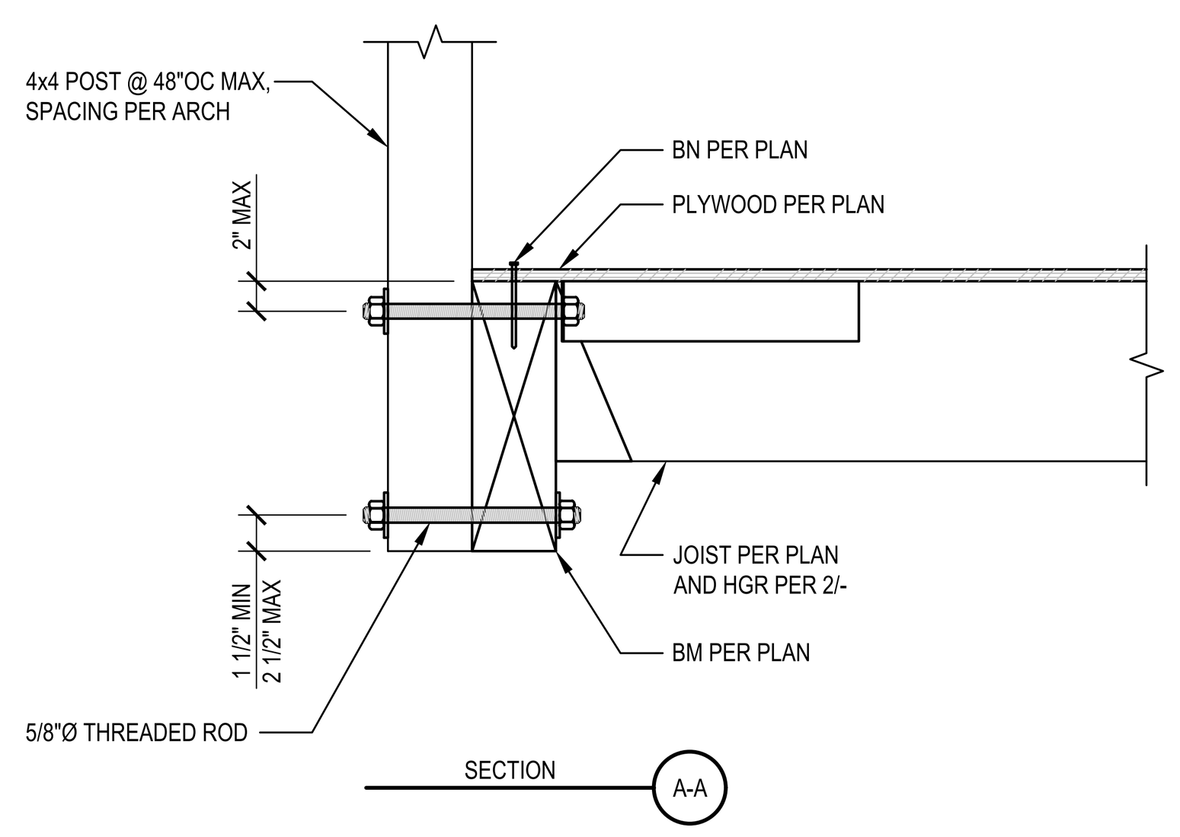
2 BALCONY JOISTS TO (E) WALL

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



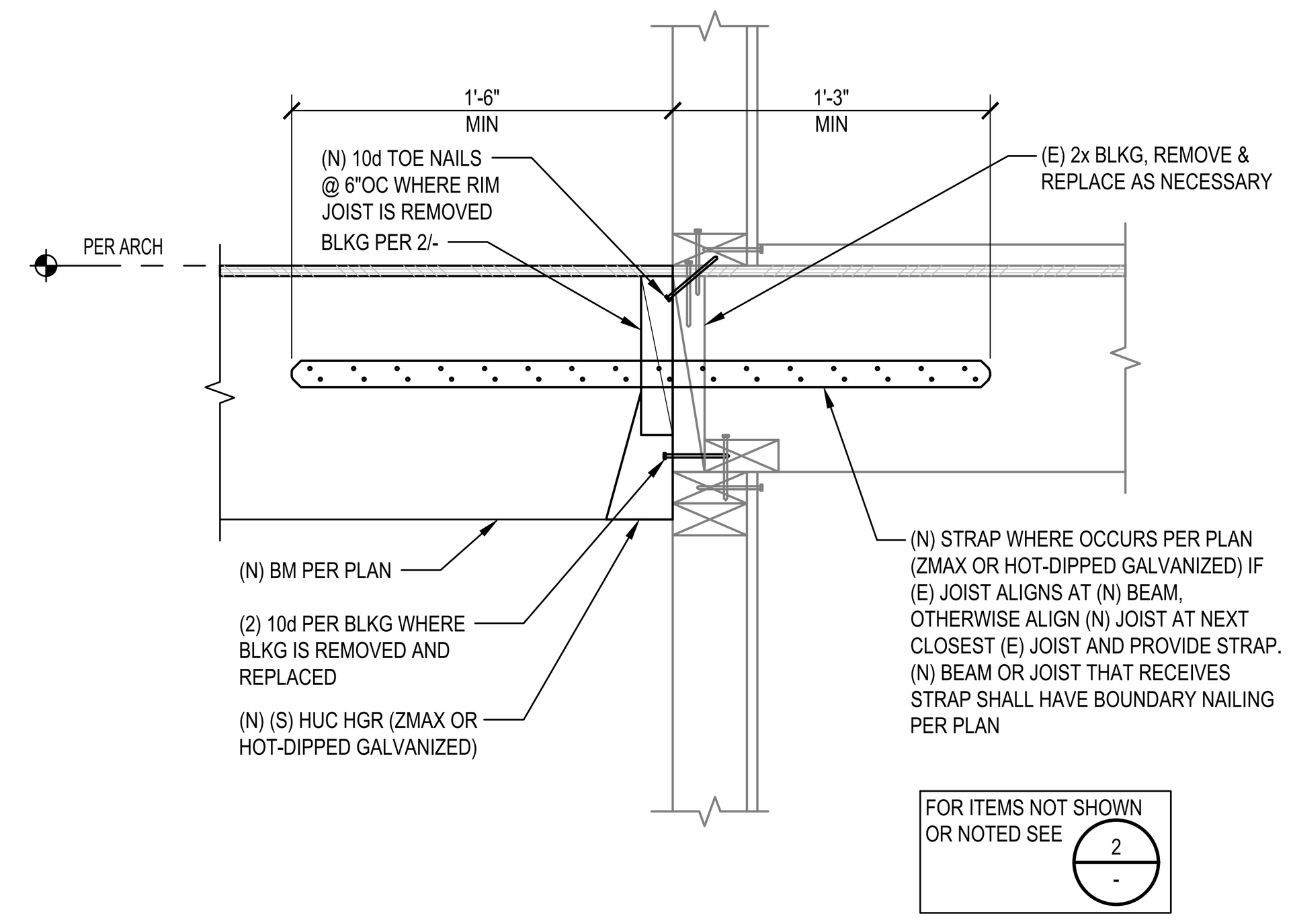
B TYPE-B BALCONY FRAMING PLAN (BLDG 9)

1/2"=1'-0"



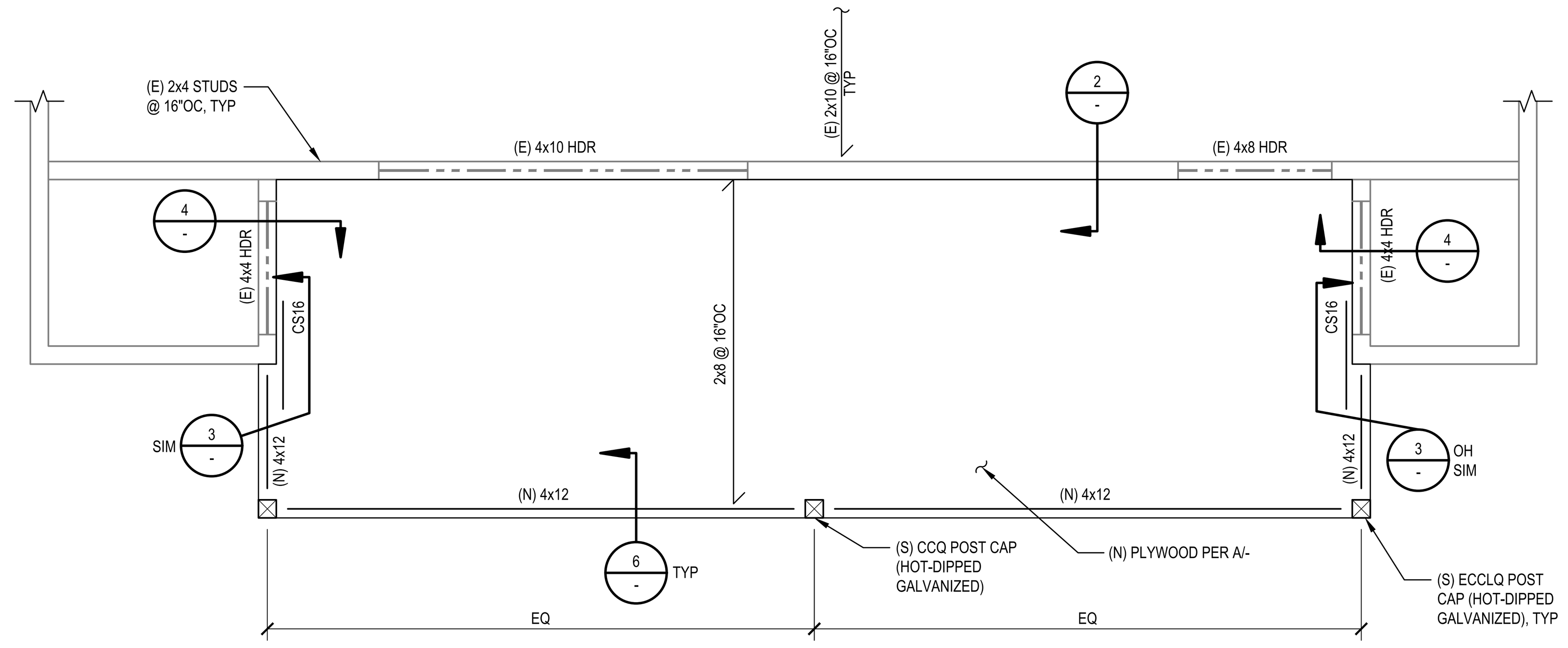
6 HANDRAIL POST CONNECTION

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



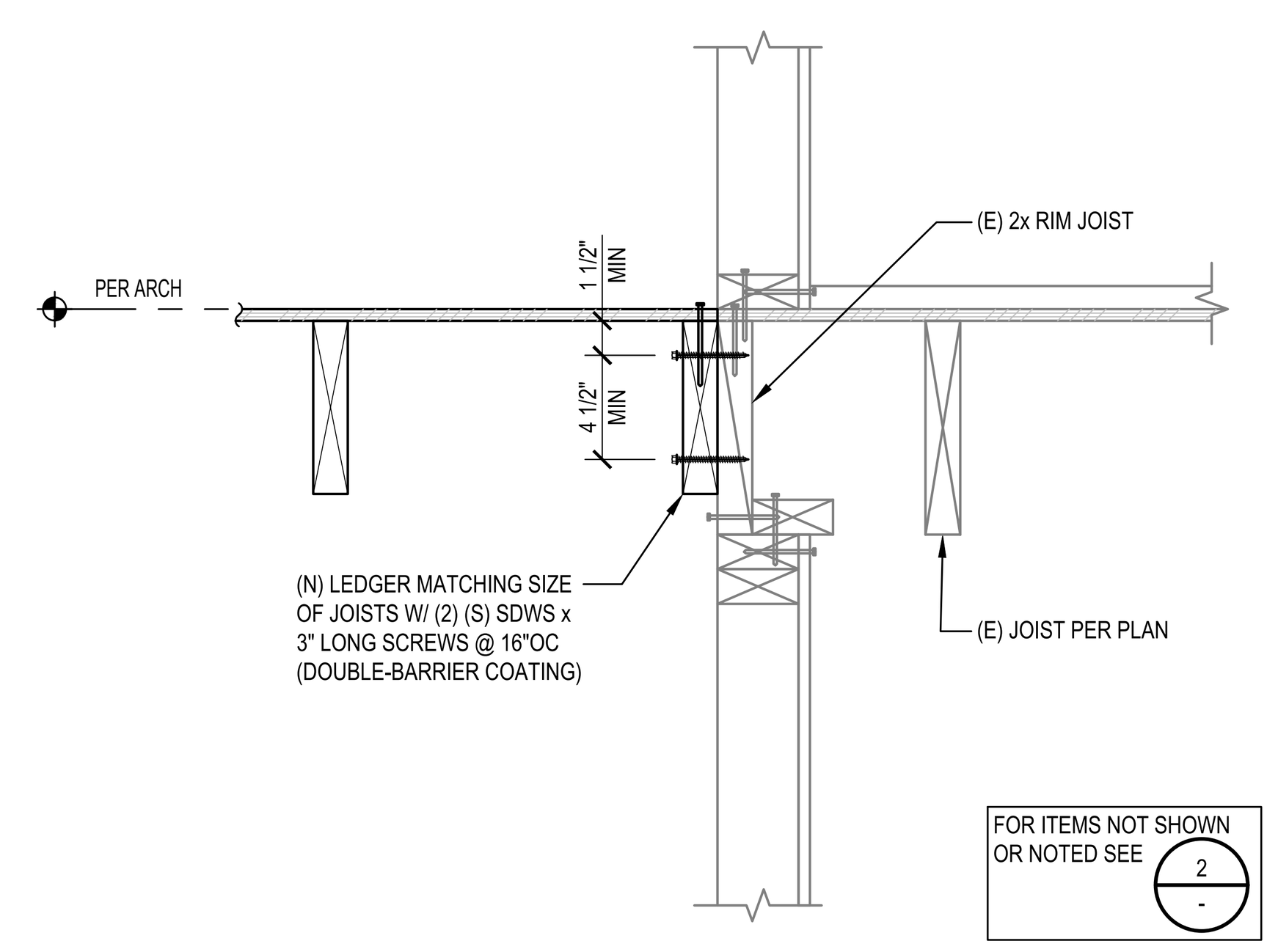
3 BALCONY BEAM TO (E) WALL AND (E) PARALLEL JOISTS

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



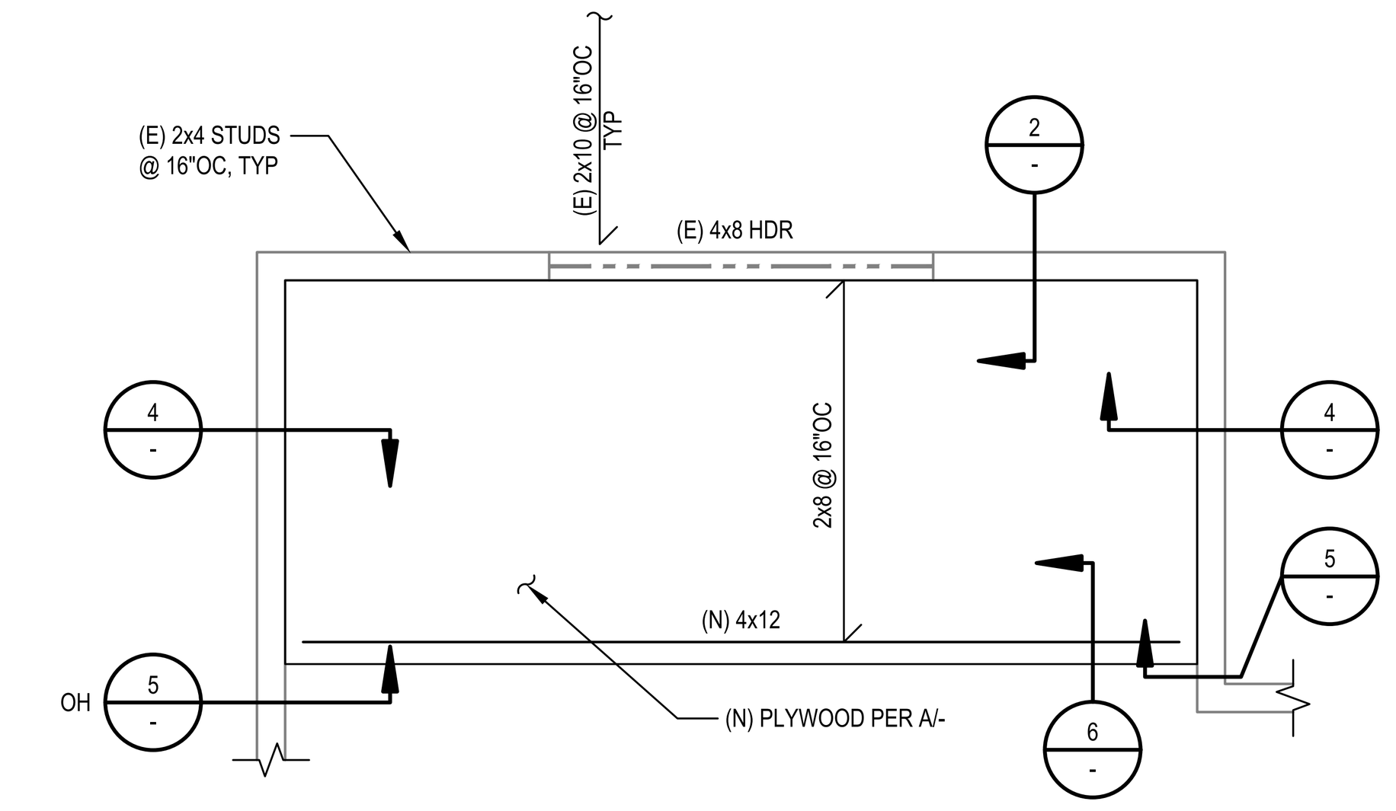
C TYPE-C BALCONY FRAMING PLAN (BLDG 9)

1/2"=1'-0"



4 BALCONY LEDGER TO (E) WALL

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



D TYPE-D BALCONY FRAMING PLAN (BLDG 9)

1/2"=1'-0"

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Reviewed by:
Fire and Life Safety Division South

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Building, Safety and Compliance Division

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams

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MI19040111.00
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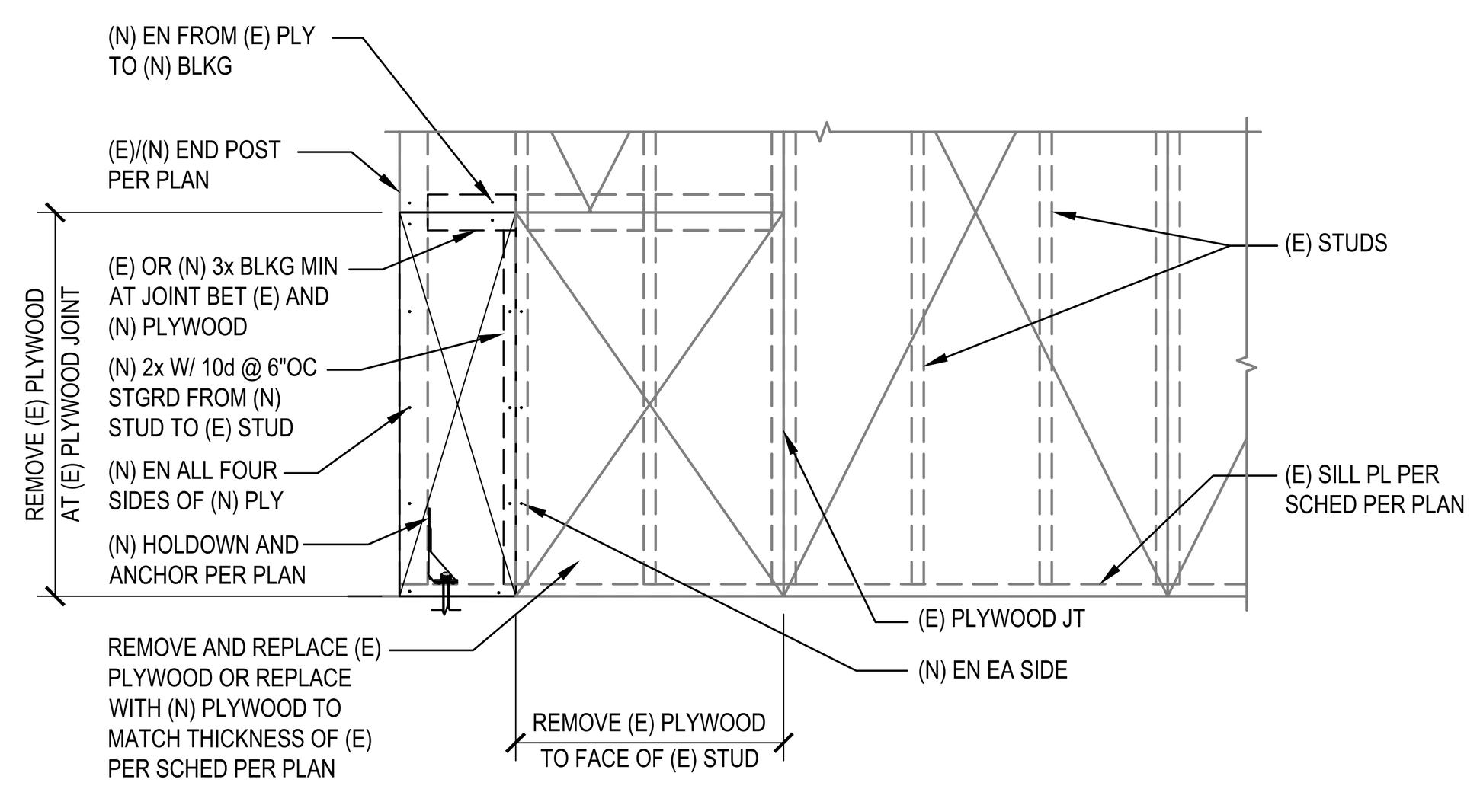
UCR CAAN #:	P5673
DATE:	05-10-2019
DRAWN:	M.B.V.

BALCONY FRAMING PLANS & DETAILS

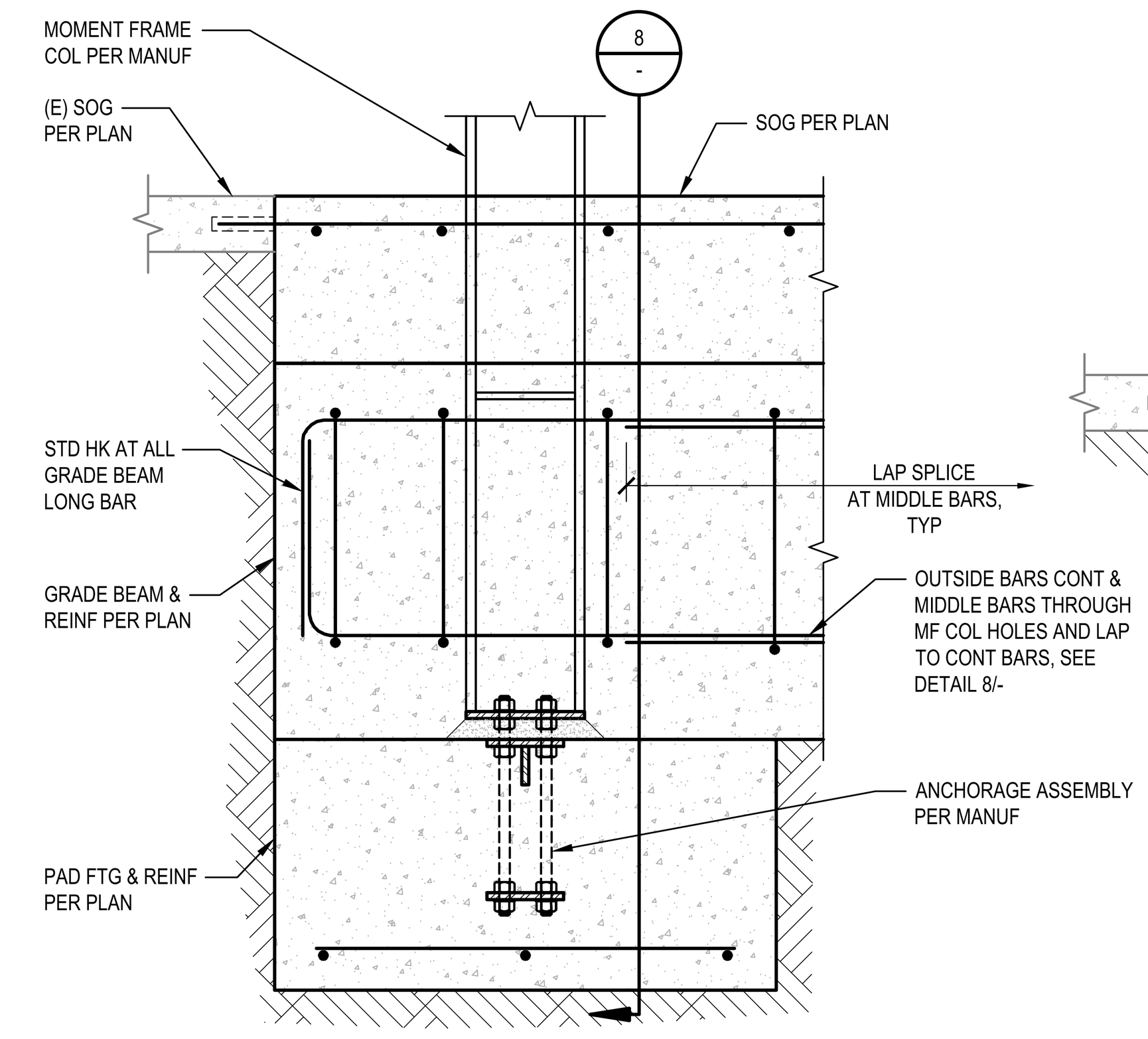
S3.2

07/02/2019

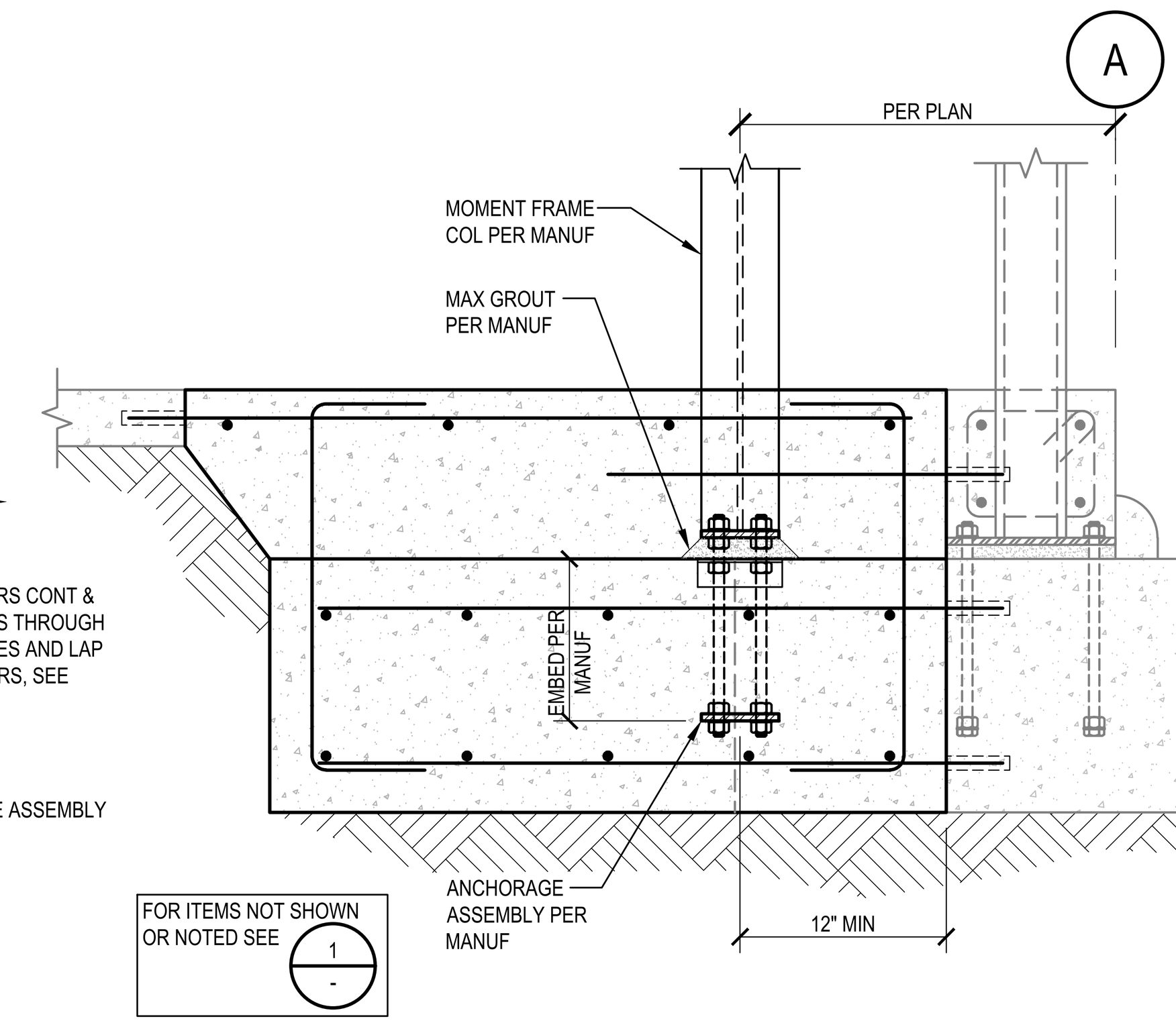


NOTES:
1. IF NEW POST IS REQUIRED PER HOLDOWN SCHEDULE, REMOVE (E) PLYWOOD FULL HEIGHT AND RENAIL TO (N)/(E) END POST TO MATCH (E).
2. FOR OPTIONAL PLYWOOD REPLACEMENT, SEE 4/-

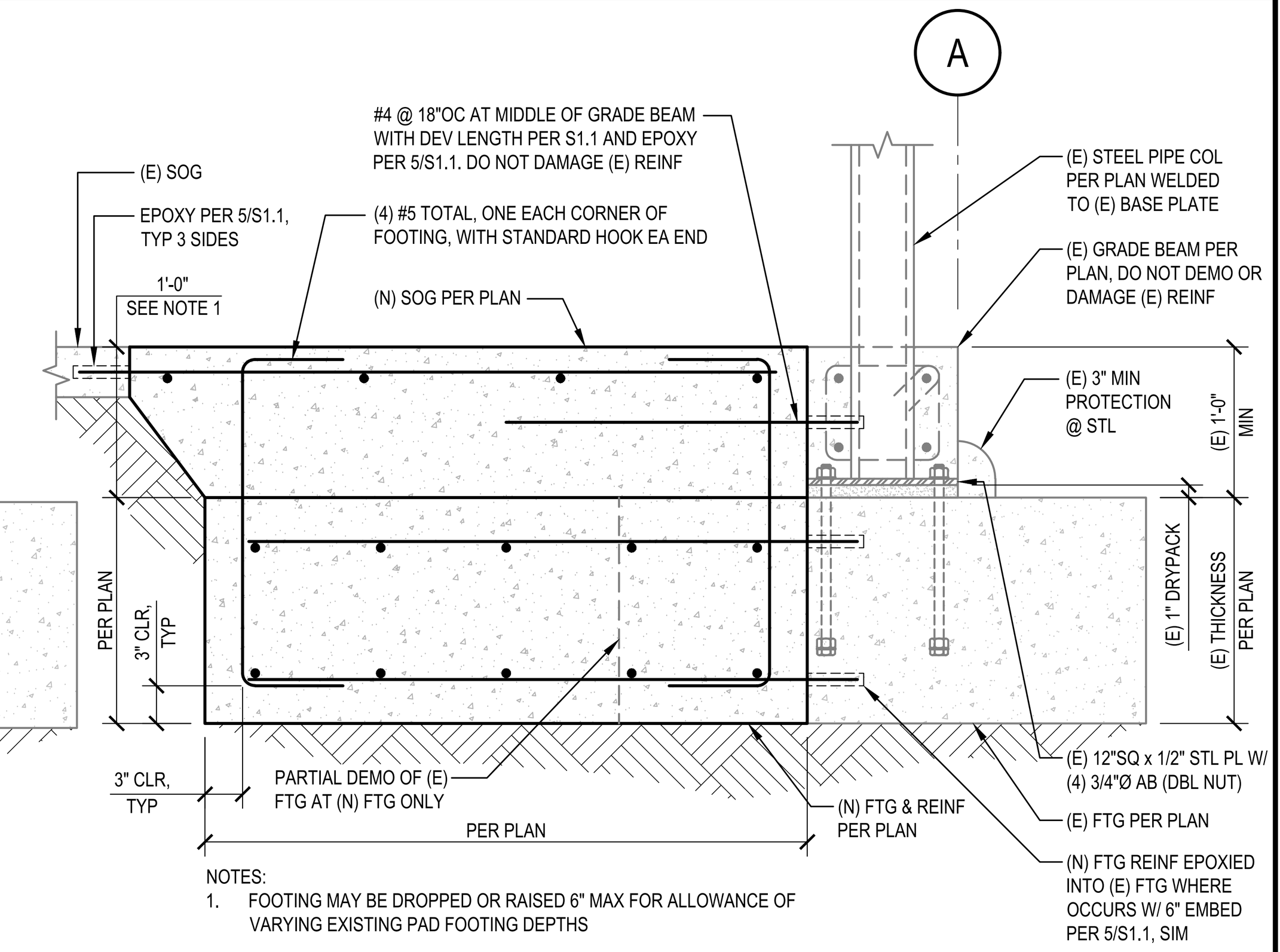
13 (E) PLYWOOD SHEATHING REMOVAL
1"=1'-0"



9 MOMENT FRAME GRADE BEAM AND PAD FOOTING END
N.T.S.

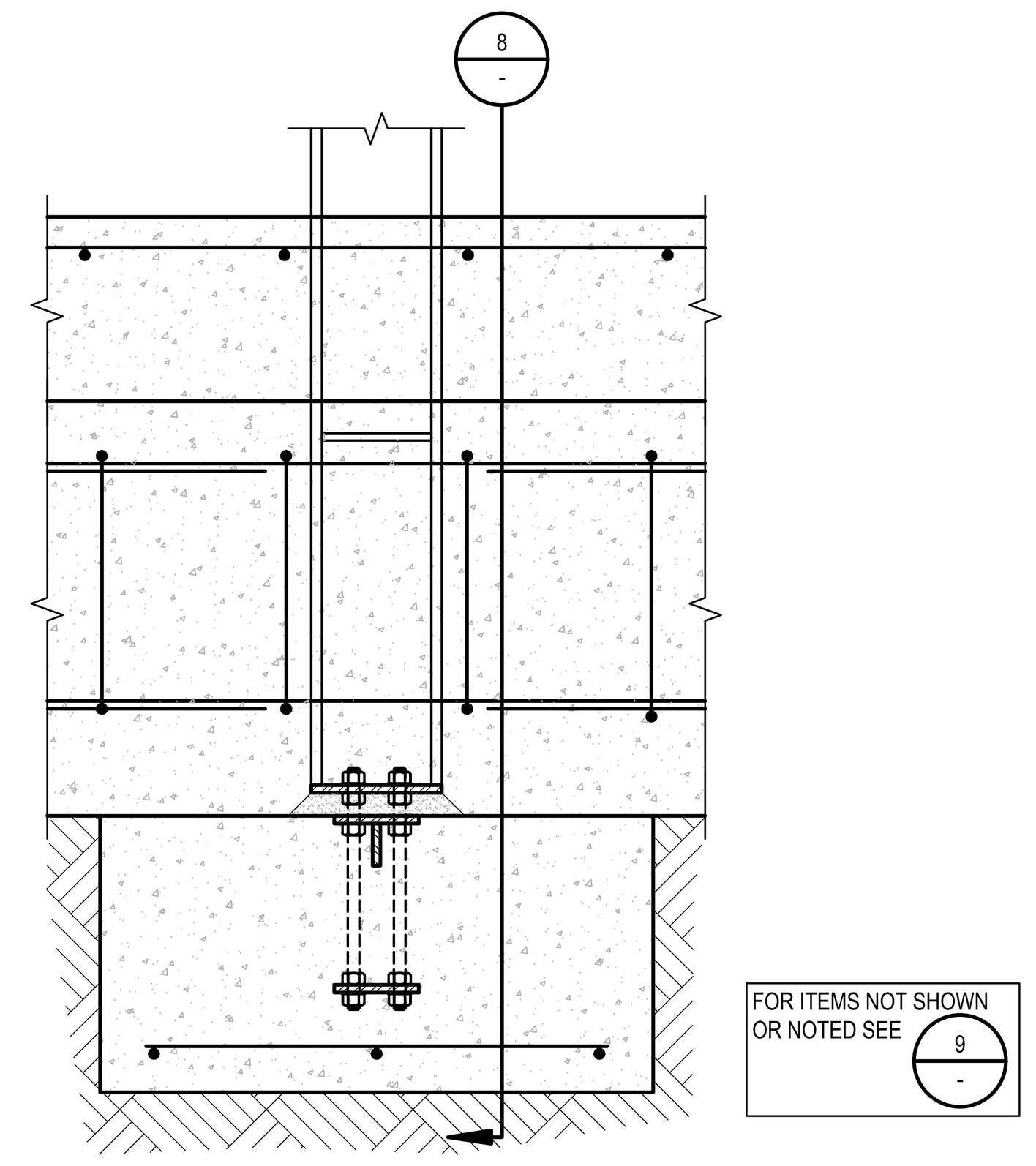


5 MOMENT FRAME AT PAD FOOTING
1"=1'-0"

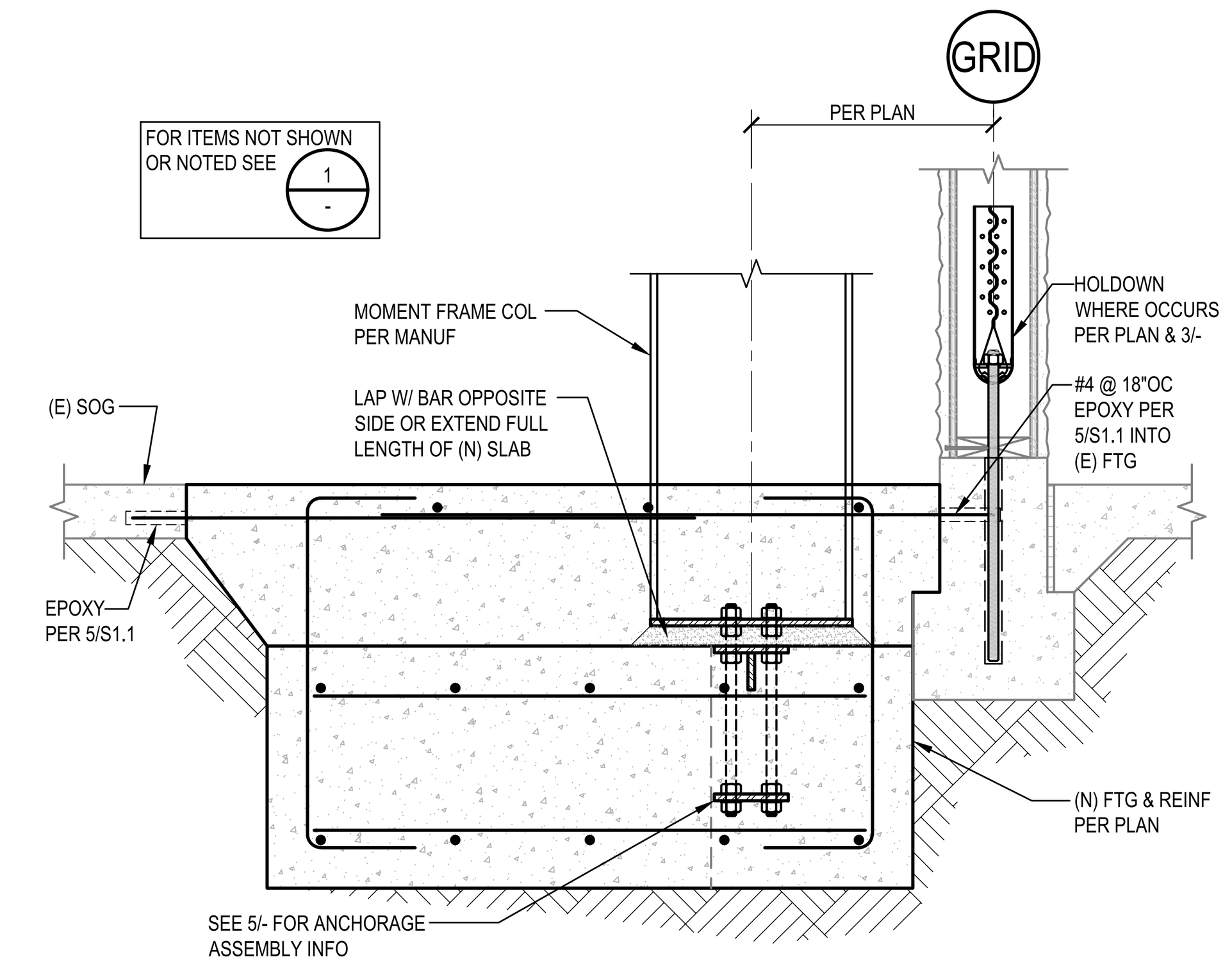


NOTES:
1. FOOTING MAY BE DROPPED OR RAISED 6" MAX FOR ALLOWANCE OF VARYING EXISTING PAD FOOTING DEPTHS

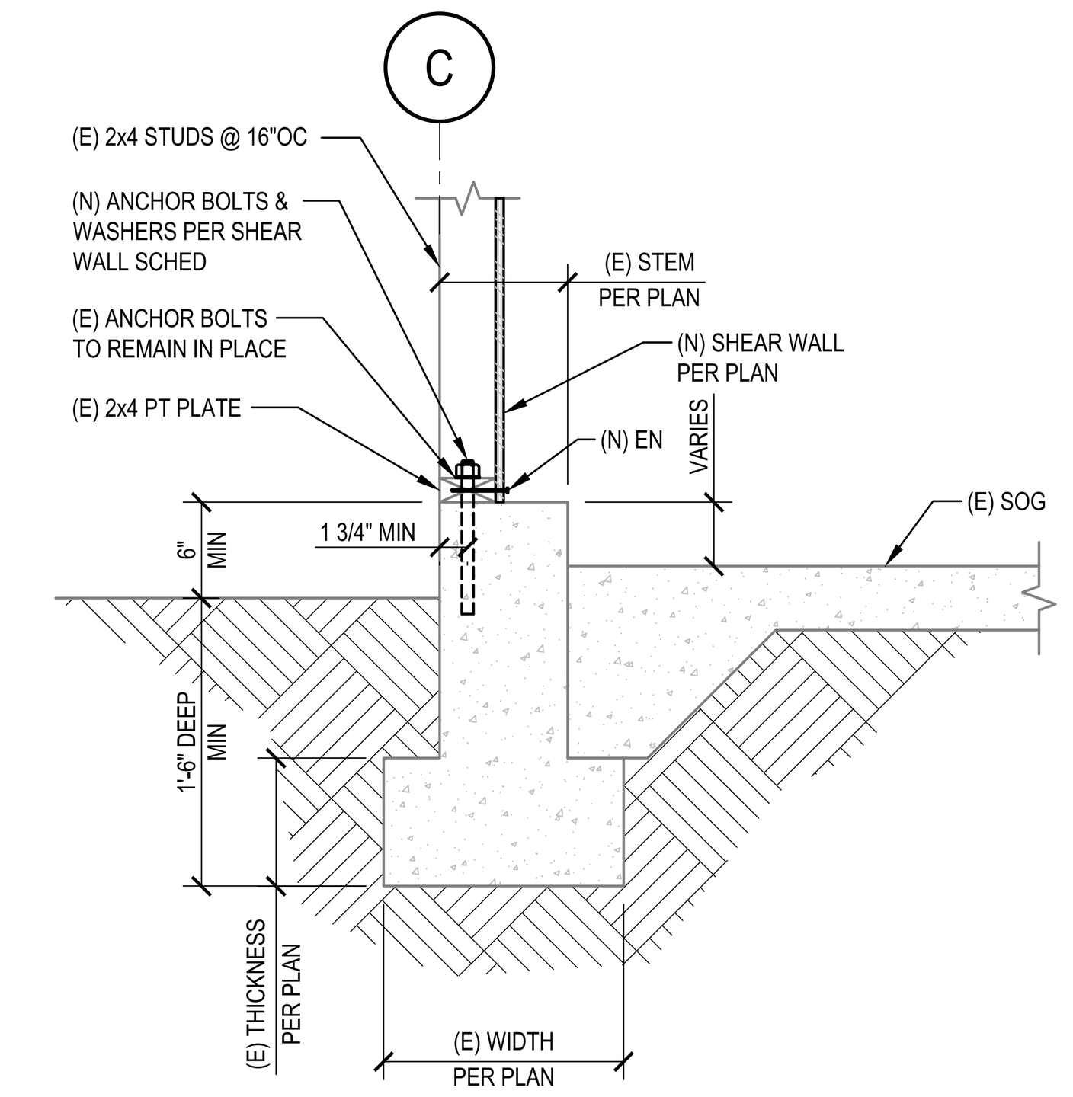
1 MOMENT FRAME PAD FOOTING AT (E) PAD FOOTING
1"=1'-0"



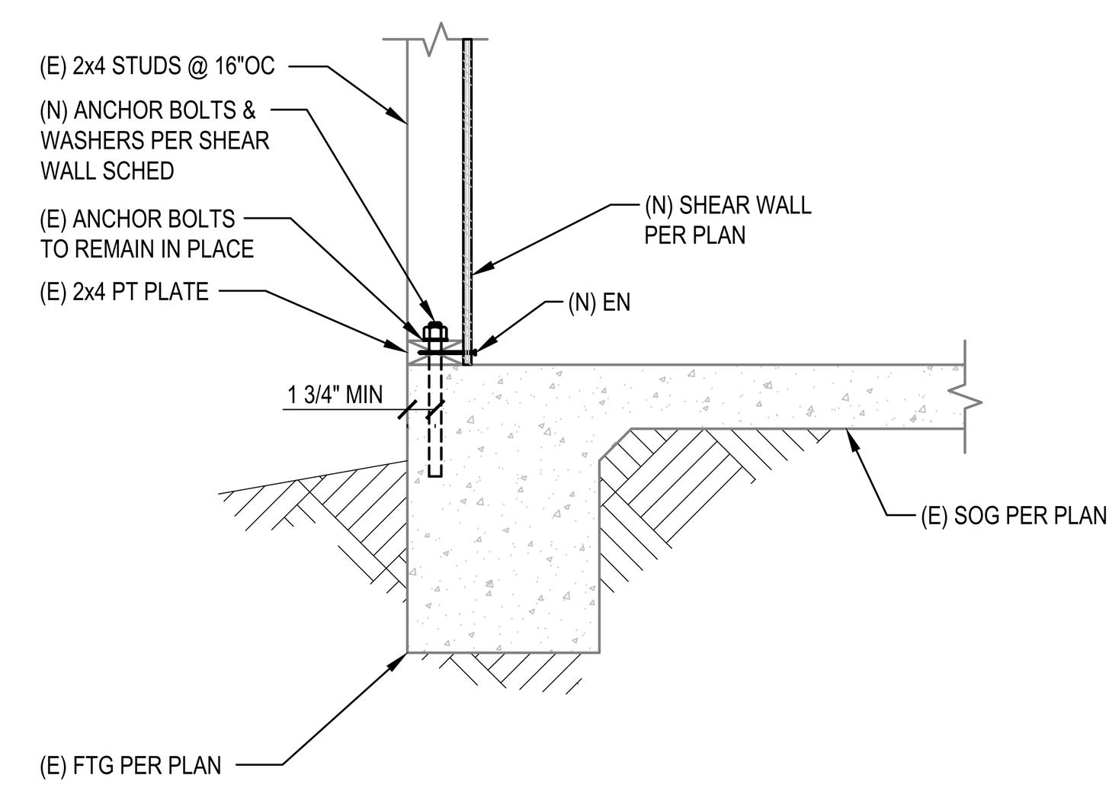
10 MOMENT FRAME GRADE BEAM AND PAD FOOTING MIDDLE
N.T.S.



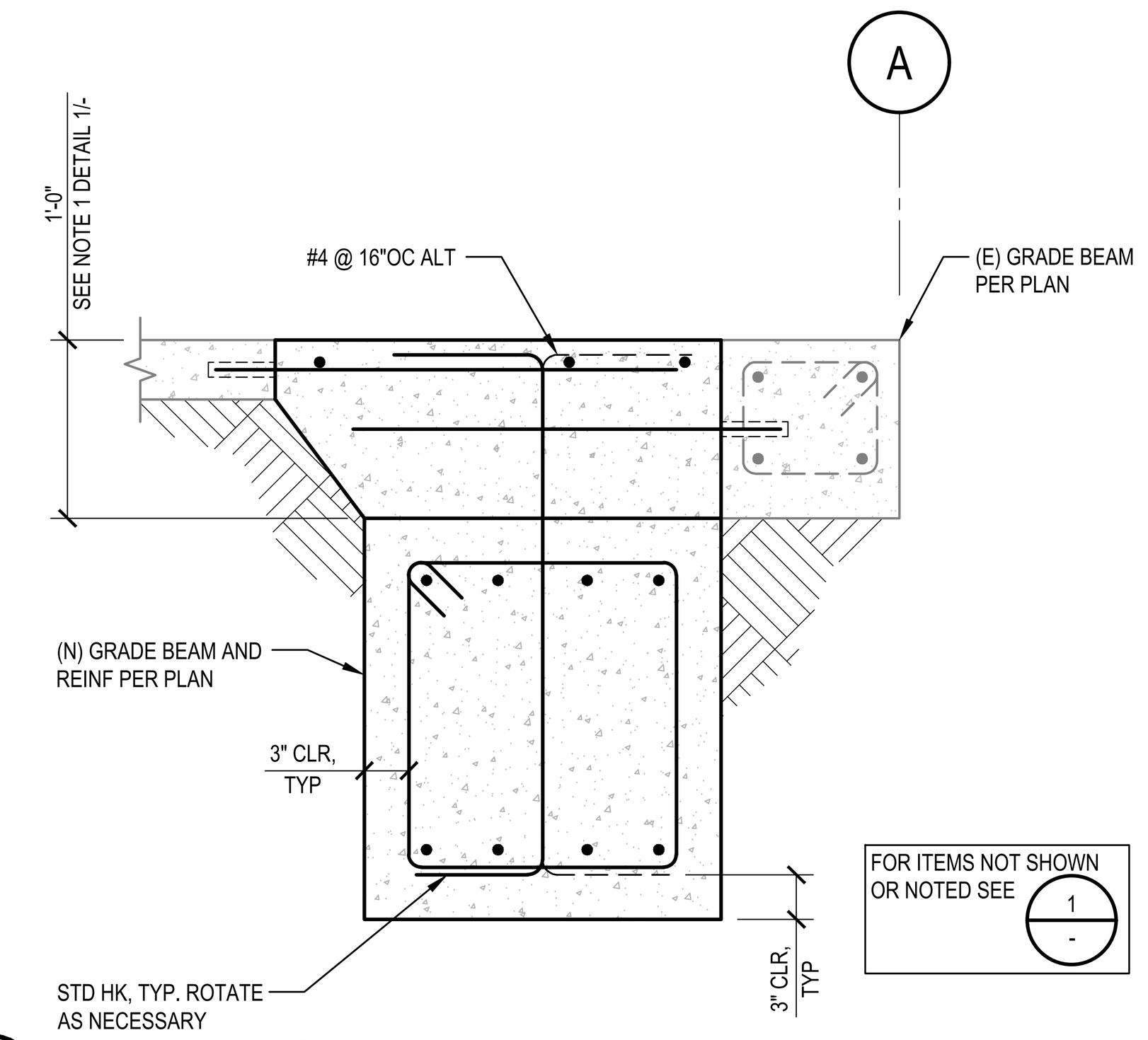
6 MOMENT FRAME PAD FOOTING AT (E) CONTINUOUS FOOTING
1"=1'-0"



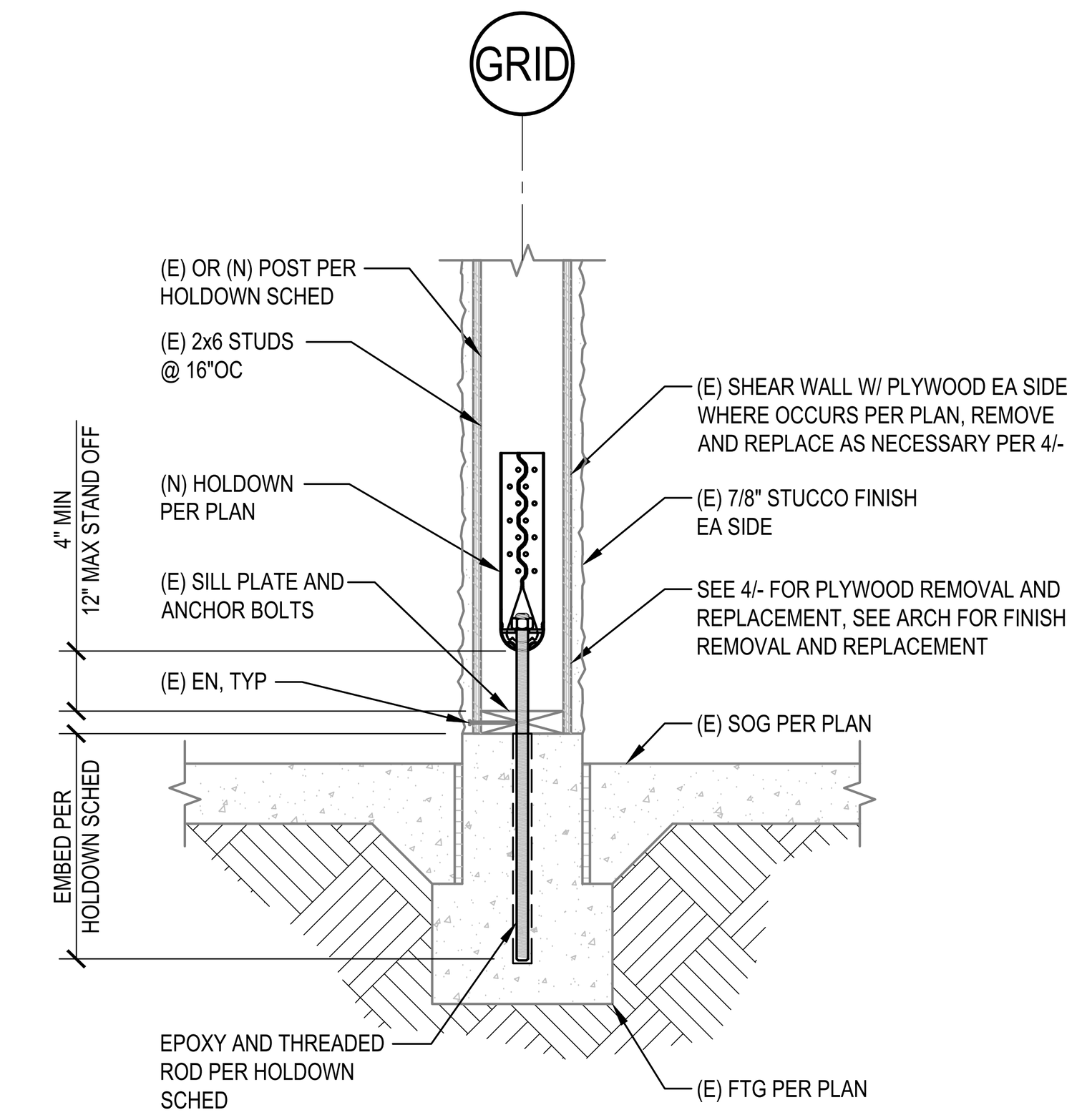
2 (N) SHEAR WALL AT (E) CONTINUOUS FOOTING
1"=1'-0"



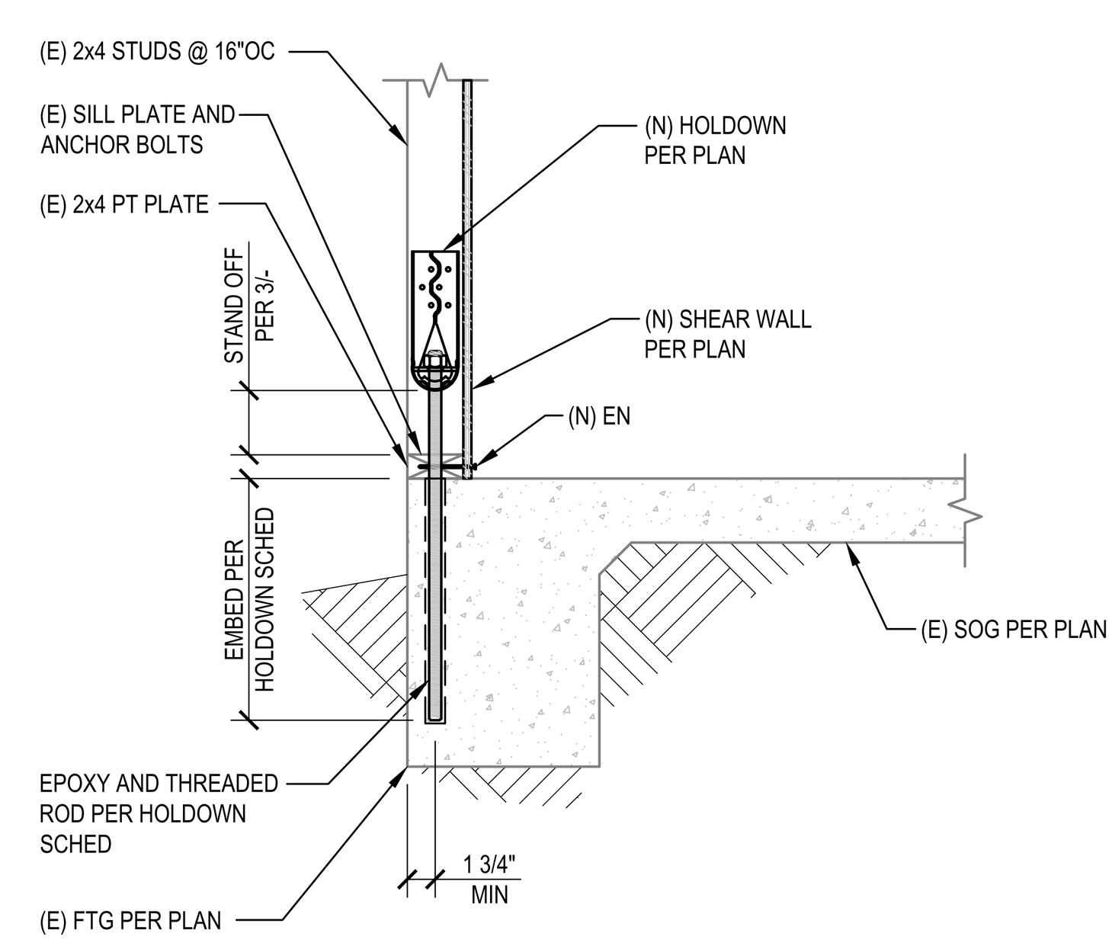
11 BLDG 20 (N) SHEAR WALL AT (E) CONTINUOUS FOOTING
N.T.S.



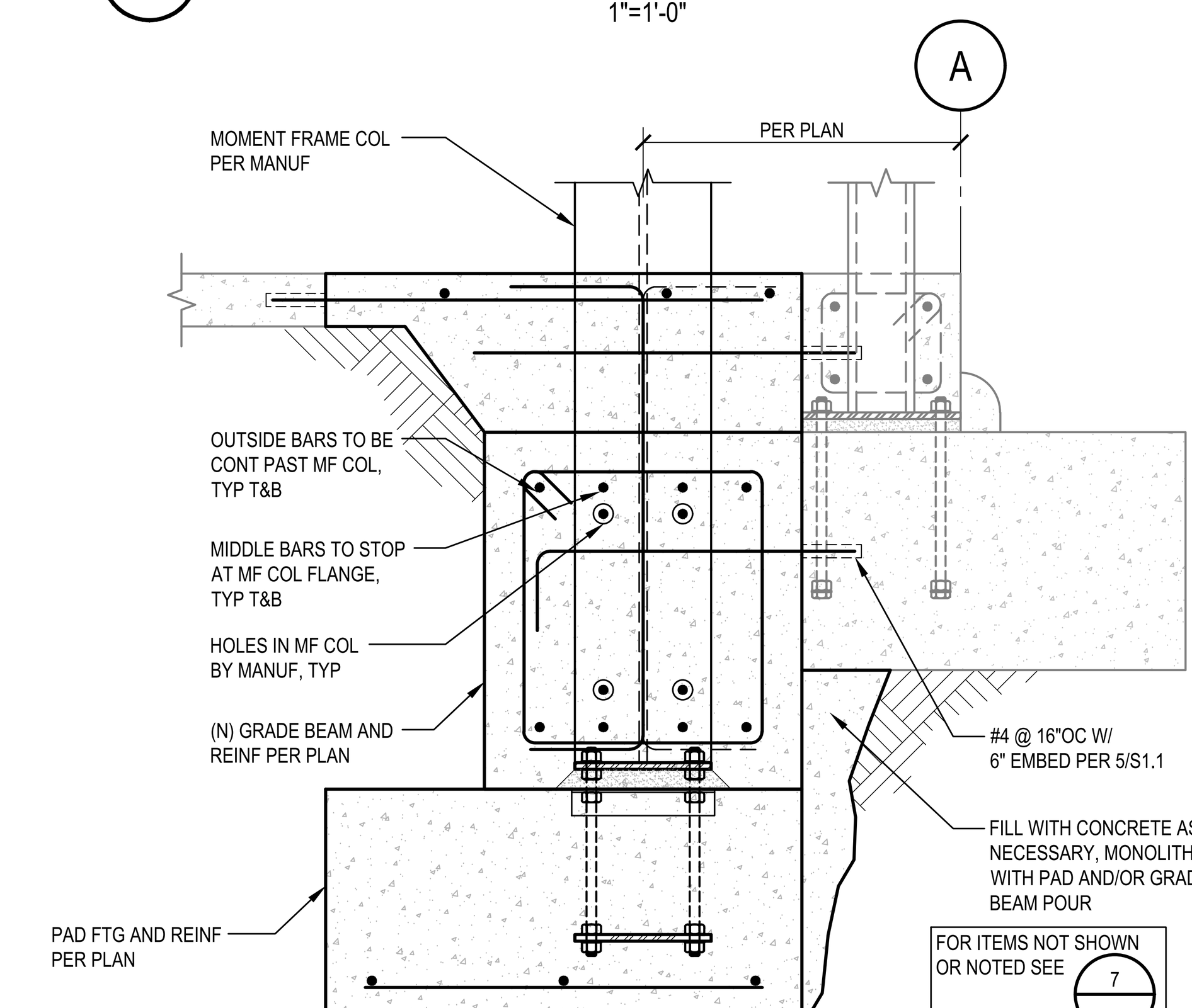
7 MOMENT FRAME GRADE BEAM
1"=1'-0"



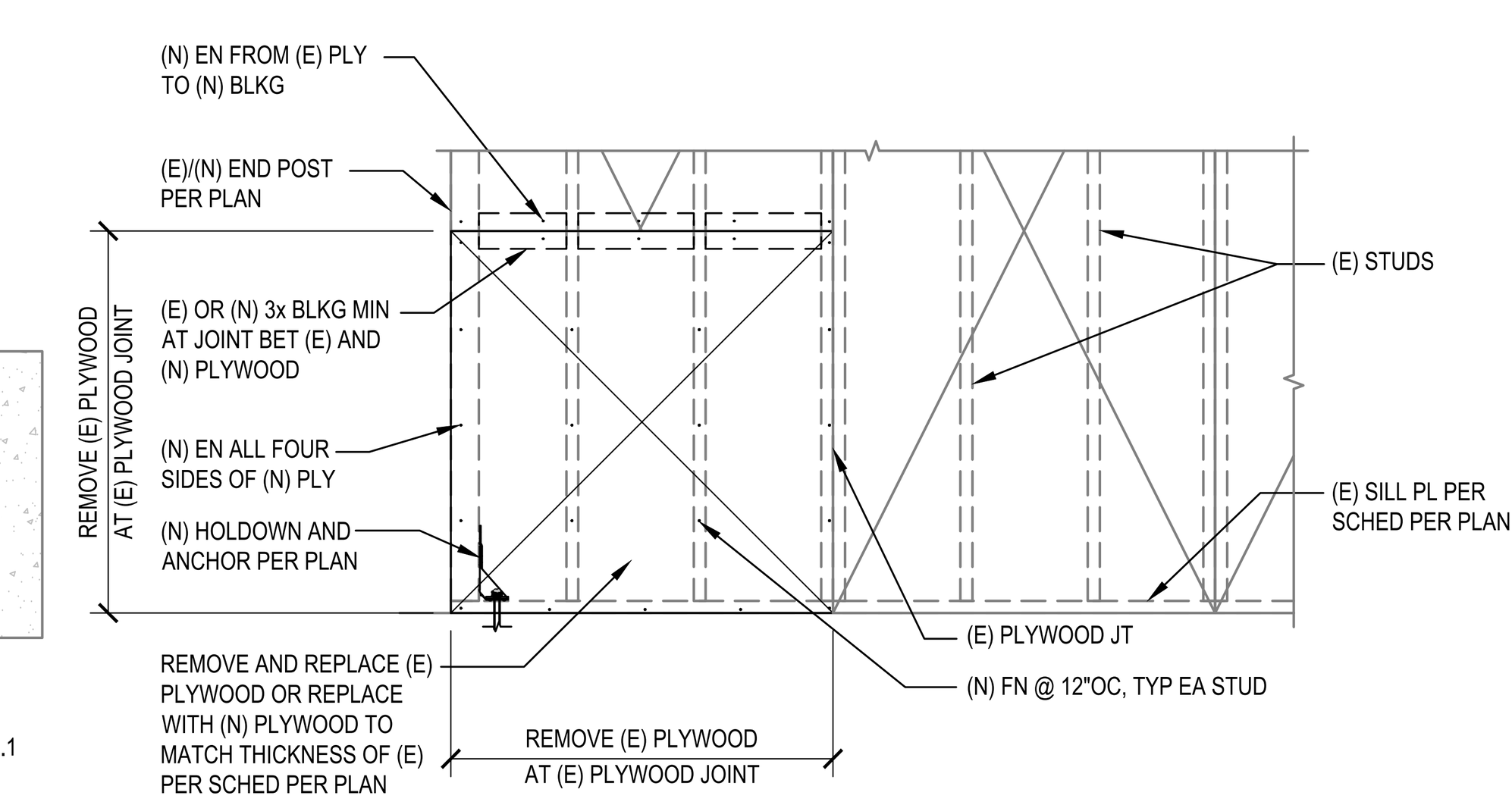
3 (N) HOLDOWN AT (E) CONTINUOUS FOOTING
1"=1'-0"



12 BLDG 20 (N) HOLDOWN AT (E) CONTINUOUS FOOTING
N.T.S.



8 MOMENT FRAME GRADE BEAM AND PAD FOOTING
1"=1'-0"



NOTES:
1. IF NEW POST IS REQUIRED PER HOLDOWN SCHEDULE, REMOVE (E) PLYWOOD FULL HEIGHT AND RENAIL TO (N)/(E) END POST TO MATCH (E). ... REPLACEMENT, SEE 13/-

INSPECTIONS REQUIRED — UC RIVERSIDE Office of Planning, Design & Construction, Building, Safety and Compliance Division

APPROVED — UC Riverside Planning, Design and Construction, Campus Building Official. Signature: Robert K. Williams

4 (E) PLYWOOD SHEATHING REMOVAL
1"=1'-0"

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07/02/2019
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Reviewed by:
Fire and Life Safety Division South

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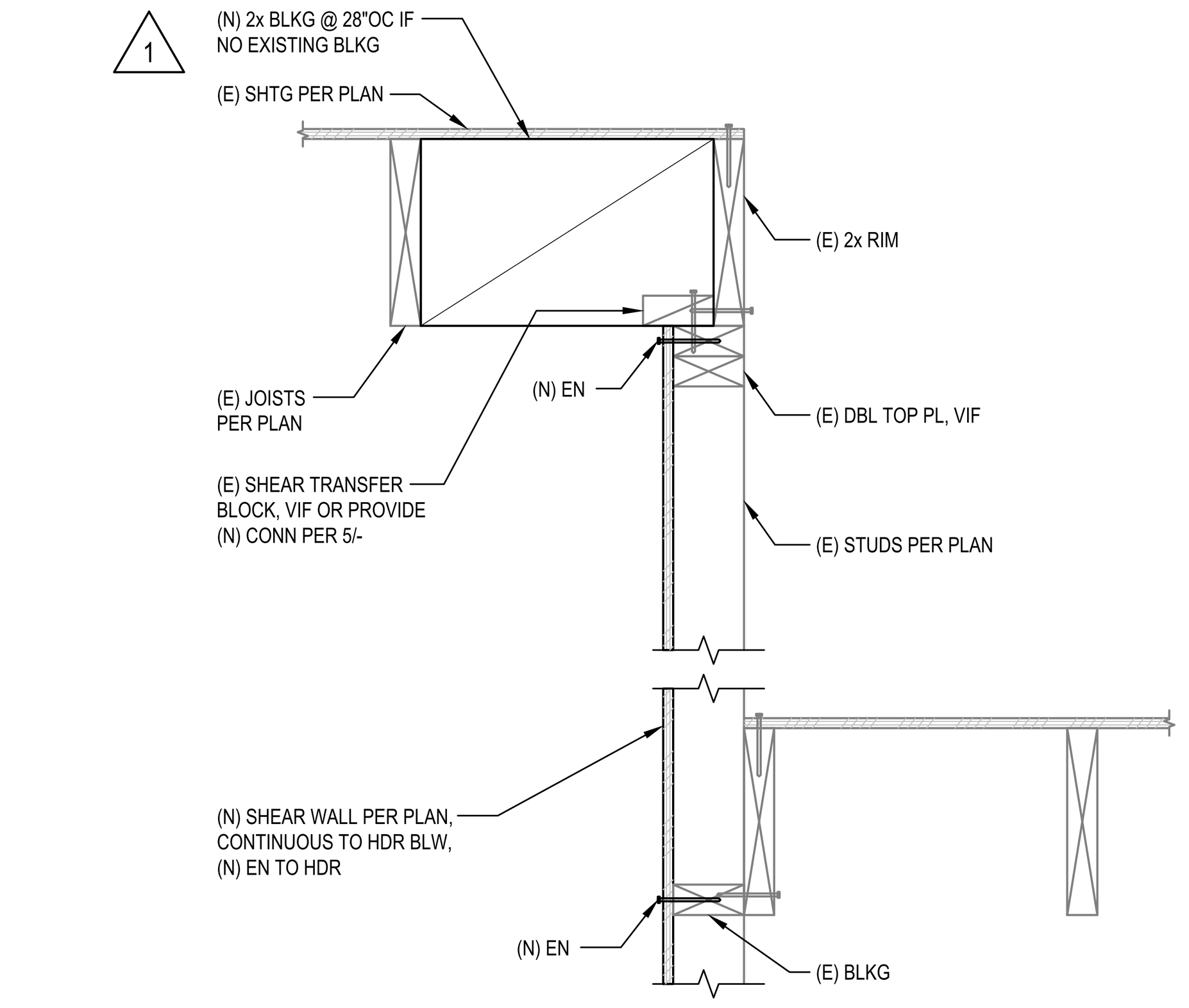
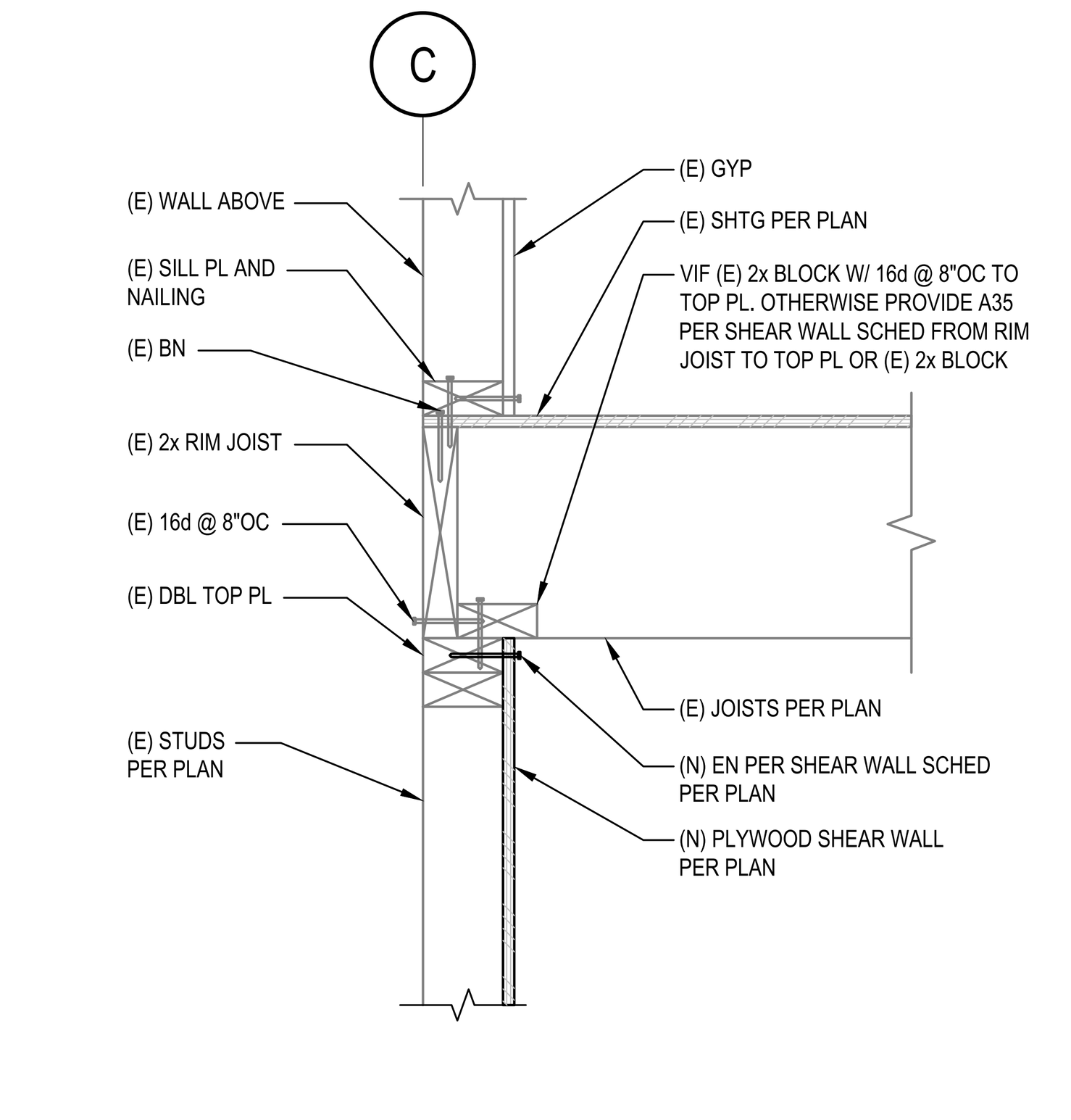
DRAWN:	M.B.V.

FOUNDATION DETAILS

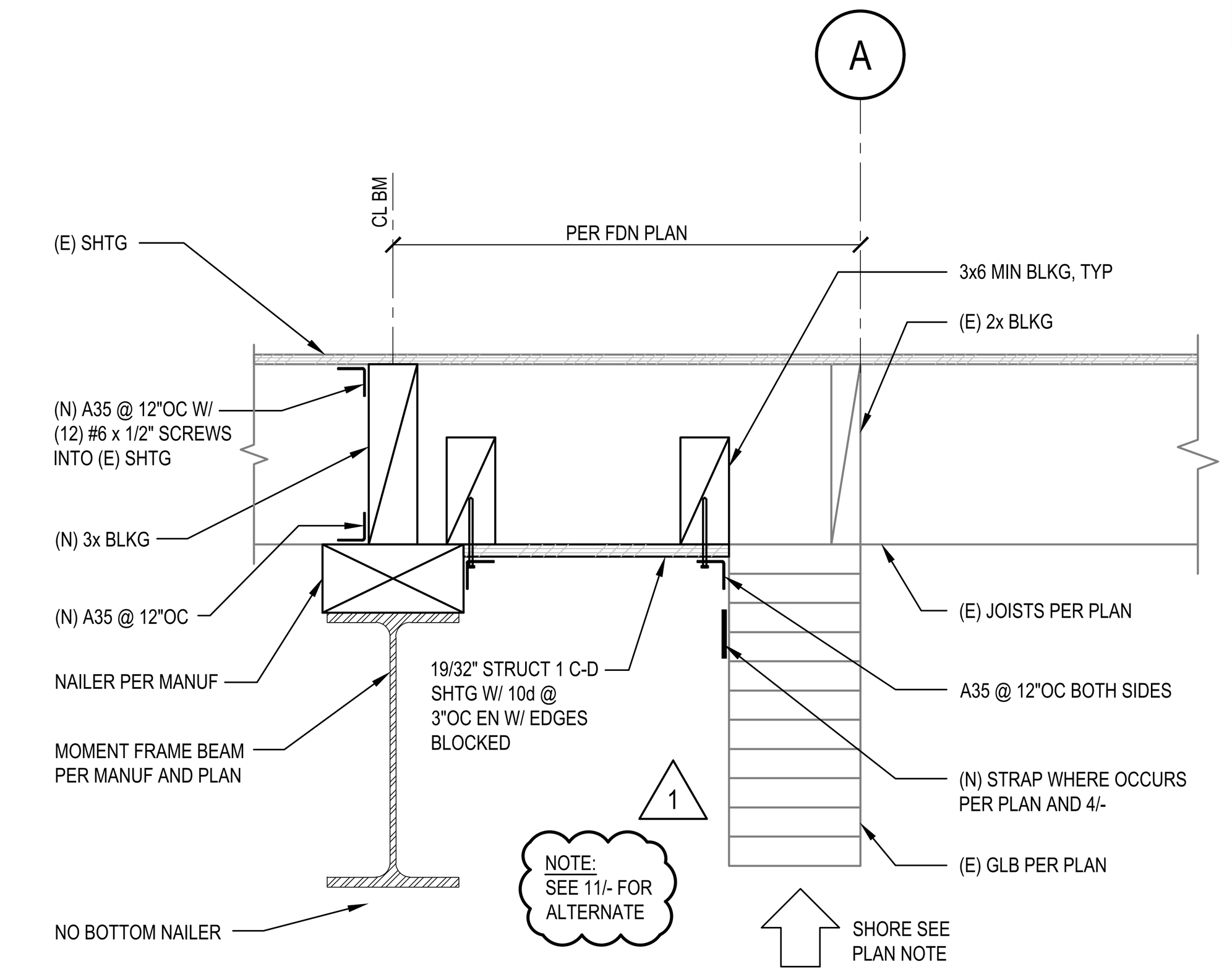
S4.1



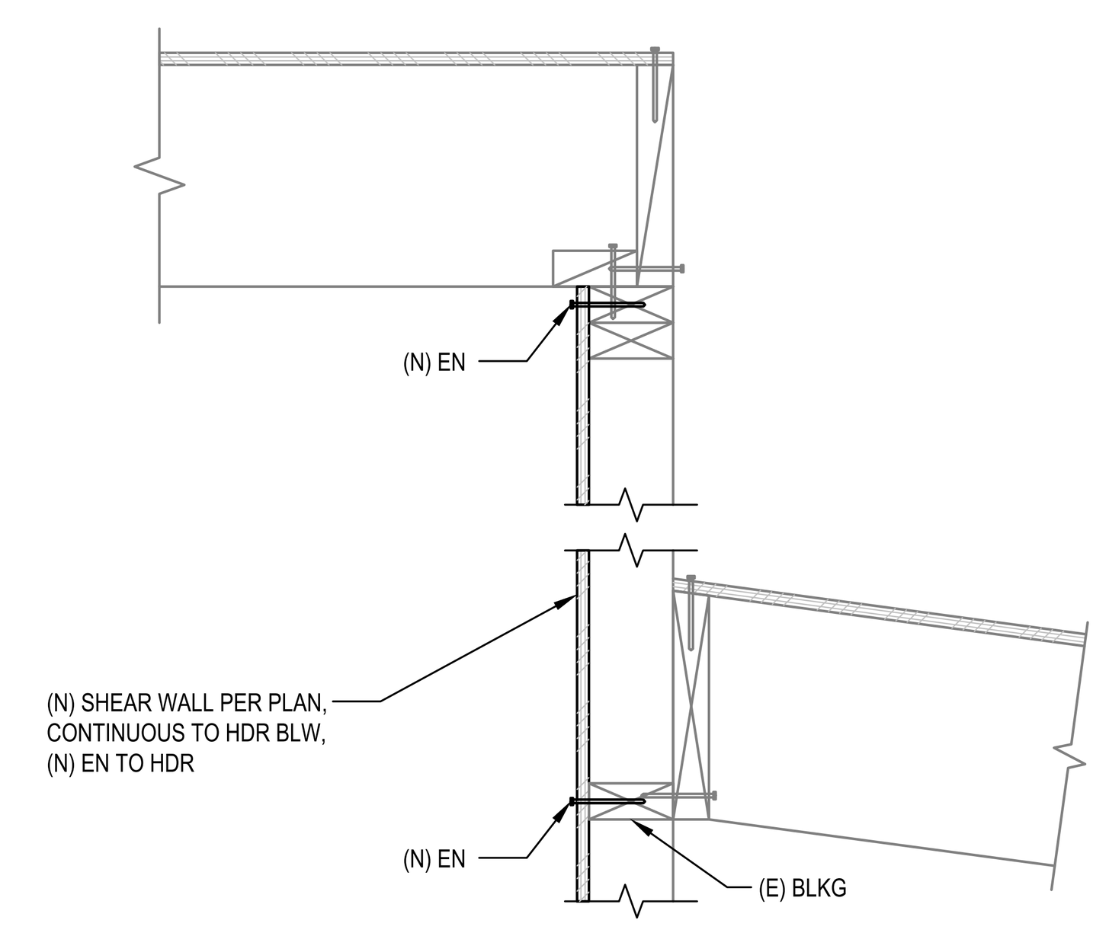
9 BLDG 20 - TOWER ROOF SHEAR TRANSFER
1-1/2"=1'-0"



5 BLDG 14-16 - FLOOR SHEAR TRANSFER
1-1/2"=1'-0"

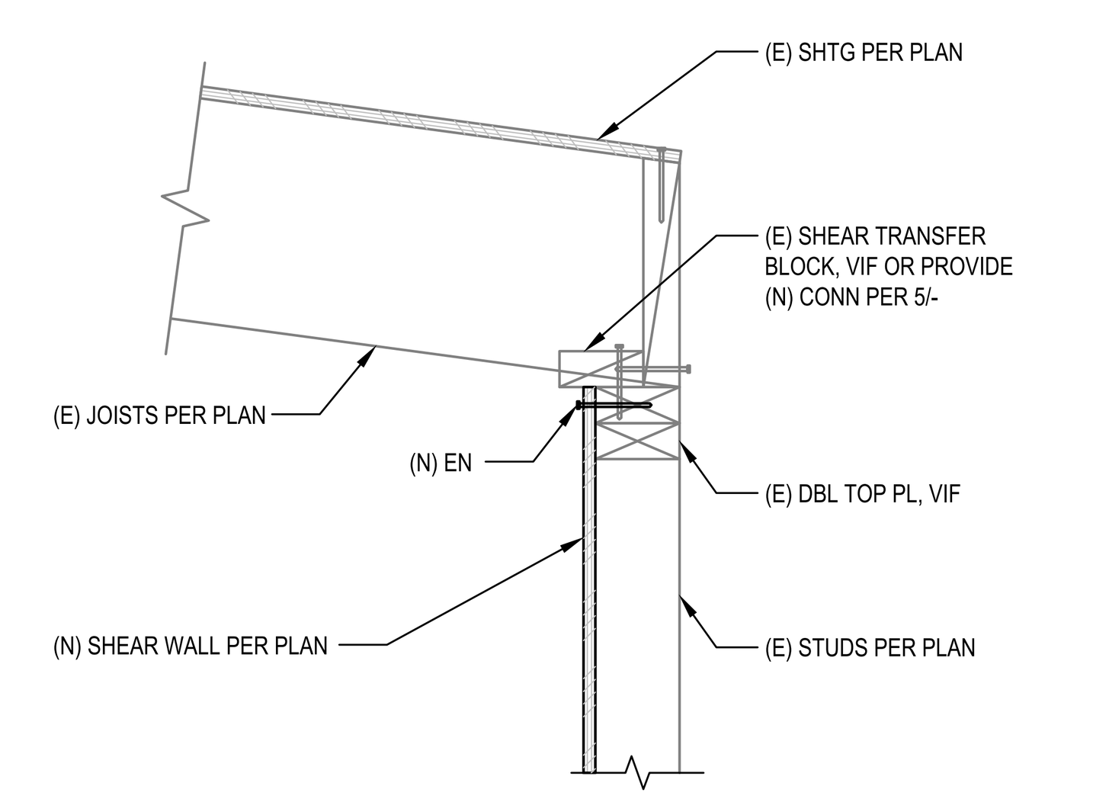


1 BLDG 14-16 - MOMENT FRAME TO (E) FLOOR FRAMING
1-1/2"=1'-0"

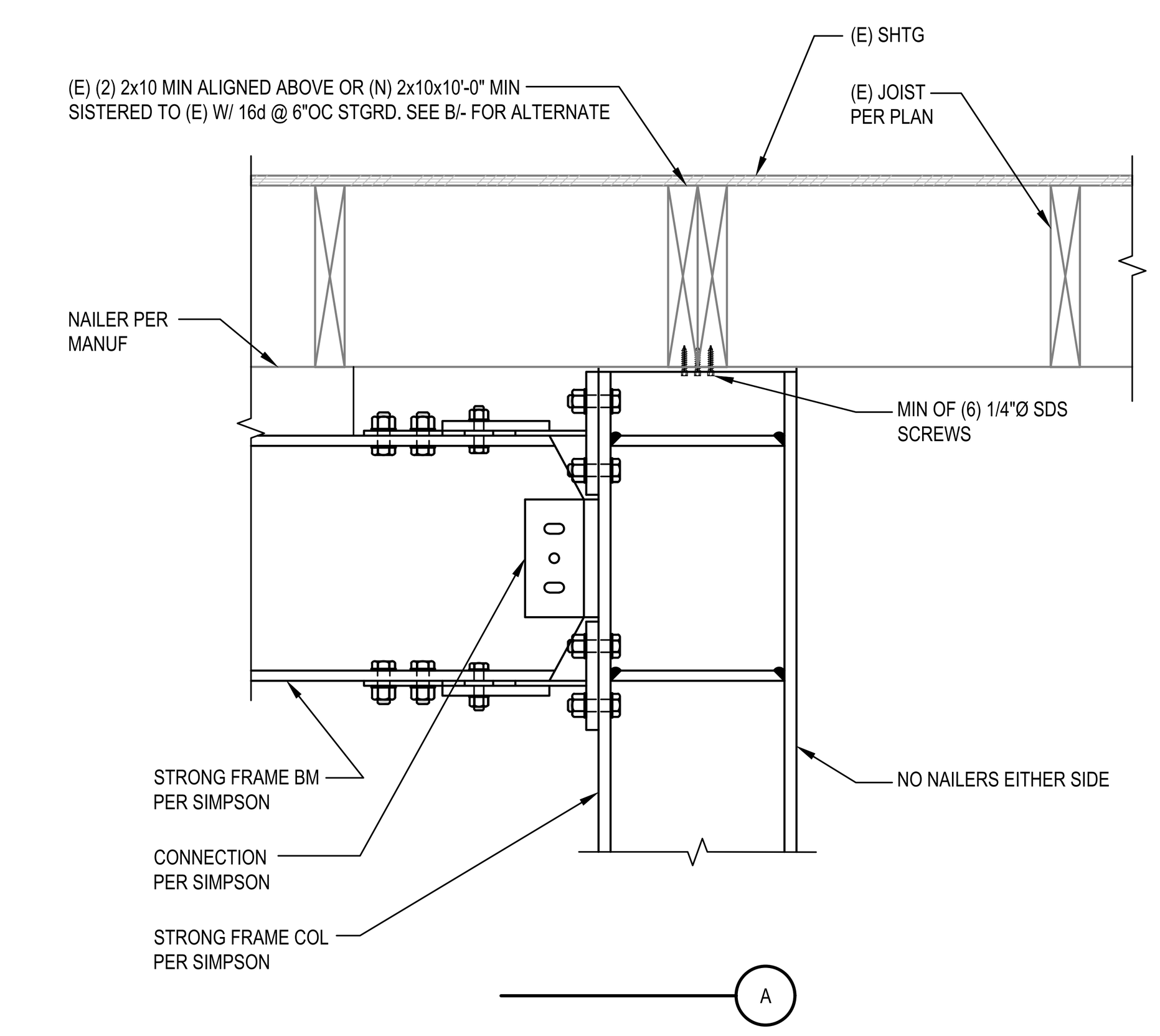


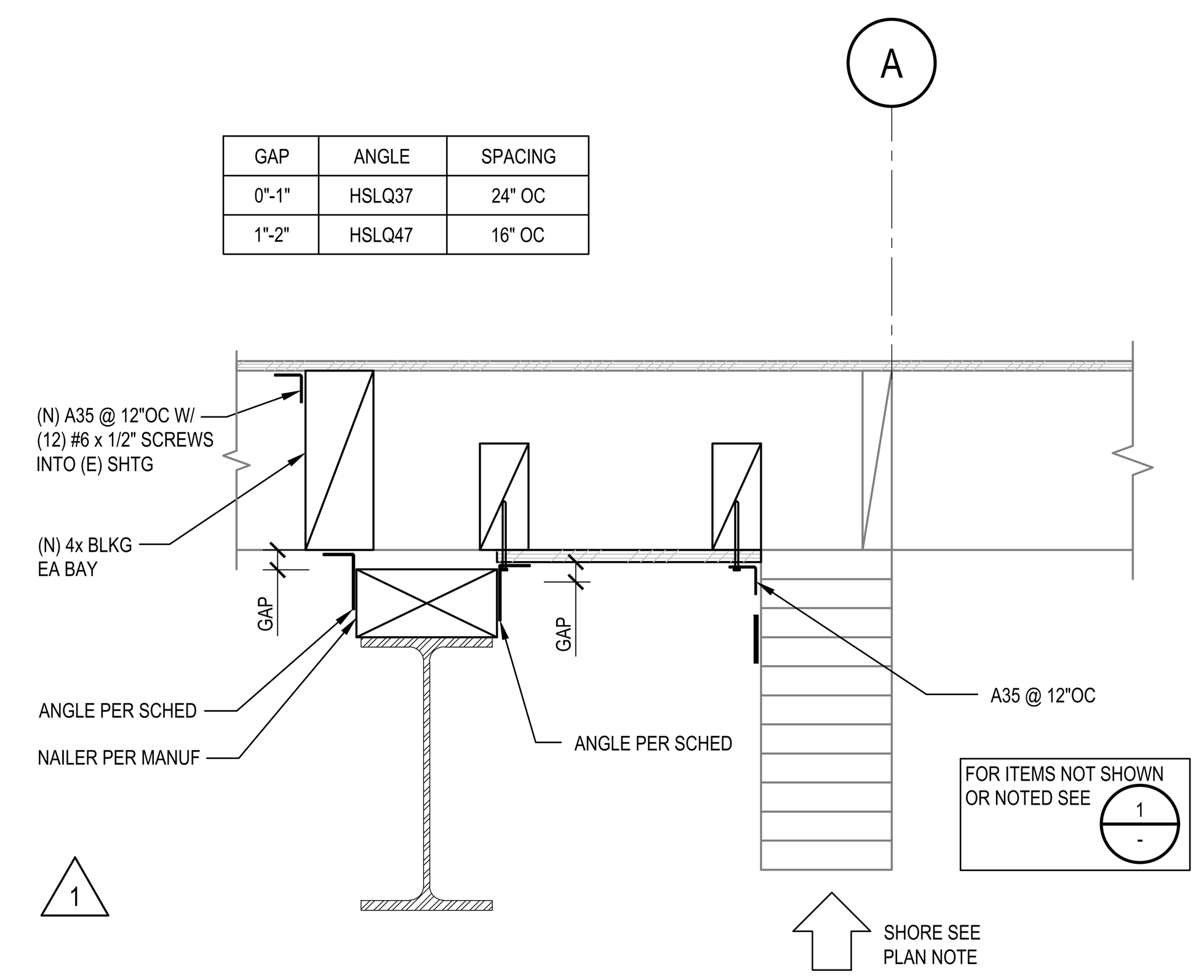
FOR ITEMS NOT SHOWN OR NOTED SEE 8/-

10 BLDG 20 - TOWER ROOF SHEAR TRANSFER
1-1/2"=1'-0"



6 BLDG 20 - ROOF EDGE SHEAR TRANSFER
1-1/2"=1'-0"

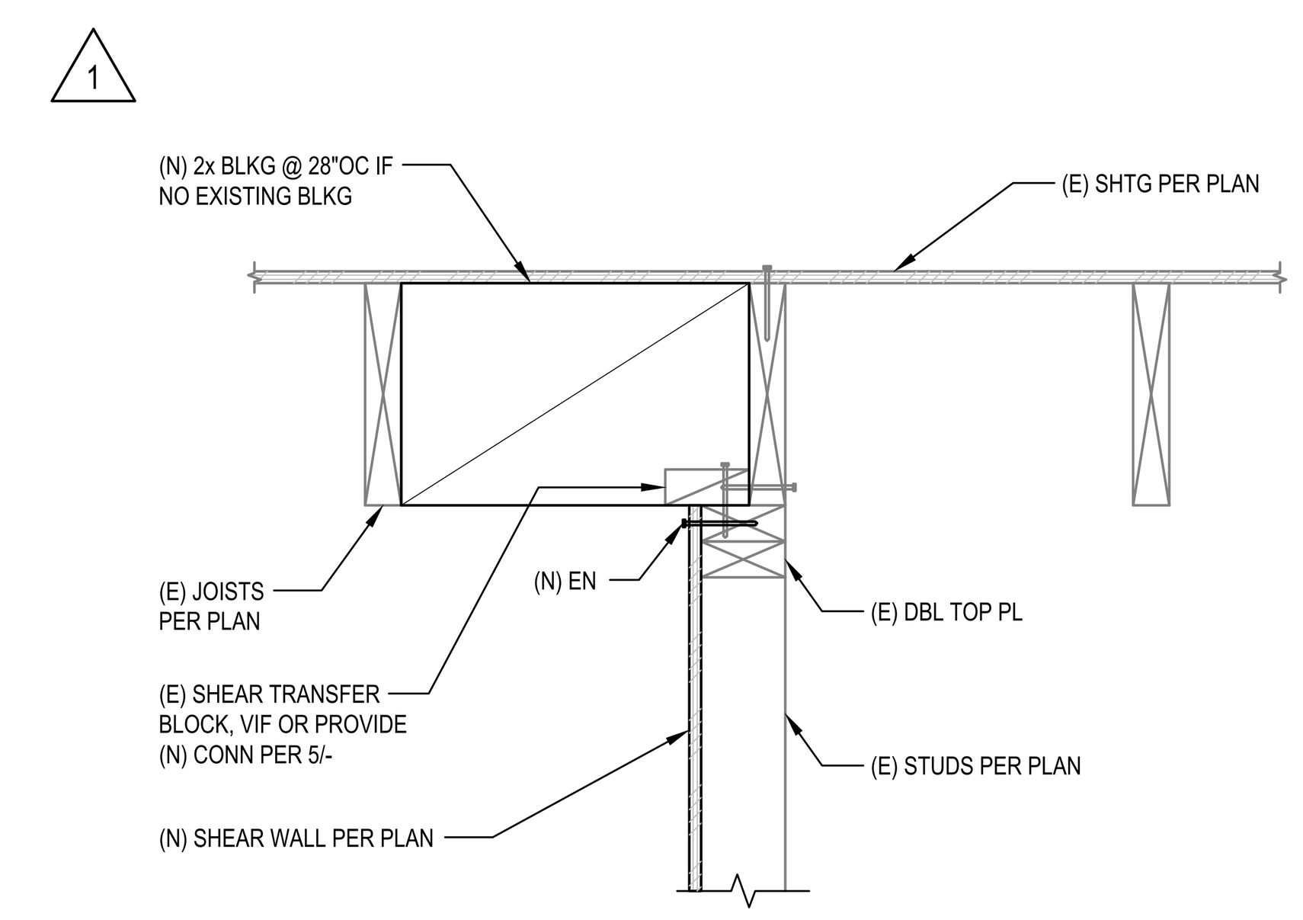




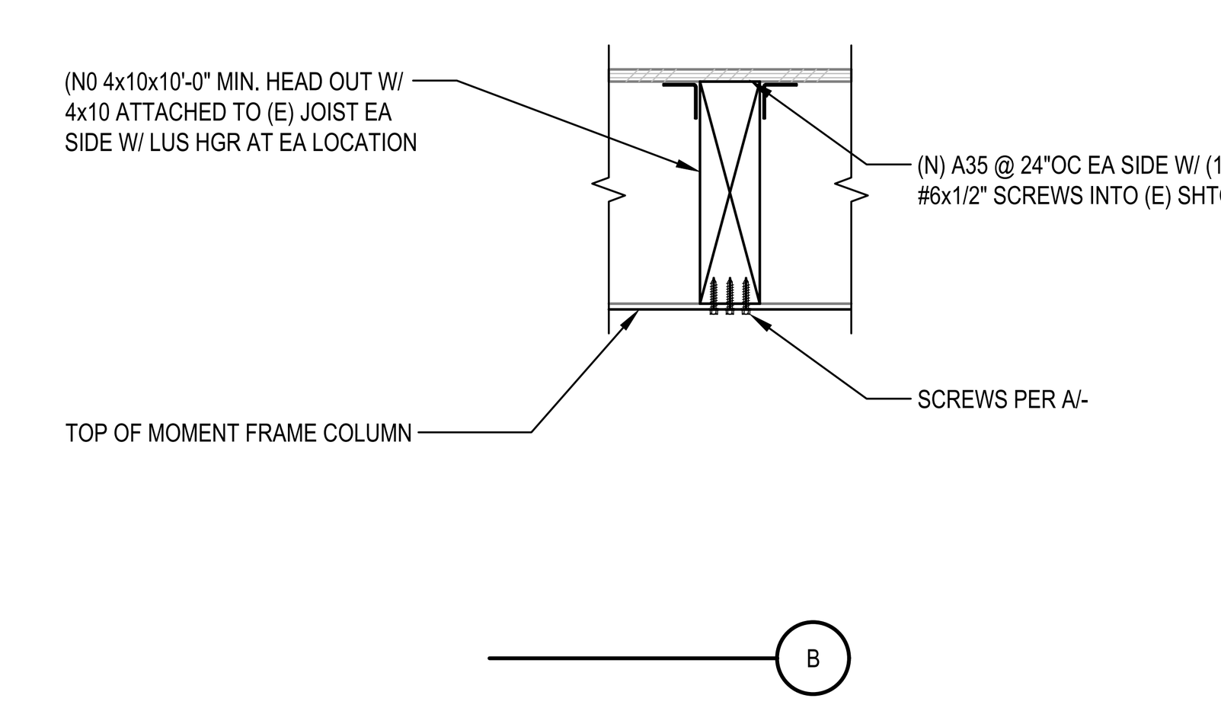
GAP	ANGLE	SPACING
0"-1"	HSLQ37	24" OC
1"-2"	HSLQ47	16" OC

FOR ITEMS NOT SHOWN OR NOTED SEE 1/-

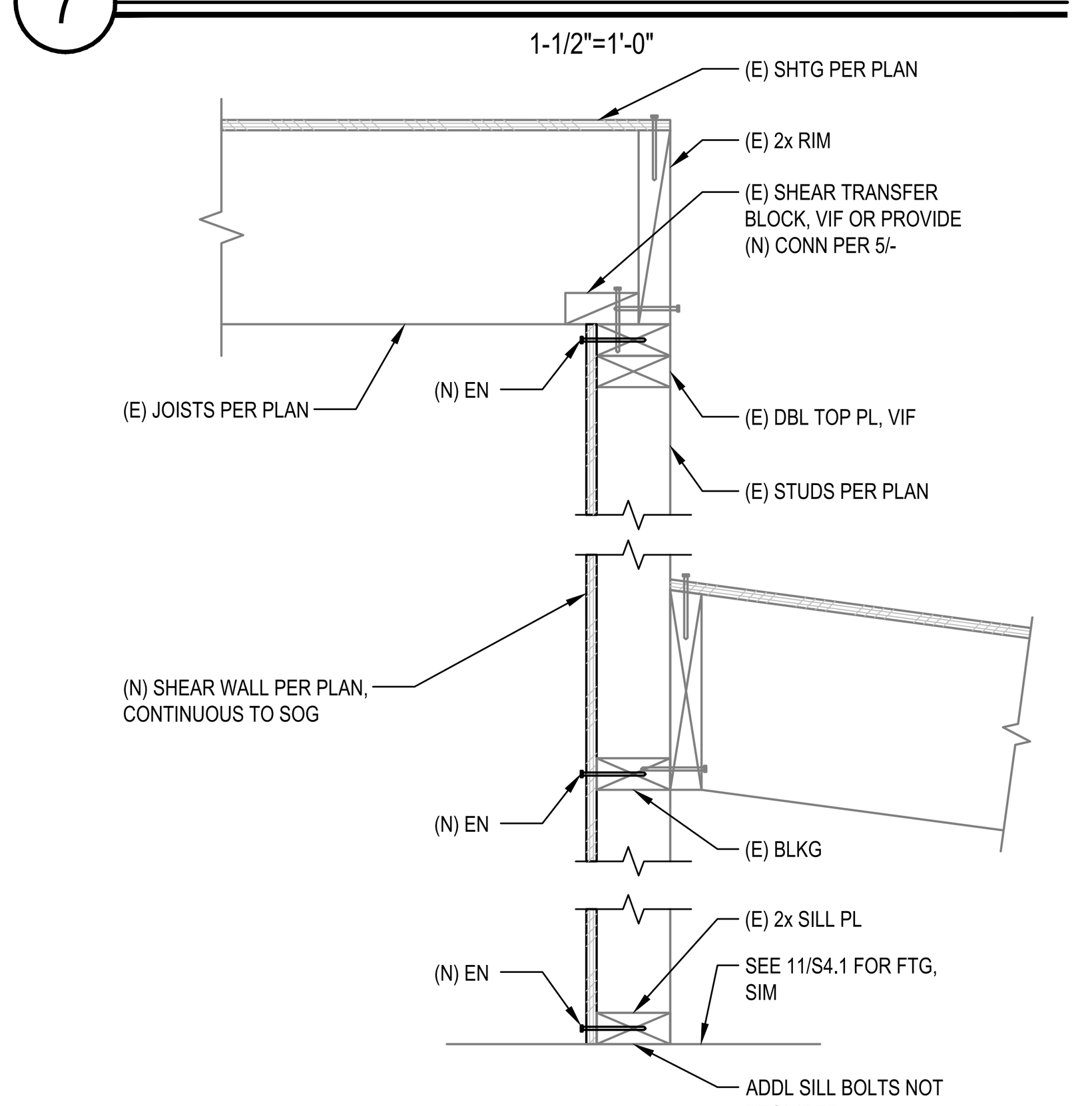
11 BLDG 14-16 - MOMENT FRAME TO (E) FLOOR FRAMING ALT
1-1/2"=1'-0"



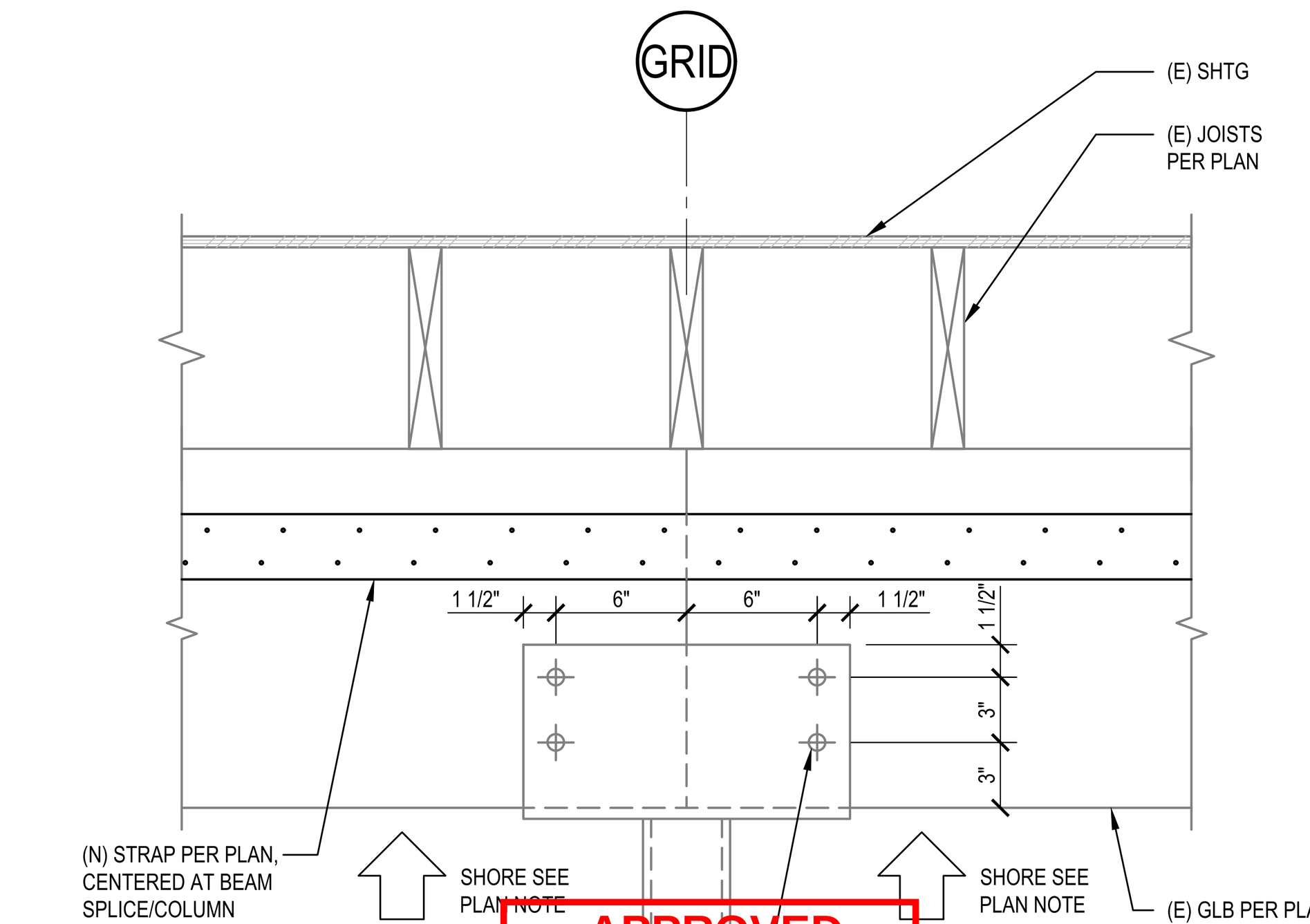
7 BLDG 20 - ROOF INTERIOR SHEAR TRANSFER
1-1/2"=1'-0"



3 BLDG 14-16 - MOMENT FRAME COLUMN BRACING
1-1/2"=1'-0"



8 BLDG 20 - TOWER ROOF SHEAR TRANSFER
1-1/2"=1'-0"



4 BLDG 14-16 - DRAG STRAP
1-1/2"=1'-0"

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
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Reviewed by:
Fire and Life Safety Division South

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Building, Safety and Compliance Division
BUILDING PERMIT

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division

miyamoto.
1901 East Alton Avenue, Suite 160
Santa Ana, CA 92705
MI1904011.00
T: (949) 579-1170
miyamotointernational.com

REGISTERED PROFESSIONAL ENGINEER
JONATHAN K. BUCKALEW
STRUCTURAL
STATE OF CALIFORNIA

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

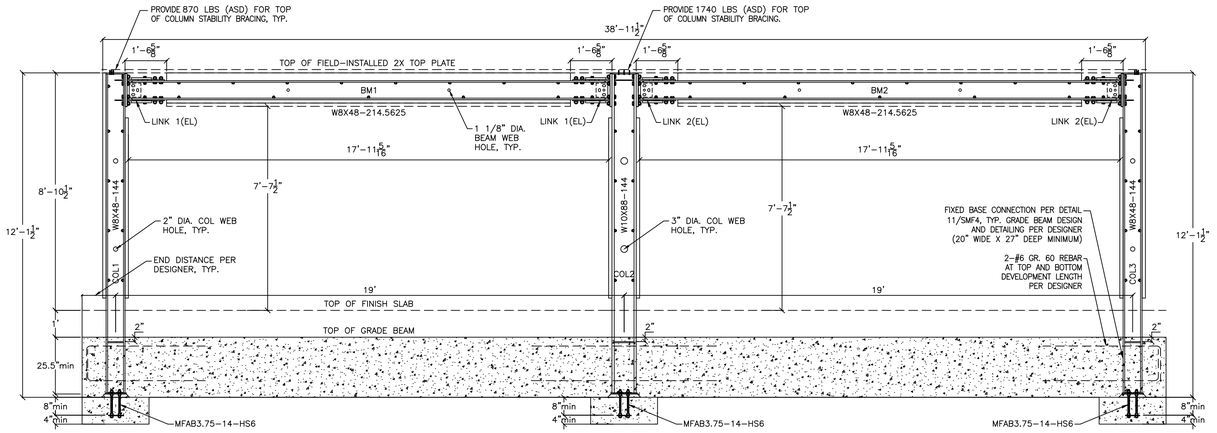
1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	05-10-2019
DRAWN:	M.B.V.

FRAMING DETAILS

S5.1

07/02/2019



NOTE:
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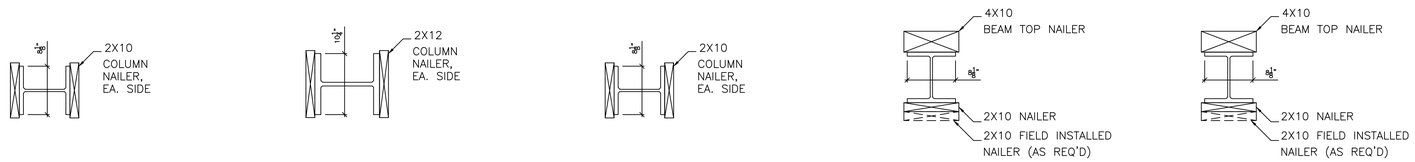
SMF-12MBX8A10z8A8B-214.563x214.563x144-EL-EL

FRAME ELEVATION

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



SECTION AT COLUMN 1 | SECTION AT COLUMN 2 | SECTION AT COLUMN 3 | SECTION AT BEAM 1 | SECTION AT BEAM 2

COLUMN SECTION

SCALE:1" = 1'-0"

BEAM SECTION

SCALE:1" = 1'-0"

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Reviewed by:
Fire and Life Safety Division, South

GENERAL NOTES:

1. SIMPSON STRONG-TIE® STRONG FRAME® AND THE YIELD-LINK® STRUCTURAL FUSE ARE PROTECTED UNDER ONE OR MORE OF THE FOLLOWING US PATENTS AND APPLICATIONS: US PATENT NO. 8,001,734 B2, US PATENT NO. 8,375,652 B2, AND US PATENT PUBLICATION NO. 2015/0159362, AND MUST BE SUPPLIED OR LICENSED THROUGH SIMPSON STRONG-TIE.
2. STRONG FRAME® SPECIAL MOMENT FRAME IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD. , PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001 REGISTERED COMPANY.
3. DESIGN FOR STRONG FRAME® MOMENT FRAMES ARE IN ACCORDANCE WITH THE FOLLOWING:
   - 2015 AND 2012 INTERNATIONAL BUILDING CODE
   - AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (ANSI/AISC 360-05, 360-10)
   - AISC SEISMIC PROVISIONS (ANSI/AISC 341-05, 341-10)
   - RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
   - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI318-11, ACI318-14)
4. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
5. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
6. THE DESIGNER MUST SPECIFY THE REQUIRED COMPONENTS OF THE COMPLETE LOAD TRANSFER PATH INCLUDING DIAPHRAGMS, SHEAR TRANSFER, CHORDS AND COLLECTORS AND FOUNDATIONS.
7. ALL CONNECTED MEMBERS AND RELATED ELEMENTS SHALL BE DESIGNED BY THE DESIGNER.
8. DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS. SEE LIMITATIONS NOTED ON SHEET SMF3.
9. ANCHORAGE LENGTHS PROVIDED ARE SHOWN FOR MINIMUM EMBEDMENT INTO FOOTING BASED ON TENSION ANCHORAGE DESIGN ONLY. ACTUAL LENGTH OF ANCHORAGE SHALL BE PER DESIGNER'S SPECIFICATIONS AND PROJECT SPECIFIC INSTALLATION REQUIREMENTS.
10. PRE-ASSEMBLED ANCHORAGE KITS PROVIDED BY SIMPSON (MFSL OR MFAB) SHALL BE SPECIFIED BY DESIGNER AND SHOULD INCLUDE ANCHORAGE TYPE, ROD GRADE, AND LENGTH OF ASSEMBLY. REFER TO DETAIL 2 FOR AVAILABLE LENGTHS OF FULLY ASSEMBLED ANCHORAGE ASSEMBLIES. EXTENSION KITS IN 36" LENGTHS ARE AVAILABLE FOR USE IN STEMWALLS OR APPLICATIONS WHERE DEEPER EMBEDMENT IS REQUIRED.
11. FOOTING DIMENSIONS SHOWN ARE THE MINIMUMS REQUIRED FOR CONCRETE ANCHORAGE REQUIREMENTS ONLY. THE DESIGNER MUST DETERMINE REQUIRED FOOTING SIZE AND REINFORCING FOR OTHER DESIGN LIMITS, SUCH AS FOUNDATION SHEAR AND BENDING, SOIL BEARING SHEAR TRANSFER, AND FRAME STABILITY / OVERTURNING.
12. DESIGNER MUST DETAIL ACTUAL FOOTING / GRADE BEAM SIZE AND REINFORCING.
13. HOLES IN BASE PLATES ARE OVER-SIZED FOR ERECTION TOLERANCE. DESIGNER MUST EVALUATE EFFECTS OF OVER-SIZED HOLES AND PROVIDE PLATE WASHER WITH STANDARD-SIZE HOLES WELDED TO BASE PLATE OR REQUEST BASE PLATES WITH STANDARD SIZE HOLES WHERE REQUIRED.
14. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STEEL STRONG FRAME SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
15. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE WITH THESE DRAWINGS AND ICC ESR-2802. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
16. SIMPSON STRONG-TIE® COMPANY, INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
17. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE®.
18. USE OF A SIMPSON STRONG-TIE PRODUCT DOES NOT IMPLY THAT SIMPSON STRONG-TIE ENDORSES ANY PROJECT, STRUCTURE OR USE. NO LICENSE IS GRANTED WITH RESPECT TO ANY SIMPSON STRONG-TIE TRADEMARK OR OTHER INTELLECTUAL PROPERTY RIGHTS. WRITTEN PERMISSION MUST BE OBTAINED PRIOR TO USING ANY SIMPSON STRONG-TIE TRADEMARKS OR PROPRIETARY DOCUMENTS AND MATERIALS.
19. SIMPSON STRONG-TIE IS NOT AFFILIATED WITH, AND DOES NOT SPONSOR OR ENDORSE, THE DESIGNER, INSTALLER OR USERS OF THIS DRAWING, NOR DOES SIMPSON STRONG-TIE HAVE ANY JOINT VENTURE, PARTNERSHIP, AGENCY, EMPLOYMENT OR FIDUCIARY RELATIONSHIP WITH SUCH PERSONS.

MATERIAL:

1. BARS/PLATES: ASTM 572 GR. 50, ASTM A529 GR. 50, OR ASTM A1011 HSLAS GR. 50
2. W-SECTIONS (HOT ROLLED SECTIONS): ASTM A992
3. LINK TO COLUMN FLANGE HIGH STRENGTH BOLTS: 7/8" DIA. ASTM A325, TYPE 1 (SNUG-TIGHT)
4. BRP TO BEAM FLANGE AND SHEAR PLATE TO BEAM WEB HIGH STRENGTH BOLTS: ASTM A325, TYPE 1 (SNUG-TIGHT)
5. LINK TO BEAM FLANGE HIGH STRENGTH BOLTS: ASTM F2280 TWIST OFF TYPE (A490 EQUIVALENT) (PRETENSIONED)
6. BEAM TOP FLANGE WOOD NAILER BOLT: ASTM A307 GR. A
7. CARRIAGE BOLTS: ASTM A307 GR. A
8. ANCHOR RODS: ASTM F1554 GR 36 OR A36 (MFAB, MFSL, AND MF-ATR6EXT-LS); ASTM A449 (MFAB-HS, MFSL-HS, AND MF-ATR6EXT-HS)
9. GROUT: ASTM C1107, MINIMUM 5,000 PSI COMPRESSIVE STRENGTH

INSTALLATION AND FIELD MODIFICATIONS:

THESE GENERAL INSTRUCTIONS FOR THE INSTALLER ARE PROVIDED TO ENSURE PROPER SELECTION AND INSTALLATION OF SIMPSON STRONG-TIE COMPANY INC. PRODUCTS AND MUST BE FOLLOWED CAREFULLY. THESE GENERAL INSTRUCTIONS ARE IN ADDITION TO THE SPECIFIC INSTALLATION INSTRUCTIONS AND NOTES PROVIDED FOR EACH PARTICULAR PRODUCT, ALL OF WHICH SHOULD BE CONSULTED PRIOR TO AND DURING INSTALLATION OF SIMPSON STRONG-TIE COMPANY INC. PRODUCTS.

1. PROPER PRODUCT INSTALLATION REQUIRES CAREFUL ATTENTION TO ALL NOTES AND INSTRUCTIONS. IN ADDITIONAL TO THE NOTES, WARNINGS, AND INSTRUCTIONS PROVIDED IN THE CATALOG, INSTALLERS, DESIGNERS, ENGINEERS AND CONSUMERS SHOULD CONSULT THE SIMPSON STRONG-TIE COMPANY INC. WEBSITE AT WWW.STRONGTIE.COM TO OBTAIN ADDITIONAL INFORMATION FOR INSTALLATION, SPECIFICATIONS, CODE REPORTS, TECHNICAL FLIERS AND BULLETINS, FAQS, AND OTHER PERTINENT INFORMATION.
2. PROVIDE TEMPORARY DIAGONAL BRACING OF STRONG FRAME® AS REQUIRED UNTIL FRAME IS TIED INTO THE FLOOR OR ROOF FRAMING ABOVE.
3. USE PROPER SAFETY AND INSTALLATION EQUIPMENT DURING INSTALLATION OF STRONG FRAME®.
4. ALL SPECIFIED FASTENERS MUST BE INSTALLED ACCORDING TO THE INSTRUCTIONS PROVIDED IN THE CATALOG, CODE REPORT, AND INSTALLATION DETAILS. INCORRECT FASTENER QUANTITY, SIZE, PLACEMENT, TYPE, MATERIAL, OR FINISH MAY CAUSE THE CONNECTION TO FAIL.
5. FILL ALL FASTENER HOLES AS SPECIFIED IN THE INSTALLATION INSTRUCTIONS FOR THE SPECIFIED PRODUCT. INSTALL ALL FASTENERS BEFORE LOADING THE FRAME. SOME PRE-INSTALLED ITEMS MAY NOT USE ALL HOLES.
6. NUTS SHALL BE INSTALLED SUCH THAT THE END OF THE THREADED ROD OR BOLT IS AT LEAST FLUSH WITH THE TOP OF THE NUT.
7. REFER TO DETAIL 12/SMF3 FOR ALLOWABLE HOLE OPENINGS IN BEAM AND COLUMNS.
8. REFER TO DETAIL 11/SMF3 FOR CONNECTION PROTECTED ZONE.
9. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 AND AWS D1.8 (AS APPLICABLE FOR SEISMIC). WELDS SHALL BE SPECIFIED BY THE DESIGNER. PROVIDE WELDING SPECIAL INSPECTION AS REQUIRED BY THE LOCAL BUILDING DEPARTMENT.

INSPECTIONS:

1. WELDING OF FRAME MEMBERS AND APPLICABLE WELDING SPECIAL INSPECTIONS REQUIRED BY IBC SECTION 1707 ARE PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED IN ACCORDANCE WITH THE REQUIREMENTS OF IBC SECTION 1704.2.5 FOR FABRICATOR APPROVAL.
2. PRE-INSTALLATION VERIFICATION TESTING IS PERFORMED ON HIGH-STRENGTH FASTENER ASSEMBLIES.
3. INSPECTION REQUIREMENTS OUTSIDE THE SHOP MANUFACTURING AND ASSEMBLY PROCESS SHALL BE IN ACCORDANCE WITH THE LOCAL CODE, BASED ON BUILDING OCCUPANCY, CONCRETE STRENGTH, REQUIREMENTS OF THE LOCAL BUILDING OFFICIAL, AND OTHER CONSIDERATIONS AND SHALL BE SPECIFIED BY THE DESIGNER.
4. GROUTING UNDER COLUMN BASE PLATE MAY REQUIRE SPECIAL INSPECTION, CONTACT THE LOCAL BUILDING DEPARTMENT FOR COMPLIANCE REQUIREMENTS.
5. CONTACT SIMPSON STRONG-TIE® AT 800-999-5099 TO REQUEST PRE-INSTALLATION TESTING, WELDING REPORTS, MILL CERTS, ETC. WHEN REQUIRED.

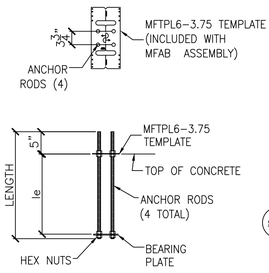
GENERAL NOTES | 1

MODEL NO.	ROD SIZE & NUMBER	LENGTH (in)	l_e (in)	BEARING PLATE (in)
ALL SMF COLUMNS				
MFAB3.75-14-6	4 - ¾	14	8	⅜ x 7 x 7
MFAB3.75-14-HS6	4 - ¾	14	8	
MFAB3.75-18-6	4 - ¾	18	12	
MFAB3.75-18-HS6	4 - ¾	18	12	
MFAB3.75-24-6	4 - ¾	24	18	
MFAB3.75-24-HS6	4 - ¾	24	18	
MFAB3.75-30-6	4 - ¾	30	24	
MFAB3.75-30-HS6	4 - ¾	30	24	
MFAB3.75-36-6	4 - ¾	36	30	
MFAB3.75-36-HS6	4 - ¾	36	30	

THE MFAB ANCHOR ASSEMBLIES HAVE BEEN ENGINEERED TO PROVIDE A SOLUTION MEETING THE 2012 AND 2015 INTERNATIONAL BUILDING CODE REQUIREMENTS FOR BOTH TENSION AND SHEAR.

INSPECTION IS EASY; THE HEAD IS STAMPED WITH A "NO EQUAL" SYMBOL FOR IDENTIFICATION, BOLT LENGTH, BOLT DIAMETER, AND OPTIONAL "HS" FOR HIGH STRENGTH IF SPECIFIED.

MFAB ANCHOR ASSEMBLIES REQUIRE ADDITIONAL REINFORCING TO PROVIDE A COMPLETE TENSION AND SHEAR SOLUTION. DESIGNER MUST SPECIFY ADDITIONAL REINFORCING TIES OR HAIRPINS AS REQUIRED FOR SHEAR.



MFAB3.75 | ANCHOR ROD STAMP

MFAB ANCHORAGE ASSEMBLIES | 2

NO.	DATE	REVISIONS

SIMPSON STRONG-TIE, CO. INC.
5956 W. Las Positas Blvd.
Pleasanton, CA 94588
Tel: (800) 999-5099
Fax: (925) 847-13977
Web site: www.strongtie.com

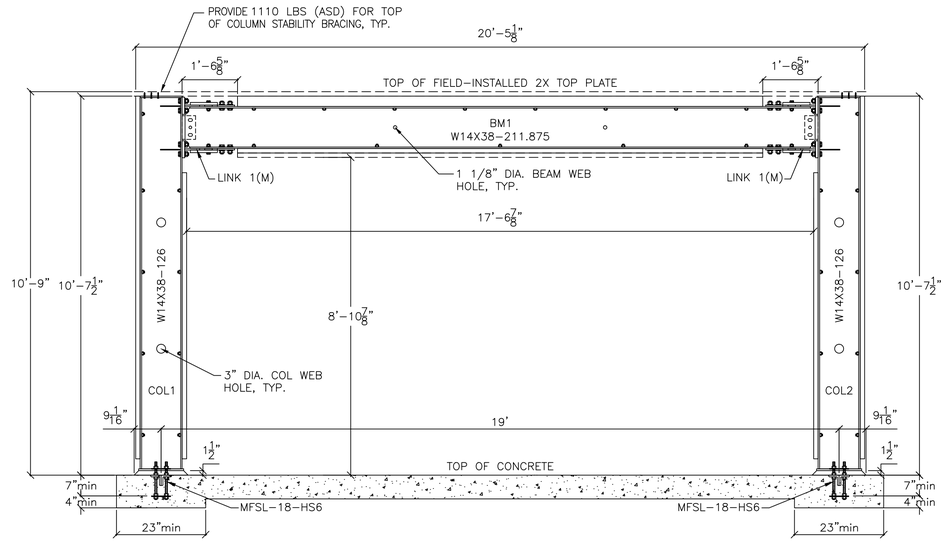
SIMPSON Strong-Tie
THERE IS NO EQUAL

THE MOMENT FRAME(S) IS DESIGNED FOLLOWING INFORMATION PROVIED BY:
Miyamoto Internation, Inc.
DATE OF PLANS (D.O.P.):
8/17/2018
PROVIDED TO SIMPSON STRONG-TIE BY:
Jonathan Buckley

STRONG-FRAME®
FRAME ELEVATION DRAWING
ENGINEERED DESIGN
3429 CANYON CREST DRIVE - MF-1

NAME: D.H.
DATE: 08/17/2018
SCALE: N.T.S.
SHEET:
MF-1
JOB NO.
ES-183167

6-14-2019 ADDENDUM 1 SUBMITTAL SET



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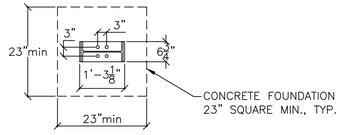
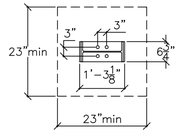
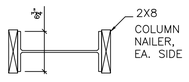




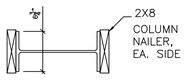
FRAME MODEL: SMFX1414-211.875x126-M

FRAME ELEVATION

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



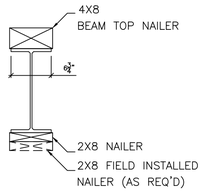
SECTION AT COLUMN 1



SECTION AT COLUMN 2

COLUMN SECTION

SCALE:1" = 1'-0"



SECTION AT BEAM 1

BEAM SECTION

SCALE:1" = 1'-0"

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CROWN SYSTEM

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
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Reviewed by:
Fire and Life Safety Division South

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9. ANCHORAGE LENGTHS PROVIDED ARE SHOWN FOR MINIMUM EMBEDMENT INTO FOOTING BASED ON TENSION ANCHORAGE DESIGN ONLY. ACTUAL LENGTH OF ANCHORAGE SHALL BE PER DESIGNER'S SPECIFICATIONS AND PROJECT SPECIFIC INSTALLATION REQUIREMENTS.
10. PRE-ASSEMBLED ANCHORAGE KITS PROVIDED BY SIMPSON (MFSL OR MFAB) SHALL BE SPECIFIED BY DESIGNER AND SHOULD INCLUDE ANCHORAGE TYPE, ROD GRADE, AND LENGTH OF ASSEMBLY. REFER TO DETAIL 2 FOR AVAILABLE LENGTHS OF FULLY ASSEMBLED ANCHORAGE ASSEMBLIES. EXTENSION KITS IN 36" LENGTHS ARE AVAILABLE FOR USE IN STEMWALLS OR APPLICATIONS WHERE DEEPER EMBEDMENT IS REQUIRED.
11. FOOTING DIMENSIONS SHOWN ARE THE MINIMUMS REQUIRED FOR CONCRETE ANCHORAGE REQUIREMENTS ONLY. THE DESIGNER MUST DETERMINE REQUIRED FOOTING SIZE AND REINFORCING FOR OTHER DESIGN LIMITS, SUCH AS FOUNDATION SHEAR AND BENDING, SOIL BEARING SHEAR TRANSFER, AND FRAME STABILITY / OVERTURNING.
12. DESIGNER MUST DETAIL ACTUAL FOOTING / GRADE BEAM SIZE AND REINFORCING.
13. HOLES IN BASE PLATES ARE OVER-SIZED FOR ERECTION TOLERANCE. DESIGNER MUST EVALUATE EFFECTS OF OVER-SIZED HOLES AND PROVIDE PLATE WASHER WITH STANDARD-SIZE HOLES WELDED TO BASE PLATE OR REQUEST BASE PLATES WITH STANDARD SIZE HOLES WHERE REQUIRED.
14. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STEEL STRONG FRAME SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
15. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE WITH THESE DRAWINGS AND ICC ESR-2802. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
16. SIMPSON STRONG-TIE® COMPANY, INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
17. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE®.
18. USE OF A SIMPSON STRONG-TIE PRODUCT DOES NOT IMPLY THAT SIMPSON STRONG-TIE ENDORSES ANY PROJECT, STRUCTURE OR USE. NO LICENSE IS GRANTED WITH RESPECT TO ANY SIMPSON STRONG-TIE TRADEMARK OR OTHER INTELLECTUAL PROPERTY RIGHTS. WRITTEN PERMISSION MUST BE OBTAINED PRIOR TO USING ANY SIMPSON STRONG-TIE TRADEMARKS OR PROPRIETARY DOCUMENTS AND MATERIALS.
19. SIMPSON STRONG-TIE IS NOT AFFILIATED WITH, AND DOES NOT SPONSOR OR ENDORSE, THE DESIGNER, INSTALLER OR USERS OF THIS DRAWING, NOR DOES SIMPSON STRONG-TIE HAVE ANY JOINT VENTURE, PARTNERSHIP, AGENCY, EMPLOYMENT OR FIDUCIARY RELATIONSHIP WITH SUCH PERSONS.

MATERIAL:

1. BARS/PLATES: ASTM 572 GR. 50, ASTM A529 GR. 50, OR ASTM A1011 HSLAS GR. 50
2. W-SECTIONS (HOT ROLLED SECTIONS): ASTM A992
3. LINK TO COLUMN FLANGE HIGH STRENGTH BOLTS: 7/8" DIA. ASTM A325, TYPE 1 (SNUG-TIGHT)
4. BRP TO BEAM FLANGE AND SHEAR PLATE TO BEAM WEB HIGH STRENGTH BOLTS: ASTM A325, TYPE 1 (SNUG-TIGHT)
5. LINK TO BEAM FLANGE HIGH STRENGTH BOLTS: ASTM F2280 TWIST OFF TYPE (A490 EQUIVALENT) (PRETENSIONED)
6. BEAM TOP FLANGE WOOD NAILER BOLT: ASTM A307 GR. A
7. CARRIAGE BOLTS: ASTM A307 GR. A
8. ANCHOR RODS: ASTM F1554 GR 36 OR A36 (MFAB, MFSL, AND MF-ATR6EXT-LS); ASTM A449 (MFAB-HS, MFSL-HS, AND MF-ATR6EXT-HS)
9. GROUT: ASTM C1107, MINIMUM 5,000 PSI COMPRESSIVE STRENGTH

INSTALLATION AND FIELD MODIFICATIONS:

THESE GENERAL INSTRUCTIONS FOR THE INSTALLER ARE PROVIDED TO ENSURE PROPER SELECTION AND INSTALLATION OF SIMPSON STRONG-TIE COMPANY INC. PRODUCTS AND MUST BE FOLLOWED CAREFULLY. THESE GENERAL INSTRUCTIONS ARE IN ADDITION TO THE SPECIFIC INSTALLATION INSTRUCTIONS AND NOTES PROVIDED FOR EACH PARTICULAR PRODUCT, ALL OF WHICH SHOULD BE CONSULTED PRIOR TO AND DURING INSTALLATION OF SIMPSON STRONG-TIE COMPANY INC. PRODUCTS.

1. PROPER PRODUCT INSTALLATION REQUIRES CAREFUL ATTENTION TO ALL NOTES AND INSTRUCTIONS. IN ADDITIONAL TO THE NOTES, WARNINGS, AND INSTRUCTIONS PROVIDED IN THE CATALOG, INSTALLERS, DESIGNERS, ENGINEERS AND CONSUMERS SHOULD CONSULT THE SIMPSON STRONG-TIE COMPANY INC. WEBSITE AT WWW.STRONGTIE.COM TO OBTAIN ADDITIONAL INFORMATION FOR INSTALLATION, SPECIFICATIONS, CODE REPORTS, TECHNICAL FLIERS AND BULLETINS, FAQS, AND OTHER PERTINENT INFORMATION.
2. PROVIDE TEMPORARY DIAGONAL BRACING OF STRONG FRAME® AS REQUIRED UNTIL FRAME IS TIED INTO THE FLOOR OR ROOF FRAMING ABOVE.
3. USE PROPER SAFETY AND INSTALLATION EQUIPMENT DURING INSTALLATION OF STRONG FRAME®.
4. ALL SPECIFIED FASTENERS MUST BE INSTALLED ACCORDING TO THE INSTRUCTIONS PROVIDED IN THE CATALOG, CODE REPORT, AND INSTALLATION DETAILS. INCORRECT FASTENER QUANTITY, SIZE, PLACEMENT, TYPE, MATERIAL, OR FINISH MAY CAUSE THE CONNECTION TO FAIL.
5. FILL ALL FASTENER HOLES AS SPECIFIED IN THE INSTALLATION INSTRUCTIONS FOR THE SPECIFIED PRODUCT. INSTALL ALL FASTENERS BEFORE LOADING THE FRAME. SOME PRE-INSTALLED ITEMS MAY NOT USE ALL HOLES.
6. NUTS SHALL BE INSTALLED SUCH THAT THE END OF THE THREADED ROD OR BOLT IS AT LEAST FLUSH WITH THE TOP OF THE NUT.
7. REFER TO DETAIL 12/SMF3 FOR ALLOWABLE HOLE OPENINGS IN BEAM AND COLUMNS.
8. REFER TO DETAIL 11/SMF3 FOR CONNECTION PROTECTED ZONE.
9. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 AND AWS D1.8 (AS APPLICABLE FOR SEISMIC). WELDS SHALL BE SPECIFIED BY THE DESIGNER. PROVIDE WELDING SPECIAL INSPECTION AS REQUIRED BY THE LOCAL BUILDING DEPARTMENT.

INSPECTIONS:

1. WELDING OF FRAME MEMBERS AND APPLICABLE WELDING SPECIAL INSPECTIONS REQUIRED BY IBC SECTION 1707 ARE PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED IN ACCORDANCE WITH THE REQUIREMENTS OF IBC SECTION 1704.2.5 FOR FABRICATOR APPROVAL.
2. PRE-INSTALLATION VERIFICATION TESTING IS PERFORMED ON HIGH-STRENGTH FASTENER ASSEMBLIES.
3. INSPECTION REQUIREMENTS OUTSIDE THE SHOP MANUFACTURING AND ASSEMBLY PROCESS SHALL BE IN ACCORDANCE WITH THE LOCAL CODE, BASED ON BUILDING OCCUPANCY, CONCRETE STRENGTH, REQUIREMENTS OF THE LOCAL BUILDING OFFICIAL, AND OTHER CONSIDERATIONS AND SHALL BE SPECIFIED BY THE DESIGNER.
4. GROUTING UNDER COLUMN BASE PLATE MAY REQUIRE SPECIAL INSPECTION, CONTACT THE LOCAL BUILDING DEPARTMENT FOR COMPLIANCE REQUIREMENTS.
5. CONTACT SIMPSON STRONG-TIE® AT 800-999-5099 TO REQUEST PRE-INSTALLATION TESTING, WELDING REPORTS, MILL CERTS, ETC. WHEN REQUIRED.

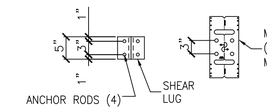
GENERAL NOTES | 1

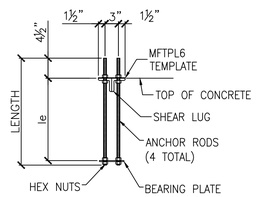
MODEL NO.	ROD SIZE & NUMBER	LENGTH (in)	l_e (in)	BEARING PLATE (in)
MFSL-14-6	4 - ¾	14	8½	⅜ x 7 x 7
MFSL-14-HS6	4 - ¾	14	8½	
MFSL-18-6	4 - ¾	18	12½	
MFSL-18-HS6	4 - ¾	18	12½	
MFSL-24-6	4 - ¾	24	18½	
MFSL-24-HS6	4 - ¾	24	18½	
MFSL-30-6	4 - ¾	30	24½	
MFSL-30-HS6	4 - ¾	30	24½	
MFSL-36-6	4 - ¾	36	30½	
MFSL-36-HS6	4 - ¾	36	30½	

THE MFSL ANCHOR ASSEMBLIES HAVE BEEN ENGINEERED TO PROVIDE A COMPLETE ANCHORAGE SOLUTION MEETING THE 2012 AND 2015 INTERNATIONAL BUILDING CODE REQUIREMENTS FOR BOTH TENSION AND SHEAR.

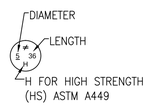
ANCHOR RODS AND THE MFTPL TEMPLATE ARE INCLUDED PRE-ATTACHED WITH THE ASSEMBLY.

INSPECTION IS EASY; THE HEAD IS STAMPED WITH A "NO EQUAL" SYMBOL FOR IDENTIFICATION, BOLT LENGTH, BOLT DIAMETER, AND OPTIONAL "HS" FOR HIGH STRENGTH IF SPECIFIED.





MFSL



ANCHOR ROD STAMP

MFSL ANCHORAGE ASSEMBLIES | 2

SIMPSON STRONG-TIE, CO. INC.
● 5956 W. Las Positas Blvd.
Pleasanton, CA 94588
● Tel: (800) 999-5099
● Fax: (925) 847-13977
● Web site: www.strongtie.com

SIMPSON Strong-Tie ≠ THERE IS NO EQUAL

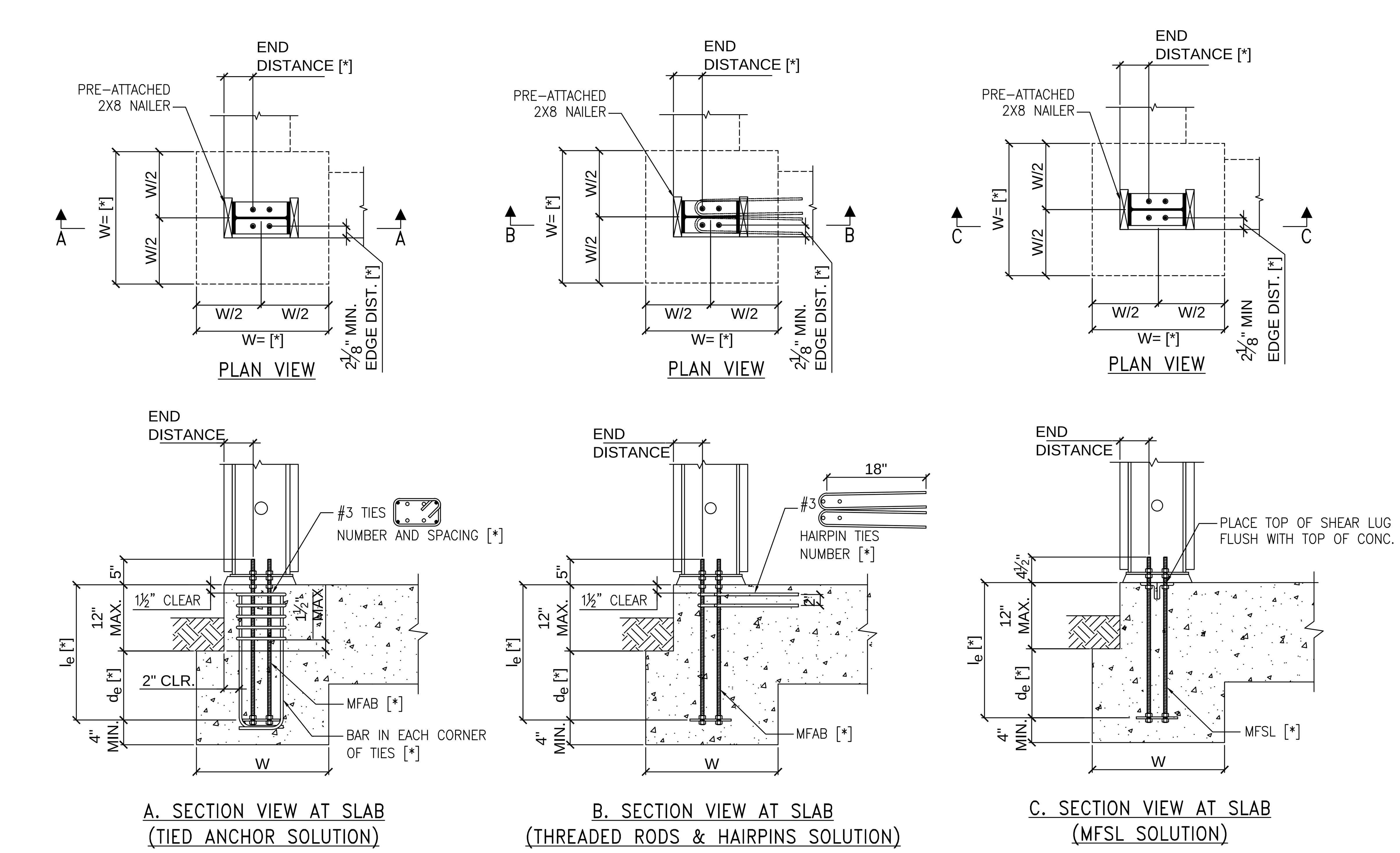
NO.	DATE	REVISIONS
1	6/28/19	ADDENDUM 1

THE MOMENT FRAME(S) IS DESIGNED FOLLOWING INFORMATION PROVIED BY:
Miyamoto Internation, Inc.
DATE OF PLANS (D.O.P.):
8/17/2018
PROVIDED TO SIMPSON STRONG-TIE BY:
Jonathan Buckley

STRONG-FRAME®
FRAME ELEVATION DRAWING
ENGINEERED DESIGN
3429 CANYON CREST DRIVE - MF-2

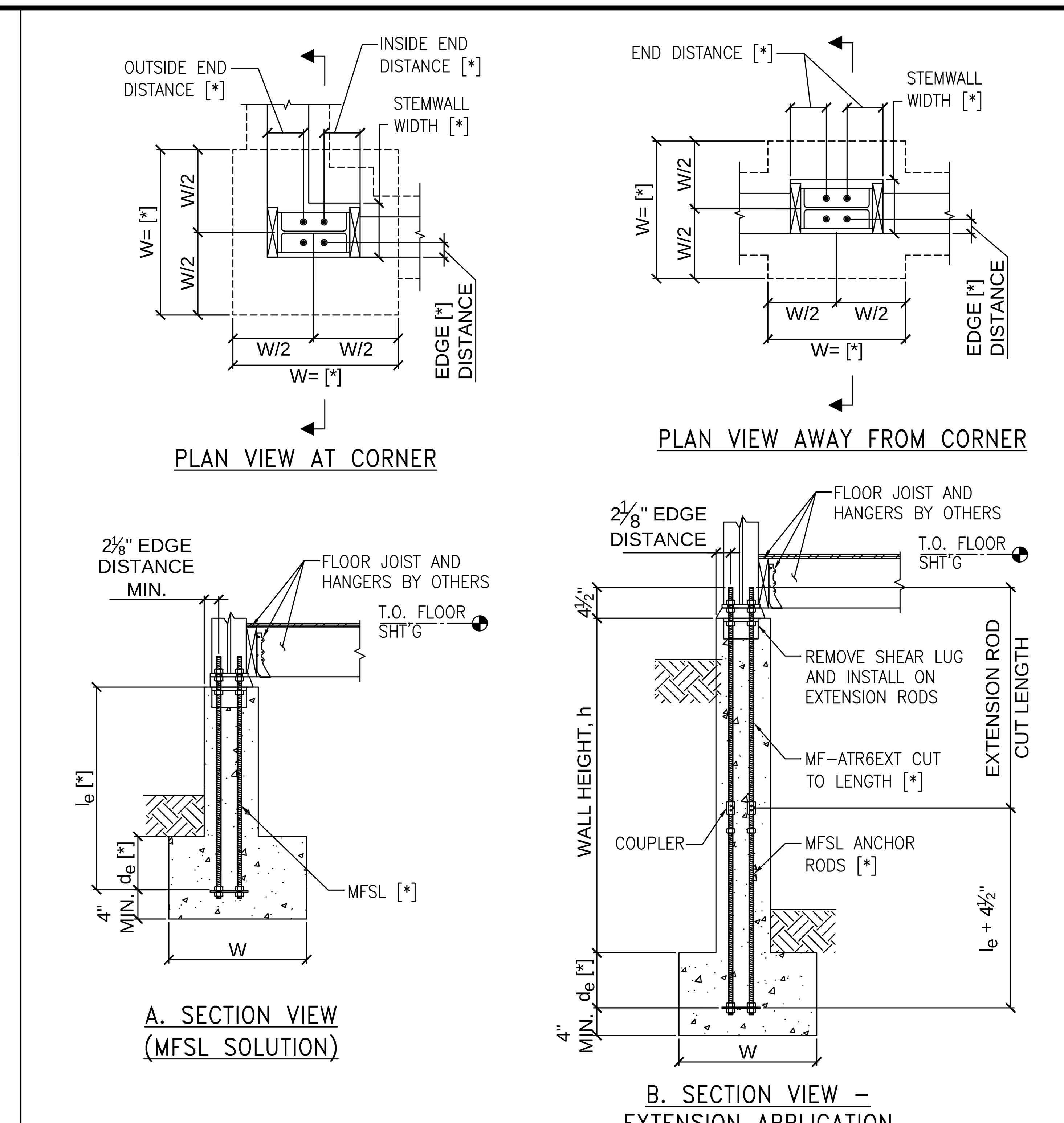
NAME: D.H.
DATE: 08/17/2018
SCALE: N.T.S.
SHEET:
MF-2
JOB NO. ES-183167

6-14-2019 ADDENDUM 1 SUBMITTAL SET



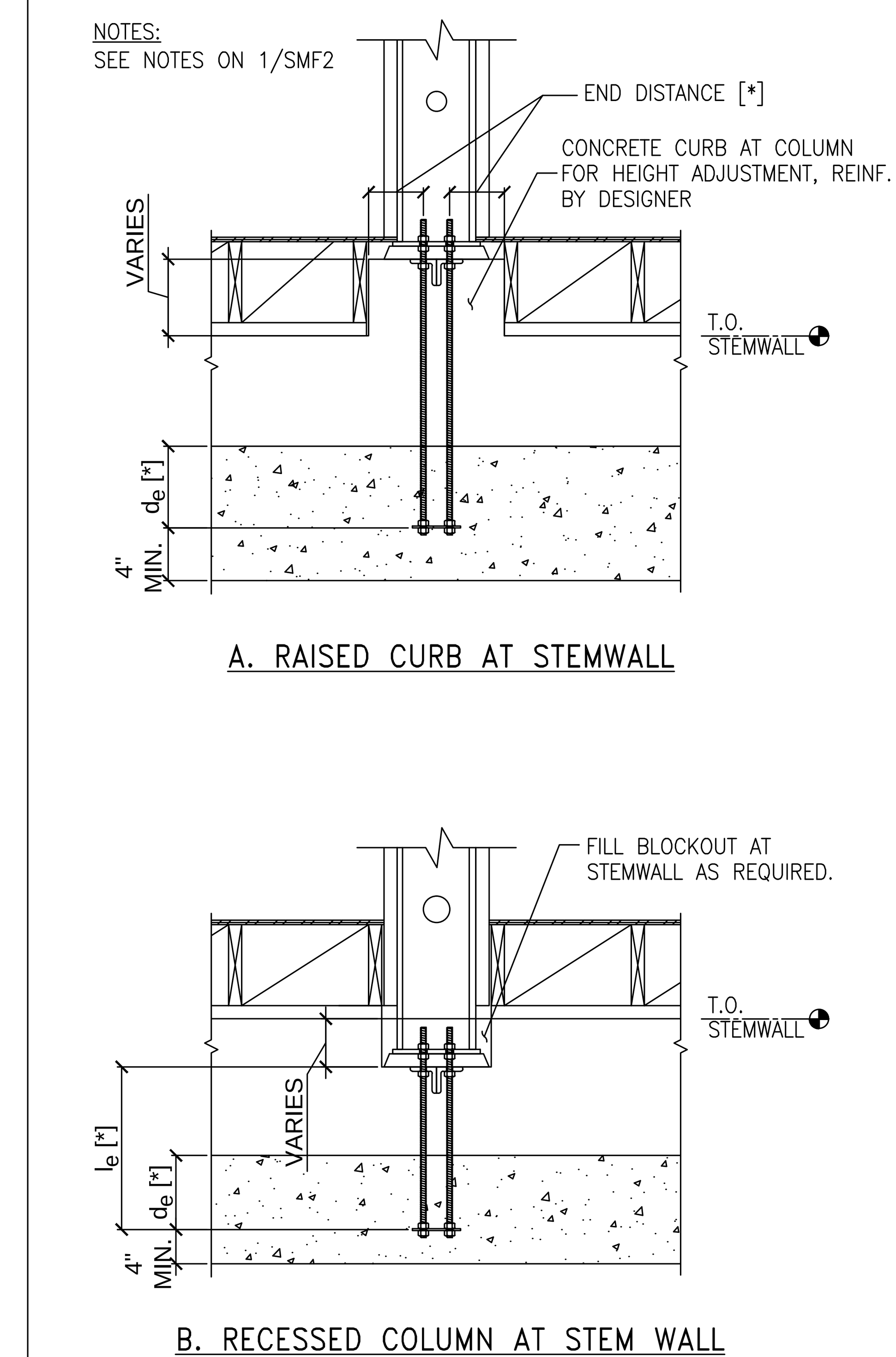
NOTES:
1. [*] DENOTES INFORMATION TO BE PROVIDED BY DESIGNER
2. FOOTING/GRADE BEAM SIZE AND REINFORCING SHALL BE SPECIFIED BY THE DESIGNER AS REQUIRED TO RESIST IMPOSED LOADS, SUCH AS FOUNDATION SHEAR AND BENDING, SOIL BEARING PRESSURE, SHEAR TRANSFER, AND FRAME STABILITY/OVERTURNING

SLAB-ON-GRADE FOUNDATION ANCHORAGE DETAILS 1

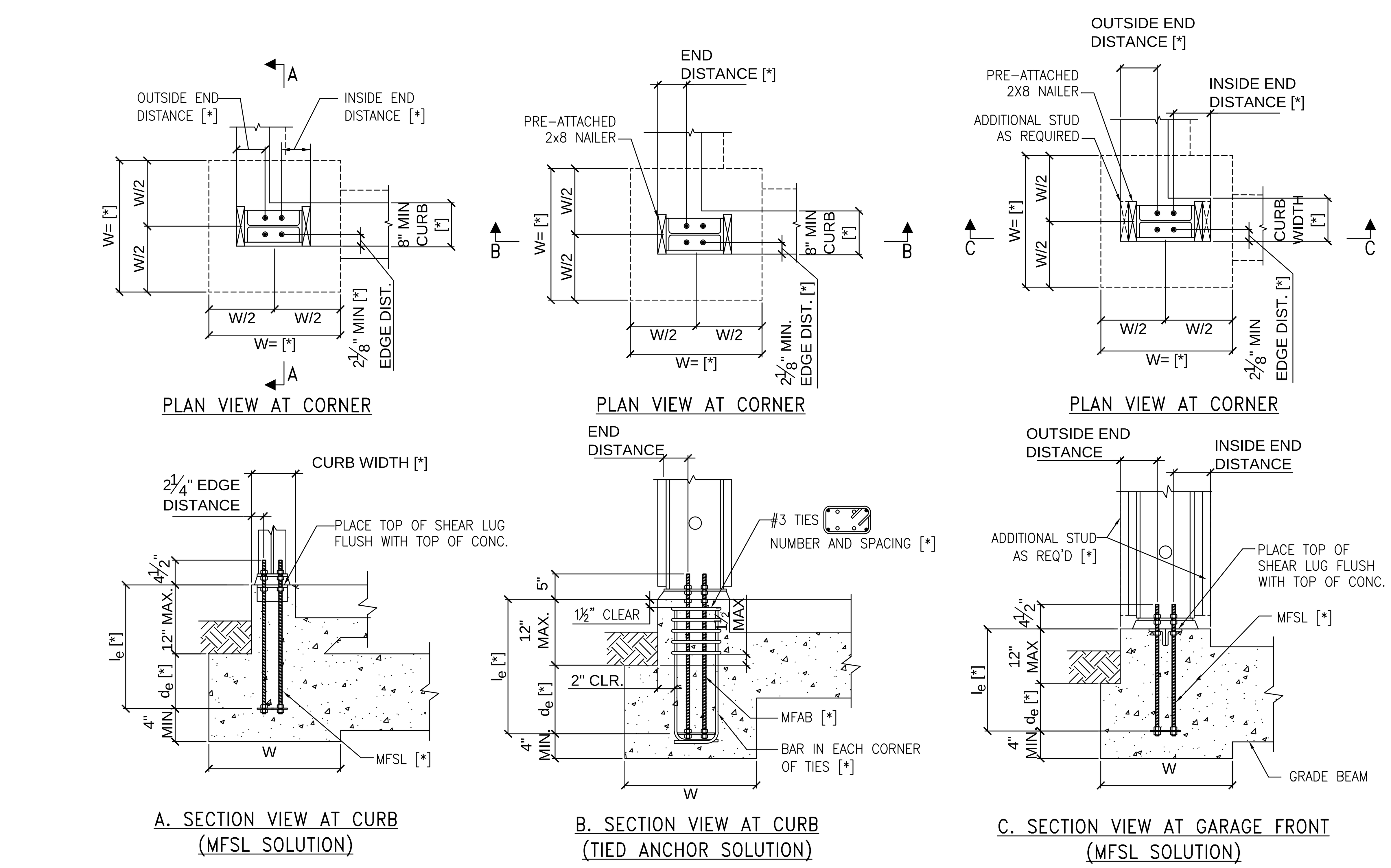


NOTES:
SEE NOTES ON 1/SMF2

STEMWALL FOUNDATION ANCHORAGE DETAILS 3

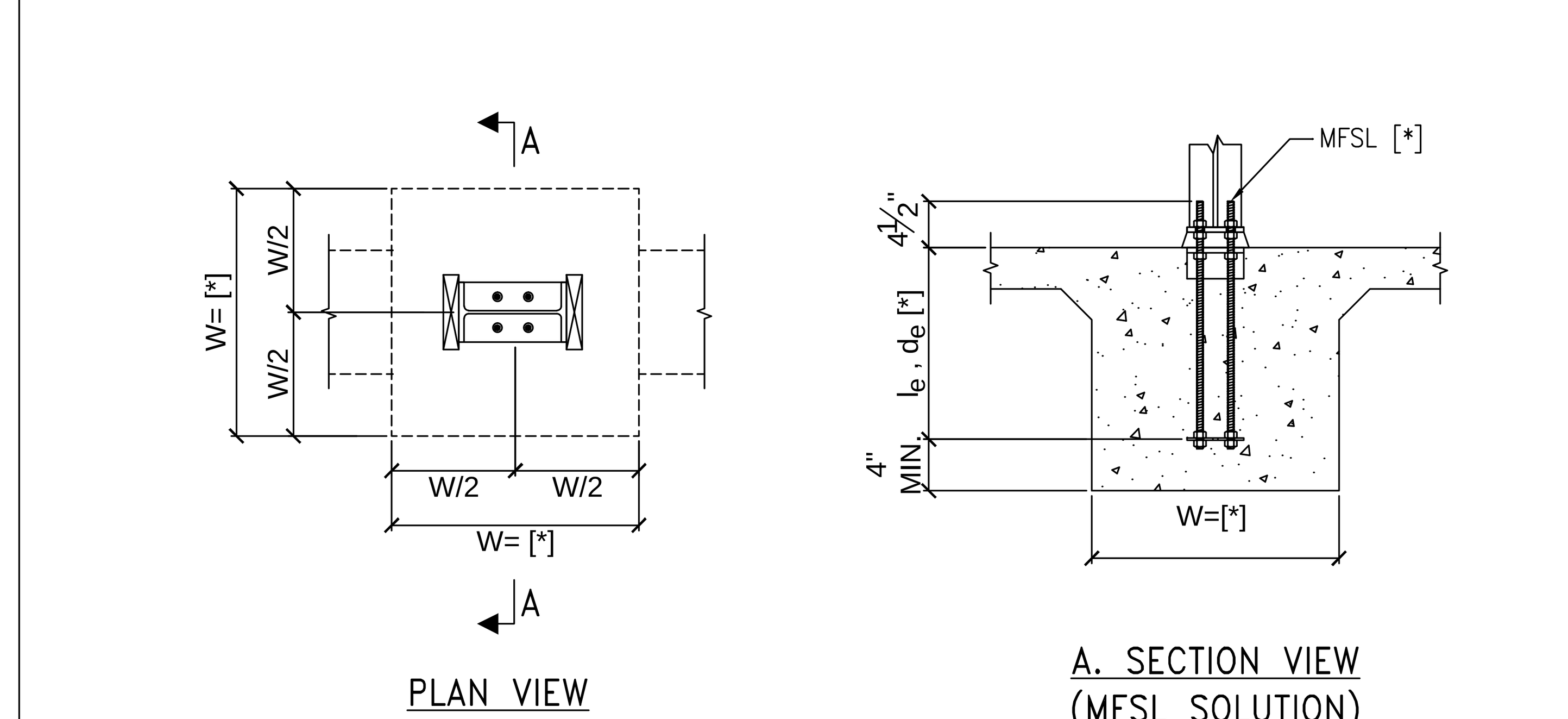


COL. HEIGHT ADJ. AT STEMWALL 6



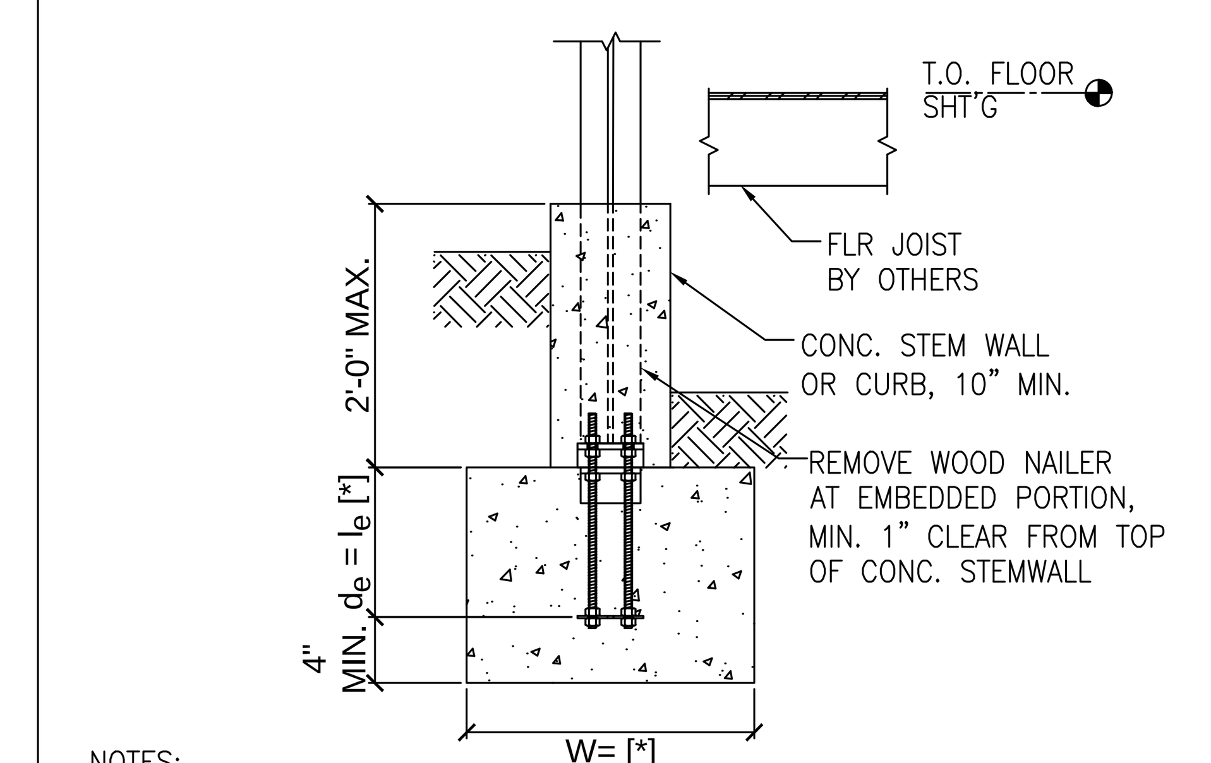
NOTES:
SEE NOTES ON 1/SMF2

CONCRETE CURB FOUNDATION ANCHORAGE DETAILS 2



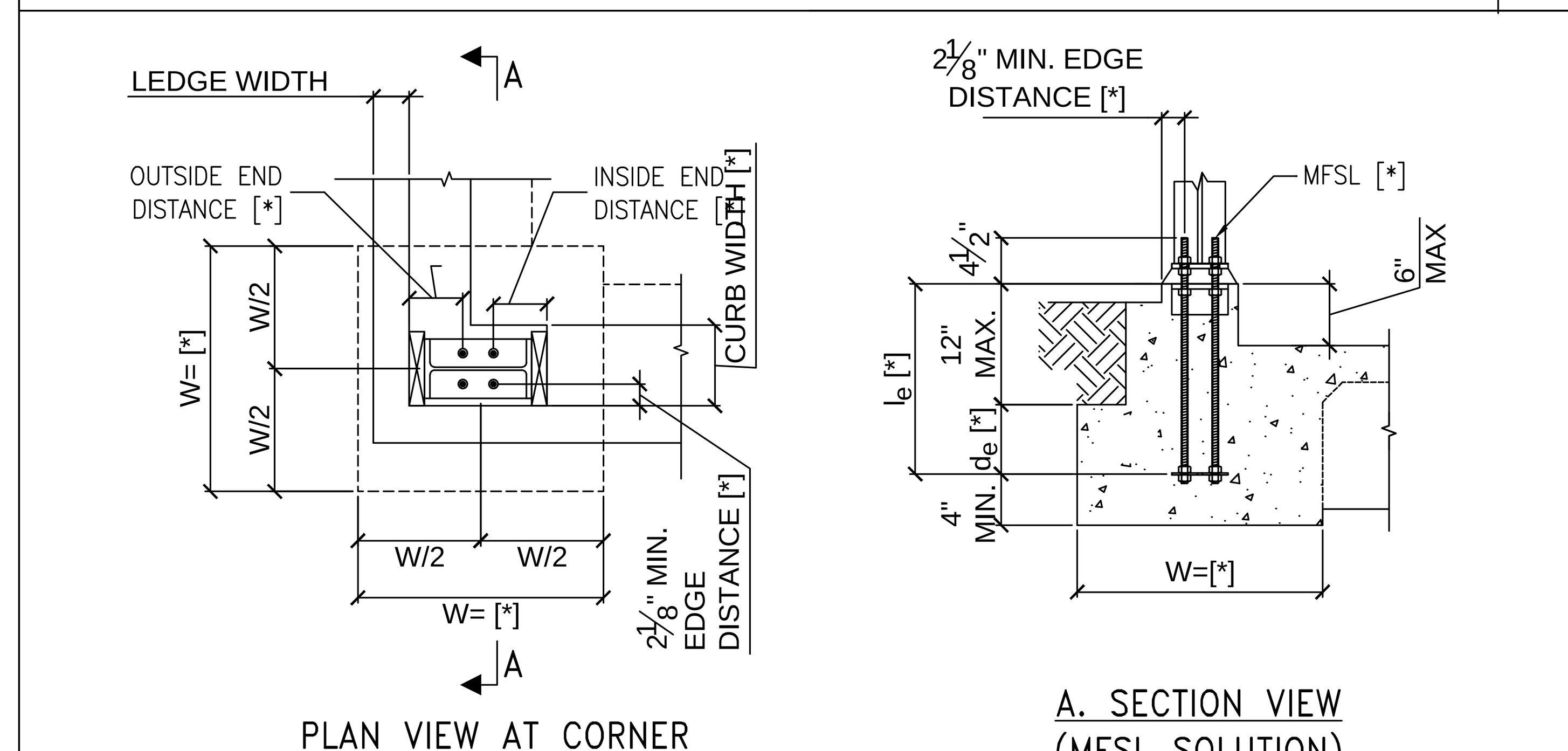
NOTES:
SEE NOTES ON 1/SMF2

INTERIOR FOUNDATION ANCHORAGE DETAILS 4



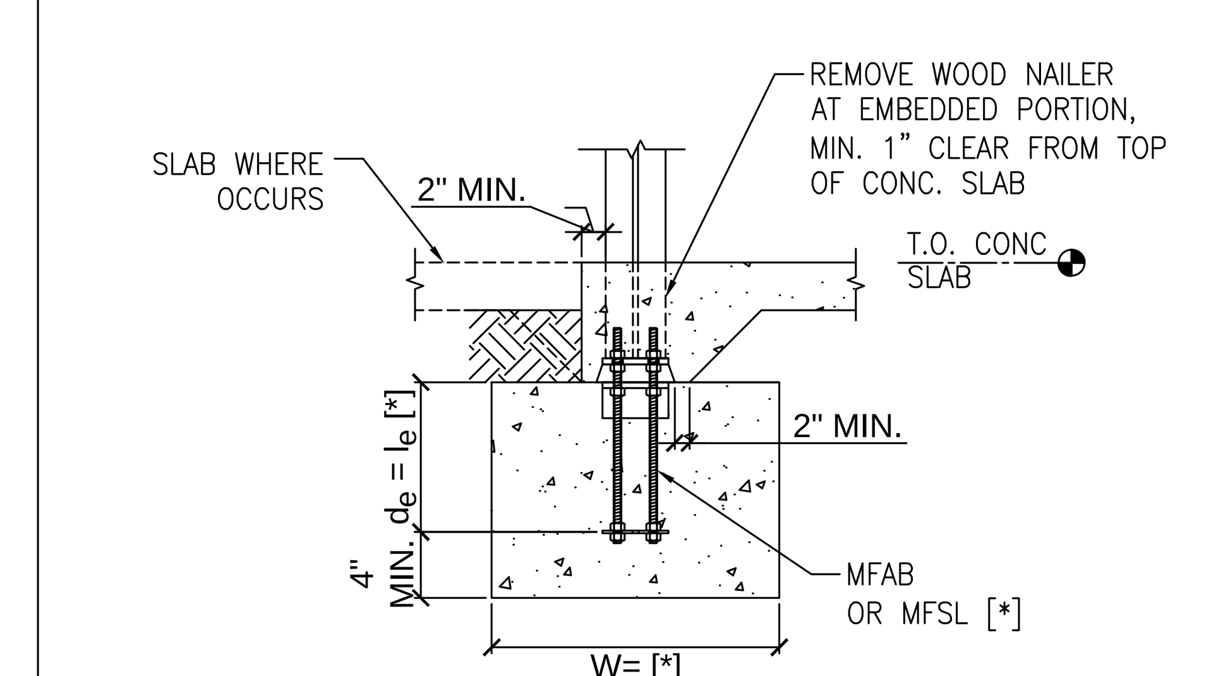
NOTES:
SEE NOTES ON 1/SMF2

DEPRESSED COL. AT STEMWALL 7



NOTES:
SEE NOTES ON 1/SMF2

BRICK LEDGE FOUNDATION ANCHORAGE DETAILS 5



NOTES:
SEE NOTES ON 1/SMF2

DEPRESSED COL. AT S.O.G. 8

REVISIONS

NO.	DATE	
1	6/25/19	ADDENDUM 2

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

SIMPSON STRONG-TIE, CO. INC.
5956 W. Las Positas Blvd.
Pleasanton, CA 94588
Tel: (800) 999-5099
Fax: (925) 847-15977
Web site: www.strongtie.com

SIMPSON Strong-Tie
THERE IS NO EQUAL

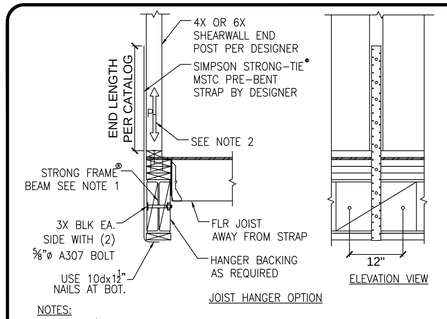
INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT

STRONG-FRAME®
SMF FOUNDATION DETAILS
ENGINEERED DESIGN
3429 CANYON CREST DRIVE

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Fire and Life Safety Division South

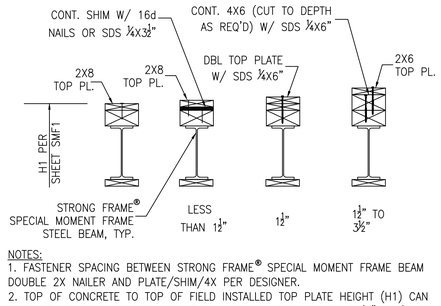
NAME: D.H.
DATE: 08/17/2018
SCALE: N.T.S.
SHEET:
SMF2
JOB NO. ES-183167

6-14-2019 ADDENDUM 1 SUBMITTAL SET



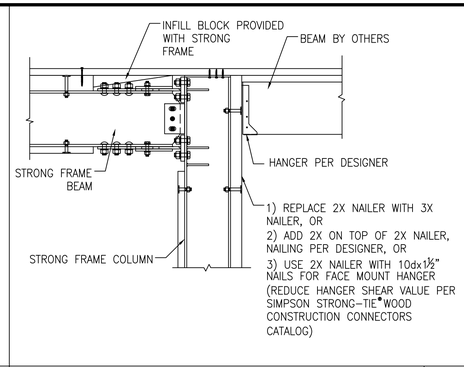
NOTES:
1. SEE 12/SMF3 FOR ALLOWABLE PENETRATION IN STEEL BEAM AND COLUMN
2. DESIGNER TO VERIFY TOTAL BEAM LOADING INCLUDING REACTION "P" DOES NOT EXCEED "Pmax" VALUE PER CATALOG

HOLDOWN POST TO SMF BEAM | 1

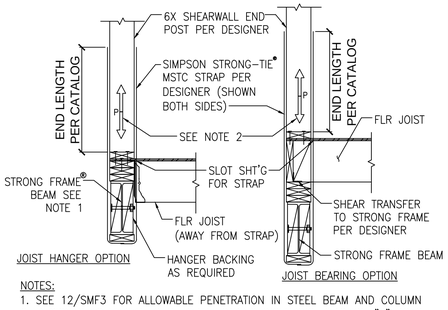


NOTES:
1. FASTENER SPACING BETWEEN STRONG FRAME® SPECIAL MOMENT FRAME BEAM DOUBLE 2X NAILER AND PLATE/SHIM/4X PER DESIGNER.
2. TOP OF CONCRETE TO TOP OF FIELD INSTALLED TOP PLATE HEIGHT (H1) CAN ALSO BE ADJUSTED BY THE USE OF THICKER NON-SHRINK GROUT (2" MAX), OR USE NEXT NOMINAL HEIGHT MODEL AND LOWER THE STEM WALL OR FOOTING (SEE SMF2 FOR DETAILS)

TOP OF FRAME ADJUSTMENT | 5

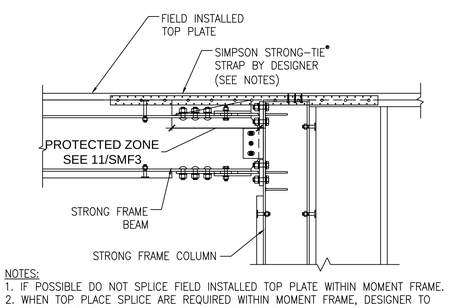


WOOD BM TO SMF COL. CONN. | 8



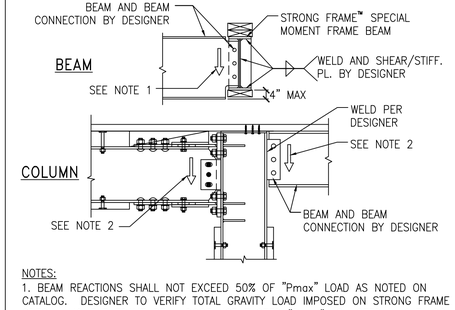
NOTES:
1. SEE 12/SMF3 FOR ALLOWABLE PENETRATION IN STEEL BEAM AND COLUMN
2. DESIGNER TO VERIFY TOTAL BEAM LOADING INCLUDING REACTION "P" DOES NOT EXCEED "Pmax" VALUE PER CATALOG
3. SEE 1/SMF3 FOR INFO NOT NOTED

6x HOLDOWN POST TO SMF BEAM | 2



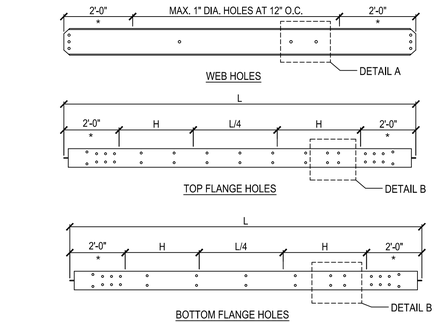
NOTES:
1. IF POSSIBLE DO NOT SPLICE FIELD INSTALLED TOP PLATE WITHIN MOMENT FRAME.
2. WHEN TOP PLACE SPLICE ARE REQUIRED WITHIN MOMENT FRAME, DESIGNER TO DESIGN/SPECIFY NO NAILING WITHIN PROTECTED ZONE.

TOP PLATE SPLICE DETAIL | 6

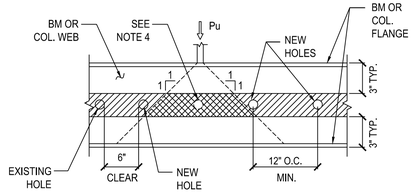


NOTES:
1. BEAM REACTIONS SHALL NOT EXCEED 50% OF "Pmax" LOAD AS NOTED ON CATALOG. DESIGNER TO VERIFY TOTAL GRAVITY LOAD IMPOSED ON STRONG FRAME SPECIAL MOMENT FRAME BEAM DOSE NOT EXCEED "Pmax" AS NOTED IN CATALOG.
2. SUMMATION OF BEAM REACTIONS (FRAMING INTO STEEL COLUMN) SHALL NOT EXCEED 50% OF "Pmax" LOADS NOTED IN CATALOG.

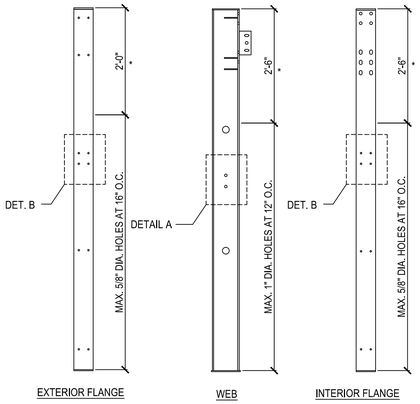
STEEL BEAM TO SMF BEAM/COL. | 9



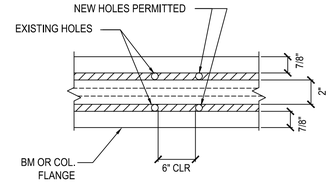
BEAM



A: WEB PENETRATION



COLUMN



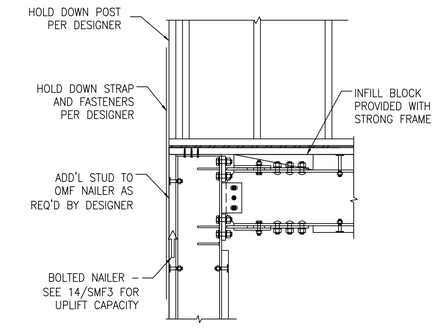
B: FLANGE PENETRATION

NOTES:
1. * DENOTES NO PENETRATIONS PERMITTED.
2. H DENOTES MAXIMUM 3/4" Ø HOLES AT 16" O.C. ARE PERMITTED.
3. LOCATE NEW HOLES 6" CLEAR OF EXISTING HOLES
4. PENETRATION PERMITTED UNDER Pu (MAXIMUM FACTORED POINT LOAD) REGION ONLY IF ALLOWABLE GRAVITY LOAD "Pmax" IS REDUCED BY 15%.
5. SEE 9/SMF3 FOR MAXIMUM COLUMN REACTIONS.
6. HOLES MAY BE BORED THROUGH WOOD NAILERS AT LOCATIONS CORRESPONDING TO AN ACCESS HOLE IN THE FLANGE.

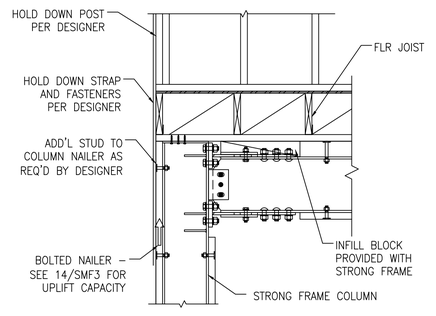
DENOTE REGIONS WHERE PENETRATIONS ARE PERMITTED

DENOTE BEAM WEB REGIONS WHERE PENETRATIONS ARE PERMITTED IF "Pmax" IS REDUCED PER NOTE 4.

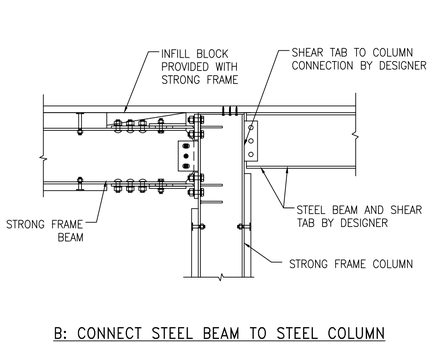
ALLOWABLE BEAM AND COLUMN PENETRATIONS | 12



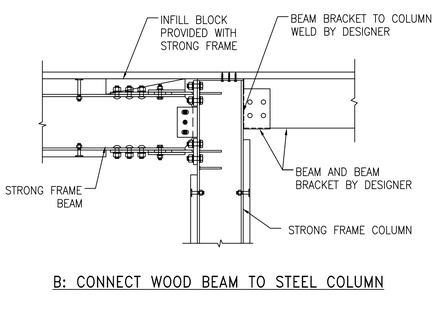
HOLDOWN POST TO SMF COL. | 3



HOLDOWN POST TO SMF COL. | 4

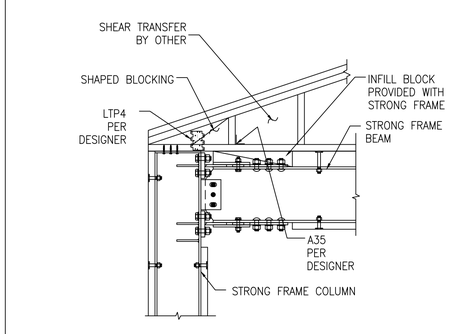


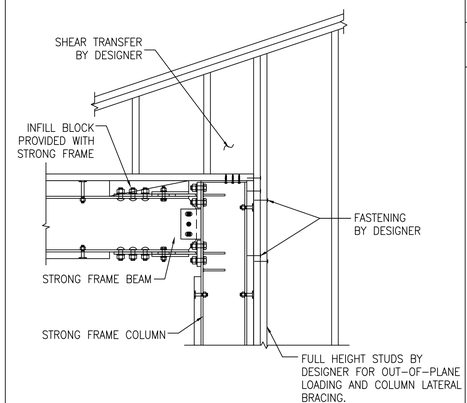
B: CONNECT STEEL BEAM TO STEEL COLUMN



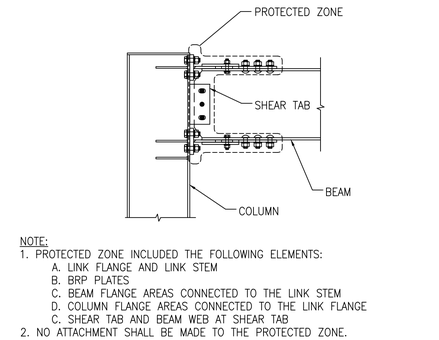
B: CONNECT WOOD BEAM TO STEEL COLUMN

COLLECTOR DETAILS | 7



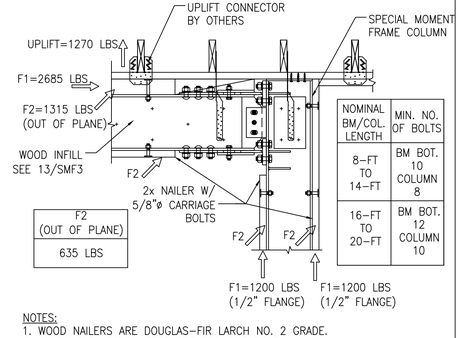


RAKE WALL DETAILS | 10



NOTE:
1. PROTECTED ZONE INCLUDED THE FOLLOWING ELEMENTS:
   A. LINK FLANGE AND LINK STEM
   B. BRP PLATES
   C. BEAM FLANGE AREAS CONNECTED TO THE LINK STEM
   D. COLUMN FLANGE AREAS CONNECTED TO THE LINK FLANGE
   C. SHEAR TAB AND BEAM WEB AT SHEAR TAB
2. NO ATTACHMENT SHALL BE MADE TO THE PROTECTED ZONE.

PROTECTED ZONE | 11

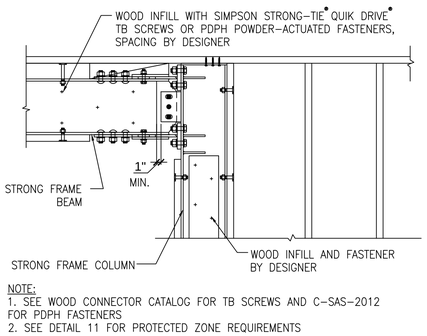


NOMINAL BM/COL. LENGTH	MIN. NO. OF BOLTS
8-FT TO 14-FT	BM BOT. 10 COLUMN 8
16-FT TO 20-FT	BM BOT. 12 COLUMN 10

F2 (OUT OF PLANE)
635 LBS

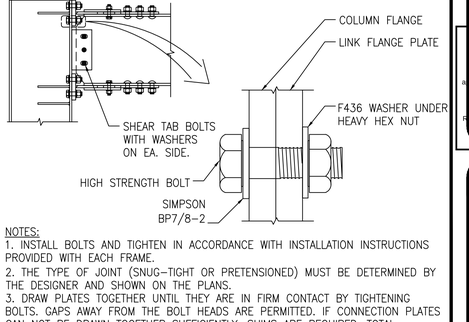
NOTES:
1. WOOD NAILERS ARE DOUGLAS-FIR LARCH NO. 2 GRADE.
2. ALLOWABLE LOADS LISTED ARE FOR ONE BOLT.

NAILER BOLT ALLOWABLE LOADS | 14



NOTE:
1. SEE WOOD CONNECTOR CATALOG FOR TB SCREWS AND C-SAS-2012 FOR PDPH FASTENERS
2. SEE DETAIL 11 FOR PROTECTED ZONE REQUIREMENTS

WOOD INFILLS | 13



NOTES:
1. INSTALL BOLTS AND TIGHTEN IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS PROVIDED WITH EACH FRAME.
2. THE TYPE OF JOINT (SNUG-TIGHT OR PRETENSIONED) MUST BE DETERMINED BY THE DESIGNER AND SHOWN ON THE PLANS.
3. DRAW PLATES TOGETHER UNTIL THEY ARE IN FIRM CONTACT BY TIGHTENING BOLTS. GAPS AWAY FROM THE BOLT HEADS ARE PERMITTED. IF CONNECTION PLATES CAN NOT BE DRAWN TOGETHER SUFFICIENTLY, SHIMS ARE REQUIRED. TOTAL THICKNESS OF SHIMS UNDER A BOLT HEAD MUST NOT EXCEED 1/4".

BEAM-TO-COLUMN CONNECTION | 15

NO.	DATE	REVISIONS
1	6/28/19	ADDENDUM 2

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

SIMPSON STRONG-TIE, CO. INC.
5956 W. Las Positas Blvd.
Pleasanton, CA 94588
tel: (800) 999-5099
fax: (925) 847-15977
Web site: www.strongtie.com

SIMPSON Strong-Tie
THERE IS NO EQUAL

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
INSPECTIONS SHALL BE REQUESTED USING THE CORE SYSTEM

STRONG-FRAME®

SMF INSTALLATION DETAILS
ENGINEERED DESIGN
3429 CANYON CREST DRIVE

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Fire and Life Safety Division Supervisor

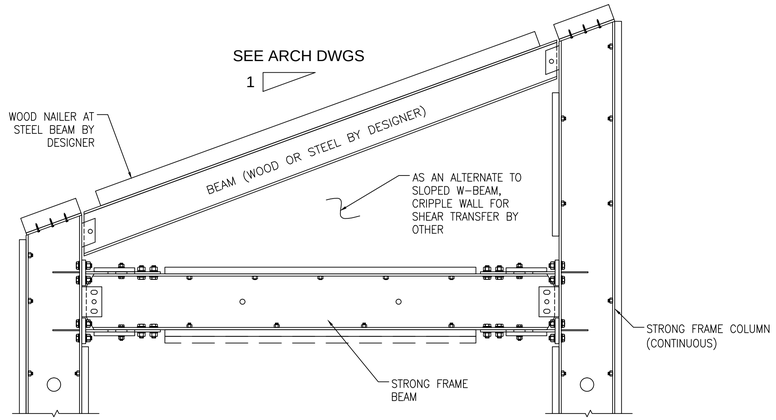
NAME: D.H.
DATE: 08/17/2018
SCALE: N.T.S.
SHEET:

SMF3

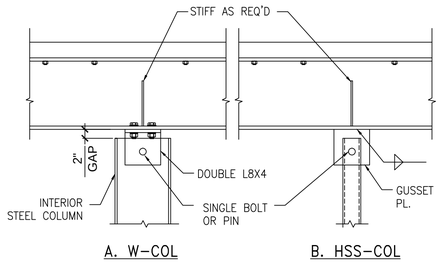
JOB NO.
ES-183167

6-14-2019 ADDENDUM 1 SUBMITTAL SET

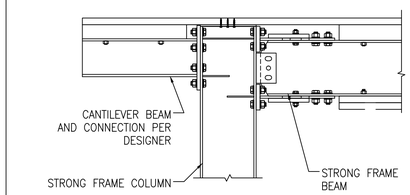
07/02/2019



SST SMF WITH SLOPED ROOF BEAM — 1

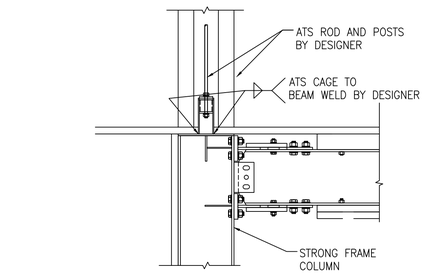


INTERIOR PINNED BEARING COL. — 2



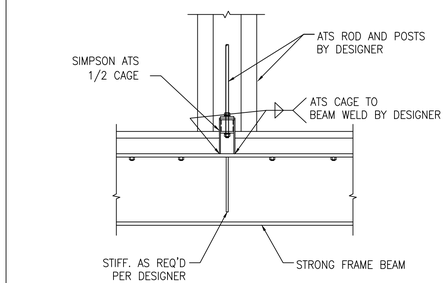
NOTE:
1. COORDINATE WITH SIMPSON STRONG-TIE IF ADDITIONAL HARDWARE NEEDS TO BE WELDED TO THE SIMPSON STRONG FRAME
2. SEE DETAIL 11/SMF3 FOR PROTECTED ZONE REQUIREMENTS.

CANTILEVER BEAM TO COLUMN — 5



NOTE:
1. COORDINATE WITH SIMPSON STRONG-TIE IF ADDITIONAL HARDWARE NEEDS TO BE WELDED TO THE SIMPSON STRONG FRAME.
2. SEE DETAIL 11/SMF3 FOR PROTECTED ZONE REQUIREMENTS.

ATS ROD//HD ON STEEL COLUMN — 3

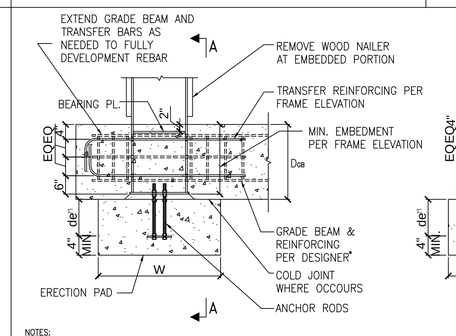


NOTE:
1. COORDINATE WITH SIMPSON STRONG-TIE IF ADDITIONAL HARDWARE NEEDS TO BE WELDED TO THE SIMPSON STRONG FRAME

ATS ROD ON STEEL BEAM — 6

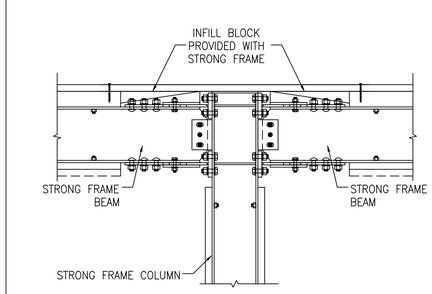
NOTES:
1. CONTACT SIMPSON STRONG-TIE FOR AVAILABILITY OF SINGLE BOLT PINNED BASE CONNECTION.

SINGLE BOLT PINNED BASE DETAIL — 4



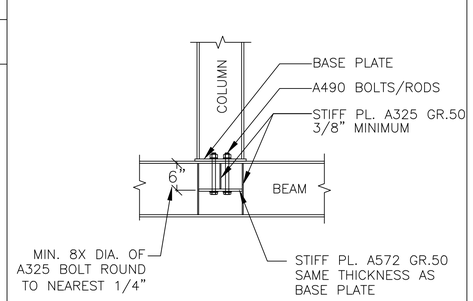
NOTES:
1. SEE NOTES ON 1/SMF2
2. ACTUAL FOOTING/GRADE BEAM SIZE, REINFORCING, AND DETAILING PER DESIGNER

FIXED BASE CONNECTION — 11

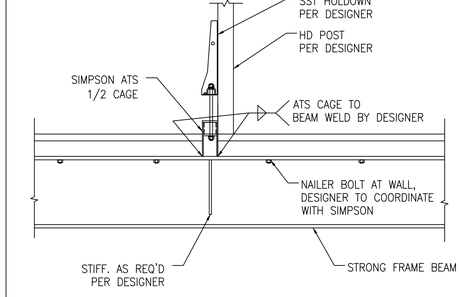


NOTE:
1. FOR FLOOR JOIST TO BEAM CONNECTION, SEE 1/SMF3 OR 4/SMF3

INT. COL WITH BEAMS ON EA. SIDE — 8

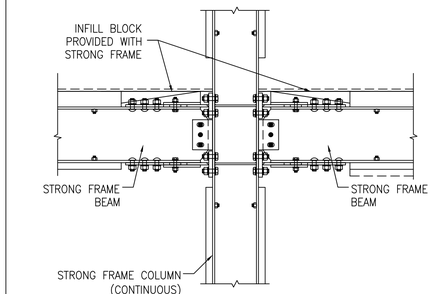


SMF COLUMN ON STEEL BEAM — 9



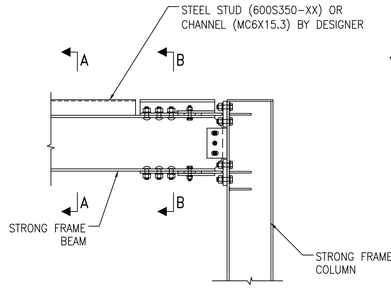
NOTE:
1. COORDINATE WITH SIMPSON STRONG-TIE IF ADDITIONAL HARDWARE NEEDS TO BE WELDED TO THE SIMPSON STRONG FRAME

SHEAR WALL HD ON STEEL BEAM — 10

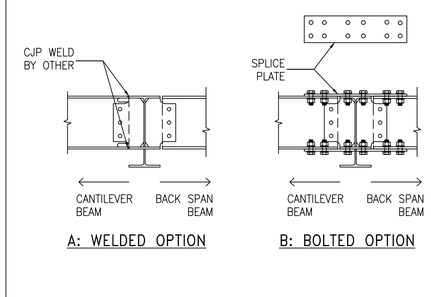


NOTE:
1. FOR FLOOR JOIST TO BEAM CONNECTION, SEE 1/SMF3 OR 4/SMF3

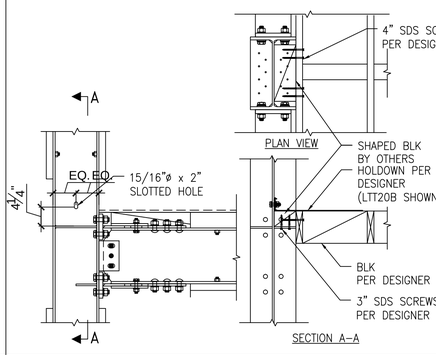
MULTI-STORY COLUMNS (2 BEAMS) — 12



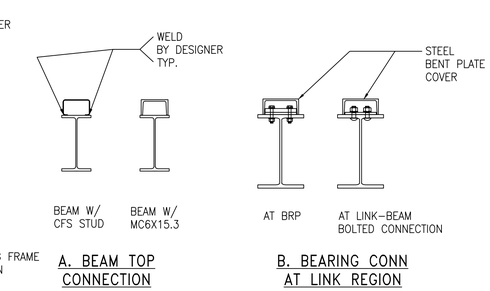
SMF BEAM ATTACHEMENT FOR COLD-FORMED STEEL CONSTRUCTION — 16



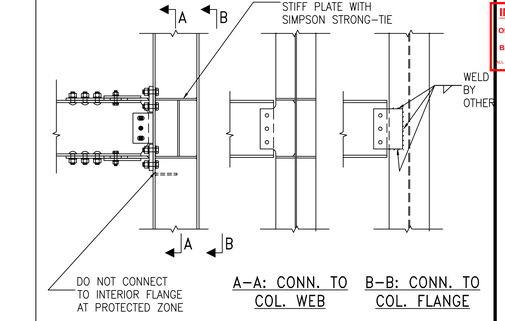
CANTILEVER STEEL BEAM CON. — 13



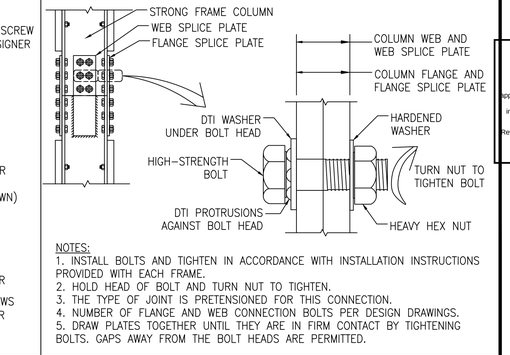
COL. BRACING AT FLOOR LEVEL — 14



MULTI-STORY COLUMNS (1-BEAM) — 15



BEAM CONNECTION TO COLUMN — 17



NOTES:
1. INSTALL BOLTS AND TIGHTEN IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS PROVIDED WITH EACH FRAME.
2. HOLD HEAD OF BOLT AND TURN NUT TO TIGHTEN.
3. THE TYPE OF JOINT IS PRETENSIONED FOR THIS CONNECTION.
4. NUMBER OF FLANGE AND WEB CONNECTION BOLTS PER DESIGN DRAWINGS.
5. DRAW PLATES TOGETHER UNTIL THEY ARE IN FIRM CONTACT BY TIGHTENING BOLTS. GAPS AWAY FROM THE BOLT HEADS ARE PERMITTED.

BOLTED COLUMN SPLICE — 18

NO.	DATE	REVISIONS
2	6/28/19	ADDENDUM 2

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

SIMPSON STRONG-TIE, CO. INC.
5956 W. Las Positas Blvd.
Pleasanton, CA 94588
Tel: (800) 999-5099
Fax: (925) 847-15977
Web site: www.strongtie.com
SIMPSON Strong-Tie
THERE IS NO EQUAL

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CRO: Bob S. Skilmer
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE ACCELA SYSTEM

STRONG-FRAME®

SMF INSTALLATION DETAILS
ENGINEERED DESIGN
3429 CANYON CREST DRIVE

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Fire and Life Safety Division South

NAME: D.H.
DATE: 08/17/2018
SCALE: N.T.S.
SHEET:

SMF4

JOB NO.
ES-183167

6-14-2019 ADDENDUM 1 SUBMITTAL SET

07/02/2019

GENERAL ELECTRICAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST CALIFORNIA CODE OF REGULATIONS (CCR), NATIONAL ELECTRICAL CODE EDITION AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
2. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL AND CEILING OUTLET BOXES FOR DETECTORS, HORN/STROBES, FIRE ALARM PULL STATIONS AND OTHER DEVICES WITH EXISTING CABINETS, FURNITURE, EQUIPMENT ETC., TO AVOID CONFLICT.
4. FURNISH PULL WIRE IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
5. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT. PULL BOXES SHALL BE ACCESSIBLE. THE SIZE OF PULL BOX SHALL COMPLY WITH N.E.C. REQUIREMENTS.
6. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT (UP TO 16') SHALL BE WEATHERPROOF TYPE, NEMA 3R.
7. ALL WIRING IN FIRE RATED WALL IS TO BE INSTALLED IN A METALLIC CONDUIT SYSTEM.
8. ALL ELECTRIC MATERIAL SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
9. (SECTION 16121-2.01-A11A2) CONDUCTORS SHALL HAVE UNDERWRITER'S LABORATORIES, INC.(UL) LISTED, 600 VOLT INSULATION OF TYPE SPECIFIED BELOW OR ELSEWHERE IN THE SPECIFICATIONS. CONDUCTORS SHALL BE COPPER.
10. WIRING METHOD SHALL BE WIREMOLD AND EMT ABOVE GROUND (AS SHOWN ON PLAN DRAWINGS) AND SCHEDULE-40 PVC FOR UNDERGROUND INSTALLATION UNLESS NOTED OTHERWISE
11. NO SCREW TIGHT FITTINGS SHALL BE ALLOWED. ALL CONDUIT FITTINGS SHALL BE COMPRESSION TYPE.

ABBREVIATIONS

A	AMPERE	MH	MOUNTING HEIGHT
AF	AMPERE FRAME RATING	MIN	MINIMUM
AFF	ABOVE FINISHED FLOOR	MCC	MOTOR CONTROL CENTER
AIC	AMPERE INTERRUPTING CAPACITY	MH	MANHOLE
AFG	ABOVE FINISHED GRADE	MAX	MAXIMUM
ASSY	ASSEMBLY	N, (N)	NOTIFICATION CIRCUIT
AT	AMPERE TRIP RATING	NC	NORMALLY CLOSED
AWG	AMERICAN WIRE GAUGE	NEC	NATIONAL ELECTRICAL CODE
BKBD	BACKBOARD	NEMA	NATIONAL ELECTRICAL
BLDG	BUILDING		MANUFACTURER'S ASSOCIATION
BKR	BREAKER	NF	NON-FUSED
C	CONDUIT	NIC	NOT IN CONTRACT
CAB	CABINET	NO	NUMBER, NORMALLY OPEN
CB	CIRCUIT BREAKER	NTS	NOT TO SCALE
CKT	CIRCUIT	OC	ON CENTER
CFSD	COMBINATION FIRE SMOKE DAMPER	OD	OUTSIDE DIAMETER
CO	CONDUIT ONLY	P	POLE
CT	CURRENT TRANSFORMER	PB	PULL BOX
CU	COPPER	PF	POWER FACTOR
℄	CENTERLINE	PNL	PANEL
DISC	DISCONNECT	POC	POINT OF CONNECTION
DN	DOWN	PWR	POWER
DWG	DRAWING	PVC	POLYVINYL CHLORIDE
EA	EACH	QTY	QUANTITY
EC	ELECTRICAL CONTRACTOR	REQD	REQUIRED
EQUIP	EQUIPMENT	REQMT	REQUIREMENT
EMERG	EMERGENCY	RGS	RIGID GALVANIZED STEEL
EXIST, (E)	EXISTING	RM	ROOM
F	FUSE	SHT	SHEET
FA	FIRE ALARM	SPEC	SPECIFICATIONS
FACP	FIRE ALARM CONTROL PANEL	SW	SWITCH
FF	FINISHED FLOOR	SWBD	SWITCHBOARD
FG	FINISHED GRADE	TEL	TELEPHONE
FLA	FULL LOAD CURRENT	TERM	TERMINAL
GEN	GENERATOR	TYP	TYPICAL
GFI	GROUND FAULT INTERRUPTER	UL	UNDERWRITERS LABORATORY
GND	GROUND	UPS	UNINTERRUPTIBLE POWER SUPPLY
HP	HORSE POWER	UON	UNLESS OTHERWISE NOTED
HT	HEIGHT	V	VOLT, VOLTAGE
HV	HIGH VOLTAGE	VA	VOLT-AMPERE
J-BOX	JUNCTION BOX	W	WATT
KCMIL	THOUSAND CIRCULAR MILS	WP	WEATHERPROOF
KW	KILOWATT	WW	WIREWAY
KV	KILO VOLT	4W	FOUR-WIRE
KVA	KILO VOLT-AMPERE	3W	THREE-WIRE
LCL	LONG CONTINUOUS LOAD	4S	JUNCTION BOX
LTG	LIGHTING		(4" SQUARED X2 1/8" DEEP)
LV	LOW VOLTAGE	Ø	DIAMETER, PHASE
MFR	MANUFACTURER	#	NUMBER
MAX	MAXIMUM	°C	DEGREE CELSIUS

APPLICABLE CODES

1. 2016 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2. 2016 CALIFORNIA BUILDING CODE (CBC),PART 2, TITLE 24 C.C.R. (UBC WITH AMENDMENTS)
3. 2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (NEC WITH AMENDMENTS)
4. 2016 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (UMC WITH AMENDMENTS)
5. 2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (UPC WITH AMENDMENTS)
6. 2016 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (UFC WITH AMENDMENTS)
7. 2016 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
8. 2016 TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
9. NFPA 72 NATIONAL FIRE ALARM CODE (CALIFORNIA AMENDED) 2016 EDITION.

LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
	ABOVE CEILING, CONCEALED, JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 370-b(a), 4" SQUARE DEEP, WITH PLASTER RING.
	RECESSED WALL MOUNTED JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 370-b(a), 4" SQUARE DEEP, WITH PLASTER RING.
OR	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (SURFACE MOUNTED)
	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (RECESSED MOUNTED)
	MAIN SWITCHBOARD, POWER OR LIGHT, FLOOR STANDING ENCLOSURE, (SEE SINGLE LINE DIAGRAM AND LOAD SUMMARY)
	CONDUIT TURNED DOWN
	CONDUIT TURNED UP
	CONDUIT STUBBED AND CAPPED
	3/4" (MIN.) RACEWAY CONCEALED IN WALLS OR ABOVE CEILING
	CONDUIT CONCEALED IN OR UNDER FLOOR, COORDINATE WITH G.C.: OR, BURIAL CONDUIT UNDERGROUND IN SCHEDULE - 40 PVC UNLESS NOTED OTHERWISE. VERIFY DEPTH AND TRENCHING WITH G.C.
(E)	EXISTING CONDUIT AND WIRING TO REMAIN
(R)	PULL-OUT WIRES AND ABANDON CONDUIT. CUT AND CAPPED FLUSH WALL OR SLAB.
E	EXISTING CONDUIT TO REMAIN
R	EXISTING CONDUIT AND WIRE TO BE REMOVED
(E)	EXISTING DEVICE TO REMAIN
(R)	REMOVE EXISTING DEVICE AND ASSOCIATED CONDUIT AND WIRE
(RL)	REMOVE EXISTING DEVICE AND RELOCATE AS SHOWN ON PLAN
(NL)	NEW LOCATION OF RELOCATED DEVICE
A–1,3	HOMERUN TO CIRCUITS #1 AND #3 IN PANEL "A". (CROSSMARKS INDICATE NUMBER OF PHASES AND NEUTRAL. PROVIDE GROUND WIRE.)
	EXISTING (DASH INDICATES) ELECTRICAL EQUIPMENT
	TELEPHONE BACKBOARD 2'X4'X3/4" PLYWOOD. PROVIDE 2" CONDUIT TO TELEPHONE POC.

NOTE TO CONTRACTOR

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

BUILDING ANALYSIS

BUILDING ADDRESS :	3429 CANYON CREST DRIVE RIVERSIDE, CA 92507
OCCUPANCY GROUP :	GROUP R (APARTMENT)
TYPE OF CONSTRUCTION :	WOOD
NUMBER OF STORIES :	TWO
EXISTING BUILDING S.F. :	NET 142,000 S.F.

SEQUENCE OF OPERATIONS

System Outputs

Control Unit Annunciation — Notification — Required Fire Safety Control

- A: Activate control panel trouble buzzer and LED
- B: Activate control panel supervisory buzzer and LED
- C: Activate control panel alarm buzzer and LED
- E: Annunciate at remote fire alarm annunciator
- G: Send signal to central station (24hr attended location)
- H: Activate all audible/visual devices throughout building
- J: Activate local sounder base
- K: Notify fire department via central station

System Inputs

	System Inputs	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	
1																													1
2	(1) Area smoke/heat detector		●			●		●			●																		2
3	(2) Area smoke/heat detectors activated simultaneously			●		●		●	●		●	●																	3
4																													4
5																													5
6																													6
7																													7
8	Phone line communication fault	●				●		●																					8
9	FACP 120vac power failure	●				●		●																					9
10	Fire alarm system device wiring trouble/fault	●				●		●																					10
11	Open circuit	●				●		●																					11
12	Ground fault	●				●		●																					12
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	

FIRE ALARM SYSTEM EQUIPMENT LIST

SYMBOL	MFG.	PART NO.	DESCRIPTION	REMARKS	CSFM LISTING
FACP	SIMPLEX	S4100-0045	ADDRESSABLE FIRE ALARM CONTROL PANEL W/ KEYPAD & 160 CHARACTER LCD DISPLAY, DUAL DIGITAL COMMUNICATOR	PROVIDE 30AH BATTERIES & CHARGER(3) MOTHERBOARDS(2 SLC LOOPS PER BOARD) AND AMPLIFICATION MODULES AS NEEDED.	7165-0026:0251
COMM	HONEYWELL	IPGSM4G	DUAL PATH FIRE ALARM COMMUNICATOR	PROVIDE 7AH BATTERY	7300-1645:0199
FATC			FIRE ALARM TERMINAL CABINET, NEMA 1 ENCLOSURE 24"X24"X6", W/ MOUNTING PLATE AND TERMINAL BLOCKS	SURFACE WALL MOUNT	
RPS	ALTRONIX	AL1002UL-ADA	REMOTE POWER SUPPLY WITH (4) NOTIFICATION APPLIANCE CIRCUITS.	PROVIDE 7AH BATTERIES	7315-1335:0110
	SIMPLEX	4098-9402	135° FIXED WITH RATE OF RISE ADDRESSABLE HEAT DETECTOR WITH 4 INCH MOUNTING BASE		7272-0026:0200
	SIMPLEX	4098-9754	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR WITH 4 INCH MOUNTING BASE		7272-0026:0218
	SYSTEM SENSOR	P2W	MULTI-CANDELA HORN/STROBE	WALL MOUNT, WHITE	7125-1653:0188
	SYSTEM SENSOR	SW	MULTI-CANDELA STROBE	WALL MOUNT, WHITE	7125-1653:0186

FIRE ALARM SYSTEM WORK SCOPE

2 PROVIDE A COMPLETE ADDRESSABLE FIRE ALARM SYSTEM FOR THE ENTIRE UNIVERSITY APARTMENT COMPLEX. SYSTEM SHALL PROVIDE FULL COVERAGE IN COMPLIANCE WITH CURRENT BUILDING AND FIRE CODES, ADA REQUIREMENTS AND UCR STANDARDS AND REQUIREMENTS. NEW SYSTEM SHALL BE APPROVED BY UCR CAMPUS FIRE MARSHAL. PROVIDE SHOP DRAWINGS TO ENGINEER OF RECORD FOR REVIEW. INSTALLATION WORK SCOPE INCLUDES FOLLOWING (BUT NOT LIMITED TO):

1. PROVIDE AND INSTALL A NEW ADDRESSABLE FIRE ALARM CONTROL PANEL FIRE AT THE EXISTING RECREATION BUILDING (BUILDING 20).
2. (2) PROVIDE AND INSTALL NEW FIRE ALARM DEVICES AT (3) APARTMENT BUILDINGS AND THE RECREATION BUILDING. PROVIDE AND INSTALL ALL NECESSARY WIRING INSIDE EACH BUILDING. PROVIDE POWER SUPPLY UNITS AT EACH BUILDING FOR THE NOTIFICATION DEVICES. ENSURE FIRE ALARM PANEL HAS ADEQUATE AMPLIFICATION POWER FOR SPEAKERS AS SHOWN ON FLOOR PLANS. CONNECT 120VAC FROM EXISTING PANELBOARDS TO THE POWER SUPPLY UNITS AT EACH BUILDING.
3. INSTALL AN UNDERGROUND CONDUIT SYSTEM THROUGHT-OUT THE APARTMENT COMPLEX WITH PULL BOXES FOR THE NEW FIRE ALARM SYSTEM WIRING.
4. INSTALL ALL HOMERUN WIRING FROM EACH BUILDING TO THE NEW FIRE ALARM CONTROL PANEL. PROGRAM ALL ADDRESSABLE DEVICES AT THE NEW FIRE ALARM CONTROL PANEL IN ACCORDANCE WITH THE BUILDING'S AREA DESIGNATIONS WITH FLOOR AND UNIT IDENTIFICATIONS.
5. PERFORM ALL NECESSARY TESTS AND ENSURE ALL EQUIPMENT IS WORKING PROPERLY.
6. PERFORM ALL REQUIRED FIRE INSPECTIONS BY THE CAMPUS FIRE MARSHALL AND OBTAIN FINAL APPROVAL.
7. PROVIDE TRAINING IF NEEDED TO UCR PERSONNEL TO OPERATE AND MAINTAIN THE NEW FIRE ALARM SYSTEM.

FIRE ALARM NOTES

1. THE FIRE ALARM SYSTEM AND EQUIPMENT INDICATED ON THESE DRAWINGS SHALL BE INSPECTED AND APPROVED BY UCR CAMPUS FIRE MARSHALL AND SHALL BE INSTALLED AS DESCRIBED ON THESE DRAWINGS AND AS NOTED IN THE SPECIFICATIONS PER CFC 901.5. ANY CHANGES TO THESE PLANS, SUCH AS DELETION, RELOCATION, ADDING OF DEVICES OR EQUIPMENT SUBSTITUTIONS SHALL BE RESUBMITTED TO THE CAMPUS FIRE MARSHALL FOR APPROVAL AT NO ADDITIONAL COST TO THE OWNER.
2. ALL WIRING AND INITIATING DEVICES SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION (FIRE ALARM CONTROL PANEL TO SUPERVISE ALL CIRCUITS AND INITIATING DEVICES).
3. WIRING SHALL NOT BE LOOPED THROUGH DEVICES; WIRE MUST BE CUT FOR IN AND FOR OUT.
4. EXPOSED CONDUIT BELOW CEILING SHALL NOT BE ACCEPTED INSIDE APARTMENT UNITS. FIRST FLOOR INTERIOR WIRING SHALL BE IN WALL MOUNT METAL WIREMOLD RACEWAY.
5. ALL TERMINATIONS IN JUNCTION BOXES, PULL BOXES AND TERMINAL CABINETS SHALL BE ON BOX MOUNTED TERMINAL BLOCKS. DO NOT USE WIRE NUTS FOR SPLICING. DO NOT SPLICE WIRES IN ANY BOXES.
6. ALL RACEWAY SIZES INDICATED IN DRAWINGS ARE MINIMUM. CONTRACTOR TO ADJUST SIZE FOR FIELD CONDITIONS BUT CONDUITS SHALL NOT BE SMALLER THAN 3/4 INCH.
7. ALL FIRE ALARM WIRING MUST TEST FREE OF OPENS, SHORTS AND GROUNDS.
8. FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE ONLY. CONTRACTOR TO ROUTE WIRING AND RACEWAY AS FIELD CONDITIONS INDICATE.
9. RACEWAY AND JUNCTION/BACK BOXES ARE NOT TO BE USED FOR UNRELATED WIRING.
10. THE SYSTEM SHALL CONFORM TO TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT.
11. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF, AND IN A MANNER ACCEPTABLE, TO THE OWNER AND UCR CAMPUS MARSHALL.
12. CONDUCTOR LENGTHS AND DEVICE QUANTITIES ARE SHOWN SOLELY FOR CALCULATION PURPOSES ONLY, AND SHALL NOT BE USED FOR BID TAKE-OFF.
13. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF CALIFORNIA ELECTRICAL CODE. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND CUTSHEETS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY UCR CAMPUS FIRE MARSHALL. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE THE CAMPUS FIRE MARSHALL.
14. PENETRATIONS OF PIPES, CONDUITS, ETC., IN FIRE RATED WALLS REQUIRING PROTECTED OPENINGS SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A TEST ASSEMBLY ACCEPTABLE TO THE CAMPUS FIRE MARSHALL.
15. ALL FIRE ALARM AND COMMUNICATIONS WIRES AND CABLES SHALL BE ONE CONTINUOUS LENGTH FROM A BUILDING TERMINAL CABINET TO ANOTHER BUILDING TERMINAL CABINET OR JUNCTION BOX. ABSOLUTELY NO SUBGRADE SPLICES WILL BE PERMITTED. PROVIDE TERMINAL BLOCKS WITH MOUNTING IN TERMINAL CABINETS ONLY AS REQUIRED.
17. THE FIRE ALARM DEVICE SUPPLIER SHALL FURNISH ALL SURFACE MOUNT ENCLOSURES FOR PULL STATIONS AND SKIRTS FOR ALL VISUAL AND AUDIO VISUAL DEVICES TO CONCEAL 4S BACK BOXES.
18. AFTER THE SYSTEM IS COMPLETED, ALL ADDRESSABLE DEVICES SHALL BE PROGRAMMED AT THE FIRE ALARM CONTROL ACCORDING TO THE ACTUAL APARTMENT UNIT NUMBER OR LOCATION DESCRIPTIONS AS INDICATED BY THE UNIVERSITY.
19. POWER SERVICES SHALL BE ON A DEDICATED BRANCH CIRCUIT WITH A RED MARKING AND IDENTIFIED AS "FIRE ALARM".
20. AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 90 dBA MEASURED AT 10 FEET FROM THE DEVICE.
21. FIRE ALARM CONTRACTOR SHALL PROVIDE A "RECORD OF COMPLETION" TO THE CAMPUS FIRE MARSHALL PRIOR COMPLETION OF OPERATION ACCEPTANCE TEST.
22. CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH THE CAMPUS MARSHALL FOR THE PRE-WIRE INSPECTION OF EACH SYSTEM AS REQUIRED. APPROVAL BY THE CAMPUS FIRE MARSHALL SHALL BE OBTAINED BEFORE FURTHER INSTALLATIONS ARE COMMENCED.
23. EACH NEW SYSTEM, UPON COMPLETION, SHALL BE CERTIFIED AS PER CAMPUS FIRE MARSHALL REQUIREMENTS.
24. FIRE ALARM CABLING SHALL BE NEATLY BUNDLED ABOVE CEILING SPACE. CADDY CLIP ALL WIRE BUNDLES.
25. ALL CONDUIT STRAPS SHALL BE (2) HOLE TYPE. (1) HOLE TYPE CONDUIT STRAPS ARE NOT ALLOWED.
26. CONDUIT SET-SCREW - FITTINGS ARE NOT ALLOWED.

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CFORMS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: Scott Jackson
Fire and Life Safety Division South

miyamoto.
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MI190401 1.00
T: (949) 579-1170
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Engineer:

Stamp: REGISTERED PROFESSIONAL ENGINEER — LEONARD P. MAYA — No. E19480 — EXP. 6-30-2019 — ELECTRICAL — STATE OF CALIFORNIA

DESIGN WEST ENGINEERING
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UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

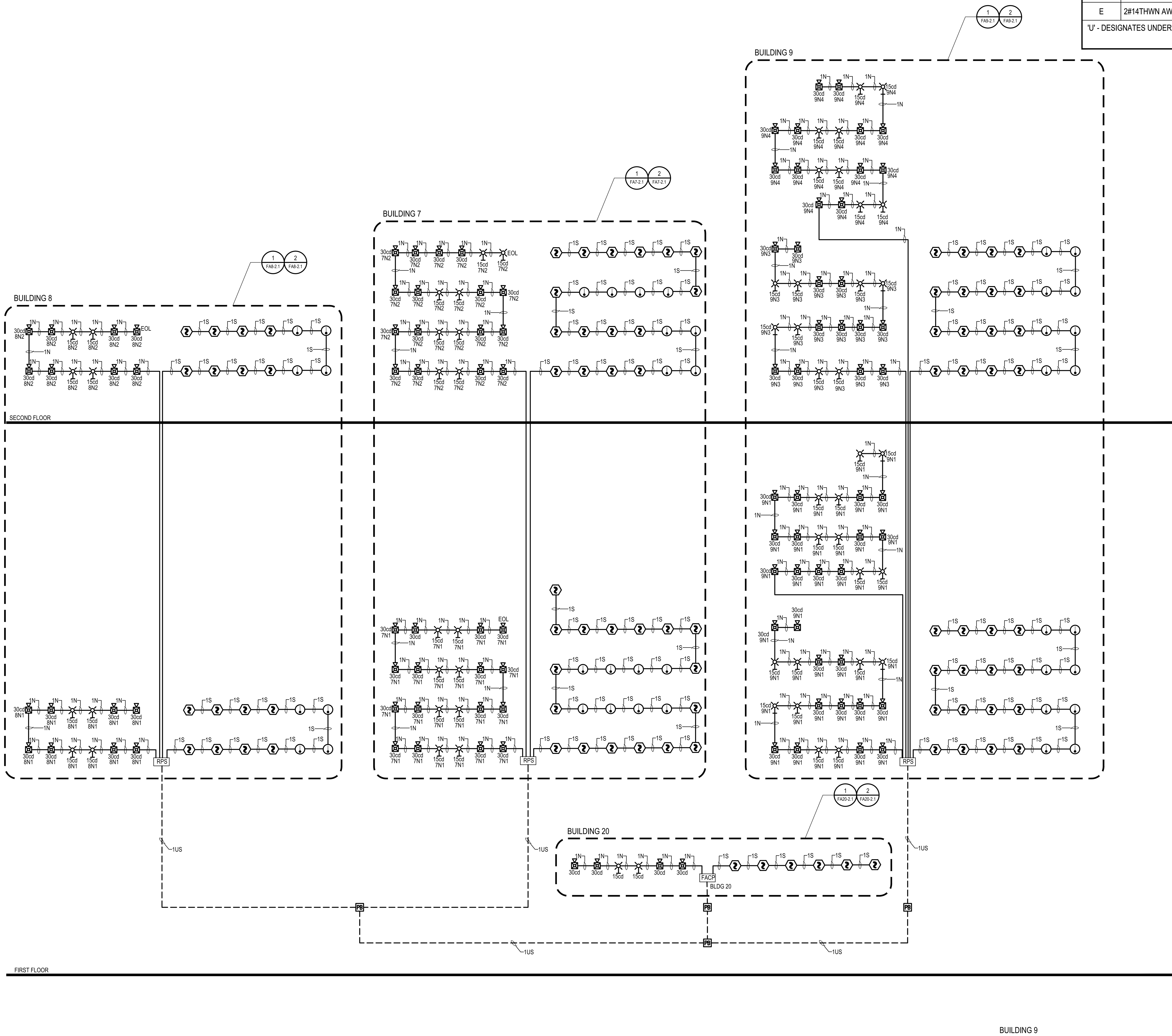
UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-14-2019
DRAWN:	S.V

FIRE ALARM LEGENDS & NOTES

FA-0.1

DESIGNATION	TYPE
S	#18/4 FPLP SHIELDED FIRE CABLE (DATA LOOP)
N	#12/2 FPLP FIRE CABLE (HORN/VISUAL).
D	#18/4 FPLP FIRE CABLE (REMOTE ANNUNCIATOR)
E	2#14THWN AWG BUILDING WIRE

'U' - DESIGNATES UNDERGROUND RATED CABLING



GENERAL NOTES

1. ALL WIRING AND CABLING SHOWN IN UNDERGROUND INSTALLATIONS SHALL BE RATED FOR UNDERGROUND USE.
2. REFERENCE ELECTRICAL DRAWINGS FOR EXACT CONDUIT ROUTING.
3. FIRST FLOOR CABLING SHALL BE RAN USING WIREMOLD RACEWAYS. REFERENCE SHEET FA-3.1 FOR EXACT WIREMOLD REQUIREMENTS.

CONSTRUCTION NOTES

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REGISTERED PROFESSIONAL ENGINEER LEONARD P. MAYA No. E19480 EXP. 6-30-2019 ELECTRICAL STATE OF CALIFORNIA
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RISER DIAGRAM

FA-0.2

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Reviewed by:
Fire and Life Safety Division South

RISER DIAGRAM | SCALE: 1/8" = 1'-0" | 1

R:_PROJECT\2019\19-101 FALKIRK FA AND ADA IMPROVEMENTS\19-101 FA-RISER - 2019-06-28 - SAMUEL VELA

BATTERY SIZING CALCULATION — 06/28/19

UCR FALKIRK - BUILDING 7
RPS7

Quantity	Device Type	Model Number	Standby Current	Total Standby Current	Alarm Current	Total Alarm Current
1	AL1002ULADA	AL1002ULADA	0.09000	0.09000	0.17500	0.17500
32	Horn/Strobe	P2W (30cd)	0.00000	0.00000	0.10700	3.42400
16	Strobe	SW (15cd)	0.00000	0.00000	0.06600	1.05600
				Standby Load 0.090		Alarm Load 4.655

Standby Load:	0.090 Amps	Alarm Load:	4.655 Amps
Standby Time:	24 Hours	Alarm Time:	5 Minutes
Total Standby Load:	2.16 Amp*Hours	Total Alarm Load:	0.39 Amp*Hours
Batteries Provided:	(2) BAT-1270	Available Battery:	5.60 A.H.
Battery Size:	7.00 A.H.	Load (ALM + STBY)	2.55 A.H.
De-Rated Size(80%):	5.60 A.H.	Spare Capacity	3.05 A.H.

BATTERY SIZING CALCULATION — 06/14/19

UCR FALKIRK - BUILDING 8
RPS8

Quantity	Device Type	Model Number	Standby Current	Total Standby Current	Alarm Current	Total Alarm Current
1	AL1002ULADA	AL1002ULADA	0.09000	0.09000	0.17500	0.17500
16	Horn/Strobe	P2W (30cd)	0.00000	0.00000	0.10700	1.71200
8	Strobe	SW (15cd)	0.00000	0.00000	0.06600	0.52800
				Standby Load 0.090		Alarm Load 2.415

Standby Load:	0.090 Amps	Alarm Load:	2.415 Amps
Standby Time:	24 Hours	Alarm Time:	5 Minutes
Total Standby Load:	2.16 Amp*Hours	Total Alarm Load:	0.20 Amp*Hours
Batteries Provided:	(2) BAT-1270	Available Battery:	5.60 A.H.
Battery Size:	7.00 A.H.	Load (ALM + STBY)	2.36 A.H.
De-Rated Size(80%):	5.60 A.H.	Spare Capacity	3.24 A.H.

BATTERY SIZING CALCULATION — 06/14/19

UCR FALKIRK - BUILDING 9
RPS9

Quantity	Device Type	Model Number	Standby Current	Total Standby Current	Alarm Current	Total Alarm Current
1	AL1002ULADA	AL1002ULADA	0.09000	0.09000	0.17500	0.17500
48	Horn/Strobe	P2W (30cd)	0.00000	0.00000	0.10700	5.13600
32	Strobe	SW (15cd)	0.00000	0.00000	0.06600	2.11200
				Standby Load 0.090		Alarm Load 7.423

Standby Load:	0.090 Amps	Alarm Load:	7.423 Amps
Standby Time:	24 Hours	Alarm Time:	5 Minutes
Total Standby Load:	2.16 Amp*Hours	Total Alarm Load:	0.62 Amp*Hours
Batteries Provided:	(2) BAT-1270	Available Battery:	5.60 A.H.
Battery Size:	7.00 A.H.	Load (ALM + STBY)	2.78 A.H.
De-Rated Size(80%):	5.60 A.H.	Spare Capacity	2.82 A.H.

BATTERY SIZING CALCULATION — 06/14/19

UCR FALKIRK
MAIN FIRE ALARM CONTROL PANEL

Quantity	Device Type	Model Number	Standby Current	Total Standby Current	Alarm Current	Total Alarm Current
1	4100	4100	0.12000	0.12000	0.20000	0.20000
40	Heat Det	4098-9402	0.00030	0.01200	0.00680	0.27200
87	Smoke Det	4098-9754	0.00030	0.02610	0.00680	0.59160
4	Horn/Strobe	P2W (30cd)	0.00000	0.00000	0.10700	0.42800
2	Strobe	SW (15cd)	0.00000	0.00000	0.06600	0.13200
				Standby Load 0.158		Alarm Load 1.624

Standby Load:	0.158 Amps	Alarm Load:	1.624 Amps
Standby Time:	24 Hours	Alarm Time:	5 Minutes
Total Standby Load:	3.79 Amp*Hours	Total Alarm Load:	0.14 Amp*Hours
Batteries Provided:	(2) BAT-12180	Available Battery:	14.40 A.H.
Battery Size:	18.00 A.H.	Load (ALM + STBY)	3.93 A.H.
De-Rated Size(80%):	14.40 A.H.	Spare Capacity	10.47 A.H.

VOLTAGE DROP CALCULATION — 06/28/

SYSTEM SENSOR — UCR FALKIRK - BUILDING 7 — RPS7

	DEVICE CURR. (AMPS)	SIGNAL CIRCUIT 7N1 QTY	CURR.	SIGNAL CIRCUIT 7N2 QTY	CURR.	SIGNAL CIRCUIT SPARE QTY	CURR.	SIGNAL CIRCUIT SPARE QTY	CURR.	QTY TOTAL
Horn/Strobe										
P2W (30cd)	0.107	16	1.712	16	1.712		0.000		0.000	32
Strobe										
SW (15cd)	0.066	8	0.528	8	0.528		0.000		0.000	16
TOTAL CURRENT ON CIRCUIT		2.240	AMPS	2.240	AMPS	0.000	AMPS	0.000	AMPS	
TOTAL WIRE LENGTH		450	FT.	430	FT.		FT.		FT.	
WIRE SIZE		12	AWG	12	AWG	12	AWG	12	AWG	
CIRCULAR MILS		6530	CIRC MILS	6530	CIRC MILS	6530	CIRC MILS	6530	CIRC MILS	
VOLTAGE DROP		3.33	VOLTS	3.19	VOLTS	0.00	VOLTS	0.00	VOLTS	
VOLTAGE @ END OF CIRCUIT		17.1	VOLTS	17.2	VOLTS		VOLTS		VOLTS	
CIRCUIT LOCATION		1ST FLOOR		1ST FLOOR		1ST FLOOR		1ST FLOOR		

VOLTAGE DROP = TOTAL CURRENT x DISTANCE x 21.6 / CIRCULAR MILS

CIRC. MILS
18 AWG = 1620
16 AWG = 2580
14 AWG = 4110
12 AWG = 6530

OLTAGE @ END OF CIRCUIT = STARTING CIRCUIT VOLTAGE - VOLTAGE DROP

LISTED CIRCUIT VOLTAGE = 24V
STARTING CIRCUIT VOLTAGE = 20.4V (85% LISTED VOLTAGE)
OPERATING VOLTAGE RANGE FOR 24V NOTIFICATION APPLIANCES TO BE 16V-33V

VOLTAGE DROP CALCULATION — 06/28/

SYSTEM SENSOR — UCR FALKIRK - BUILDING 8 — RPS8

	DEVICE CURR. (AMPS)	SIGNAL CIRCUIT 8N1 QTY	CURR.	SIGNAL CIRCUIT 8N2 QTY	CURR.	SIGNAL CIRCUIT SPARE QTY	CURR.	SIGNAL CIRCUIT SPARE QTY	CURR.	QTY TOTAL
Horn/Strobe										
P2W (30cd)	0.107	8	0.856	8	0.856		0.000		0.000	16
Strobe										
SW (15cd)	0.066	4	0.264	4	0.264		0.000		0.000	8
TOTAL CURRENT ON CIRCUIT		1.120	AMPS	1.120	AMPS	0.000	AMPS	0.000	AMPS	
TOTAL WIRE LENGTH		280	FT.	280	FT.		FT.		FT.	
WIRE SIZE		12	AWG	12	AWG	12	AWG	12	AWG	
CIRCULAR MILS		6530	CIRC MILS	6530	CIRC MILS	6530	CIRC MILS	6530	CIRC MILS	
VOLTAGE DROP		1.04	VOLTS	1.04	VOLTS	0.00	VOLTS	0.00	VOLTS	
VOLTAGE @ END OF CIRCUIT		19.4	VOLTS	19.4	VOLTS		VOLTS		VOLTS	
CIRCUIT LOCATION		1ST FLOOR		1ST FLOOR		1ST FLOOR		1ST FLOOR		

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OPERATING VOLTAGE RANGE FOR 24V NOTIFICATION APPLIANCES TO BE 16V-33V

VOLTAGE DROP CALCULATION — 06/28/

SYSTEM SENSOR — UCR FALKIRK - BUILDING 9 — RPS9

	DEVICE CURR. (AMPS)	SIGNAL CIRCUIT 9N1 QTY	CURR.	SIGNAL CIRCUIT 9N2 QTY	CURR.	SIGNAL CIRCUIT 9N3 QTY	CURR.	SIGNAL CIRCUIT 9N4 QTY	CURR.	QTY TOTAL
Horn/Strobe										
P2W (30cd)	0.107	12	1.284	12	1.284	12	1.284	12	1.284	48
Strobe										
SW (15cd)	0.066	8	0.528	8	0.528	8	0.528	8	0.528	32
TOTAL CURRENT ON CIRCUIT		1.812	AMPS	1.812	AMPS	1.812	AMPS	1.812	AMPS	
TOTAL WIRE LENGTH		280	FT.	280	FT.	200	FT.	180	FT.	
WIRE SIZE		12	AWG	12	AWG	12	AWG	12	AWG	
CIRCULAR MILS		6530	CIRC MILS	6530	CIRC MILS	6530	CIRC MILS	6530	CIRC MILS	
VOLTAGE DROP		1.68	VOLTS	1.68	VOLTS	1.20	VOLTS	1.08	VOLTS	
VOLTAGE @ END OF CIRCUIT		18.7	VOLTS	18.7	VOLTS	19.2	VOLTS	19.3	VOLTS	
CIRCUIT LOCATION		1ST FLOOR		1ST FLOOR		1ST FLOOR		1ST FLOOR		

VOLTAGE DROP = TOTAL CURRENT x DISTANCE x 21.6 / CIRCULAR MILS

CIRC. MILS
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OLTAGE @ END OF CIRCUIT = STARTING CIRCUIT VOLTAGE - VOLTAGE DROP

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OPERATING VOLTAGE RANGE FOR 24V NOTIFICATION APPLIANCES TO BE 16V-33V

VOLTAGE DROP CALCULATION — 06/28/

SYSTEM SENSOR — UCR FALKIRK - FACP — FACP

	DEVICE CURR. (AMPS)	SIGNAL CIRCUIT 20N1 QTY	CURR.	SIGNAL CIRCUIT SPARE QTY	CURR.	SIGNAL CIRCUIT SPARE QTY	CURR.	SIGNAL CIRCUIT SPARE QTY	CURR.	QTY TOTAL
Horn/Strobe										
P2W (30cd)	0.107	4	0.428		0.000		0.000		0.000	4
Strobe										
SW (15cd)	0.066	2	0.132		0.000		0.000		0.000	2
TOTAL CURRENT ON CIRCUIT		0.560	AMPS	0.000	AMPS	0.000	AMPS	0.000	AMPS	
TOTAL WIRE LENGTH		450	FT.		FT.		FT.		FT.	
WIRE SIZE		12	AWG	12	AWG	12	AWG	12	AWG	
CIRCULAR MILS		6530	CIRC MILS	6530	CIRC MILS	6530	CIRC MILS	6530	CIRC MILS	
VOLTAGE DROP		0.83	VOLTS	0.00	VOLTS	0.00	VOLTS	0.00	VOLTS	
VOLTAGE @ END OF CIRCUIT		19.6	VOLTS		VOLTS		VOLTS		VOLTS	
CIRCUIT LOCATION		1ST FLOOR		1ST FLOOR		1ST FLOOR		1ST FLOOR		

VOLTAGE DROP = TOTAL CURRENT x DISTANCE x 21.6 / CIRCULAR MILS

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BATTERY SIZING CALCULATION — 06/28/19

UCR FALKIRK
Dual Path Wireless Communicator

Quantity	Device Type	Model Number	Standby Current	Total Standby Current	Alarm Current	Total Alarm Current
1	IPGSM4G	IPGSM4G	0.23000	0.23000	0.95000	0.95000
				Standby Load 0.230		Alarm Load 0.950

Standby Load:	0.230 Amps	Alarm Load:	0.950 Amps
Standby Time:	24 Hours	Alarm Time:	5 Minutes
Total Standby Load:	5.52 Amp*Hours	Total Alarm Load:	0.08 Amp*Hours
Batteries Provided:	(1) ES7-12	Available Battery:	5.60 A.H.
Battery Size:	7.00 A.H.	Load (ALM + STBY)	5.60 A.H.
De-Rated Size(80%):	5.60 A.H.	Spare Capacity	0.00 A.H.

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Fire and Life Safety Division South

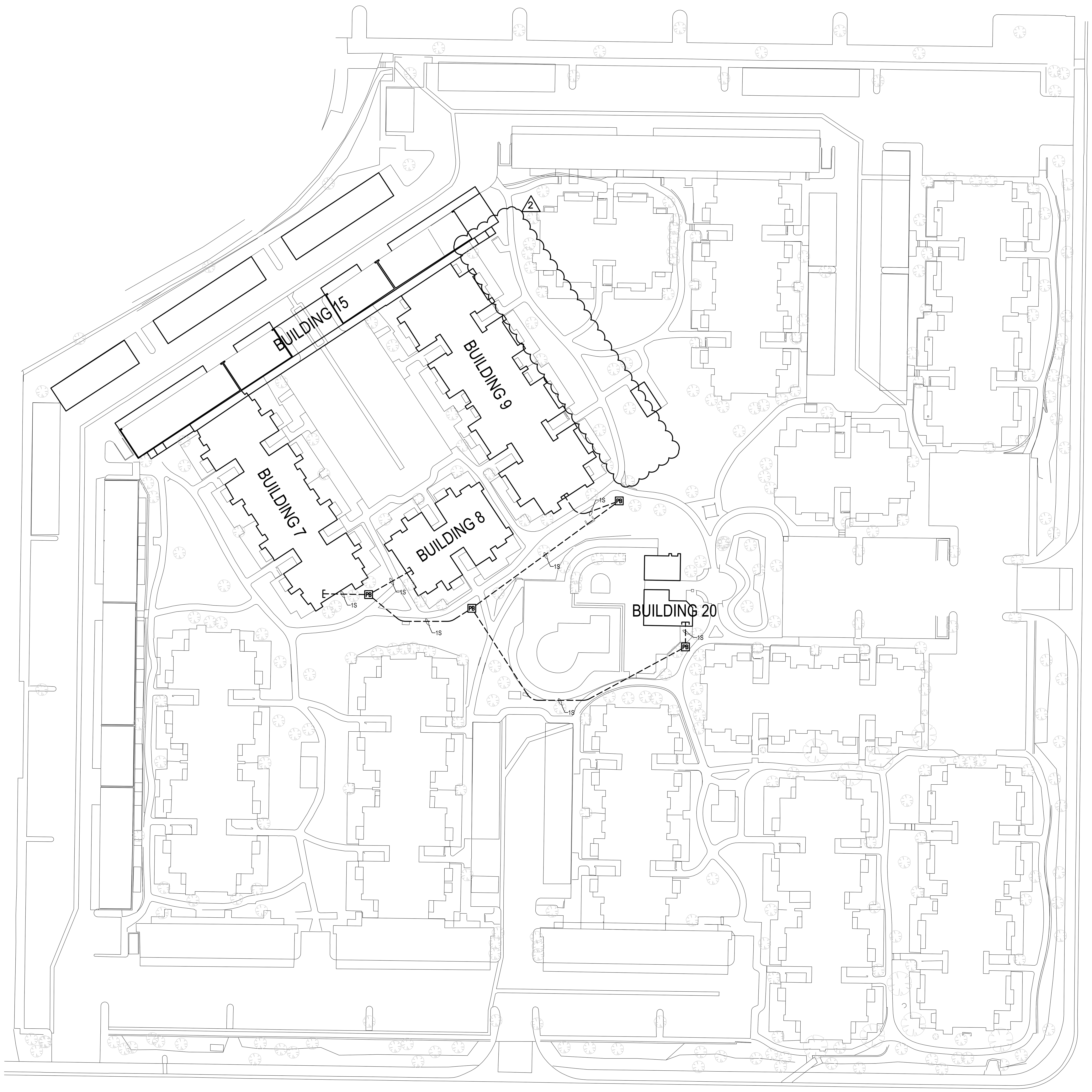
UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-14-2019
DRAWN:	S.V

FIRE ALARM CALCULATIONS

FA-0.3

FIRE ALARM CALCULATIONS | 1

DESIGNATION	TYPE
S	#18/4 FPLP SHIELDED FIRE CABLE (DATA LOOP)
N	#14/2 FPLP FIRE CABLE (HORN/VISUAL).
D	#18/4 FPLP FIRE CABLE (REMOTE ANNUNCIATOR)
E	2#14THWN AWG BUILDING WIRE



GENERAL NOTES

1. ALL WIRING AND CABLING SHOWN IN UNDERGROUND INSTALLATIONS SHALL BE RATED FOR UNDERGROUND USE.
2. REFERENCE ELECTRICAL DRAWINGS FOR EXACT CONDUIT ROUTING.

CONSTRUCTION NOTES

Engineer:
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Stamp:
REGISTERED PROFESSIONAL ENGINEER
LEONARD P. MAYA
No. E19480
EXP. 6-30-2019
ELECTRICAL
STATE OF CALIFORNIA

Consultant:
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Email: cadd@designwesteng.com
DESIGN WEST ENGINEERING
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UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019

3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-14-2019
DRAWN:	S.V

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT
ALL INSPECTIONS SHALL BE REQUESTED USING THE CFORMS SYSTEM

APPROVED
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
Campus Building Permit

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: [signature]
Fire and Life Safety Division South

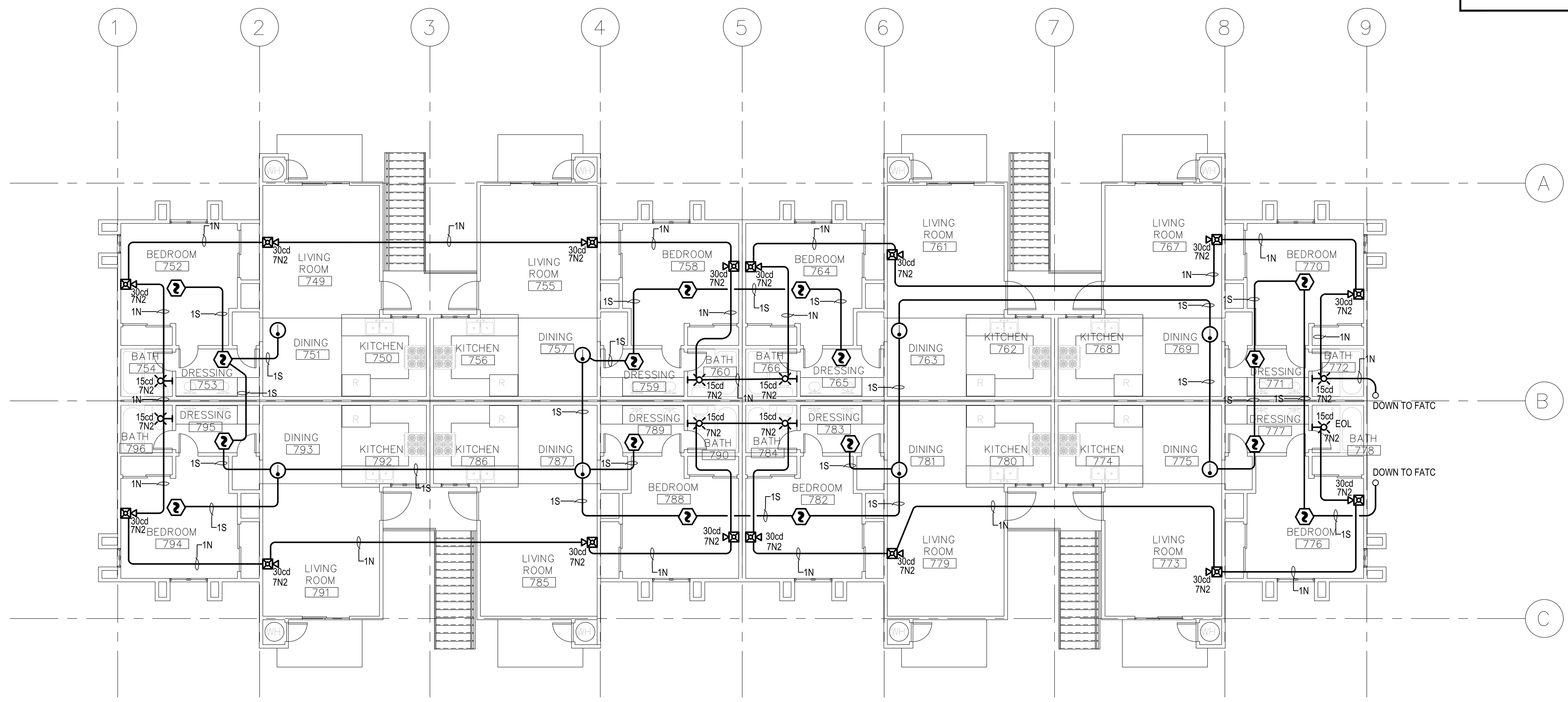
FIRE ALARM SITE PLAN | SCALE: 1/8" = 1'-0" | 1

FIRE ALARM
SITE PLAN

FA-1.0

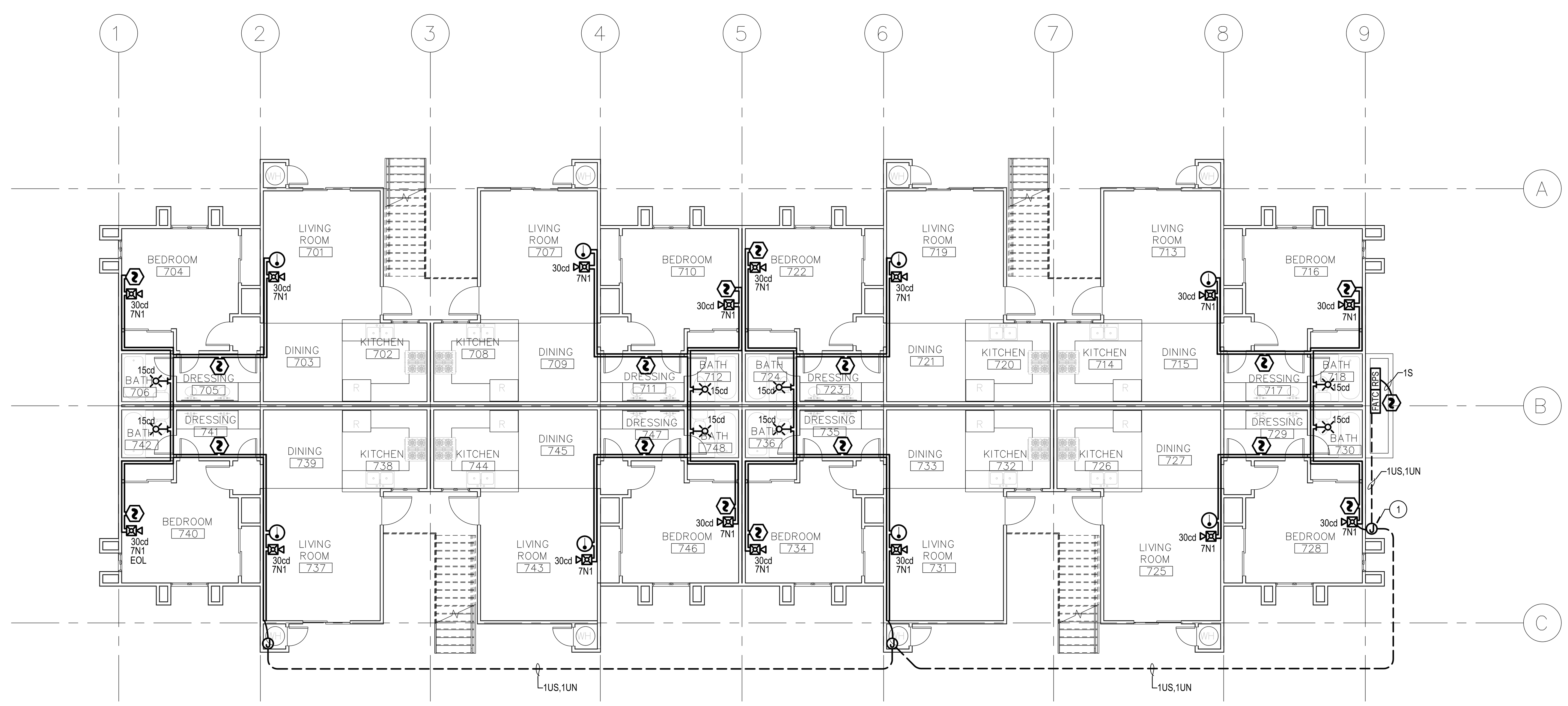
R:_PROJECT\2019\19-101 FALKIRK FA AND ADA IMPROVEMENTS\19-101 FA-SITEPLN - 2019-06-28 - SAMUEL VELA

DESIGNATION	TYPE
S	#18/4 FPLP SHIELDED FIRE CABLE (DATA LOOP)
N	#12/2 FPLP FIRE CABLE (HORN/VISUAL).
D	#18/4 FPLP FIRE CABLE (REMOTE ANNUNCIATOR)
E	2#14THWN AWG BUILDING WIRE
'U' - DESIGNATES UNDERGROUND RATED CABLING	



FIRE ALARM PLAN - BUILDING 7 SECOND FLOOR

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



FIRE ALARM PLAN - BUILDING 7 FIRST FLOOR

SCALE: 1/8" = 1'-0" | 2

GENERAL NOTES

1. ALL WIRING AND CABLING SHOWN IN UNDERGROUND INSTALLATIONS SHALL BE RATED FOR UNDERGROUND USE.
2. REFERENCE ELECTRICAL DRAWINGS FOR EXACT CONDUIT ROUTING.
3. FIRST FLOOR CABLING SHALL BE RAN USING WIREMOLD RACEWAYS. REFERENCE SHEET FA-3.1 FOR EXACT WIREMOLD REQUIREMENTS.

CONSTRUCTION NOTES

(1) PROVIDE J-BOX AT BUILDING BASE FOR U/G CONDUIT STUBUP. CONTINUE WIRING FROM J-BOX INTO ELECTRICAL CLOSET TO THE NEW FATC IN EXPOSED SURFACE CONDUIT.

(2) ROUTE FIRE ALARM CIRCUITS FROM FATC IN EXPOSED SURFACE CONDUIT THROUGH WALL. CONTINUE CONDUIT BELOW GRADE AND STUB OUTSIDE EXISTING WATER HEATER CLOSET AND INTO CLOSET.

INSPECTIONS REQUIRED
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Reviewed by: [signature]
Fire and Life Safety Division South

Engineer:
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Stamp: REGISTERED PROFESSIONAL ENGINEER LEONARD P. MAYA No. E19480 EXP. 6-30-2019 ELECTRICAL STATE OF CALIFORNIA

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Consultant:

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REVISIONS

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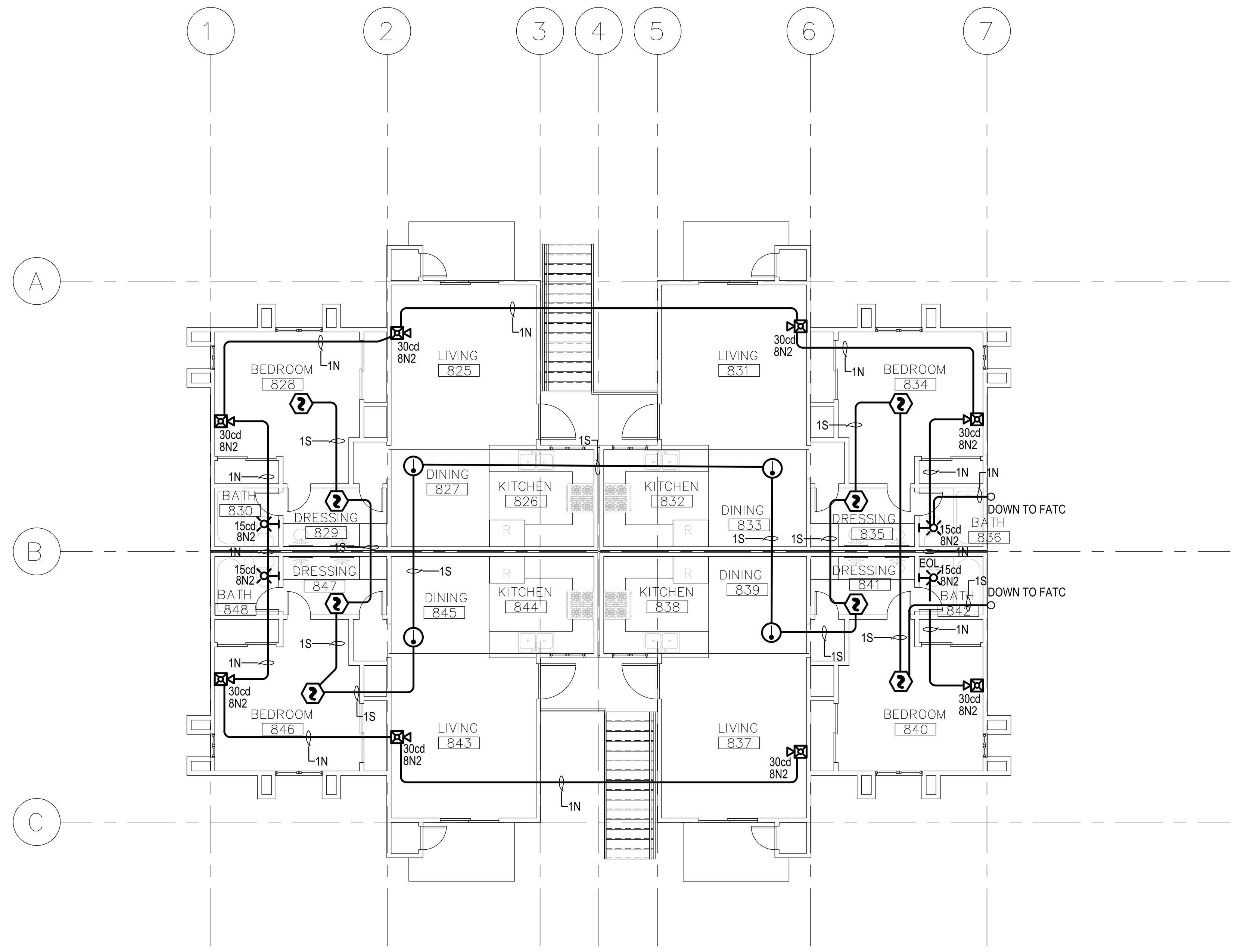
UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-14-2019
DRAWN:	S.V

FIRE ALARM FLOOR PLAN - BUILDING 7

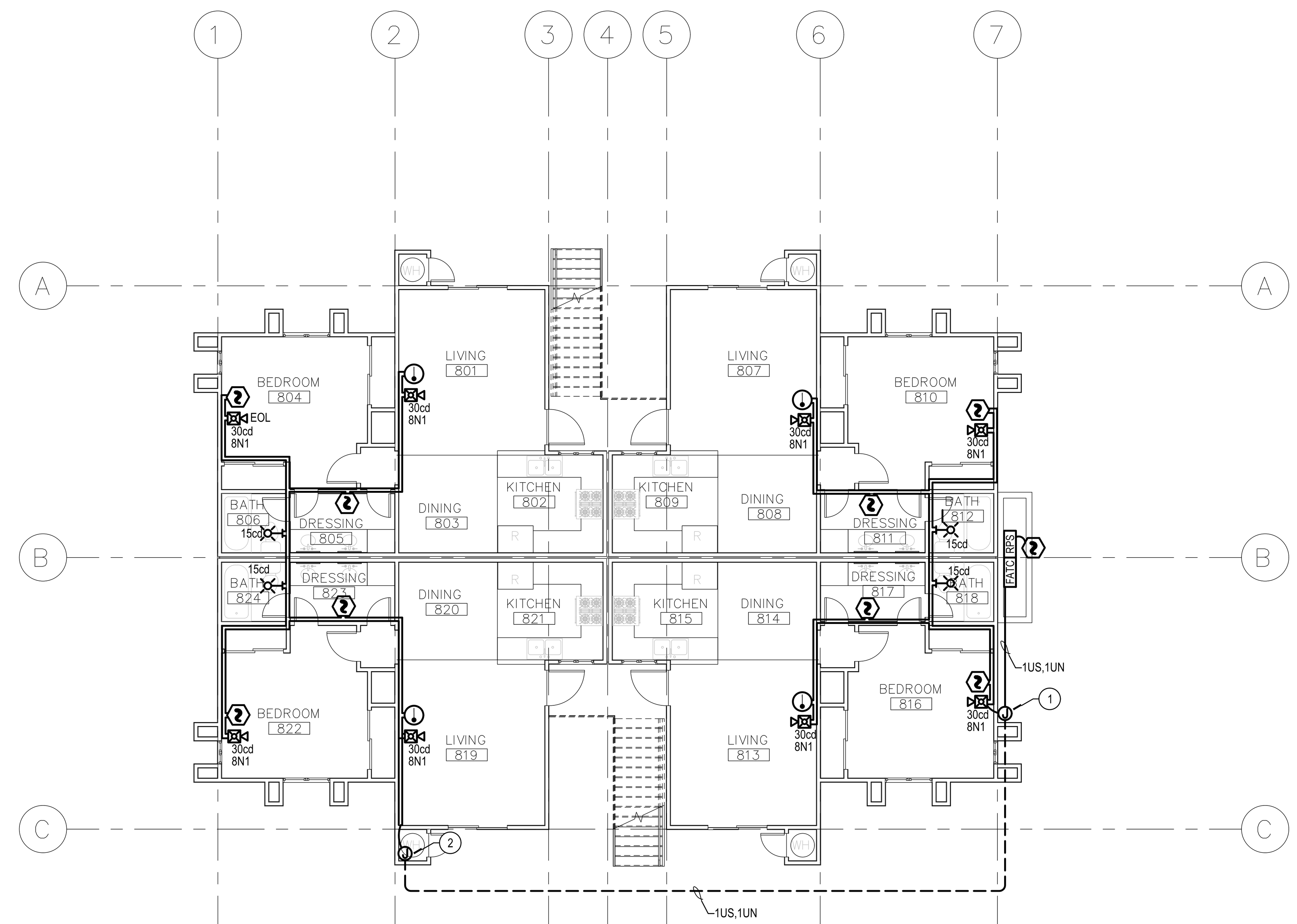
FA7-2.1

CAMPUS BUILDING PERMIT NUMBER B19-194

DESIGNATION	TYPE
S	#18/4 FPLP SHIELDED FIRE CABLE (DATA LOOP)
N	#12/2 FPLP FIRE CABLE (HORN/VISUAL).
D	#18/4 FPLP FIRE CABLE (REMOTE ANNUNCIATOR)
E	2#14THWN AWG BUILDING WIRE
'U' - DESIGNATES UNDERGROUND RATED CABLING	



FIRE ALARM PLAN - BUILDING 8 SECOND FLOOR | SCALE: 1/8" = 1'-0" | 1



FIRE ALARM PLAN - BUILDING 8 FIRST FLOOR | SCALE: 1/8" = 1'-0" | 2

GENERAL NOTES

1. ALL WIRING AND CABLING SHOWN IN UNDERGROUND INSTALLATIONS SHALL BE RATED FOR UNDERGROUND USE.
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Reviewed by: Scott Jackson
Fire and Life Safety Division South

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miyamoto.
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DRAWN:	S.V

FIRE ALARM FLOOR PLAN - BUILDING 8

FA8-2.1

07/02/2019

DESIGNATION	TYPE
S	#18/4 FPLP SHIELDED FIRE CABLE (DATA LOOP)
N	#12/2 FPLP FIRE CABLE (HORN/VISUAL).
D	#18/4 FPLP FIRE CABLE (REMOTE ANNUNCIATOR)
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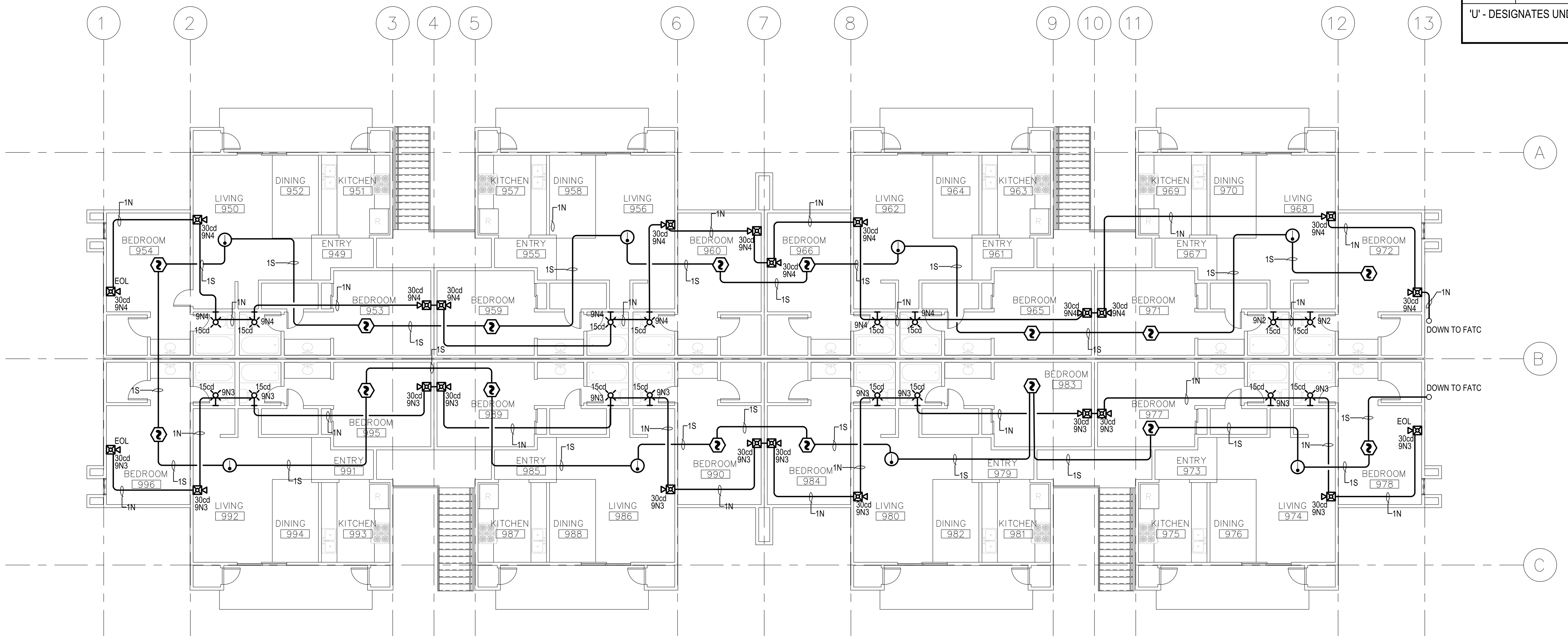
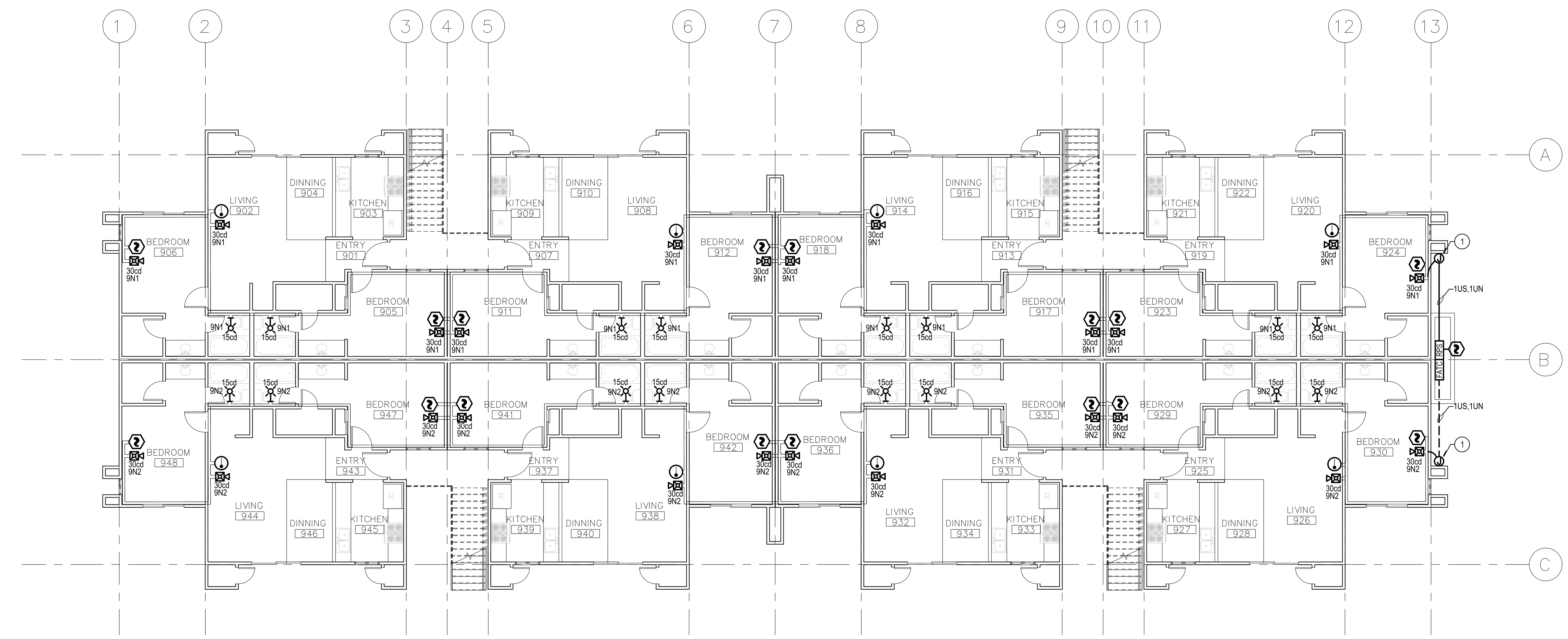


FIRE ALARM PLAN - BUILDING 9 SECOND FLOOR | SCALE: 1/8" = 1'-0" | 1



FIRE ALARM PLAN - BUILDING 9 FIRST FLOOR | SCALE: 1/8" = 1'-0" | 2

GENERAL NOTES

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DATE:	06-14-2019
DRAWN:	S.V

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Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
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UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division
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Reviewed by: [signature]
Fire and Life Safety Division South

FIRE ALARM FLOOR PLAN - BUILDING 9

FA9-2.1

DESIGNATION	TYPE
S	#18/4 FPLP SHIELDED FIRE CABLE (DATA LOOP)
N	#12/2 FPLP FIRE CABLE (HORN/VISUAL).
D	#18/4 FPLP FIRE CABLE (REMOTE ANNUNCIATOR)
E	2#14THWN AWG BUILDING WIRE
'U' - DESIGNATES UNDERGROUND RATED CABLING	

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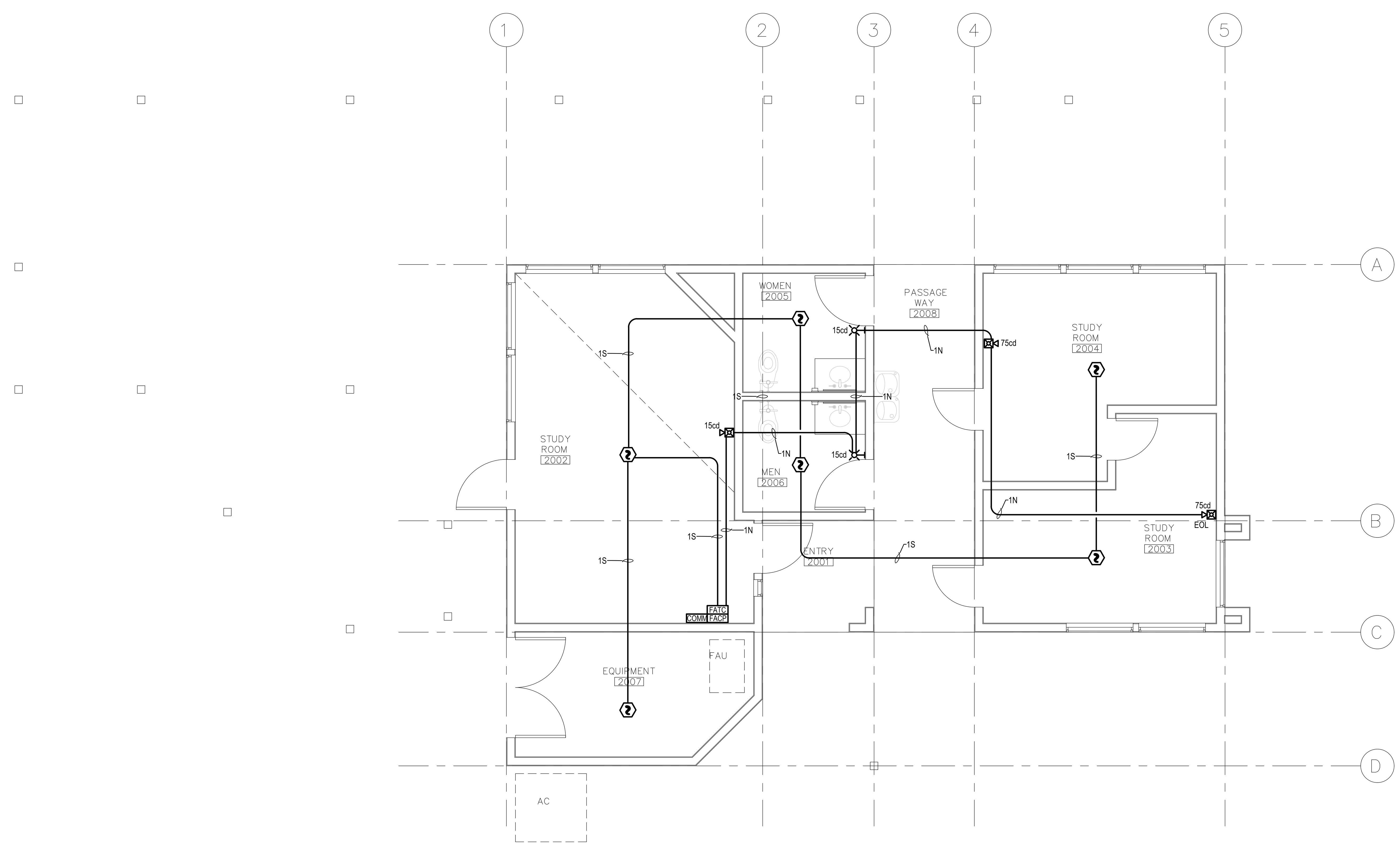
CONSTRUCTION NOTES



FIRE ALARM FLOOR PLAN - BUILDING 20 | SCALE: 1/8" = 1'-0" | 1

Engineer: miyamoto.
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Stamp: REGISTERED PROFESSIONAL ENGINEER LEONARD P. MAYA No. E19480 EXP. 6-30-2019 ELECTRICAL STATE OF CALIFORNIA

Consultant: DESIGN WEST ENGINEERING
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RIVERSIDE, CA 92507

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2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-14-2019
DRAWN:	S.V

FIRE ALARM FLOOR PLAN - BUILDING 20

FA20-2.1

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Signed CBO: Robert K. Williams
Building, Safety and Compliance Division
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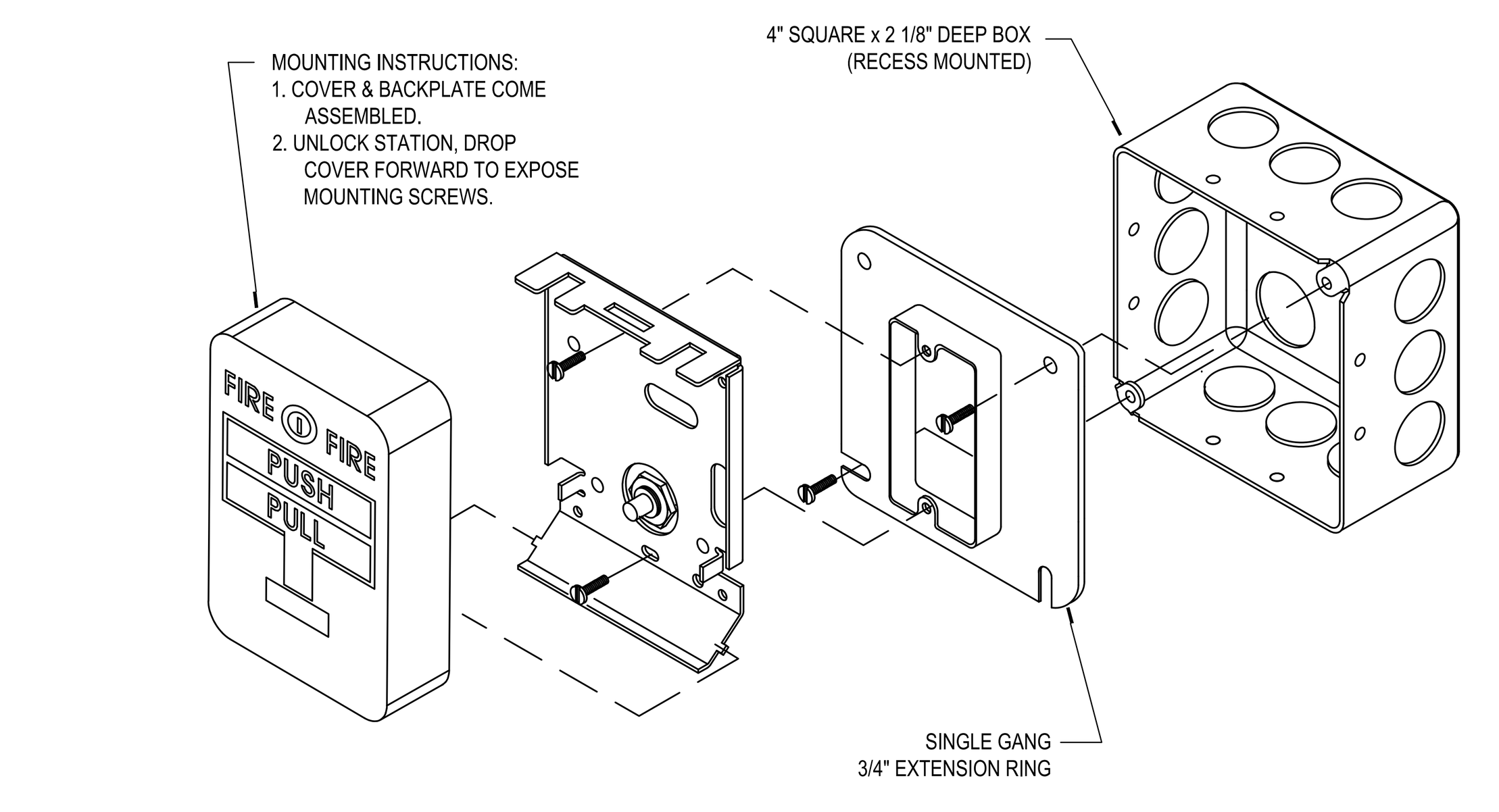
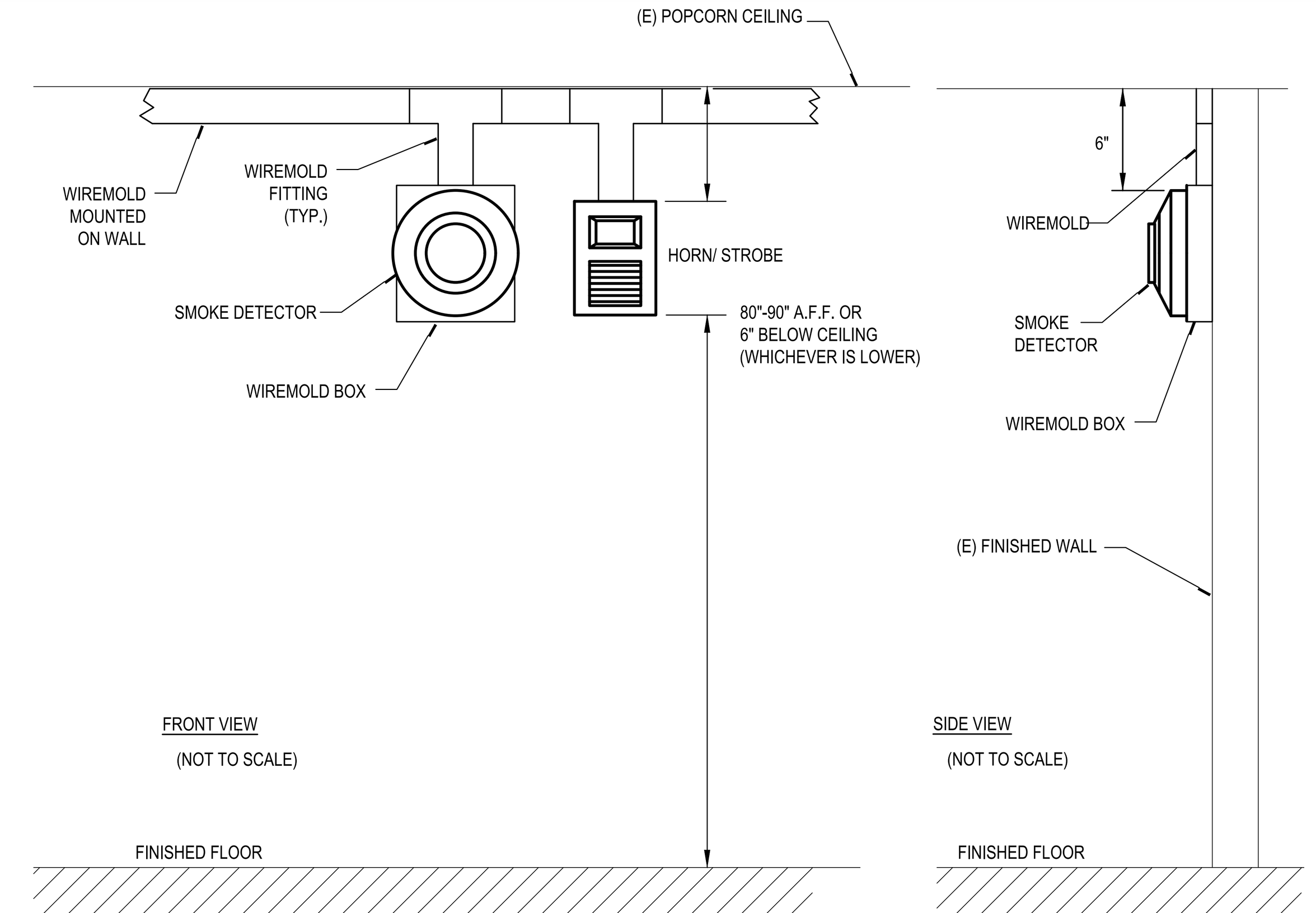
Fire and Life Safety Division South

SEMI-FLUSH WEATHER-PROOF PULL STATION | 1

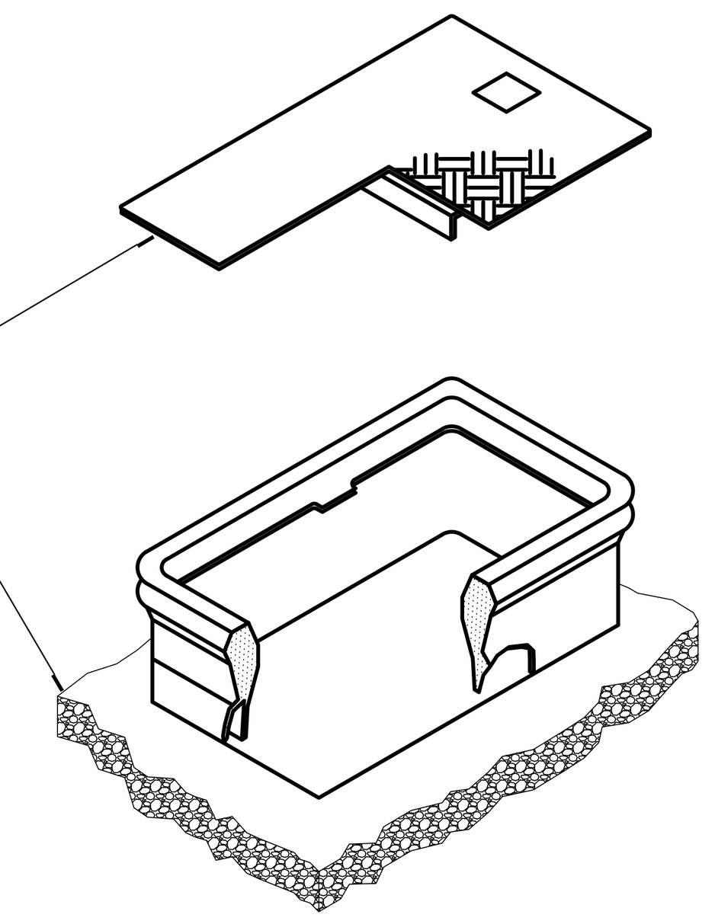


- CENTER AT 46" A.F.F. (BOTTOM NO LOWER THAN 42" TOP NO HIGHER THAN 48"
- SECURE BACK BOX TO FRAME. DO NOT USE CUT IN BACK BOX.
- LOCATION SHALL COMPLY WITH C.B.C. CHAPTER 11B FOR WHEELCHAIR COMPLIANCE
- COORDINATE LOCATION WITH UCR FACILITY AND CAMPUS FIRE MARSHALL.

FIRST FLOOR DEVICE MOUNTING | 5



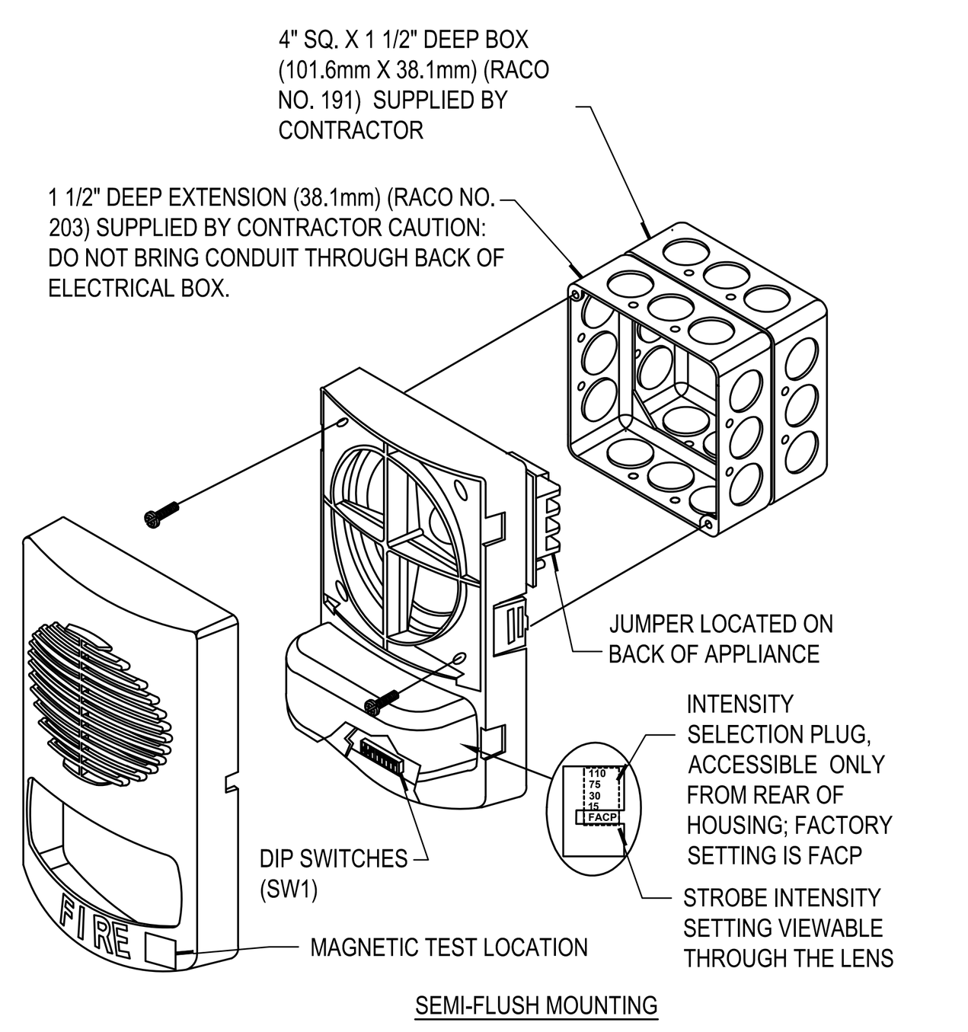
PULL BOX INSTALLATION | 9

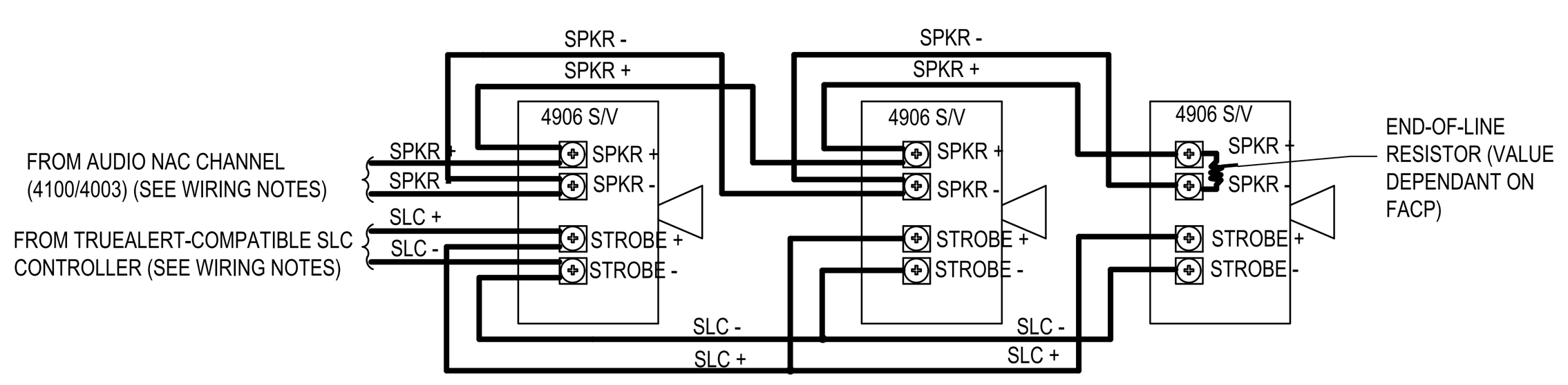


GENERAL NOTES:

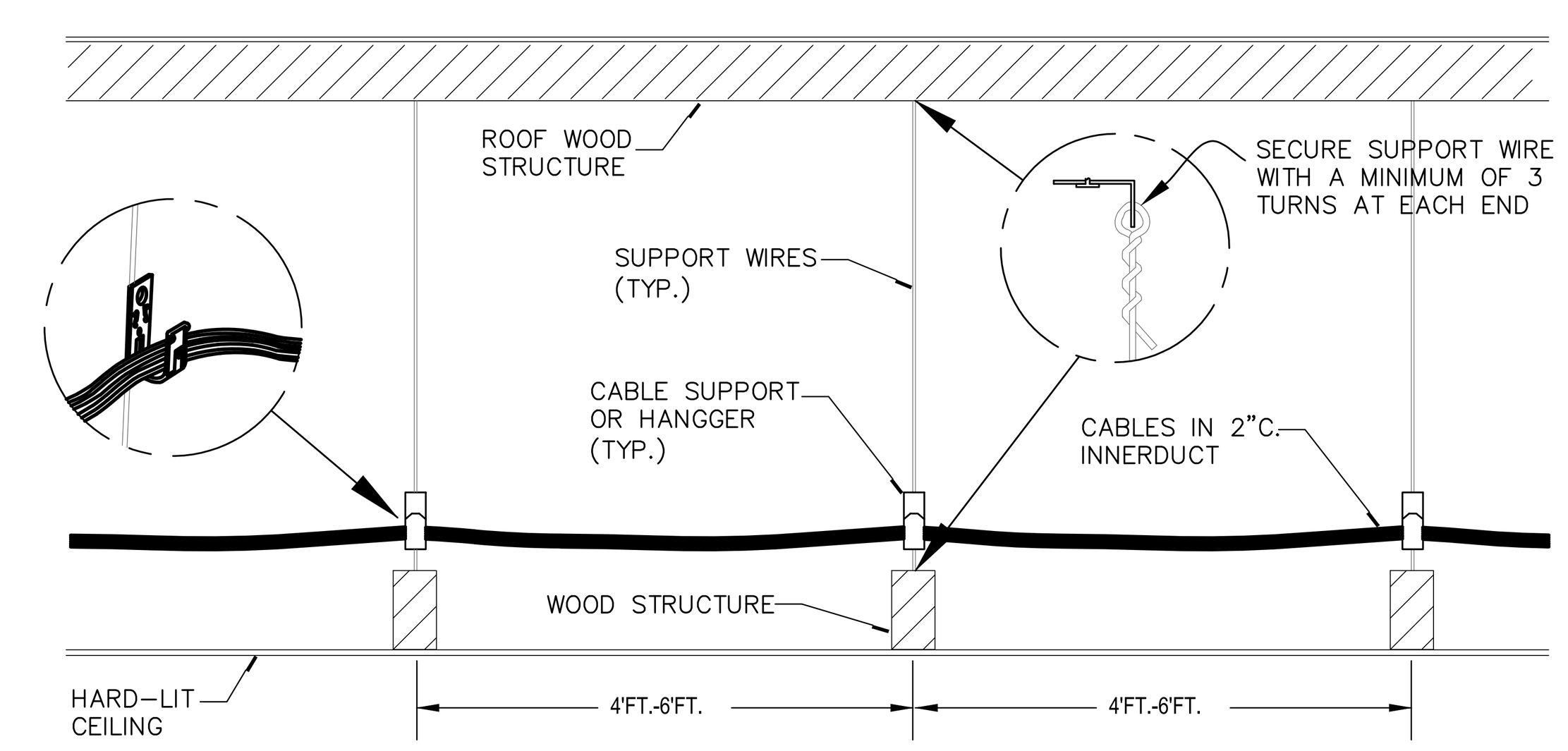
1. PULLBOX TO BE SIZED PER NEC, U.O.N.
2. PROVIDE COVER LABELED WITH "POWER" OR "DATA" DESIGNATION.

SPEAKER STROBE MOUNTING REQUIREMENTS | 13

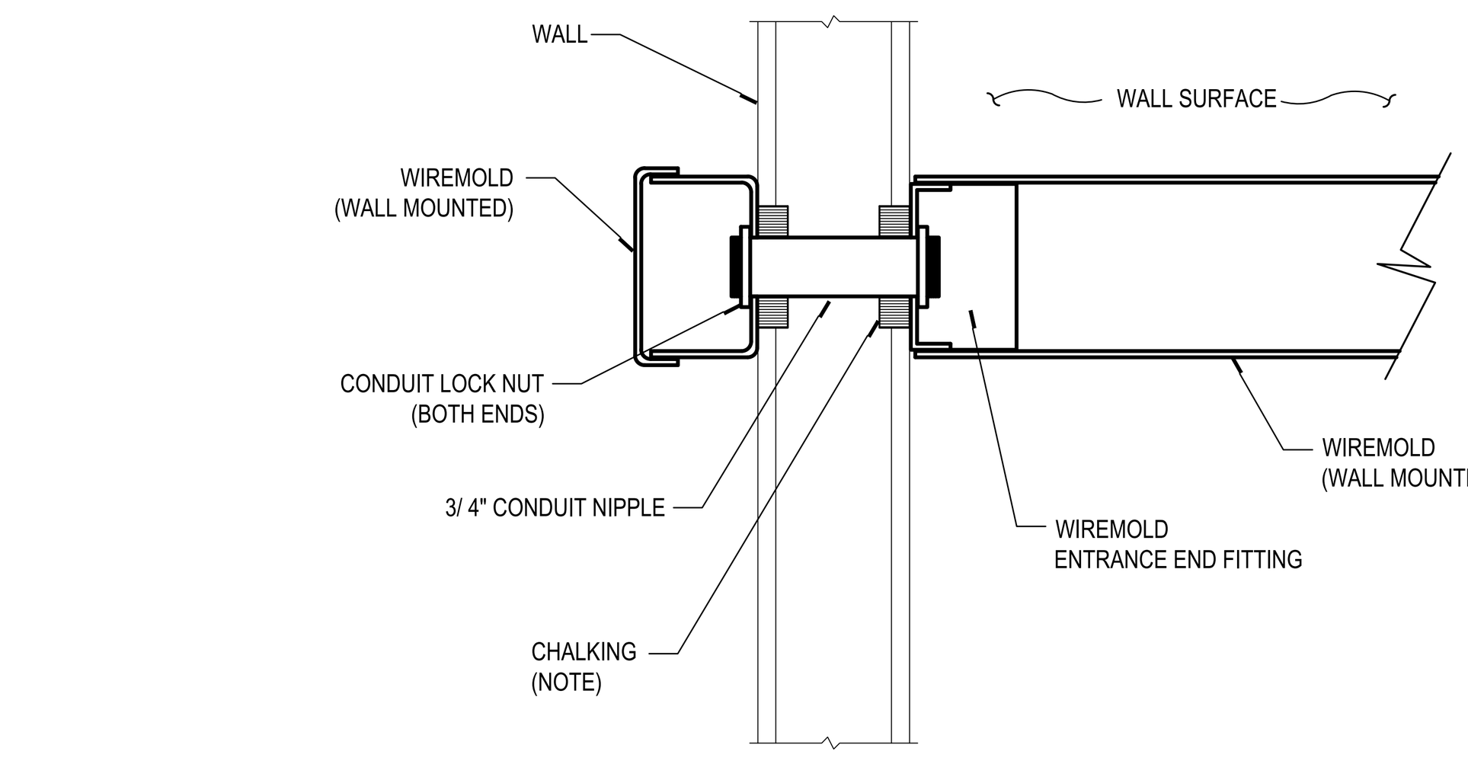




CABLE SUPPORT | 2

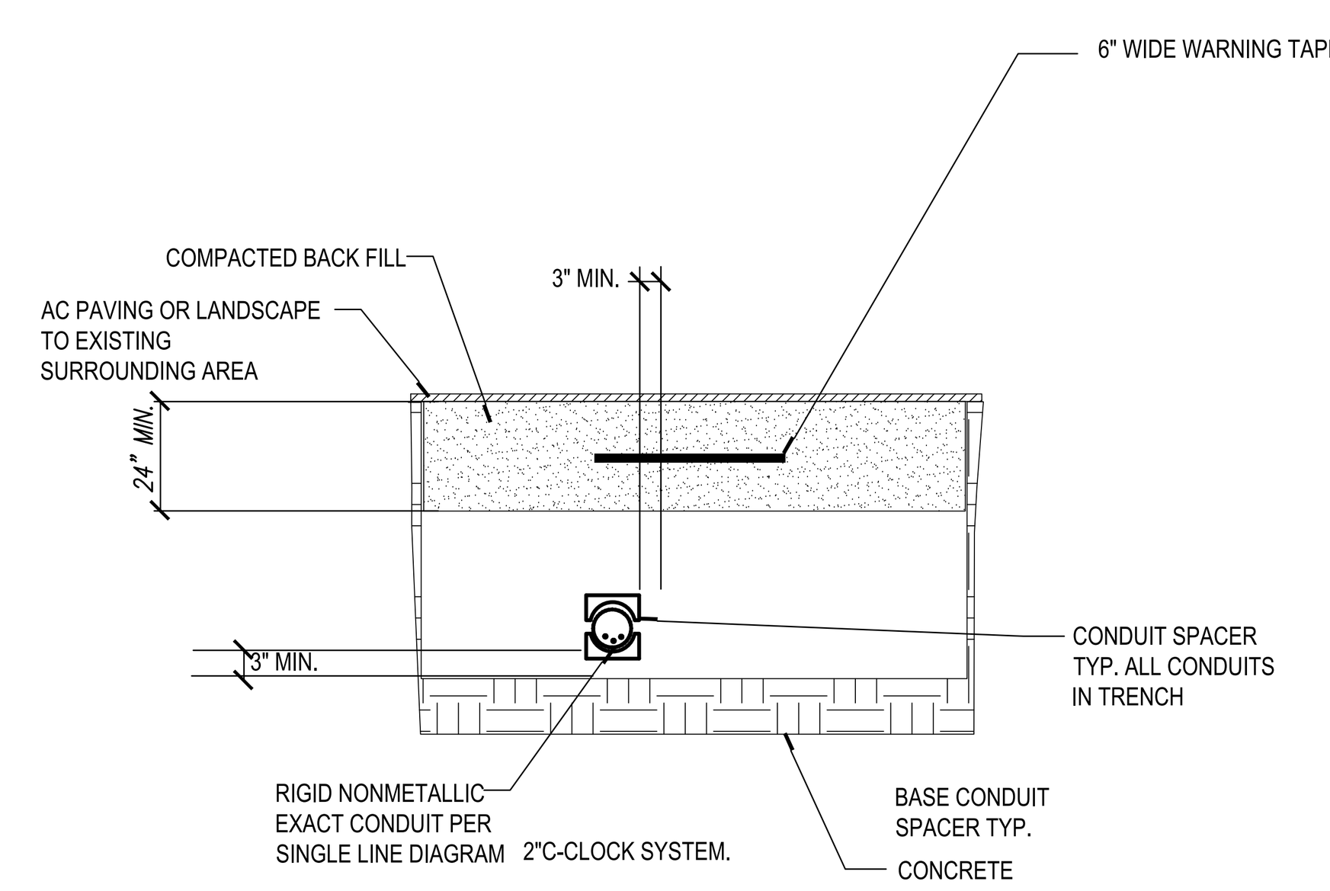


WIREMOLD ROUTING THROUGH WALL | 6



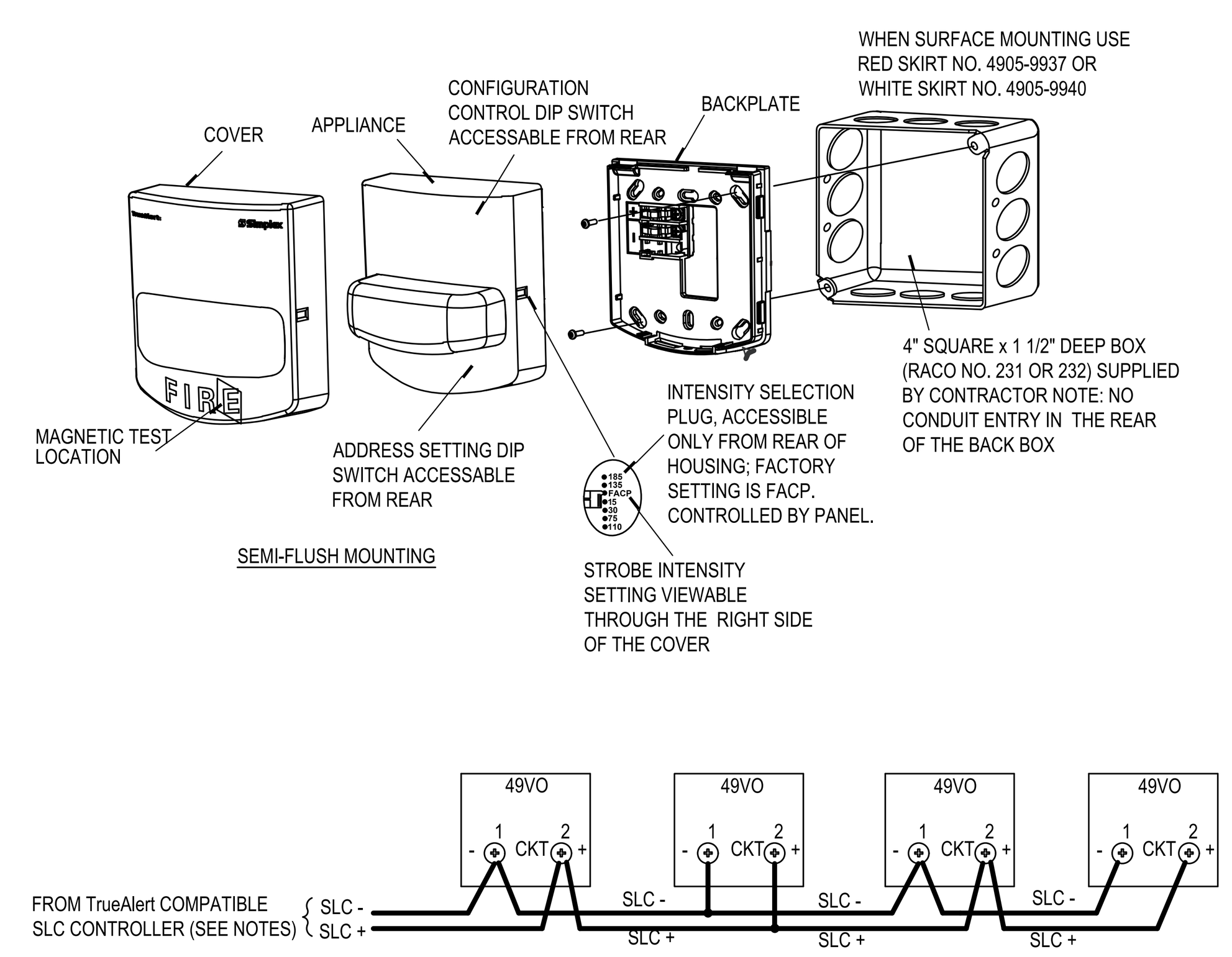
NOTE: SEAL WALL PENETRATION WITH CHALKING ON BOTH SIDES.

CONDUIT DUCT BANK SECTION | 10

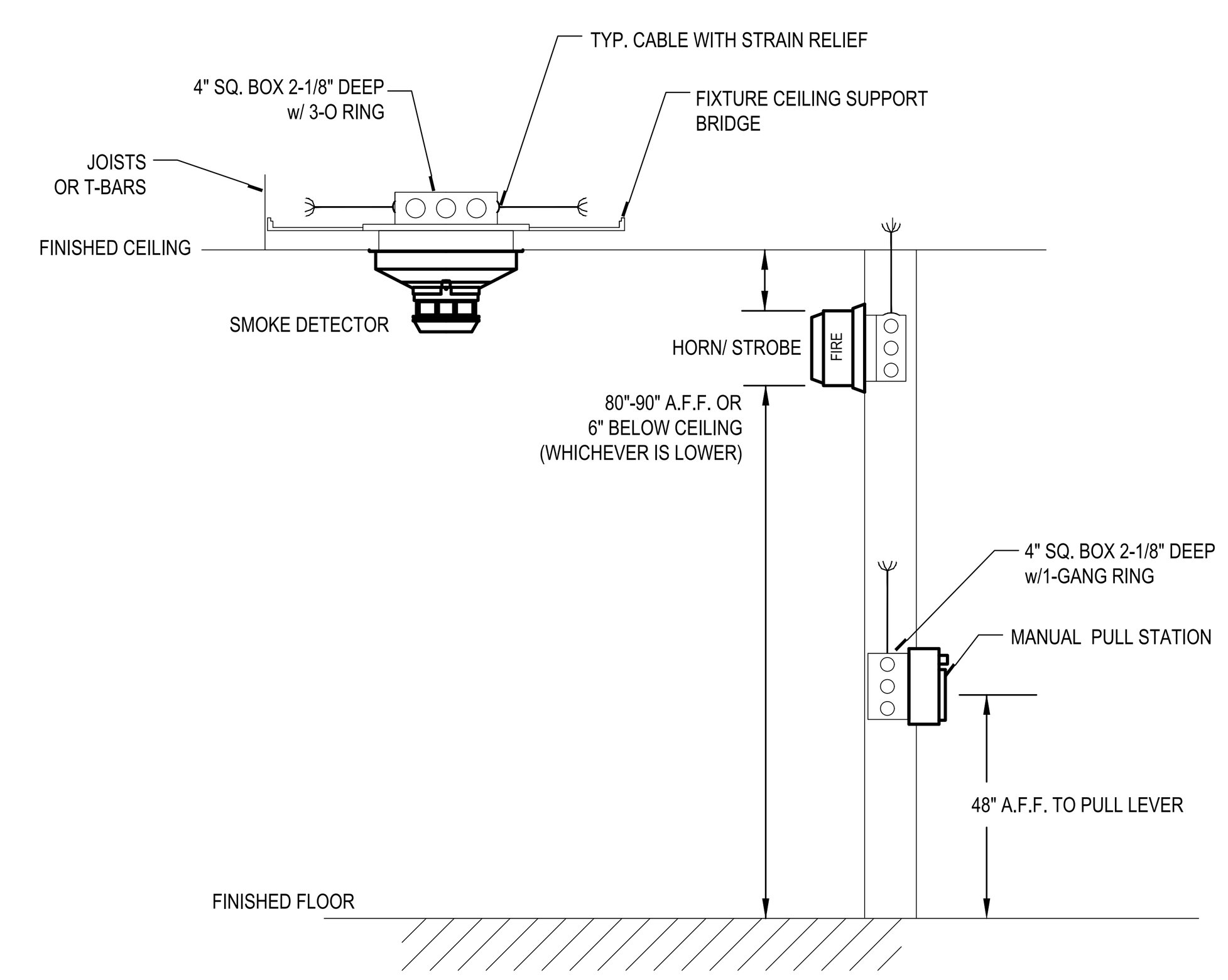


- | 14

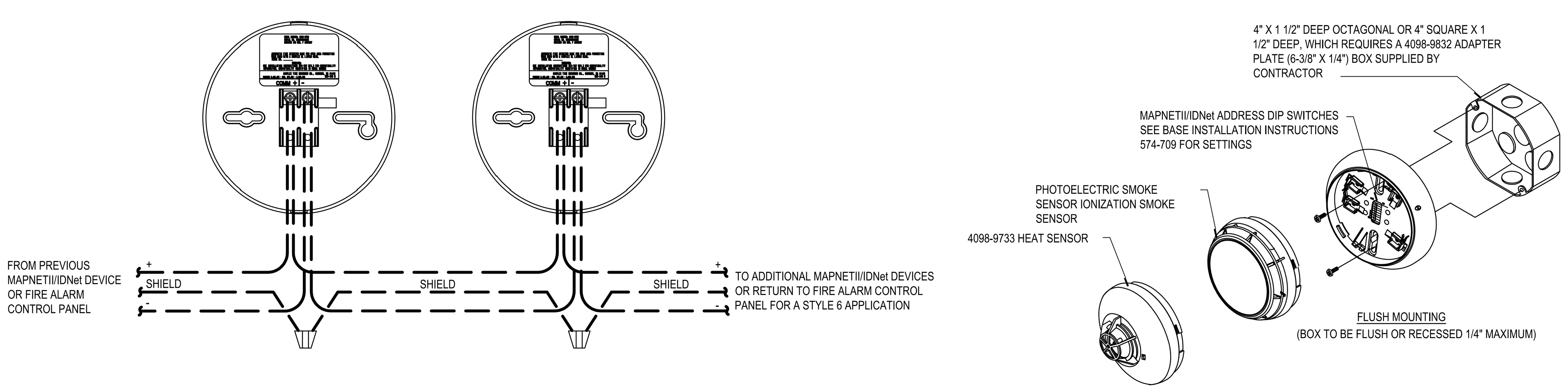
STROBE MOUNTING REQUIREMENTS | 11



FIRE ALARM DEVICE TYPICAL WIRING | 7

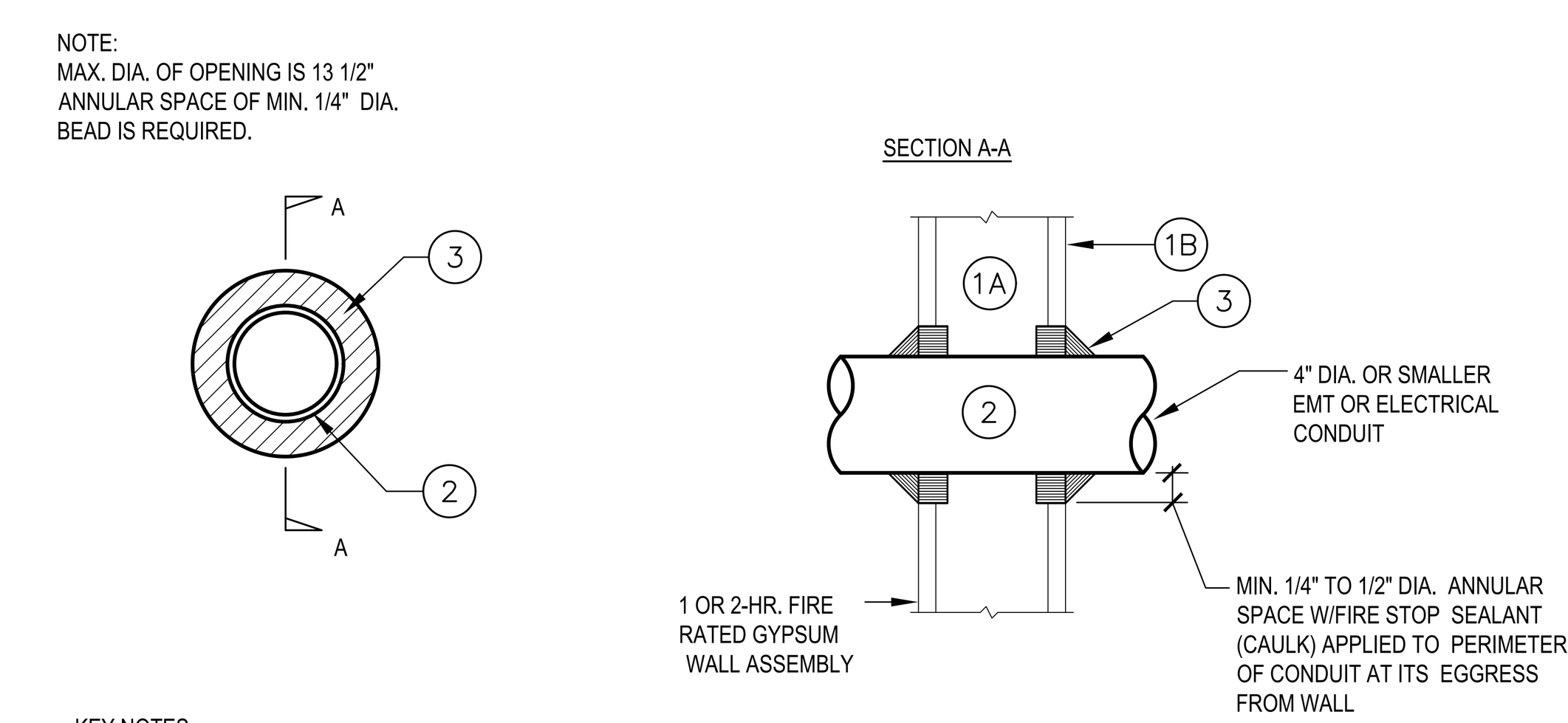


SENSOR BASE MOUNTING REQUIREMENTS | 12



CONDUIT THRU EXTERIOR WALL | 8

NOTE:
MAX. DIA. OF OPENING IS 13 1/2"
ANNULAR SPACE OF MIN. 1/4" DIA.
BEAD IS REQUIRED.



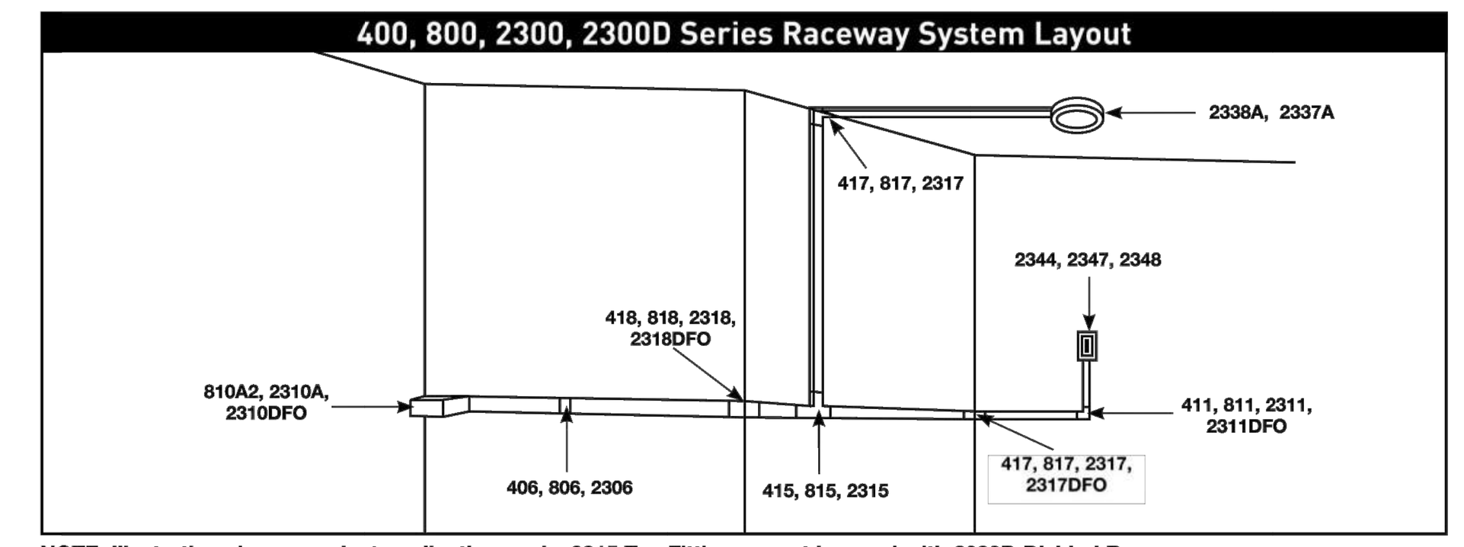
KEY NOTES:

1. WALL CONSTRUCTION: A. STEEL STUDS. B. 5/8" TYPE X GYPSUM BOARD
2. EMT/RGS CONDUIT SIZE PER DRAWINGS
3. FIRE STOP SYSTEM - ONE HOUR CAULK. APPLY TO INTERFACE WITH WALL SURFACE.

U.L. SYSTEM NO. WL 1001
FOR METAL CONDUIT ONLY

WIREMOLD 2400 RACEWAY SYSTEM | 4

400, 800, 2300, 2300D Series Raceway System Layout



NOTE: Illustration shows product applications only. 2315 Tee Fitting cannot be used with 2300D Divided Raceway.

400, 800, 2300, 2300D Raceway Series Wire Fill Capacities for Power

WIRE SIZE THHN/THWN	O.D. Inches	O.D. (mm)	NUMBER OF CONDUCTORS 400BAC	800BAC	2300BAC	2300BACD†
14 AWG	0.111	(2.8)	5	6	15	7
12 AWG	0.130	(3.3)	3	5	14	6
10AWG	0.164	(4.2)	0	4	12	5

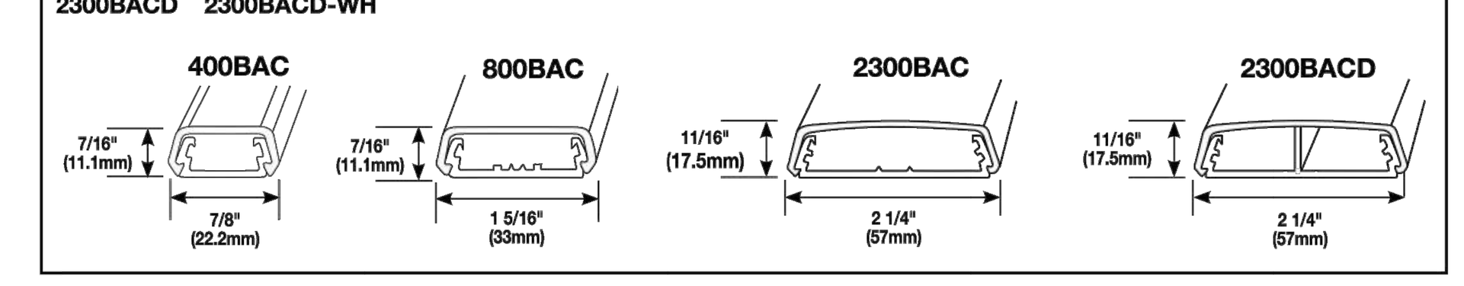
400, 800, 2300, 2300D Raceway Series Wire Fill Capacities for Communications

	CABLE/WIRE SIZE	O.D. inches	O.D. (mm)	40% FILL* 400	800	2300	2300D†
UNSHIELDED TWISTED PAIR	4-Pair, 24 AWG Cat. 3	0.190	(4.8)	1	3	11	5
	4-Pair, 24 AWG Cat. 5e	0.210	(5.3)	1	3	9	4
	4-Pair, 24 AWG Cat. 6	0.250	(6.3)	1	2	6	3
	4-Pair, 24 AWG Cat. 6a**	0.354	(9.0)	0	1	3	1
	25-Pair, 24 AWG	0.410	(10.4)	0	0	2	1
COAXIAL	RG6/U	0.270	(6.9)	0	1	5	2
FIBER	Zip Cord 0.118 x 0.157	(3 x 6)	1	3	12	6	
	Round 4 Strand Fiber	0.187	(4.8)	1	3	12	6
	Round 6 Strand Fiber	0.256	(6.5)	1	2	6	3

* Wire capacity is reduced to allow for proper conductor bend radius and maximum permissible heat rise.
** Category 6 augmented (6a) cable for 10 gigabit ethernet – max allowed cable diameter per addenda No. 11 ANSI TIA/EIA 568-B.2.
† each compartment.

400BAC, 800BAC, 2300BAC, 23000BACD Series Raceway Ordering Information

Catalog No./Item		Description/Specifications
400BAC	400BAC-WH	**Low profile, two-piece raceway with snap-on cover** – Available in 5' (1.525m and length. Supplied with wide adhesive tape along entire length of base.
800BAC	800BAC-WH	
2300BAC	2300BAC-WH	
2300BACD	2300BACD-WH	



2

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miyamotointernational.com

DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS
275 W. Hospitality Lane, Suite #100
San Bernardino, CA 92408

UNIVERSITY OF CALIFORNIA, RIVERSIDE
FALKIRK SITE AND SEISMIC IMPROVEMENTS - SUMMER 2019
3429 CANYON CREST DRIVE
RIVERSIDE, CA 92507

REVISIONS

1	ADDENDUM 1	6/14/19
2	ADDENDUM 2	6/28/19

UCR PROJECT #:	956390
UCR CAAN #:	P5673
DATE:	06-14-2019
DRAWN:	S.V

FIRE ALARM DETAILS

FA-3.1

INSPECTIONS REQUIRED
UC RIVERSIDE
Office of Planning, Design & Construction
Building, Safety and Compliance Division
CAMPUS BUILDING PERMIT

APPROVED
07/02/2019
UC Riverside
Planning, Design and Construction
Campus Building Official
Signature: Robert K. Williams
Building & Safety Division

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
07/02/2019
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: