

University of South Carolina
Longstreet Theatre Shutter Replacement

1300 Greene Street, Columbia, South Carolina

State Project Number: H27-6100-F

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February 20, 2015

ADDENDUM NO. 2

This addendum forms a part of the Contract documents and modifies the original Bidding Documents and any previous Addenda as noted below. Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may subject Bidder to disqualification.

MODIFICATIONS TO PREVIOUS ADDENDA:

None

MODIFICATIONS TO PROJECT MANUAL:

1. Reference Specification Section 107113.13, EXTERIOR ALUMINUM SHUTTERS: DELETE Specification Section 107113.13, EXTERIOR ALUMINUM SHUTTERS in its entirety, ADD in its place Specification Section 107113.13, EXTERIOR ALUMINUM SHUTTERS, Revised 2/20/2015.

MODIFICATIONS TO DRAWINGS:

ARCHITECTURAL DRAWINGS:

1. Reference Sheet A400: DELETE sheet A400 dated 1/09/2015, ADD in its place sheet A400 dated 1/09/2015, Revised 2/20/2015.
2. Reference Sheet A401: DELETE sheet A401 dated 1/09/2015, ADD in its place sheet A401 dated 1/09/2015, Revised 2/20/2015.

REQUESTED PRODUCT APPROVALS:

1. Available manufacturers of shutter products that may be included as long as they meet the specifications includes:
 - a. Safe Air of Illinois and Dowco Products Group - 1855 South 54th Ave, Cicero, IL. 60804 Tel. 708-652-9100 Fax 708-652-9158

QUESTIONS FROM CONTRACTORS:

0. Question: Shutter 1,3,4 - 1.25 x 2 stile material is not an available size. Can 1.5 x 2 be substituted on stiles?
 1. **Answer: Yes**
1. Question: Shutter 1,3,4 - 1.25 x 3 rail material is not an available size. Can 1.5 x 3 be substituted?
 1. **Answer: Yes**
2. Question: Shutter 1,2,3,4 - 1.25 x 7.25 bottom rail is not an available size. Can 1.5 x 6 be substituted?
 1. **Answer: Yes**
3. Question: Shutter 2 - 1.25 x 5.5 mid rail is not an available size. Can 1.5 x 6 be substituted?
 1. **Answer: Yes**
4. Question: Shutter 2 - 1.25 x 3.25 stiles are not an available size. Can 1.5 x 3 be substituted?
 1. **Answer: Yes**

5. Question: Shutter 2 - 1.25 x 3.5 crown rail is not an available size. Can 1.5 x 3 be substituted?
1. Answer: Yes
6. Question: Shutter 2 - Can this be made as a three separate panels? Mating stiles could be 1.5 x 1.5 to yield 3" when ganged together.
1. Answer: Yes
7. Question: Drawings call for insect screen at back of shutter. Section 107113.13 EXTERIOR ALUMINUM SHUTTERS 2.3 Materials calls for a backing panel with the same finish as the shutter. Specify what the backing panel should be: solid or bug screen.
1. Answer: See changes to specification section 107113.13 in addendum 2.
8. Question: Please stipulate all joints that are to receive caulking/sealant.
1. Answer: Perimeter joints around the shutters are to receive sealant.
9. Question: Section 107113.13 EXTERIOR ALUMINUM SHUTTERS calls for louver slat to be .062 thickness. Is this a wall thickness for rectangular tubing or the actual thickness of the louver slat. Specify louver profile and overall size.
1. Answer: The 0.062" thickness is for the aluminum, the louver profile is a nominal 1/4" thick x nominal 1 3/4" wide x width of the shutter. These may vary slightly within the standards for the louver manufacturer.

END OF ADDENDUM NO. 2

107113.13 EXTERIOR ALUMINUM SHUTTERS

Revised 02/20/2015

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section covers exterior aluminum fixed and hinged shutters.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's complete product data for all specified components, including specifications, finish information and installation instructions.
- B. Shop Drawings: : Submit shop drawings for each individual shutter opening showing field dimensions, layout, sizes and types, product materials, components and accessories, fabrication data, operation, finishes, rough-in dimensions, anchorage and installation requirements and details.
- C. Samples / colors: Submit Custom Color as selected by Architect/Owner to match paint chip on aluminum component.
- D. Partial Mockups: Build mockups to verify details, to demonstrate aesthetic effects (mockup is not for color selection and manufacturers standard white color can be used for partial mockups), and to set quality standards for materials and execution.
 - 1. Build partial mockups of the following:
 - a. Corner section of detail 7/A401 including wood substrate, insect screen, brake metal, proposed attachment method, and shutter. Include 3/4" plywood to represent the existing stucco walls (back wall behind shutter assembly) and jamb. Mockup to be a minimum of 18" long (from corner condition), and 12" above and below the detail.
 - b. Corner section of detail 9/A401 including wood substrate, insect screen, brake metal, proposed attachment method, shutter. Include 3/4" plywood to represent the existing stucco walls (back wall behind shutter assembly) and jamb. Mockup to be a minimum of 18" long (from corner condition), and 24" above the detail.
- E. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 - 1. Build mockup of one unit of both the lower and upper shutters (Shutter 1, 2, 3 and 4) as shown on Drawings and install complete.

- a. Include sealant-filled joint in mockup.
 - b. Include through-wall flashing
 - c. Include wood blocking and framing
 - d. **Include insect screen**
2. Clean exposed faces of mockups prior to review by University.
 3. Protect accepted mockups from damage.
 4. Approval of mockups is for color, relationship of sealant colors to shutter unit colors; tooling of joints; and aesthetic qualities of workmanship.
 - a. Approval of mockups is also for other material and construction qualities specifically approved by Architect in writing.
 - b. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 5. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- F. Quality Assurance Submittals:
1. Test Reports: Certified test reports showing compliance with specified requirements.
 2. Certificates: Manufacturer's certification that design criteria meets specified requirements.
- G. Operating and Maintenance Instructions: Submit detailed maintenance requirements and operating instructions.
- H. Warranty: Submit specified warranty documents.
- #### 1.4 QUALITY ASSURANCE
- A. Installer Qualifications:
1. Use only manufacturer's factory trained installers or qualified licensed installers approved by shutter manufacturer.
- B. Regulatory Requirements:
1. Comply with all local and governing code requirements.
 2. Unless required otherwise, fabricate to withstand wind loads that carry same rating as component and cladding of walls
 3. Pre-Installation Conference: Conduct a pre-installation meeting to verify project installation and coordination requirements, field conditions, and manufacturer instructions
 4. Welding Qualifications: Qualify procedures and personnel according to the following:
 - a. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."
 - b. AWS D1.6/D1.6M, "Structural Welding Code - Stainless Steel."
- #### 1.5 QUALITY ASSURANCE
- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver components in manufacturer's original, unopened, undamaged containers with identification labels intact. Store components protected from harmful weather conditions and damage from other construction activity.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify actual measurements of openings by field measurements before fabrication. Show recorded measurements on shop drawings for each opening.

1.8 WARRANTY

- A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's warranty document executed by an authorized company official for both installation, finish and materials.
 - 1. Warranty period: 20 years.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain shutters, accessories and associated trim from single source from a single manufacturer where indicated to be of same type, design, or factory-applied color finish.
- B. Available Manufacturers offering products that may be incorporated into the work include but are not limited to the following:
 - 1. Shutter Revolution – contact: Gary Dunne 704.658.0062 cell: 704.806.3312
gdunne@shutterrevolution.com
 - 2. Windward Shutter – contact Tim Smith 843-881-6262
veronica@windwardshutters.com
 - 3. The Louver Shop of Columbia – Brian Peavy (478)-318-2593
 - 4. Safe Air of Illinois and Dowco Products Group - 1855 South 54th Ave, Cicero, IL. 60804 Tel. 708-652-9100 Fax 708-652-9158

2.2 PERFORMANCE REQUIREMENTS

- A. Structural Performance: shutters shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated without permanent deformation of louver components, noise or metal fatigue caused by louver-blade rattle or flutter, or permanent damage to fasteners and anchors. Wind pressures shall be considered to act normal to the face of the building
 - 1. Wind Loads: Determine loads based on a uniform pressure of 30 lbf/sq. ft., acting inward or outward.
 - 2. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes:
 - a. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.3 MATERIALS

- A. Components:
 - 1. Frame: Extruded aluminum, 6063-T6 alloy, 0.062 inch wall thickness minimum or as required to meet performance requirements
 - 2. Slat Type: Extruded Aluminum, 6063-T6 alloy, 0.062 inch thickness minimum or as required to meet performance requirements.
 - 3. Hardware and Hinges: Type 304 Stainless Steel
 - 4. Screening for Aluminum Shutters:
 - a. Insect Screening: Aluminum, 18-by-16 mesh, 0.012-inch wire.
 - b. Mount in aluminum frames attached to back side of the aluminum shutter.

2.4 SHOP FINISH

- A. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils (0.04 mm). Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
- B. Color to match Sherwin Williams SW 7005 Pure White, Semi-Gloss

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify conditions of substrates to determine if acceptable for shutter installation in accordance with manufacturer's instructions. Correct all unsatisfactory conditions prior to commencing shutter installation.

3.2 INSTALLATION

- A. Install track and all shutter components to comply with project shop drawings and manufacturer's written installation requirements.
- B. Locate and place shutters level, plumb, and at indicated alignment with adjacent work.
- C. Use concealed anchorages at all locations. Provide stainless steel anchors and washers where required to make connections.
- D. Where metal surfaces are in contact with masonry, concrete or dissimilar metals, protect with manufacturer's recommended isolation coatings or tape.
- E. After installation, lubricate if needed and adjust shutters to operate properly during closure.
- F. Form closely fitted joints with exposed connections accurately located and secured.
- G. Provide perimeter reveals and openings of uniform width for sealants and joint fillers, as indicated.

3.3 CLEANING

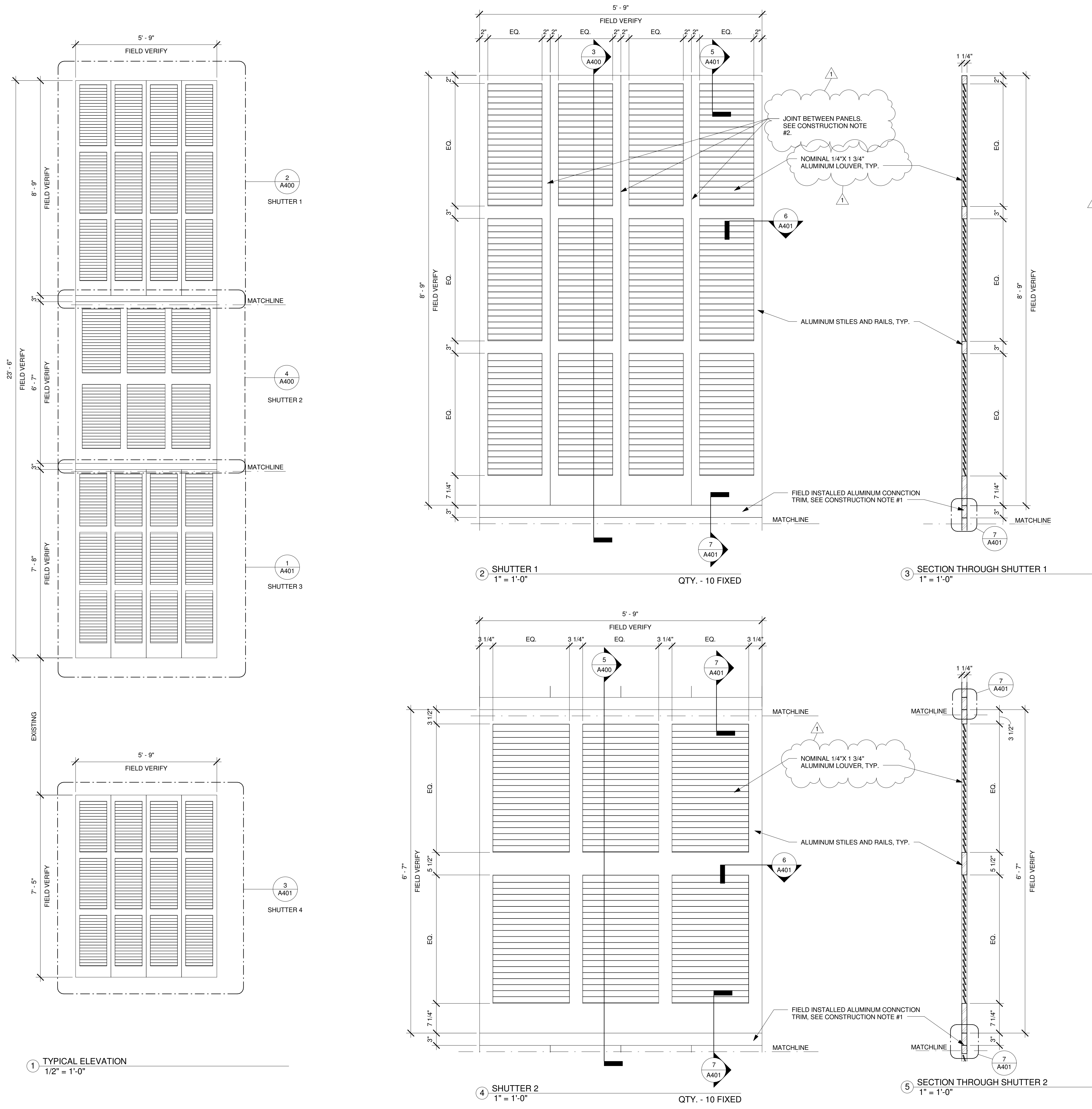
- A. Clean exposed shutter surfaces that are not protected by temporary covering, to remove fingerprints and soil during construction period. Do not let soil accumulate during construction period.
- B. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to finishes. Thoroughly rinse surfaces and dry.
- C. Restore shutters damaged during installation and construction so no evidence remains of corrective work. If results of restoration are unsuccessful, as determined by Architect, remove damaged units and replace with new units
 - 1. Touch up minor abrasions in finishes with air-dried coating that matches color and gloss of, and is compatible with, factory-applied finish coating.
- D. Clean installed components in accordance with manufacturer's instructions prior to Owner's acceptance. Properly remove from the site all debris remaining from this installation.
- E. Inadequate surface cleaning will result in corrosion formation & potential structural damage.

3.4 PROTECTION

- A. Comply with manufacturer's recommendations and protect completed shutter installations from damage during remaining construction so as not to void warranty.

END OF SECTION 107113.13

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- DEMOLITION NOTES**
- REMOVE ALL EXISTING WOOD SHUTTERS AND WOOD SUB FRAME COMPLETE, INCLUDING ANY CAULKING. USE SPECIAL PRECAUTIONS TO NOT DAMAGE ANY EXISTING FINISHES.
- GENERAL NOTES**
- PATCH AND REPAIR ALL EXISTING FINISHES DISTURBED OR DAMAGED DURING DEMOLITION AND CONSTRUCTION. MATCH EXISTING FINISHES. PRIME AND PAINT WITH SHERWIN WILLIAMS "LOXON" SYSTEM. MATCH EXISTING COLOR.
 - ALL FASTENERS SHALL BE STAINLESS STEEL. THERE SHALL BE NO EXPOSED FASTENERS USED IN THE INSTALLATION OF THIS SYSTEM.
- CONSTRUCTION NOTES**
- THE DESIGN INTENT IS FOR THE 3" FIELD INSTALLED ALUMINUM CONNECTION TRIM TO BE INSTALLED AFTER EACH SHUTTER IS IN CLIPPED INTO PLACE, CONSECUTIVELY. THIS WILL ALLOW THE CONTRACTOR ROOM TO MAKE ADJUSTMENTS. IF THE CONTRACTOR USES AN ALTERNATE METHOD OF INSTALLATION, THE METHOD MUST BE REVIEWED AND APPROVED BY THE OWNER AND THE ARCHITECT.
 - AT FIXED SHUTTER PANELS IT IS THE INTENT OF THE OWNER TO HAVE INDIVIDUAL SHUTTER PANELS, ATTACHED TO EACH OTHER SO THAT THE LOOK IS SIMILAR TO A BI-FOLD SHUTTER. IF THE CONTRACTOR USES AN ALTERNATE METHOD OF INSTALLATION, THE METHOD MUST BE REVIEWED AND APPROVED BY THE OWNER AND THE ARCHITECT.
 - SUBFRAME TO BE EXTERIOR GRADE. PRESSURE TREATED 2X MEMBERS ANCHORED TO EXISTING WALL. PROVIDE SHIM SPACE AND WEEPS AT BOTTOM OF SUBFRAME WHERE IT ATTACHES TO THE EXISTING WALL.
 - HARDWARE FOR OPERABLE SHUTTER:
10 HINGES (5 HINGES PER LEAF)
4 PULLS (2 PER LEAF, 1 EXTERIOR AND 1 INTERIOR)
1 HASP
ALL HARDWARE SHALL BE POWDER COATED 304 STAINLESS STEEL
 - PROVIDE INSECT SCREENING AT THE BACK OF ALL SHUTTERS WITH THE EXCEPTION OF THE OPERABLE SHUTTERS, WHICH WILL RECEIVE NO BACKING.
 - ANY EXISTING STUCCO DISTURBED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPAIRED WITH THE FOLLOWING STUCCO MIXES. CONTRACTOR SHALL VERIFY TYPE OF STUCCO TO BE REPAIRED PRIOR TO COMMENCEMENT.
 - FOR MODERN STUCCO:** A MIX OF 1 PART TYPE M MASONRY CEMENT AND 3.4 PARTS LOCAL AGGREGATE.
TYPE M MASONRY CEMENT - GUARANTEED SUPPLY COMPANY 1850 SHOP ROAD COLUMBIA, SC 803-212-1626
WASHED FINE GRAINED MASONRY SAND - B&T SAND MINE (MEADORS SAND LIBRARY #10) 5960 EDMUND HWY. LEXINGTON SC 803-955-0771
 - FOR HISTORIC STUCCO:** A MIX OF 1 PART LIME AND 2.5 PARTS LOCAL AGGREGATE.
TYPE S HYDRATED LIME - GUARANTEED SUPPLY COMPANY 1850 SHOP ROAD COLUMBIA, SC 803-212-1626
WASHED FINE GRAIN MASONRY SAND - LUGOFF SAND MINE (MEADORS SAND LIBRARY #11) 1428 FORT JACKSON ROAD LUGOFF, SC 803-771-6150
 - ALL PARTS SHALL BE MIXED BY VOLUME AND NOT BY WEIGHT. DRY INGREDIENTS SHOULD BE WELL MIXED PRIOR TO ADDING WATER. CURED SAMPLES SHALL BE COMPARED TO THE ORIGINAL TO ENSURE AN AESTHETIC MATCH.
 - CONTRACTOR SHALL FIELD VERIFY ALL MASONRY OPENINGS PRIOR TO ORDERING AND FABRICATING METAL SHUTTERS TO PROVIDE CONTINUOUS AND CONSISTANT GAP BETWEEN SHUTTERS AND MASONRY OPENINGS.
 - CONTRACTOR SHALL FURNISH AND INSTALL ONE FULL SIZE MOCK UP, IN ONE BAY OF THE BUILDING (EAST SIDE), WHICH IF APPROVED SHALL REMAIN AS PART OF THE PROJECT AND SERVE AS A STANDARD OF QUALITY AND WORKMANSHIP.

ISSUED FOR BIDDING JANUARY 9, 2015

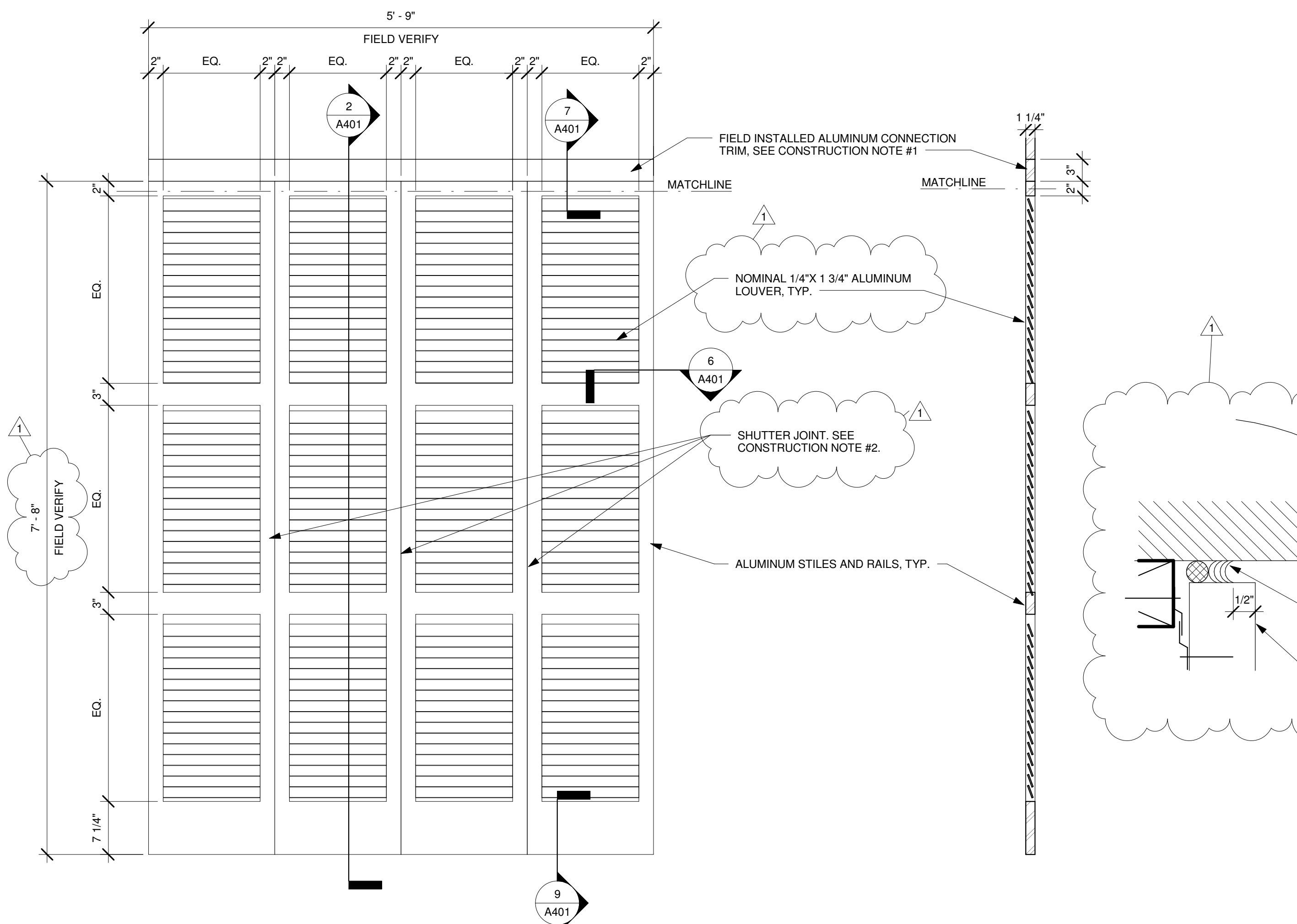
<p>CLIENT NAME UNIVERSITY OF SOUTH CAROLINA</p> <p>PROJECT NAME USC LONGSTREET THEATRE SHUTTER REPLACEMENT</p> <p>LOCATION 1300 GREENE STREET, COLUMBIA, SC</p>	<p>STUDIO 2LR, INC. 801 GERVAIS ST. SUITE 201 COLUMBIA, SOUTH CAROLINA 29201 P. 803.233.6602 F. 802.233.6613 STUDIO2LR.COM</p> <p style="text-align: center;">STUDIO 2LR ARCHITECTURE + INTERIORS</p>
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REVISIONS		
NO.	DATE	DESCRIPTION
1	2/18/2015	Revision 1

USC PROJECT # CP00366430
STATE PROJECT # H27-6100

PROJECT NUMBER	14066
SHEET NUMBER	A400
SHEET NAME	ELEVATIONS
DATE	01/09/15

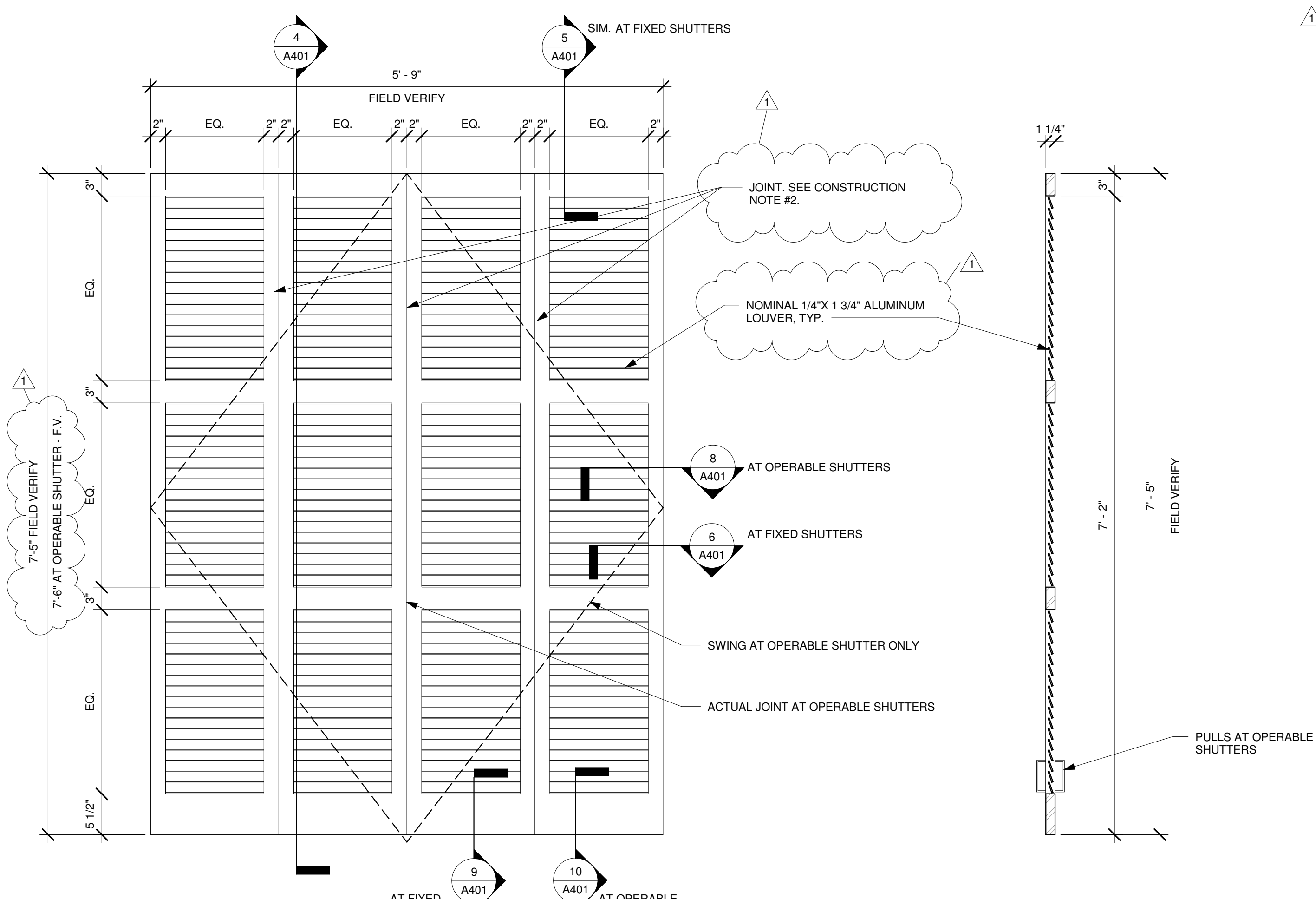
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1 SHUTTER 3
1" = 1'-0"

QTY. - 10 FIXED

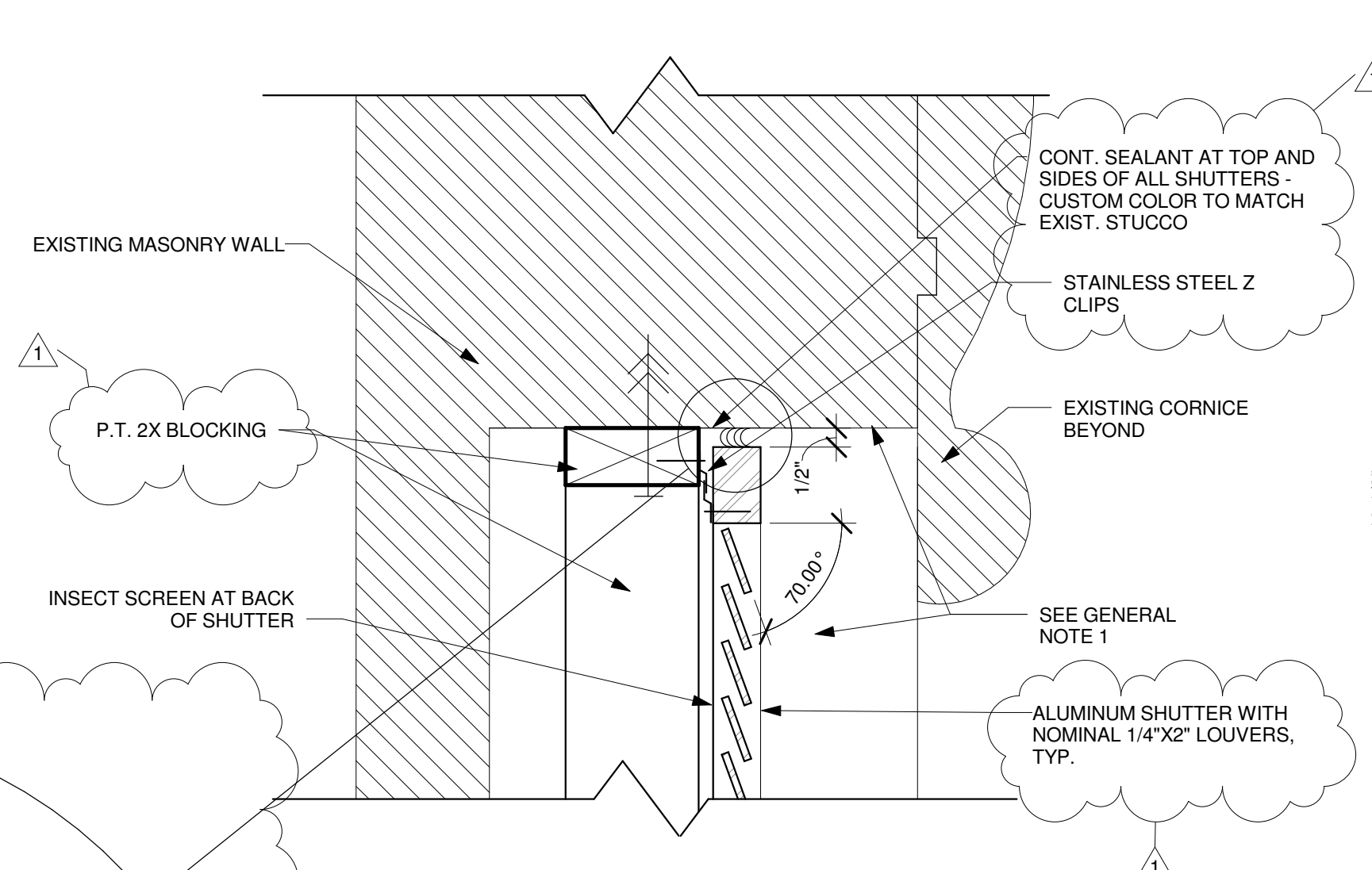
2 SECTION THROUGH SHUTTER 3
1" = 1'-0"



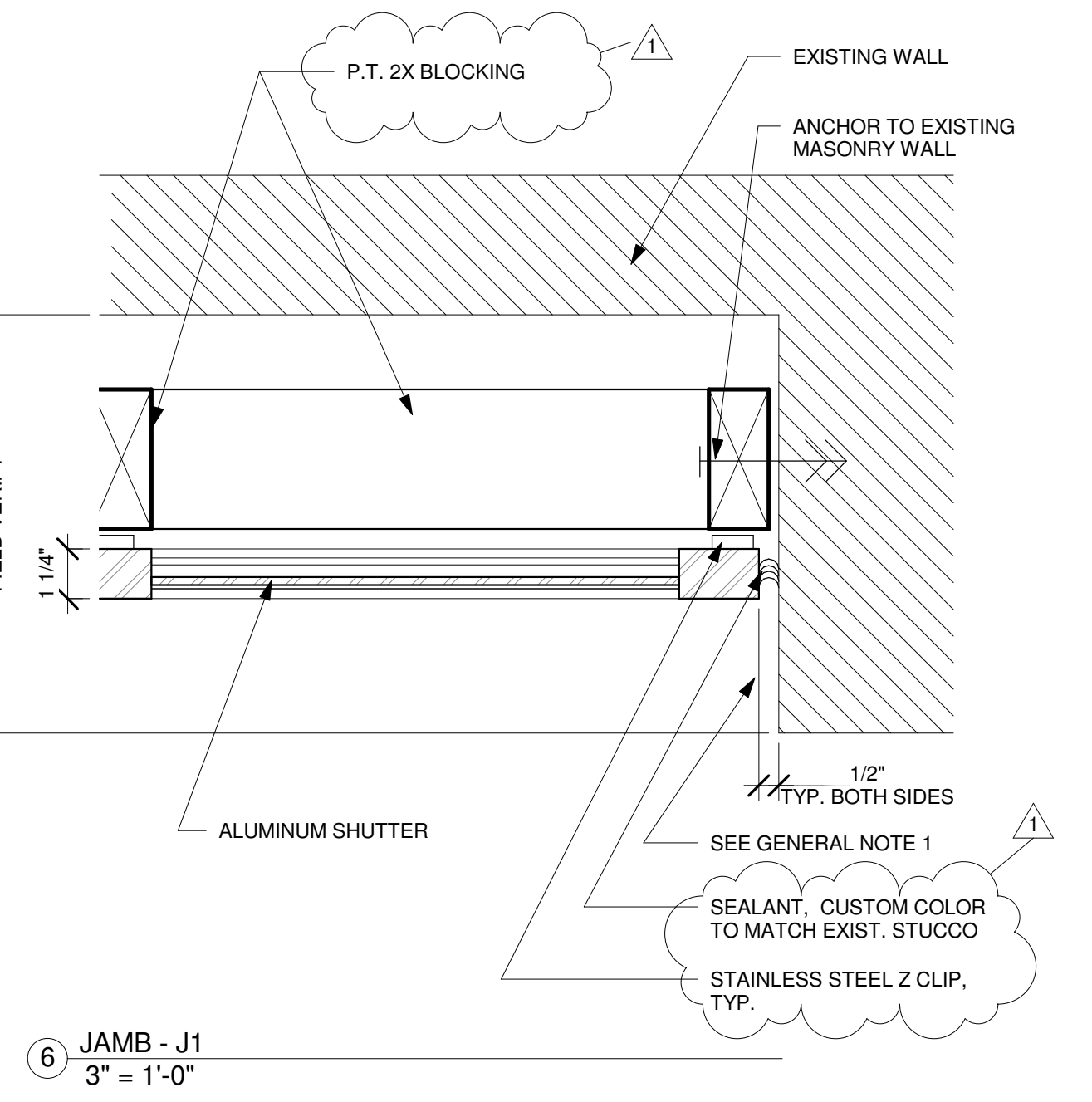
3 SHUTTER 4
1" = 1'-0"

QTY. 8 - 7 FIXED,
1 OPERABLE

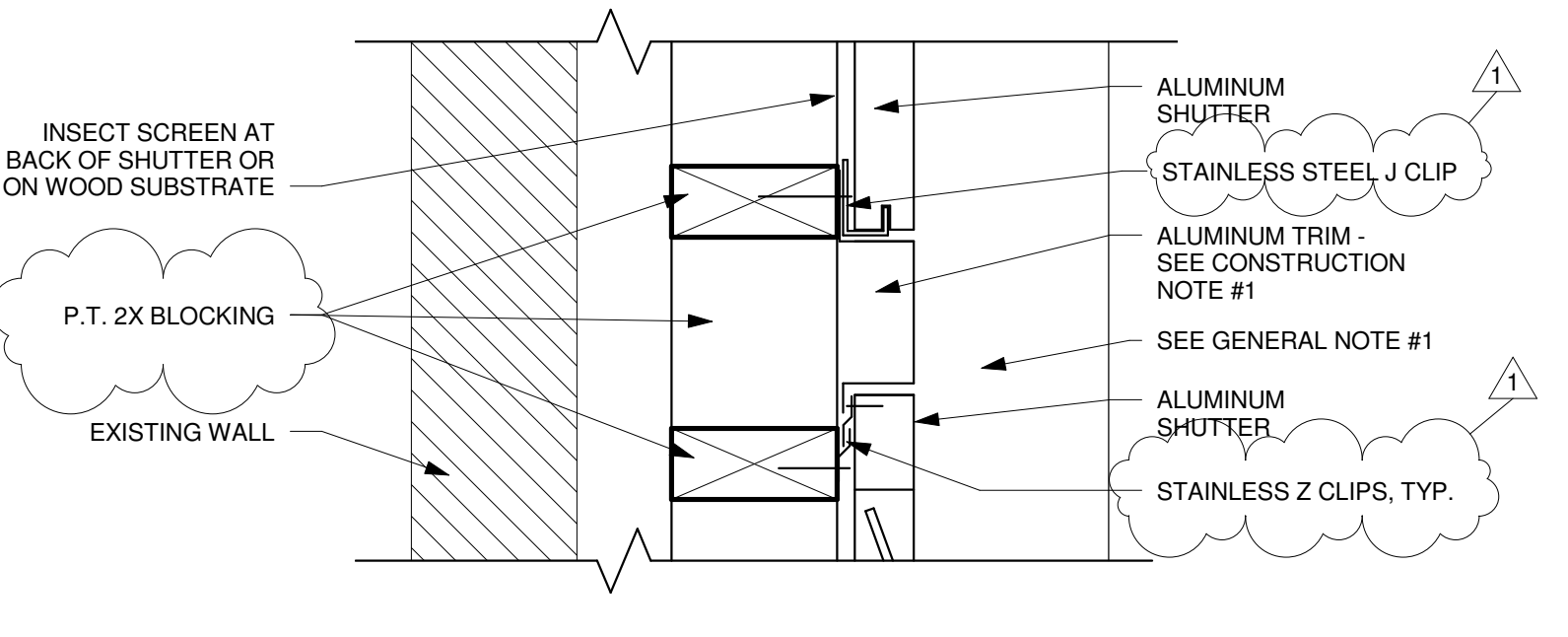
4 SECTION THROUGH SHUTTER 4
1" = 1'-0"



5 HEAD - H1
3" = 1'-0"

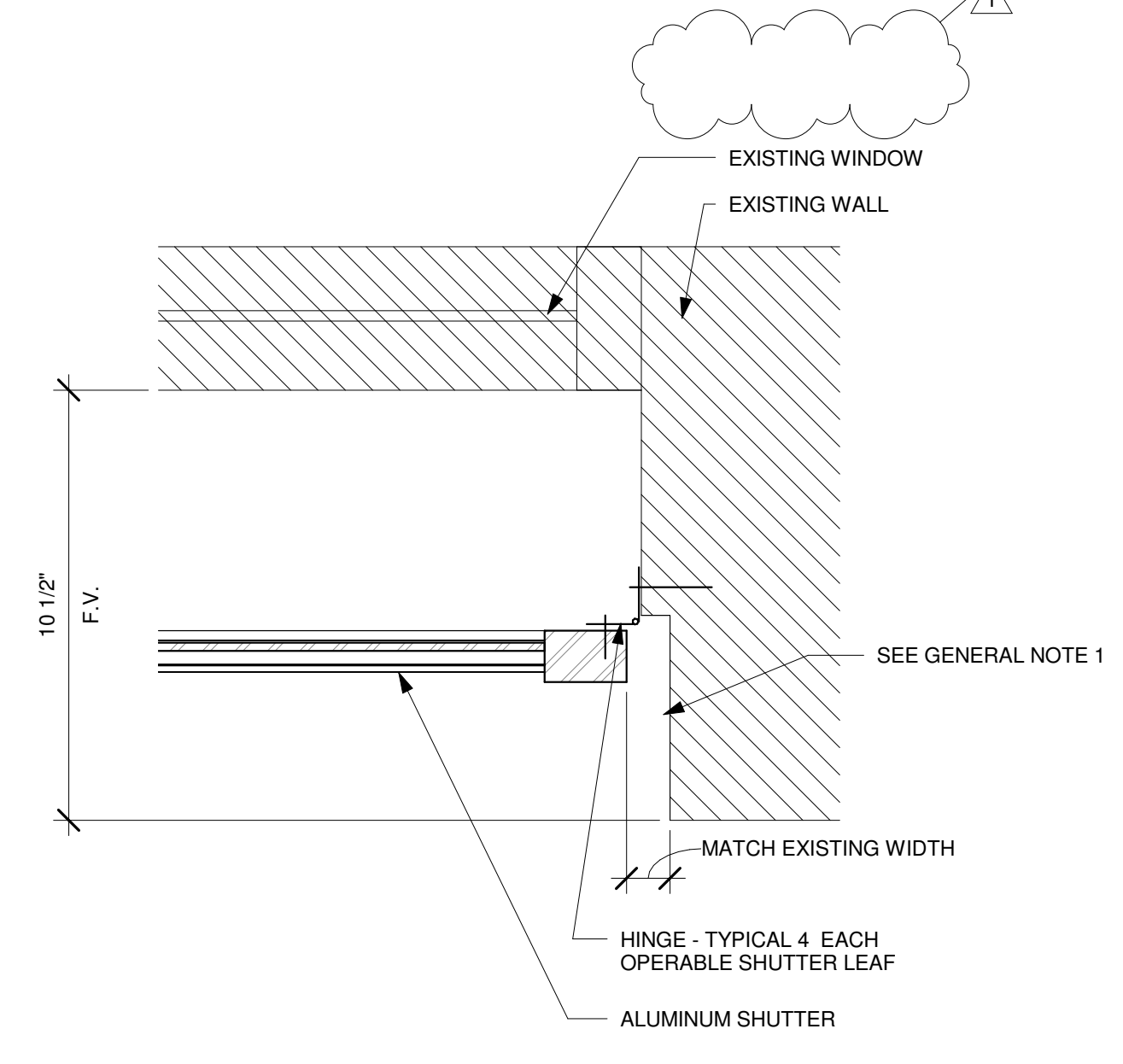


6 JAMB - J1
3" = 1'-0"



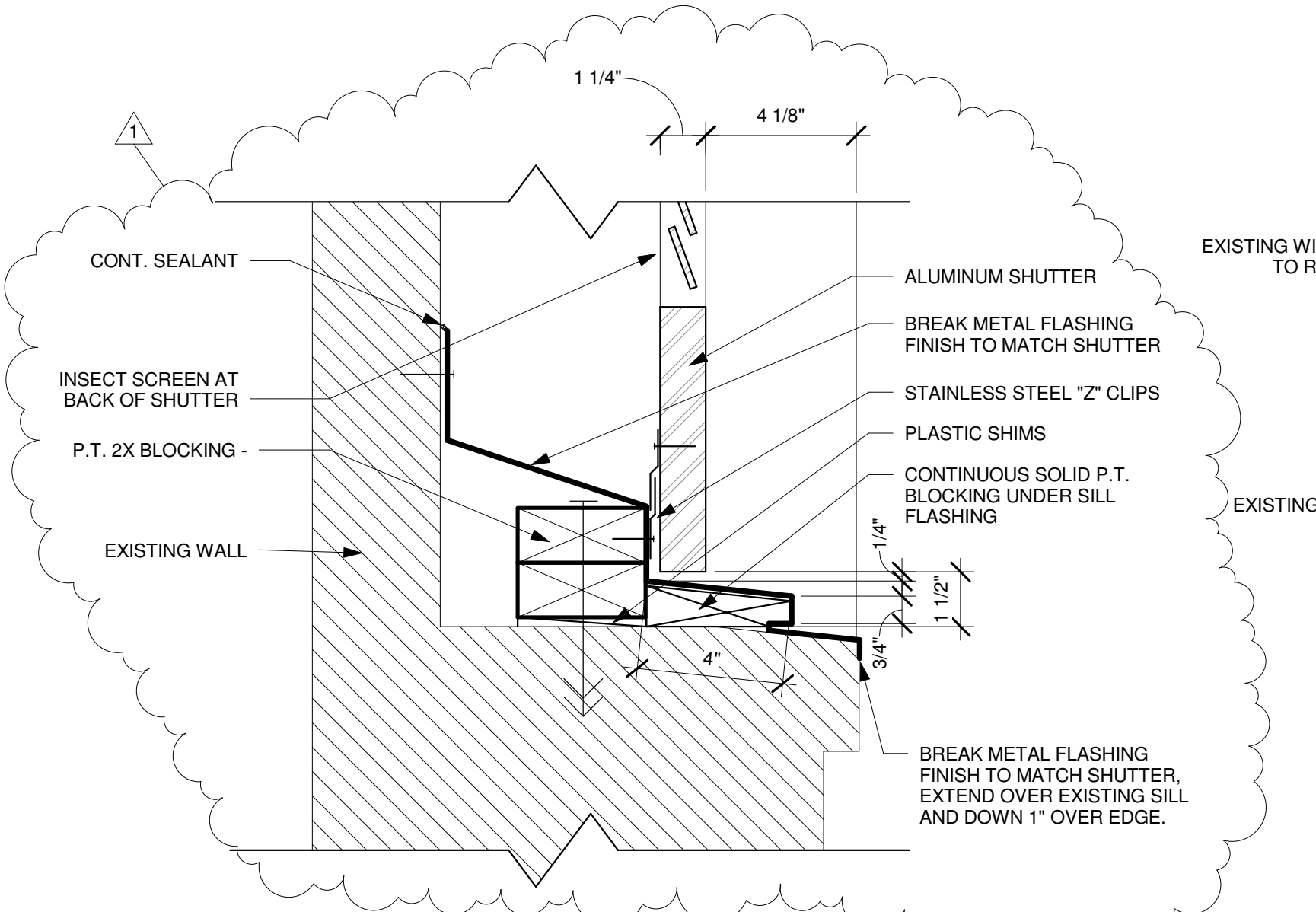
7 MULLION - M1
3" = 1'-0"

AT FIXED SHUTTERS

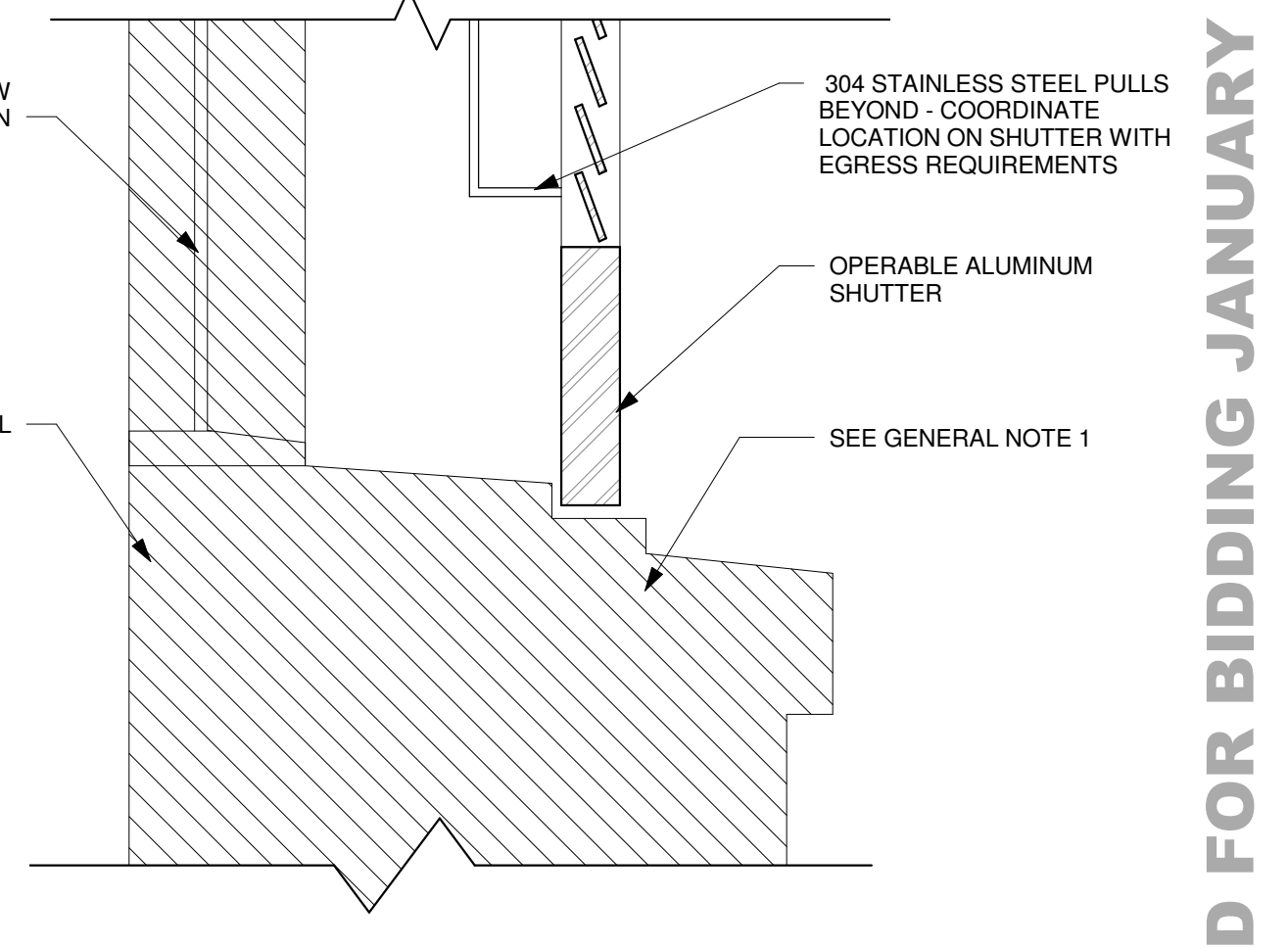


8 JAMB - J2
3" = 1'-0"

AT OPERABLE SHUTTER



9 SILL - S1
3" = 1'-0"



10 SILL - S2
3" = 1'-0"

AT OPERABLE SHUTTER

STUDIO 2LR, INC.
801 GERVAIS ST. SUITE 201
COLUMBIA, SOUTH CAROLINA 29201
P. 803.233.6602 F. 802.233.6613
STUDIO2LR.COM

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UNIVERSITY OF SOUTH CAROLINA
PROJECT NAME
**USC LONGSTREET THEATRE
SHUTTER REPLACEMENT**
LOCATION
1300 GREENE STREET, COLUMBIA, SC

ISSUED FOR BIDDING JANUARY 9, 2015

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