SALASO'BRIEN

expect a difference

ADDENDUM

ADDENDUM #: **3**
DATE: **May 10, 2022**

SO PROJECT #: 0384-15-00-18
SCO #: 18-18469-01A

PROJECT:	Transportation Building Complex Improvements
OWNER:	NC Department of Transportation
CITY, STATE:	Raleigh, NC

This Addendum is hereby made a part of the Contract Documents to the same extent as if originally included therein. This Addendum must be acknowledged on the Form of Proposal and shall be placed with the Contract Documents.

Drawings and Project Manual dated March 29, 2022 for this project are hereby modified, corrected, or supplemented as follows:

DRAWINGS

Sheet A101: ***Replace*** sheet with attached. See revisions to details 5,6 and 7 in the attached drawing. Contractor to note that the profiles for the 2 ½" window are for information only. The actual details of the profile may differ between manufacturers.

SPECIFICATIONS

Section 085113 Aluminum Windows: ***replace*** with attached section

Section 088000 "Glazing": ***delete*** sub-paragraph 2.2.C Windborne Debris Impact Resistance,

~~C. Windborne-Debris-Impact Resistance: Exterior glazing shall comply with basic-protection testing requirements in ASTM E 1996 for Wind Zone 1 when tested according to ASTM E 1886. Test specimens shall be no smaller in width and length than glazing indicated for use on Project and shall be installed in same manner as glazing indicated for use on Project.~~

~~1. Large-Missile Test: For glazing located within 30 feet (9.1 m) of grade.~~
~~2. Small-Missile Test: For glazing located more than 30 feet (9.1 m) above grade.~~

CLARIFICATIONS/CONTRACTOR QUESTIONS

1. Wall legend indicates wall types to be 20ga. However, on sheet A218 plan details it shows 16ga. Can you clarify? **It is acceptable to utilize 20ga steel studs in all interior partition locations.**

2. Are we replacing the exit lights and emergency wall packs in the corridors with new fixtures? **No. Remove and reinstall as necessary. See general note 2.**

3. Are we replacing fire alarm devices in corridors with new devices? **No. Remove and reinstall as necessary. See general note 2.**

4. Are we replacing lighting control occupancy sensors in corridors with new lighting control devices? **No. Remove and reinstall as necessary. See general note 2.**

5. Is any stainless steel ductwork or stainless steel dampers required for this project? Note: Spec 233100 states ductwork to be galvanized. Spec 233300, page 233300-3, lines 15/16: fire and smoke dampers calls for 316 stainless steel dampers "in other wet locations". Bathrooms have what appears to be a janitor's closet mop basin – is this considered "wet locations" that would require stainless steel fire/smoke dampers or stainless steel ductwork? **Stainless steel ductwork**

or dampers are *NOT* required. While there is occasional water use associated with toilets/lavatories and mop sink, there is not enough consistent moisture for this to be considered a "wet location".

6. The drawings were based on Traco 2410 Thermally Broken Window. This product has since been discontinued. **The design is now to be based on Kawneer 8225 TLF Thermal Windows. The drawings however continue to reflect a Traco profile at the sill.**

7. Details 5, 6, & 7 on A101 show both 'NEW CONT STL PLATE' and 'NEW CONT ALUM PLATE' for attachment to existing steel plate. Do you know which is going to be required on the project? **Please see revised Sheet A101. The continuous sill plate should be steel. (note all steel to have bituminous paint applied to all surfaces.)**

8. Specs for 085113-4 2.4 Insect Screens states that "Screen wickets are not permitted" and goes on to say that "Full, inside for project-out sashes" are required. We are not familiar with any screens on the market that would match these conditions (non-wicket while still being an inside full screen for a project-out window) and would ask for clarification or correction. **With a pivot shoe operator and a hook bolt lock a wicket in the screen should not be necessary as the means of operation are attached at the frame. See attached updated aluminum window specification.**

9. Specs for 088000-3 2.2 © calls for hurricane/large & small missile tested glazing. This would generally indicate to us an impact-resistant window type including laminated glazing as part of the IG unit… but there's no indications in the Aluminum Windows Specs or in the plans indicating these need to be impact-rated windows. We're glad to include laminated glazing rated for impact-resistance as stated but want to make sure that's the intent here: to include laminated impact glazing in non-impact rated windows. Any correction or clarification regarding this is appreciated. **Impact resistance is not required, see above.**

10. Panning is indicated in the specifications but not indicated on the drawings. **There is no panning required. Panning typically would require an interior installation. Give the occupancy of the building and the need for minimal disruption to occupants, a requirement for panning is deleted from the specification.**

END OF ADDENDUM #3

SECTION 085113 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes aluminum windows for exterior locations.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product, including all product test reports.

B. Shop Drawings: Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation. Anchoring shall indicate means of anchoring to other work.

C. Samples: For each exposed product and for each color specified.

1.4 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Sample warranties.

1.5 WARRANTY

A. Manufacturer's Special Warranty: Manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.

1. Warranty Period:

a. Window: 10 years from date of Final Completion.
b. Glazing Units: 5 years from date of Final Completion.
c. Aluminum Finish: 10 years from date of Final Completion.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An installer which has successfully completed installations of a similar size and quantity, including phased installations for fully occupied buildings. Provide qualifications and locations of similar installations.

B. Manufacturer Qualifications: A manufacturer capable of fabricating aluminum windows that meet or exceed performance standards indicated.

C. Source Limitations: Obtain all Storefront and Aluminum windows from the same manufacturer.

D. Mock-ups: Carefully remove and existing window and provide a mock-up installation at a location to be determined with the owner. Mock up will evaluated both the installed product as well as the duration of time to install as well as other trades finish work.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify all existing window opening conditions with field measurements prior to fabrication. Indicate field verified measurements on all shop drawings.

PART 2 - PRODUCTS

2.1 WINDOW PERFORMANCE REQUIREMENTS

A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.

1. Window Certification: AAMA certified with label attached to each window.

B. Performance Class and Grade: AAMA/WDMA/CSA 101/I.S.2/A440 as follows:

1. Minimum Performance Class: AW.
2. Minimum Performance Grade: PG90-AP.

C. Air Infiltration: The test specimen shall be tested in accordance with ASTM E 283 with a minimum window size of 60” x 36”. Air infiltration rate shall not excees 0.10 cfm/ft^2 at a static air pressure differential of 6.2 psf.

D. Water Resistance: The test specimen shall be tested in accordance with ASTM E 547 and ASTM E 331 with a minimum window sie of 60” x 36” with no leakage at pressure differential of 15 psf.

E. Uniform Load Deflection: No deflection in excess of L/175 of the span of framing members with a minimum static air pressure difference of 90 psf applied in positive and negative direction per ASTM E 330.

F. Uniform Load Structural Test: A minimum static air pressure difference of 135 psf shall be applied in the positive an negative direction per ASTM E 330.

G. Component Testing: All components shall be tested and comply with testing in accordance with ANSI AAMA/WDMA/CSA 101/I.S.2/A440.

H. Thermal Transmittance: NFRC 100 maximum whole-window U-factor of 0.30 Btu/sq. ft. x h x deg F (1.71 W/sq. m x K).

I. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-window SHGC of 0.27.

J. Condensation-Resistance Factor (CRF): Provide aluminum windows tested for thermal performance according to AAMA 1503, showing a CRF of 52.

K. Thermal Movements: Provide aluminum windows, including anchorage, that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change: 120 deg F (67 deg C) ambient; 180 deg F (100 deg C) material surfaces.

2.2 ALUMINUM WINDOWS

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

1. Kawneer North America, an Arconic company. Kawneer 8225TLF “Basis of Design”
2. TRACO.
3. Wausau Window and Wall Systems; Apogee Wausau Group, Inc.

B. Operating Types: As indicated on Drawings.

1. Project Out bottom sashes on the first floor

2. Fixed windows all other floors

C. Frames and Sashes: Aluminum extrusions complying with AAMA/WDMA/CSA 101/I.S.2/A440.

1. Thermally Improved Construction: Fabricate frames, sashes, and muntins with an integral, concealed, low-conductance thermal barrier located between exterior materials and window members exposed on interior side in a manner that eliminates direct metal-to-metal contact.

2. Frame Depth: 2 ¼”

D. Insulating-Glass Units: ASTM E 2190.

1. Glass: ASTM C 1036, Type 1, Class 1, q3.

a. Tint: Clear.
b. Kind: Fully tempered where indicated on Drawings.

2. Lites: Two.
3. Filling: Fill space between glass lites with air.
4. Low-E Coating: Pyrolytic on second surface.

E. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.

F. Hardware, General: Provide manufacturer's standard corrosion-resistant hardware sized to accommodate sash weight and dimensions.

1. Exposed Hardware Color and Finish: As selected by Architect from manufacturer's full range.

G. Projected Window Hardware:

1. Gear-Type Rotary Operators: Complying with AAMA 901 when tested according to ASTM E 405, Method A. Provide operators that function without requiring the removal of interior screens or using screen wickets.

a. Type and Style: Pivot-shoe roto operator

2. Hinges: Non-friction type, 4 bar hinges.
3. Lock: hook bolt lock.
4. Limit Devices: Limit clear opening to 4 inches (100 mm) for ventilation.

H. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.

I. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.

1. Exposed Fasteners: Do not use exposed fasteners to greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

2.3 ACCESSORIES

A. Subsills: Thermally broken, extruded-aluminum subsills in configurations indicated on Drawings.

B. Interior Trim: Extruded-aluminum profiles in sizes and configurations indicated on Drawings.

C. Receptor System as required by manufacturer’s assembly: Two-piece, snap-together, thermally broken, extruded-aluminum receptor system that anchors windows in place. Receptor system shall not have any visible anchoring upon complete installation.

D. Anchors, Clips and Accessories: Aluminum, nonmagnetic stainless steel or zinc-coated steel or iron complying with ATM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressures indicated.

E. Sealant: For sealants required within fabricated windows, provide window manufacturer's standard permanently elastic, non-shrinking, non-migrating type recommended by sealant manufacturer for joint size and movement.

F.

2.4 INSECT SCREENS

A. General: Fabricate insect screens to integrate with window frame. Provide screen for each operable exterior sash. Screen wickets are not permitted.

1. Type and Location: Full, inside for project-out sashes.

B. Aluminum Frames: Complying with SMA 1004 or SMA 1201.

C. Glass-Fiber Mesh Fabric: 18-by-14 (1.1-by-1.4-mm) or 18-by-16 (1.0-by-1.1-mm) mesh of PVC-coated, glass-fiber threads; woven and fused to form a fabric mesh resistant to corrosion, shrinkage, stretch, impact damage, and weather deterioration. Comply with ASTM D 3656/D 3656M.

1. Mesh Color: Chose from manufacturer's standard.

2.5 FABRICATION

A. Fabricate aluminum windows in sizes indicated. Include a complete system for assembling components and anchoring windows.

B. Glaze aluminum windows in the factory.

C. Weather strip each operable sash to provide weathertight installation.

D. Weep Holes: Provide weep holes and internal passages to conduct infiltrating water to exterior.

E. Provide water-shed members above side-hinged sashes and similar lines of natural water penetration.

F. Mullions: Provide mullions and cover plates, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections. Provide mullions and cover plates capable of withstanding design wind loads of window units.

G. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation.

2.6 ALUMINUM FINISHES

A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

B. Class I, Clear Anodic Finish: AA-M12C22A41 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E 2112.

B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.

C. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.

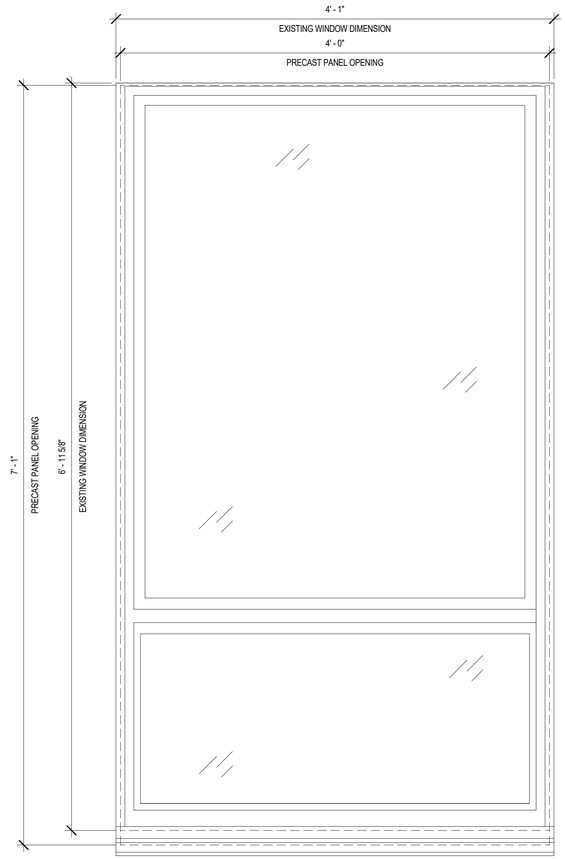
D. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

E. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.

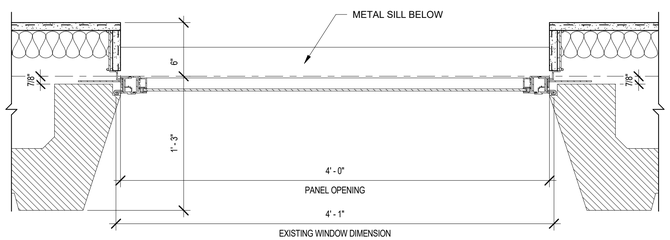
F. Clean exposed surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.

G. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

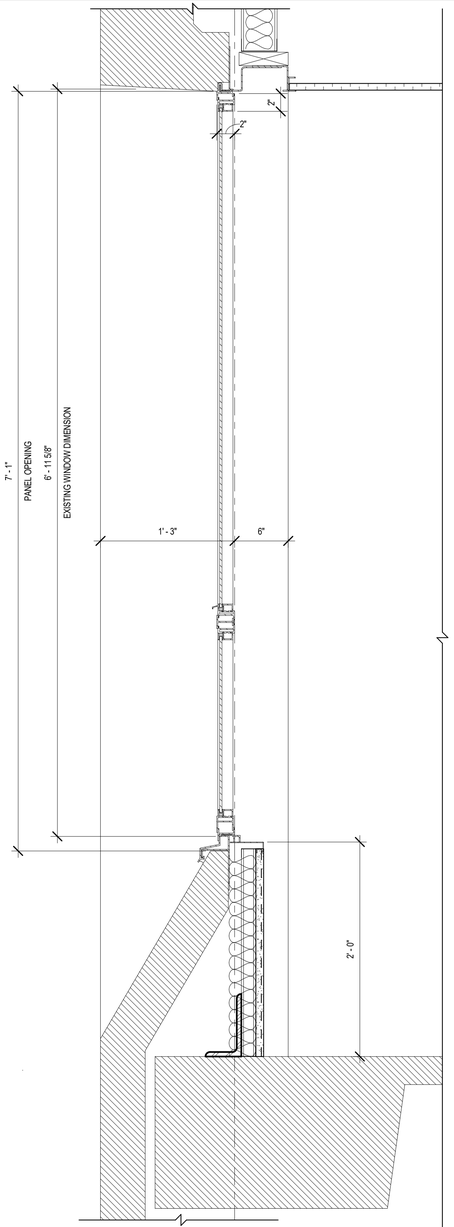
END OF SECTION 085113



EXISTING ELEVATION

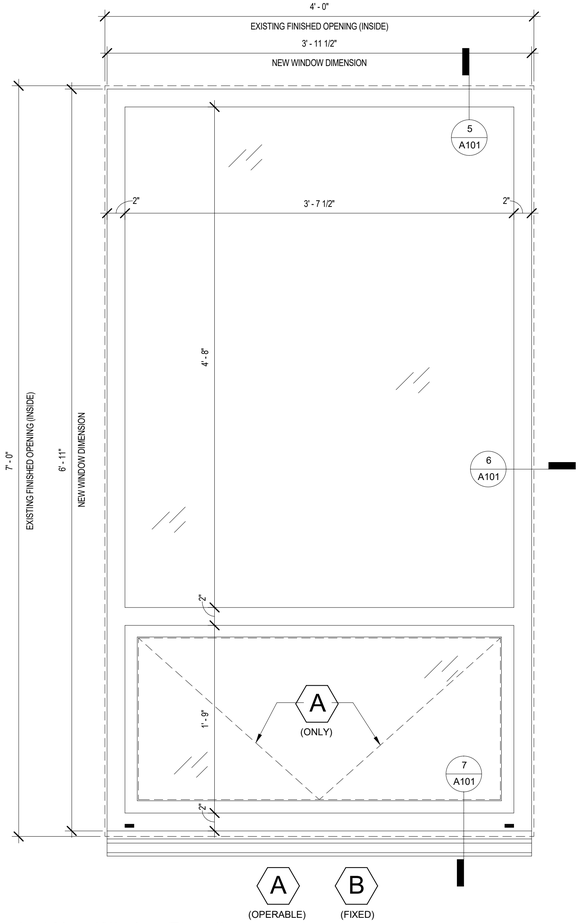


EXISTING PLAN

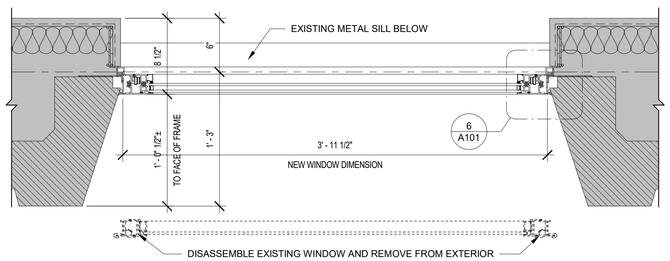


EXISTING SECTION

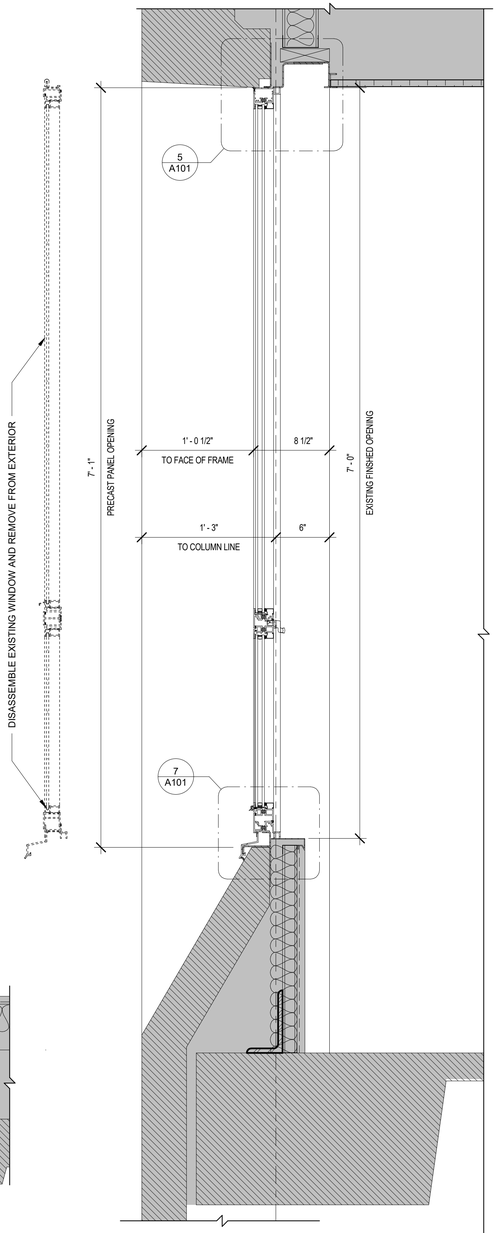
1 Existing Window & Wall Conditions
1 1/2" = 1'-0"



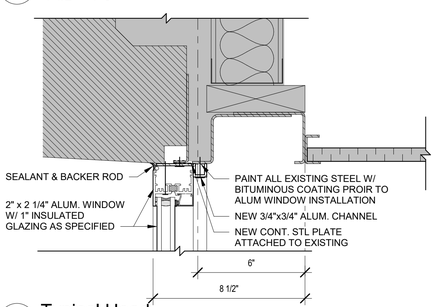
2 Typical New Window Elevation
1 1/2" = 1'-0"



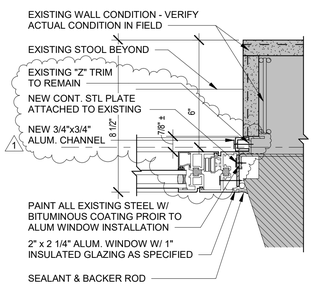
3 Partial Plan - New Window
1 1/2" = 1'-0"



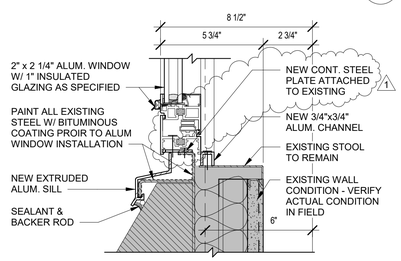
4 Partial Section - New Window
1 1/2" = 1'-0"



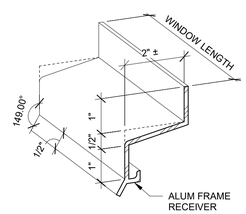
5 Typical Head
3" = 1'-0"



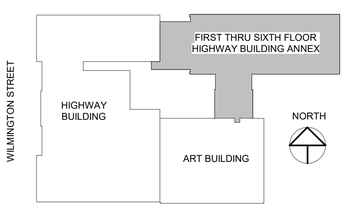
6 Typical Jamb
3" = 1'-0"



7 Typical Sill
3" = 1'-0"



Isometric
8 New Extruded Alum Sill
6" = 1'-0"



KEY PLAN
1" = 80'-0"

DETAIL 9 OMITTED 1

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salasobrien.com
license (NC): F-1434

TRANSPORTATION BUILDING COMPLEX IMPROVEMENTS

1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

SCO # 18-18469-01A

Project Number: 0384-15-00-18

Date: 03/29/2022

Designed by: ALK | Checked by: ALK

Revisions:

1	ADDENDUM #3	05/10/22

Sheet Title: Highway Building Annex Window Details

ALTERNATE

Sheet Number: A101