SAMPLE SAMPLE EXTERIOR WALL CONDITION

ASSESSMENT REPORT

May 12, 2024

**Report Prepared By:** 



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**Properties, Inc.** 

**Attention:** Director of Operations - Tampa

Property:

2002 Tampa, FL 33602

**Regarding:** Exterior Wall Condition Assessment

Mr. Stupp:

Dynamic Engineering Design & Inspection (Dynamic) recently performed an Exterior Wall Condition Assessment at **Constant Constant Constant** 

We appreciate the opportunity to provide this assessment. Should you have any questions regarding this report, please do not hesitate to contact me.

Sincerely,

Matthew T. Mullins, PE RRC, RRO, CCS, CCCA President Dynamic Engineering Design & Inspection



# **Executive Summary**

Dynamic performed a condition assessment of the exterior walls at

ampa, Florida 33602 in March 2024. The purpose of the assessment was to identify signs of water intrusion, deficiencies and other defects related to the installation of the fenestrations and joint sealants in the exterior walls. The scope of the assessment included: a review of applicable code requirements from the 2017 Florida Building Code, 6th Edition; a review of readily available documents; interviews with relevant personnel; a visual assessment of exterior walls, including the sealants, cladding and fenestrations with photographic documentation; an aerial survey by drone; and non-destructive testing of the exterior joint sealants in general conformance with ASTM-C1736.

During the assessment, Dynamic observed the following deficiencies in the exterior walls:

- 1. Evidence of water intrusion was observed on the frames of the curtain wall and window wall systems at several locations.
- 2. Adhesive failure of the exterior joint sealants at isolated locations.
- 3. Anomalies in the exterior joint sealants at isolated locations indicative of changes in sealant thickness.

Other installation deficiencies are noted in the report below.

Flashing of the rough openings was not required on the architect's drawings, or on the window wall shop drawings. Flashing was not observed by Dynamic around the openings. Section of the 2017 Florida Building Code requires flashing of rough openings.

The heights of the window wall and the curtain wall exceed the maximum height listed on their respective product approvals. Products must be installed in accordance with their product approval, or in accordance with a rational or comparative analysis performed by a licensed engineer or architect.

Dynamic recommends the following:

Notify the General Contractor and the Installer that the curtain wall and the window wall exceeds the maximum height listed on their respective product



approvals. The construction team should reach out to the manufacturer for a remedial solution, or engage a professional engineer to perform rational or comparative analysis of the as-built conditions.

Perform additional water testing in general conformance with AAMA 501.2 at 2-4 locations on each building, where evidence of water intrusion was observed. Dynamic should be present to perform the testing.

Upon completion of the water testing, Engage a licensed and qualified glazing contractor to deconstruct the curtain wall and window wall at 1-2 locations on each building. Dynamic should be present to document the existing conditions, such as perimeter sealants, flashing, anchors, and interior sealants and gaskets.

Engage a licensed and qualified weatherproofing contractor that specializes in the installation of exterior sealants to systematically inspect and test the joints in general accordance with ASTM C1736. If anomalies are discovered, the contractor should perform destructive investigation of the joint sealants in general accordance with ASTM C1521. Dynamic should be present to coordinate the testing and catalog samples.

Additional recommendations may be provided after the additional analysis and testing is performed.



## **1. Introduction**

Dynamic performed an exterior wall assessment at

March 2024. The

assessment was performed in general accordance with ASCE/SEI 30-14, *Guideline for Condition Assessment of the Building Envelope*.

#### 1.1. Purpose

The purpose of the assessment was to identify signs of water intrusion, deficiencies and other defects related to the installation of the fenestrations and joint sealants in the exterior walls.

### 1.2. Scope

The scope of the assessment included:

- 1. a review of applicable code requirements from the 2017 Florida Building Code, 6th Edition;
- 2. a review of readily available documents;
- 3. interviews with relevant personnel;
- 4. A visual assessment of exterior walls, including the sealants, cladding and fenestrations with photographic documentation;
- 5. An aerial survey of the exterior walls by drone;
- 6. Non-destructive testing of the exterior joint sealants in general conformance with ASTM-C1736 Standard Practice for Non-Destructive Evaluation of Adhesion of Installed Weatherproofing Sealant Joints Using a Rolling Device.



# 2. Applicable Codes

designed and constructed under:

- 1. 2017 Florida Building Code Building, 6th Edition
- 2. 2017 Florida Building Code Plumbing, 6th Edition
- 3. 2017 Florida Building Code Energy Conservation, 6th Edition
- 4. 2017 Florida Fire Prevention Code, 6th Edition
- 5. ASCE 7-10, Minimum Design Loads for Buildings and Other Structures

## 2.1. Summary of Code Requirements

Excerpts from the 2017 Florida Building Code - Building, 6th Edition are copied below.

#### 2.1.1. 1405.1 General

Exterior wall coverings shall be designed and constructed in accordance with the applicable provisions of this section.

#### 2.1.2. 1405.2 Weather Protection

Exterior walls shall provide weather protection for the building.

#### 2.1.3. 1405.4 Flashing

Flashing shall be installed in such a manner so as to prevent moisture from entering the wall or to redirect that moisture to the exterior. Flashing shall be installed at the perimeters of exterior door and window assemblies, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, chimneys, porches, decks, balconies and similar projections and at built-in gutters and similar locations where moisture could enter the wall.... Approved corrosion-resistant flashing shall be applied at the following locations:

Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage. Flashing at exterior window and door openings shall be installed in accordance with one or more of the following:

1.1. The fenestration manufacturer's installation and flashing instructions, or for applications not addressed in the fenestration manufacturer's instructions, in accordance with the flashing manufacturer's instructions. Where flashing instructions or details are



not provided, pan flashing shall be installed at the sill of exterior window and door openings. Pan flashing shall be sealed or sloped in such a manner as to direct water to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage. Openings using pan flashing shall also incorporate flashing or protection at the head and sides.

1.2. In accordance with the flashing design or method of a registered design professional.

1.3. In accordance with other approved methods.

1.4 In accordance with FMA/AAMA 100, FMA/ AAMA 200, FMA/WDMA 250, FMA/AAMA/ WDMA 300 or FMA/AAMA/WDMA 400.

## **3. Documents and Interviews**

### **3.1. Documents Reviewed**

Dynamic reviewed applicable sections from the following documents:

- 1. As-built Architectural Drawings titled dated March 2, 2020, prepared by
  - 2. As-built Structural Drawings titled dated October 2, 2018, prepared by
  - 3. Shop Drawings titled *CE window wall punched opening shop drawings*, dated 12/06/2019, prepared by
  - 4. Florida Product Approval 17691.2
  - 5. Florida Product Approval 17687.2
  - 6. StormMax RW-5100 Window Wall Installation and Glazing Manual
- 7. StormMax HR-251 Curtain Wall Installation and Glazing Manual

## 3.2. Interviews Performed

Additional information regarding the building and its history was provided to us by the following persons:

1.



# 4. Description & Background

## 4.1. General

a 6-story office building of approximately 150,000 square		
feet located at	Tampa, Florida 33602 in	
is a 6-sto	bry office building of approximately 150,000	
square feet located at		

The buildings are located in:

- 1. Climate Zone 2A;
- 2. Hurricane Prone Region;
- 3. Wind-Borne Debris Region;

## 4.2. Design Team

The design team consisted in part of:

٦.	Architect -	
2.	Structural Engineer -	

## 4.3. Building - Structure

The structure consists of post-tensioned roof and floor slabs supported by reinforced concrete walls and columns bearing on reinforced concrete footings at grade.

## **4.4. Exterior Walls**

The exterior walls are clad with precast concrete panels, curtain wall and window wall glazing systems, and metal composite panels.

Based on our review of the provided submittals and on site conditions, Dynamic's opinion is that the window wall systems are OldCastle StormMax RW-5100 Ribbon Window System, and the curtain wall systems are OldCastle StormMax HR-251 Insulated Impact Curtain Wall System - Dry Glazed.



### 4.5. History

#### 4.5.1. Dates of Construction

According to our review of the as-built drawings and information obtained from the **second second** property appraisers website, the building was submitted for permit in 2019 and built in 2020.

## 5. Findings from Document Review & Interviews

### 5.1. Project Manual

The Project Manual (Specifications) was not provided for review at the time of report preparation.

### 5.2. Architectural Drawing Review

Pages from the Architectural As-Builts are provided in Appendix A.

#### 5.2.1. Window Wall Opening Dimensions

The height of the window wall systems shown on the architectural drawings varies, but are shown up to 10 feet high. The width of the window wall lites varies, but are less than 5 feet wide.

#### 5.2.2. Curtain Wall Dimensions

The height of the curtain wall systems shown on the architectural drawings varies, but are shown up to 10 feet high. The width of the curtain wall lites varies, but are less than 5 feet wide.

#### 5.2.3. Rough Opening Flashing

Flashing of the rough opening was not indicated on the architectural drawings.

#### 5.2.4. Parapet at Curtain Wall

Detail 2 on Sheet All.5 requires a metal framed wall to be installed above the concrete roof deck, behind the curtain wall, and a wood nailer to be installed above the metal framed wall and curtain wall. A continuous metal clip is required to be installed above the curtain wall to receive the metal panels, and is to be stripped in with the roof membrane. According to notes on the

as-built drawings, RFI089 regarding Roof Blocking Attachment and RFI249 regarding Roof Parapet CW (curtainwall) Detail Confirmation were submitted, but these RFI's were not provided for review at the time of report preparation.

### 5.3. Structural Drawing Review

Pages from the Structural As-Builts are provided in Appendix D.

#### 5.3.1. Exterior Wall Design Loads

The Structural Engineer of Record provided the following design loads and design criteria for the exterior walls, in accordance with the provisions of ASCE 7-10, *Minimum Design Loads for Buildings and Other Structures*:

#### 5.3.1.1. Wind Pressure Design Criteria

Ultimate Wind Speed of 141 miles per hour (MPH) Nominal Wind Speed of 109 MPH Risk Category of II Mean Roof Height of 128 feet<sup>1</sup> Wind Exposure Category of B Internal Pressure Coefficient of +/-0.18

The width of Zone 5 (a) is listed on the drawings as 10 feet.

#### 5.3.1.2. Wind Pressures

Zone 4 (Interior) Ultimate Pressure: +47, -47 psf Zone 5 (Corner) Ultimate Pressure: +47, -85 psf

These pressures are for an effective area of 10 square feet. In accordance with The Florida Building Code Section 1710.5, The allowable pressures are determined by applying a reduction factor of 0.6 to the ultimate pressures, shown below.

Zone 4 (Interior) Allowable Pressure: +28.2, -28.2 psf Zone 5 (Corner) Allowable Pressure: +28.2, -51.0 psf

## 5.4. Submittals Review

Submittals for the Curtainwall System, Precast Panels, and Metal Wall Panels were not provided for review. The Window Wall Shop Drawings are provided in Appendix C.

<sup>&</sup>lt;sup>1</sup> This is the height Dynamic assumed was used by the Structural EOR. Dynamic performed a comparative wind load analysis based on this height, with equivalent results.

#### 5.4.1. General

The Window Wall submittal package consists of Shop Drawings

The dimensions shown for the window wall systems are generally consistent with those shown on the architectural drawings.

#### 5.4.2. Architect's and Consultant's Review Comments

the flashing requirement per FBC with Building Official."

The shop drawings indicate anchoring the window wall system to the concrete substrate with a 3/8" Ø SS Titen HD anchor, a total of 4 per frame. A review comment on the drawings noted that this anchor is not listed on the Product Approval.

#### 5.4.3. Florida Product Approvals (FL 17691.2 & FL 17687.2)

Product Approvals were not provided as part of the submittal package. Paramount noted that the product approval for the window wall system was FL 17687.2 on the shop drawings. Dynamic obtained copies of the applicable Product Approvals from the Florida Department of Business and Professional Regulation's website, and are provided in Appendix E.

OldCastle issued FL 17691.2 on April 24, 2015 for the StormMax HR-251 Insulated Impact Curtain Wall System - Dry Glazed, and issued FL 17687.2 on August 27 2010 for the StormMax RW-5100 Ribbon Window System.

FL 17687.2 indicates the maximum design pressure (MDP) for the window wall of +70 psf, -80 psf, a maximum height of 8 feet, and a maximum width of 5 feet for the window wall system. The maximum height of 8 feet is less than the 10 foot height shown on the architectural drawings and shop drawings.

FL 17691.2 indicates the MDP for the curtain wall of +70 psf, -80 psf, a maximum DLO height of 96 inches, and a maximum width of  $57-\frac{1}{2}$  inches for the curtain wall system. The maximum height of 96 inches is less than the 9 foot 8- $\frac{1}{4}$  inches height shown on the architectural drawings.



#### 5.5.1. Water Intrusion

reported water intrusion in the building adjacent to the exterior walls. Dynamic was asked to investigate the recurring water intrusion on the third floor of **Contract Contract** at the inside corner between the partial north elevation and the partial east elevation.

## 6. Visual Observations

Photographs of the visual observations are provided in Exhibit 1.

### 6.1. Interior Survey - Water Intrusion

Dynamic reviewed the interior of the building, along the exterior walls in accessible areas for evidence of water intrusion. Evidence of water intrusion was observed at several locations in both buildings.

## 6.2. Aerial Survey - Exterior

Dynamic reviewed the exterior of the building with a drone. These photographs can be made available upon request.

# 7. Testing

## 7.1. AAMA 501.2 Testing

Dynamic performed a water intrusion investigation of the curtain walls installed at the inside corner between the partial north elevation and the partial east elevation of **Manufactures** in general conformance with AAMA 501.2. Dynamic used Rain Wand AAMA 501.2 Kit, manufactured by the RM Group. The Rain wand uses a nozzle manufactured by Monarch Manufacturing Works, Inc./Newton Tool & Mfg. Company, and was connected to a hose and provided with a control valve and a pressure gauge between the valve and the nozzle. The water pressure to the nozzle was adjusted to 30 to 35 psi at the nozzle inlet.

The designated test area was divided into and evaluated in 5 ft sections of the framing and joint. The nozzle was held at a distance of approximately 1 foot from the location under test. Each 5 ft section of the test area was evaluated for a period of 5 minutes by slowly moving the nozzle back and forth over the test section while maintaining the nozzle perpendicular to the plane of the

wall. Working from the exterior, the wall test section was selectively wetted progressing from the lowest horizontal framing member, then the adjacent framing intersections, then the adjacent vertical framing members, etc. During the test, an observer was on the indoor side of the wall, and checked for any water leakage. This process was repeated on all framing, gaskets and joint intersections within the designated area, using increments of exposed framing length not exceeding 5 ft and always working upward on the wall.

The testing began at the third floor and progressed systematically to the top floor. Water intrusion was not observed until the top of the parapet was tested. An opening in the roof membrane installed over the top of the parapet was discovered, and is likely the source of the water intrusion on the floors below.

Photographs of the findings from the water testing are provided in Exhibit 2.

## 7.2. ASTM-C1736 Weatherproofing Sealant Joint Testing

Dynamic performed limited testing and inspection of the exterior sealant joints in general conformance with ASTM-C1736. At isolated locations, the testing revealed adhesive failures of the sealant, and anomalies consistent with a change in sealant depth.

At the ground floor of the East building, on the east elevation, sealant was not installed in one of the joints between the precast concrete panels.

Photographs of the findings from the sealant testing are provided in Exhibit 3.

# 8. Analysis

Copies of the wind load criteria and analysis are provided in Appendix D.

## 8.1. Wind Load Analysis

Dynamic performed a wind load analysis of the structure in accordance with the provisions of ASCE 7-10 to compare against the wind pressures and criteria provided by the Structural Engineer of Record, and determined the following wind design criteria and pressures:



#### 8.1.1. Revised Wind Pressure Design Criteria:

Ultimate Wind Speed of 141 miles per hour (MPH) Nominal Wind Speed of 109 MPH Risk Category of II Mean Roof Height of 78 feet Wind Exposure Category of **C** (not B) Internal Pressure Coefficient of +/-0.18

#### 8.1.2. Revised Uplift Wind Pressures:

Zone 4 (Interior) Ultimate Pressure: +56.1, -56.1 psf Zone 3 (Corner) Ultimate Pressure: +56.1, -102.8 psf

These pressures are for an effective area of 10 square feet. In accordance with The Florida Building Code Section 1710.5, The allowable pressures are determined by applying a reduction factor of 0.6 to the ultimate pressures, shown below.

Zone 4 (Interior) Allowable Pressure: +33.7, -33.7 psf Zone 3 (Corner) Allowable Pressure: +33.7, -61.7 psf

#### 8.1.3. Revised width of Zones 2 & 3:

The width of Zone 5 (a) is 13 feet.

# 9. Discussion

### 9.1. Wind Pressures

#### 9.1.1. Differences in the Wind Design Criteria and Wind Pressures

Dynamic noted differences in the design pressures calculated by Dynamic and the design pressures provided by the Structural Engineer of Record, however, the glazed assemblies installed have maximum design pressures (MDP) that exceed the design wind pressures for the project.

### 9.2. Water Intrusion

Water intrusion around window wall and curtain wall systems may indicate installation deficiencies. These complex systems require meticulous installation to ensure their intended performance as weathertight barriers.

Common installation issues that can lead to water intrusion include:

Improper Sealing: Sealant joints are critical for preventing water ingress. If sealants are not correctly applied, are incompatible with the materials, or deteriorate prematurely, they can create pathways for water penetration.

Incorrect Flashing/Tape/Gasket Installation: Flashing details are essential to divert water back to the exterior. Incorrect installation may lead to water intrusion.

Faulty Drainage: Both window walls and curtain walls rely on drainage systems to manage water. If weep holes are blocked, or other drainage components are malfunctioning, water can accumulate and find its way into the building.

### **9.3. Product Approvals**

A Florida Product Approval is a formal recognition by the Florida Building Commission that a specific building product, material, or method of construction complies with the Florida Building Code. This approval is required for certain products such as windows and doors, to be legally used in construction projects within the state of Florida.

The Florida Product Approval process involves a thorough evaluation of the product's performance, quality, and safety, including testing and documentation review. Once approved, the product is assigned a unique Florida Product Approval Number (FL#) and listed in the state's product approval database.

Deviations from the conditions shown on the Product Approval are only permitted if a rational or comparative analysis is performed by a Professional Engineer or Architect licensed in the state of Florida.

### 9.4. Joint Sealants

Adhesive failure in sealant joints occurs when the sealant loses its bond to the substrate material(s). This is caused by factors such as improper surface preparation, sealant/substrate incompatibility, incorrect sealant selection, improper primer use, inadequate curing time, excessive joint movement, and environmental factors. Consequences of adhesive failure include water infiltration, air leakage, and costly premature repairs.



A consistent joint thickness in exterior wall sealant joints is critical for the long-term performance and durability of the building envelope. A constant joint thickness ensures that the sealant can maintain its intended properties, such as elasticity, adhesion, and weather resistance. Deviations from the specified thickness can lead to sealant failure, including cracking, adhesion loss, and moisture ingress.

## **10. Conclusions**

With a reasonable degree of professional and engineering certainty, Dynamic offers the following conclusions:

- 1. Evidence of water intrusion was observed on the frames of the curtain walls and window walls at several locations in the East building, and in the West building. The water intrusion is likely the result of installation defects within the window wall and curtain wall assemblies, or at the transitions between these assemblies and other components, such as the roof.
- 2. The window wall systems and the curtain wall systems installed at exceed the maximum allowable height on their Product Approvals. These systems may not be able to resist the design wind pressures.
- 3. Deficiencies and anomalies exist in the exterior sealant joints, including adhesive failure and varying joint sealant thickness. These defects and anomalies can cause water intrusion and premature failure of the sealant joint.
- 4. The roof membrane was not terminated at the parapets and roof edges in accordance with the approved construction documents and approved shop drawings. The parapets are not coped with a weatherproof material of a width no less than the thickness of the parapet wall, or with proper securement at the edge to comply with Section 1504.5 of the 2017 Florida Building Code.
- 5. The design pressures provided by the structural engineer of record are incorrect, based on incorrect criteria, and the design of corner zones does not comply with the requirements of ASCE 7-10. However, the curtainwall and window wall systems have maximum design pressures that exceed the correct design wind pressures.



## **11. Recommendations**

Dynamic offers the following recommendations:

- Notify the General Contractor and the Installer that the curtain wall and the window wall exceeds the maximum height listed on their respective product approvals. The construction team should reach out to the manufacturer for a remedial solution, or engage a professional engineer to perform rational or comparative analysis of the as-built conditions.
- 2. Perform additional water testing in general conformance with AAMA 501.2 at 2-4 locations on each building, where evidence of water intrusion was observed. Dynamic should be present to perform the testing.
- 3. Upon completion of the water testing, Engage a licensed and qualified glazing contractor to deconstruct the curtain wall and window wall at 1-2 locations on each building. Dynamic should be present to document the existing conditions, such as perimeter sealants, flashing, anchors, and interior sealants and gaskets.
- 4. Engage a licensed and qualified weatherproofing contractor that specializes in the installation of exterior sealants to systematically inspect and test the joints in general accordance with ASTM C1736. If anomalies are discovered, the contractor should perform destructive investigation of the joint sealants in general accordance with ASTM C1521. Dynamic should be present to coordinate the testing and catalog samples.
- 5. Additional recommendations may be provided after the analysis and testing is performed.

# 12. Limitations

This report has been prepared exclusively for **contract of the second se** 



The standard of care and skill for the services provided by Dynamicis consistent with the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Dynamic makes no warranties, express or implied, in connection with any services provided by Dynamic.

This assessment is limited to portions of the exterior walls that were readily accessible and visible at the time of our site visit. Any areas of the facility that were concealed, inaccessible or not readily visible at the time of the site visit are not included. Unless explicitly stated in this report, extrapolations should not be made from the observations or opinions provided in this report.

The conclusions and recommendations offered in this report are based in part upon information gathered from the documents reviewed and interviews performed. While reasonable efforts were made to verify the existing conditions as reported, verifying the veracity of this information is beyond this scope of service.

The opinions in this report are based on information gathered from the documents reviewed, interviews performed, and site observations. Dynamic should be allowed to review any additional information that is discovered after the issuance of this report and determine if the original opinions should be revised.



## 13. Closing

To the best of my knowledge and ability, this report represents an accurate assessment of the present condition of the exterior walls based upon the evaluation of the observed conditions, to the extent reasonably possible. I appreciate the opportunity to provide these services and trust that this report will be informative. Should you have any questions regarding our report, please do not hesitate to contact me.

Matthew Mullins, PE RRC, RRO, CCS, CCCA President 941-212-0398 mtmullins@dyneng.online

05/12/24

This item has been digitally signed and sealed by Matthew T. Mullins, PE on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



# **14. List of Exhibits**

Exhibit 1 - Visual Observations Photo Exhibit Exhibit 2 - Water Testing Photo Exhibit Exhibit 3 - Sealant Testing Photo Exhibit

## **15. List of Appendices**

Appendix A - Pages from the Architectural Drawings

Appendix B - Pages from the Structural Drawings

Appendix C - Window Wall Shop Drawings

Appendix D - Wind Load Criteria & Analysis

Appendix E - Product Approvals\*

Appendix F - Personnel

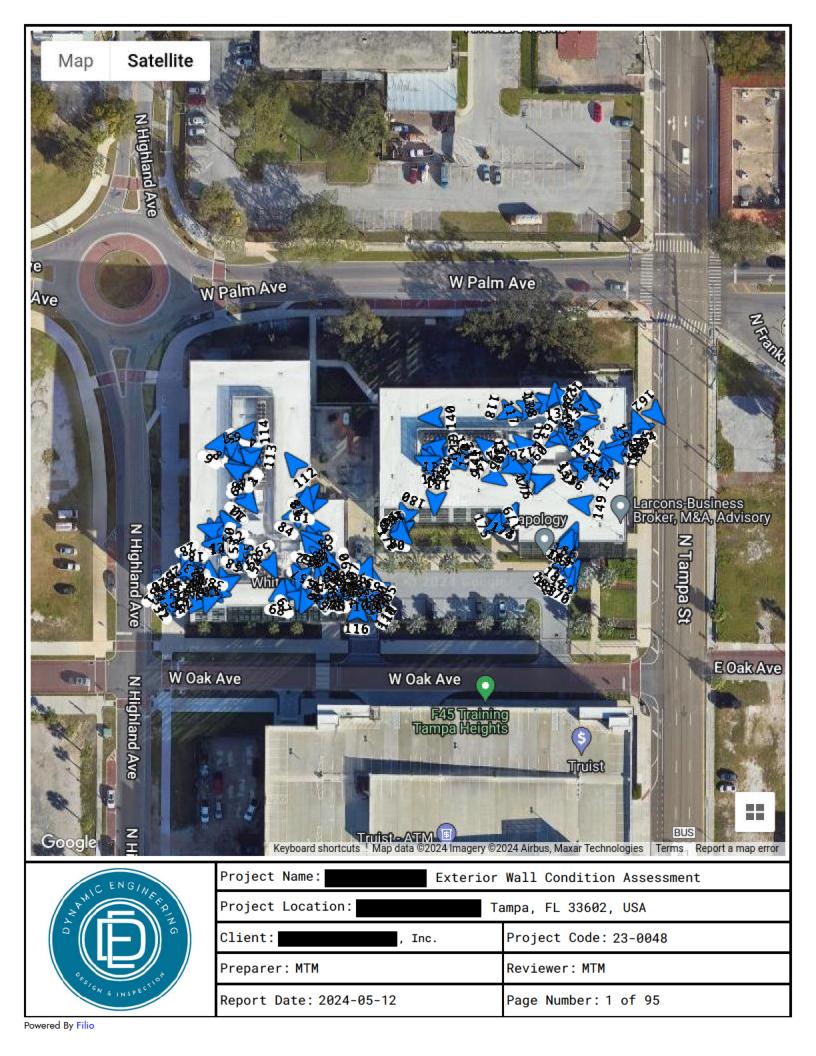
\* Florida Product Approvals are protected documents, and cannot be inserted in another document. They can be found at <u>https://www.floridabuilding.org/pr/pr\_app\_lst.aspx</u> <u>https://www.floridabuilding.org/pr/pr\_app\_lst.aspx</u>





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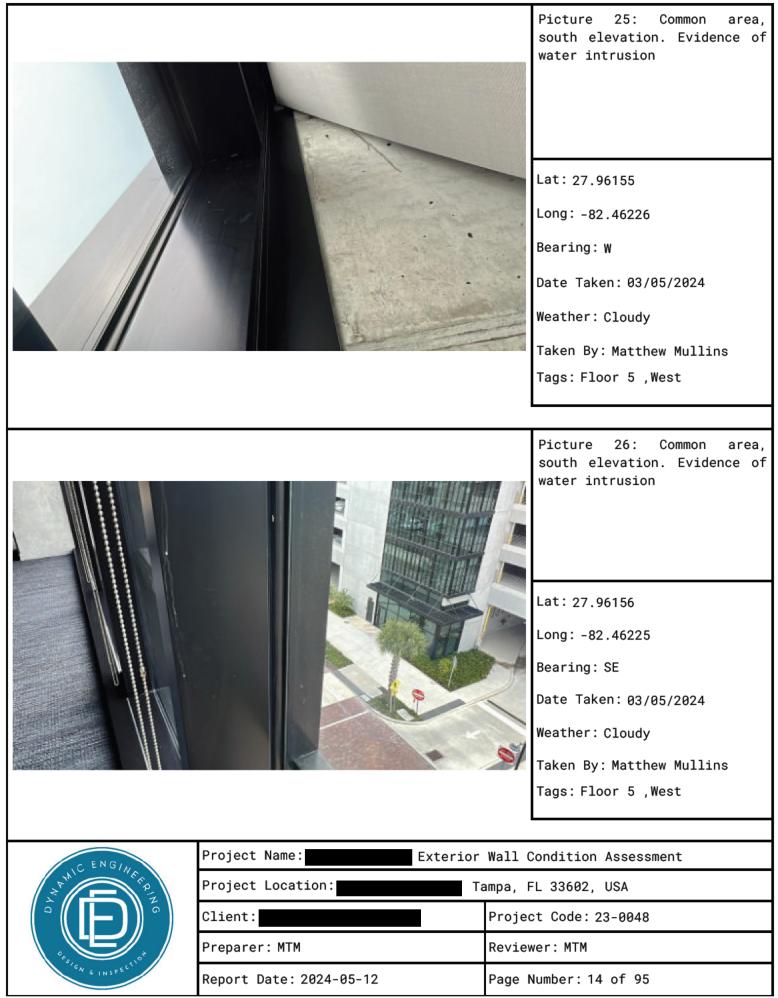




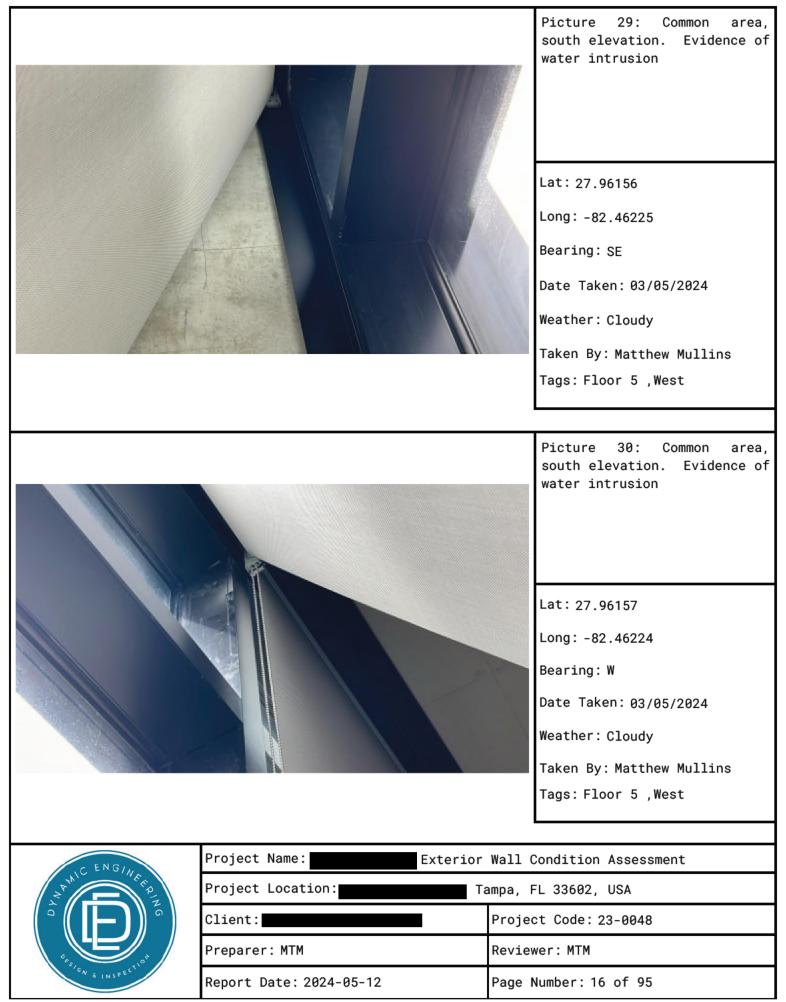


		Picture 21: Common area, by air hockey table. Evidence of water intrusion Lat: 27.96156 Long: -82.46225 Bearing: W Date Taken: 03/05/2024 Weather: Cloudy Taken By: Matthew Mullins Tags: Floor 5 ,West
		Picture 22: Common area, by air hockey table. Evidence of water intrusion Lat: 27.96154 Long: -82.46223 Bearing: E Date Taken: 03/05/2024 Weather: Cloudy Taken By: Matthew Mullins Tags: Floor 5 ,West
C. ENG/W	Project Name: Exter	rior Wall Condition Assessment
APANIC ENGINERED	Project Location:	Tampa, FL 33602, USA
	Client:	Project Code: 23-0048
P	Preparer: MTM	Reviewer: MTM
Powered By Filio	Report Date: 2024-05-12	Page Number: 12 of 95

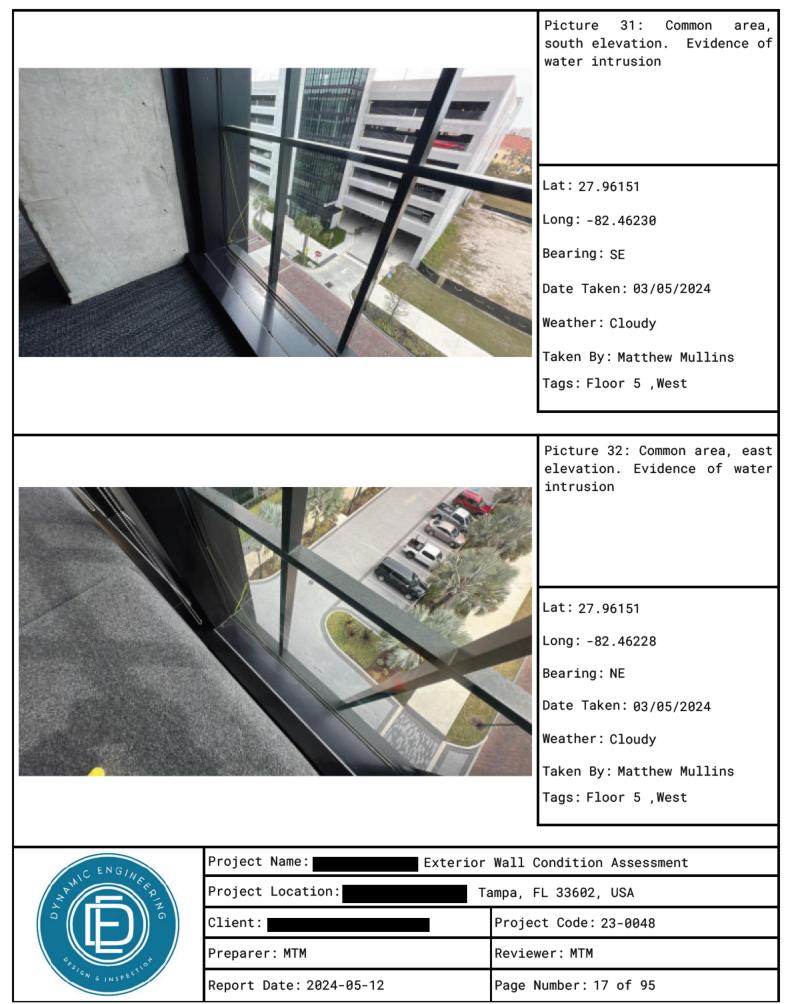
		Picture 23: Common area, south elevation. Evidence of water intrusion Lat: 27.96156 Long: -82.46225 Bearing: SW Date Taken: 03/05/2024 Weather: Cloudy Taken By: Matthew Mullins Tags: Floor 5 ,West
		Picture 24: Common area, south elevation. Evidence of water intrusion Lat: 27.96156 Long: -82.46225 Bearing: W Date Taken: 03/05/2024 Weather: Cloudy Taken By: Matthew Mullins Tags: Floor 5 ,West
2 PMIC ENGINAM	Project Name: Exterior	Wall Condition Assessment
Client:	Project Location: Ta	ampa, FL 33602, USA
	Client:	Project Code: 23-0048
	Preparer: MTM	Reviewer: MTM
W & INSPEC	Report Date: 2024-05-12	Page Number: 13 of 95

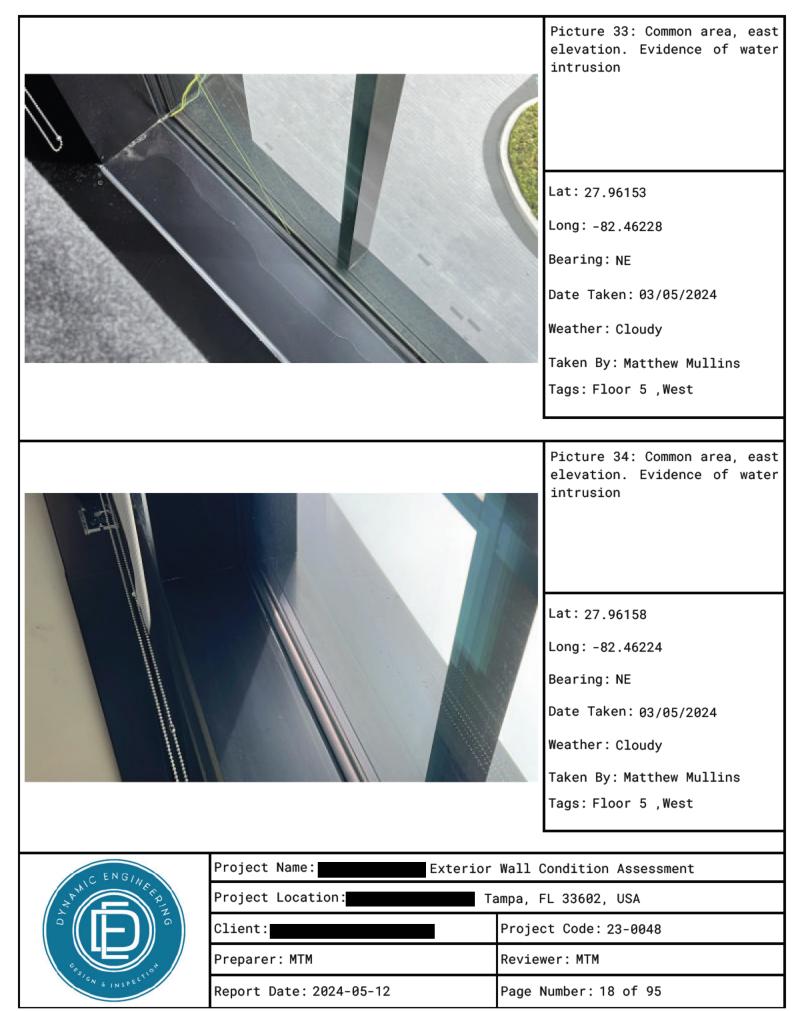




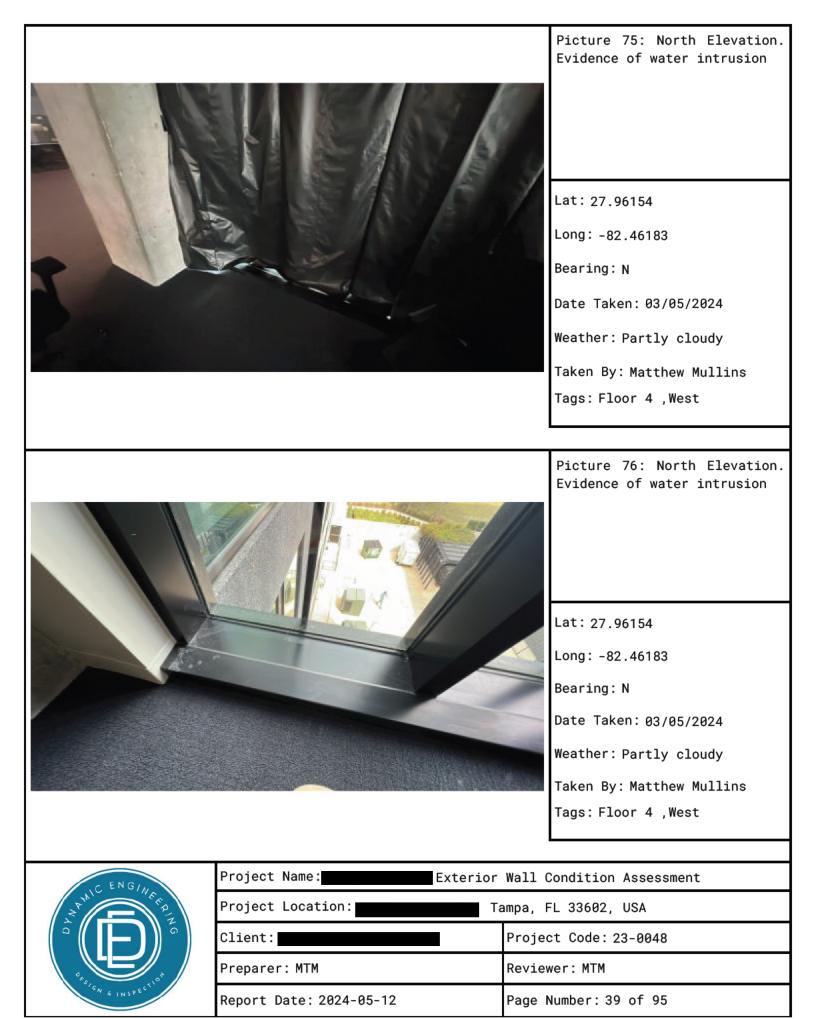


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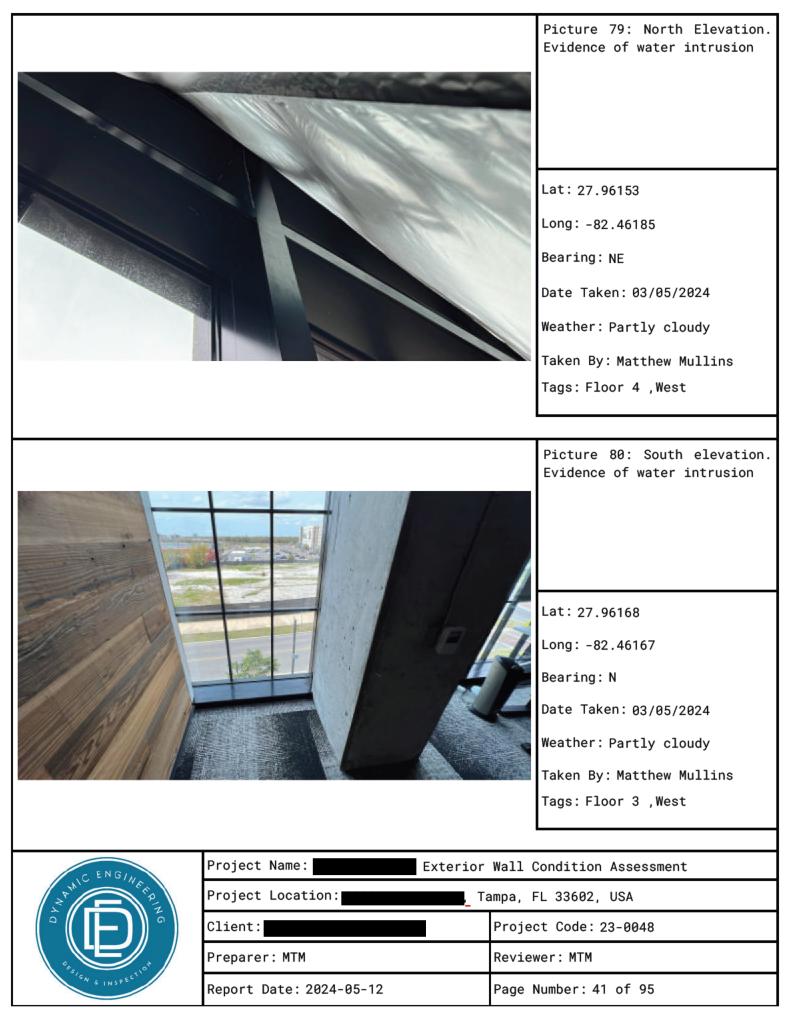




		Picture 73: East elevation. Evidence of water intrusion Lat: 27.96153 Long: -82.46185 Bearing: NE Date Taken: 03/05/2024 Weather: Partly cloudy Taken By: Matthew Mullins Tags: Floor 4 ,West
		Picture 74: East elevation. Evidence of water intrusion Lat: 27.96155 Long: -82.46187 Bearing: N Date Taken: 03/05/2024 Weather: Partly cloudy Taken By: Matthew Mullins Tags: Floor 4 ,West
Project Name: Exterior Wal		r Wall Condition Assessment
	Project Location:	Tampa, FL 33602, USA
	Client:	Project Code: 23-0048
	Preparer: MTM	Reviewer: MTM
Powered By Filio	Report Date: 2024-05-12	Page Number: 38 of 95



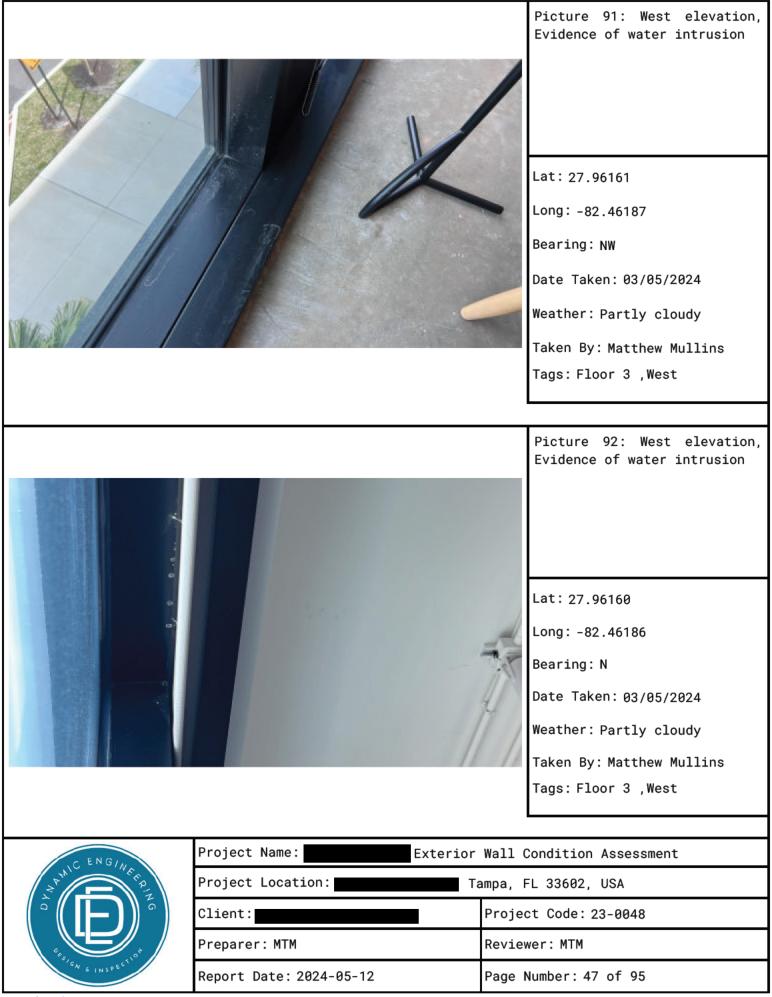
		Picture 77: North Elevation.Evidence of water intrusion Lat: 27.96154 Long: -82.46182 Bearing: N Date Taken: 03/05/2024 Weather: Partly cloudy Taken By: Matthew Mullins Tags: Floor 4 ,West
		Picture 78: North Elevation. Evidence of water intrusion Lat: 27.96154 Long: -82.46184 Bearing: N Date Taken: 03/05/2024 Weather: Partly cloudy Taken By: Matthew Mullins Tags: Floor 4 ,West
Project Name: Exterior Wall		Wall Condition Assessment
A Q	Project Location: T	ampa, FL 33602, USA
	Client:	Project Code: 23-0048
	Preparer: MTM	Reviewer: MTM
Powered By Filio	Report Date: 2024-05-12	Page Number: 40 of 95





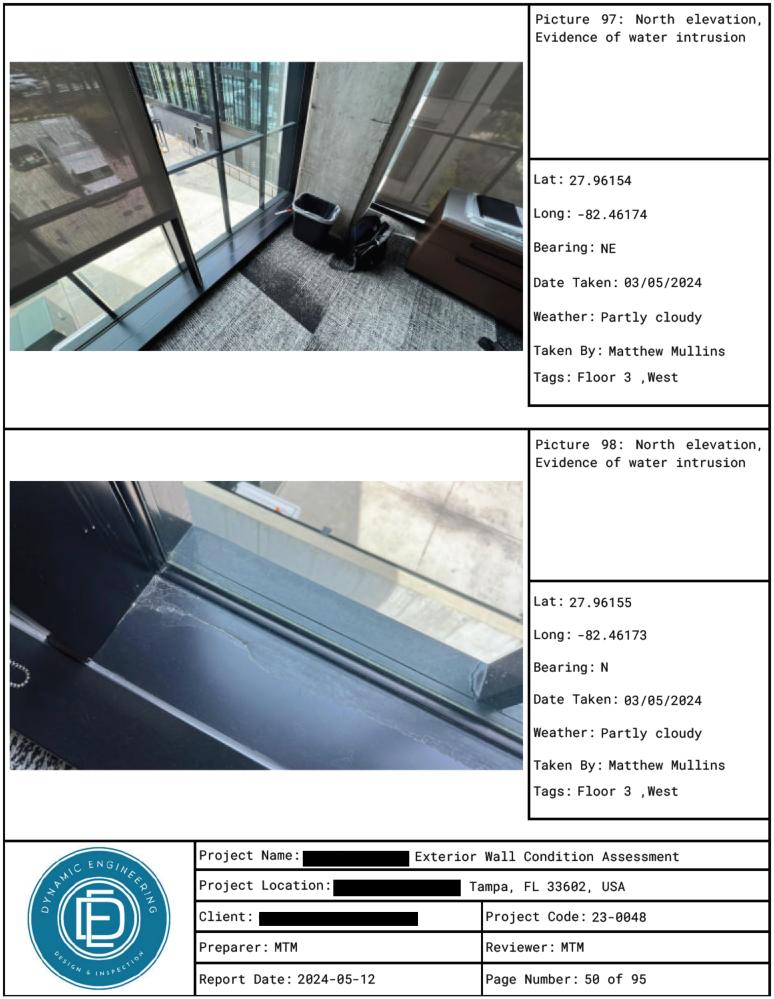


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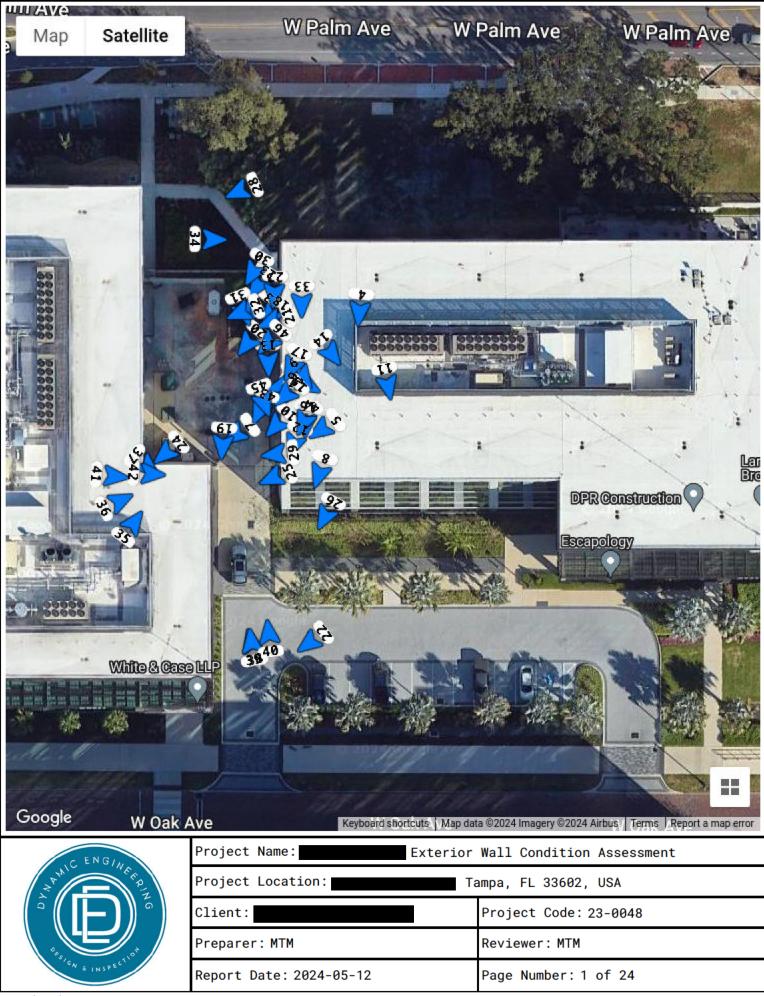
		Picture 93: West elevation, Evidence of water intrusion Lat: 27.96154 Long: -82.46179 Bearing: W Date Taken: 03/05/2024 Weather: Partly cloudy Taken By: Matthew Mullins Tags: Floor 3 ,West
	<image/>	Picture 94: South elevation, Evidence of water intrusion Lat: 27.96155 Long: -82.46179 Bearing: SE Date Taken: 03/05/2024 Weather: Partly cloudy Taken By: Matthew Mullins Tags: Floor 3 ,West
HALC ENGINERINA MAD		Wall Condition Assessment ampa, FL 33602, USA
	Client:	Project Code: 23-0048
	Preparer: MTM	Reviewer: MTM
STGN & INSPECTIO	Report Date: 2024-05-12	Page Number: 48 of 95

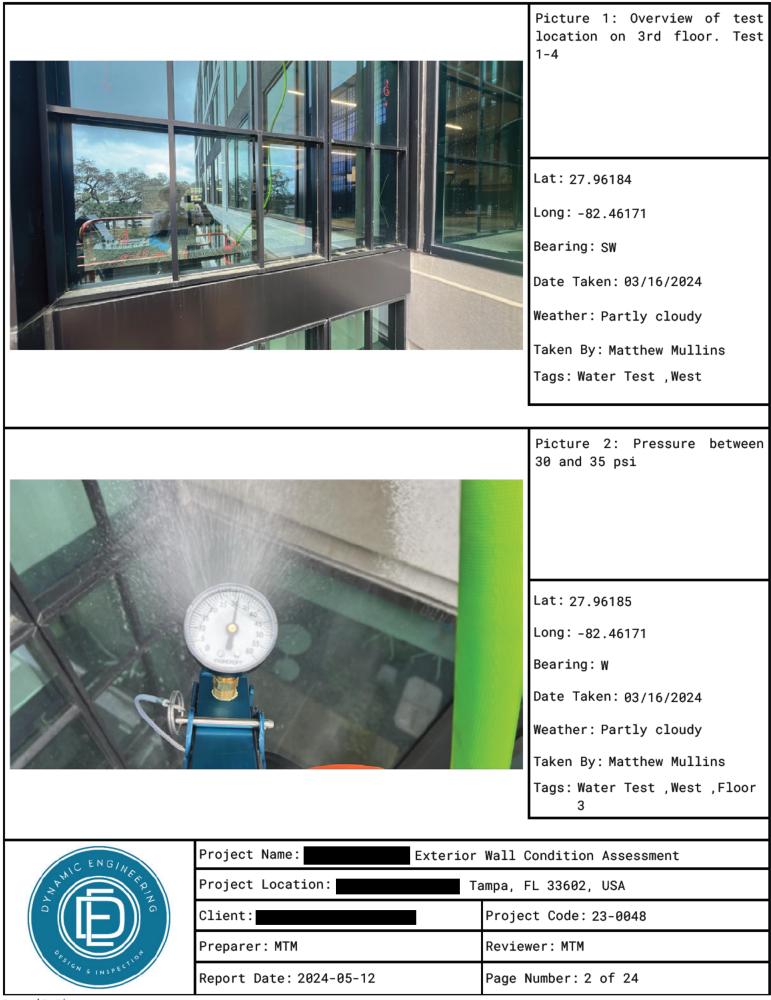






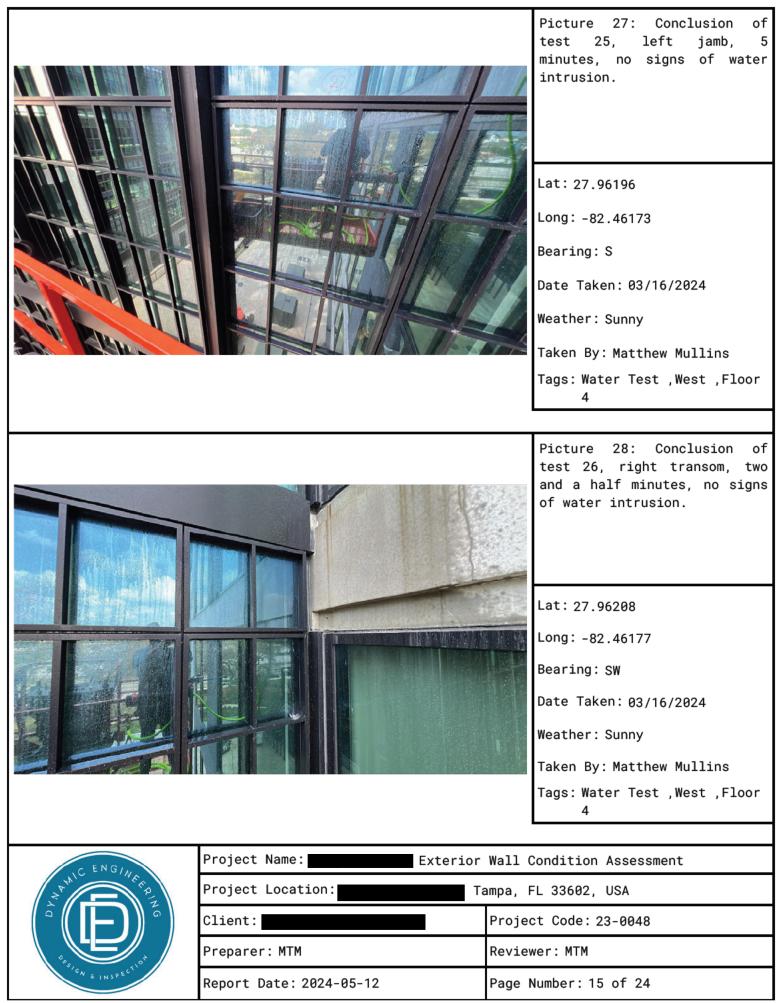


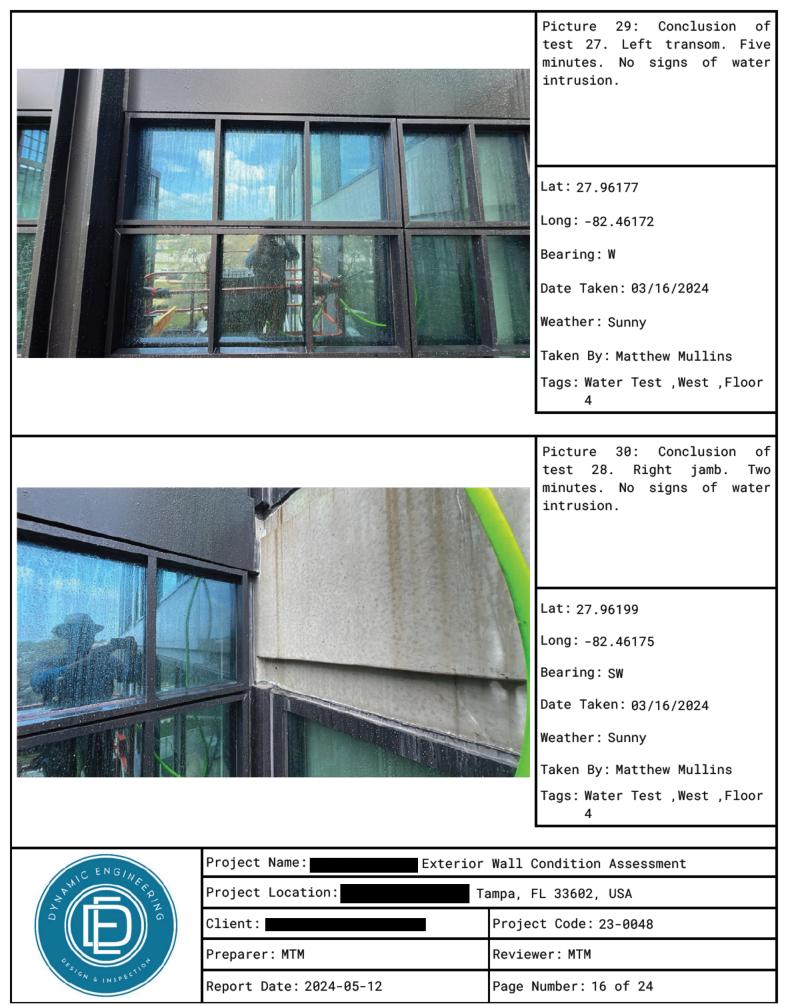


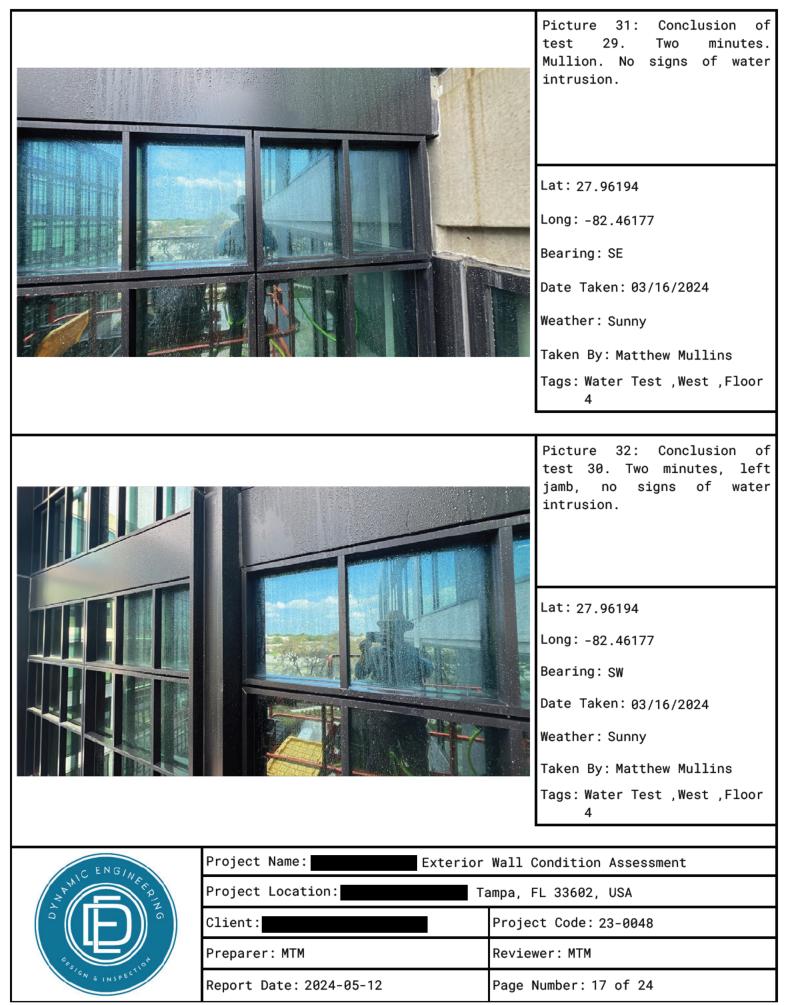


		<pre>Picture 3: Conclusion of test 1, for 5 minutes. No water intrusion observed Lat: 27.96194 Long: -82.46175 Bearing: SW Date Taken: 03/16/2024 Weather: Partly cloudy Taken By: Matthew Mullins Tags: Water Test ,West ,Floor 3</pre>
		<pre>Picture 4: Conclusion of test 2, 2.5 minutes. No water intrusion observed Lat: 27.96194 Long: -82.46161 Bearing: S Date Taken: 03/16/2024 Weather: Partly cloudy Taken By: Matthew Mullins Tags: Water Test ,West ,Floor 3</pre>
C ENG/	Project Name: Exterior	Wall Condition Assessment
A PHIC ENGINER PIZ	Project Location:	ampa, FL 33602, USA
	Client:	Project Code: 23-0048
	Preparer: MTM	Reviewer: MTM
Powered By Eilio	Report Date: 2024-05-12	Page Number: 3 of 24

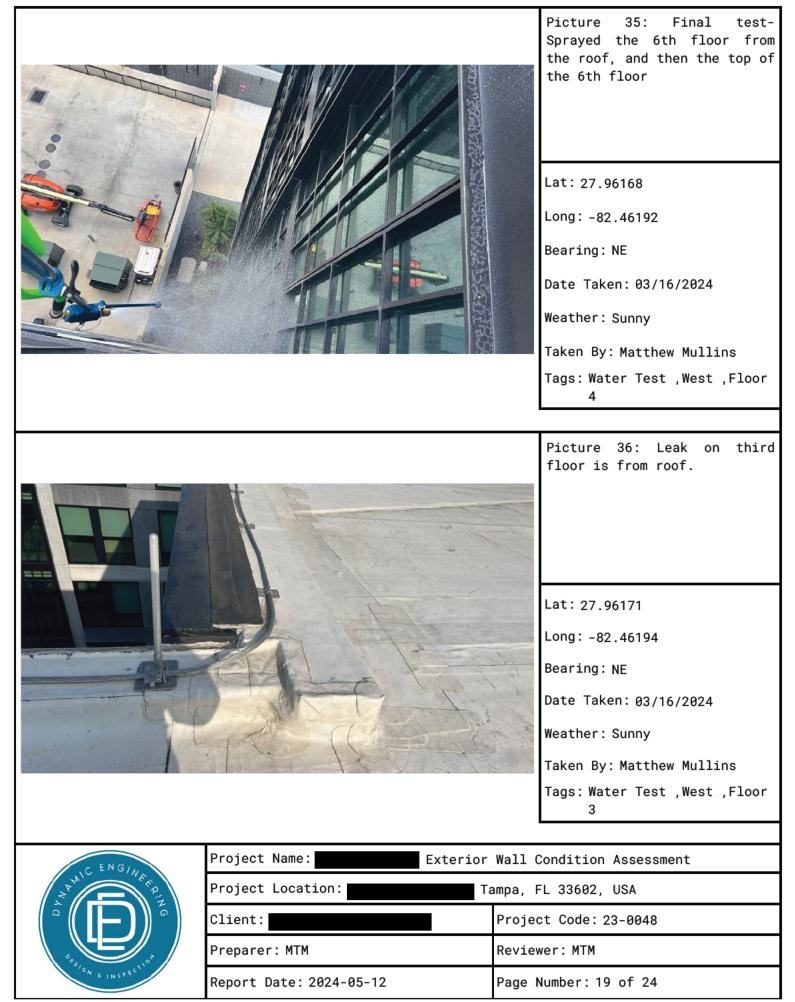
		<pre>Picture 5: Test 3 at jamb. 5 minutes. No water intrusion observed Lat: 27.96180 Long: -82.46166 Bearing: SW Date Taken: 03/16/2024 Weather: Partly cloudy Taken By: Matthew Mullins Tags: Water Test ,West ,Floor 3</pre>
		Picture 6: Conclusion of test 5. Left jamb. 5 minutes. No water intrusion observed Lat: 27.96185 Long: -82.46169 Bearing: SE Date Taken: 03/16/2024 Weather: Partly cloudy Taken By: Matthew Mullins Tags: Water Test ,West ,Floor 3
PMIC ENGINERIA		Wall Condition Assessment
	Project Location: Ta	ampa, FL 33602, USA
	Client:	Project Code: 23-0048
	Preparer: MTM	Reviewer: MTM
CAUTON & INSPECTION	Report Date: 2024-05-12	Page Number: 4 of 24







	<image/>	<pre>Picture 33: Conclusion of test 31, two and a half minutes, window head, no signs of water intrusion.</pre>
		<pre>Picture 34: Conclusion of test 32, window head, 5 minutes, no signs of water intrusion.</pre> Lat: 27.96202 Long: -82.46182 Bearing: E Date Taken: 03/16/2024 Weather: Sunny Taken By: Matthew Mullins Tags: Water Test ,West ,Floor
APMIC ENGINER	Project Name: Exterior	Wall Condition Assessment
	Project Location:	ampa, FL 33602, USA
	Client:	Project Code: 23-0048
	Preparer: MTM	Reviewer: MTM
Powered By Eilio	Report Date: 2024-05-12	Page Number: 18 of 24

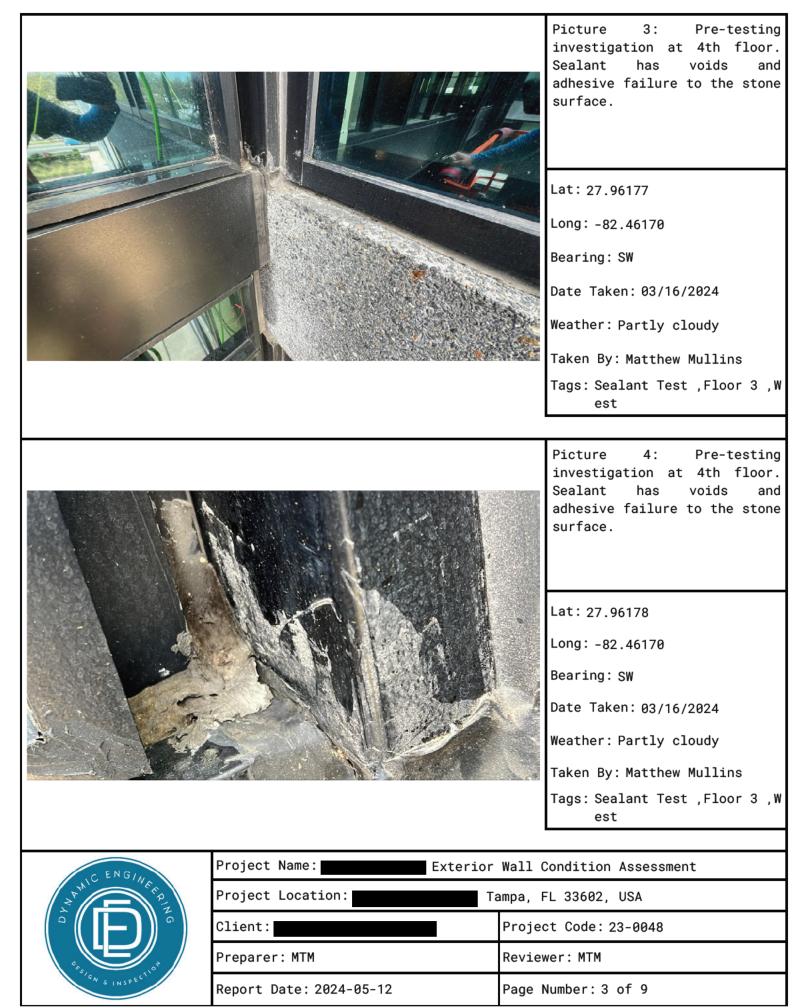


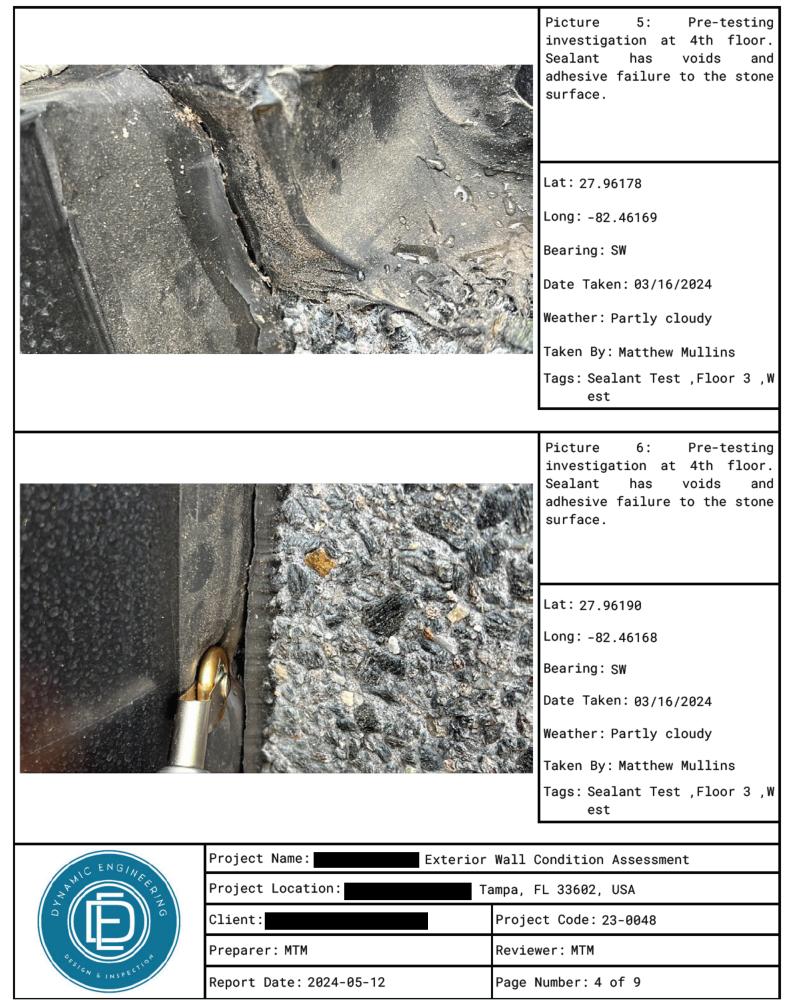




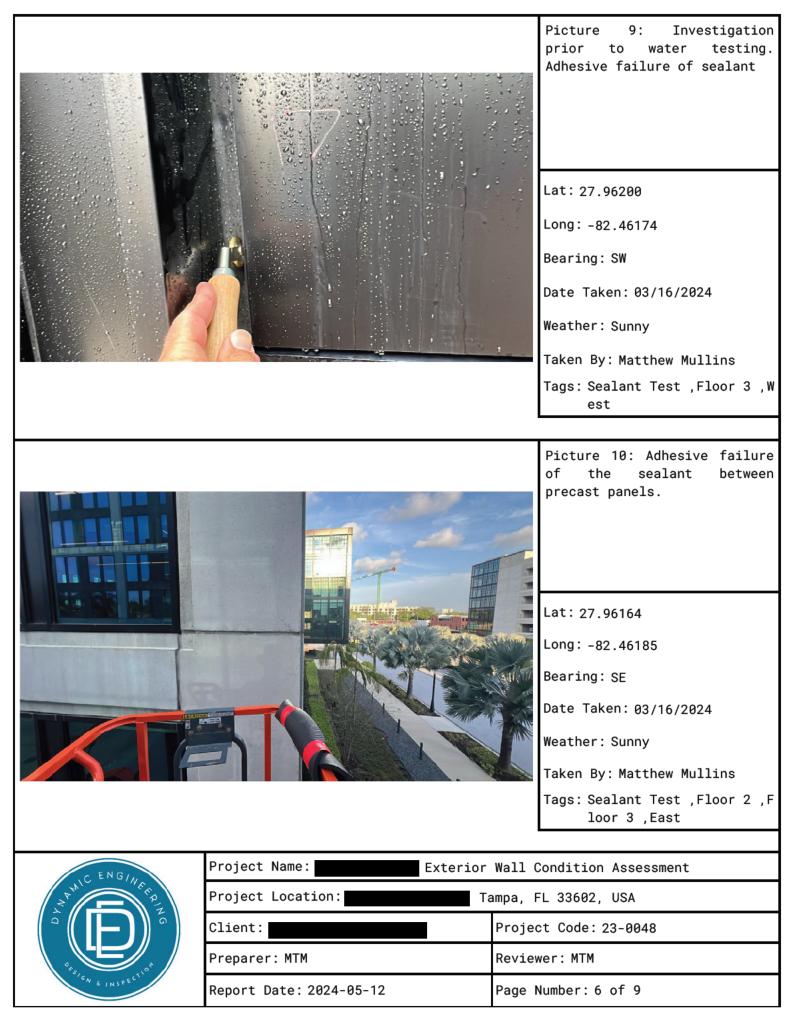


		Picture 1: Hole in the sealant at corner
		Lat: 27.96193
		Long: -82.46175
		Bearing: SW
		Date Taken: 03/16/2024
		Weather: Partly cloudy
		Taken By: Matthew Mullins
		Tags: Sealant Test ,Floor 2 ,E ast
		Picture 2: Hole in the sealant at corner
2		Lat: 27.96194
		Long: -82.46173
		Bearing: SW
	ALZ N DET	Date Taken: 03/16/2024
	Contraction of the	Weather: Partly cloudy
		Taken By: Matthew Mullins
		Tags: Sealant Test ,Floor 2 ,E ast
ANIC ENGINER P		Wall Condition Assessment
MA O CENGINER PING		ampa, FL 33602, USA
	Client:	Project Code: 23-0048 Reviewer: MTM
Crustich & INSPECTION	Preparer: MTM	
	Report Date: 2024-05-12	Page Number: 2 of 9





		Picture 7: Investigation prior to water testing. Adhesive failure of sealant
		Long: -82.46173
		Bearing: SW
	L'ALL CONTRACTOR	Date Taken: 03/16/2024
	MANAR KE	Weather: Sunny
	Contraction of the second s	Taken By: Matthew Mullins
		Tags: Sealant Test ,Floor 3 ,W est
		Picture 8: Investigation prior to water testing. Adhesive failure of sealant
		Lat: 27.96199
		Long: -82.46174
		Bearing: SW
		Date Taken: 03/16/2024
		Weather: Sunny
		Taken By: Matthew Mullins
		Tags: Sealant Test ,Floor 3 ,W est
THIC ENGINER		Wall Condition Assessment
	Client:	ampa, FL 33602, USA Project Code: 23-0048
	Preparer: MTM	Reviewer: MTM
ON & INSPECTION	Report Date: 2024-05-12	Page Number: 5 of 9



			Picture 11: Adhesive failure of the sealant between precast panels.
in the second	A state of the sta		Lat: 27.96163
	N/AN AND		Long: -82.46183
			Bearing: SE
	a service		Date Taken: 03/16/2024
		A	Weather: Sunny
	-y" " " e alta :		Taken By: Matthew Mullins
			Tags: Sealant Test ,Floor 2 ,F loor 3 ,East
			Picture 12: Adhesive failure of the sealant between precast panels.
the state of the second	Le La la		Lat: 27.96162
			Long: -82.46182
		. AN	Bearing: SE
			Date Taken: 03/16/2024
			Weather: Sunny
	and a second		Taken By: Matthew Mullins
			Tags: Sealant Test ,Floor 2 ,F loor 3 ,East
	Project Name:	Exterior Wall	Condition Assessment
APMIC ENGINER	Project Location:		FL 33602, USA
	Client:		ct Code: 23-0048
	Preparer: MTM		wer: MTM
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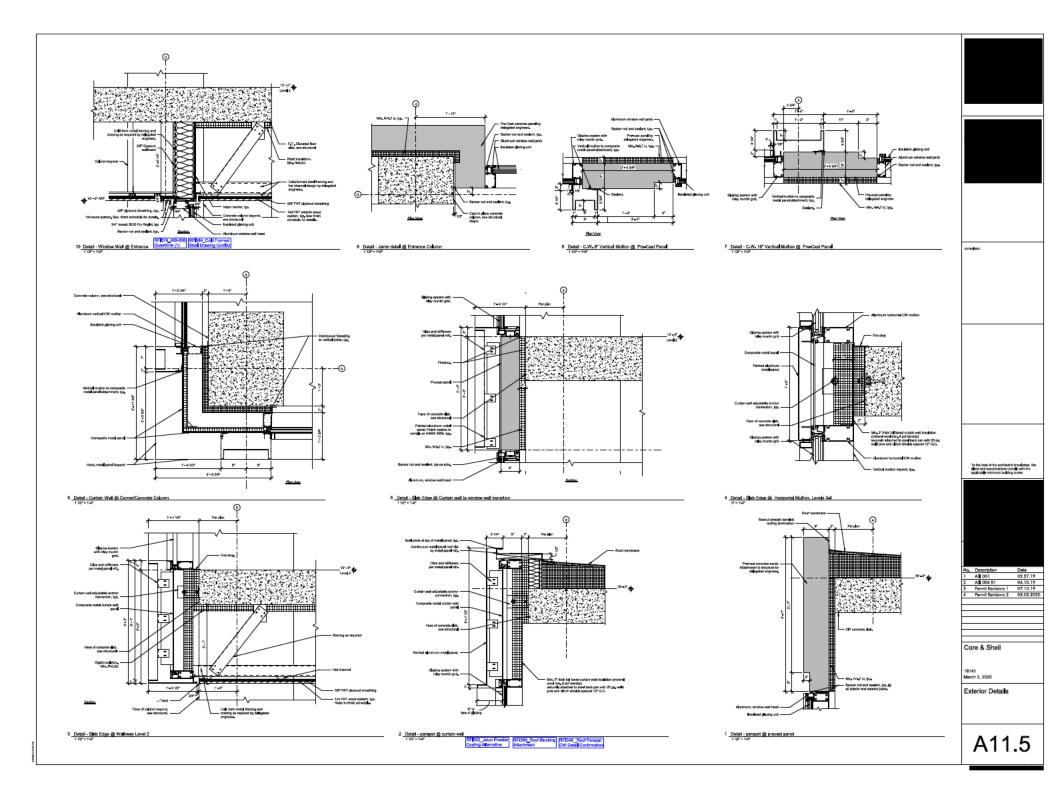
Picture 14: Sealants check at isolated locations.         Picture 14: Sealants check at isolated locations.         Image: Distribution of the state of the			Picture 13: Adhesive failure of the sealant between precast panels. Lat: 27.96164 Long: -82.46181 Bearing: SE Date Taken: 03/16/2024 Weather: Sunny Taken By: Matthew Mullins Tags: Sealant Test ,Floor 2 ,F
at isolated locations. Lat: 27.96168 Long: -82.46129 Bearing: NE Date Taken: 03/16/2024 Weather: Sunny			loor 3 ,East
Long: -82.46129 Bearing: NE Date Taken: 03/16/2024 Weather: Sunny			at isolated locations.
			Long: -82.46129 Bearing: NE Date Taken: 03/16/2024
			Taken By: Matthew Mullins Tags: Sealant Test ,Floor 3 ,E ast ,Floor 4
Project Name: Exterior Wall Condition Assessment		Project Name: Exterior	Wall Condition Assessment
Project Name: Exterior Wall Condition Assessment Project Location: Tampa, FL 33602, USA	PHIC ENGINER		
Client: Project Code: 23-0048			
Preparer: MTM Reviewer: MTM			
Report Date: 2024-05-12 Page Number: 8 of 9	STEN & INSPECTION		

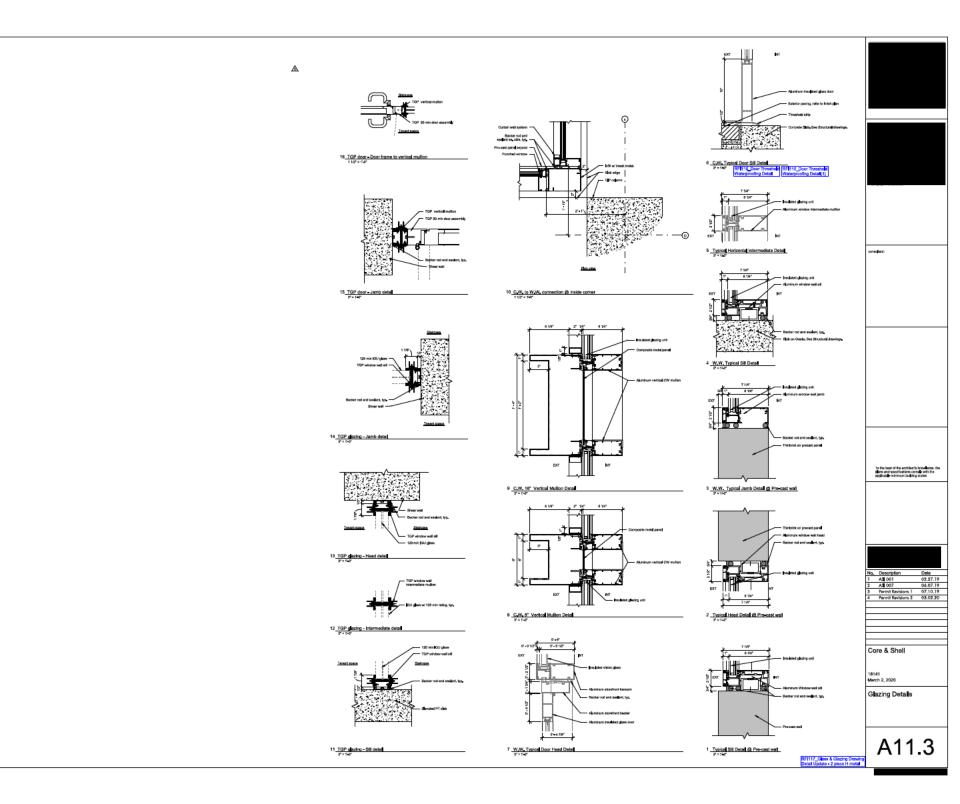
		Picture 15: Sealants checked at isolated locations Lat: 27.96142 Long: -82.46217 Bearing: N Date Taken: 03/16/2024 Weather: Sunny Taken By: Matthew Mullins Tags: Sealant Test ,Floor 2 ,W est ,Floor 1
		<pre>Picture 16: Sealants checked at isolated locations</pre> Lat: 27.96141 Long: -82.46217 Bearing: N Date Taken: 03/16/2024 Weather: Sunny Taken By: Matthew Mullins Tags: Sealant Test ,Floor 2 ,W est ,Floor 1
A PANIC ENGINARIA		Wall Condition Assessment ampa, FL 33602, USA
	Client:	Project Code: 23-0048
	Preparer: MTM	Reviewer: MTM
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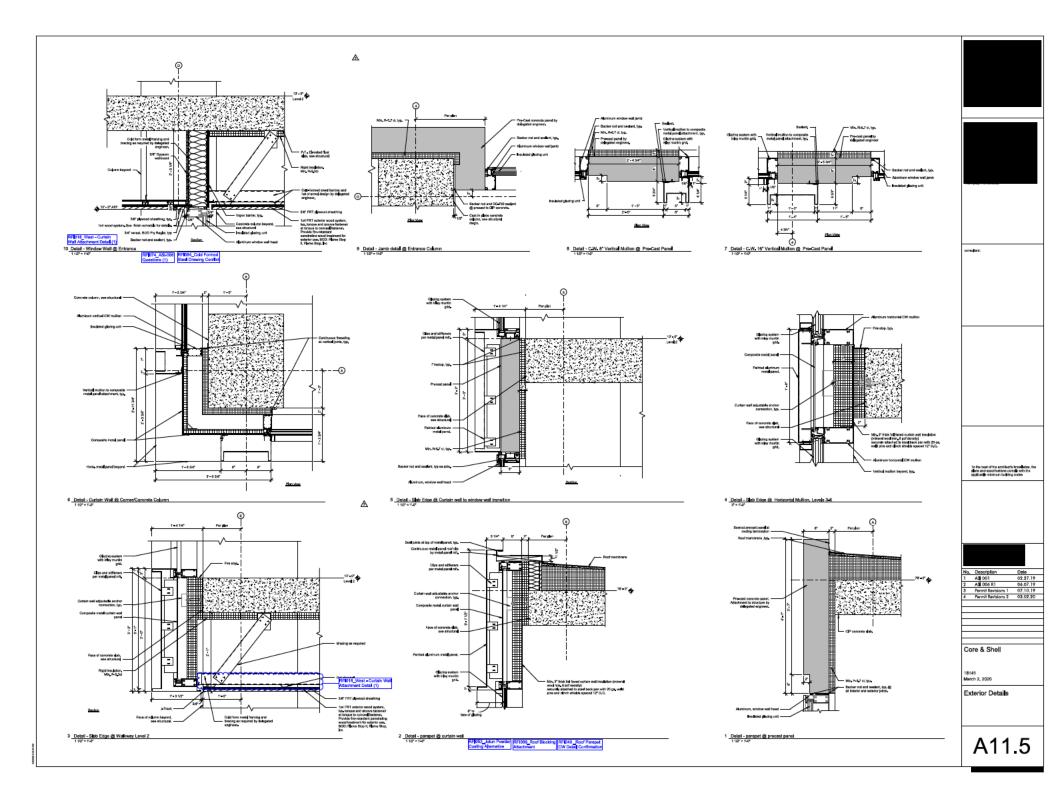


















amp	ba, Fl	_ 33602-955	9						Project #	D5-D18 <b>:</b> Tel:	3015-0 Fa
ate:	11/25	5/2019									
Trar	nsmit	tted To:					Transmitted By:				
Trar	nsmit	ted For					Delivered Via				
Refe	erenc	e					Status		Di	ue Date	
0880	00 <b>-</b> 02	18-Window Wall	Shops W&E				Pending				
#	Qty	Item	Date	Ref	Cycle	Descriptio	n	Comments	St	atus	
1		Submittal	11/25/19	01424	1	WW Shops E	ast		Or	ben	
2		Submittal	11/25/19	01423	1	WW Shops W	Vest		Op	ben	
Cc:	Com	npany Name				Contact Na	ame				
_											
Ren	narks										



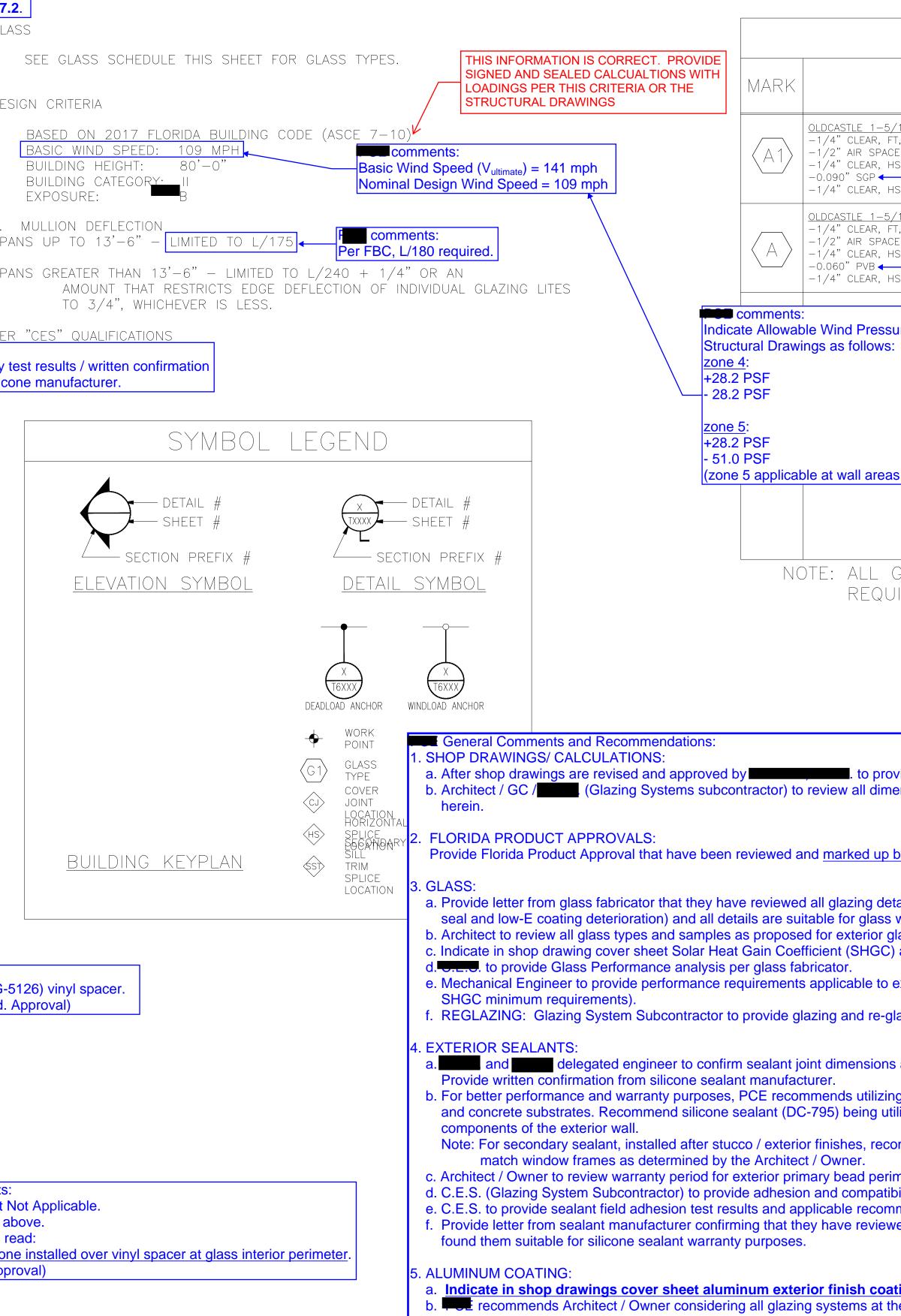
Tampa, FL 33602-9559			<b>Project #:</b> D5-D18015-00 Tel: Fax:
Tampa, FL 33602-9559 Phone: Fax: Tampa to confirm material types for all items not specifically called out.	Reviewed for general conformance to the contract documents. This review does not relieve the subcontractor of the responsibility of making the work conform to the contract requirements. The subcontractor is responsible for all dimensions, correct fabrication, and accurate fit with the work of other trades. Submittal No: 088000-018 Project No: D5-D18015-00 Reviewed By:	Architect	

Consultant	
SUBMIT SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS.	
CALCOLATIONS AND SHOP DRAWINGS.	

Consultant		

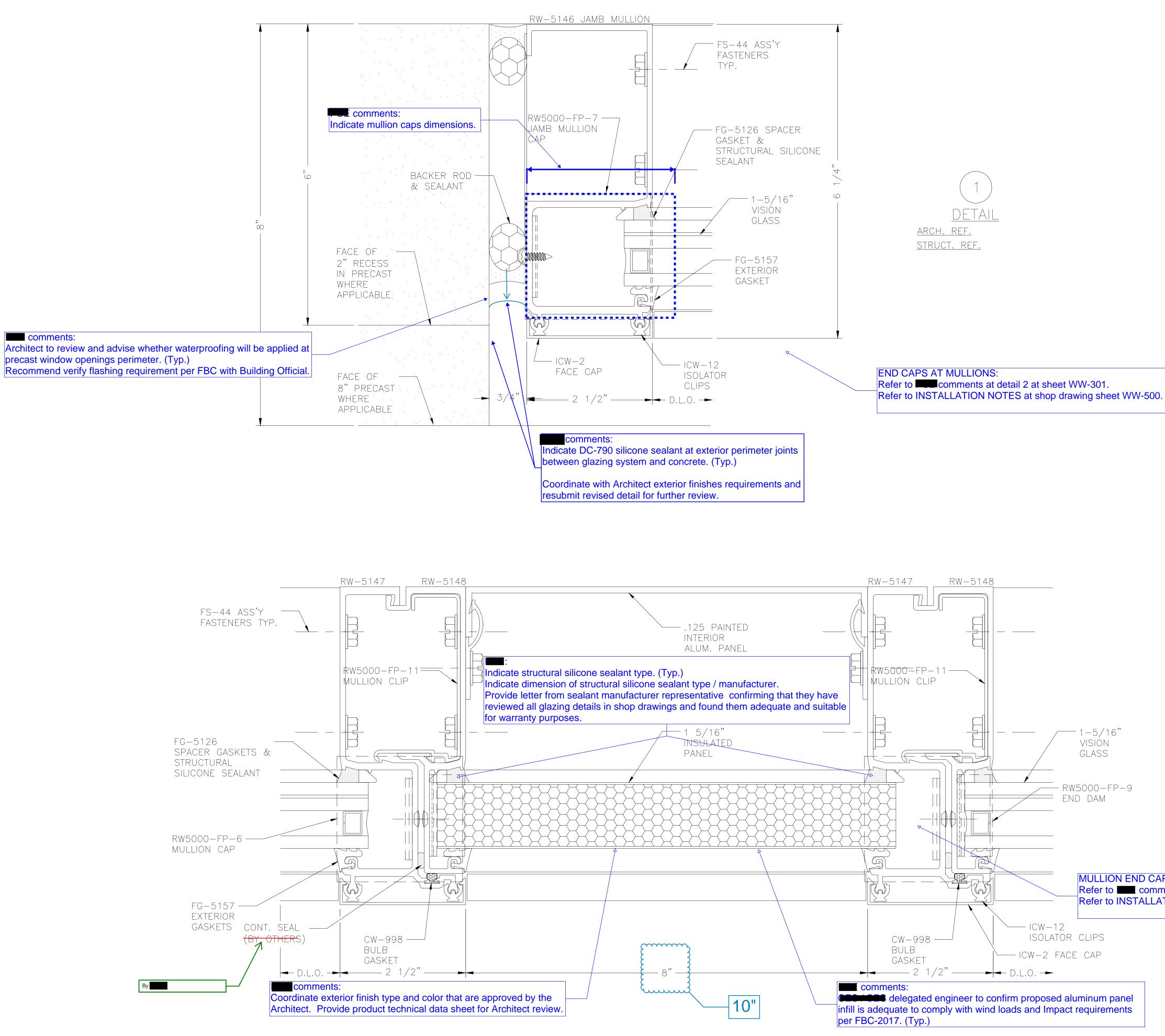
<u>GEI</u>	NER	<u>AL NOTES</u>			Add FL # 1768	
ALUN 1.	ALL STRI	1 FRAMING: OLDCASTLE BUILDING STRUCTURE TO WHICH "CES" FR JCTURALLY SOUND AND CAPABLE THE CURTAIN WALL OR WINDOWS	RAMING IS T <mark>o be anchc</mark> Of supporting the N	DRED MUST BE WEIGHTS AND REACTIONS	11. GI	LA
2.		" ASSUMES NO RESPONSIBILITY ER TRADES THROUGH THE USE C	,		12. DI	ES
3.	INTE AUTI	SE SHOP DRAWINGS, WHEN APPR RPRETATION OF PROJECT REQUIR HORIZATION TO PROCEED WITH SI SEQUENT TO THE APPROVAL MUS	REMENTS AND SUCH APP HOP FABRICATION. ANY	PROVAL SHALL CONSTITUTE ′ CHANGES REQUESTED	Ι.	
4.	ALUI I.	MINUM FINISHES EXTERIOR: BLACK 378X500	Indicate exterior finish ty Provide paint Product Da project requirements.	vpe and manufacturer. ata Sheet and Warranty Period p		Ра Ра
	.	INTERIOR: BLACK 378X500		ish in accordance with AAMA 26	605.	
	.	ALUMINUM IN CONTACT WITH SIL CARRYING BOND TO HAVE BLAC			iii. Pl Comments: Provide laboratory	
	Ⅳ.	ALUMINUM NOT EXPOSED TO VI COME IN CONTACT WITH CONCR BITUMINOUS COAT FOR DISSIMIL	RETE, IN WHICH CASE TH		from structural sili	
6.	STE	EL FINISH				
	.	MISCELLANEOUS STEEL TO REC	CEIVE (2) COATS OF ZIN		to confirm this steel is not	
7.	ALL(	DYS AND TEMPERS:		e	kposed	
	١.	NON-STRUCTURAL ALUMINUM E>	XTRUSIONS:	6063-T6		
	.	VERTICAL MULLIONS, HORIZONTA	AL MULLIONS	6063-T6		
	.	ALUMINUM SHEET AND BRAKE M	IETAL:	5005 OR 3003-H14		
	IV.	STRUCTURAL STEEL SHAPES:		A-36		
	V.	ANCHORS		6105-T5		
8.	FAST	ENERS				
	IW.	FASTENERS EXPOSED DIRECTLY	TO WEATHER TO BE 30	00 SERIES STAINLESS STEEL.		
	.	STRUCTURAL FASTENERS NOT EX STEEL "SILVER STALGARD" ELCO				
	.	NON STRUCTURAL FASTENERS N STEEL WITH A CADMIUM AND YE				
	IV.	LOAD CARRYING BOLTS TO BE (	grade 5 unless notei	D OTHERWISE.		
	$\lor$ .	STRUCTURAL BOLTS NOT DIRECT WITH A CADMIUM AND YELLOW		IER TO BE CARBON STEEL		
9.	GAS	KETS, SETTING BLOCKS AND EDG	e blocks <	to confirm where setting block is to be used.		
	١.	INTERIOR SPACER TO BE 1/4"	SILICONE ROD.		-Indicate (part FG	6-5
	.	SETTING BLOCKS TO BE BLACK PER ASTM C115-04	SILICONE, 85±5 DURON	METER ,SHORE 'A',	(per Florida Prod	1. /
	.	LENGTH OF SETTING BLOCKS IS GLASS X 0.1" OR 4", WHICHEVE		SQUARE FEET OF		
	∨.	CENTERLINE OF SETTING BLOCK GLASS DIVIDED BY 8 OR 8", WI		THE WIDTH OF THE		
	V.	EXTERIOR GASKETS TO BE BLAC DUROMETER SHORE "A", PER AS CORNERS IF APPLICABLE.			comment	
	∨I.	INTERIOR GASKETS TO BE BLAC PER ASTM C864-84, OPTION II, IF APPLICABLE.			Interior Gasket Refer to item I Item VI should Structural silico (per Florida Ap	at re on
10.	SEAI	ANTS AND BACKER RODS				<u>וץ,</u>
	١.	ALL INTERNAL SEALS TO BE MA SEALANT.	ADE WITH BLACK DOW C	ORNING 795 SILICONE		
	.	ALL WEATHER SEALS TO BE MA SEALANT	DE WITH "TBD" DOW CC	ORNING 795 SILICONE	sealants will b Dow 995 or 7	be u
	.	BACKER RODS TO BE CLOSED- By Nomaco, inc.	CELL, NONE GASSING "S	SOF'ROD" AS MANUFACTURED		

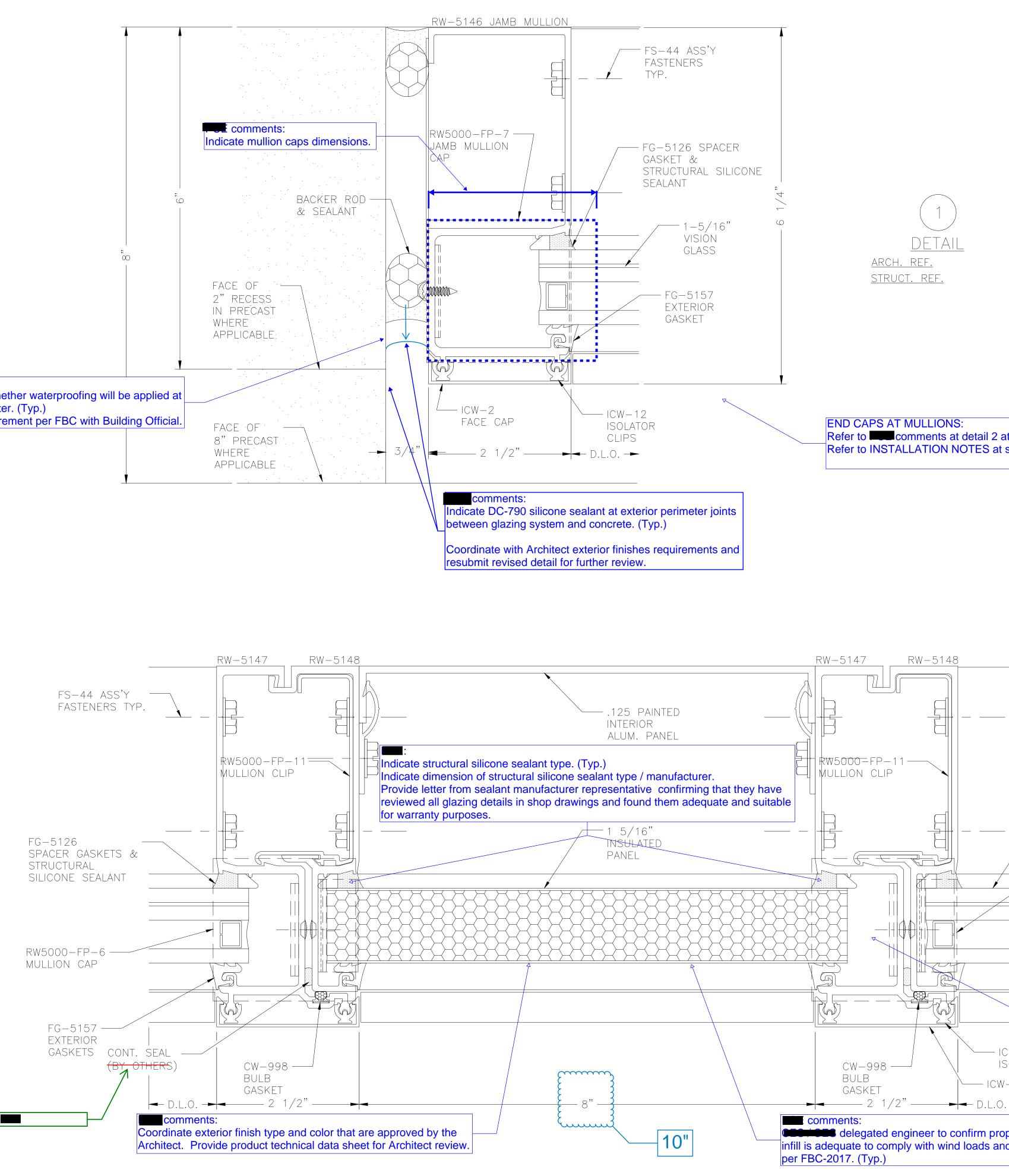
IV. ALL SEALANTS AND BACKER RODS TO BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS.



irm if any other be used such as 2-coats system min.) in accordance with AAMA 2605.
c. Submit painted aluminum samples for Architect / Owner approval.
d. Architect / Owner to coordinate adequate exterior finish type and color recommendations.

		B
		DATE
GLASS SCHEDULE		
DESCRIPTION Architect to review Optical / Energy performance requirements.		$\uparrow$
The vision, [L.M.I.] The with MEP Energy calculations.		
0.075" SAFLEX CP INTERLAYER by Eastman Chemical Co.		z
CES to review.		- S
16" VISION, [S.M.I.]         , W/ SNX 51/23 HT, LOW E, #2         Comments:         0.060 "SAFLEX PVB by Eastman Chemical Co.         CES to review.		R E <
ires (ASD) in shop drawings per		
		0 Z
s within 10 ft from building corners)		
GLASS IS HEAT STRENGTHENED EXCEPT WHERE		
IRED BY CODE OR DESIGN		
vide shop drawings and structural calculations signed & sealed by a Florida registered P.E.		
by delegated glazing systems engineer indicating applicable conditions for this project.		
by delegated glazing bysteme engineer indicating appliedble conditions for the project.		
ails in shop drawings and found them adequate (to prevent glass delamination and I.G.U. warranty purposes. azing systems at the project.	0	
and Visible Light Transmittance (VLT) required for this project for Architect review.		
exterior glazing systems per Energy Calculations (indicate glazing system U-Value and		
azing procedures for all the proposed glazing systems at the project.		
at the project are compatible with sealant movement capabilities.		
g silicone sealant (Dow Corning DC-790) at exterior perimeter joints between glazing systems		
lized at joints between glazing systems and metal structure or between painted aluminum		
mmend a sealant compatible with primary sealant or a silicone sealant colored to closely		
neter silicone sealant in contact with waterproofing system (as applicable).		
ility test results for proposed sealant in contact with all applicable substrates / materials. mendations for sealant installation at the project.		
ed all glazing sealant details in shop drawings / all perimeter sealant joints conditions and	JOB N	0.
	0000	
ting type. The project to receive finish coating that contains min. 70% Kynar 500 resin (such as Duranar	DRAWN	ΒY
	HJC	
quirements for the project.	DATE	
	11-22-	
	SCALE	
	NTS Shee	
	SHEE	
	WW - C	102





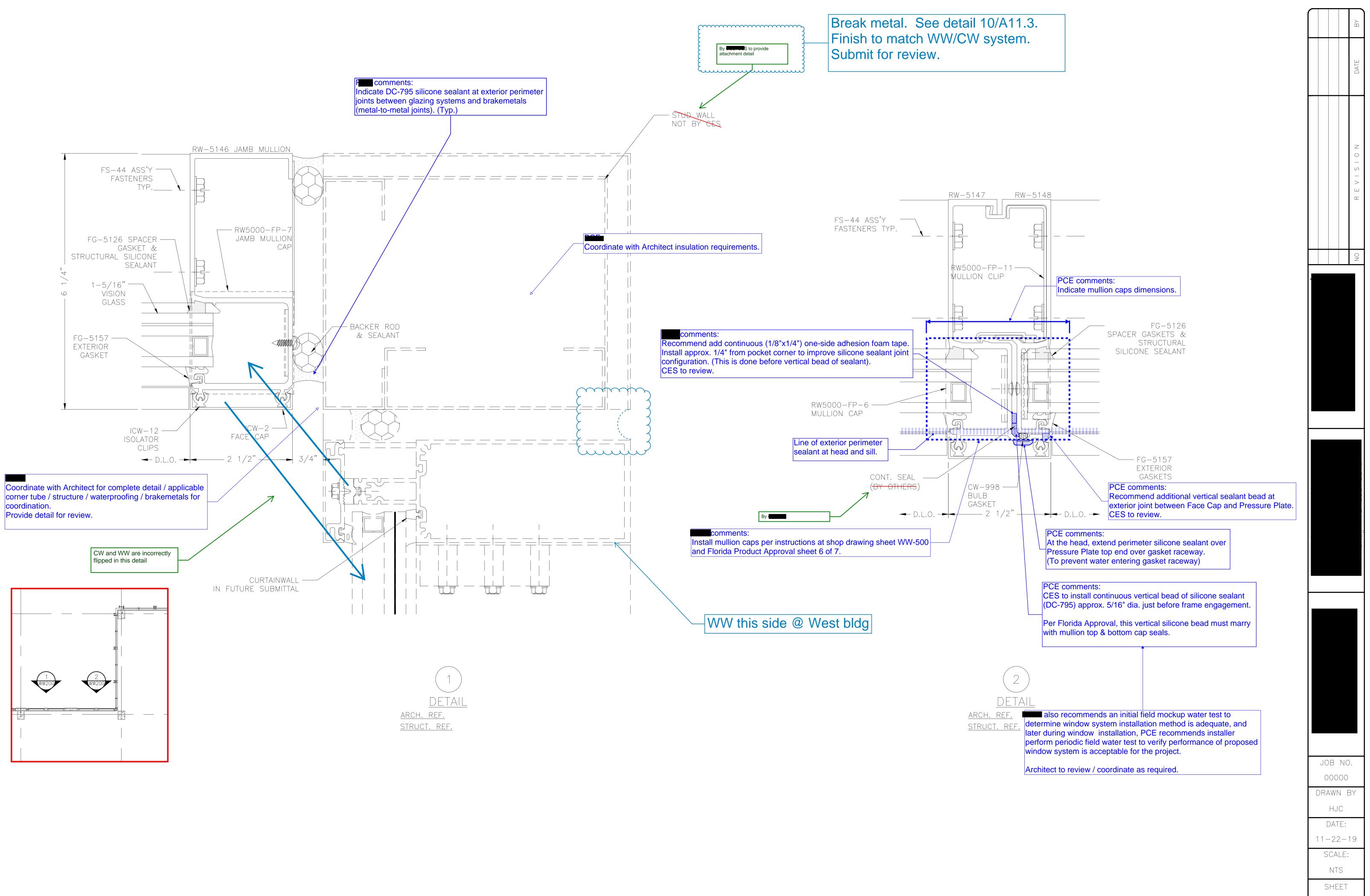
- 	<u>arch. ref.</u> <u>struct. ref.</u>
-	
-	
-	
Refer to	CAPS & INSTALLATION: omments at detail 2 at sheet WW-301. LLATION NOTES at shop drawing sheet W
ATOR CLIPS	
FACE CAP	
ed aluminum panel	

WW-500.

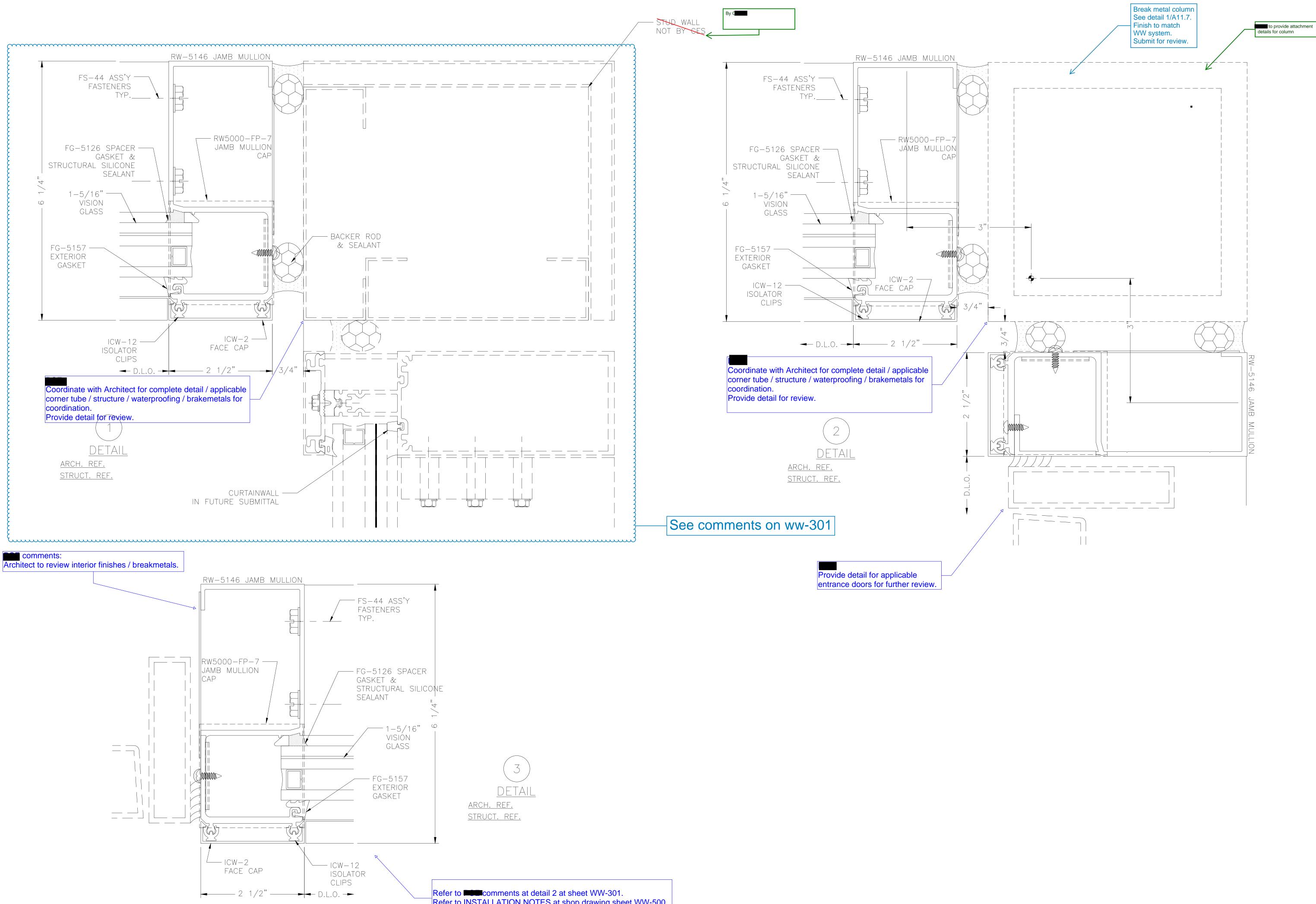
DETAIL

JOB NO. 00000 DRAWN BY HJC DATE: 11-22-19 SCALE: NTS SHEET WW - 300

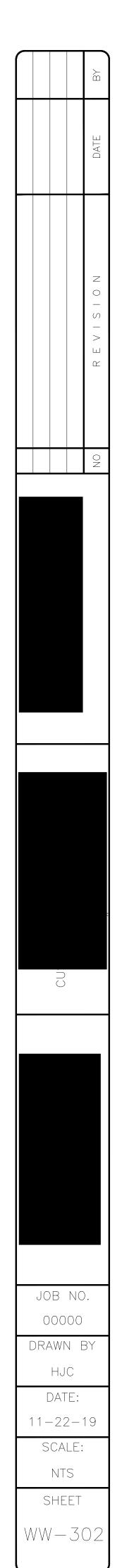
- 1–5/16" VISION GLASS

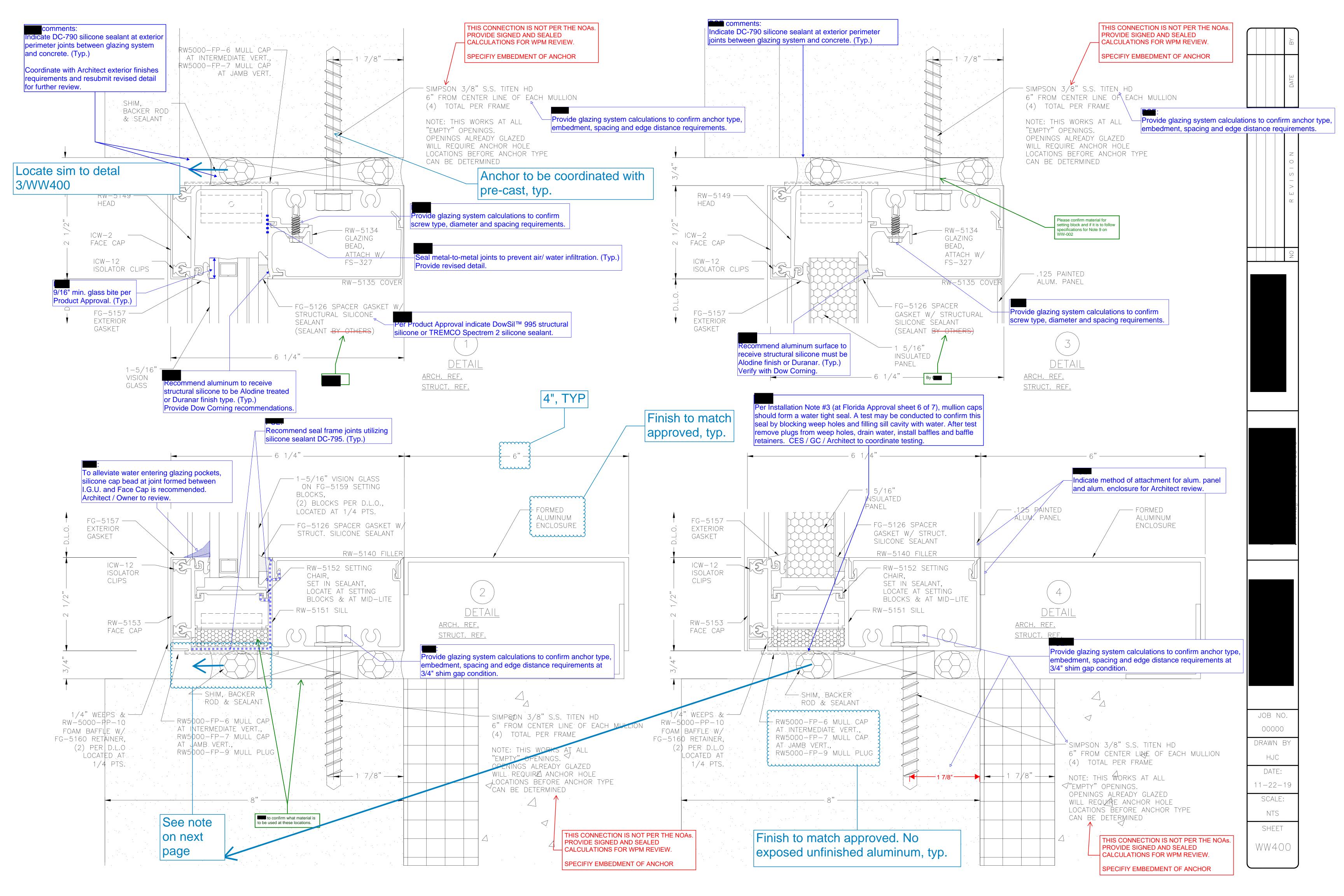


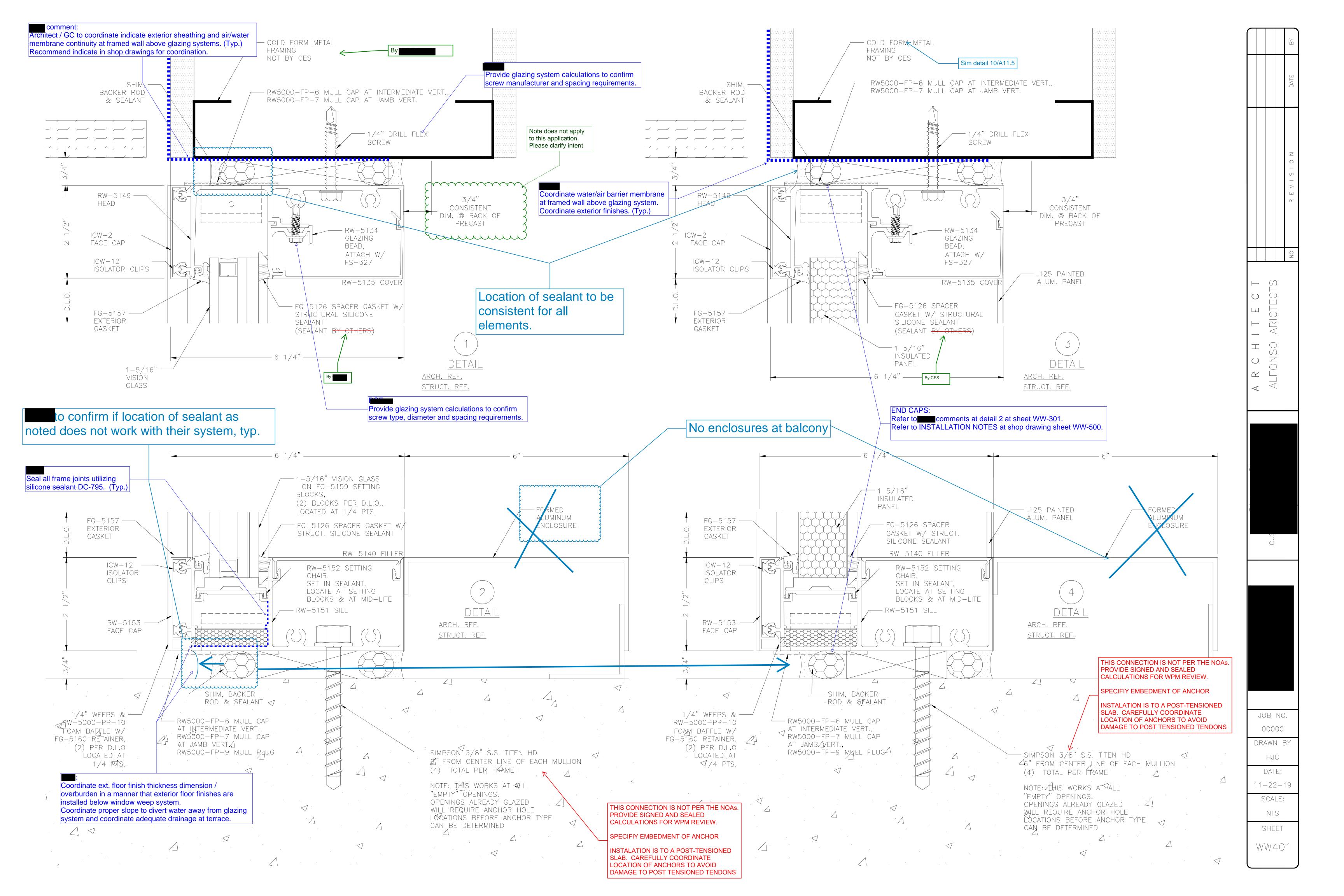
WW - 30



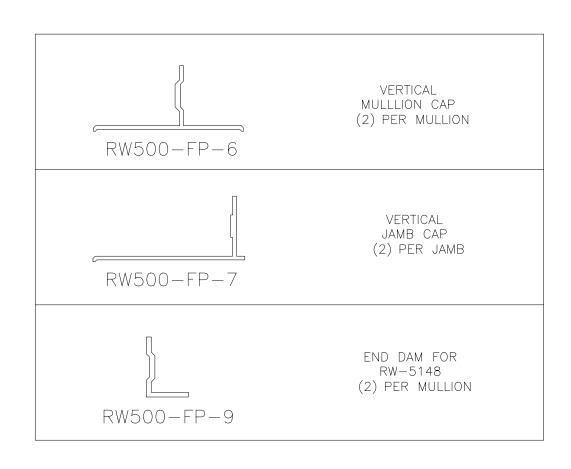
Refer to INSTALLATION NOTES at shop drawing sheet WW-500.

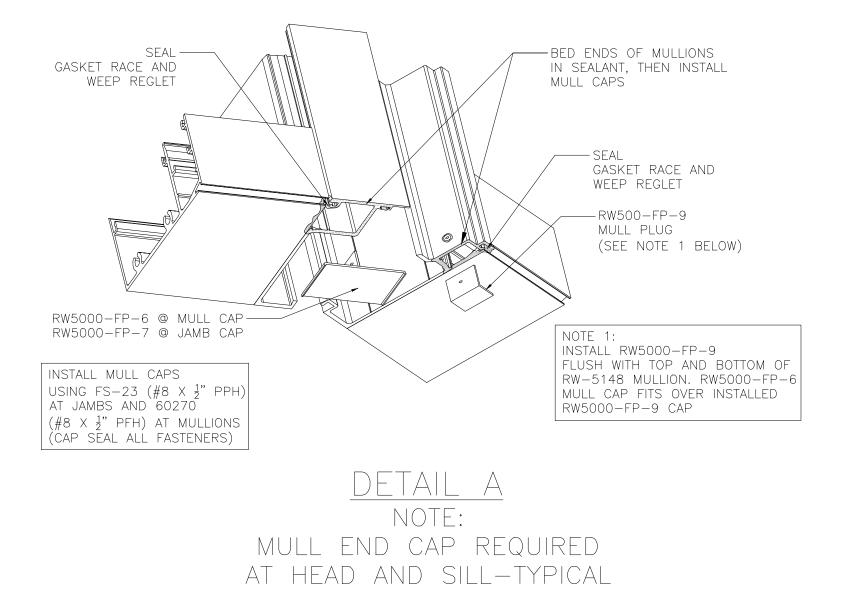




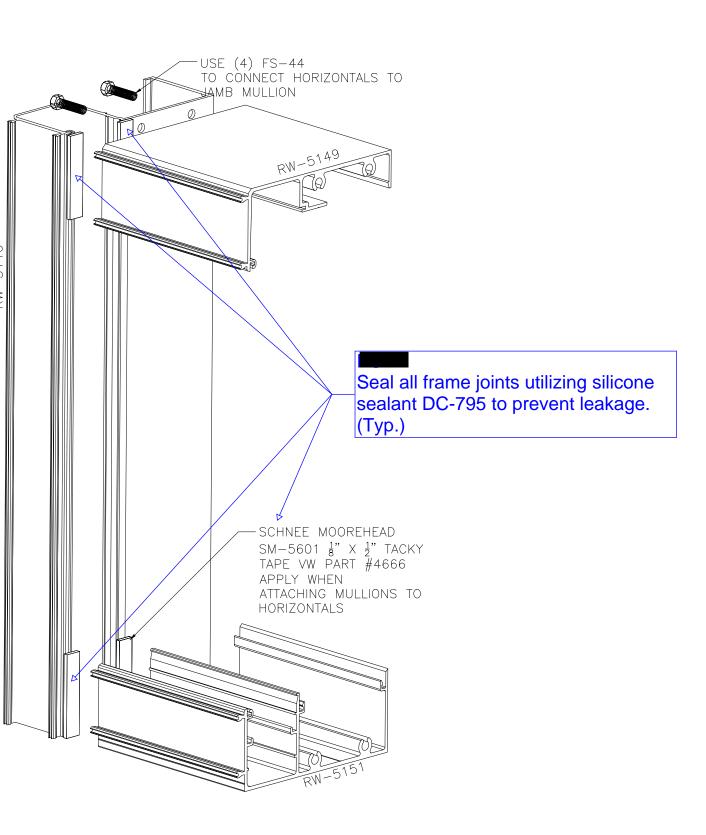




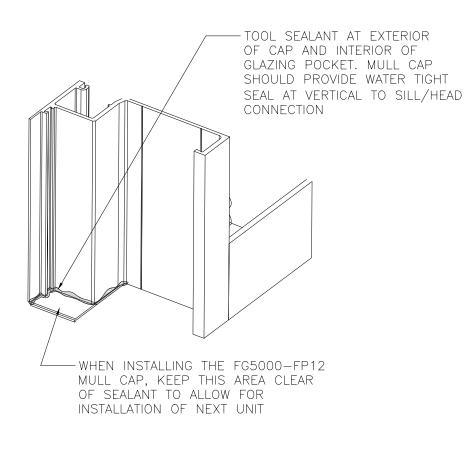




# ATTACH HORIZONTALS TO VERTICALS USING $\frac{5}{16}$ " X 1" HHSTS SPLINE SCREWS. TRIM EXCESS SEALANT TAPE AT JOINTS WITH RAZOR KNIFE.

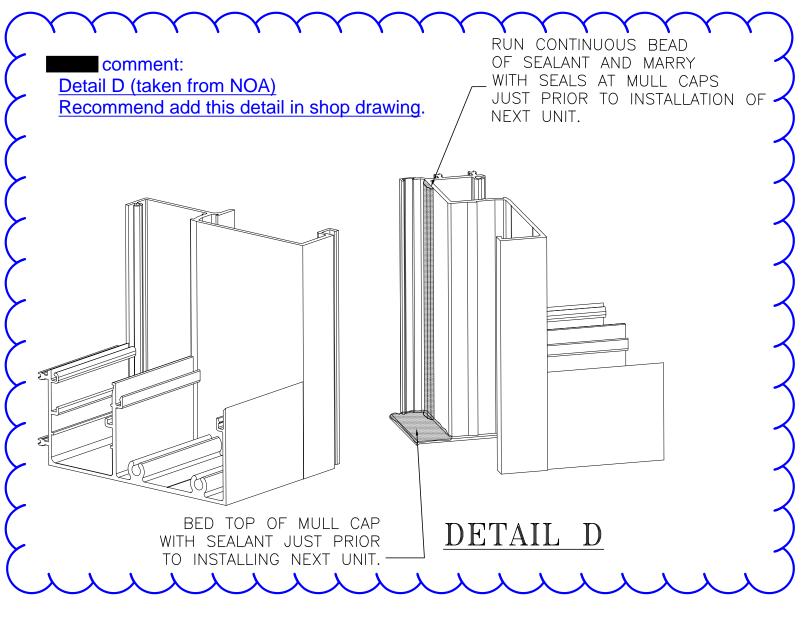


STEP 2 INSTALL AND SEAL MULLION CAPS AT HEAD AND SILL AS SHOWN IN DETAILS A, B AND C (SILL IS SHOWN AND HEAD IS SIMILAR).



DETAIL B

# comment: Note 2) Install and seal mull caps as shown in Details A, B & C below. alignment, and rotate unit into place. Plumb and anchor.



**INSTALLATION NOTES** (taken from Florida Product Approval sheet 6 of 7):

Note 1) Units must be assembled per Florida Product Approval sheets 3 thru 5.

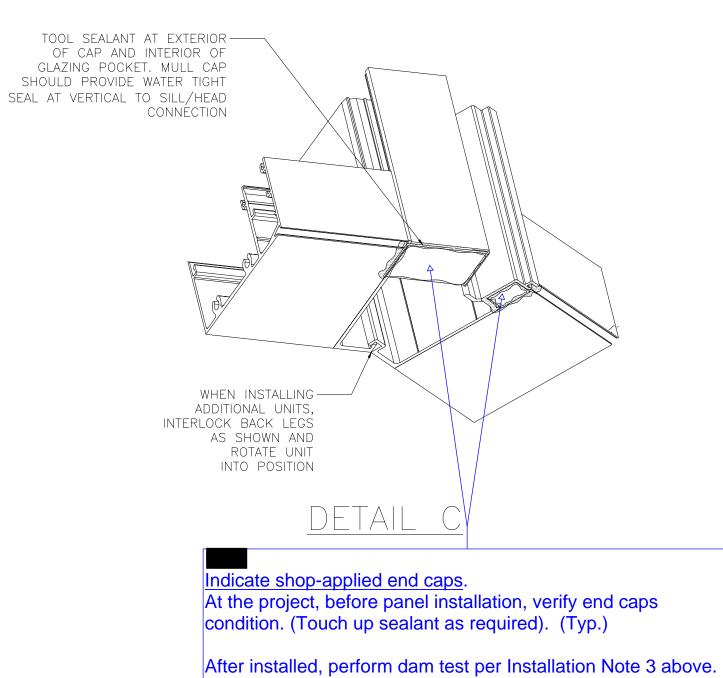
Note 3) Mullion caps should form a water tight seal. A test may be conducted to confirm this seal by blocking weep holes and filling sill cavity with water. After test remove plugs from weep holes, drain water, install baffles and baffle retainers.

Note 4) Install first unit into opening (Units will install from LEFT to RIGHT as viewed from exterior of the building), level, plumb and anchor first unit. When shimming units. shim at anchor points under sill. Do not place shims beneath mull or mull cap.

Note 5) Run bead of sealant continuous for full height of mullion and bed mull cap with sealant at head and sill as shown in Detail D.

Note 6) Install second unit by bringing into position from inside of building, tilt head of unit beneath mull cap, rotate sill of unit over lower mull cap, then interlock back legs of mullion (see <u>Detail C</u>), place appropriate shims beneath sill member to allow for better

Note 7) Repeat step 6 for all additional units. Minimum 1/4" sealant joint at jamb is required for installation of final unit.



JOB NO. 00000 DRAWN BY HJC DATE: 11-22-19 SCALE: NTS SHEET

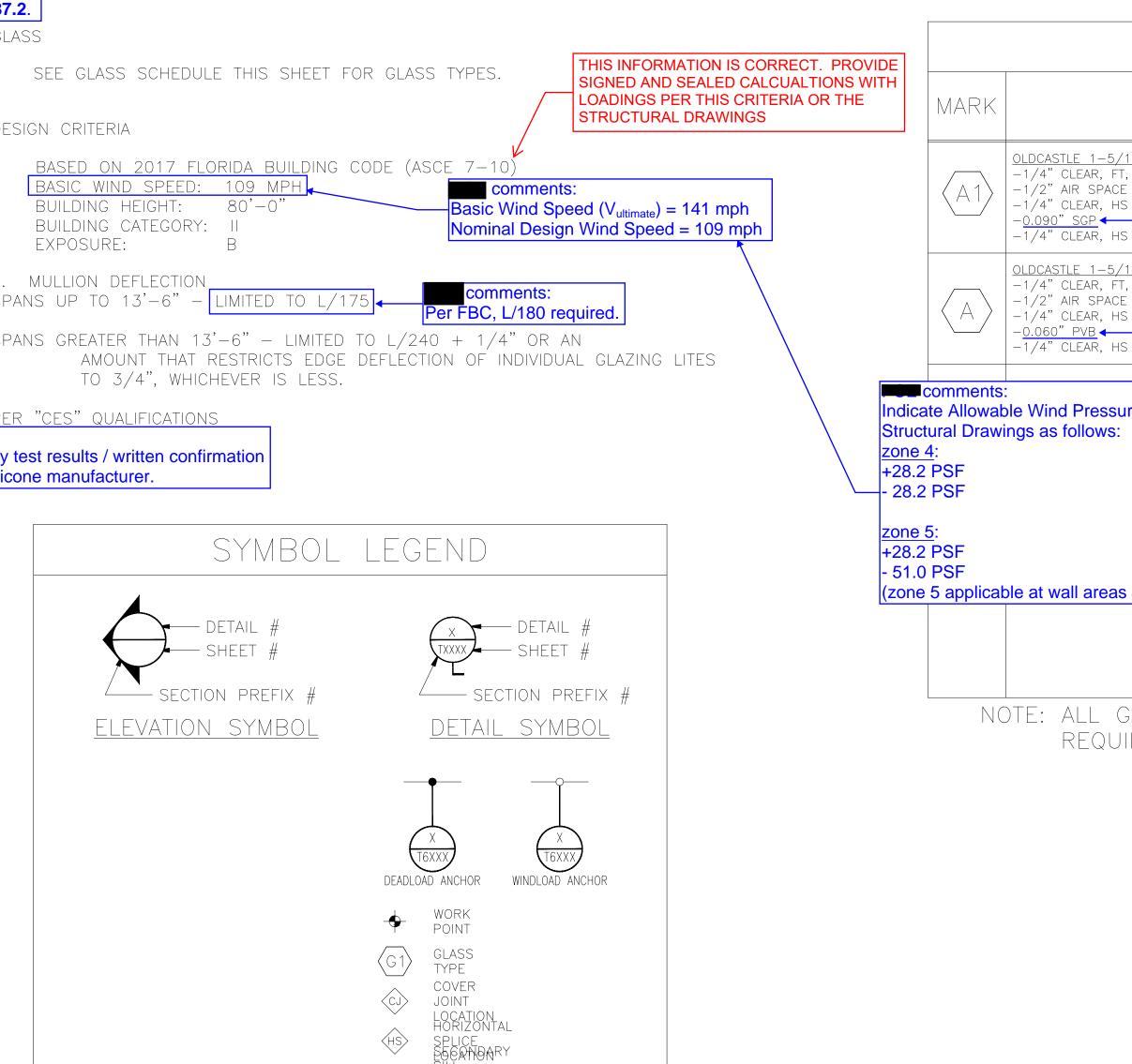
WW500

<u>gen</u>	IER.	AL NOTES			Add FL # 1	ients:
ALUM	INUM	FRAMING: OLDCASTLE BUILDING	ENVELOPE RW-5100 ST	FORMMAX WINDOW WALL	11.	
	STRU	STRUCTURE TO WHICH "CES" FRA CTURALLY SOUND AND CAPABLE HE CURTAIN WALL OR WINDOWS	OF SUPPORTING THE W	EIGHTS AND REACTIONS		Ι.
		' ASSUMES NO RESPONSIBILITY F R TRADES THROUGH THE USE O	,		12.	DESI I.
	INTEF AUTH	E SHOP DRAWINGS, WHEN APPRO PRETATION OF PROJECT REQUIRE ORIZATION TO PROCEED WITH SH EQUENT TO THE APPROVAL MUST	EMENTS AND SUCH APP IOP FABRICATION. ANY	ROVAL SHALL CONSTITUTE CHANGES REQUESTED		1.
4.	ALUM	IINUM FINISHES	comments:		i.	II. SPAI
	I.	EXTERIOR: BLACK 378X500	Indicate exterior finish typ Provide paint Product Da	be and manufacturer. Ita Sheet and Warranty Period p	er ii.	SPAN
		INTERIOR: BLACK 378X500	project requirements. Recommend exterior finis	sh in accordance with AAMA 26		0174
	.	ALUMINUM IN CONTACT WITH SIL CARRYING BOND TO HAVE BLACK			iii.	PER
	∨.	ALUMINUM NOT EXPOSED TO VIE COME IN CONTACT WITH CONCRE BITUMINOUS COAT FOR DISSIMILA	ETE, IN WHICH CASE TH		Provide labora from structura	
6.	STEE	_ FINISH				
	.	MISCELLANEOUS STEEL TO REC	EIVE (2) COATS OF ZIN	C RICH PRIMER.		
7.	ALLO	YS AND TEMPERS:				
	.	NON-STRUCTURAL ALUMINUM EX	TRUSIONS:	6063-T6		
	.	VERTICAL MULLIONS, HORIZONTAL	MULLIONS	6063-T6		
	.	ALUMINUM SHEET AND BRAKE ME	ETAL:	5005 OR 3003-H14		
	IV.	STRUCTURAL STEEL SHAPES:		A-36		
	V. ,	ANCHORS		6105-T5		
8.	FASTI	ENERS				
		FASTENERS EXPOSED DIRECTLY T	to weather to be 300	) series stainiess stefi		
		STRUCTURAL FASTENERS NOT EX	POSED DIRECTLY TO WE	EATHER TO BE CARBON		
	.	NON STRUCTURAL FASTENERS NO	· ·			
		STEEL WITH A CADMIUM AND YEI				
	IV.	LOAD CARRYING BOLTS TO BE G	RADE 5 UNLESS NOTED	OTHERWISE.		
	∨.	STRUCTURAL BOLTS NOT DIRECTI WITH A CADMIUM AND YELLOW C		ER TO BE CARBON STEEL		
9.	GASK	ETS, SETTING BLOCKS AND EDGE	BLOCKS		comme	nto:
	.	INTERIOR SPACER TO BE 1/4" S	SILICONE ROD.		-Indicate (par	t FG-5′
	.	SETTING BLOCKS TO BE BLACK PER ASTM C115-04	SILICONE, 85±5 DURON	ieter ,shore 'A',	(per Florida I	-100. A
		LENGTH OF SETTING BLOCKS IS GLASS X 0.1" OR 4", WHICHEVE		SQUARE FEET OF		
		CENTERLINE OF SETTING BLOCKS GLASS DIVIDED BY 8 OR 8", WH		HE WIDTH OF THE		

- V. EXTERIOR GASKETS TO BE BLACK CLOSED-CELL EPDM SPONGE 40+/-5 DUROMETER SHORE "A", PER ASTM C509-84 WITH FACTORY MOLDED/VULCANIZED CORNERS IF APPLICABLE.
- VI. INTERIOR GASKETS TO BE BLACK DENSE EPDM 70+/- DUROMETER SHORE "A" PER ASTM C864-84, OPTION II, WITH FACTORY MOLDED/VOLCANIZED CORNERS IF APPLICABLE

Comments: Interior Gasket Not Applicable. Refer to item I above. Item VI should read: <u>Structural silicone installed over vinyl spacer at glass interior perimeter</u>. (per Florida Approval)

- 10. SEALANTS AND BACKER RODS
  - I. ALL INTERNAL SEALS TO BE MADE WITH BLACK DOW CORNING 795 SILICONE SEALANT.
  - II. ALL WEATHER SEALS TO BE MADE WITH "TBD" DOW CORNING 795 SILICONE SEALANT
  - III. BACKER RODS TO BE CLOSED-CELL, NONE GASSING "SOF'ROD" AS MANUFACTURED BY NOMACO, INC.
  - IV. ALL SEALANTS AND BACKER RODS TO BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS.



SILL TRIM

SPLICE LOCATION

SST

. G-5126) vinyl spacer. d. Approval)

<u>Building keyplan</u>

	GLASS SCH	EDULE
RK	DESCRI	PTION Architect to review Optical / Energy performance requirements.
1		Coordinate with MEP Energy calculations nents: FLEX CP INTERLAYER by Eastman Chemical Co
	OLDCASTLE 1-5/16" VISION, [S.M.I.]         -1/4" CLEAR, FT, W/ SNX 51/23 HT, LOW E, #2         -1/2" AIR SPACE         -1/4" CLEAR, HS         -0.060" PVB          -1/4" CLEAR, HS         OLDCASTLE 1-5/16" VISION, [S.M.I.]         -1/4" CLEAR, HS         CES to rev	FLEX PVB by Eastman Chemical Co.
)rawi	ble Wind Pressures (ASD) in shop drawings per ngs as follows:	
NC	) TE: ALL GLASS IS HEAT STREN	GTHENED EXCEPT WHERE

REQUIRED BY CODE OR DESIGN

_				
				BY
				DATE
				REVISION
				0
	JC	B	NC	).
[	0 DRA	00 1W/		3Y
┝	[	HJ DAT		
1	1 - S	-22 CA		19
	S	NT HE		
M	/W	/	0(	)2
-				





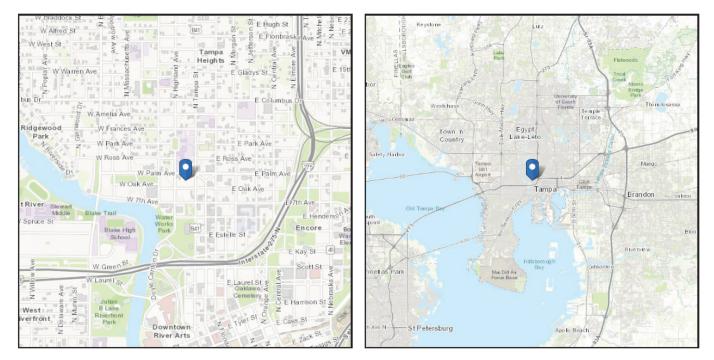


33602

# ASCE 7 Hazards Report

Standard:ASCE/SEI 7-10Risk Category:IISoil Class:undefined

Latitude: 27.961798 Longitude: -82.461622 Elevation: 29.51970345119216 ft (NAVD 88)



## Wind

#### **Results:**

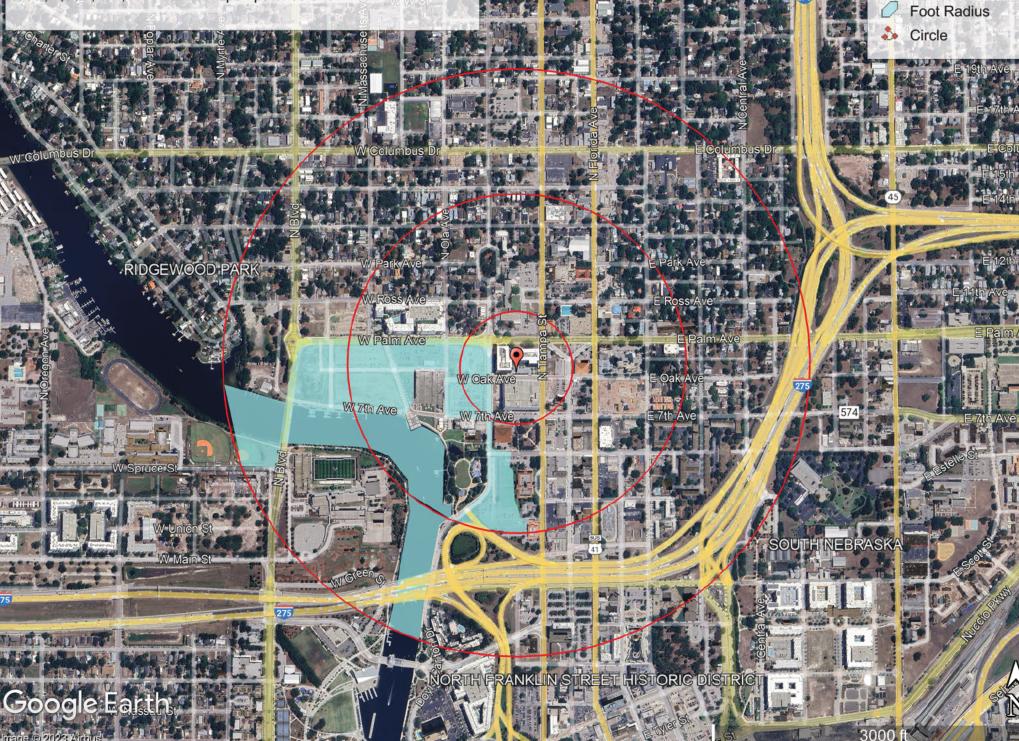
141 Vmph	
79 Vmph	
95 Vmph	
106	Vmph
117 Vmph	
ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, and S March 12, 2014	Section
	79 Vmph 95 Vmph 106 117 Vmph

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings shall be protected against wind-borne debris as specified in Section 26.10.3.

# **Exposure Category Map**

500', 1,500', & 2,600' radii with open patches shown



Legend

Feature 1

9

# Sample

Input Cont.

### **Structure Information**

Structure Type:	Building
Structure Category:	II
Enclosure Classification:	Enclosed

#### Main Section

Wall	Lengt	h (ft)	Overhang	(ft)
1	21	0	0.00	
2	13	0	0.00	
2 3	21	0	0.00	
4	13	0	0.00	
Eave Height: Parapet Height: Parapet Enclosure: Roof Shape:			78.0 ft 0.00 ft Solid Monoslope	
F	Roof	Slop	e (X:12)	
A 0.00				

