City of Plymouth Historic District Commission
Regular Meeting Agenda
Wednesday, October 6, 2021 – 7:00 p.m.
ONLINE Zoom Meeting

City of Plymouth
201 South Main Street
Plymouth, Michigan 48170

www.plymouthmi.gov
Phone 734-453-1234
Fax 734-455-1892

Join Zoom Webinar https://us02web.zoom.us/j/83818073969
Webinar ID: 838 1807 3969
Passcode: 850543

Statement of explanation of the reason why the public body is meeting electronically:
On March 10, 2020, the Governor of the State of Michigan declared a State of Emergency across the State of Michigan under section 1 of Article 5 of the Michigan Constitution of 1963, the Emergency Management Act, 1976 PA 390, as amended, MCL 30.401 – 421, and the Emergency Powers of the Governor Act of 1945, 1945 PA 302, as amended, MCL10.31 – 33. These sections provide the governor with broad powers and duties to cope with dangers to this state or to the people of the state.

As a part of the response to the emergency, the Governor has deemed it reasonable and necessary to temporarily suspend rules and procedures relating to physical presence at meetings and hearings of public bodies and other governmental entities in Michigan. These public bodies and entities must continue to conduct public business during this emergency.

1) CALL TO ORDER

2) CITIZENS COMMENTS

3) APPROVAL OF THE MINUTES
   a) Approval of the September 1, 2021, regular meeting minutes

4) APPROVAL OF THE AGENDA

5) COMMISSION COMMENTS

6) OLD BUSINESS

7) NEW BUSINESS
   a) H21-07, 306 S. Main: Exterior alterations, windows and doors, signage, and exterior lighting

8) REPORTS AND CORRESPONDENCE

9) ADJOURNMENT

Citizen Comments - This section of the agenda allows up to 3 minutes to present information or raise issues regarding items not on the agenda. Upon arising to address the Commission, speakers should first identify themselves by clearly stating their name and address. Comments must be limited to the subject of the item.

Persons with disabilities needing assistance with this should contact the City Clerk's office at 734-453-1234 Monday through Friday from 8:00 a.m. -4:30 p.m., at least 24 hours prior to the meeting. An attempt will be made to make reasonable accommodations.

GOAL I - QUALITY OF LIFE
OBJECTIVES
Support the neighborhoods with high-quality customer service
Engage in collaboration with private entities and surrounding municipalities to implement the Joint Recreation Master Plan
Improve communication with the public across multiple platforms
Maintain a high level of cleanliness throughout the City
Support and host a diverse variety of events that foster community and placemaking

ONE-YEAR TASKS 2021

Restore sports and recreational programs that were halted by COVID-19 as soon as possible
Review and evaluate the special event policy with safety considerations
Address challenges with the Kellogg Park improvements with safety considerations
Move Kellogg Park Fountain project forward
Continue to re-engage service clubs to help enhance parks and public properties
Increase followers by 2,000 on all our communications platforms
Develop an internal and external communications plan
Upgrade City Hall facilities to accommodate remote meetings and remote participation
Continue investigating multi-modal transportation opportunities
Revisit noise ordinance

GOAL II - FINANCIAL STABILITY
OBJECTIVES
Approve balanced budgets that maintain fiscal responsibility
Advocate for increased revenue sharing with the State of Michigan
Encourage and engage in partnerships, both public and private, to share costs of services and equipment
Address the issue of legacy costs
Seek out and implement efficient and effective inter-departmental collaboration
Market our successes to attract new economic and investment opportunities

ONE-YEAR TASKS 2021

Identify mechanisms for funding sources for capital improvement projects
Increase funding to the Public Improvement Fund
Create a potential package for financing emergency structural repairs
Develop a comprehensive asset management plan that includes a review of the equipment fleet
Search out other possible revenue streams through continued association with the CWW and the MML
Develop a financial plan for public safety
Continue to make extra payments towards legacy costs
Monitor outside influences on our revenue sources, including unfunded mandates, the 35th District Court and the PCCS
Negotiate three labor contracts

GOAL III - ECONOMIC VITALITY
OBJECTIVES
Continue to support and improve active, vibrant downtown branding
Support community and economic development projects and initiatives
Support a mix of industrial, commercial and residential development
Reference the Master Plan in economic decision-making

ONE-YEAR TASKS 2021

Complete Saxton's development
Develop municipal parking lot at Saxton's site
Support development of 23 parcels adjacent to the Starkweather School property
Continue to administer the grant and the brownfield plan to support the Pulte project's completion
Finish Redevelopment Ready Community (RRC) certification by the end of 2021
Develop an annual training calendar for the Planning Commission, the Historic District Commission, the Zoning Board of Appeals and the DDA, and identify a funding source
Implement temporary plans to assist businesses in recovery efforts

GOAL IV - SERVICE AND INFRASTRUCTURE
OBJECTIVES
Support administration and staff by providing professional development opportunities, supplying resources, and maintaining a commitment to recruitment, retention, succession planning
Support and deliver safe and responsive emergency services
Maintain a sophisticated and responsive technology to communicate and manage data
Continually record, maintain, update, and improve City infrastructure

ONE-YEAR TASKS 2021

Explore enhanced pedestrian safety opportunities into targeted intersections
Research funding opportunities for ADA compliance at the PCC
Implement 2021 infrastructure program
Continue training for future career development and succession planning
Conduct a traffic study to determine whether to make additional streets one way
Update mapping resources including parcel data, completing 50% by the end of the year
Update/replace current technology to ensure compliance with new regulations, rules, and operating systems
Revisit paid parking

City of Plymouth
Historic District Commission
Regular Meeting Minutes
Wednesday, September 1, 2021 - 7:00 p.m.

City of Plymouth
201 S. Main
Plymouth, Michigan 48170-1637

www.plymouthmi.gov
Phone 734-453-1234
Fax 734-455-1892

Online Zoom Meeting

1. CALL TO ORDER

a. Chair Colleen Polin called the meeting to order at 7:00 p.m.

Present: Chair Polin, Members Jeremy Borys, Stanley Cole, Linda Filipczak, Gania Kandalaft, Joshua Mrozowski, John Townsend

Also present: Assistant Community Development Director Greta Bolhuis, City Commission Liaison Suzi Deal

2. CITIZENS COMMENTS

There were no citizen comments.

3. APPROVAL OF THE MEETING MINUTES

Townsend offered a motion, seconded by Filipczak, to approve the minutes of the of the August 4, 2021 meeting.

There was a roll call vote.

Yes: Borys, Cole, Filipczak, Kandalaft, Mrozowski, Polin, Townsend

MOTION PASSED 7-0

4. APPROVAL OF THE AGENDA

It was noted that item 7.a was withdrawn by the applicant. Townsend offered a motion, seconded by Filipczak, to approve the amended agenda for Wednesday, September 1, 2021.

There was a roll call vote.

Yes: Borys, Cole, Filipczak, Kandalaft, Mrozowski, Polin, Townsend

MOTION PASSED 7-0

5. COMMISSION COMMENTS

Townsend said he toured the project at 248 Union St. and he thinks it looks great. A scheduled open house had to be canceled due to slow progress, however.
Polin said she recently read a Northville Historic District Commission report on guidelines for consideration for the demo or moving of structures and she recommended other members of the HDC read it as well. She will forward the article to Bolhuis for distribution.

6. OLD BUSINESS

There was no old business.

7. NEW BUSINESS

There was no new business.

8. REPORTS AND CORRESPONDENCE

There were no reports or correspondence.

9. ADJOURNMENT

A motion to adjourn was offered at 7:19 p.m. by Borys. Townsend seconded the motion.

There was a roll call vote.

Yes: Borys, Cole, Filipczak, Kandalaft, Mrozowski, Polin, Townsend

MOTION PASSED 7-0

Historic District Commission
201 S. Main Plymouth, MI 48170
Administrative Review of 306 S. Main
Case Number H21-07
Agenda Date: October 6, 2021

Address: 306 S. Main
Year Built: Circa 1920
Historical Significance: Architecture

Proposed Changes: Exterior modifications, new windows and doors, exterior lighting, and building cleaning

Standards for Rehabilitation

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Application Review

The following applicable information has been provided		YES	NO	N/A
Demolition, new construction, additions, and alterations				
1.	Completed application	[X]	[ ]	[ ]
2.	Synopsis: description of the project in words	[X]	[ ]	[ ]
3.	Materials finish list	[X]	[ ]	[ ]
4.	Detailed justification of why the changes are necessary	[X]	[ ]	[ ]
5.	Historic photographs of the building	[X]	[ ]	[ ]
6.	Photographs of the building and site as they exist today	[X]	[ ]	[ ]
7.	Scaled drawings to include existing and proposed site plan including property lines, easements, setbacks, and landscape features	[X]	[ ]	[ ]
8.	Scaled drawings to include existing and proposed floor plans	[X]	[ ]	[ ]
9.	Scaled drawings to include existing and proposed elevations	[X]	[ ]	[ ]
10.	Scaled drawings to include existing and proposed cross sections and other details as needed	[X]	[ ]	[ ]
11.	Cut sheets (manufacturer information) for all exterior materials including windows, doors, garage, doors, exterior lighting, fencing, etc.	[X]	[ ]	[ ]
12.	Material samples and colors for roofing, siding, and trim	[ ]	[X]	[ ]
13.	Statement of impact of the project on surrounding properties and buildings. Statement shall include items such as architectural character, building scale, vehicular and pedestrian traffic, mass, form, proportion, configuration, location on site, landscaping, and visual appearance.	[X]	[ ]	[ ]
14.	Time frame for the project including approximate start date and dates for exterior completion, landscaping completion, and final occupancy	[X]	[ ]	[ ]
15.	Color rendering of exterior elevation	[ ]	[X]	[ ]
16.	New construction requires a streetscape view (to scale) with the proposed project inserted	[X]	[ ]	[ ]

The following applicable information has been provided		YES	NO	N/A
Building cleaning				
1.	Completed application	[X]	[ ]	[ ]
2.	Synopsis: description of the project in words	[X]	[ ]	[ ]
3.	Materials finish list	[X]	[ ]	[ ]
4.	Detailed justification of why the changes are necessary	[X]	[ ]	[ ]
5.	Historic photographs of the building	[X]	[ ]	[ ]
6.	Photographs of the building and site as they exist today	[X]	[ ]	[ ]
7.	Description of the cleaning method including the names of chemicals and the pressure of any washes or applications	[X]	[ ]	[ ]
8.	Brochure for cleaning agents	[X]	[ ]	[ ]
9.	Description of the treatment of the building exterior (surface) after cleaning – painting, sealing, tuck pointing, etc.	[ ]	[ ]	[X]

Proposed window replacement project				
The following applicable information has been provided		YES	NO	N/A
1.	Completed application	[X]	[ ]	[ ]
2.	Synopsis: description of the project in words	[X]	[ ]	[ ]
3.	Materials finish list	[X]	[ ]	[ ]
4.	Detailed justification of why window replacement is necessary	[X]	[ ]	[ ]
5.	Historic photographs of the building	[X]	[ ]	[ ]
6.	Description of the existing window material including color and condition	[ ]	[X]	[ ]
7.	Photographs of the affected windows as they exist today	[X]	[ ]	[ ]
8.	Photographs of the building with proposed changes indicated	[X]	[ ]	[ ]
9.	Cut sheets (manufacturer information) for all replacement windows	[X]	[ ]	[ ]
10.	Material samples and colors of windows	[ ]	[X]	[ ]
11.	Number of windows to be replaced	[X]	[ ]	[ ]
12.	Dimensions of windows including frame thickness and frame width	[X]	[ ]	[ ]
13.	Photographs of other projects incorporating the window replacement component	[X]	[ ]	[ ]

Proposed door or garage door replacement				
The following applicable information has been provided		YES	NO	N/A
1.	Completed application	[X]	[ ]	[ ]
2.	Synopsis: description of the project in words	[X]	[ ]	[ ]
3.	Materials finish list	[X]	[ ]	[ ]
4.	Detailed justification of why door replacement is necessary	[X]	[ ]	[ ]
5.	Historic photographs of the building	[X]	[ ]	[ ]
6.	Description of the existing door material including color and condition	[X]	[ ]	[ ]
7.	Photographs of the affected doors as they exist today	[X]	[ ]	[ ]
8.	Photographs of the building with proposed changes indicated	[X]	[ ]	[ ]
9.	Cut sheets (manufacturer information) for all replacement doors	[X]	[ ]	[ ]
10.	Material samples and colors of doors	[ ]	[X]	[ ]
11.	Number of doors to be replaced	[X]	[ ]	[ ]
12.	Dimensions of doors including frame thickness and frame width	[X]	[ ]	[ ]
13.	Photographs of other projects incorporating the door replacement component	[X]	[ ]	[ ]

Sign installation				
The following applicable information has been provided		YES	NO	N/A
1.	Completed application	[X]	[ ]	[ ]
2.	Synopsis: description of the project in words including related work such as soffits, fascia, gutters, and trim	[X]	[ ]	[ ]
3.	Materials finish list	[X]	[ ]	[ ]
4.	Detailed justification of why signage installation or replacement is necessary	[X]	[ ]	[ ]
5.	Historic photographs of the building	[X]	[ ]	[ ]
6.	Description of the existing signage material including location, size, material, color, and condition	[X]	[X]	[ ]
7.	Photographs of the building as it exists today	[X]	[ ]	[ ]
8.	Scaled and dimensioned front and side elevations showing the size and location of signage	[X]	[ ]	[ ]
9.	Scaled cross-section of building elevation indicating proposed signage	[X]	[ ]	[ ]
10.	Identification of all materials used in the construction of signage	[X]	[ ]	[ ]
11.	Material samples including number, letter, font size, and colors of signage	[ ]	[X]	[ ]

SAMPLE MOTION LANGUAGE

1. Motion to Approve Application

I move that the Commission issue a Certificate of Appropriateness for application number __. The Findings of Fact are as follows: (list facts of finding). The work as proposed meets the Secretary of the Interior's Standards for Rehabilitation standard number(s) __ and would give consideration and/or significance to the City of Plymouth Ordinance review criteria number(s) __.

Vote "Yes" to approve application. Vote "No" to deny application.

2. Motion to Approve Application with Conditions

I move that the Commission issue a Certificate of Appropriateness for application number __ , provided that the following conditions are met: (list conditions). The Findings of Fact are as follows: (list facts of finding). The work would then meet the Secretary of the Interior's Standards for Rehabilitation, standard number(s) __ and would give consideration and/or significance to the following City of Plymouth Ordinance review criteria number(s) __.

Vote "Yes" to approve application with conditions. Vote "No" to deny application with conditions.

3. Motion to Postpone Review

I move that the Commission Postpone Review of application number __ until the next regular meeting scheduled for ___.

Vote "Yes" to approve postponing the review. Vote "No" to deny postponing the review.

4. Motion to Deny Application

I move that the Commission issue a Certificate of Appropriateness for application number __ . The Findings of Fact are as follows: (list findings of facts that do not warrant the project's approval). The work as proposed does not meet the Secretary of the Interior's Standards for Rehabilitation, standard number(s) __ and would not give consideration and/or significance to the following City of Plymouth Ordinance review criteria number(s) __.
Note: Voting "No" to positively framed motion is the easiest way to deny an application's request for a Certificate of Appropriateness. FYI: Making a motion for approval and then voting "No" to deny is the same as making a motion to deny an application and then voting "Yes".

Vote "No" to deny the application. Vote "Yes" to approve the application.

5. Motion to Issue a Notice to Proceed

May be used in special conditions or emergencies.

I move that the Commission issue a Notice to Proceed for application number __. The Findings of Fact are as follows: (list facts of finding). The work as proposed does (not) meet the Secretary of the Interior's Standards for Rehabilitation, standard number(s) __ and would (not) give consideration and/or significance to the following City of Plymouth Ordinance review criteria number(s) __. The work which is approved with this Notice to Proceed is as follows: (list approved work). The work that is not approved/not appropriate requires the following conditions to be met: (list conditions). The proposed work will substantially improve or correct the following: (list notice to proceed options). Additional work desired which is not approved within this Notice to Proceed is to be resubmitted for a Certificate of Appropriateness.

Vote "Yes" to approve notice to proceed. Vote "No" to deny notice to proceed.

CITY OF PLYMOUTH
HISTORIC DISTRICT COMMISSION APPLICATION

Community Development Department
201 S. Main Street Plymouth, MI 48170
Ph. 734-453-1234 ext. 232
www.plymouthmi.gov

I. Site/Project Information

Site Address		Date of Application
306 S. Main St., Plymouth, MI 48170	☐ Contributing structure ☐ Non-contributing structure	August 25, 2021

Name of Property Owner	Phone Number	
306 S. Main	248.790-0837	
Mailing Address	Email Address (Required)	
306 S. Main St., Plymouth, MI 48170	stefanakis329@gmail.com	
City	State	Zip Code
Plymouth	Michigan	48170

II. Applicant and Contact Information

Indicate Who the Applicant Is. If Property Owner, Skip to Section III.	☐ Architect	☐ Developer	☐ Engineer	☐ Lessee
Applicant/Company Name Constantine George Pappas AIA Architecture / Planning	Phone Number 248.629.8998			
Applicant/Company Address 1025 S. Washington	City Royal Oak	State MI	Zip Code 48067	
Email Address (Required) epcaruso@cgp-architecture.com & cgpappas@cgp-architecture.com				

III. Site Plan Designer and Contact Information

Site Plan Designer Company Name Constantine George Pappas AIA Architecture / Planning		Phone Number 248.629.8998		
Company Address 1025 S. Washington		City Royal Oak	State MI	Zip Code 48067
Registration Number State of Michigan 1301029063	Expiration Date May 11, 2023	Email Address (Required) cgpappas@cgp-architecture.com epcaruso@cgp-architecture.com		

IV. Type of Project (Please Select All that Apply)

☐ New Construction	☒ Window Replacement	☒ Sign/Awning Install or Replacement	☐ Color Change
☐ Addition	☐ Siding Replacement	☐ Wall/Fence Install or Replacement	☒ Building Cleaning
☒ Alteration	☐ Door Replacement	☐ Paving Install or Replacement	☒ Other
☐ Porch Reconstruct/Repair	☐ Roof Replacement	☐ Landscaping Install or Replacement	

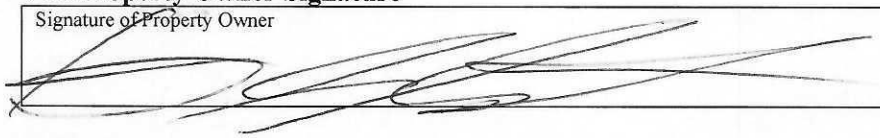
V. Description of Work

Add and improve the Exterior Lighting - See Drawings.
Repair deterioration at Lower Base of Building and replace with Granite & Clean Existing Limestone surface - See Drawings
Replace Selected Windows and Door - See Drawings.
Replace Existing Signage with New Signage with Exterior Lighting - See Drawings

VI. Applicant Signature

Signature of Applicant	Date
	8/30/21

VII. Property Owner Signature

Signature of Property Owner	Date
	08/30/2021

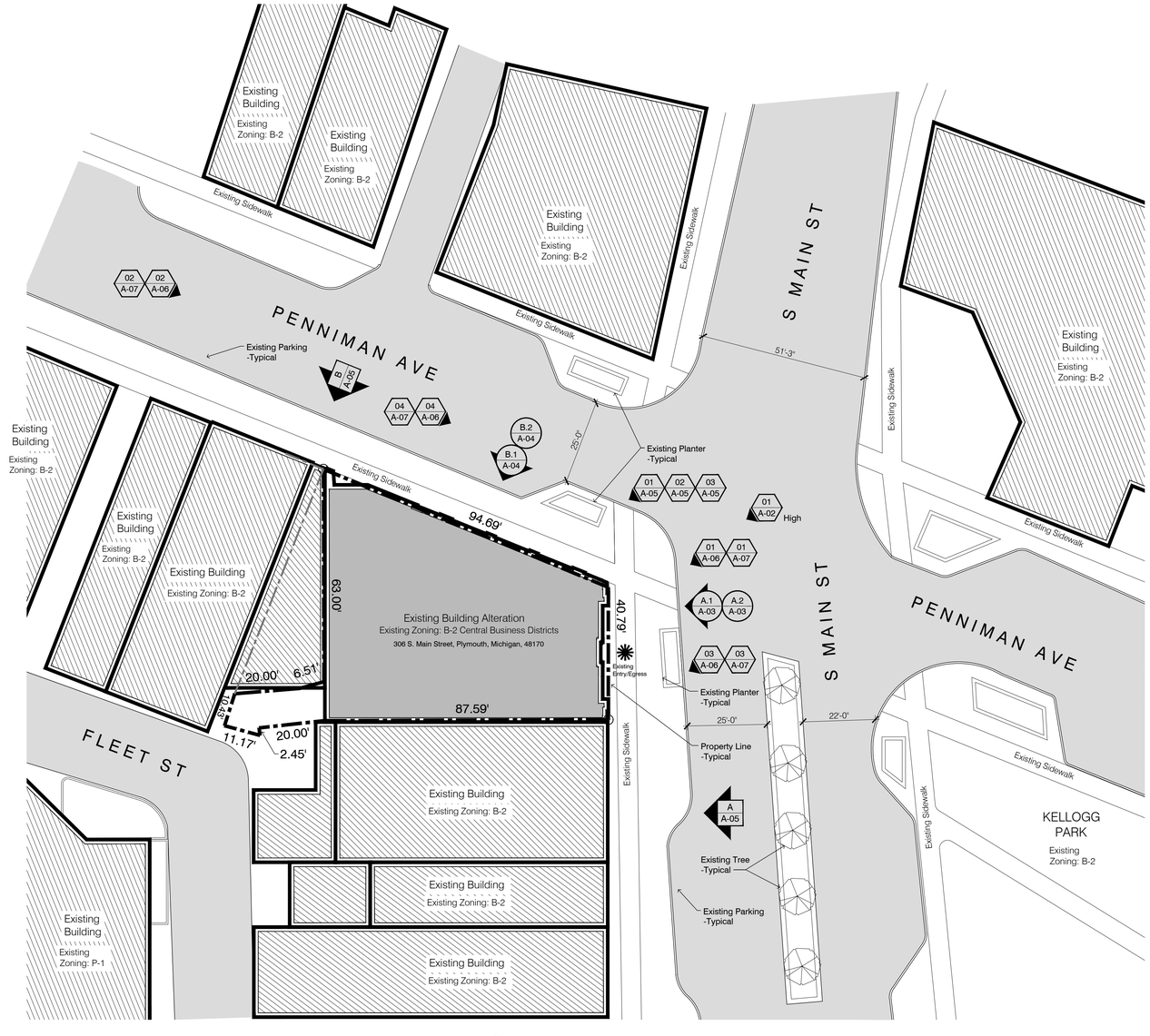
VIII. Submittal Checklist

Please include the following applicable information		YES	NO	N/A
Demolition, new construction, additions, and alterations				
1.	Completed application	[✓]	[ ]	[ ]
2.	Synopsis: description of the project in words	[✓]	[ ]	[ ]
3.	Materials finish list	[✓]	[ ]	[ ]
4.	Detailed justification of why the changes are necessary	[✓]	[ ]	[ ]
5.	Historic photographs of the building	[✓]	[ ]	[ ]
6.	Photographs of the building and site as they exist today	[✓]	[ ]	[ ]
7.	Scaled drawings to include existing and proposed site plan including property lines, easements, setbacks, and landscape features	[✓]	[ ]	[ ]
8.	Scaled drawings to include existing and proposed floor plans	[✓]	[ ]	[ ]
9.	Scaled drawings to include existing and proposed elevations	[✓]	[ ]	[ ]
10.	Scaled drawings to include existing and proposed cross sections and other details as needed	[✓]	[ ]	[ ]
11.	Cut sheets (manufacturer information) for all exterior materials including windows, doors, garage, doors, exterior lighting, fencing, etc.	[✓]	[ ]	[ ]
12.	Material samples and colors for roofing, siding, and trim	[ ]	[ ]	[ ]
13.	Statement of impact of the project on surrounding properties and buildings. Statement shall include items such as architectural character, building scale, vehicular and pedestrian traffic, mass, form, proportion, configuration, location on site, landscaping, and visual appearance.	[✓]	[ ]	[ ]
14.	Time frame for the project including approximate start date and dates for exterior completion, landscaping completion, and final occupancy	[✓]	[ ]	[ ]
15.	Color rendering of exterior elevation	[✓]	[ ]	[ ]
16.	New construction requires a streetscape view (to scale) with the proposed project inserted	[✓]	[ ]	[ ]
Proposed window replacement project				
1.	Completed application	[✓]	[ ]	[ ]
2.	Synopsis: description of the project in words	[✓]	[ ]	[ ]
3.	Materials finish list	[✓]	[ ]	[ ]
4.	Detailed justification of why window replacement is necessary	[✓]	[ ]	[ ]
5.	Historic photographs of the building	[✓]	[ ]	[ ]
6.	Description of the existing window material including color and condition	[✓]	[ ]	[ ]
7.	Photographs of the affected windows as they exist today	[✓]	[ ]	[ ]
8.	Photographs of the building with proposed changes indicated	[✓]	[ ]	[ ]

Please include the following applicable information		YES	NO	N/A
9.	Cut sheets (manufacturer information) for all replacement windows	[✓]	[ ]	[ ]
10.	Material samples and colors of windows	[ ]	[ ]	[ ]
11.	Number of windows to be replaced	[✓]	[ ]	[ ]
12.	Dimensions of windows including frame thickness and frame width	[✓]	[ ]	[ ]
13.	Photographs of other projects incorporating the window replacement component	[✓]	[ ]	[ ]
Proposed door or garage door replacement				
1.	Completed application	[✓]	[ ]	[ ]
2.	Synopsis: description of the project in words	[✓]	[ ]	[ ]
3.	Materials finish list	[✓]	[ ]	[ ]
4.	Detailed justification of why door replacement is necessary	[✓]	[ ]	[ ]
5.	Historic photographs of the building	[✓]	[ ]	[ ]
6.	Description of the existing door material including color and condition	[✓]	[ ]	[ ]
7.	Photographs of the affected doors as they exist today	[✓]	[ ]	[ ]
8.	Photographs of the building with proposed changes indicated	[✓]	[ ]	[ ]
9.	Cut sheets (manufacturer information) for all replacement doors	[✓]	[ ]	[ ]
10.	Material samples and colors of doors	[ ]	[ ]	[ ]
11.	Number of doors to be replaced	[✓]	[ ]	[ ]
12.	Dimensions of doors including frame thickness and frame width	[✓]	[ ]	[ ]
13.	Photographs of other projects incorporating the door replacement component	[✓]	[ ]	[ ]
Proposed roof replacement				
1.	Completed application	[ ]	[ ]	[ ]
2.	Synopsis: description of the project in words including related work such as gutters, soffit, and fascia	[ ]	[ ]	[ ]
3.	Materials finish list	[ ]	[ ]	[ ]
4.	Detailed justification of why roof replacement is necessary	[ ]	[ ]	[ ]
5.	Historic photographs of the building	[ ]	[ ]	[ ]
6.	Description of the existing roof material including color and condition	[ ]	[ ]	[ ]
7.	Photographs of the roof as it exists today	[ ]	[ ]	[ ]
8.	Photographs of the building with proposed changes indicated	[ ]	[ ]	[ ]
9.	Cut sheets (manufacturer information) for replacement roof	[ ]	[ ]	[ ]
10.	Material samples and colors of roof	[ ]	[ ]	[ ]
11.	Dimensions of replacement roof	[ ]	[ ]	[ ]
12.	Photographs of other projects incorporating the roof replacement component	[ ]	[ ]	[ ]
Proposed siding replacement				
1.	Completed application	[ ]	[ ]	[ ]
2.	Synopsis: description of the project in words including related work such as soffits, fascia, gutters, and trim	[ ]	[ ]	[ ]
3.	Materials finish list	[ ]	[ ]	[ ]

Please include the following applicable information		YES	NO	N/A
4.	Detailed justification of why siding replacement is necessary	[ ]	[ ]	[ ]
5.	Historic photographs of the building	[ ]	[ ]	[ ]
6.	Description of the existing siding material including width, color, and condition	[ ]	[ ]	[ ]
7.	Photographs of the siding as it exists today	[ ]	[ ]	[ ]
8.	Photographs of the building with proposed changes indicated	[ ]	[ ]	[ ]
9.	Scaled and dimensioned elevations showing the replacement siding	[ ]	[ ]	[ ]
10.	Cut sheets (manufacturer information) for replacement siding	[ ]	[ ]	[ ]
11.	Material samples and colors of siding	[ ]	[ ]	[ ]
12.	Dimensions including full profile of replacement siding	[ ]	[ ]	[ ]
13.	Photographs of other projects incorporating the roof replacement component	[ ]	[ ]	[ ]
Sign and awning installation or replacement				
1.	Completed application	[✓]	[ ]	[ ]
2.	Synopsis: description of the project in words including related work such as soffits, fascia, gutters, and trim	[✓]	[ ]	[ ]
3.	Materials finish list	[✓]	[ ]	[ ]
4.	Detailed justification of why signage and/or awning installation or replacement is necessary	[✓]	[ ]	[ ]
5.	Historic photographs of the building	[✓]	[ ]	[ ]
6.	Description of the existing signage/awning material including location, size, material, color, and condition	[✓]	[ ]	[ ]
7.	Photographs of the building as it exists today	[✓]	[ ]	[ ]
8.	Scaled and dimensioned front and side elevations showing the size and location of signage and/or awning	[✓]	[ ]	[ ]
9.	Scaled cross-section of building elevation indicating proposed signage and/or awning	[✓]	[ ]	[ ]
10.	Identification of all materials used in the construction of signage and/or awning	[ ]	[ ]	[ ]
11.	Material samples including number, letter, font size, and colors of signage and/or awning	[ ]	[ ]	[ ]
Site improvements: fence, walls, paving, or landscaping installation				
1.	Completed application	[ ]	[ ]	[ ]
2.	Synopsis: description of the project in words	[ ]	[ ]	[ ]
3.	Materials finish list	[ ]	[ ]	[ ]
4.	Detailed justification of why site improvement is necessary	[ ]	[ ]	[ ]
5.	Historic photographs of the building and site	[ ]	[ ]	[ ]
6.	Photographs of the building and site as it exists today	[ ]	[ ]	[ ]
7.	Scaled and dimensioned site plan showing existing lot lines	[ ]	[ ]	[ ]
8.	Scaled and dimensioned site plan showing existing buildings	[ ]	[ ]	[ ]
9.	Scaled and dimensioned site plan showing	[ ]	[ ]	[ ]
10.	Identification of all materials used in the construction of signage and/or awning	[ ]	[ ]	[ ]
11.	Material samples including number, letter, font size, and colors of signage and/or awning	[ ]	[ ]	[ ]

Please include the following applicable information		YES	NO	N/A
Porch reconstruction or repair				
1.	Completed application	[ ]	[ ]	[ ]
2.	Synopsis: description of the project in words	[ ]	[ ]	[ ]
3.	Materials finish list	[ ]	[ ]	[ ]
4.	Detailed justification of why the changes are necessary	[ ]	[ ]	[ ]
5.	Historic photographs of the building	[ ]	[ ]	[ ]
6.	Photographs of the building and site as they exist today	[ ]	[ ]	[ ]
7.	Description of the existing porch material including location, size, material, color, and condition	[ ]	[ ]	[ ]
8.	Scaled drawings to include existing and proposed site plan	[ ]	[ ]	[ ]
9.	Scaled drawings to include existing and proposed floor plans	[ ]	[ ]	[ ]
10.	Scaled drawings to include existing and proposed elevations	[ ]	[ ]	[ ]
11.	Scaled drawings to include existing and proposed cross sections and other details as needed	[ ]	[ ]	[ ]
12.	Cut sheets (manufacturer information) for proposed replacement porch materials	[ ]	[ ]	[ ]
13.	Material samples and colors for porch	[ ]	[ ]	[ ]
Paint color change				
1.	Completed application	[ ]	[ ]	[ ]
2.	Synopsis: description of the project in words	[ ]	[ ]	[ ]
3.	Materials finish list	[ ]	[ ]	[ ]
4.	Detailed justification of why the changes are necessary	[ ]	[ ]	[ ]
5.	Historic photographs of the building	[ ]	[ ]	[ ]
6.	Photographs of the building and site as they exist today	[ ]	[ ]	[ ]
7.	Samples of the proposed paint color (paint chip)	[ ]	[ ]	[ ]
8.	Photographs and/or diagrams showing the locations and colors where paint will be applied	[ ]	[ ]	[ ]
Building cleaning				
1.	Completed application	[✓]	[ ]	[ ]
2.	Synopsis: description of the project in words	[✓]	[ ]	[ ]
3.	Materials finish list	[✓]	[ ]	[ ]
4.	Detailed justification of why the changes are necessary	[✓]	[ ]	[ ]
5.	Historic photographs of the building	[✓]	[ ]	[ ]
6.	Photographs of the building and site as they exist today	[✓]	[ ]	[ ]
7.	Description of the cleaning method including the names of chemicals and the pressure of any washes or applications	[✓]	[ ]	[ ]
8.	Brochure for cleaning agents	[✓]	[ ]	[ ]
9.	Description of the treatment of the building exterior (surface) after cleaning – painting, sealing, tuck pointing, etc.	[ ]	[ ]	[ ]



Site Plan

Scale:1" = 20'-0"

Do Not Scale Print - Use Figured Dimensions

Building Legend

- X / X-XX — Streetscape View
- X.X / X-XX — Building Elevation
- XX / X-XX — Perspective

Building and Site Data

OWNER:
306 S. Main
306 S. Main Street
Plymouth, Michigan, 48170

ARCHITECT:
Constantine George Pappas, AIA
Architecture/Planning
1025 S. Washington
Royal Oak, Michigan 48067
(248) 629-8998 Fax (248) 298-3192

PROJECT ADDRESS:
306 S. Main Street
Plymouth, Michigan, 48170

ACREAGE:
0.134 Acres (5837.04 sq. ft.)

NUMBER OF STORIES
Three (3) Stories Including Basement

BUILDING HEIGHT
29'-0" +/-

BUILDING SETBACKS
Front Yard Setback
Meets Existing Ordinance Requirements
Per City of Plymouth Zoning Ordinance Sections 78-190 & 78-191.(f)

Side Yard Setback
Meets Existing Ordinance Requirements
Per City of Plymouth Zoning Ordinance Sections 78-190 & 78-191.(j)

Rear Yard Setback
Meets Existing Ordinance Requirements
Per City of Plymouth Zoning Ordinance Sections 78-190 & 78-191.(j)

ZONING
Existing Zoning Classification is B-2 Central Business Districts

HISTORIC DISTRICT
Existing Building Is Located Within City of Plymouth Historic District

P:\SDSK\PROJ\202111 - MAIN & TRUST URBAN BAR - PLYMOUTH\04 - SD\05 - SHEET (HISTORIC COMMISSION)\A-01 SITE PLAN.DWG August 26 2021

Architect's Seal

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STATE OF MICHIGAN — CONSTANTINE GEORGE PAPPAS — ARCHITECT — No. 47033 — LICENSED ARCHITECT

Revisions

City Of Plymouth Historic District Commission Submittal - August 25, 2021	---
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Constantine George Pappas AIA
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www.cgp-architecture.com

Project

Urban Restaurant & Lounge

Project No. 202111

Sheet Title

Site Plan

Drawn / Checked: E.P.C. / C.G.P.
Approved: C.G.P.
Date: August 25, 2021 HDC Submittal

Sheet No.
A-01

PENNIMAN AVE.

01 A-02 Perspective View - Aerial
Scale: N.T.S.

Existing Kitchen
Existing Kitchen
Existing Mens
Existing Womens
Storage
Storage
Office
Stair
DN
UP
Stair
Dumbwaiter
Server Station
Server Station
Server Station
Food Server Station
Line of Mezzanine Above
Pass-Thru Window
Hostess Area
Lounge Area
Vest.
Existing Window To Remain
Existing Planter, Typical
New Crown Glass & Glazing System Or Approved Equal Fixed Window, Typical
New Crown SST-II Hydraulic Bi-Fold Window System, Typical
1/4" Tempered Glass Silicone In Place With 1/2" x 1/2" Stainless Steel Channel, Typical At All Operable Window Openings
New Stone Sill Secured To Existing Wall, Typical
10'-4"
Sim.
6" TYP.
High
Existing Window To Remain
New Granite Secured To Existing Wall With Stainless Steel Clips, Typical
New Crown SST-II Hydraulic Bi-Fold Window System, Typical
6" TYP.
2" TYP.
6'-5"
4 1/2" TYP.
5'-0"
Existing Entry/Egress
New Aluminum Glass Door To Match New Glass & Glazing System, Typical
Existing Limestone To Be Cleaned, Typical
S MAIN ST.
Existing Planter, Typical

Building Legend

- Streetscape View
- Building Elevation
- Perspective

Windows To Be Replaced
5 Total Windows
Doors To Be Replaced
1 Total Door

Crown SST-II Hydraulic Bi-Fold Window System Data	
Frame Material:	Aluminum/Steel
Frame Color:	Black Brown
Glass:	1" Clear Insulated Low-E Glass

Kawneer 451T Glass & Glazing Data System Data	
Frame Material:	Aluminum
Frame Color:	Black Brown
Glass:	1" Clear Insulated Low-E Glass

Note:
New Frame Locations At New Windows
To Match Existing Frame Configuration, Typical

Overall Floor Plan
Scale:1/4" = 1'-0" A-FP-1_4

0' 1' 2' 4' 8'
Do Not Scale Print - Use Figured Dimensions

Revisions

City Of Plymouth Historic District Commission Submittal - August 25, 2021	---
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Architect's Seal

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STATE OF MICHIGAN CONSTANTINE GEORGE PAPPAS ARCHITECT No. 47035 LICENSED ARCHITECT

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Project
Urban Restaurant & Lounge

Project No. 202111

Drawn / Checked
E.P.C. / C.G.P.
Approved:
C.G.P.
Date: August 25, 2021
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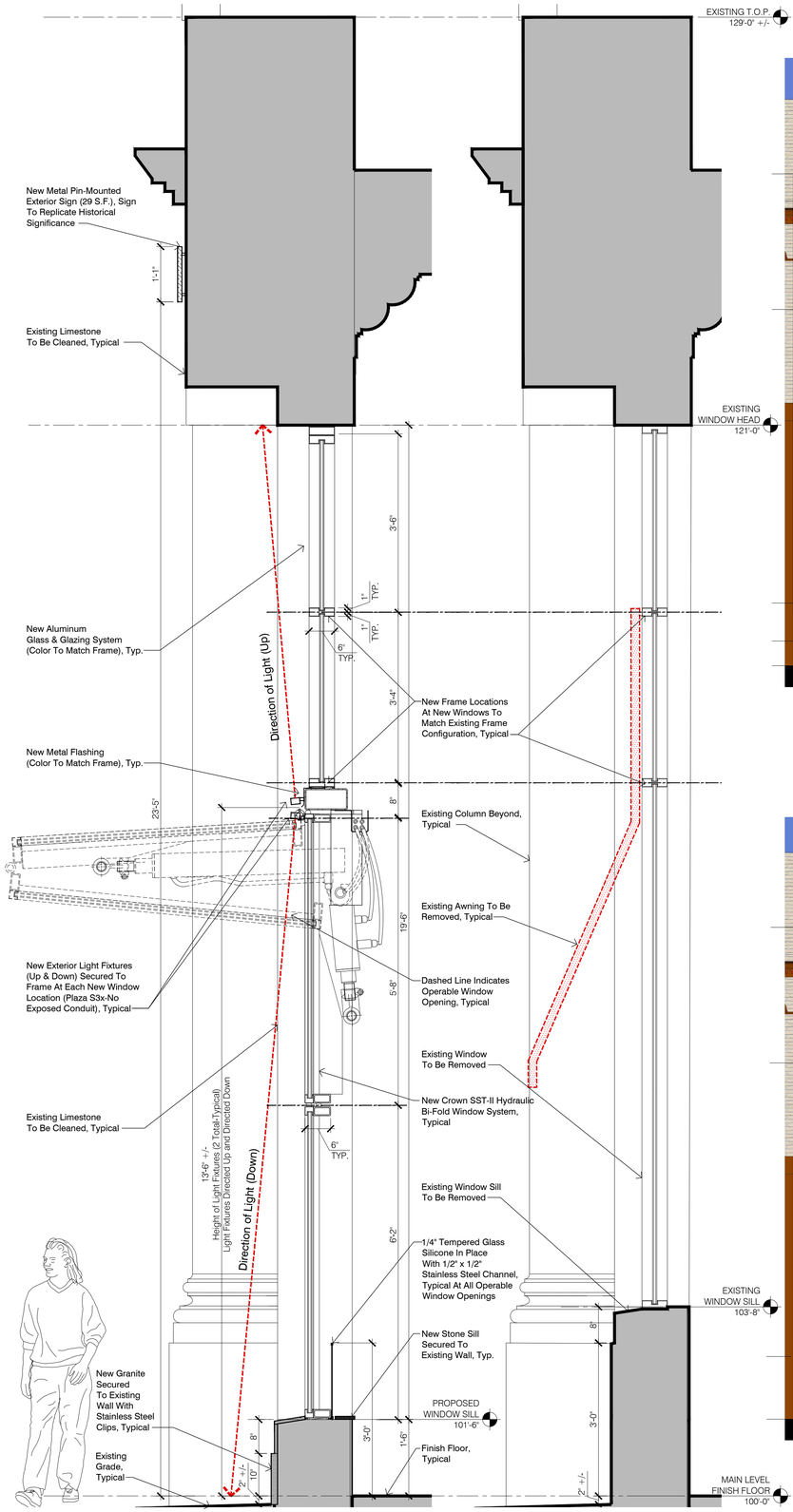
Sheet Title
Floor Plan

Sheet No.
A-02

P:\SDSK\PROJ\202111 - MAIN & TRUST URBAN BAR - PLYMOUTH\04 - SD/05 - SHEET (HISTORIC COMMISSION)\A-02 FLOOR PLAN DWG September 16 2021



02 A-03 **Proposed Section**
Scale:3/4" = 1'-0" A-SEC-02

01 A-03 **Existing Section**
Scale:3/4" = 1'-0" A-SEC-01

A.2 A-03 **Proposed Building Elevation A.2**
Scale: 1/4" = 1'-0"

A.1 A-03 **Existing Building Elevation A.1**
Scale: 1/4" = 1'-0"

P:\SDSK\PROJ\202111 - MAIN & TRUST URBAN BAR - PLYMOUTH\04 - SD\05 - SHEET (HISTORIC COMMISSION)\A-03 EXISTING & PROPOSED BUILDING ELEVATIONS.DWG September 16 2021

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STATE OF MICHIGAN — CHRISTOPHER GEORGE PAPPAS — ARCHITECT — No. 47053 — LICENSED ARCHITECT

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Project

Urban Restaurant & Lounge

Project No. 202111

Sheet Title

Existing & Proposed Building Elevations

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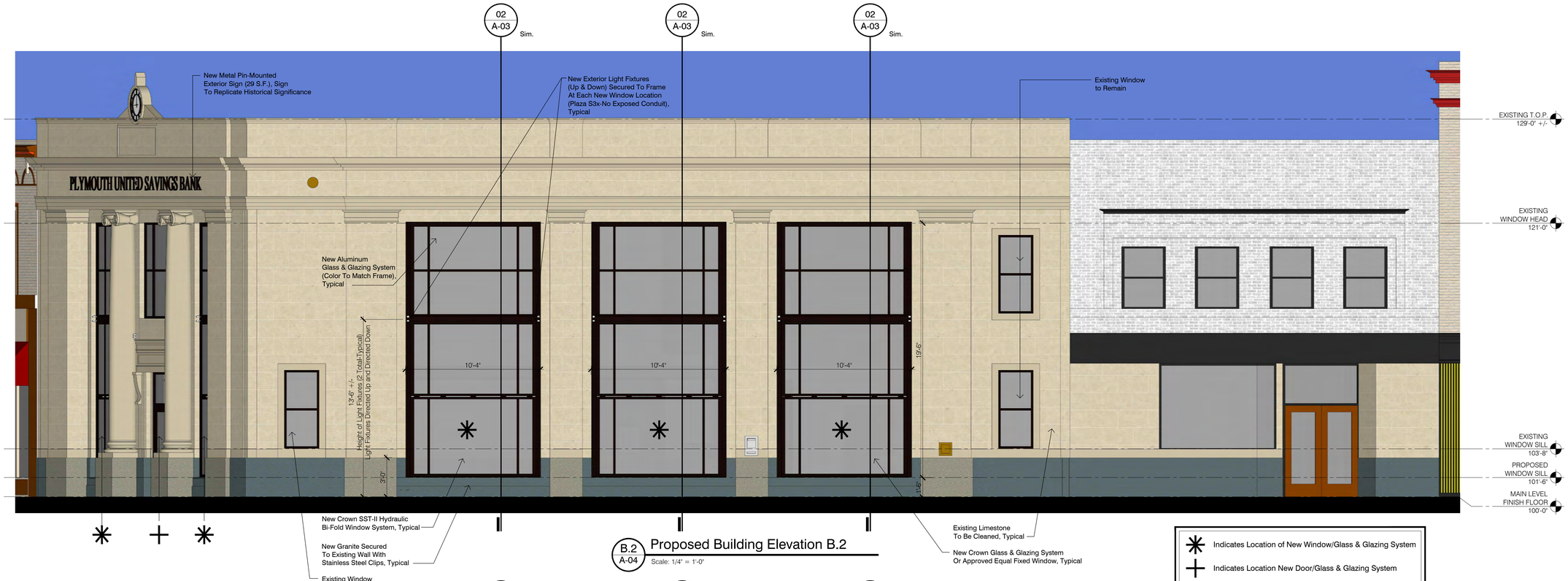
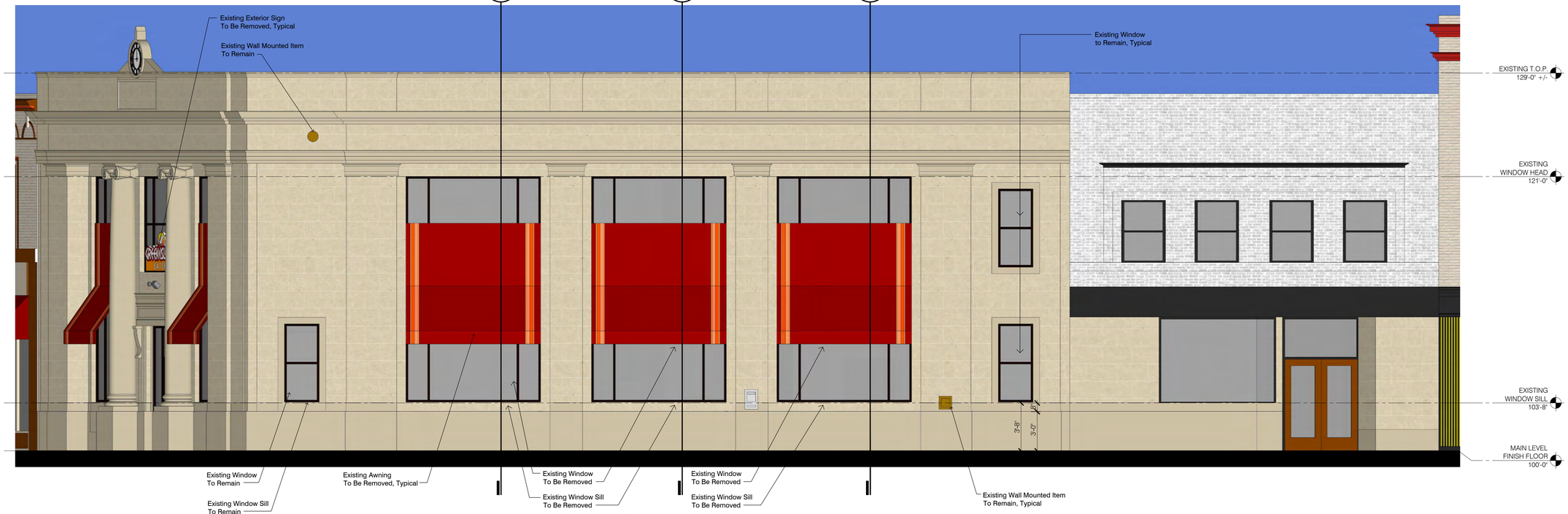
Date: August 25, 2021 HDC Submittal

Sheet No.
A-03



B.2 / A-04 Proposed Building Elevation B.2

Scale: 1/4" = 1'-0"



B.1 / A-04 Existing Building Elevation B.1

Scale: 1/4" = 1'-0"

Revisions

City Of Plymouth Historic District Commission Submittal - August 25, 2021	---	---

Architect's Seal

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STATE OF MICHIGAN
CONSTANTINE GEORGE PAPPAS
ARCHITECT
No. 47003
LICENSED ARCHITECT

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Project

Urban Restaurant & Lounge

Project No. 202111

Sheet Title

Existing & Proposed
Building Elevations

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HDC Submittal

Sheet No.
A-04

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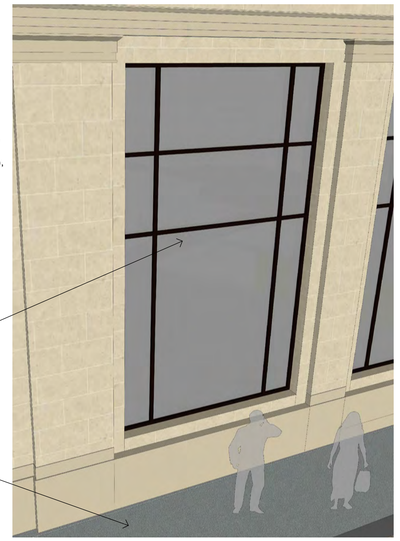
03 A-05 Proposed Window View - Open

Scale: N.T.S.

02 A-05 Proposed Window View - Closed

Scale: N.T.S.



01 A-05 Existing Window View

Scale: N.T.S.

B A-05 Streetscape View B @ Penniman Ave.

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

A A-05 Streetscape View A @ S. Main Street

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

P:\SDSK\PROJ\202111 - MAIN & TRUST URBAN BAR - PLYMOUTH\04 - SD\05 - SHEET (HISTORIC COMMISSION)\A-05 STREETSCAPE VIEW & WINDOW DETAILS.DWG September 16 2021

Revisions

City Of Plymouth Historic District Commission Submittal - August 25, 2021	---
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STATE OF MICHIGAN · REGISTERED · PEPAS · ARCHITECT · No. 47035 · LICENSED · ARCHITECT

Cornerstone George Pappas AIA
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Project

Urban Restaurant & Lounge

Project No. 202111

Sheet Title

Streetscape View & Window Details

Drawn / Checked
E.P.C. / C.G.P.

Approved:
C.G.P.

Date: August 25, 2021
HDC Submittal

Sheet No.
A-05

04 A-06 Perspective View - Window Closed

Scale: N.T.S.

03 A-06 Perspective View - Window Closed

Scale: N.T.S.

02 A-06 Perspective View - Window Closed

Scale: N.T.S.

01 A-06 Perspective View - Window Closed

Scale: N.T.S.

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Revisions

City Of Plymouth Historic District
Commission Submittal - August 25, 2021	---

Architect's Seal

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STATE OF MICHIGAN
CONSTANTINE GEORGE PEPPAS
ARCHITECT
No. 47003
LICENSED ARCHITECT

Project

Urban Restaurant & Lounge

Project No. 202111

Sheet Title

Perspectives

Drawn / Checked
E.P.C./ C.G.P.

Approved:
C.G.P.

Date: August 25, 2021
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Sheet No.
A-06

P:\SDSK\PROJ\202111 - MAIN & TRUST URBAN BAR - PLYMOUTH\04 - SD\05 - SHEET (HISTORIC COMMISSION)\A-06 PERSPECTIVES.DWG September 16 2021

04 A-07 Perspective View - Window Open
Scale: N.T.S.

03 A-07 Perspective View - Window Open
Scale: N.T.S.

02 A-07 Perspective View - Window Open
Scale: N.T.S.

01 A-07 Perspective View - Window Open
Scale: N.T.S.

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Revisions

City Of Plymouth Historic District Commission Submittal - August 25, 2021	---
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Architect's Seal

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STATE OF MICHIGAN
CONSTANTINE GEORGE PEPPAS
ARCHITECT
No. 47003
LICENSED ARCHITECT

Project
Urban Restaurant & Lounge

Project No. 202111

Sheet Title
Perspectives

Drawn / Checked
E.P.C. / C.G.P.

Approved:
C.G.P.

Date: August 25, 2021
HDC Submittal

Sheet No.
A-07

P:\SDSK\PROJ\202111 - MAIN & TRUST URBAN BAR - PLYMOUTH\04 - SD\05 - SHEET (HISTORIC COMMISSION)\A-07 PERSPECTIVES.DWG September 16 2021

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Architecture / Planning
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August 25, 2021

City of Plymouth
Community Development Department
Historic District Commission
201 South Main Street
Plymouth, Michigan 48170

Ref: Historic District Commission Application

Address: 306 S. Main Street
Plymouth, Michigan 48170

Year Built: 1913

Business: Urban Restaurant / Lounge

Dear Historic District Commission,

Please find this letter outlining the alterations to the Existing Building located at 306 S. Main Street (Corner of S. Main St. & Penniman - Restaurant).

See the items listed below regarding the alterations:

1. **Lower Base of Building where deterioration is occurring and surface cleaning.**
   Synopsis:
   We will be removing the deteriorated skim coat (see images below) and will provide a new granite surface at the lower base of the building (see attached drawings). Two colors of granite will be incorporated. One color creates a band around the existing walls and another color accentuates the existing columns on the façade. The granite surface will be secured to the existing walls and columns using stainless steel clips to prevent corrosion (see attached drawings). In addition, we will clean all remaining existing Limestone surfaces on the building using a solution specified for limestone (see attached product data).

   Alteration Justification:
   Repairing the skim coat and replacing it with granite surface will create a layer of protection as well as enhancing the architectural aesthetic which will complement the existing building. The reasoning behind the selection of granite is because it is a hard durable material that can withstand all seasons. The granite is resistant to the salt used on the sidewalks in the winter unlike the existing surface that continues to deteriorate. Cleaning the Existing Limestone surface on the building will help to improve the exterior limestone appearance.

   Material List:
   Granite Surface (See Attached Drawings)
   Artisan Safer Limestone Cleaner, or approved equal (See Attached Product Information)

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2. New Exterior Windows & Doors:

Synopsis:

We will be removing Existing Windows and a Door and providing New Windows and a Door at the existing locations shown on drawings. The Greek Islands Eatery in Plymouth has been open since 2012 and are looking to alter their operations to an Urban Restaurant / Lounge setting. We would like to start with bringing the streetscape indoors to create a connection with the Urban environment. In this location, it is very difficult to increase patio size due to the existing parking on Penniman Ave. and the existing landscape planter. Since we are unable to increase the patio area, we propose to remove the existing awnings, provide new bi-fold operable windows, and lower the existing window sills to bring the life of the streetscape indoors and create a connection with the urban environment. The proposed sill height will align with the majority of the other businesses' sill heights around us. We want our business to provide similar amenities that other businesses have created within the city. Providing this experience to our patrons will allow us to compete with the other businesses in town during the summer months.

Alteration Justification:

The current windows are 10 years old and very inefficient. When sitting near the existing widows it is cold in the winter and warm in the summer. In addition, when sitting in the space it is difficult to see over the existing sill and connect with the active streetscape.

Material List:

Crown SST-II Hydraulic Bi-Fold System Window with Black Brown Aluminum/Steel Frames and 1" Clear Insulated Low-E Glass, or approved equal. (See Attached Brochure and Drawings for Frame Dimensions).
Kawneer 451 Aluminum Storefront Glass & Glazing System and Door with Black Brown Aluminum Frames, or approved equal. (See Attached Drawings for Frame Dimensions).

3. Exterior Signage:

Synopsis:

We will be removing the Existing Signage and Lighting and providing New Signage below the existing limestone cornice to be metal pin-mounted (black brown in color) with the inscription of "Plymouth United Savings Bank". The signage will be located on the front of the building facing South Main Street.

Alteration Justification:

The existing business will cease to operate as Greek Islands Eatery and the existing signage will need to be removed. The new sign will replicate the historical signage and the incorporation of the "Plymouth United Savings Bank" metal pin-mounted inscription is meant to pay homage to the past historical significance of the existing building.

Material List:

New Sign materials to include metal pin-mounted letters (Times New Roman), 13" tall and 1" deep, and black brown in color (See Attached Drawings for Size and Location).

4. Exterior Lighting:

Synopsis:

We will be providing New Lighting at the exterior of the existing building (see attached drawings). The New Lighting at the exterior will consist of two light fixtures at each new bi-fold window which will direct light up and down onto the walls at each end of the frames. Additionally, there will be two light fixtures above the main entry directing light up and down onto the walls as well as lighting above the door header. No light fixture shall have exposed conduit. All lighting will comply with lighting ordinances as required.

Alteration Justification:

The new lighting at the exterior of the existing building is meant to provide additional security for the customers coming and going from the business within the hours of operation after dark. In addition, the new lighting would enhance historic architectural features of the building.

Material List:

Plaza S3x Light Fixture, or approved equal (See Attached Brochure and Drawings).
Blade Si Exterior Light Fixture, or approved equal (See Attached Brochure and Drawings).

Statement of Impact

The Existing Building will seek to maintain its historical architectural character while creating new opportunities for connecting to the streetscape and complimenting the adjacent businesses. As a key building in the City of Plymouth's commercial district, the new alterations are aimed to enhance the existing building's visual integrity and preserving its historical significance.

Timeframe for Project

The project timeframe will be determined at a later date.

We trust that this letter addresses the items of the proposed alterations to the Existing Building located at 306 Main Street (Corner of S. Main St. & Penniman - Restaurant). If you have any questions or require further clarification, please feel free to contact our office.

Sincerely,

Evans P. Caruso
Constantine George Pappas Architecture / Planning
248.629.8998

Constantine George Pappas AIA
Architecture / Planning
1025 S. Washington Ave. Royal Oak, MI 48067 P. 248.629.8998 F. 248.298.3192

Historical Images:

View from S. Main Street

Corner of S. Main St. & Penniman Ave.

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Historical Images: Cont.

Corner of S. Main St. & Penniman Ave.

View from S. Main Street

Images of the Site Currently:

Corner of S. Main St. & Penniman Ave.

View from S. Main Street

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Architecture / Planning
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Images of the Site Currently: Cont.

View from Penniman Ave.

Images of Base of Building Deterioration:

View From Corner of S. Main Street & Penniman Ave.

View From S. Main Street.

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Architecture / Planning
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Images of Base of Building Deterioration: Cont.

View From S. Main Street.

View From Penniman Ave.

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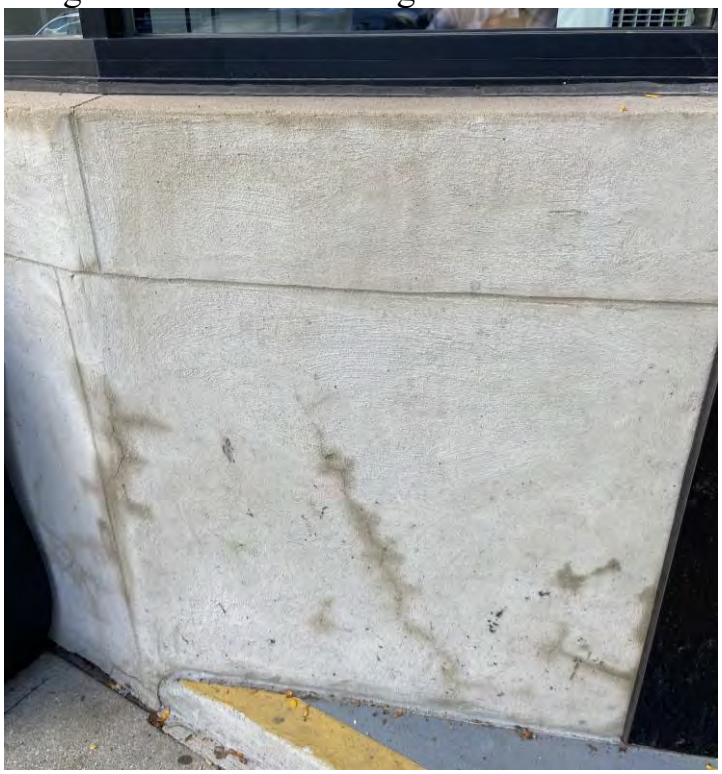
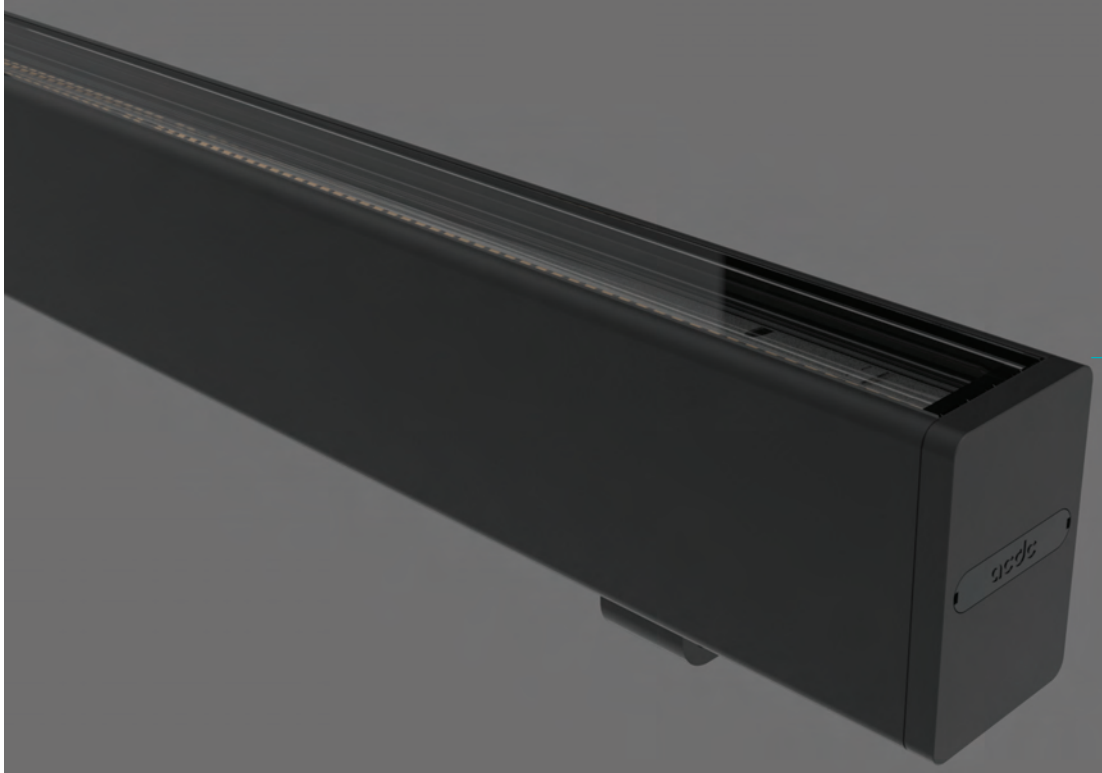
Images of Base of Building Deterioration: Cont.



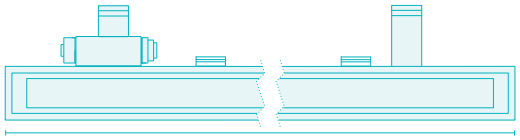
View From Penniman Ave.

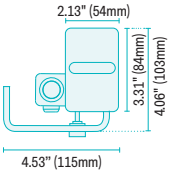
View From Penniman Ave.

SPECIFY
BLADE Si

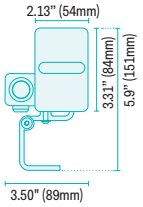


BLADE Si
Up to 6000 lumens
Surface mount
Integral driver
L: 25.04" (636mm),
36.85"(936mm)
48.66" (1236mm)
W: 2.13" (54mm)

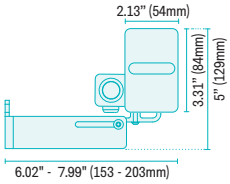




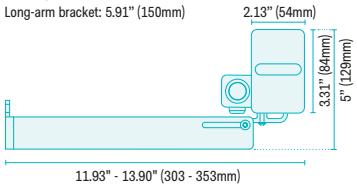
BLADE Si
Standard bracket



BLADE Si
Adjsutable bracket



BLADE Si
Long-arm bracket: 5.91" (150mm)



BLADE Si
Long-arm bracket: 11.81" (300mm)

BLADE Si

Example spec code:	BL SI L06 2400-827 N BK CW STD 66 HF
Description:	BLADE Si, 636mm, 2400lm, 2700K, Narrow optic, Black finish, Cowl accessory, Standard bracket, IP66, Switched.

LENGTH/LUMEN	
636MM/EB	L06 2400
636MM/SB**	L06 900
936MM/EB	L09 3800
936MM/SB**	L09 1400
1236MM/EB	L12 5000
1236MM/SB**	L12 1900

CRI AND COLOUR TEMP	
80CRI 2700K	-827
80CRI 3000K	-830
80CRI 4000K	-840
RGBW	-RGBW

OPTIC	
Narrow	N
Medium	M
Wide Flood	WF

FINISH		
Black	BK	*VERIFY RAL/CUSTOM COLOR TO
Silver	SI	MATCH COLOR OF EXTERIOR STONE.

GLARE CONTROL	
Cross Anti Glare Film	CF
Linear Anti Glare Film	LF
Cowl	CW

BRACKET	
Adjustable Bracket	AJ
Standard Bracket	STD
Long Arm 150mm	LA01
Long Arm 300mm	LA03

IP RATING	
IP66	66

DIMMING*	
Switched	HF
0-10V	0-10V
DMX	DMX

*Dimming: all drivers options are universal voltage 120/277.
**Standard Bright only available with Switched (HF) dimming.

Accessory Optic Compatability

	CF	LF	CW
N	✓	✓	✓
M	✓	✓	✓
WF	✓	✓	✓

Control Method Option

	HF		0-10V		DMX	
	SB	EB	SB	EB	SB	EB
2700K	✓	✓	-	✓	-	✓
3000K	✓	✓	-	✓	-	✓
4000K	✓	✓	-	✓	-	✓
RGBW	-	-	-	✓	-	✓

Driver Type

	HF	HFX	DMX
300	INT	INT (SC) REM (RGBW)	REM
600	INT	INT	INT
900	INT	INT	INT
1200	INT	INT	INT

CF Cross anti glare film
LF Linear anti glare film
CW Cowl

SB Standard bright
EB Extra bright

INT Integral driver

For further information and installation details please refer to our website

c UL us LISTED

HOW TO BUY
BLADE Si

The standard product comes with no cables. Starter and link leads are sold seperately.

Cable clips come as standard when you order BLADE Si.
23.62" (600mm) BLADE Si = 1 clip
35.43" (900mm) BLADE Si = 2 clips
47.24" (1200mm) BLADE Si = 3 clips.

ELECTRICAL
Cable can be cut to length on site.
To start a run, purchase a 6.5ft (2m) or 32.8ft (10m) **Starter Kit** (SW, 0-10V, or DMX) - this comes with a cover cap which should be used to terminate the run (Fig 1.). To extend this, a **Flex Reel** (5) and a field service **Connector Kit** (4) is needed.

If you want to extend the gap to connect fittings on non-standard spacings (Fig 2.), use a piece of **Flex** (5) from the 20m reel (SW, 0-10V, or DMX) plus a **Connector Kit** (4).

Electrical wiring to be done by a qualified electrician.

BRACKETS
The product comes with four mounting options. Select one of the four mounting brackets at the point of ordering.

Options are:
Standard bracket, fully adjustable bracket and long-arm 5.90" (150mm) and 11.81" (300mm).

Note: for inverted application where the luminaire is pointing downwards use the adjustable bracket option (standard and long-arm brackets not suitable).

STANDARD BRACKETS - BLADE Si	CODE	DESCRIPTION
Standard bracket 15 degree tilt. Black	21100323	SI STD BRACKET UL 2053/BK
Standard bracket 15 degree tilt Silver	21100322	SI STD BRACKET UL 2053/SI

ADJUSTABLE BRACKETS - BLADE Si	CODE	DESCRIPTION
Surface mount bracket fully adjustable. Black	21100325	SI SURFACE BRACKET UL 2054/BK
Surface mount bracket fully adjustable. Silver	21100324	SI SURFACE BRACKET UL 2054/SI

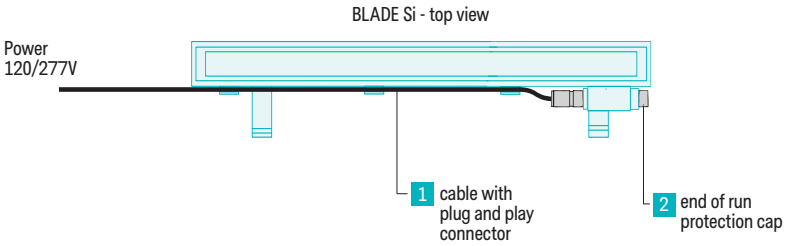
LONG ARM BRACKETS - BLADE Si	CODE	DESCRIPTION
5.90" (150mm) fully adjsutable bracket black	21100327	SI LONG ARM 150MM UL 2055/BK
5.90" (150mm) fully adjustable bracket silver	21100326	SI LONG ARM 150MM UL 2055/SI
11.81" (300mm) fully adjustable bracket black	21100329	SI LONG ARM 300MM UL 2056/BK
11.81" (300mm) fully adjustable bracket silver	21100328	SI LONG ARM 300MM UL 2056/SI

STARTER KIT - BLADE LRi | Si

Cable with plug & play connector and
end of run protection cap. 6.5ft (2m) or 32.8ft (10m) cable.
HF = 3 pole 0-10V = 5 pole DMX = 6 pole.

CODE	DESCRIPTION
21100491	BL STARTER 2061A/2M UL HF
21100492	BL STARTER 2062A/2M UL 0-10V
21100493	BL STARTER 2063A/2M UL DMX
21100494	BL STARTER 2061A/10M UL HF
21100495	BL STARTER 2062A/10M UL 0-10V
21100496	BL STARTER 2063A/10M UL DMX

Fig 1.



LINK LEAD - BLADE LRi | Si

Plug and play connector on each end of cable.
13.78" (350mm), 25.59" (650mm), 37.40" (950mm) and 49.21" (1250mm) link cables.
HF = 3 pole cable 0-10V = 5 pole DMX = 6 pole

CODE	DESCRIPTION
21100497	BL LINK 2067A/0.6M UL HF
21100500	BL LINK 2067A/0.9M UL HF
21100503	BL LINK 2067A/1.2M UL HF
21100498	BL LINK 2068A/0.6M UL 0-10V
21100501	BL LINK 2068A/0.9M UL 0-10V
21100504	BL LINK 2068A/1.2M UL 0-10V
21100499	BL LINK 2069A/0.6M UL DMX
21100502	BL LINK 2069A/0.9M UL DMX
21100505	BL LINK 2069A/1.2M UL DMX

Fig 2.

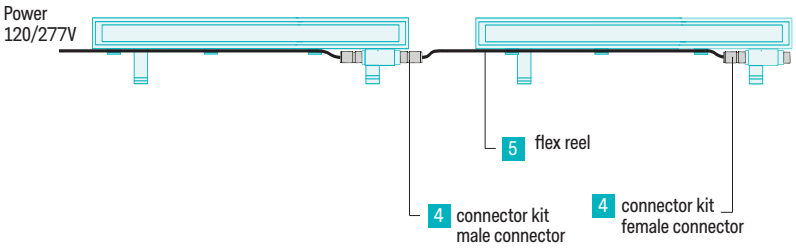
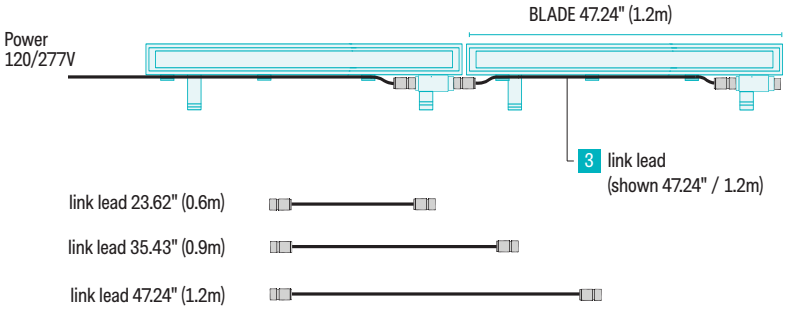


Fig 3.



CONNECTOR KIT - BLADE LRi | Si

Connector kit for making custom leads in the field.

CODE	DESCRIPTION
21100506	BLADE CONNECTOR KIT UL 2087A

FLEX REEL - BLADE LRi | Si

65.62ft (20M) Flex Reel. HF = 3 pole 0-10V = 5 pole DMX = 6 pole. 1x Through Wire Connector.

CODE	DESCRIPTION
21100319	BL FLEX REEL 2065/20M UL HF
21100320	BL FLEX REEL 2064/20M UL 0-10V
21100321	BL FLEX REEL 2066/20M UL DMX

WIRING INFORMATION

Number of fittings that can be powered from a starter Lead.

MAXIMUM Nº OF 4FT FITTINGS PER SUPPLY LEAD

Switched and 0-10V single color	10
Single color DMX And all RGBW (0-10V and DMX)	7

c UL us LISTED

PLAZA S3x/ PLAZA S7x SPECIFICATION

PLAZA S3x

N.B. These products require clear airflow to maintain the LED junction temperature and lifetime of the product. Please refer to the installation instructions for necessary volumetric air details.

PLAZA S7x

PRODUCT FEATURES

Plaza S3x and Plaza S7x are a family of extremely compact adjustable IP67 surface mounted spotlights for the illumination of architectural façades, feature details, niches and structures.

Simple minimalist design, solid construction: Incredibly small and beautifully designed to blend seamlessly within the architectural environment. Plaza S3x and Plaza S7x are constructed with 6063 grade aluminium and finished in a specialist corrosion resistant powder coat paint, to ensure the long life integrity of the product.

Clean Beam Design (CBD) with wide optic choices: The optics and internal detailing of the luminaire have been designed to ensure outstanding control of the beam angle, and the cleanliness of the overall lit effect, without stray light or unpleasant imaging. We have a multitude of optics from super narrow to flood, plus multiple colour temperature options.

Deep recessed Single Source LED with integral snoot to minimise glare: The 320 and 700 lumen single chip LED is positioned 15mm on the Plaza S3x and 30mm on the Plaza S7x from the front of the luminaire to hide it from view. The matt black integral snoot aids in hiding the source from view to ensure the visual comfort of the luminaire.

Broad Choice as standard, with broad range of colors and optics: Black, white and RAL colors are available, along with a wide range of beam angles and driver options allowing you to position and control the light wherever and however you require.

Materials and finish: Grade 6063 Aluminium housing. Powder coat black and white. RAL colors are available upon request.

Installation and mounting: Surface or wall mounted on adjustable bracket. Ground spike and tree strap accessories available. Can be adjusted on site by +90/-120 degrees. Plaza S3x is individually pre wired. Plaza S7x features an internal junction box for through wiring.

Application: Suitable for flood lighting on building façades and surroundings, and highlighting objects in the public realm. They are suitable for outdoor applications with IP67 protection and for ambient environments up to 104ºF.

Drivers: Switched and 0-10v drivers are available, capable of powering up to 4 Plaza S3x and 4 Plaza S7x luminaires.

Optics:
PLAZA S3x - Narrow = 15º
Medium = 22º
Flood = 35º
Linear = 46º x 11º
PLAZA S7x - Super Narrow = 10º
Narrow = 13º
Medium = 29º
Flood = 36º

Specification text: To specify state: IP67 Surface Mounted Adjustable LED Spotlight with simple minimalist design. Deep recessed single LED with integral snoot with CBD to ensure minimal glare and light spill. Solid construction from 6063 grade aluminium with Black and White powder coat paint finish. Delivered Lumen package in the region of 700 lumens for Plaza S7x. 320 lumens for Plaza S3x with optic choice of super narrow (S7x), narrow, medium, flood, and linear (S3x). Single source LED binned to 2 step MacAdam Ellipses with color temperature of 2700K/3000K/4000K and CRI >80. Lifetime of 50 000 hours @ L70 Ta 50°C. Plaza S3x and Plaza S7x acdc.

SPECIFICATION CODES

PRODUCT		LIGHT ENGINE		OPTICS		FINISH		CABLE	IP
PLAZA S3x 320	PLAZA S3x 320	80CRI 2700K	-827	NARROW	N	WHITE	WH	2M FLYING LEAD	67
		80CRI 3000K	-830	MEDIUM	M	BLACK	BL		
		80CRI 4000K	-840	FLOOD	F	RAL	RAL		
				LINEAR HORIZONTAL	LH				
				LINEAR VERTICAL	LV				
PLAZA S3x 320		-827		N		WH		2M	67

ACCESSORIES	
TREE STRAP	21903362 TREE STRAP
GROUND SPIKE	21100170 SPIKE 1796

*VERIFY RAL/CUSTOM COLOR TO MATCH COLOR OF EXTERIOR STONE.

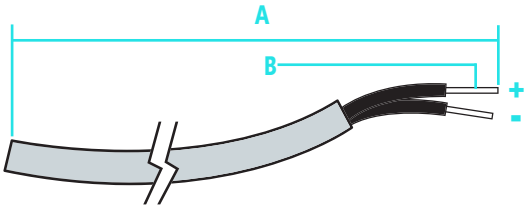
PRODUCT		LIGHT ENGINE		OPTICS		FINISH		CABLE	IP
PLAZA S7x 700	PLAZA S7x 700	80CRI 2700K	-827	SUPER NARROW	SN	WHITE	WH	STD NONE	67
		80CRI 3000K	-830	NARROW	N	BLACK	BL		
		80CRI 4000K	-840	MEDIUM	M	RAL	RAL		
				FLOOD	F				
PLAZA S7x 700		-827		N		WH		STD	67

DRIVER OPTIONS

Driver options								
Protocol type	Product	Driver Order Code	No of products driven per driver	Max watts	Current mA	Primary Voltage	Dimming %	Enclosure Dimensions
Switched	Plaza S3x	DR-LEDR-035-006-UNV-S	1	6W	350mA	120-277v	N/A	1 7/8" x 3 9/16" x 7 7/8"
		DR-LEDR-035-017-UNV-S	1-4	17W	350mA	120-277v	N/A	1 7/8" x 3 9/16" x 7 7/8"
	Plaza S7x	DR-LEDR-070-033-UNV-S	1-3	33W	700mA	120-277v	N/A	1 7/8" x 2 5/16" x 8 7/8"
0-10v	Plaza S3x	DR-LEDR-035-030-UNV-D010	1-4	30W	350mA	120-277v	1%	1 7/8" x 3 9/16" x 7 7/8"
	Plaza S7x	DR-LEDR-070-030-UNV-D010	1-3	30W	700mA	120-277v	1%	1 7/8" x 3 9/16" x 7 7/8"

WIRING: PLAZA S3x

PLAZA S3x	A	B	CHANNEL 1	
			+	-
	2000mm	0.22mm	RED	BLUE



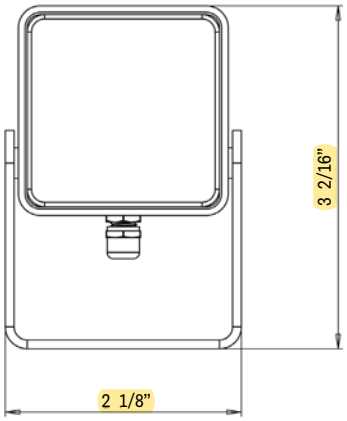
WIRING: PLAZA S7x

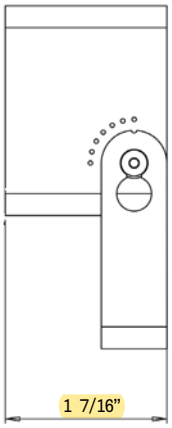
Contractor must wire with cable between 3-6mm OD (outer diameter). 2 core cable with 0.5mm-0.75mm CSA.

Tel: +1 845 691 6262
Web: www.acdclighting.us
Email: sales@acdclighting.us

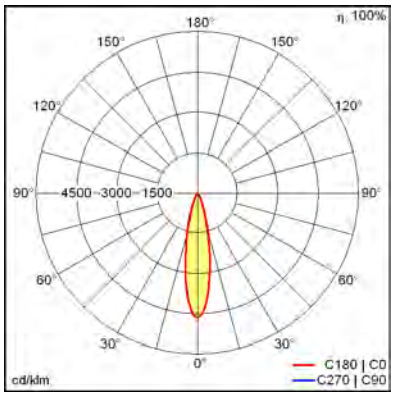
DIMENSIONAL DRAWINGS (MM)

PLAZA S3x



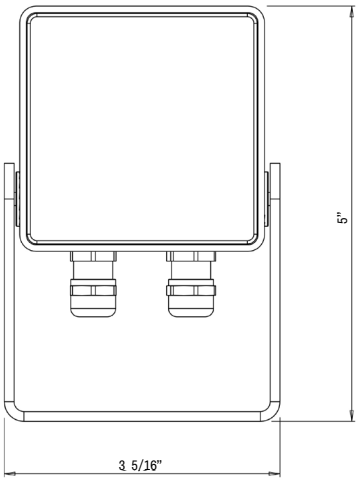


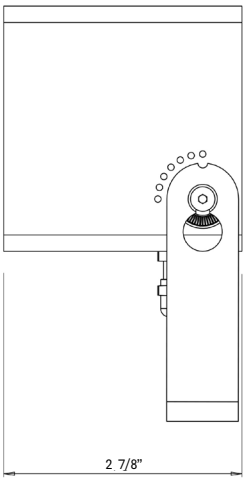
POLAR DIAGRAM



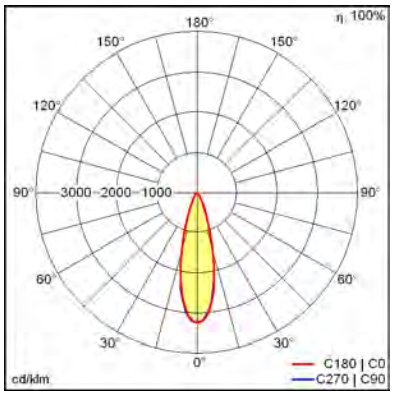
Based on 3000K, medium.

PLAZA S7x



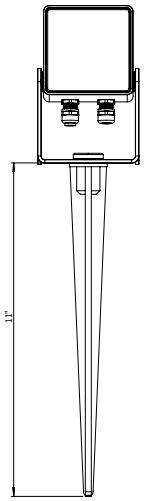


POLAR DIAGRAM

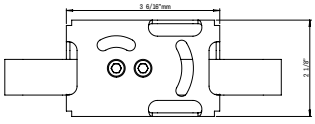


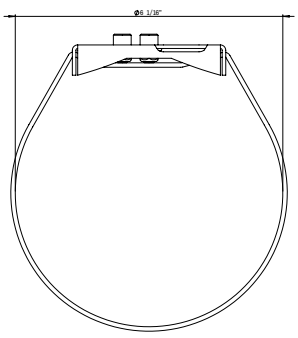
Based on 3000K, medium.

GROUND SPIKE



TREE STRAP



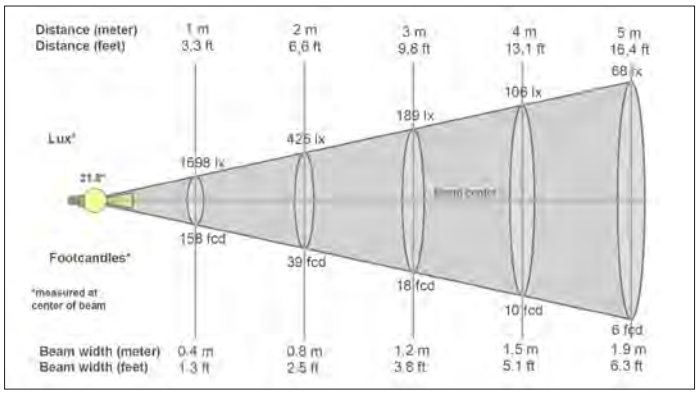


PERFORMANCE SUMMARY

LIGHT SOURCE INFORMATION: PLAZA S3x

Optic	N	M	F	L
Luminaire Lumen Output	376	351	315	386
Luminaire Lumens per Circuit Watt (lm/W)	83	77	70	85
Lifetime L70. Based on TM-21	>50,000			
CRI	80			
Operating Temperature Range	14/104°F			
Power Consumption. (Including 85% efficient driver) - Watts	4.5			
Color Accuracy	2 Step MacAdam ellipse			
Color Temperature	Based on 3000K			

CONE DIAGRAM

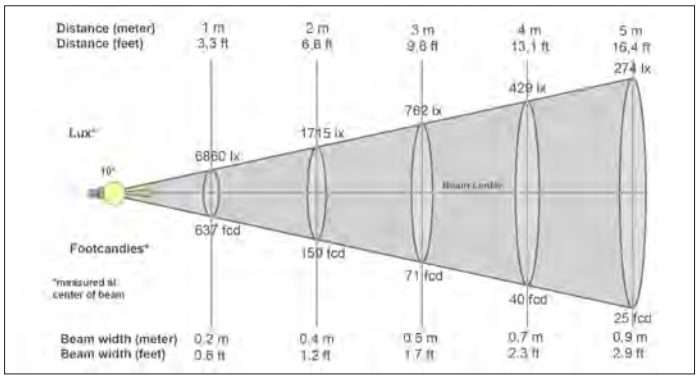


Based on 3000K, medium.

LIGHT SOURCE INFORMATION: PLAZA S7x

Optic	SN	N	M	F
Luminaire Lumen Output	287	545	768	772
Luminaire Lumens per Circuit Watt (lm/W)	32	60	85	86
Lifetime L70. Based on TM-21	>50,000			
CRI	80			
Operating Temperature Range	14/104°F			
Power Consumption. (Including 85% efficient driver) - Watts	9			
Color Accuracy	2 Step MacAdam ellipse			
Color Temperature	Based on 3000K			

CONE DIAGRAM



Based on 3000K, super narrow.

All acdc products are independently tested in line with LM80 standards, 50,000 hours lifetime with lumen maintenance at L70 to guarantee product performance. Output data figures stated are typical values.

Product Information

ARTISAN®

Safer Limestone Cleaner

Description

Artisan Safer Limestone is a unique, single step cleaner and restorer for limestone. Artisan is a combination of chelating agents and surfactants. Artisan is most effective on limestone but can also be used on non-polished or non-honed marble and travertine. Use Artisan for both interior and exterior restoration applications.

Uses

Artisan can be used without harm to limestone, marble (polished or unpolished), travertine and other similar surfaces.

Preparation

Before general application test a Artisan and allow test area to thoroughly dry to determine compatibility and desired results. Protect metal, painted surfaces and all other surfaces this product is not intended. Run-off might clean surrounding areas, protect accordingly.

Properties

Appearance	Pale yellow liquid
Odor	Slight ammonia
Flash Point	None
pH	11 - 11.5
lbs/gallon	9.5 - 10.0

Application

Apply Artisan onto a dry surface starting from the bottom and work up. Liberally apply with a brush or low pressure sprayer. Let solution stand for approximately 10-30 minutes, depending on surface and contaminates. Agitate with a stiff brush and rinse thoroughly. Some areas might require a second application.

Coverage

Coverage varies depending upon porosity and application method but generally average 100 – 150 square feet per gallon.

Packaged

Artisan is available in gallons (4/case), 5 gallon pails and 55 gallon drums.

Disposal

Use completely or dispose of properly. Local requirements vary. Consult your local sanitation department or state designated environmental agency.

Storage and Shelf Life

Store in original closed containers. Store in a cool, dry place. Protect from freezing. The shelf life is 36 months in closed, original containers.

Safety and Handling

For specific information, please refer to the material safety data sheet. Wear chemical resistant gloves, apron, footwear and goggles. Refer to product label and material safety data sheet for complete safety information. KEEP OUT OF REACH OF CHILDREN.

Use only with adequate ventilation. Do not breathe spray mist. Ensure fresh air entry during application and drying. Avoid contact with eyes and prolonged or repeated contact with skin. Avoid exposure to
mist by wearing a NIOSH approved respirator during application and clean up. Follow respirator manufacturer's directions for respirator use. Close container after each use. Wash thoroughly after handling.

Chemique, Inc 315 N. Washington Avenue Moorestown, NJ 08057 856.235.4161 Fax: 856-273.0917
e-mail: chemique@aol.com www.chemique.com

FIRST AID: In case of eye contact, flush with water for 15 minutes. Get immediate medical attention. In case of contact with skin, wash with soap and water. If you experience difficulty breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.
IN CASE OF SPILL: Absorb with inert material and dispose of properly. KEEP OUT OF REACH OF CHILDREN. Refer to Material Safety Data Sheet available for further safety and handling information.

Warranty

Information and recommendations for this product are based on research performed by Chemique, Inc. and the research of others, and are believed to be accurate. However, no guarantee of the accuracy is made because we cannot cover every possible application of our products, or can we anticipate every variable that may be encountered regarding types masonry surfaces, job conditions, degradation, weathering, age and methods used. The purchaser and end user must make their own tests to determine the suitability of such products for each particular purpose.

Chemique, Inc. warrants this product to be free from defects. Chemique makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of merchantability or fitness for particular purpose. Chemique, Inc's liability shall be strictly limited to supplying sufficient product to re-clean the specific areas which defective product was applied. Acceptance and use of this product absolves Chemique, Inc. from any and all liability whatsoever, including liability for incidental, consequential or resultant damages whether due to breach of warranty, negligence or strict liability. This warranty may not be altered, modified or extended by representatives of Chemique, Inc., its distributors or dealers.

Artisan Safer Limestone Cleaner
Safety Data Sheet

Section **1. Identification**

Product Name: Artisan Safer Limestone Cleaner
Product Code:

Recommended use: Surface Clenaner for Limestone
Restrictions on use: Use only as directed.

Manufacturer Name: Chemique, Inc.
Address: 315 N. Washington Avenue
Moorestown, NJ 08057
Telephone number: (856) 235-4161

Emergency phone number: (800) 535-5053 (Infotrac)

Date of Preparation: September 16, 2013

Section 2. Hazard(s) Identification

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

Classification:

Physical	**Health**
None	Eye Damage Category 1 Carcinogenicity Category 2

Danger!

Hazard statements

Causes serious eye damage.
Suspected of causing cancer.

Precautionary statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection or face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER.
IF exposed or concerned: Get medical attention.
Store locked up.
Dispose of contents and container in accordance with local

and national regulations.

Section 3. Composition / Information on Ingredients

Chemical name	CAS No.	Concentration
Tetrasodium EDTA	64-02-8	20-30%
Surfactant	Proprietary	1-5%
Trisodium Nitrilotriacetate	5064-31-3	0.5-1.5%
Sodium Hydroxide	1310-73-2	<1

The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4. First-Aid Measures

Inhalation: Remove victim to fresh air. If breathing has stopped give artificial respiration. If breathing is difficult have qualified personnel administer oxygen. Get medical attention.
Skin contact: Wash thoroughly with soap and water until no traces of the chemical remains. Remove contaminated clothing and launder before reuse. Get medical attention if irritation or symptoms of exposure develop.
Eye contact: Immediately flush eyes with water for at least 20 minutes while lifting the upper and lower lids. Get immediate medical attention.
Ingestion: If conscious, give 1 glass of water to dilute. Do not induce vomiting unless directed to by medical personnel. Never give anything by mouth to a person who is unconscious or convulsing. Get immediate medical attention.

Most important symptoms/effects, acute and delayed: Causes severe eye irritation or burns. May cause skin irritation. Inhalation of vapors or mists may cause mucous membrane and upper respiratory irritation. Swallowing may cause irritation of the mouth, throat and stomach with nausea and diarrhea.

Indication of immediate medical attention and special treatment, if necessary: If eye contact occurs, get immediate medical attention.

Section 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media: Use any media appropriate for surrounding fire.

Specific hazards arising from the chemical: None known.

Special protective equipment and precautions for fire-fighters: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus. Cool fire exposure containers with water.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective clothing and equipment to prevent eye and skin contact.

Environmental precautions: Avoid release to the environment. Report spill as required by local and federal regulations.

Methods and materials for containment and cleaning up: Dike spill and collect into closable containers for disposal with an inert absorbent. Wash spill site with water.

Section 7. Handling and Storage

Precautions for safe handling: Prevent contact with eyes. Avoid contact with skin and clothing. Avoid breathing vapors or mists. Use only with adequate ventilation. Remove and launder contaminated clothing before re-use. Wash thoroughly after handling and before eating, drinking, smoking or using toilet facilities.

Empty containers retain product residues. Follow all SDS precautions in handling empty containers.

Conditions for safe storage, including any incompatibilities: Store in a cool, well ventilated area away from oxidizers and other incompatible materials. Protect containers from physical damage.

Section 8. Exposure Controls / Personal Protection

Exposure guidelines:

Tetrasodium EDTA	None Established
Surfactant	None Established
Trisodium Nitrilotriacetate	None Established
Sodium Hydroxide	2 mg/m3 Ceiling ACGIH TLV 2 mg/m3 TWA OSHA PEL

Appropriate engineering controls: Good general room ventilation (equivalent to outdoors) should be adequate under normal conditions. If the recommended exposure limit is exceeded increased mechanical ventilation such as local exhaust may be required.

Personal Protective Equipment:
Respiratory protection: Good general ventilation (equivalent to outdoors) should be adequate under normal conditions. For spray application and for large jobs where the recommended exposure limit may be exceeded an approved particulate may be used. For higher concentrations, a NIOSH approved supplied air respirator (with escape bottle if required) or self-contained breathing apparatus may be required. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.
Skin protection: Neoprene rubber or other impervious gloves are recommended to prevent skin contact.
Eye protection: Wear chemical goggles and/or faceshield to prevent eye contact. Do not wear contact lenses.
Other: Impervious apron, boots and other clothing are recommended if needed to prevent contact or if splashing is possible. For operations where contact can occur, a safety shower and an eye wash facility should be available.

Section 9. Physical and Chemical Properties

Appearance (physical state, color, etc.): Yellow Liquid
Odor: Slight ammonical odor.

Odor threshold: Not available	**pH:** 11
Melting point/freezing point: <0ºF	**Boiling point:** >212°F / >100°C
Flash point: Not flammable	**Evaporation rate:** Not available
Flammability (solid, gas): Not applicable	
Flammable limits: LEL: Not available	**UEL:** Not available
Vapor pressure: Not determined	**Vapor density:** Not available
Relative density: 1.00	**Solubility(ies):** Completely soluble in water
Partition coefficient: n-octanol/water: Not available	**Auto-ignition temperature:** Not available
Decomposition temperature: Not available	**Viscosity:** Not available
VOC: 10g/L	

Section 10. Stability and Reactivity

Reactivity: Not reactive under normal conditions of use.
Chemical stability: Stable
Possibility of hazardous reactions: None known.
Conditions to avoid: Contact with copper, zinc and aluminum may release flammable hydrogen gas.
Incompatible materials: Avoid oxidizing agents.
Hazardous decomposition products: Thermal decomposition may produce carbon and nitrogen oxides.

Section 11. Toxicological Information

Acute effects of exposure:
Inhalation: Inhalation of vapors or mist may cause respiratory irritation with coughing, sneezing and sore throat.
Skin Contact: Contact may cause irritation with redness and swelling.
Eye Contact: Contact may cause severe irritation or burns with redness, pain and tearing. .
Ingestion: Swallowing may cause mucous membrane and gastrointestinal irritation. Large amounts cause gastrointestinal distress and osmotic balance from chelation of metals in the body.
Chronic Effects: Prolonged or repeated exposure may cause skin irritation with redness and swelling. Prolonged overexposure to trisodium nitrilotriacetate has been shown to cause kidney toxicity.
Sensitization: None of the components have been shown to cause sensitization to animals or humans.
Germ Cell Mutagenicity: None of the components have been shown to cause germ cell mutagenicity.
Reproductive Toxicity: Sodium salts of EDTA have been reported to cause birth defects in animals at doses not expected in occupational exposures. These effects were observed only at levels that were toxic to the mother

Carcinogenicity: Nitrilotriacetic acid and its salts have been classified as "possibly carcinogenic to humans" (Group 2B) by IARC. None of the other components are listed as carcinogens or suspected carcinogens by IARC, NTP, ACGIH or OSHA.

Acute toxicity values:
Tetrasodium EDTA: Oral rat LD50 1780mg/kg;
Surfactant: No toxicity data available
Trisodium Nitrilotriacetate: Oral rat LD50 1740 mg/kg; Inhalation rat LC50 >5.0 mg/L/4 hr.
Sodium Hydroxide: No toxicity data available

Section 12. Ecological Information

This product may be harmful to aquatic organisms due to change in pH of water where released.

Ecotoxicity values:
Tetrasodium EDTA: 96 hr LC50 Lepomis macrochirus 121 mg/L; 24 hr EC50 daphnia magna 652 mg/L;
Surfactant: No data available
Trisodium Nitrilotriacetate: No data available
Sodium Hydroxide: 48 hr EC50 Ceriodaphnia sp 40.4 mg/L

Persistence and degradability: Tetrasodium EDTA is not considered readily biodegradable. It degrades very slowly in soil or water and the soluble salts rapidly degrade with light.
Bioaccumulative potential: Tetrasodium EDTA has a calculated BSF of 100.
Mobility in soil: No data available.
Other adverse effects: None known.

Section 13. Disposal Considerations

Dispose in accordance with all local, state and federal regulations.

Section 14. Transport Information

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	N/A	Not Regulated	N/A	N/A	None
TDG	N/A	Not Regulated	N/A	N/A	None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None known

Section 15. Regulatory Information

Safety, health, and environmental regulations specific for the product in question.

CERCLA Hazardous Substances (Section 103)/RQ: This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
SARA Hazard Category (311/312): Acute health, Chronic Health
EPA SARA 313: This product contains the following chemicals regulated under SARA Title III, section 313: None

California Proposition 65: This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity: None

EPA TSCA Inventory: All of the components of this product are listed on the TSCA inventory.

CANADA:
Canadian CEPA: All the components of this product are listed on the Canadian DSL.
Canadian WHMIS Classification: Class D-2-A, Class D-2B

This product has been classified under the CPR and this SDS discloses information elements required by the CPR.

Section 16. Other Information

SDS Revision History: All sections revised. Converted to GHS format.
Date of preparation: 16 September 2013
Date of last revision: 29 January 2011

Trifab® VersaGlaze® 451/451T Framing System

- 2" (50.8mm) sightline
- 4-1/2" (114.3mm) depth
- High thermal performance
- Front, Center, Back or Multi-Plane glass applications
- Blast mitigation (451T), hurricane resistance
- Structural silicone glazed (SSG) options, Pre-glazed options



Product Features

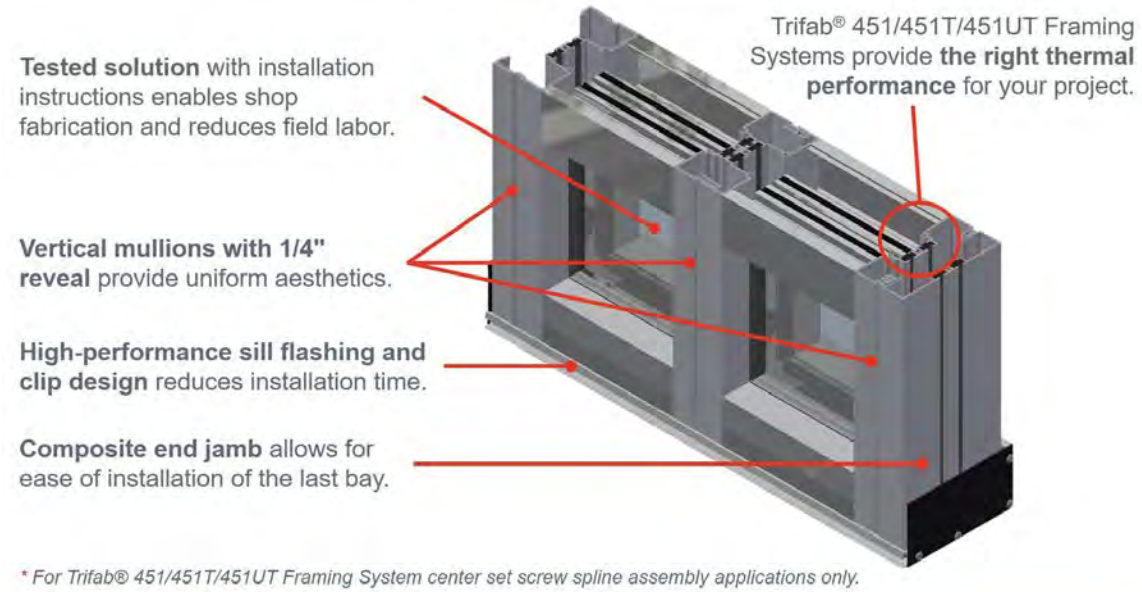
Trifab® VG (VersaGlaze®) Framing systems are built on the proven and successful Trifab® framing platform – with all the versatility its name implies. Trifab® framing set the standard and Trifab® VG framing improves upon it.

There are enough fabrication, design and performance choices to please the most discerning building owner, architect and installer. Plus, the confidence a tried and true framing system instills. Select from four glazing applications, four fabrication methods and multiple infill choices.

Consider thermal options and performance, SSG and Weatherseal alternatives and your project takes an almost custom shape whether your architecture is traditional or modern and the building is new or retrofitted.

Latest Feature:

Pre-Glaze Option Features*



** For Trifab® 451/451T/451UT Framing System center set screw spline assembly applications only.*

Key Features Include:

- Hurricane Impact tested on Shutter Application Only
- Trifab® VG 451/451T Framing is 4-1/2" (114.3) deep with a 2" (50.8) sightline
- Front, Center, Back or Multi-Plane glass applications
- Flush glazed from either the inside or outside
- Screw Spline, Shear Block, Stick or Type-B fabrication
- Screw spline pre-glaze option
- SSG / Weatherseal option
- Isolock® lanced and debridged thermal break option with Trifab® VG 451T Framing
- Infill options up to 1-1/8" (28.6) thickness
- Permanodic® anodized finishes in 7 choices
- Painted finishes in standard and custom choices

Optional Features:

- Acoustical rating per AAMA 1801 and ASTM E 1425
- Project specific U-factors (See Thermal Charts)
- Profit$Maker® plus die sets available

Product Applications:

- Storefront, Ribbon Window or Punched Openings
- Single-span
- Integrated entrance framing allowing Kawneer standard entrances or other specialty entrances to be incorporated
- Kawneer windows including GLASSvent® Windows for Storefront Framing are easily incorporated

Features

- Trifab® 451UT is 4-1/2" (114.3) deep with a 2" (50.8) sightline
- Center Plane glass applications
- Flush glazed from either the inside or outside
- Screw Spline fabrication
- Screw Spline Pre-Glazed option
- Dual IsoLock® lanced and debridged thermal break
- Infill options up to 1-1/8" (28.6) thicknes
- High performance sill flashin
- Permanodic® anodized finishes in seven choice
- Painted finishes in standard and custom choice

Optional Features

- Acoustical rating per AAMA 1801 and ASTM E 1425
- Project specific U-factors (See Thermal Charts)
- Integrates with Versoleil® SunShade Outrigger System and Horizontal Single Blade System

Product Applications

- Storefront, Ribbon Window, Punched Openings or Pre-Glazed
- Single-span
- Integrated entrance framing allowing Kawneer standard entrances or other specialty entrances to be incorporated
- Kawneer windows, GLASSvent® UT windows are easily incorporated

For specific product applications
consult your Kawneer representative.

BASIC FRAMING DETAILS
(CENTER - Inside Glazed - Stops Down) 4
(CENTER - Outside Glazed - Stops Down) 5
(CENTER - Outside Glazed - Stops Up) 6
PRE-GLAZED FRAMING DETAILS
(CENTER - Inside Glazed - Stops Down) 7
(CENTER - Outside Glazed - Stops Down) 8
(CENTER - Outside Glazed - Stops Up) 9
MISCELLANEOUS FRAMING (CENTER) 10
CURVING & TRIM DETAILS 11
AIR/VAPOR BARRIER TIE-IN OPTION 12
AA® 250/425 THERMAL ENTRANCE DETAILS 13
250T/350T/500T INSULPOUR® THERMAL ENTRANCES 14-15
GLASSvent® UT WINDOW DETAILS 16
8225TL THERMAL WINDOW DETAILS 17
WINDLOAD / DEADLOAD CHARTS 18-22
THERMAL CHARTS 23-32

Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

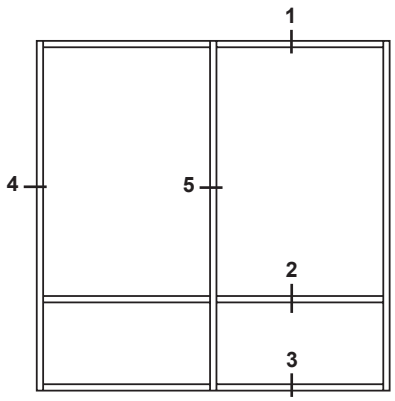
The following metric (SI) units are found in these details:

m – meter
cm – centimeter
mm – millimeter
s – second
Pa – pascal
MPa – megapascal

Trifab® 451UT Framing System

BASIC FRAMING DETAILS (CENTER - Inside Glazed - Stops Down)

Additional information and CAD details are available at www.kawneer.com



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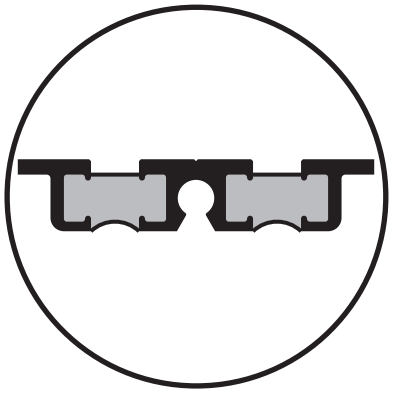
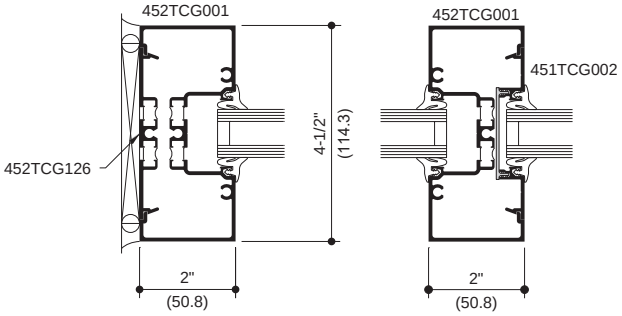


DUAL IsoLock® THERMAL BREAK

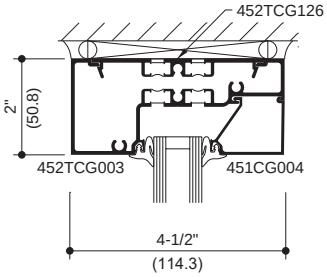
SCREW SPLINE



4
JAMB

5
VERTICAL

1
HEAD



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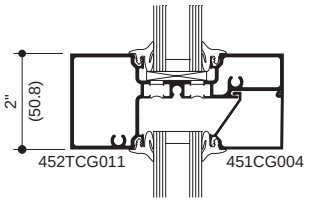
HORIZONTAL



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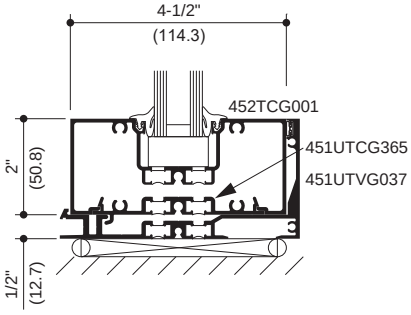

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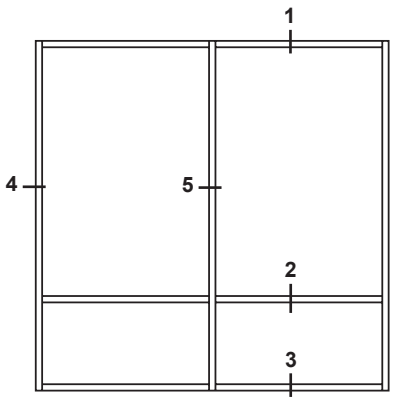

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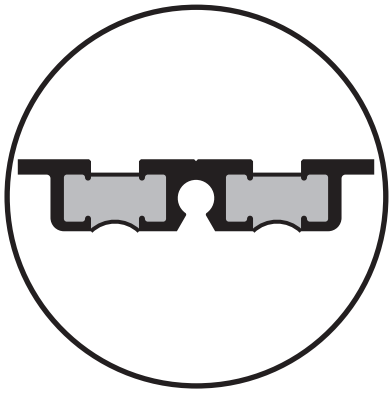
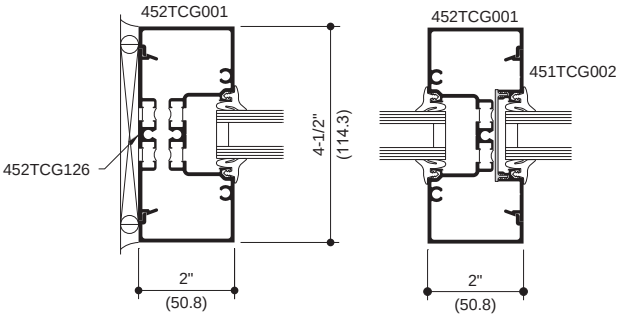


DUAL IsoLock® THERMAL BREAK

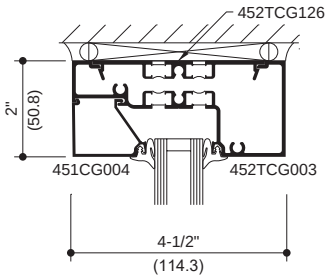
SCREW SPLINE



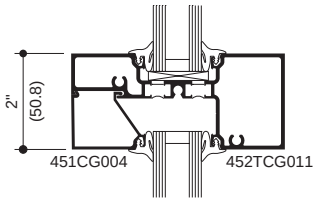
4 JAMB

5 VERTICAL

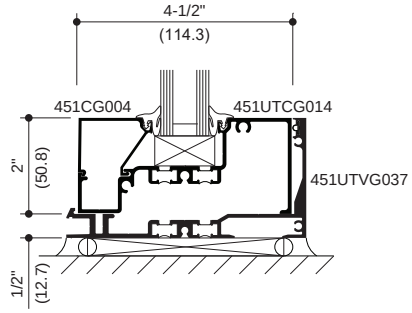
1 HEAD



2 HORIZONTAL



3 SILL



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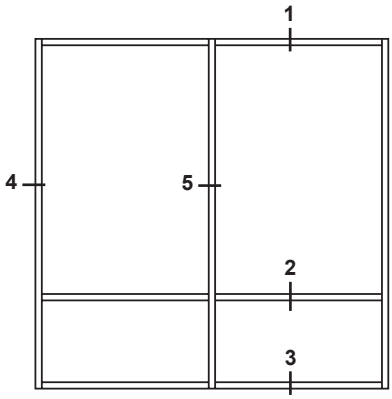

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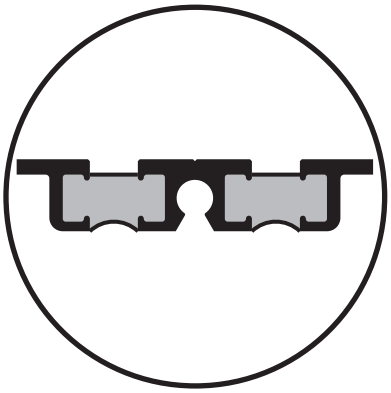
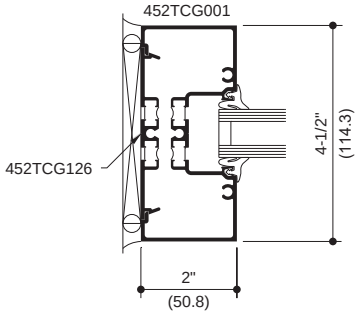


DUAL IsoLock® THERMAL BREAK

SCREW SPLINE



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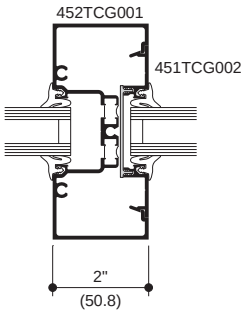
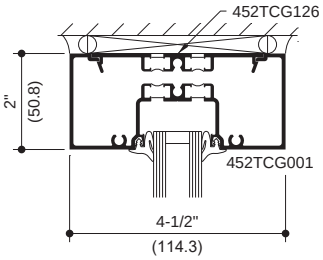


5
VERTICAL

1
HEAD



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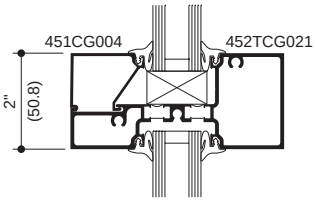
HORIZONTAL



3
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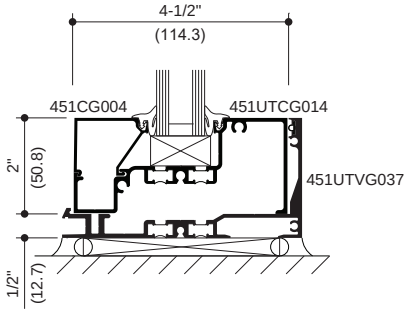

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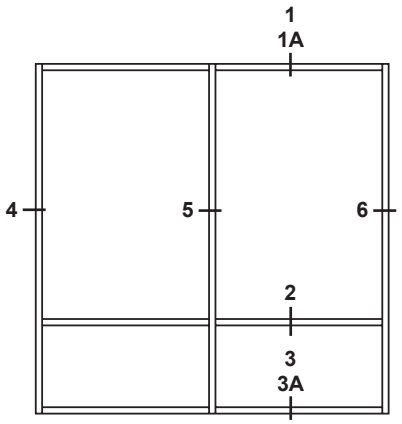

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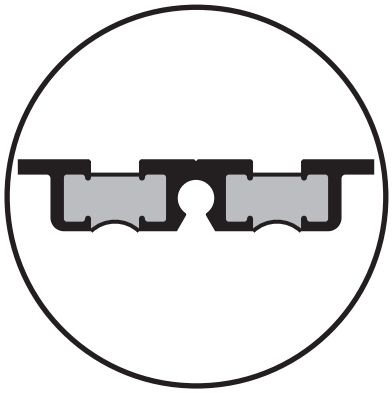
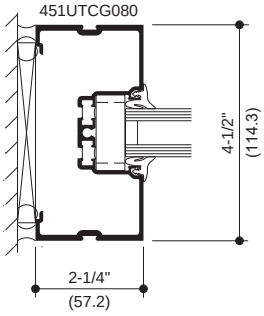
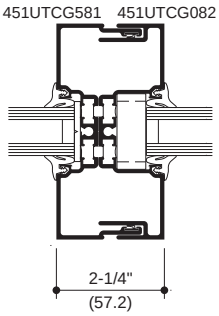


DUAL IsoLock® THERMAL BREAK

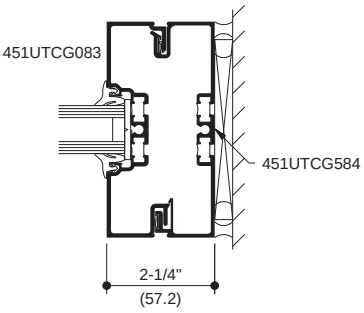
SCREW SPLINE



4
JAMB

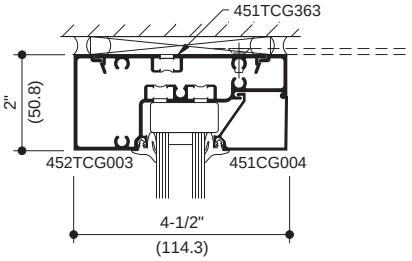


5
VERTICAL



6
JAMB

1
HEAD



2
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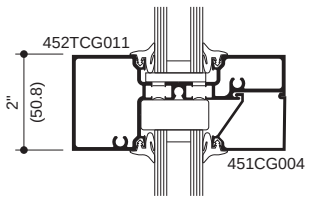
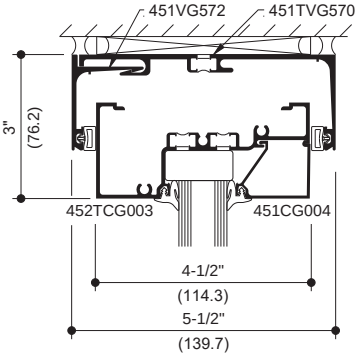
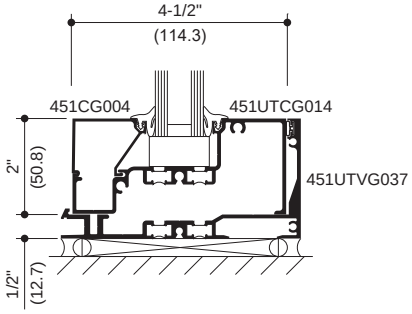


1A
HEAD



STANDARD HEAD
COMPENSATING RECEPTOR
(EXTERIOR INSTALLED)

3
SILL



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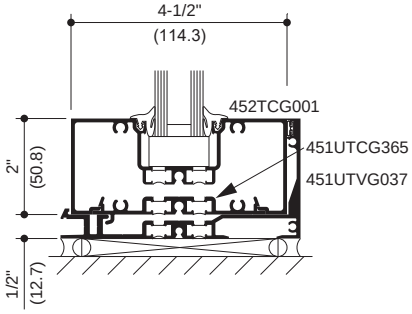

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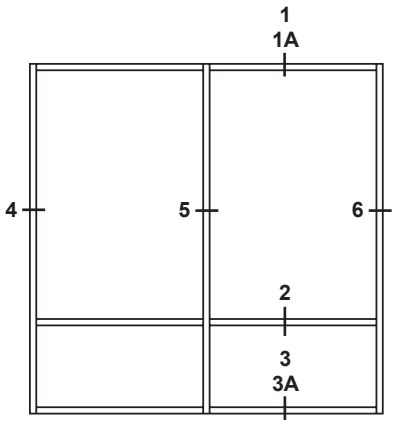

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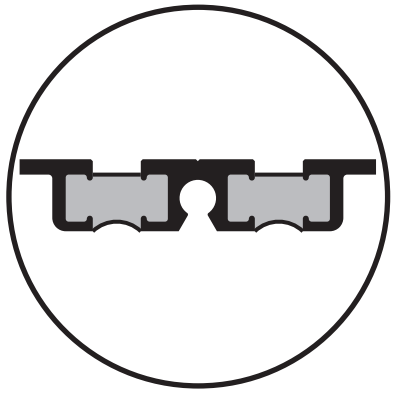
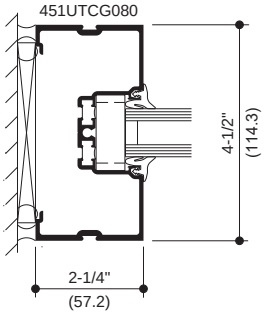
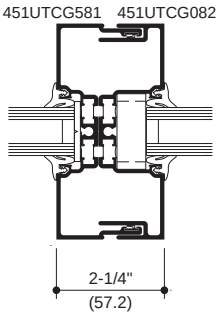


DUAL IsoLock® THERMAL BREAK

SCREW SPLINE



4
JAMB



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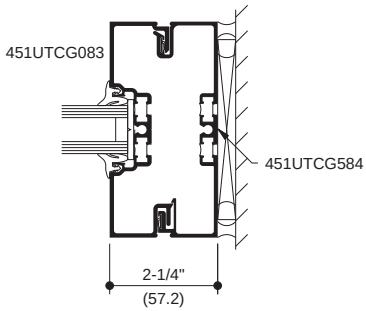
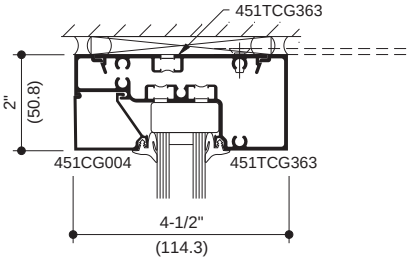
VERTICAL



6
JAMB

1
HEAD



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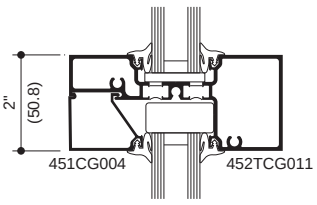

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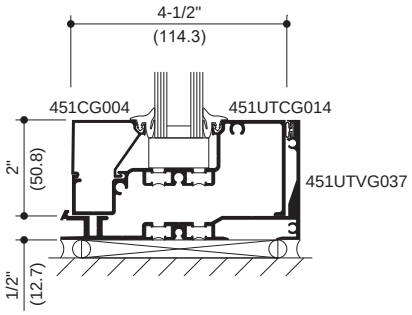
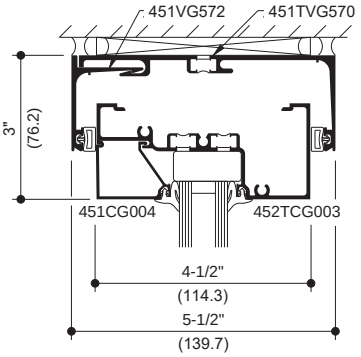
SILL

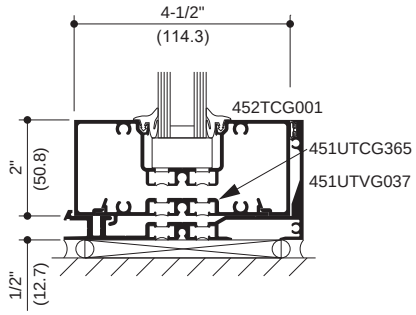


1A
HEAD

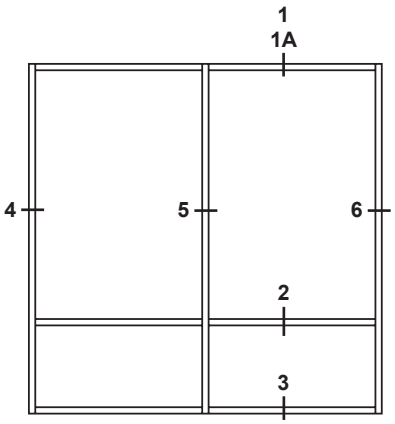


STANDARD HEAD
COMPENSATING RECEPTOR
(EXTERIOR INSTALLED)

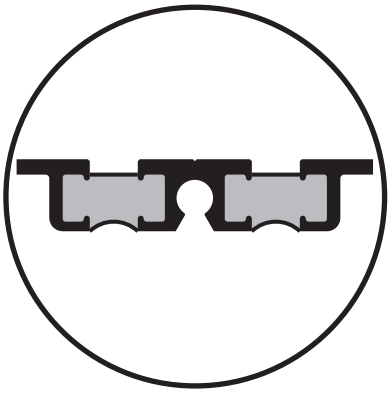
3A
SILL



Additional information and CAD details are available at www.kawneer.com

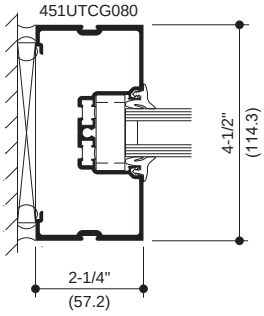


ELEVATION IS NUMBER KEYED TO DETAILS



DUAL IsoLock® THERMAL BREAK

SCREW SPLINE



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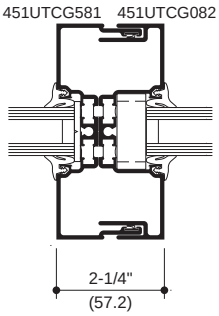
JAMB



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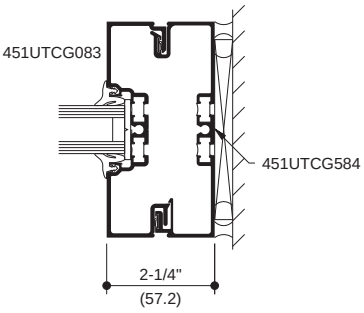
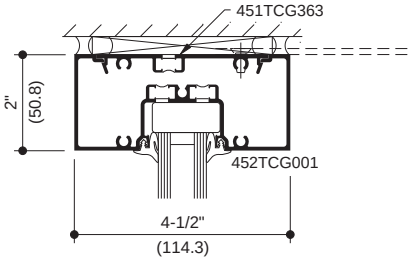


6
JAMB

1
HEAD



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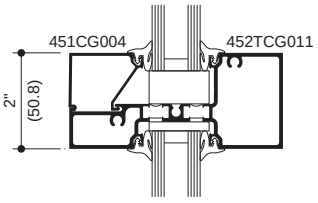

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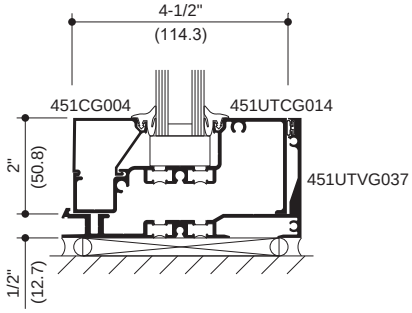
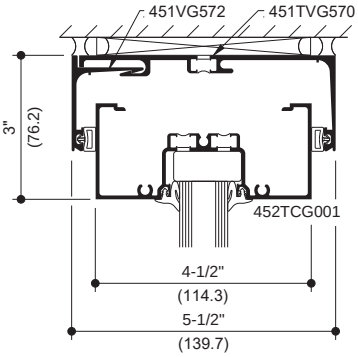
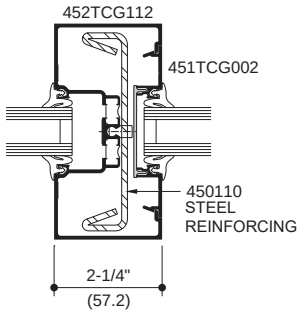


1A
HEAD

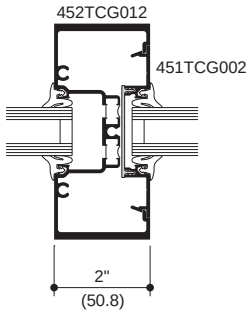


STANDARD HEAD
COMPENSATING RECEPTOR
(EXTERIOR INSTALLED)

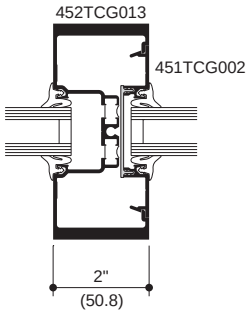
Additional information and CAD details are available at www.kawneer.com



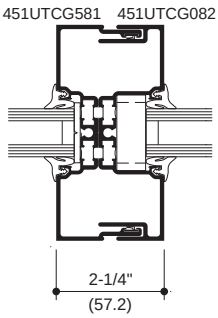
2-1/4" (57.2) MULLION W/ STEEL



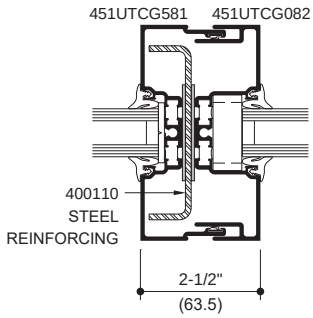
MEDIUM WEIGHT MULLION



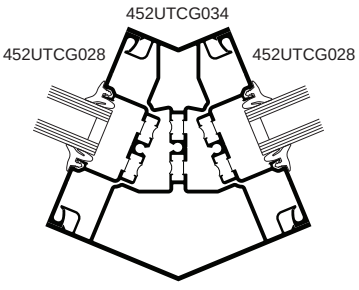
HEAVY WEIGHT MULLION

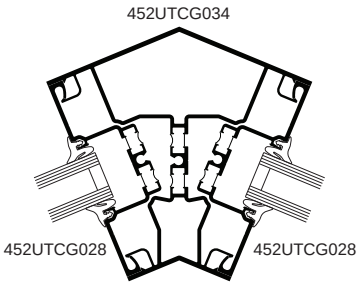


PRE-GLAZED EXPANSION MULLION



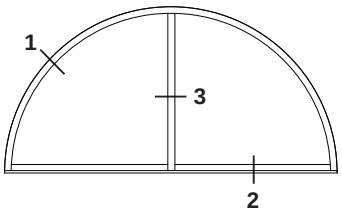
PRE-GLAZED EXPANSION MULLION WITH OPTIONAL STEEL





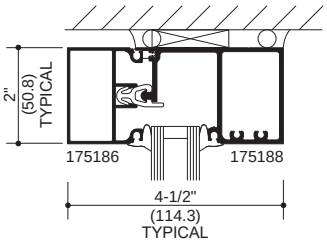
135° CORNER (THERMAL)

Additional information and CAD details are available at www.kawneer.com



CURVING DETAILS
(Center Plane Only)

1



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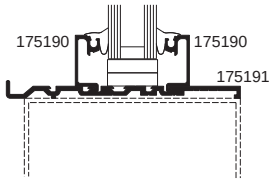

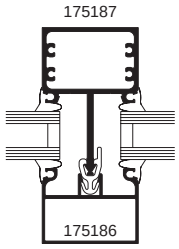

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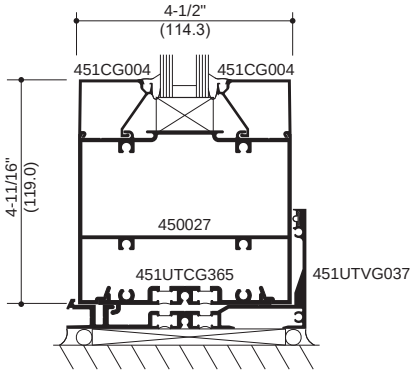
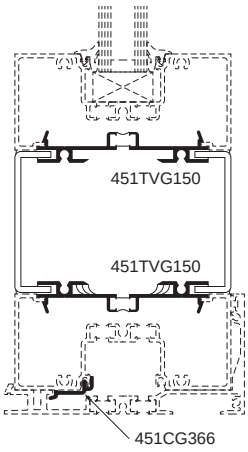
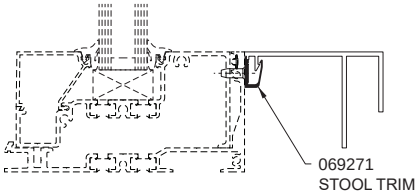


SIDELITE BASE



BRAKE METAL
FILLERS

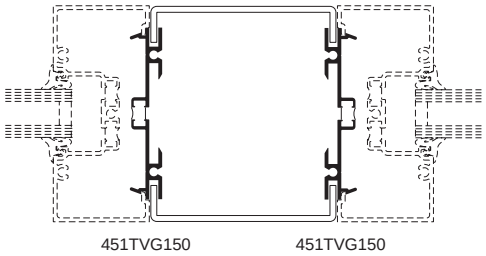
BRAKE METAL
ADAPTOR AT HORIZONTAL



STOOL TRIM CLIP
WITH HIGH PERFORMANCE
FLASHING

Seal over Stool Trim fasteners
to prevent water infiltration

BRAKE METAL
FILLERS



BRAKE METAL
ADAPTOR AT VERTICAL

Trifab® 451UT Framing System

JULY, 2020

AIR/VAPOR BARRIER TIE-IN OPTION

EC 97911-234

The following applications utilize Tremco Proglaze® ETA Connections as the transition assembly from the wall air/vapor barrier membrane to the storefront framing perimeter. Corners are sealed with either Proglaze® ETA 3D molded silicone corners or lapped Proglaze® ETA silicone sheet material. Transition assembly components are set in Tremco Spectrem® 1 silicone sealant. For complete installation instructions of Tremco Proglaze® ETA products, contact your local Tremco representative or visit www.tremcosealants.com.

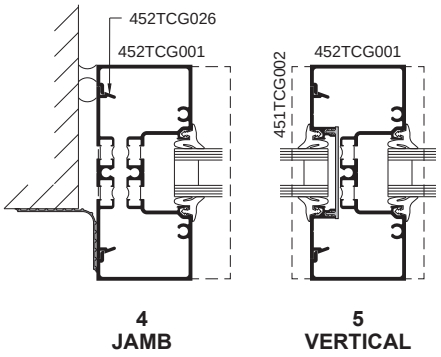
For integration of a silicone engineered transition assembly, the Trifab™ storefront system must use continuous head and jamb mullion fillers, a head receptor with continuous jamb fillers or a head receptor with jamb receptors.

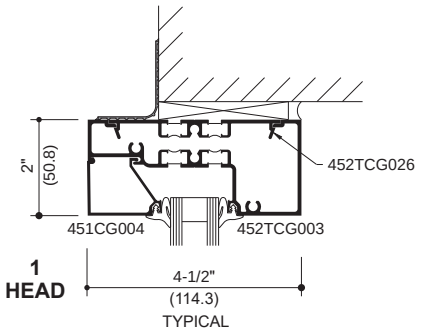
Reference air/vapor barrier installation instructions 451VG977EN. All storefront framing to be installed according to applicable Kawneer storefront system installation instructions, project specific plans, specifications and shop detail

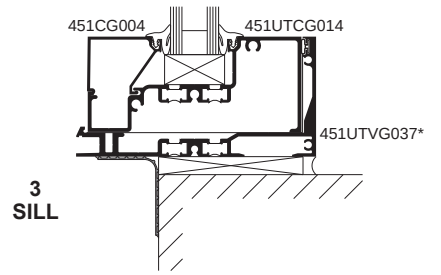
Storefront installations require the sill to be structurally supported directly under the glass setting blocks and mullion locations, as well as where the sill is anchored to the substrate. Any projecting or cantilevered sill applications that are not supported must be reviewed by Kawneer application engineering.

Installer to independently confirm sealant compatibility and adhesion with all job specific storefront framing materials, silicone A sheet material and wall AVB material.

CONTINUOUS HEAD AND JAMB MULLION FILLERS



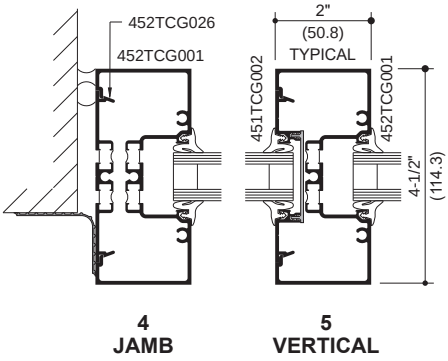


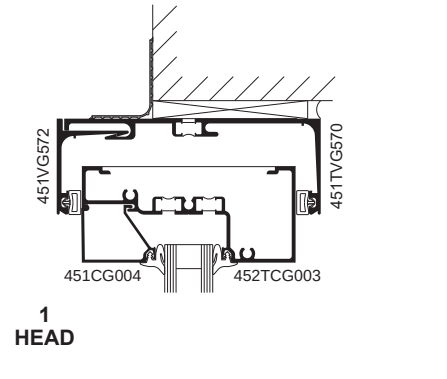


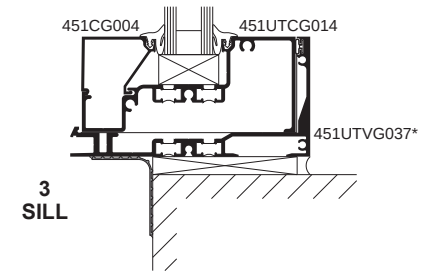
* HP Sill Flashing shown with optional gasket.

HEAD RECEPTOR WITH CONTINUOUS JAMB FILLERS

(EXTERIOR INSTALLED)



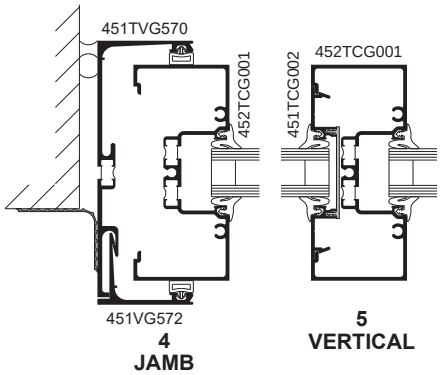


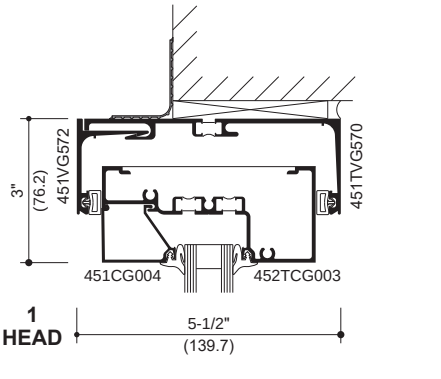


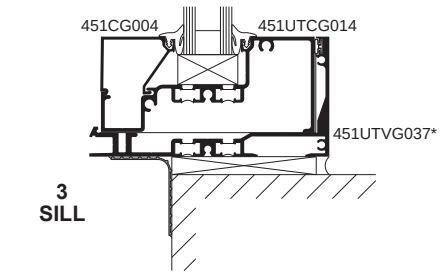
* HP Sill Flashing shown with optional gasket.

HEAD AND JAMB RECEPTORS

(EXTERIOR INSTALLED)



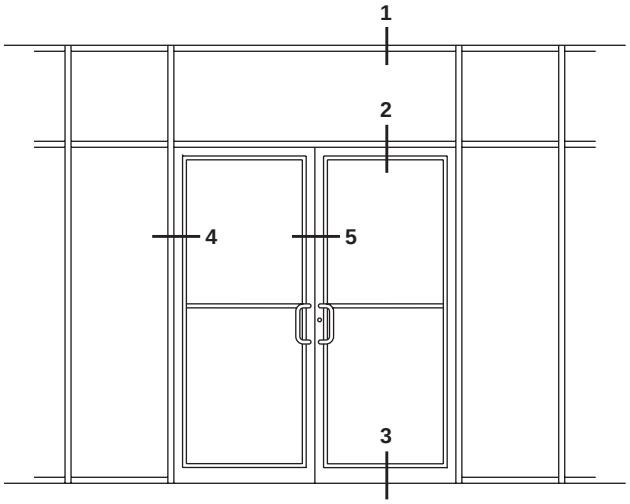




* HP Sill Flashing shown with optional gasket.

Additional information and CAD details are available at www.kawneer.com

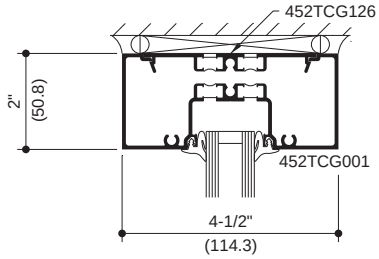
Trifab® VG 451T CENTER DOOR FRAMING SHOWN.
OTHER FRAMING OPTIONS AVAILABLE.
CONSULT YOUR KAWNEER REPRESENTATIVE.



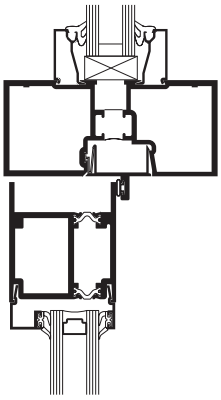
ELEVATION IS NUMBER KEYED TO DETAILS.

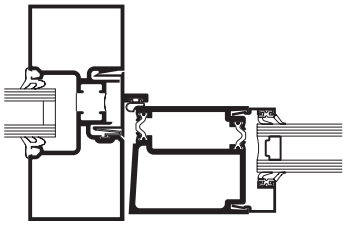
NOTE: Butt Hung or Offset Pivot Doors Onl .

1
HEAD



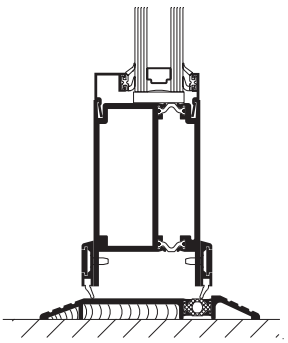
2
TRANSOM BAR

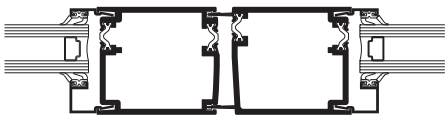




4
DOOR JAMB

3
BOTTOM RAIL





5
MEETING STILES

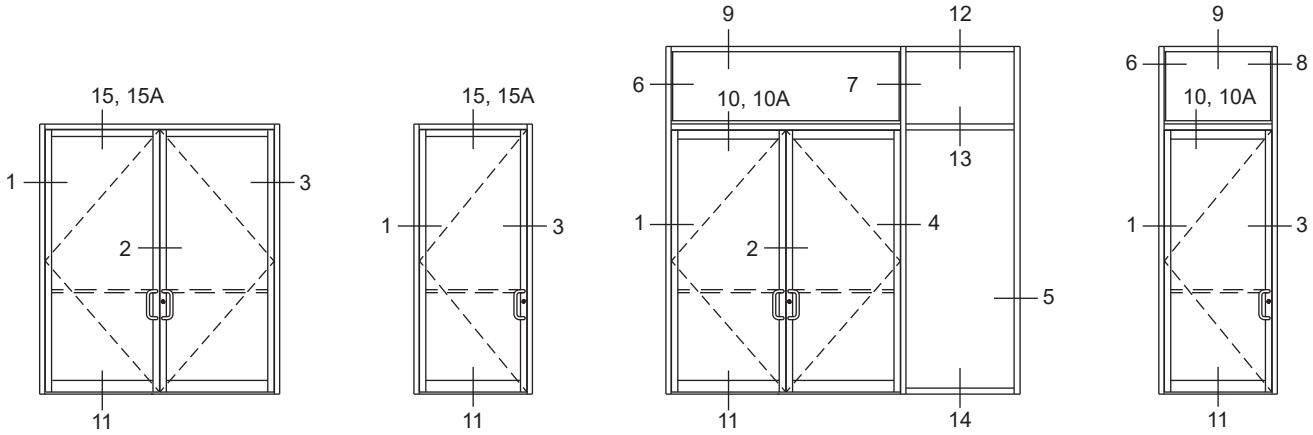
AA® 250/425 THERMAL DOOR

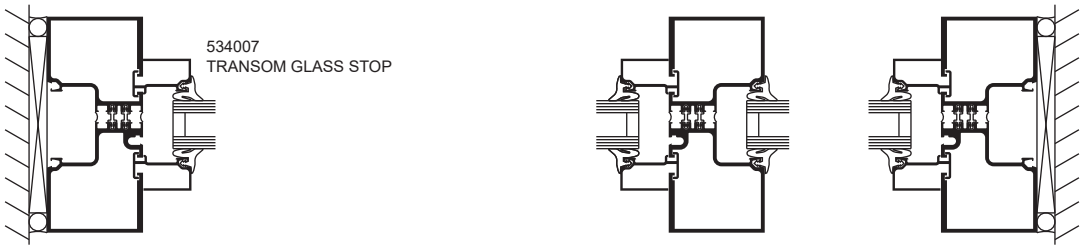
Additional information and CAD details are available at www.kawneer.com

NOTE:

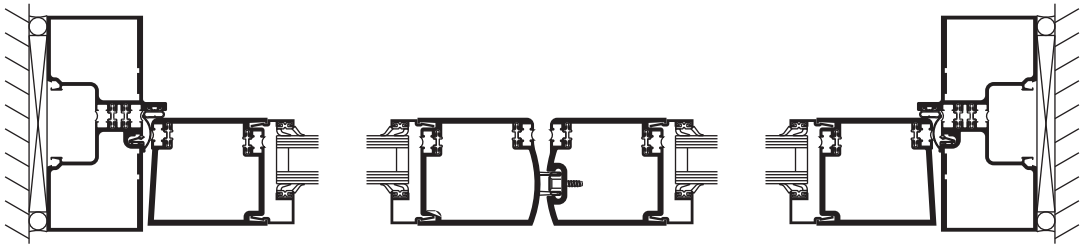
1. SERIES 250T NARROW STILE DOORS ARE DETAILED, MEDIUM STILE 350T DOORS AND WIDE STILE 500T DOORS ALSO MAY BE USED.

2. TRIFAB™ VG 451T CENTER, 2" x 4-1/2" (50.8 x 114.3) FRAMING IS DETAILED WITH THE DOORS FOR REFERENCE. OTHER KAWNEER FRAMING SERIES OR CURTAIN WALL SYSTEMS MAY BE USED.



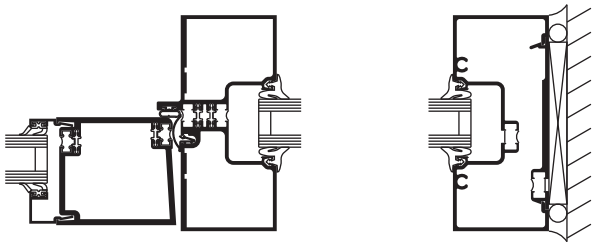


6 7 8



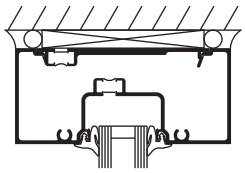
1 2 3

SINGLE ACTING DOORS



4 5

Additional information and CAD details are available at www.kawneer.com



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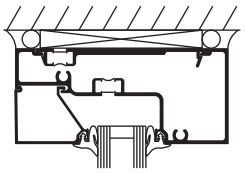
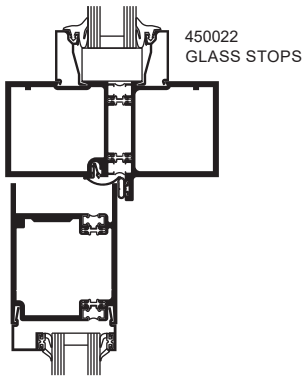


12

SINGLE ACTING DOORS



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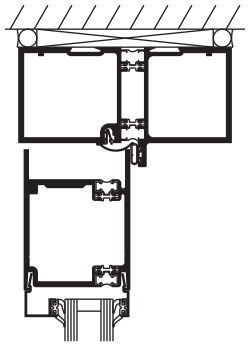

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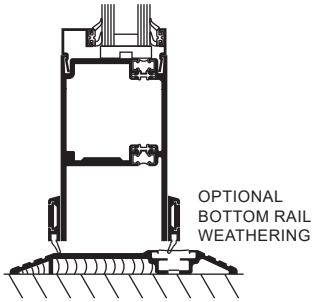
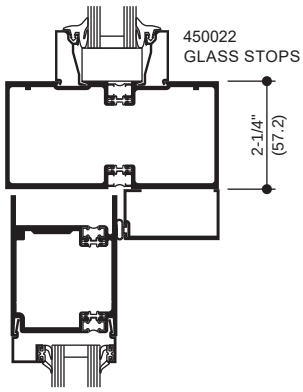


11

SURFACE OVERHEAD CLOSER

COC WITH SINGLE ACTING OFFSET ARM



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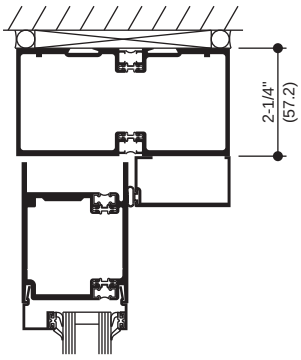

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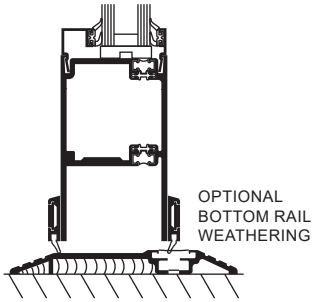
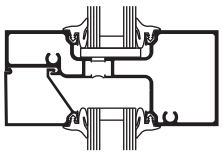


11

CONSEALED OVERHEAD CLOSER



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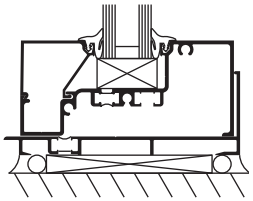
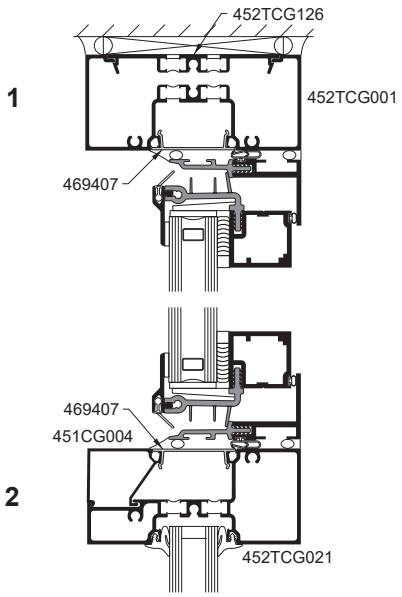


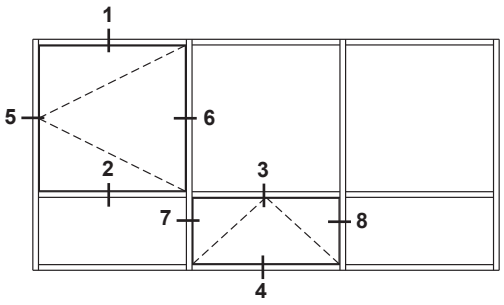
14

Additional information and CAD details are available at www.kawneer.com

Trifab® 451UT FRAMING SHOWN.
OTHER FRAMING OPTIONS AVAILABLE.
CONSULT YOUR KAWNEER REPRESENTATIVE.

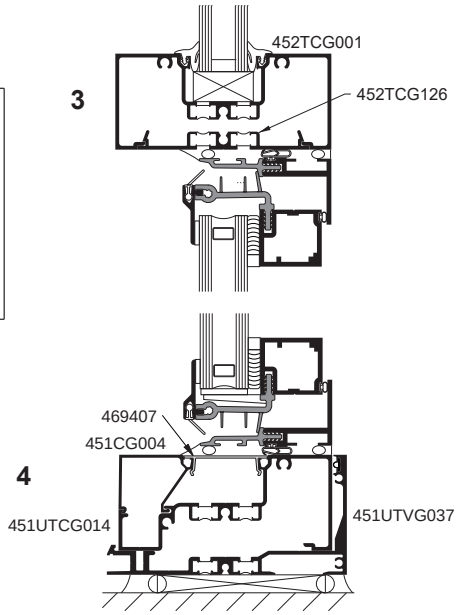
OUTSWING CASEMENT VERTICAL SECTION



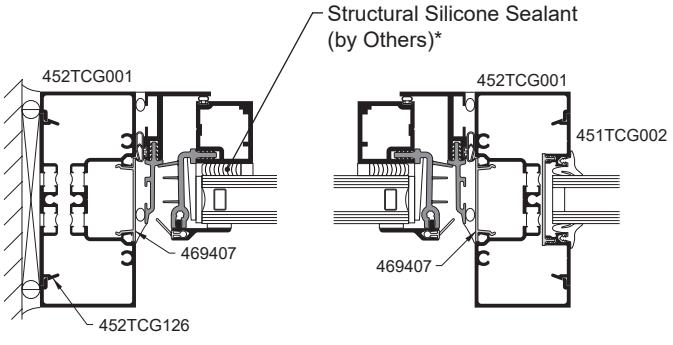


ELEVATION IS NUMBER KEYED TO DETAILS

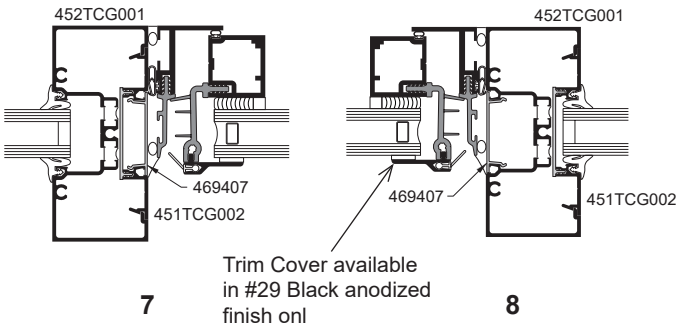
PROJECT-OUT VERTICAL SECTION



OUTSWING CASEMENT HORIZONTAL SECTION



PROJECT-OUT HORIZONTAL SECTION



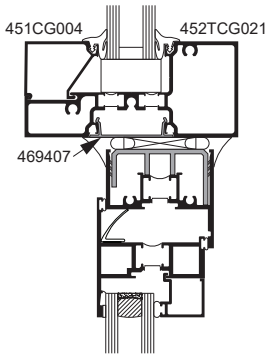
NOTE: Black spacer is recommended when 1" (25.4) insulating glass is used.

*** INSTALLER NOTE:** Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.

Additional information and CAD details are available at www.kawneer.com

PROJECT-OUT VERTICAL SECTION

1



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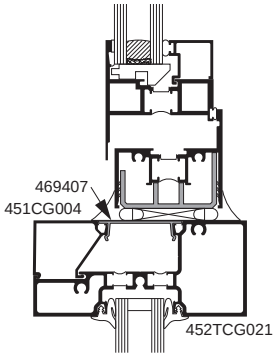
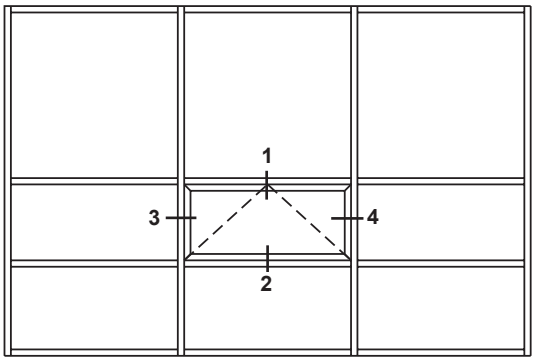
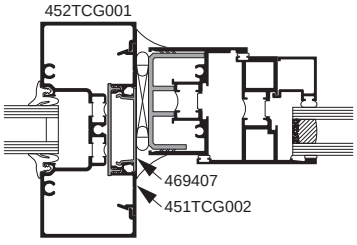


8225TL THERMAL WINDOWS SHOWN
NOTE: OTHER VENT TYPES CAN BE ACCOMMODATED, CONSULT YOUR KAWNEER REPRESENTATIVE FOR OTHER OPTIONS



ELEVATION IS NUMBER KEYED TO DETAILS

PROJECT-OUT HORIZONTAL SECTION



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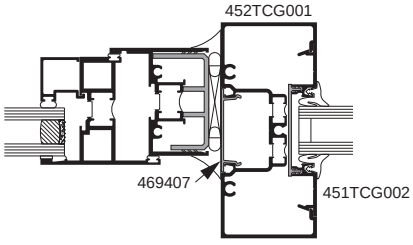


4

WIND LOAD CHARTS

Mullions are designed for deflection limitations in accordance with AAMA TIR-A11 of L/175 up to 13'-6" and L/240 +1/4" above 13'-6". These curves are for mullions WITH HORIZONTALS and are based on engineering calculations for stress and deflection. Allowable wind load stress for ALUMINUM 15,152 psi (104 MPa), STEEL 30,000 psi (207 MPa). Charted curves, in all cases are for the limiting value. Wind load charts contained herein are based upon nominal wind load utilized in allowable stress design. A conversion from Load Resistance Factor Design (LRFD) is provided. To convert ultimate wind loads to nominal loads, multiply ultimate wind loads by a factor of 0.6 per ASCE/SEI 7. A 4/3 increase in allowable stress has not been used to develop these curves. For special situations not covered by these curves, contact your Kawneer representative for additional information.

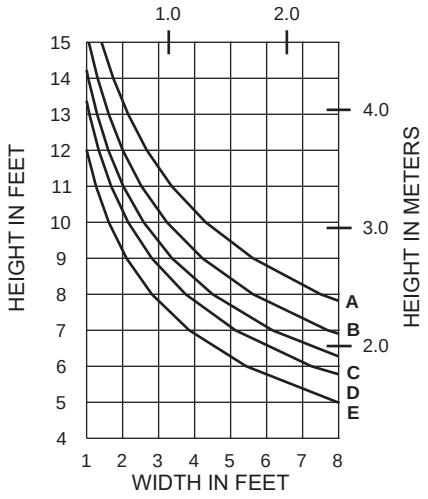
If the end reaction of the mullion [mullion spacing (ft.) times height (ft.) times specified wind load (psf) divided by two] is more than 500 lbs., the optional Mullion Anchors must be used. Consult Application Engineering. *(Mullion Anchor not used with Lightweight Receptor.)*

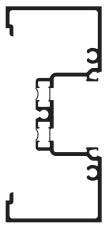
DEADLOAD CHARTS

Horizontal or deadload limitations are based upon 1/8" (3.2), maximum allowable deflection at the center of an intermediate horizontal member. The accompanying charts are calculated for 1" (25.4) thick insulating glass or 1/4" (6.35) thick glass supported on two setting blocks placed at the loading points shown.

	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	15 PSF (720)	25 PSF (1200)
B =	20 PSF (960)	33 PSF (1580)
C =	25 PSF (1200)	42 PSF (2000)
D =	30 PSF (1440)	50 PSF (2400)
E =	40 PSF (1920)	67 PSF (3200)

WITH HORIZONTALS

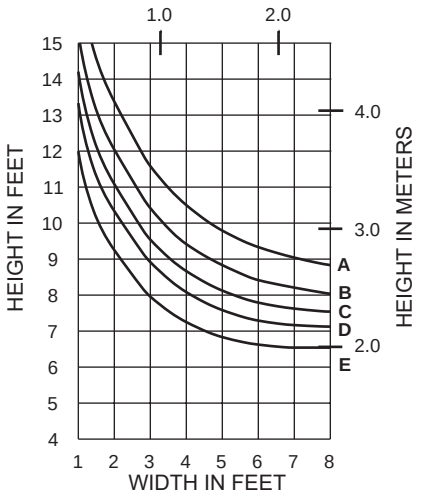




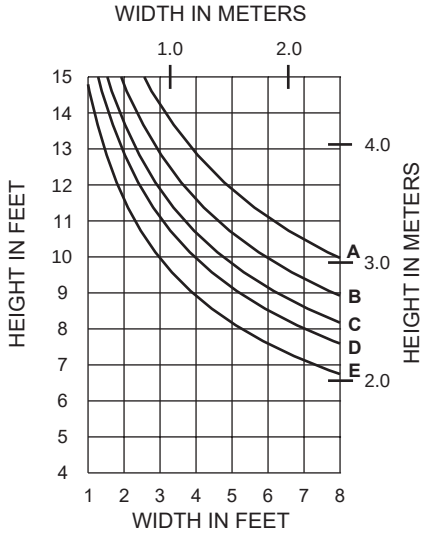
452TCG001

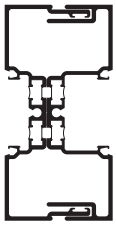
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

WITHOUT HORIZONTALS



WITH HORIZONTALS

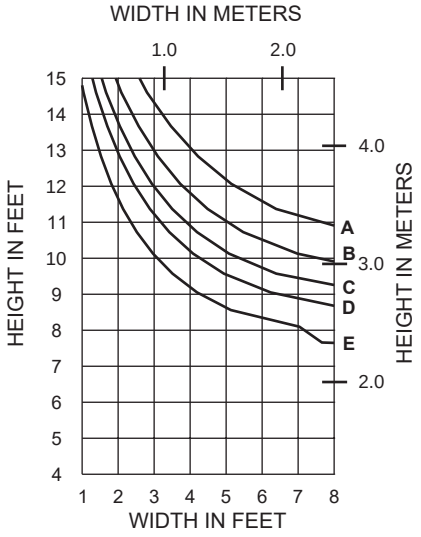




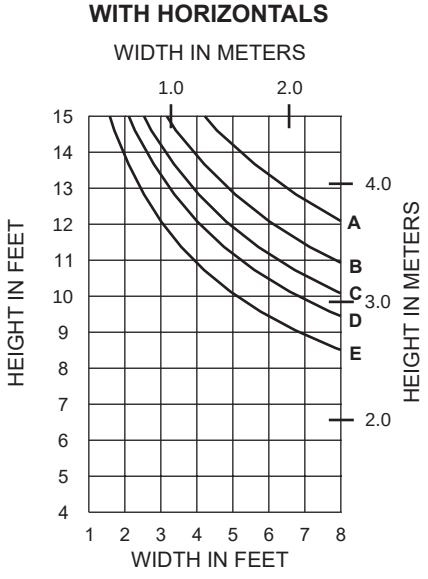
451UTCG581 / 451UT082

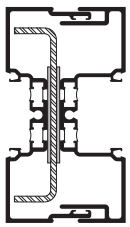
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

WITHOUT HORIZONTALS



WITH HORIZONTALS

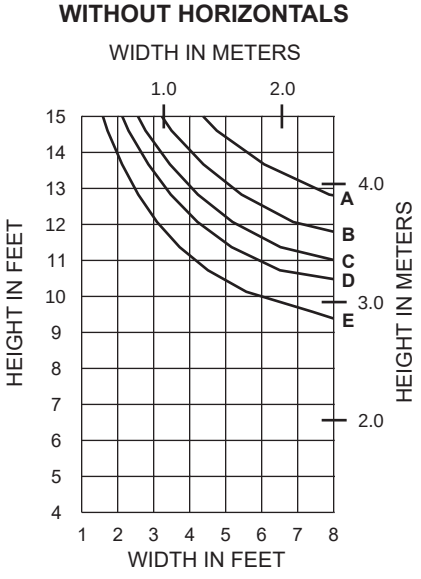




451UTCG581 / 451UT082 with 400110 STEEL

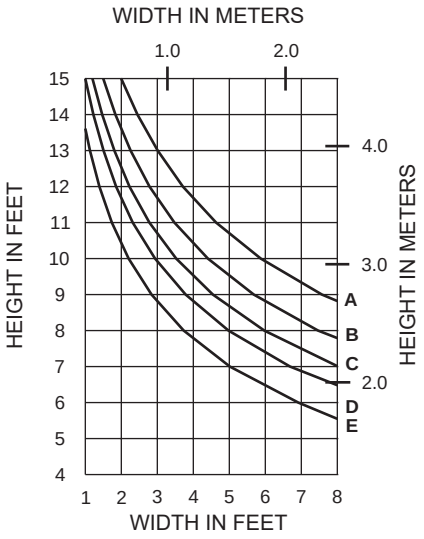
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

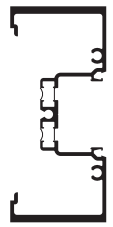
WITHOUT HORIZONTALS



	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	15 PSF (720)	25 PSF (1200)
B =	20 PSF (960)	33 PSF (1580)
C =	25 PSF (1200)	42 PSF (2000)
D =	30 PSF (1440)	50 PSF (2400)
E =	40 PSF (1920)	67 PSF (3200)

WITH HORIZONTALS

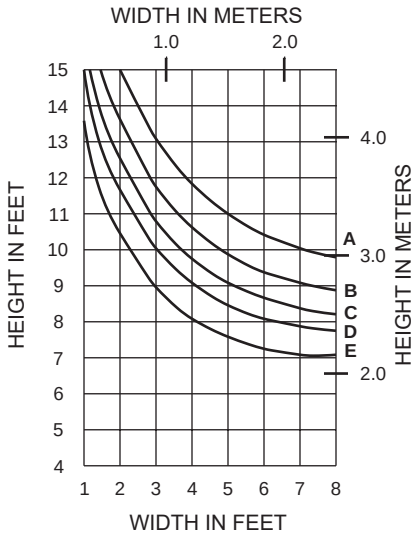




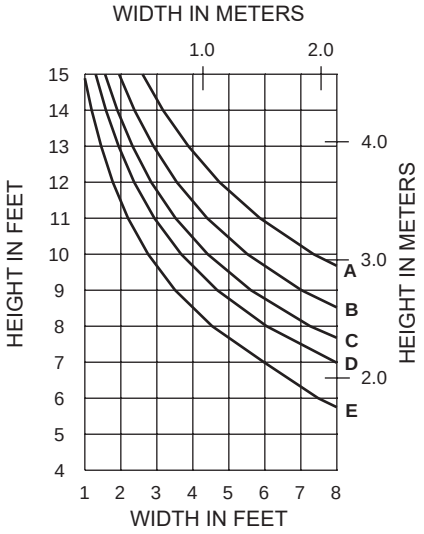
452TCG012

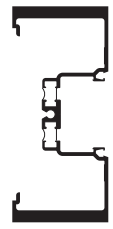
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

WITHOUT HORIZONTALS



WITH HORIZONTALS

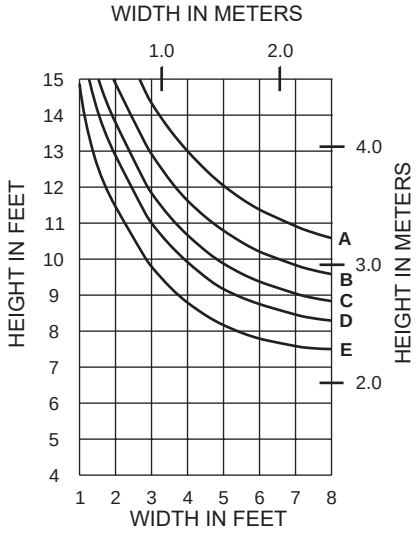




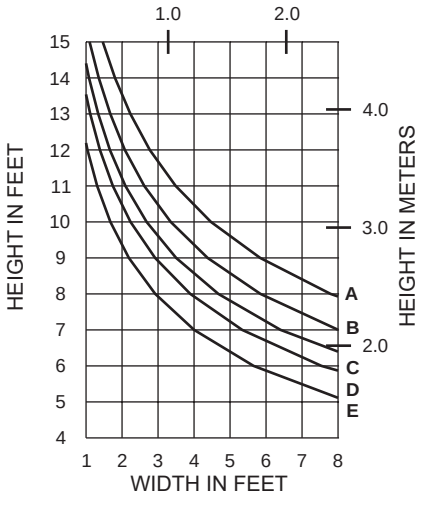
452TCG013

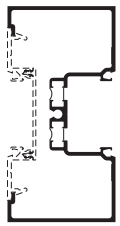
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

WITHOUT HORIZONTALS



WITH HORIZONTALS

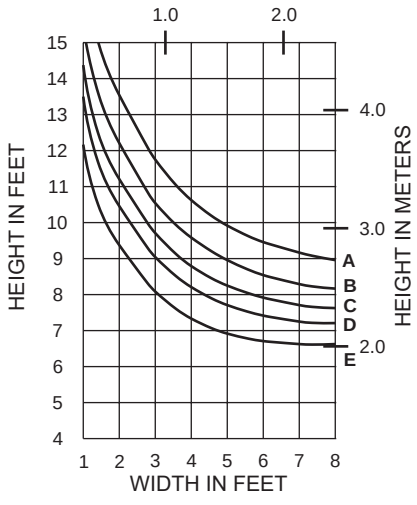




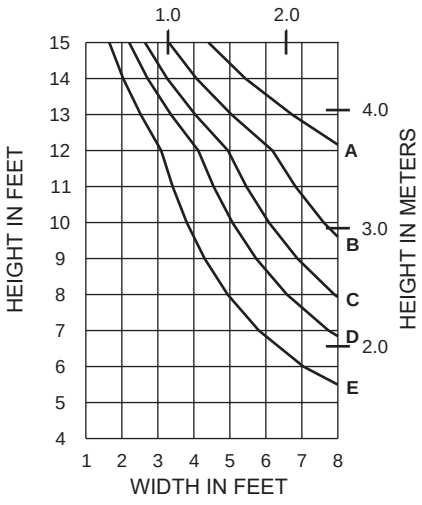
452TCG112

WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

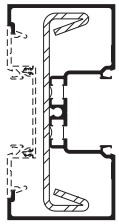
WITHOUT HORIZONTALS



WITH HORIZONTALS



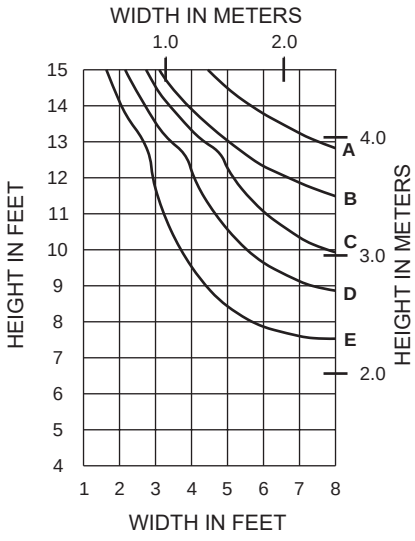
	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	15 PSF (720)	25 PSF (1200)
B =	20 PSF (960)	33 PSF (1580)
C =	25 PSF (1200)	42 PSF (2000)
D =	30 PSF (1440)	50 PSF (2400)
E =	40 PSF (1920)	67 PSF (3200)



452TCG112
with 450110 STEEL

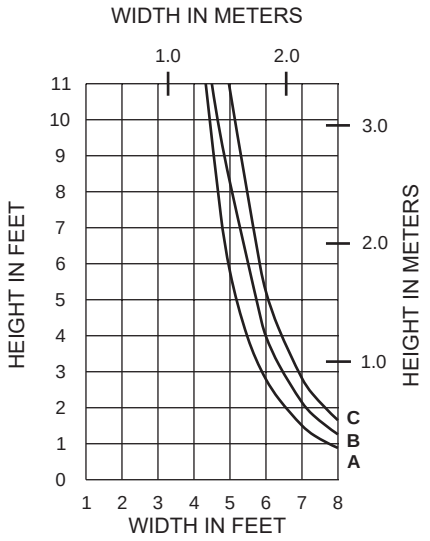
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

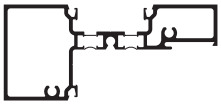
WITHOUT HORIZONTALS



A = (1/4 POINT LOADING)
B = (1/6 POINT LOADING)
C = (1/8 POINT LOADING)

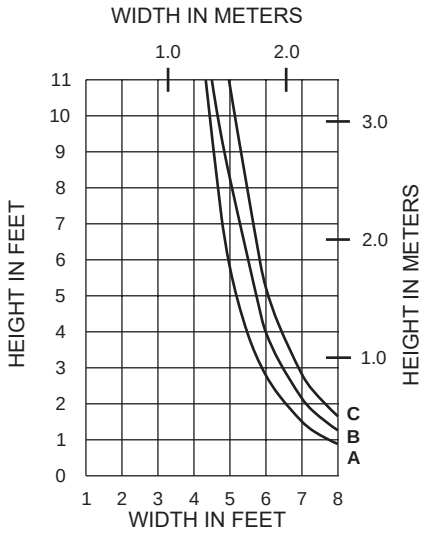
WITH HORIZONTALS

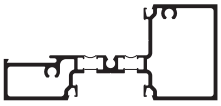




452TCG011

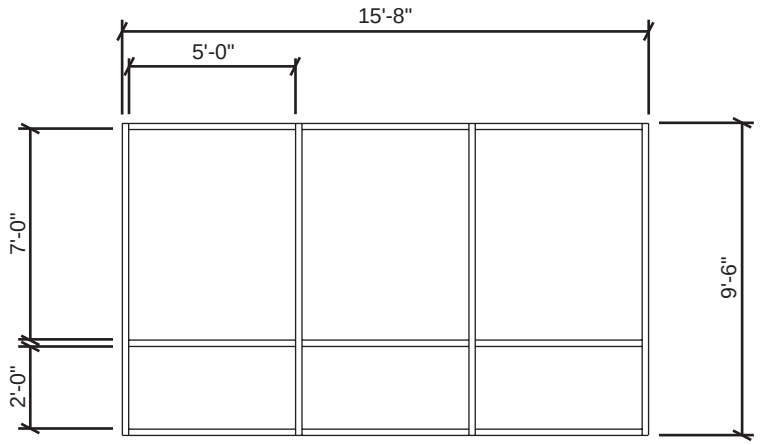
WITH HORIZONTALS





452TCG021

Generic Project Specific U-factor Example Calculatio
(Percent of Glass will vary on specific products depending on sitelines



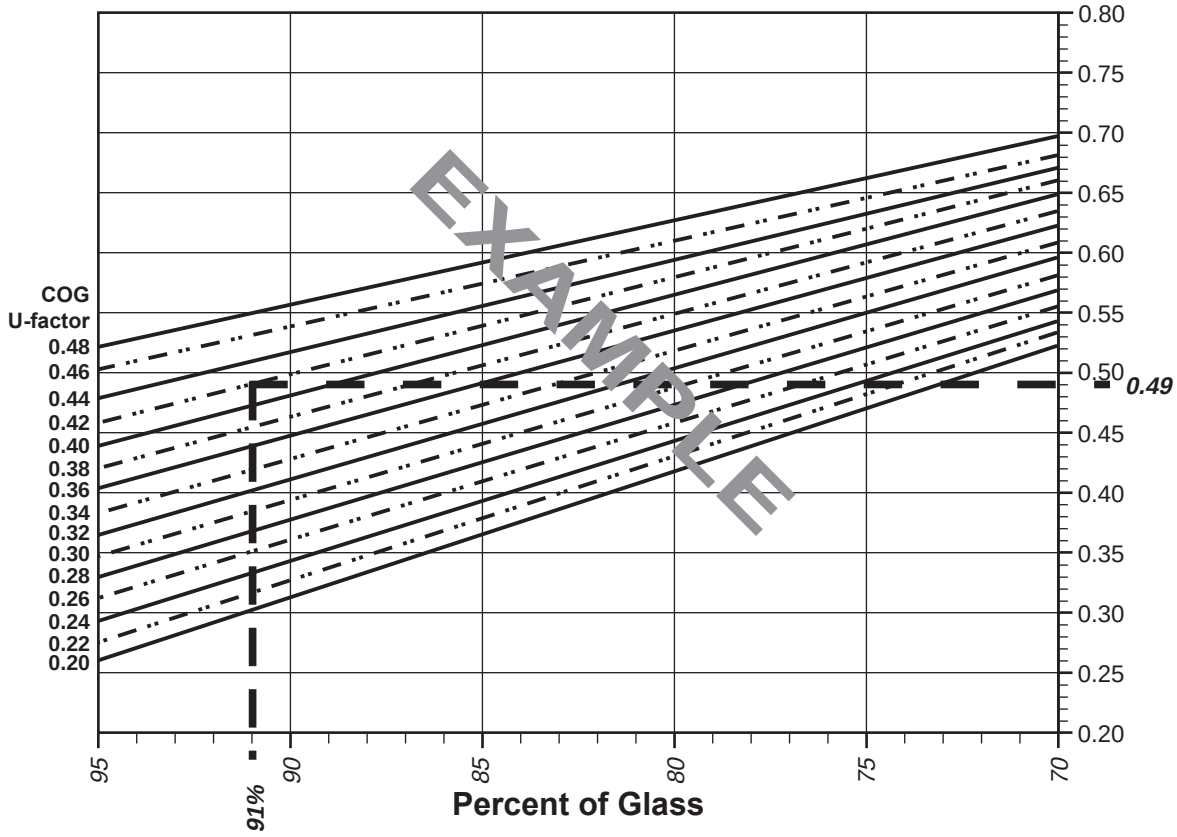
Example Glass U-factor = 0.42 Btu/hr·ft²·°F

Total Daylight Opening = 3(5' x 7') + 3(5' x 2') = 135ft²

Total Projected Area = (Total Daylight Opening + Total Area of Framing System)
= 15'-8" x 9'-6" = 148.83ft²

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area)
= (135 ÷ 148.83)100 = 91%

System U-factor vs Percent of Glass Area

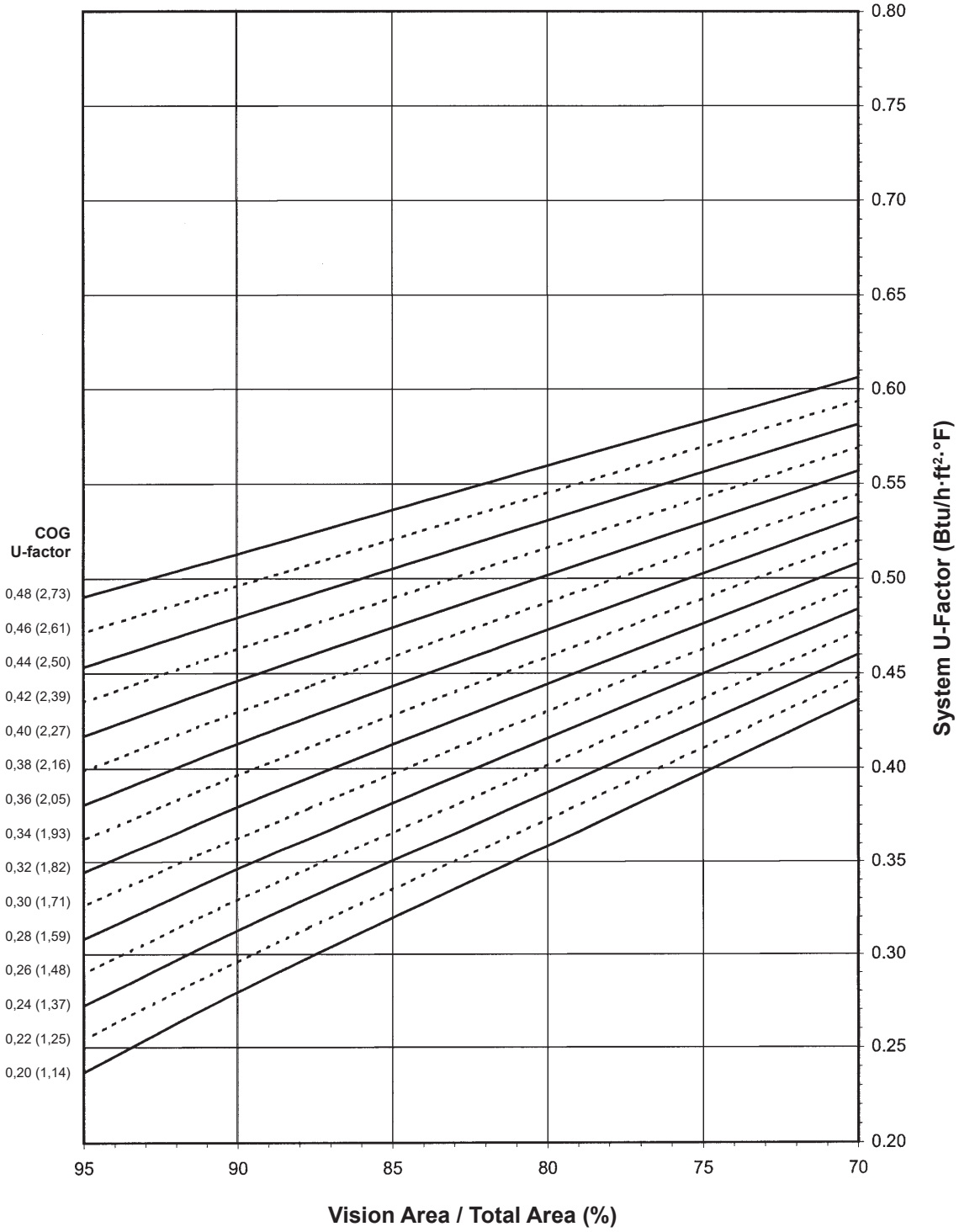


Based on 91% glass and center of glass (COG) U-factor of 0.42
System U-factor is equal to 0.49 Btu/hr x ft² x °F

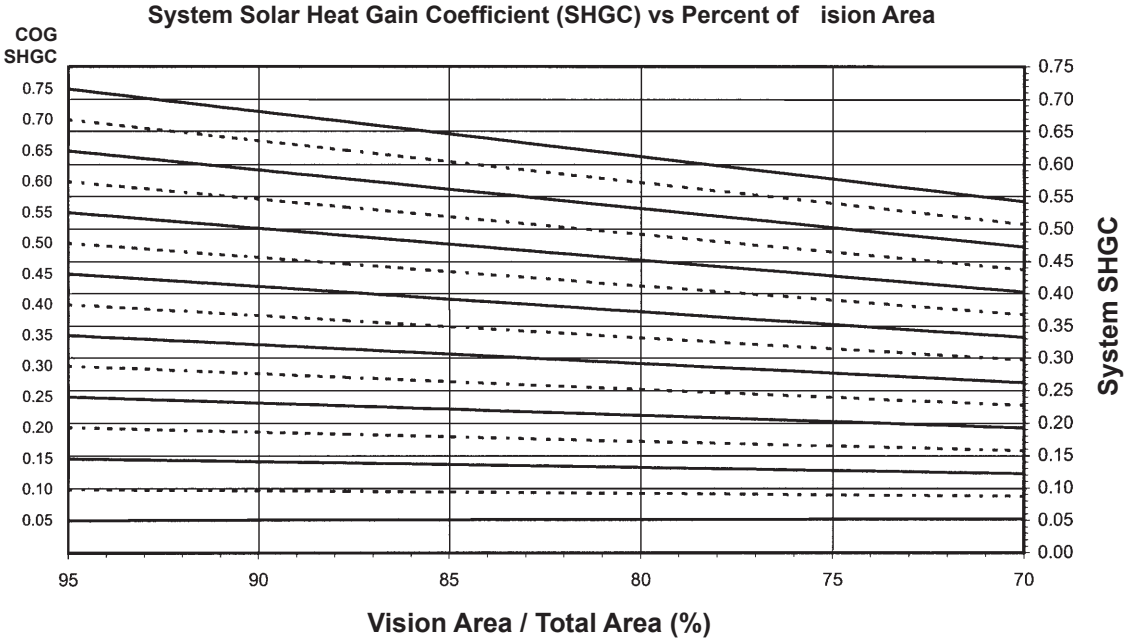
Note:
Values in parentheses are metric.
COG=Center of Glass.
Charts are generated per AAMA 507.

Trifab® 451UT

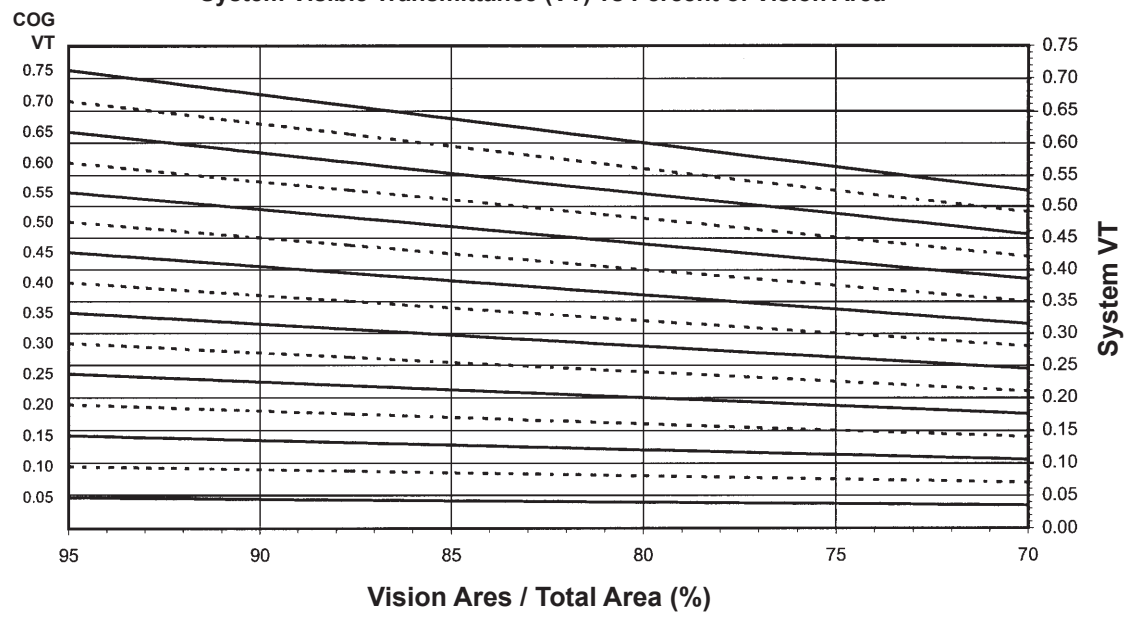
System U-Factor for Vision Glass



Trifab® 451UT



Charts are generated per AAMA 507.



Charts are generated per AAMA 507.

Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.52
0.46	0.51
0.44	0.49
0.42	0.48
0.40	0.46
0.38	0.44
0.36	0.43
0.34	0.41
0.32	0.39
0.30	0.38
0.28	0.36
0.26	0.35
0.24	0.33
0.22	0.31
0.20	0.30

Trifab® 451UT

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

SHGC Matrix [2]

Glass SHGC [3]	Overall SHGC [4]
0.75	0.66
0.70	0.62
0.65	0.58
0.60	0.53
0.55	0.49
0.50	0.45
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.23
0.20	0.18
0.15	0.14
0.10	0.09
0.05	0.05

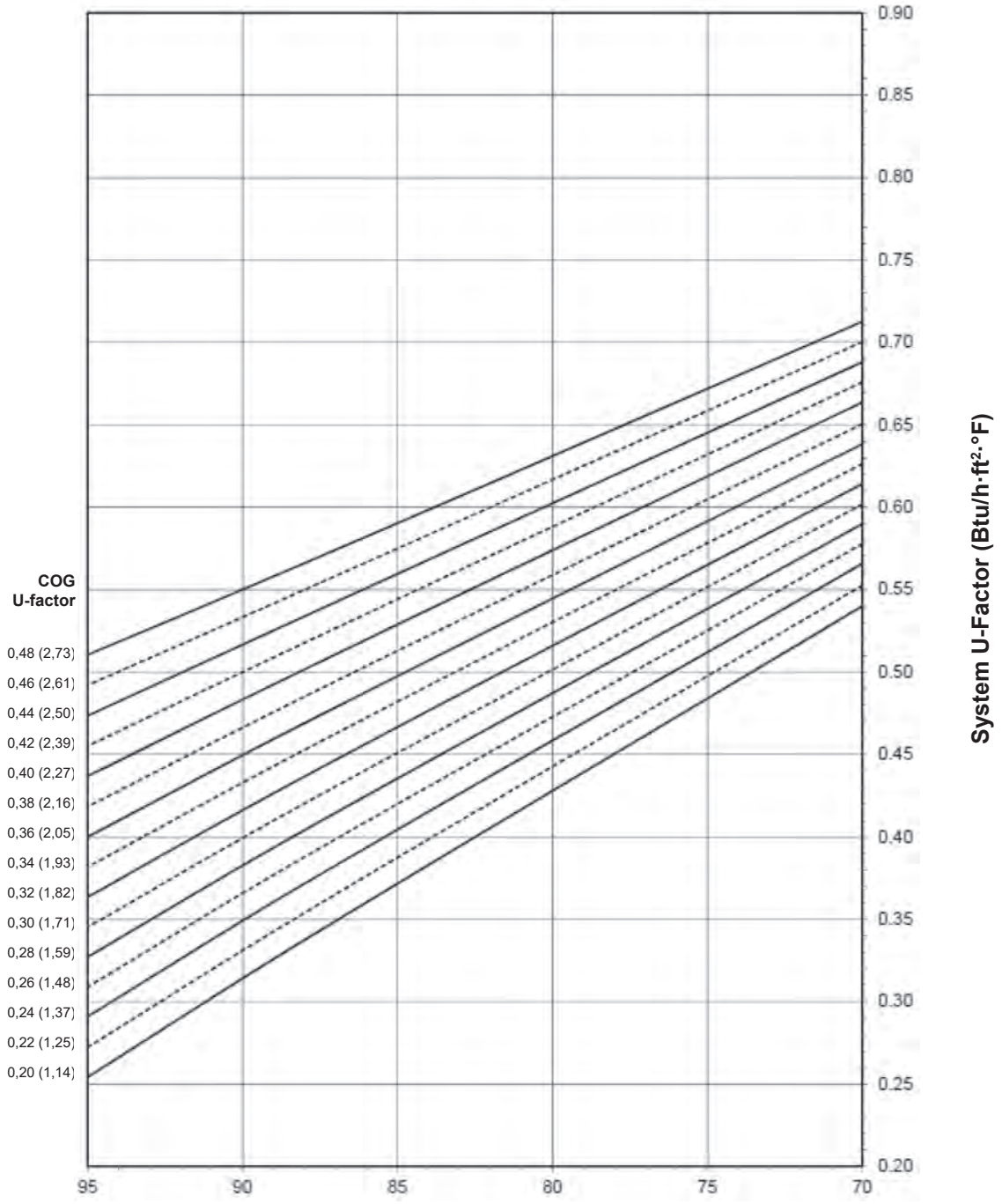
Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.75	0,66
0.70	0,61
0.65	0,57
0.60	0,53
0.55	0,48
0.50	0,44
0.45	0,39
0.40	0,35
0.35	0,31
0.30	0,26
0.25	0,22
0.20	0,18
0.15	0,13
0.10	0,09
0.05	0,04

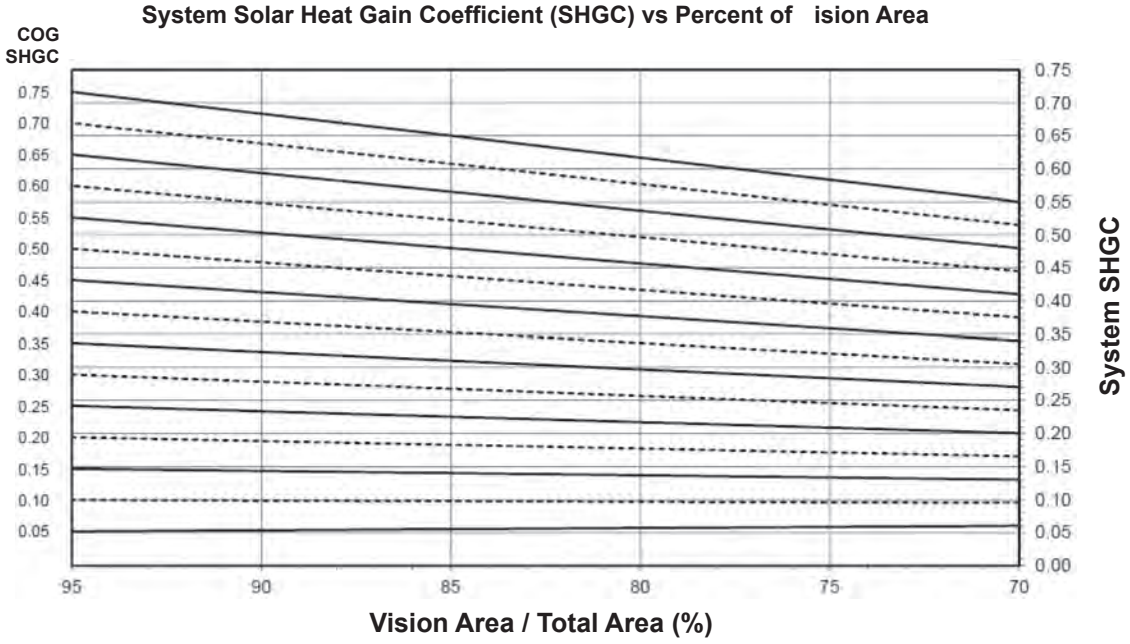
Note:
Values in parentheses are metric.
COG=Center of Glass.
Charts are generated per AAMA 507.

Trifab® 451UT with Steel

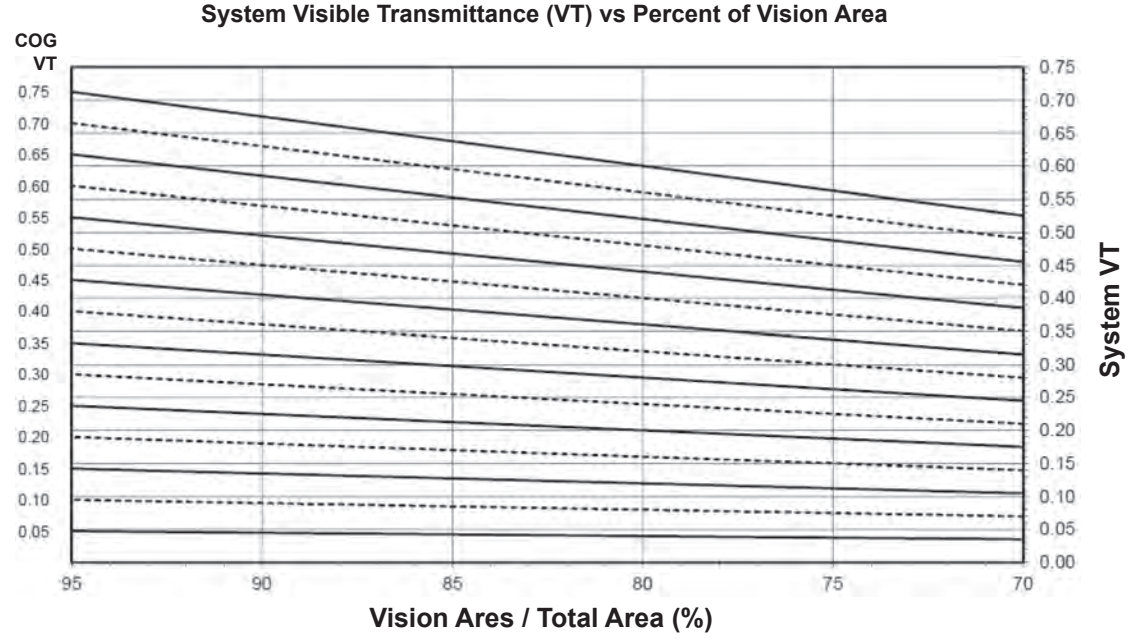
System U-Factor for Vision Glass



Trifab® 451UT with Steel



Charts are generated per AAMA 507.



Charts are generated per AAMA 507.

Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.57
0.46	0.56
0.44	0.54
0.42	0.53
0.40	0.51
0.38	0.49
0.36	0.48
0.34	0.46
0.32	0.45
0.30	0.43
0.28	0.41
0.26	0.40
0.24	0.38
0.22	0.36
0.20	0.35

Trifab® 451UT with Steel

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
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SHGC Matrix [2]

Glass SHGC [3]	Overall SHGC [4]
0.75	0.66
0.70	0.62
0.65	0.58
0.60	0.53
0.55	0.49
0.50	0.45
0.45	0.40
0.40	0.36
0.35	0.32
0.30	0.27
0.25	0.23
0.20	0.19
0.15	0.14
0.10	0.10
0.05	0.05

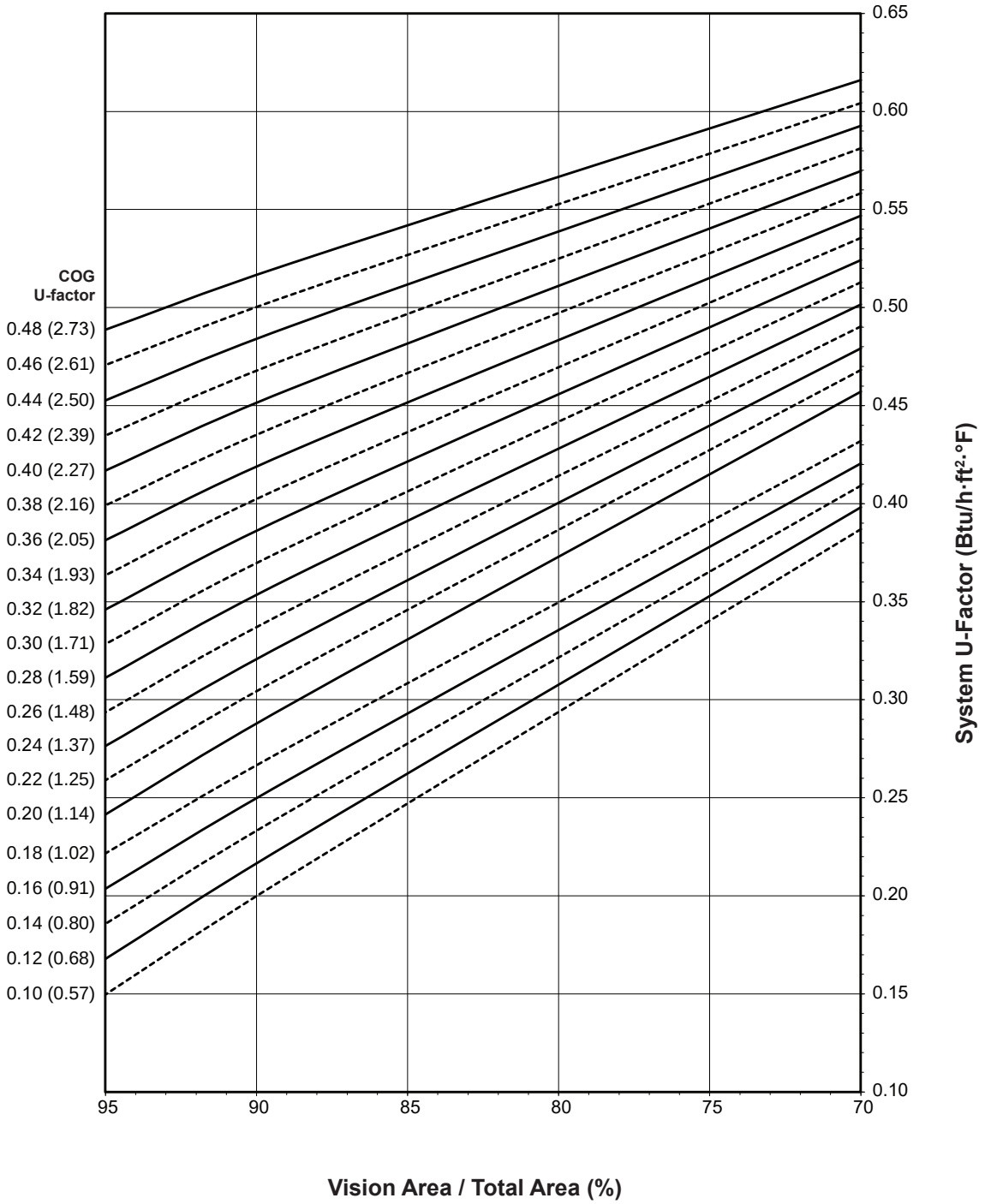
Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.75	0.65
0.70	0.61
0.65	0.57
0.60	0.52
0.55	0.48
0.50	0.44
0.45	0.39
0.40	0.35
0.35	0.30
0.30	0.26
0.25	0.22
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04

Note:
Values in parentheses are metric.
COG=Center of Glass.
Charts are generated per AAMA 507.

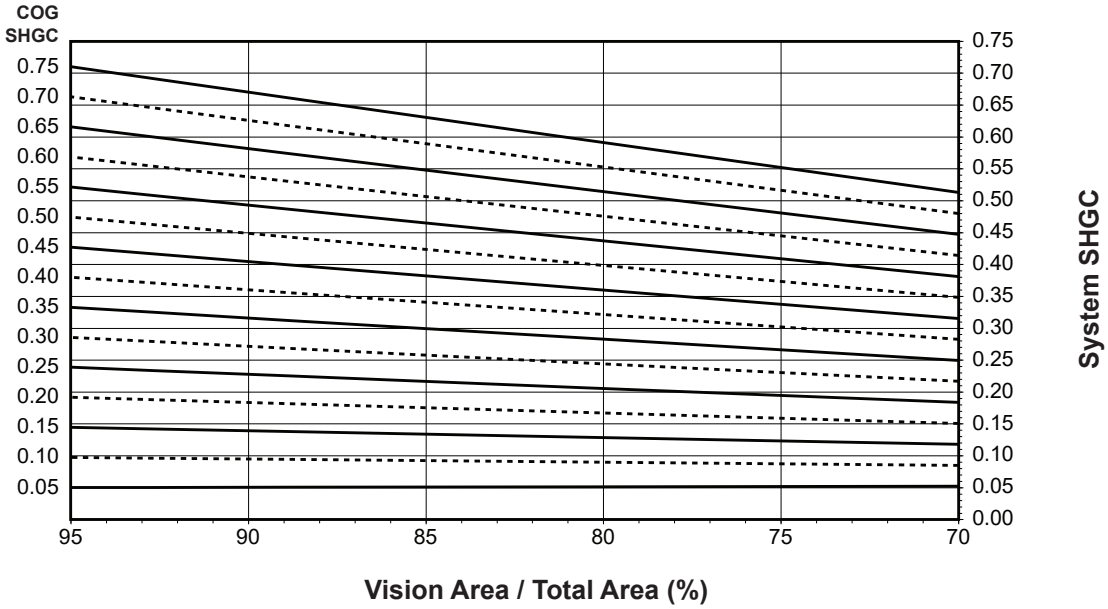
Trifab® 451UT Pre-Glazed

System U-Factor for Vision Glass



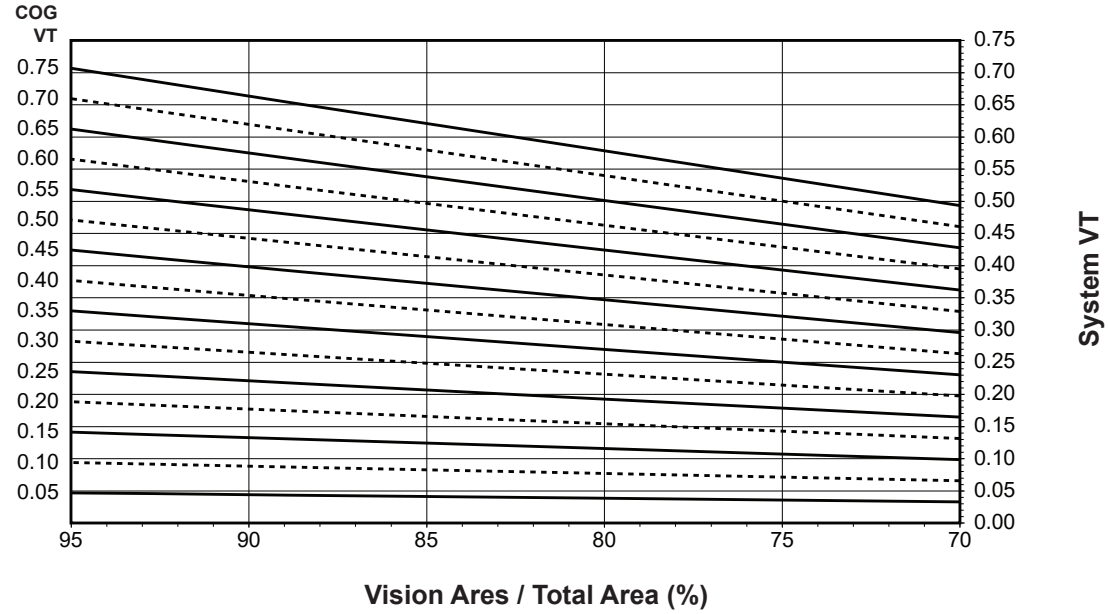
Trifab® 451UT Pre-Glazed

System Solar Heat Gain Coefficient (SHGC) vs Percent of ision Area



Charts are generated per AAMA 507.

System Visible Transmittance (VT) vs Percent of Vision Area



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0.32	0.39
0.30	0.38
0.28	0.36
0.26	0.35
0.24	0.33
0.22	0.31
0.20	0.30
0.18	0.28
0.16	0.26
0.14	0.24
0.12	0.23
0.10	0.21

Trifab® 451UT Pre-Glazed

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

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Glass VT [3]	Overall VT [4]
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0.40	0.35
0.35	0.31
0.30	0.26
0.25	0.22
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04

SPECIFICATIONS:
SST- II BI - FOLD HYDRAULIC SYSTEM

GIBCA LIMITED COMPANY (FZC) LLC

PART 1 – GENERAL

1.01 DESCRIPTION
- A. General
  1. Furnish SST-II Hydraulic Bi-Fold System complete from one manufacturer. Provide all labor, materials, tools and equipment to furnish the SST-II Bi-Fold System complete as herein specified.

1.02 RELATED WORK BY OTHERS
- A. Preparation of opening including jambs and header will be by General Contractor. Any deviation of site conditions contrary to approved shop drawings must be called to the attention of the architect.
- B. All header, blocking, support structures and jambs as required.
- C. Paint or otherwise finishing all trim and other materials adjoining door.
- D. Provide hydraulic fluid in quantity necessary for proper system operation.

1.03 SUBMITTALS
- A. Product Data
  1. Submit manufacturer's product data and roughing-in diagrams.
  2. Complete shop drawings are to be provided prior to fabrication indicating construction and installation details.

1.04 QUALITY ASSURANCE
- A. Provide each Bi-Fold System as a complete unit by one manufacturer, including frames, panels, brackets, guides, hardware, operators and installation accessories to suit opening.
- B. Wind Loading: Design and reinforce Bi-Fold system to withstand a wind loading pressure to comply with state and federal code requirements.
- C. Preparation of the opening shall conform to the criteria set forth by UBC, 2000 International Building Code & 1999 Standard Building Code (ASCE 7-98).

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING
- A. Proper storage of the system before installation and continued protection during and after installation will be the responsibility of the general contractor.

1.06 WARRANTY
- A. Frame/Panels, hydraulic cylinders and controls shall be guaranteed for one year against defects in material and workmanship from date of shipment to the job site.
- B. Optional factory-supplied, manufacturers-standard glass retainer system and glass inserts shall be guaranteed for one year against defects in material and workmanship from date of shipment to the job site.
- C. Glass retainer, glass and/or other cladding/covering by others is not included in this warranty.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS
- A. Subject to compliance with requirements, manufacturers offering products which may be incorporated into the work, include, but are not limited to, the following:

P.O.Box 312, Sohar, Oman
Tel: + 968 2685 0261
Fax: + 968 2685 0258
Email: info@gibcaoman.com
Website: www.gibcaoman.com

- B. Upon compliance with all of the criteria specified in this section, manufacturers wishing to bid products similar to the product specified must submit to the architect - 10 days prior to bidding - complete data in support of compliance. The submitting manufacturer guarantees the proposed substituted product complies with the product specified and as detailed on the drawings.

2.02 MATERIALS
- A. Product to be SST-II Hydraulic Bi-Fold System as furnished by Crown Doors, LLC (Crown)
  1. Construct panel/frame sections with structural steel tube (of ASTM-A500 grade minimum) framing to comply with applied wind code.
     a. Optional: 304 stainless steel tube framing for highly corrosive environments.
  2. Frames shall be constructed of structural steel tubing and other structural steel shapes, and designed to the same loading requirements for live, dead and wind loads as the surrounding construction, with a maximum CTC between vertical and horizontal members measuring 60" and 48", respectively.
  3. Panel frame shall be designed so that no center "cane bolt" is required in the floor.

4. Panel frames shall be factory-welded at all joints and connections, with smooth welds not to exceed 1/4" [6] thickness.
5. Panel frames shall be primed with rust-resistant red oxide to provide corrosion resistance, and be prepared for field finishing, if required.
6. Factory-Supplied neoprene seals/weather stripping will be shipped loose for field-install to protect against damage during transport.

B. Bi-fold doors/windows shall be operated by hydraulic cylinders that are mechanically fastened to the panel frame.
1. Cylinders are to be located on the top half of the door, only. Cylinders will be designed to carry the required loads during operation, open position and closed position. Internal stops will be installed so as not to allow over-extension of the cylinders, therefore restricting the system from opening or closing beyond its limit.
2. Lift straps or cables, horizontal top and bottom drive shafts, pulleys and strap or cable "kick outs" are unacceptable.
3. System shall be locked closed by means of the hydraulic cylinders providing a minimum of 1000 lbs. of closing force.

C. Power Operator - Standard voltage is 208-230v single phase.
1. "Up-Down" push-button or key-switch controls for separate mounting.
2. Power unit to power (2) hydraulic cylinders which open and close the door/window. Power unit to be pre-wired and factory-tested.
3. "Open-Close" control units will be wired for constant-hold operation.
4. Incoming electrical source to hydraulic power unit to be supplied by others (manufacturer's standard).
5. Each door operator shall have thermal overload protection for the motor.

D. Finishes
1. Entire system frame and panels shall be cleaned and primed with rust-resistant red-oxide primer, prepared for field finish (by others).
   a. Optional Finishes
      i. Manufacturers' standard RAL powder-coated

E. Available Accessories/Options
1. Photo eyes or lead-edge sensor that stops (or stops and reverses) the downward movement of the door/window.
2. Warning horn/Strobe light assembly
3. Remote receiver w/transmitter
   a. Additional transmitters available
4. 24v DC battery back-up system
5. 3-Phase option
6. External, weather-resistant, "open-close" control wired for constant-hold
7. "Inside-sash" or "front-set" glass retainer system and glass inserts

2.03 OPERATION
A. The Bi-Fold System shall be extended/retracted in the opening using a constant-contact push-button or key switch, operating hydraulic cylinders mounted to the door/window frame.

PART 3 – EXECUTION

3.01 SAFETY
A. Hydraulic power unit to have a manual emergency let-down valve for closing the system in case of a power outage.
B. SST-II Bi-Fold System to incorporate pressure compensated orifice valves
C. Photo eyes or lead-edge sensor optional.

3.02 INSTALLATION
A. Installation of the Bi-Fold System shall be by a contractor familiar with this type of installation, and be in strict accordance with the approved build drawings and manufacturers standard printed specifications, instructions and recommendations. All moving parts will be left in good operating condition.
B. Permanent or temporary electric wiring shall be brought to the power unit location before installation. After the Bi-Fold System is installed, the general contractor assumes the responsibility of any damage to the system or system components during construction until the building is turned over to the owner.
C. Fill reservoir with hydraulic fluid (provided by others). Use ATF for cold weather applications or #32 hydraulic fluid for all other applications.

3.03 CLEANING
A. All surfaces shall be wiped clean and free of handprints, grease and oil.

3.04 TRAINING
A. Installer shall demonstrate proper operation and maintenance procedures to owner's representative.
B. Operating keys and owner's manual shall be provided to owner's representative.

RAL 1028		Melon Yellow	RAL 5021		Water Blue	RAL 7039		Quartz Grey
RAL 1032 Satin		Broom Yellow	RAL 5022		Night Blue	RAL 7040		Window Grey
RAL 1033		Dahli Yellow	RAL 5024		Pastel Blue	RAL 7042		Traffic Grey A
RAL 1034		Pastel Yellow	RAL 6000		Patina Green	RAL 7043		Traffic Grey B
RAL 2000		Yellow Orange	RAL 6001		Emerald Green	RAL 7044		Silk Grey
RAL 2001		Red Orange	RAL 6002		Leaf Green	RAL 7045		Telegrey 1
RAL 2002		Vermillion	RAL 6003		Olive Green	RAL 7046		Telegrey 2
RAL 2003		Pastel Orange	RAL 6004		Blue Green	RAL 7047		Telegrey 4
RAL 2004		Pure Orange	RAL 6005 Satin		Moss Green	RAL 8000		Green Brown
RAL 2008		Bright Red Orange	RAL 6006		Grey Olive	RAL 8001		Ochre Brown
RAL 2009		Traffic Orange	RAL 6007		Bottle Green	RAL 8002		Signal Brown
RAL 2010		Signal Orange	RAL 6008		Brown Green	RAL 8003		Clay Brown
RAL 2011		Deep Orange	RAL 6009		Fir Green	RAL 8004		Cooper Brown
RAL 2012		Salmon Orange	RAL 6010		Grass Green	RAL 8007		Fawn Brown
RAL 3000 Satin		Flame Red	RAL 6011		Reseda Green	RAL 8008		Olive Brown
RAL 3001		Signal Red	RAL 6012		Black Green	RAL 8011		Nut Brown
RAL 3002		Carmine Red	RAL 6013		Reed Green	RAL 8012		Red Brown
RAL 3003 Satin		Ruby Red	RAL 6014		Yellow Olive	RAL 8014		Sepia Brown
RAL 3004		Purple Red	RAL 6015		Black Olive	RAL 8015		Chestnut Brown
RAL 3005		Wine Red	RAL 6016		Turquoise Green	RAL 8016		Mahogany Brown
RAL 3007		Black Red	RAL 6017		May Green	RAL 8017 Satin		Chocolate Brown
RAL 3009 Satin		Oxide Red	RAL 6018 Satin		Yellow Green	RAL 8019		Grey Brown
RAL 3011		Brown Red	RAL 6019		Pastel Green	RAL 8022 Satin Flat		Black Brown
RAL 3012		Beige Red	RAL 6020		Chrome Green	RAL 8023		Orange Brown
RAL 3013		Tomato Red	RAL 6021		Pale Green	RAL 8024		Beige Brown

Frame Color

CROWN

Custom Hydraulic Doors and Windows

Architectural / Commercial / Residential

INNOVATIVE – UNIQUE - EXCEPTIONAL

WHY CHOOSE CROWN?

Hydraulically-Operated: The use of hydraulic cylinders eliminates cables, straps, belts, locking mechanisms, pulleys, counter-weights, springs, etc., offering the cleanest and least obstructive panel face in the market.

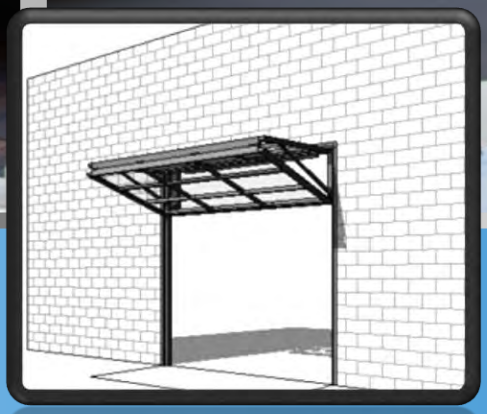
Safety: Through the use of our custom hydraulic system, we have eliminated all pinch points and moving parts typically associated with cable/strap/counter-weight systems. We provide a manual let-down feature to close the system in the event of a power failure.

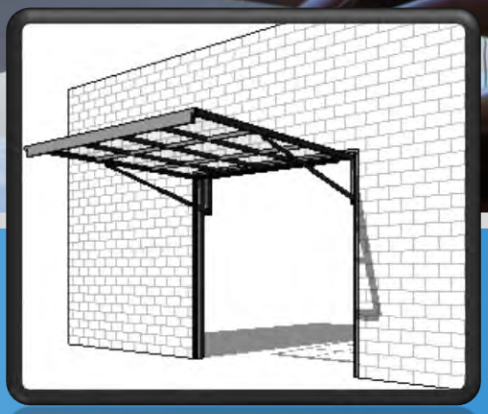
Remotely-Located Power Unit: The power unit may be located anywhere in the building, thereby providing customers quieter operation and a cleaner look.

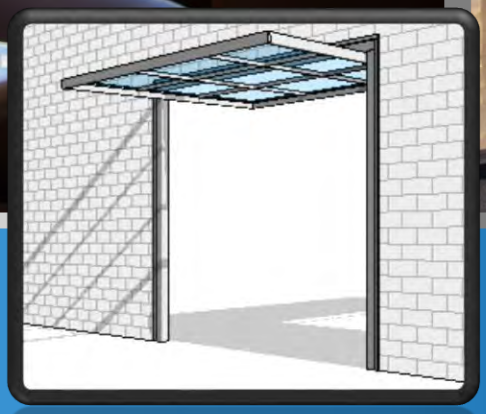
Reduced Installation Costs: The simplicity of the pre-hung mounting frame means installation is simple and straight-forward.

All-Steel Construction: Narrow steel profiles allow greater glass volume and visibility.

- DESIGN INTENT –
WHICH PRODUCT BEST COMPLIMENTS YOURS?







SST-II Bi-Fold System:

The patented SST-II Bi-Fold System is the only hydraulically-operated Bi-Folding System available in the market; perfect for operable storefront windows and full-sized doors alike. The SST-II System uses no cables or straps, resulting in a very clean, unobstructed panel view. The SST-II System is available in custom sizes to 24' x 20' high.

Single-Swing System:

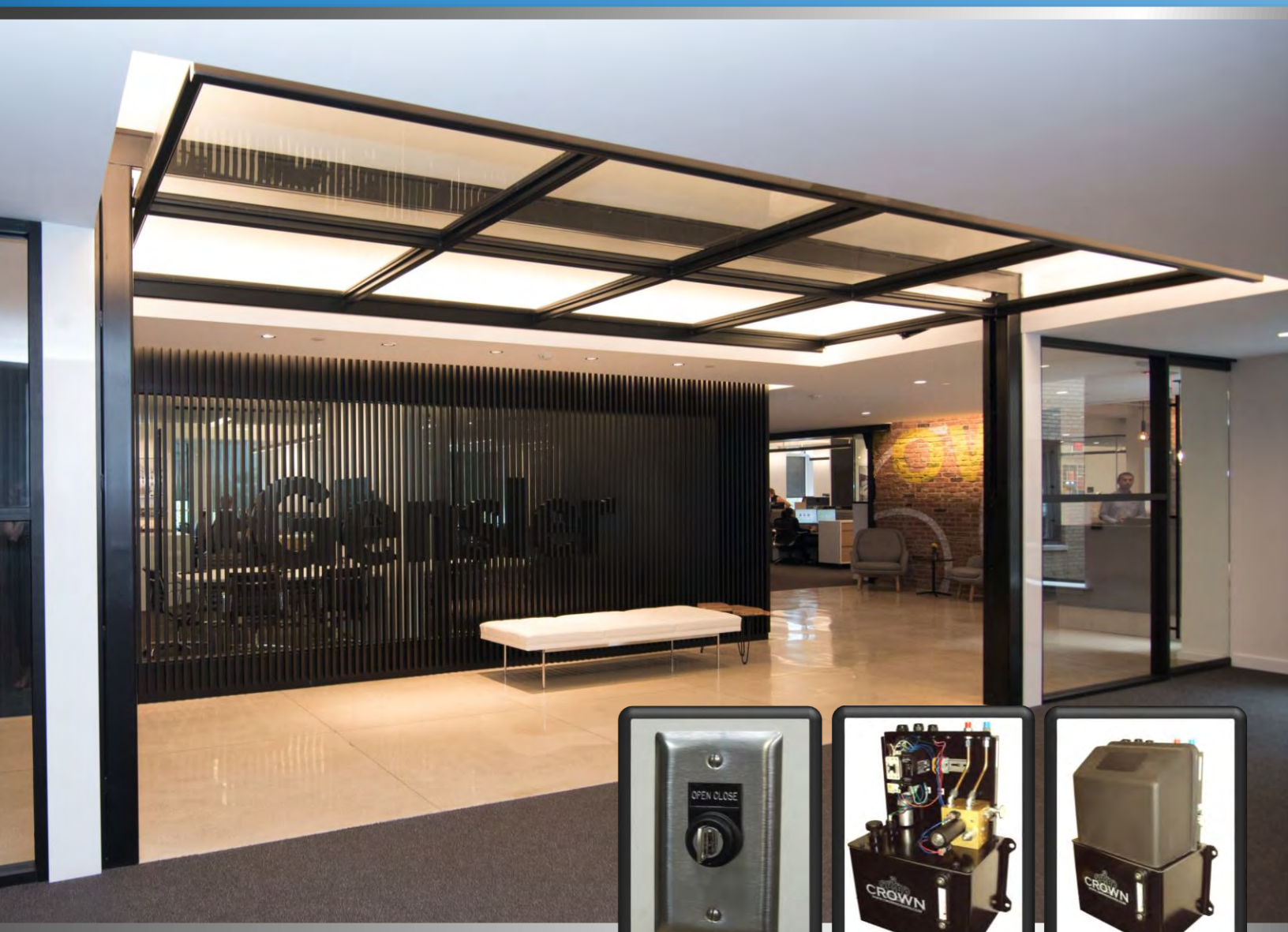
The Single-Swing System is our premier hydraulically-operated single-piece door or window. The system is capable of opening fully, to a 90 degree position, creating a full-sized awning for protection against the sun and elements. The Single-Swing System is available in custom sizes to 30' x 20' high

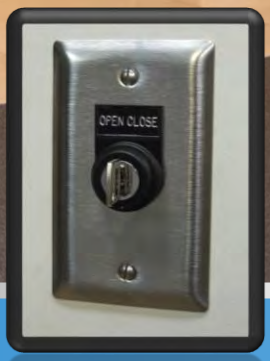
50/50 System:

The patented 50/50 Hydraulic System combines several of the best features from our SST-II Bi-Fold and Single-Swing Systems. The 50/50 provides an incredibly clean opening, requires minimal space in the open position and requires no maintenance. The 50/50 System is available in custom sizes to 24' x 12' high

- CUSTOMIZATION –

AVAILABLE FEATURES AND OPTIONS HELP SET CROWN APART





Standard Features:

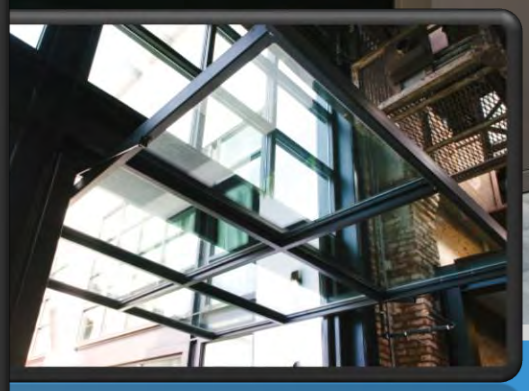
- Shipped with rust-resistant, red-oxide primer, ready for field finishing
- Manual lowering system in event of power failure
- Maintenance-free cylinder pins
- Total security without the use of locking mechanisms. Hydraulic cylinders close the system with 1,000+ lbs. of force
- Full-perimeter weather seals
- Integral mounting frame to minimize loads on the structure and simplify installation
- Constant-contact key or 2-button control
- Precision welds at all frame joints
- No floor track required - Nothing to impair movement in and out of the building
- Clean aesthetics – Greater visibility
- Hydraulics eliminate the need for limit switches
- All major parts are made in the USA

Available Options:

- Optional bare steel framing, factory-applied RAL powder-coat finish, or stainless steel framing for corrosive environments
- Exterior, weather-resistant control
- Photoelectric or lead-edge sensor
- Warning horn/strobe light
- Remote receiver w/transmitter(s) for mobile operation
- DC battery back-up system
- Factory-supplied glass retainer and glass inserts *

* Material is shipped along-side hydraulic systems, to be installed in field

- CREATIVE DESIGN & ENGINEERING EXCELLENCE –
LEADING TO INNOVATIVE PRODUCTS



Warranty

Our commitment to our customers is to provide the best product possible, backed by the best warranty in the industry.

Crown Doors, LLC warrants the main frame of our doors, and all parts, components and assemblies against defects in materials and workmanship for a period of twelve months from the date of delivery.

For full warranty details, including optional extended warranties, please contact us at info@crowndoors.com.

About CROWN

Crown Doors, LLC leads the market with pioneering design, and high-quality materials and manufacturing. We provide long-lasting, hydraulically-operated door and window systems with extensive support which equates to reduced cost of ownership. Based in Plato, Minnesota, our products are shipped to customers throughout the United States and internationally. We continually strive to produce exceptional products using all the resources and technology available to us, and we have found the best resource is the feedback of our customers. For more information, please visit our web site or email us at info@crowndoors.com

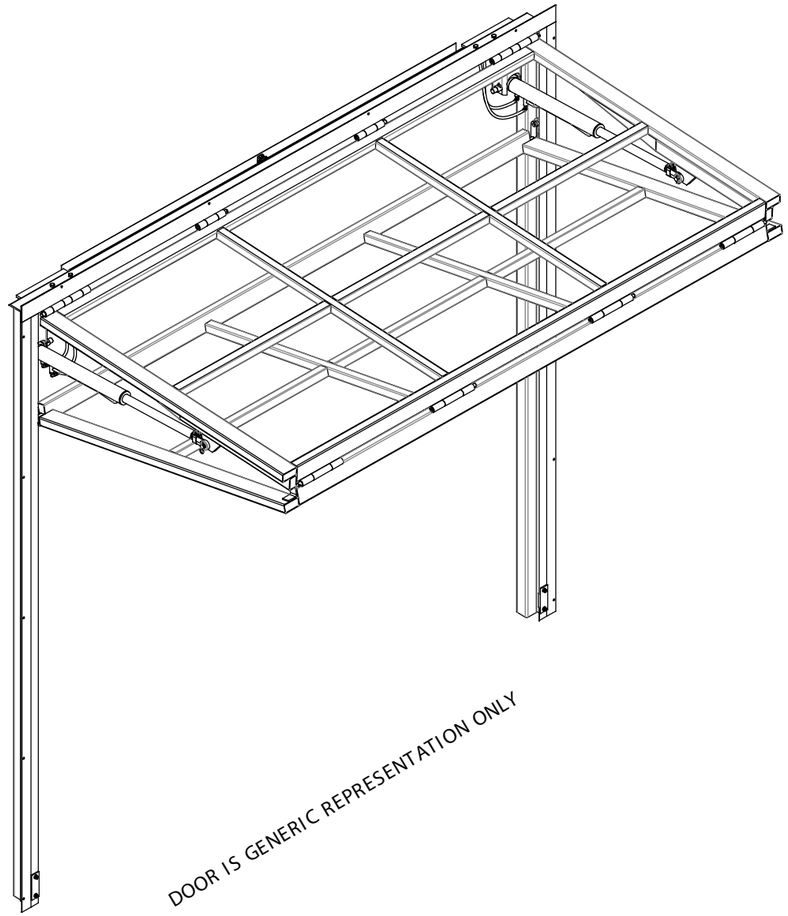
CROWN

CROWN DOORS, LLC | 135 MCLEOD AVE. SOUTH. PLATO, MN 55370 | (320) 238-2616

WWW.CROWNDOORS.COM

CROWN

P.O.Box 312, Sohar, Oman
Tel: + 968 2685 0261
Fax: + 968 2685 0258
Email: info@gibcaoman.com
Website: www.gibcaoman.com



DOOR IS GENERIC REPRESENTATION ONLY

SST-II HYDRAULIC
BI-FOLD SYSTEM

GIBCA LIMITED COMPANY (FZC) LLC

PRELIMINARY
NOT FOR CONSTRUCTION

IMPORTANT NOTICE:

ALL DIMENSIONS SHOWN ARE CRITICAL TO PROPER DOOR OPERATION. IF ANY CHANGES ARE MADE, CONTACT CROWN IMMEDIATELY. ANY CHANGES MAY INCUR ADDITIONAL CHARGES.

ALL PARTS NOT LISTED AS "BY OTHERS" TO BE PROVIDED BY CROWN.

SAMPLE DRAWINGS

- THE FOLLOWING DETAILS REPRESENT TYPICAL CONDITIONS. DETAILS/DIMENSIONS WILL VARY BETWEEN INSTALLATIONS.
- SAMPLE DRAWINGS DO NOT REFRESENT ALL AVAILABLE OPTIONS - REFER TO QUOTATION.

GENERAL NOTES

- STRUCTURAL SUPPORT (JAMBS/HEADER) BY G.C.
- INSTALLER TO CAULK AROUND MOUNTING ANGLES
- MAXIMUM ALLOWABLE RISE OF FINISHED FLOOR IS 3/8"
- CROWN RESERVES THE RIGHT TO CHANGE/ IMPROVE PRODUCTS WITHOUT PRIOR NOTICE
- THE INFORMATION CONTAINED WITHIN THIS DRAWING SET IS THE SOLE PROPERTY OF CROWN. ANY REPRODUCTION - IN PART, OR AS A WHOLE - WITHOUT THE EXPRESSED, WRITTEN PERMISSION OF CROWN IS PROHIBITED
- CROWN WILL NOT BE HELD RESPONSIBLE FOR CODE VIOLATIONS

LATERAL DRIFT AND VERTICAL DEFLECTION:

TO MAINTAIN NORMAL OPERATION OF THE DOOR/WINDOW SYSTEM, MID-HEADER DOWNWARD DEFLECTION LIMIT AND LATERAL DRIFT LIMIT OF SURROUNDING STRUCTURE IS 3/8". MAXIMUM ALLOWABLE RISE OF FINISHED FLOOR BETWEEN JAMBS IS 3/8".

STEEL MEMBERS:

STEEL TUBE FRAME MEMBERS VARY IN SIZE, DEPENDING UPON ROUGH OPENING DIMENSIONS AND COVERING/CLADDING WEIGHT. LARGER OPENINGS AND HEAVIER COVERING OR CLADDING WILL REQUIRE LARGER STEEL COMPONENTS.

TOLERANCE: TOLERANCE FOR LOCATION OF VERTICAL AND HORIZONTAL STEEL TUBE MEMBERS IS 1/8"

IMPORTANT NOTE: DO NOT PRE-DRILL ROUGH OPENING

IMPORTANT NOTICE:

ALL DIMENSIONS SHOWN ARE CRITICAL TO PROPER DOOR OPERATION. IF ANY CHANGES ARE MADE, CONTACT CROWN IMMEDIATELY. ANY CHANGES MAY INCUR ADDITIONAL CHARGES.

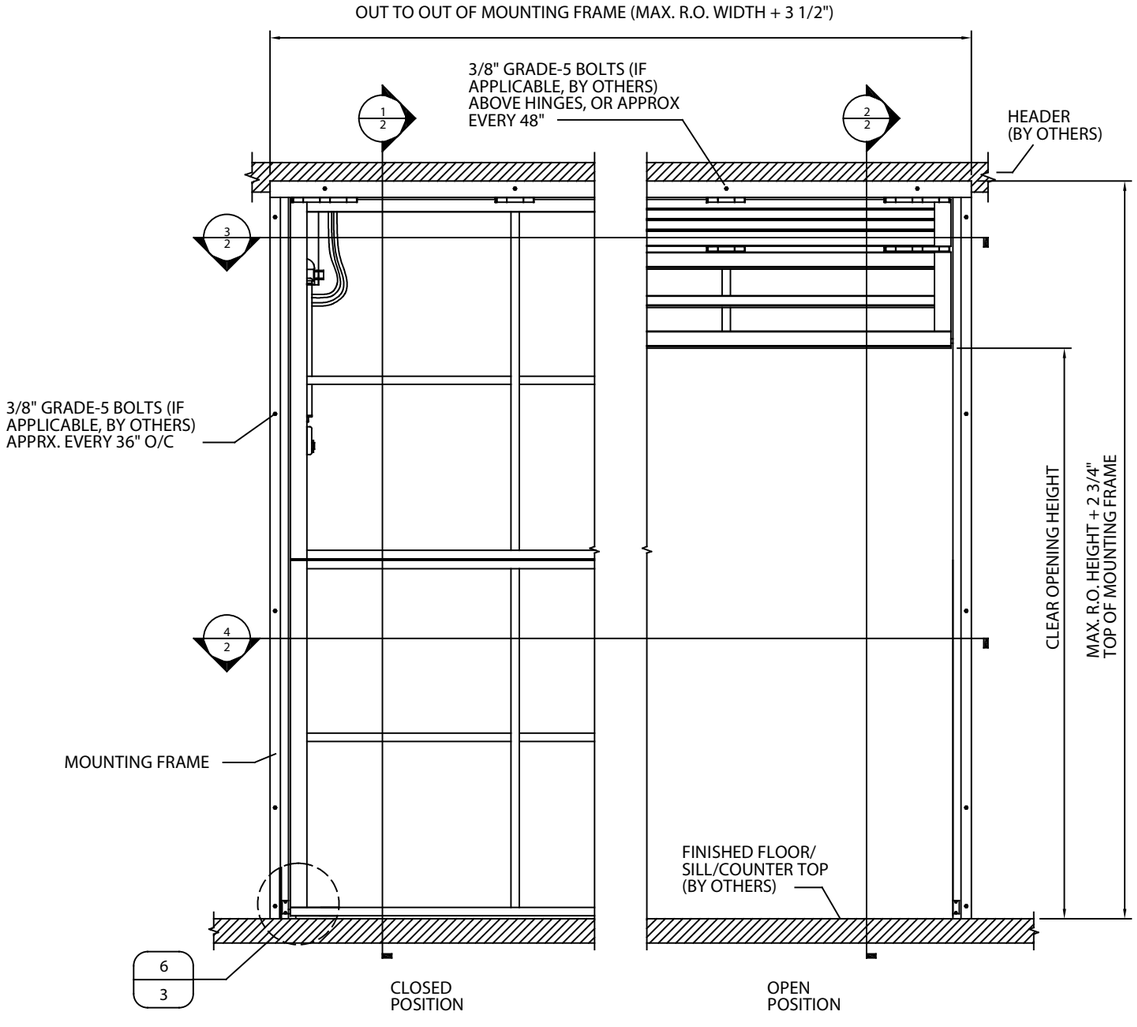
ALL PARTS NOT LISTED AS "BY OTHERS" TO BE PROVIDED BY CROWN.

CROWN

SAMPLE DRAWING

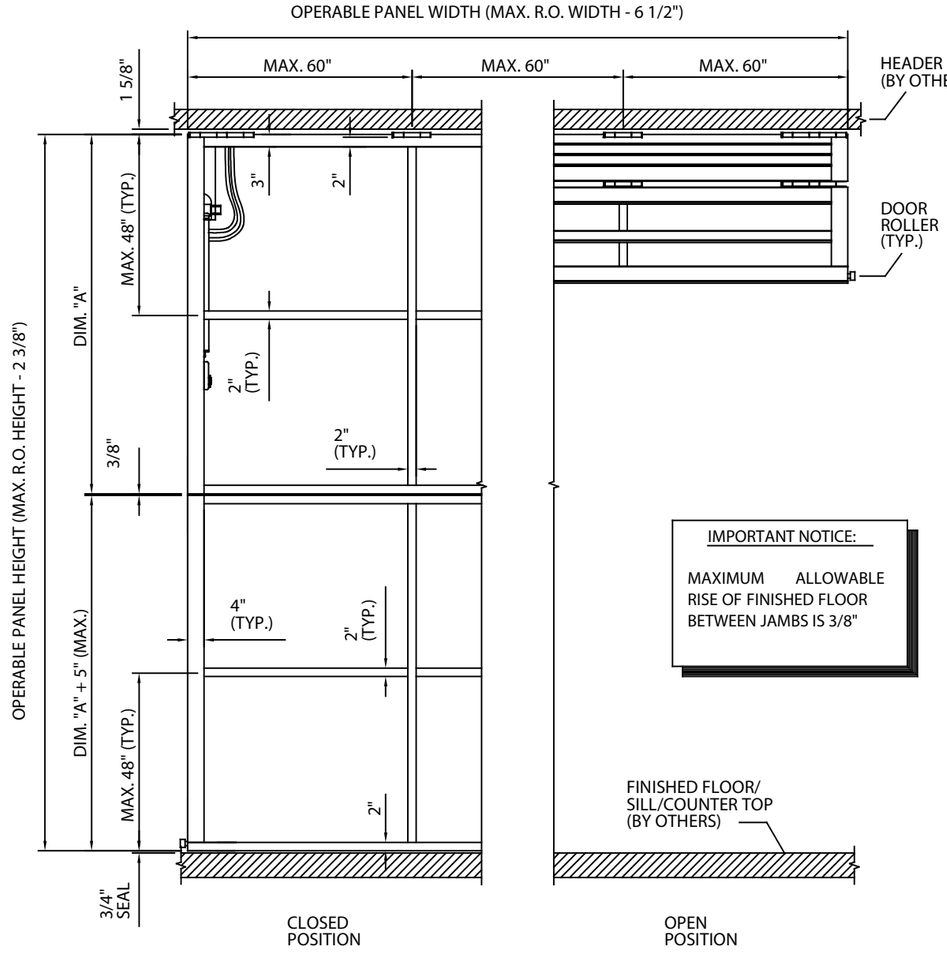
GIBCA LIMITED COMPANY (FZC) LLC

SST-II HYDRAULIC BI-FOLD SYSTEM



1 DOOR PANEL w/FRAME - EXTERIOR VIEW

NO SCALE



IMPORTANT NOTICE:

MAXIMUM ALLOWABLE RISE OF FINISHED FLOOR BETWEEN JAMBS IS 3/8"

2 DOOR PANEL - EXTERIOR VIEW

NO SCALE

MODEL: SST-II BI-FOLD

DRAWN: 6/2018

SHEET: 1.0

LATERAL DRIFT AND VERTICAL DEFLECTION:

TO MAINTAIN NORMAL OPERATION OF THE DOOR/WINDOW SYSTEM, MID-HEADER DOWNWARD DEFLECTION LIMIT AND LATERAL DRIFT LIMIT OF SURROUNDING STRUCTURE IS 3/8". MAXIMUM ALLOWABLE RISE OF FINISHED FLOOR BETWEEN JAMBS IS 3/8".

TOLERANCE: TOLERANCE FOR LOCATION OF VERTICAL AND HORIZONTAL STEEL TUBE MEMBERS IS 1/8"

IMPORTANT NOTE: DO NOT PRE-DRILL ROUGH OPENING

NOTES:

APPROX. SYSTEM WEIGHT W/CYLINDERS:	9 LBS. P.S.F.
COVERING SYSTEM WEIGHT:	VARIES
APPROX. TOTAL DOOR PANEL WEIGHT w/COVERING:	TBD
STD. ELECTRICAL REQUIREMENTS:	208-230v, 1-PH
MOTOR:	TBD
POWER UNIT:	TBD
STD. WIND LOAD:	90 MPH EXP. C
APPROX. DOOR OPEN SPEED:	TYP. 14-15' PER MIN.
CYLINDER:	TBD
STD. FINISH:	RED-OXIDE, PRIMED
OPTIONAL FINISH:	RAL POWDER-COAT

IMPORTANT NOTICE:

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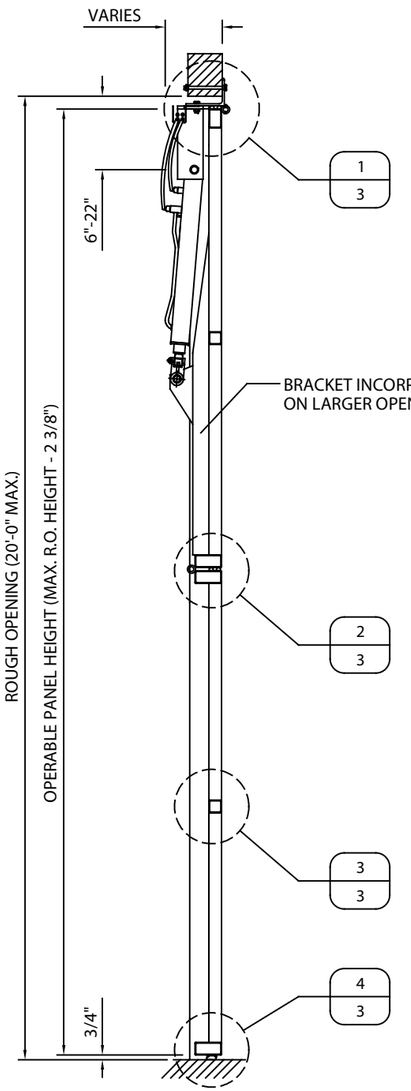
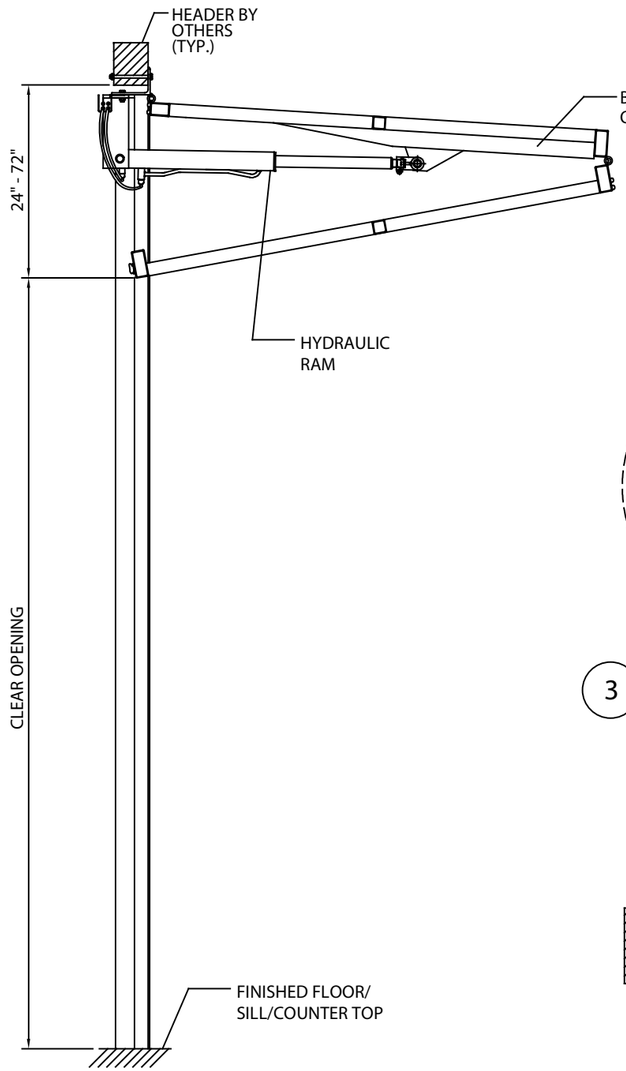
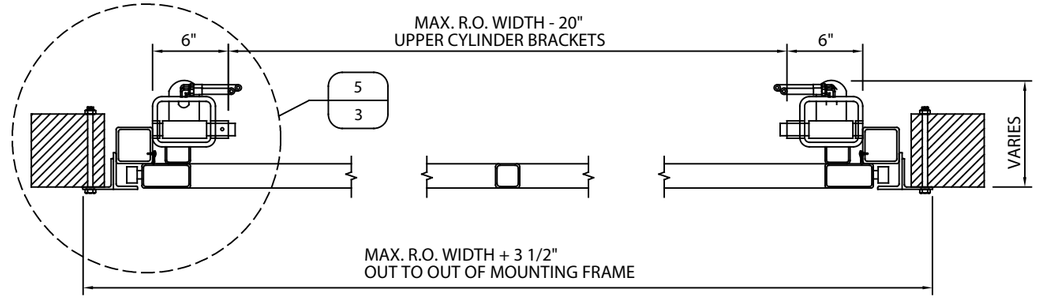


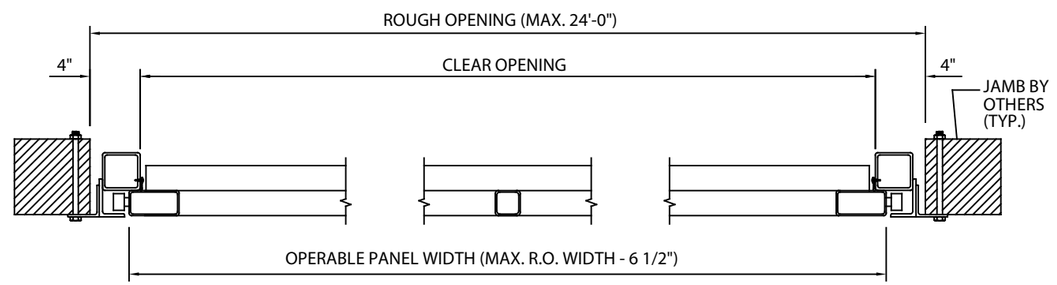
1 VERTICAL SECTION
NO SCALE



2 VERTICAL SECTION
NO SCALE



3 SECTION VIEW
NO SCALE



4 SECTION VIEW
NO SCALE

CROWN

SAMPLE DRAWING

GIBCA LIMITED COMPANY (FZC) LLC

SST-II HYDRAULIC BI-FOLD SYSTEM

MODEL: SST-II BI-FOLD

DRAWN: 6/2018

SHEET: 2.0

IMPORTANT NOTICE:

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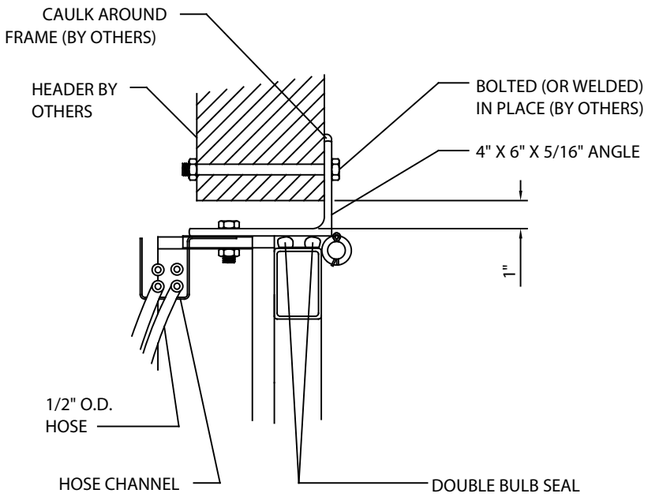
CROWN

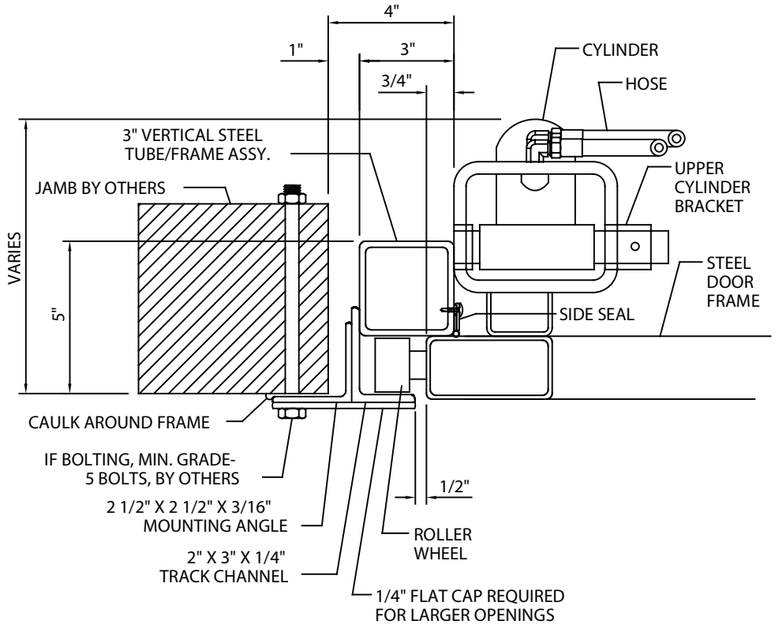
SAMPLE DRAWING

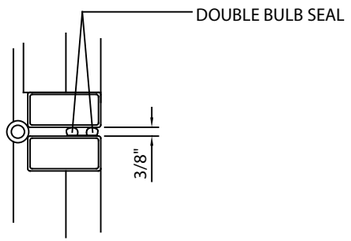
GIBCA LIMITED COMPANY (FZC) LLC

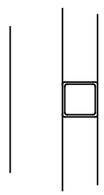
SST-II HYDRAULIC BI-FOLD SYSTEM



1 SECTION VIEW @ HEAD
NO SCALE



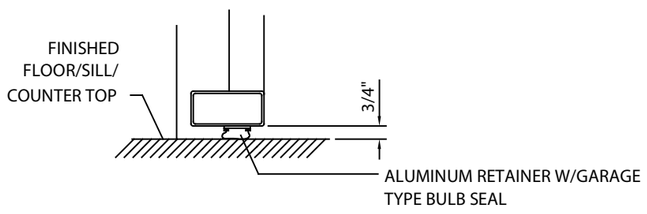




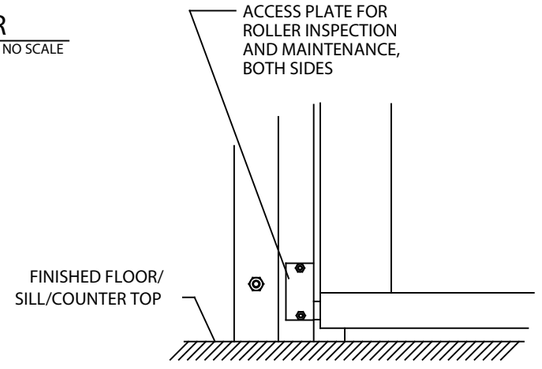
5 SECTION VIEW @ JAMB
NO SCALE

2 SECTION VIEW @ MID-HINGE
NO SCALE

3 SECTION VIEW @ INT. MEMBER
NO SCALE



4 SECTION VIEW @ BASE
NO SCALE

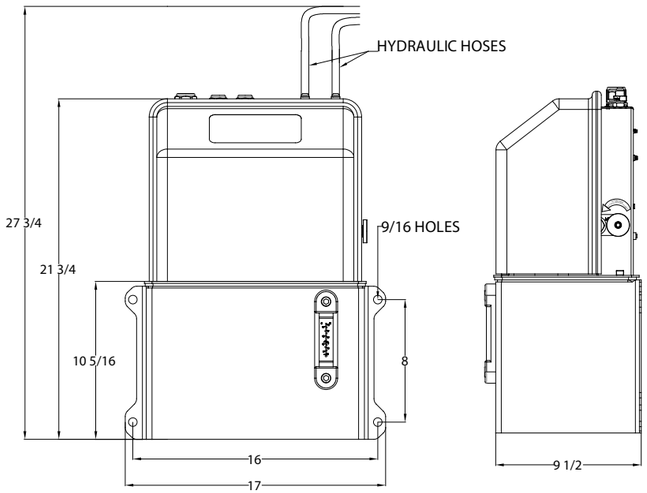


6 MAINTENANCE HATCH
NO SCALE

MODEL: SST-II BI-FOLD

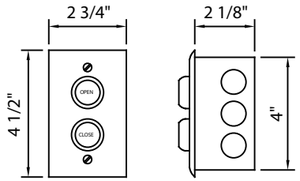
DRAWN: 6/2018

SHEET: 3.0

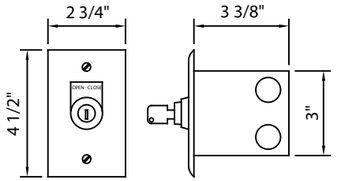


1 STANDARD MOTOR UNIT - ENCLOSED

NO SCALE



FLUSH-MOUNT, CONSTANT-CONTACT 2BUTTON W/STAINLESS COVER (STANDARD)



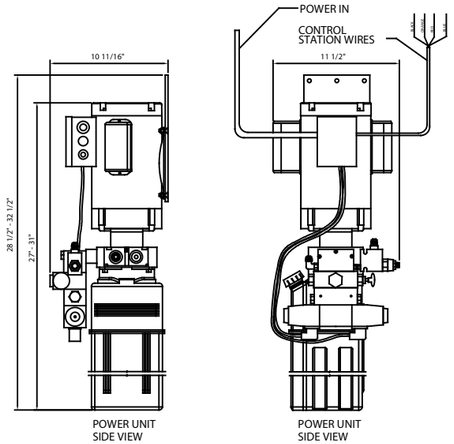
FLUSH-MOUNT, CONSTANT-HOLD KEY SWITCH W/STAINLESS COVER (STANDARD)

4 CONTROL OPTIONS

NO SCALE

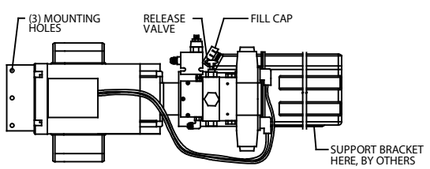
MOTOR OPTIONS

STD. MOTOR UNIT IS ENCLOSED AND INCLUDES LOW-VOLTAGE CONTROL WIRING. OPTIONAL MOTOR UNIT MAY BE ORIENTED IN EITHER VERT. OR HORIZ. POSITION AND MAY BE BETTER SUITED FOR TIGHT SPACES, HOWEVER, CONTROL WIRING IS 110V.



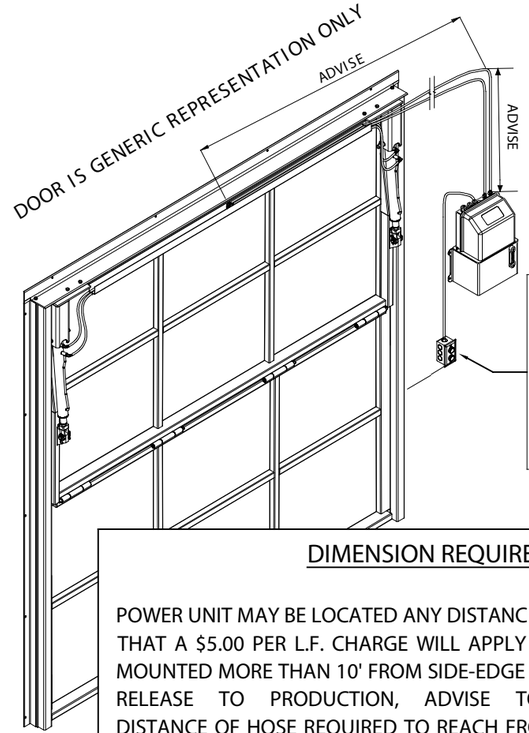
2 OPTIONAL - MOTOR UNIT - VERT. POS.

NO SCALE



3 OPTIONAL - MOTOR UNIT - HORIZ. POS.

NO SCALE



CONTROL STATION PLACEMENT

CROWN RECOMMENDS A MAX OF 24" FROM ROUGH OPENING. CONTROL STATION NEEDS TO BE PLACED SO THAT ANY PERSON OPERATING DOOR/WINDOW CAN SEE ENTIRE PERIMETER OF OPENING WHILE DOOR/WINDOW IS OPERATING.

DIMENSION REQUIRED:

POWER UNIT MAY BE LOCATED ANY DISTANCE FROM DOOR. NOTE THAT A $5.00 PER L.F. CHARGE WILL APPLY FOR POWER UNITS MOUNTED MORE THAN 10' FROM SIDE-EDGE OF THE DOOR. UPON RELEASE TO PRODUCTION, ADVISE TOTAL LINEAL-FOOT DISTANCE OF HOSE REQUIRED TO REACH FROM TOP/CENTER OF DOOR FRAME TO POWER UNIT. IF PROJECT INCLUDES MULTIPLE DOORS, ADVISE DISTANCE FOR EACH.

5 ISOMETRIC - INTERIOR VIEW

NO SCALE

IMPORTANT NOTICE:

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ALL PARTS NOT LISTED AS "BY OTHERS" TO BE PROVIDED BY CROWN.

CROWN

SAMPLE DRAWING

GIBCA LIMITED COMPANY (FZC) LLC

SST-II HYDRAULIC BI-FOLD SYSTEM

MODEL: SST-II BI-FOLD

DRAWN: 6/2018

SHEET: 4.0

IMPORTANT NOTICE:

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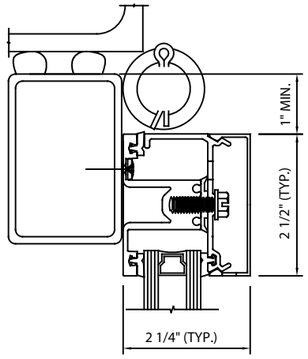
CROWN

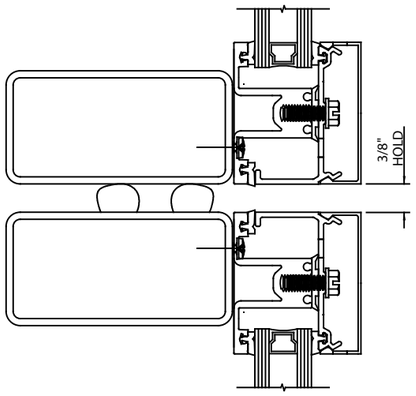
SAMPLE DRAWING

IMPORTANT NOTE:

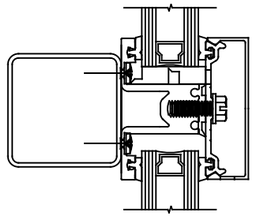
- ALL ALUMINUM RETAINER IS SHIPPED IN FULL-LENGTH PIECES, TO BE CUT TO SIZE AND/OR MITERED, IN FIELD
- DETAILS ARE FOR REPRESENTATION, ONLY, SHOWING CROWN STD. INSIDE-SASH AND FRONT-SET RETAINER SYSTEMS
- GLASS SHOWN IS MOST COMMON. OTHER GLASS TYPES/THICKNESSES ARE AVAILABLE



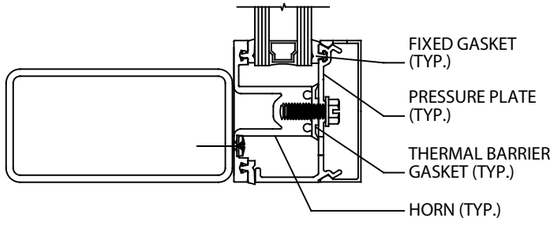
1 FRONT-SET ASSEMBLY
NO SCALE



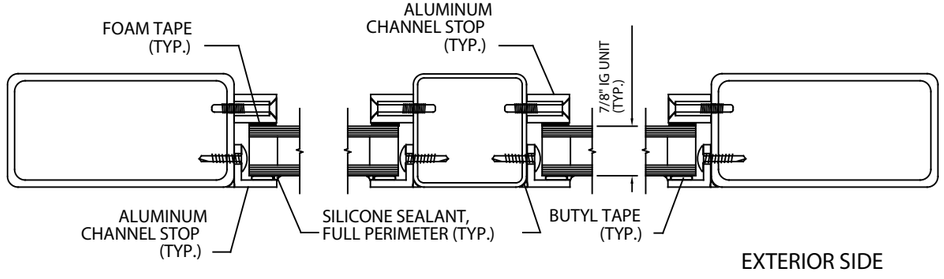
2 FRONT-SET ASSEMBLY
NO SCALE



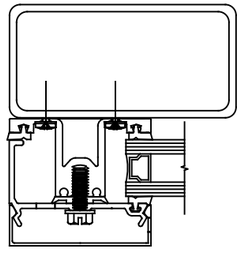
3 FRONT-SET ASSEMBLY
NO SCALE



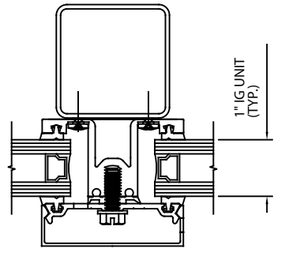
4 FRONT-SET ASSEMBLY
NO SCALE



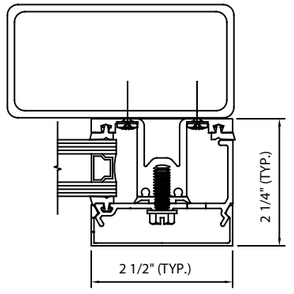
5 INSIDE SASH ASSEMBLY
NO SCALE



6 FRONT-SET ASSEMBLY
NO SCALE



7 FRONT-SET ASSEMBLY
NO SCALE



8 FRONT-SET ASSEMBLY
NO SCALE

GIBCA LIMITED COMPANY (FZC) LLC

SST-II HYDRAULIC BI-FOLD SYSTEM

MODEL: SST-II BI-FOLD

DRAWN: 6/2018

SHEET: 5.0