PRL Corporation enthusiastically announces our Aluminum division,

PRL Aluminum Architectural Products

The creation of PRL Aluminum will complement our Architectural Tempered Glass Division. This new venture will allow us to service our customers with the demand of both Aluminum Products and Tempered Glass.

Our PRL team recognizes the demand and high expectations of becoming a major broad-minded player on the "convergent" architectural glass and aluminum industry.

The Aluminum division has emerged with the expertise, technology and extensive customer base inherited from PRL Glass. This advantage will make us a very strong competitive company and will allow us to unfold our true potential.

PRL Aluminum will be able to offer you,

- Aluminum Entrance Doors
- Nu Vision Entrance Doors (Herculite)
- Storefronts
- Curtainwall
- Aluminum Entrance Doors
- Sliding Doors
- IG Units
- Architectural Tempered Glass
- Brake Metal
- Custom Extruding
- Hardware

PRL Aluminum will continue to focus on our customer service satisfaction, we will stride to provide our customers with the fastest leadtimes, highest quality, most competitive pricing.
FOR IMMEDIATE ACCESS TO INFORMATION ON ALL OF OUR PRODUCT LINES
PLEASE VISIT OUR WEBSITE,
WWW. PRLALUMINUM.COM
PRL SPECIALIZES IN CUSTOM ARCHITECTURAL GLASS & METAL FABRICATION.
TERMS OF SALE AND CONDITIONS

VOLUME PRICING: We will always welcome quotation requests for large quantities of aluminum framing, extrusions and doors. All price quotes are subject to large quantity discounts.

QUOTES: Quotes are good for 30 days, unless special arrangements have been made.

MINIMUM ORDERS:
$75.00 minimum order
$500.00 minimum order for free local delivery.
$1,000.00 minimum to ship to an address other than the billing/business address.
$1,500.00 minimum order for jobsite deliveries.

There is no delivery charge on an order, which meets the minimum charge and is within our standard delivery area and schedule.

BACK CHARGES, CLAIMS AND DEFECTIVE MATERIAL:
Back charges from the Buyer are not acceptable and will not be honored by the PRL Aluminum. All claims must be submitted to the PRL Aluminum within 5 days after receipt of shipment. PRL Aluminum shall have the exclusive right to select the final remedy for defective material, which will be expressly limited to the repair, replacement or the repayment of the original purchase price paid by the Buyer upon return of the material to the PRL Aluminum. Under no circumstances will any job site repairs, replacements made or labor charges for the same be accepted. There are no other warranties expressed or implied. PRL Aluminum shall not be liable for any penal, incidental or consequential damages.

CANCELLATIONS AND RETURNS:
Cancellation and return of custom orders will result in substantial cost to the Buyer. Return or cancellation of stock items may be made after PRL Aluminum has issued prior written authorization. Any standard stock material received in a resalable condition will be credited based on a 20% restocking charge of PRL Aluminum's sale price. All freight charges on returned goods must be paid by the customer.

PACKING/SHIPPING: All items are shipped F.O.B. PRL Aluminum's plant and the Buyer shall bear the risk of loss and shall in such circumstances be limited solely to an action against carriers or third parties other than PRL Aluminum. We will ship all orders via best available transportation facilities unless specified otherwise by the Buyer. Items omitted from the original shipment due to shortage of material, or other causes beyond the control of the company, will be shipped A.S.A.P.

Note: Wooden crates or cardboard wrap are available.

EXPEDITING CHARGES: all special leadtime requests are subject to a minimum 15% charge

ALL PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE
TERMS OF SALE AND CONDITIONS

TERMS OF CREDIT:
Credit must be established prior to delivery of merchandise. Orders must be delivered C.O.D. until credit can be approved and an open account has been established. All orders are subject to credit approval and to the acceptance by PRL Aluminum.

TAXES:
All orders will be charged sales tax unless a resale certificate is on file in our office. Please send exemption card with initial order.

LIABILITY:
Custom or special orders require a 50% deposit at time of order and always considered non-cancellable nor will any portion of the deposit be returned or credited.

CREDIT EXTENSION:
No credit will be extended by the Seller unless the Buyer's credit has been approved and is satisfactory at the time of shipment. The Seller reserves the right, at any time, to revoke credit extended to buyers because of Buyer's failure to pay for goods when due or for any other reason deemed sufficient by the Seller.

LATE PAYMENT:
Unless otherwise expressly provided, all payments are Net 30 Days after date of invoice. Seller may at any time require payment in advance or satisfactory security that invoices will be paid when due. 1 1/2% per month interest will be charged thereon from the due date until paid (18% annually).
LIMITED WARRANTY AND REMEDY

PRL Aluminum Inc. warrants its product for a period of one (1) year from date of shipment against defective workmanship in manufacturing provided the product is installed in accordance with PRL Aluminum Inc. instructions and has not been damaged and/or altered prior to or during installation. PRL Aluminum Inc. will replace all products found to be so defective. The product supplied shall meet the standard door specifications as outlined in the PRL Aluminum Inc. catalog, which have been designed in accordance with prevailing engineering practices and procedures. Buyer remedies with respect to PRL Aluminum Inc failure to meet the foregoing warranties shall be limited to the sole remedy provided herein.

All items, including without limitation hardware and glass, manufactured by others and purchased by PRL Aluminum Inc for use in its products, carry such other manufacturers' warranties only. In replacing such defective items, PRL Aluminum Inc will not assume charges for freight and/or labor. All items furnished by or on behalf of buyer for incorporation of this order must be shipped to PRL Aluminum Inc plant before PRL Aluminum Inc is obligated to commence fabrication. PRL Aluminum Inc will not accept back charges for material and/or labor due to inaccuracies caused by the use of templates for cutouts and fabrication.

PRL Aluminum Inc makes no other representations, covenants, warranties or guarantees with respect to the product and performance ordered herein except as expressly set forth in this section. All implied warranties, including without limitations, merchantability, fitness for particular purpose, or arising from a course of dealing or usage of trade, are specifically excluded. Not withstanding any provision in this agreement to the contrary, PRL Aluminum Inc in no event shall be liable to buyer for any direct, indirect, special or consequential damages, however arising, including, by way of example, but not by way limitation, loss of profit, loss of use, business interruption, or caused by the sole negligence of PRL Aluminum Inc.
Anodizing services for finishing aluminum alloys employ electrolytic oxidation of the aluminum surface to produce a protective oxide coating. The anodic coating consists of hydrated aluminum oxide. It is considered resistant to corrosion and abrasion. Conventional coatings are 0.1 to 1.0 mil thick and are mostly transparent, but may be colored. Anodizing services preserves the natural luster, and texture of the metal itself. An anodized coating is hard, durable, will never peel, and, under normal conditions, will never wear through. This category includes hard coat anodizing services.

Anodizing will protect the aluminum parts by making the surface much harder than natural aluminum. Aluminum oxide is grown out of the surface during anodizing and then becomes aluminum hydrate that is extremely hard. The porous nature of the anodized layer allows the product to be dyed any color that is required. Anodized will become slightly larger by about .0004 to .0009 Depend on Class.

Class I coating is a high performance anodic finish used primarily for exterior building products and other products that must withstand continuous outdoor exposure.

Class II coating is a commercial anodic finish recommended for interior applications or light exterior applications receiving regularly scheduled cleaning and maintenance such as storefronts.

Coating thickness can be measured by an "eddy current", a nondestructive test instrument, or by cutting a cross-section of the anodized aluminum, mounting it in a slide, polishing the edge, and reading the coating thickness directly with a microscope.

Class II coatings and I should not be confused with Type I, Type II, and Type III anodic coatings as described in the authoritative anodizing standard, MIL-A-8625. Type I anodize refers to chromic acid anodizing. Type II is normal "clear" sulfuric acid anodizing. Type III is "hard coat" using sulfuric acid or mixed chemistry electrolytes.

Coating Weight Specification:
Class I  >  15.5 mg/in2
Class II >= 27.0 mg/in2

Coating Density:
Class I k II  >= 38.0 mg/in3

Standard Anodizing
CL  Clear (In Stock)
BR  Bronze (In Stock)
BL  Black (On Request)
GL  Gold (On Request)

Note: All others different anodizing color will be consider as a Special and have a special price

We have three different type of anodizing
Class II  (Standard)
Class I  (Minimum charges may apply, and has different price)
Commercial
201 SERIES
2” x 4 1/2”
SECTION
201 SERIES
2” x 4 1/2”
SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
   2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.
B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
C. Shop Drawings: Configuration and details for installation, maintenance and operation.
D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
B. Installer Qualifications: Minimum 2 year experience installing similar products.
C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS
A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING
A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS
A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING
A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS
A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web: prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT
A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.

B. Design:
1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 201-Series (2 X 4-1/2 Offset Glaze For 1/4 Glazing):
1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
   a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.045 cfm/ft²/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
   b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
   c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.
1) Passed at Design Pressure of 20 psf (0.96 kPa).

PART 3 EXECUTION

3.1 EXAMINATION
A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION
A. Clean surfaces thoroughly prior to installation.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION
A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL
A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION
A. Protect installed products until completion of project.
B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

\[ \Delta = \frac{5WL^3}{384EI} \]

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

\[ M = \frac{WL}{8} \]

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10 X 10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE
PL-201 Series
2” X 4-1/2”

Wind Load

D = 30 P.S.F. (110 M.P.H)
C = 25 P.S.F. (100 M.P.H)
B = 20 P.S.F. (90 M.P.H)
A = 15 P.S.F. (75 M.P.H)

Curve Representation

A = 15 P.S.F. (75 M.P.H)
B = 20 P.S.F. (90 M.P.H)
C = 25 P.S.F. (100 M.P.H)
D = 30 P.S.F. (110 M.P.H)

201 Vertical Mullion

I = 2.853 in\(^4\)
S = 1.347 in\(^2\)

201 Vertical Wall Jamb

I = 2.853 in\(^4\)
S = 1.347 in\(^2\)

201 Vertical Mullion with Steel Reinforcement

I = 6.212 in\(^4\)
S = 2.933 in\(^2\)

201 Solid Wall Jamb

I = 2.853 in\(^4\)
S = 1.347 in\(^2\)
250 SERIES
2” x 4 1/2”
SECTION
250 SERIES
2” x 4 1/2”
SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
   2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS
A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web: prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT

A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.

B. Design:
   1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
   2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
   3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
   4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
   5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 250-Series (2 X 4-1/2 Center Glaze For 1 Glazing):
   1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
      a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.039 cfm/ft²/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
      b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
      c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.
1) Passed at Design Pressure of 20 psf (0.96 kPa).

**PART 3 EXECUTION**

3.1 EXAMINATION
   A. Do not begin installation until substrates have been properly prepared.
   B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION
   A. Clean surfaces thoroughly prior to installation.
   B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION
   A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL
   A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION
   A. Protect installed products until completion of project.
   B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
PL-250 SERIES
2” X 4-1/2”
FULL SCALE

250FCP

90°

C-4

PL-250 - 12
14760 Don Julian Rd.
Industry, CA 91746
1/2" POCKET REDUCER

1/4" POCKET REDUCER

1" VINYL SASH

PL-250 SERIES
2" x 4-1/2"
FULL SCALE

14760 Don Julian Rd.
Industry, CA 91746

www.praluminum.com
sales@praluminum.com

ph: (877) 775-2586
fx: (877) 274-8800
WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\Delta = \frac{5WL^3}{384EI}$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = \frac{WL}{8}$$

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10 x 10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE
PL-250 SERIES
2' x 4-1/2'
WIND LOAD

250 VERTICAL WALL JAMB
WITH FILLER

I_{100} = 1.630 in^4
S_{100} = 0.815 in^3

MULLION SPACING IN FEET
MULLION HEIGHT IN FEET

A  B  C  D
3  4  5  6  7  8  9  10

250 DOOR JAMB W/ FILLER

I = 2.733 in^4
S = 1.215 in^3

MULLION SPACING IN FEET
MULLION HEIGHT IN FEET

A  B  C  D
3  4  5  6  7  8  9  10

250 DOOR JAMB W/ FILLER
WITH STEEL REINFORCEMENT

I = 7.569 in^4

MULLION SPACING IN FEET
MULLION HEIGHT IN FEET

A  B  C  D
3  4  5  6  7  8  9  10

250 TUBE

I = 2.040 in^4
S = 1.20 in^3

MULLION SPACING IN FEET
MULLION HEIGHT IN FEET

A  B  C  D
3  4  5  6  7  8  9  10

CURVE REPRESENTATION
A = 15 P.S.F. (75 M.P.H)
B = 20 P.S.F. (90 M.P.H)
C = 25 P.S.F. (100 M.P.H)
D = 30 P.S.F. (110 M.P.H)
DEAD LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/360 OR 1/8" DEFLECTION WHICHER EVER IS LESS, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

\[ \Delta = \frac{Pa}{24Et} (3L^2 - 4a^3) \]

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

\[ M = Pa \]

NOTATIONS REPRESENT:
P = 1/2 GLASS LOAD
a = 1/4 OR 1/8 POINT OF SPAN (INCHES)
E = 10 X 10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
L = LENGTH HORIZONTAL SPAN
250 HORIZONTAL MULLION

MULLION SPACING IN FEET

MULLION HEIGHT IN FEET

I = 0.330 in
S = 0.329 in

MAX ALLOW DEFLECTION L/360 OR 1/8" WHICHEVER IS LESS

CURVE REPRESENTATION

(A) ( ) = 1/8 PTS. OR A MINIMUM OF 8" AWAY FROM THE EDGE OF GLASS

(B) ( ) = 1/4 PTS. A MINIMUM OF 8" AWAY FROM THE EDGE OF GLASS
251 SERIES
2” x 4 1/2”
SECTION
251 SERIES
2” x 4 1/2”
SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
   2. ASTM E 283 - Test Method for Determining the Rate of Air Leaks Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS
A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web: prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT

A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.

B. Design:
   1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
   2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
   3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
   4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
   5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 251-Series (2 X 4-1/2 Offset Glaze for 1 Glazing):
   1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
      a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.039 cfm/ft²/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
      b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
      c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.
1) Passed at Design Pressure of 20 psf (0.96 kPa).

**PART 3 EXECUTION**

3.1 EXAMINATION
   A. Do not begin installation until substrates have been properly prepared.
   B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION
   A. Clean surfaces thoroughly prior to installation.
   B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION
   A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL
   A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION
   A. Protect installed products until completion of project.
   B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

\[ \Delta = \frac{5WL^2}{384EI} \]

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

\[ M = \frac{WL}{8} \]

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10 X 10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE
PL-251 SERIES
2” x 4-1/2”
WIND LOAD

251 SOLID WALL JAMB

MULLION SPACING IN FEET

MULLION HEIGHT IN FEET

I = 2.671 IN^4
S = 1.229 IN^3

CURVE REPRESENTATION
A = 15 P.S.F. (75 M.P.H.)
B = 20 P.S.F. (90 M.P.H.)
C = 25 P.S.F. (100 M.P.H.)
D = 30 P.S.F. (110 M.P.H.)

251 SOLID WALL JAMB WITH STEEL REINFORCEMENT

MULLION SPACING IN FEET

MULLION HEIGHT IN FEET

I = 5.941 IN^4
S = 2.617 IN^3

251 VERTICAL MULLION

MULLION SPACING IN FEET

MULLION HEIGHT IN FEET

I = 2.671 IN^4
S = 1.229 IN^3

251 VERTICAL WALL JAMB

MULLION SPACING IN FEET

MULLION HEIGHT IN FEET

I = 2.671 IN^4
S = 1.229 IN^3
400 SERIES
1 3/4” x 4”
SECTION
400 SERIES
1 3/4” x 4”
SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
   2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS
A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web: prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT

A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.

B. Design:
   1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
   2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
   3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
   4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
   5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 400-Series (1-3/4 X 4 Center Glaze For 1/4 Glazing):
   1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
      a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.041 cfm/ft²/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
      b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
      c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.
1) Passed at Design Pressure of 20 psf (0.96 kPa).

PART 3 EXECUTION

3.1 EXAMINATION
   A. Do not begin installation until substrates have been properly prepared.
   B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION
   A. Clean surfaces thoroughly prior to installation.
   B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION
   A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL
   A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION
   A. Protect installed products until completion of project.
   B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
VINYL SASH

CLIP SASH
WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

\[ \Delta = \frac{5WL^3}{384EI} \]

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

\[ M = \frac{WL}{8} \]

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10 X 10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE
**PL-400 SERIES**

**1-3/4" X 4"**

**WIND LOAD**

**400 WALL JAMB WITH FILLER**

![Diagram of 400 Wall Jamb with Filler]

\[
\begin{align*}
I_{m2} &= 1.630 \text{ in}^4 \\
S_{m2} &= 0.815 \text{ in}^3
\end{align*}
\]

**400 TUBE**

![Diagram of 400 Tube]

\[
\begin{align*}
I &= 2.040 \text{ in}^4 \\
S &= 1.20 \text{ in}^3
\end{align*}
\]

**CURVE REPRESENTATION**

A = 15 P.S.F. (75 M.P.H)

B = 20 P.S.F. (90 M.P.H)

C = 25 P.S.F. (100 M.P.H)

D = 30 P.S.F. (110 M.P.H)

**400 WALL JAMB & FILLER WITH STEEL REINFORCEMENT**

![Diagram of 400 Wall Jamb & Filler with Steel Reinforcement]

\[
\begin{align*}
I_{m2/STL} &= 4.642 \text{ in}^4 \\
S_{m2/STL} &= 1.672 \text{ in}^3
\end{align*}
\]

**400 TUBE WITH STEEL REINFORCEMENT**

![Diagram of 400 Tube with Steel Reinforcement]

\[
\begin{align*}
I &= 5.052 \text{ in}^4 \\
S &= 2.526 \text{ in}^3
\end{align*}
\]
PL-400 SERIES
1-3/4" X 4"
WIND LOAD

400 DOOR JAMB WITH FILLER

I = 1.892 IN^4
S = 0.841 IN^3

400 DOUBLE POCKET WITH 400 DOUBLE POCKET

I = 3.054 IN^4
S = 1.082 IN^3

400 DOOR JAMB & FILLER WITH STEEL REINFORCEMENT

I = 5.601 IN^4

400 DOUBLE POCKET WITH 400 CORNER POST

I = 1.303 IN^4
S = 0.802 IN^3

MULLION SPACING IN FEET
MULLION HEIGHT IN FEET

CURVE REPRESENTATION
A = 15 P.S.F. (75 M.P.H.)
B = 20 P.S.F. (90 M.P.H.)
C = 25 P.S.F. (100 M.P.H.)
D = 30 P.S.F. (110 M.P.H.)

PL-400 - 21

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DEAD LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/360 OR 1/8" DEFLECTION WHICHEVER IS LESS, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

\[ \Delta = \frac{Pa}{24EI} \left( 3L^2 - 4a^2 \right) \]

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

\[ M = Pa \]

NOTATIONS REPRESENT:
P = 1/2 GLASS LOAD
a = 1/4 OR 1/8 POINT OF SPAN (INCHES)
E = 10 X 10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
L = LENGTH HORIZONTAL SPAN
I = 0.201 in$^4$
S = 0.203 in$^3$
MAX ALLOW DEFLECTION L/360 OR 1/8" WHICHEVER IS LESS

CURVE REPRESENTATION

(A) (---) = 1/8 PTS. OR A MINIMUM OF 8" AWAY FROM THE EDGE OF GLASS
(B) (-----) = 1/4 PTS. A MINIMUM OF 8" AWAY FROM THE EDGE OF GLASS
401 SERIES
1 3/4” x 4”
SECTION
401 SERIES
1 3/4” x 4”
SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
   2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.
B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
C. Shop Drawings: Configuration and details for installation, maintenance and operation.
D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
B. Installer Qualifications: Minimum 2 year experience installing similar products.
C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS
A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING
A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS
A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING
A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS
A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web: prlglass.com
B. Substitutions: Not permitted.
C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT
A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.
B. Design:
   1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
   2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
   3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
   4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
   5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.
C. 401-Series (1-3/4 X 4 Offset Glaze for 1/4 Glazing):
   1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
      a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.037 cfm/ft²/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
      b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
      c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.
1) Passed at Design Pressure of 20 psf (0.96 kPa).

**PART 3 EXECUTION**

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

\[ \Delta = \frac{5WL^3}{384EI} \]

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

\[ M = \frac{WL}{8} \]

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10 \times 10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE
450 SERIES
1 3/4” x 4 1/2”
SECTION
450 SERIES
1 3/4” x 4 1/2”
SECTION
PART 1  GENERAL

1.1  SECTION INCLUDES
A.  Aluminum storefronts.

1.2  REFERENCES
A.  ASTM International (ASTM):
2.  ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.

1.3  SUBMITTALS
A.  Submit under provisions of applicable Requirements.
B.  Product Data: Manufacturer's data sheets on each product to be used, including:
   1.  Preparation instructions and recommendations.
   2.  Storage and handling requirements and recommendations.
   3.  Installation methods.
C.  Shop Drawings: Configuration and details for installation, maintenance and operation.
D.  Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
E.  Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4  QUALITY ASSURANCE
A.  Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
B.  Installer Qualifications: Minimum 2 year experience installing similar products.
C.  Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1.  Finish areas designated by Architect.
   2.  Do not proceed with remaining work until workmanship is approved by Architect.
   3.  Refinish mock-up area as required to produce acceptable work.

1.5  PRE-INSTALLATION MEETINGS
1.6 DELIVERY, STORAGE, AND HANDLING
A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS
A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING
A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS
A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web: prlglass.com
B. Substitutions: Not permitted.
C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT
A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.
B. Design:
   1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
   2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
   3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
   4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
   5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.
C. 450-Series (1-3/4 X 4-1/2 Center Glaze for 1/4 Glazing):
   1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
      a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.042 cfm/ft²/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
      b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
      c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.
PART 3 EXECUTION

3.1 EXAMINATION
A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION
A. Clean surfaces thoroughly prior to installation.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION
A. Install in accordance with manufacturer’s instructions.

3.4 FIELD QUALITY CONTROL
A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION
A. Protect installed products until completion of project.
B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\Delta = \frac{5WL^3}{384EI}$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = \frac{WL}{8}$$

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10 X 10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE
MULLION SPACING IN FEET

MULLION HEIGHT IN FEET

450 WALL JAMB WITH FILLER

\[ I = 1.630 \text{ in}^4 \\
S = 0.815 \text{ in}^3 \]

450 WALL JAMB WITH STEEL REINFORCEMENT

\[ I = 4.642 \text{ in}^4 \\
S = 1.672 \text{ in}^3 \]

CURVE REPRESENTATION

A = 15 P.S.F. (75 M.P.H)
B = 20 P.S.F. (90 M.P.H)
C = 25 P.S.F. (100 M.P.H)
D = 30 P.S.F. (110 M.P.H)

450 TUBE WITH STEEL REINFORCEMENT

\[ I = 2.040 \text{ in}^4 \\
S = 1.20 \text{ in}^3 \]

\[ I = 5.052 \text{ in}^4 \\
S = 2.526 \text{ in}^3 \]
PL-450 SERIES
1-3/4 X 4-1/2
WIND LOAD

CURVE REPRESENTATION
A = 15 P.S.F. (75 M.P.H)
B = 20 P.S.F. (90 M.P.H)
C = 25 P.S.F. (100 M.P.H)
D = 30 P.S.F. (110 M.P.H)

PL-450 - 18
14760 Don Julian Rd.
Industry, CA 91746
www.prlaluminum.com
sales@prlaluminum.com
DEAD LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/360 OR 1/8" DEFLECTION WHICHEVER IS LESS, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

\[ \Delta = \frac{Pa}{24EI} (3L^2 - 4a^2) \]

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

\[ M = Pa \]

NOTATIONS REPRESENT:
P = 1/2 GLASS LOAD
a = 1/4 OR 1/8 POINT OF SPAN (INCHES)
E = 10 X 10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
L = LENGTH HORIZONTAL SPAN
PL-450 SERIES
1-3/4 X 4-1/2
DEAD LOAD

450 HORIZONTAL MULLION

MULLION SPACING IN FEET

MULLION HEIGHT IN FEET

I = 0.241 IN^4
S = 0.250 IN^3
MAX ALLOW DEFLECTION L/360 OR 1/8" WHICHEVER IS LESS

CURVE REPRESENTATION
(A) (———) = 1/8 PTS. OR A MINIMUM OF 8" AWAY FROM THE EDGE OF GLASS
(B) (———) = 1/4 PTS. A MINIMUM OF 8" AWAY FROM THE EDGE OF GLASS
PLCW-600 SERIES

2 1/2” x 6”

SECTION
ALUMINUM CURTAIN WALLS
PLCW-600 SERIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum curtain walls.

1.2 REFERENCES

A. American Architectural Manufacturers Association (AAMA):
   3. AAMA 501.4 - Recommended Static Test Method for Evaluating Curtain Wall and Storefront Systems Subjected to Seismic and Wind Induced Interstory Drifts.

B. ASTM International (ASTM):
   2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
   5. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.

C. National Fenestration Rating Council (NFRC):
   1. NFRC-100 - Procedure for Determining Fenestration Product U-factors.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings:
   1. Provide drawings showing each configuration.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email:request info (info@prlglass.com); Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 CURTAIN WALLS
2. Frame: 2-1/2 inches (64 mm) face width:
   2. Glazing: Structural glaze horizontals.

B. 6 Inches (152 mm) Depth:
1. **Product:** PLCW-600 as manufactured by PRL Glass Systems, Inc.
2. **Performance:**
   a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.026 cfm/ft²/min (0.01 L/s/m²) when tested in accordance with ASTM E-283-04 at a cross pressure of 6.24 psf (0.30 kPa).
   b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 15 psf (103 kPa) when tested in accordance with ASTM-E331-00.
   c. Water Penetration under Dynamic Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 15 psf (103 kPa) when tested in accordance with AAMA-501.1-05.
   d. Design Wind Load: Limit mullion deflection to L/175 up to 13 feet-6 inches (4115 mm) and L/240+1/4 inch (6 mm) for spans above 13 feet-6 inches (4115 mm) when measured in accordance with ASTM E330-02 at a cross pressure of 40 psf (276 kPa).
   e. Seismic Racking: Compliance that system can accommodate a lateral movement of 3/4 inch (19 mm) when tested to AAMA 501.4-00.
   f. Thermal Conductance: Whole product rating shall be determined in accordance with NFRC-100. Show that specified product can achieve U-factor of no greater than 0.37 (Values based on structural glaze verticals, and insulated glass comprising exterior light of 1/4 inch (6 mm) bronze, 1/2 inch (13 mm) space with argon fill and an interior light of 1/4 inch (6 mm) SunGuard SNX 62/27).
   g. Solar Heat Gain: Whole product rating shall be determined in accordance with NFRC-200. Show that the specified product can achieve a SHGC of no greater than 0.36. (Values based on structural glaze verticals, and insulated glass comprising exterior light of 1/4 inch (6 mm) bronze, 1/2 inch (13 mm) space with argon fill and an interior light of 1/4 inch (6 mm) SunGuard SNX 62/27).
   h. Large Missile Impact: Design and fabrication shall meet the performance requirements in the referenced test procedures for a +1676/-2873 Pa (+35/-60 psf) design pressure with missile impacts corresponding to Missile Level D and Wind Zone 3 for a Basic Protection Rating. (Laminated I.G. 1-1/8 inches (29 mm) I.G. Marine glazed into a rubber glazing gasket.

2.3 MATERIALS
A. Material: Frames, assembly clips, trims and miscellaneous extrusions shall be extruded from Aluminum 6063-T6 alloy.
B. Glazing Gaskets:
   1. Compression type gaskets. Extruded EPDM (Ethylene Propylene Diene Monomer) push in place gasket. Dense 60 Durometer Shore "A" - ASTM C864 Option II
   2. Structural silicone compatible gasket: true silicone gasket -70 Durometer Shore "A", complying with ASTM C1115, Type C.
D. End Dams: Pre-molded end dams made from closed cell EPDM (Ethylene Propylene Diene Monomer) sponge to ASTM C509.

2.4 SUN CONTROL:
A. Vertical Sunshade:
B. Horizontal Sunshade:

C. Light Shelf Adaptable:

2.5 FINISH

A. Class II clear anodized aluminum shall conform to AA-M12-C22-A31.

B. Class I clear anodized aluminum shall conform to AA-M12-C22-A41.

C. Class II color anodized aluminum shall conform to AA-M12-C22-A34.
   2. Color: Light Bronze.
   3. Color: Medium Bronze.
   5. Color: Black.

D. Class I color anodized aluminum shall conform to AA-M12-C22-A44.
   2. Color: Light Bronze.
   3. Color: Medium Bronze.
   5. Color: Black.

E. Fluorocarbon finish complying with AAMA 2605.
   1. Resin: 70% PVDF resin shall be Kynar using Kynar500/Hylar5000.
   2. Cleaned and pretreated with chromium phosphate
   3. Coat extrusions with approved primers to minimum dry film thickness of 0.20 mil (.0051 mm).
   4. Color coat shall be a minimum dry film thickness of 1.0 mil (.025 mm).
   5. Approved Coating Manufacturers:
      a. PPG Industries
      b. Valspar Corporation

EXECUTION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. Owner will engage an independent AAMA approved testing agency.
B. Conduct test under the supervision of and in the presence of the Owner, Architect, and Construction Manager.

C. Test wall in accordance with AAMA 501.2-94.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
PLCW-600 SERIES
2 1/2 x 6
FULL SCALE

CW-605
(HEAVY WALL
MULLION)

CW-604

CW-303

H

H

CW-600 - 13
14760 Don Julian Rd.
Industry, CA 91746
www.prlaluminum.com
sales@prlaluminum.com
PLCW-600 SERIES
2 1/2" x 6"
FULL SCALE
wind load design

Mullion deflection is limited per AAMA TIR-A11-04
deflection is limited to L/175 for spans up to 13'-6"
and L/240 for spans beyond 13'-6"

allowable stress for 6063-T6 aluminum alloy = 15000 p.s.i.
allowable stress for A-36 steel = 21600 p.s.i.

maximum deflection was based on the following equation:
\[ \Delta = \frac{5WL^3}{384EI} \]

maximum bending moment was based on the following equation:
\[ M = \frac{WL}{8} \]

assumptions:
\( W \) = total uniform load
\( L \) = length of mullion between anchors
\( E \) = 10 X 10^6 p.s.i.
\( I \) = moment of inertia of the mullion
\( M \) = maximum bending moment

* mullions are assumed to have equal size glass lights each side
check with local code requirements for acceptance of AAMA TIR-A11
PLCW-600 SERIES
2 1/2" x 6"
WIND LOAD

CW-601

$I_m = 4.803 \text{ IN}^4$
$S_m = 1.703 \text{ IN}^4$

CW-601 with 2.2 x 3.5 x 10g steel reinforcing

$I_m = 10.556 \text{ IN}^4$

CURVE REPRESENTATION
A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

CW-603 heavy wall mullion

$I_m = 6.602 \text{ IN}^4$
$S_m = 2.145 \text{ IN}^4$

CW-603 with 2.2 x 3.375 x 10g steel reinforcing

$I_m = 11.912 \text{ IN}^4$
PLCW-600 SERIES
2 1/2" x 6" WIND LOAD

CURVE REPRESENTATION
A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

CW-608 135° inside corner mullion
$I_m = 4.084 \text{ IN}^4$
$S_m = 1.780 \text{ IN}^3$

CW-608 with 2.2 x 2.75 x 10g (hemed)
steel reinforcing
$I_m = 9.559 \text{ IN}^4$
dead load design

horizontal mullion deflection is limited to L/360 or 1/8" (whichever is less)
curves represent limitations based on 2 point loads, equal in magnitude
both located at 1/8 or 1/4 point of the horizontal mullions length

allowable stress for 6063-T6 aluminum alloy = 15000 p.s.i.
allowable stress for A-36 steel = 21600 p.s.i.

maximum deflection was based on the following equation:

$$\Delta = \frac{Pa}{24EI} (3L^2 - 4a^2)$$

maximum bending moment was based on the following equation:

$$M = Pa$$

assumptions:
P = 1/2 glass weight
a = 1/4 or 1/8 point of span (in inches)
E = 10 X 10^6 p.s.i.
I = moment of inertia of the mullion
L = length of horizontal mullion
MULLION SPACING IN FEET

GLASS HEIGHT IN FEET

I_{\text{m}} = 1.428 \text{ IN},
S_{\text{m}} = 1.142 \text{ IN},

A (---) = 1/8 PTS.
B (----) = 1/4 PTS.

MULLION SPACING IN FEET

GLASS HEIGHT IN FEET

I_{\text{m}} = 0.786 \text{ IN},
S_{\text{m}} = 0.505 \text{ IN},
PLCW-700 SERIES
2 1/2” x 7”
SECTION
PLCW-700 SERIES
2 1/2” x 7”
SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum curtain walls.

1.2 REFERENCES

A. American Architectural Manufacturers Association (AAMA):
   3. AAMA 501.4 - Recommended Static Test Method for Evaluating Curtain Wall and Storefront Systems Subjected to Seismic and Wind Induced Interstory Drifts.

B. ASTM International (ASTM):
   2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
   5. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.

C. National Fenestration Rating Council (NFRC):
   1. NFRC-100 - Procedure for Determining Fenestration Product U-factors.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings:
   1. Provide drawings showing each configuration.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email:request info (info@prlglass.com); Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 CURTAIN WALLS
A. Frame: 2-1/2 inches (64 mm) face width:
   2. Glazing: Structural glaze horizontals.

A. 7 Inches (178 mm) Depth:
   1. Product: PLCW-700 as manufactured by PRL Glass Systems, Inc.
   2. Air infiltration: Limit air leakage through fixed glazing and frames to 0.026 cfm/ft²/min (0.01 L/s/m²) when tested in accordance with ASTM E-283-04 at a cross pressure of 6.24 psf (0.30 kPa).
   b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 15 psf (103 kPa) when tested in accordance with ASTM-E331-00.
   c. Water Penetration under Dynamic Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 15 psf (103 kPa) when tested in accordance with AAMA-501.1-05.
   d. Design Wind Load: Limit mullion deflection to L/175 up to 13 feet-6 inches (4115 mm) and L/240+1/4 inch (6 mm) for spans above 13 feet-6 inches (4115 mm) when measured in accordance with ASTM E330-02 at a cross pressure of 40 psf (276 kPa).
   e. Seismic Racking: Compliance that system can accommodate a lateral movement of 3/4 inch (19 mm) when tested to AAMA 501.4-00.
   f. Thermal Conductance: Whole product rating shall be determined in accordance with NFRC-100. Show that specified product can achieve U-factor of no greater than 0.37 (Values based on structural glaze verticals, and insulated glass comprising exterior light of 1/4 inch (6 mm) bronze, 1/2 inch (13 mm) space with argon fill and an interior light of 1/4 inch (6 mm) SunGuard SNX 62/27).
   g. Solar Heat Gain: Whole product rating shall be determined in accordance with NFRC-200. Show that the specified product can achieve a SHGC of no greater than 0.36. (Values based on structural glaze verticals, and insulated glass comprising exterior light of 1/4 inch (6 mm) bronze, 1/2 inch (13 mm) space with argon fill and an interior light of 1/4 inch (6 mm) SunGuard SNX 62/27).

2.3 MATERIALS
   A. Material: Frames, assembly clips, trims and miscellaneous extrusions shall be extruded from Aluminum 6063-T6 alloy.
   B. Glazing Gaskets:
      1. Compression type gaskets. Extruded EPDM (Ethylene Propylene Diene Monomer) push in place gasket. Dense 60 Durometer Shore “A” - ASTM C864 Option II
      2. Structural silicone compatible gasket: true silicone gasket -70 Durometer Shore “A”, complying with ASTM C1115, Type C.
   D. End Dams: Pre-molded end dams made from closed cell EPDM (Ethylene Propylene Diene Monomer) sponge to ASTM C509.

2.4 SUN CONTROL:
   A. Vertical Sunshade:
   B. Horizontal Sunshade:
   C. Light Shelf Adaptable:
2.5 FINISH

A. Class II clear anodized aluminum shall conform to AA-M12-C22-A31.
B. Class I clear anodized aluminum shall conform to AA-M12-C22-A41.
C. Class II color anodized aluminum shall conform to AA-M12-C22-A34.
   2. Color: Light Bronze.
   3. Color: Medium Bronze.
   5. Color: Black.
D. Class I color anodized aluminum shall conform to AA-M12-C22-A44.
   2. Color: Light Bronze.
   3. Color: Medium Bronze.
   5. Color: Black.
E. Fluorocarbon finish complying with AAMA 2605.
   1. Resin: 70% PVDF resin shall be Kynar using Kynar500/Hylar5000.
   2. Cleaned and pretreated with chromium phosphate
   3. Coat extrusions with approved primers to minimum dry film thickness of 0.20 mil (.0051 mm).
   4. Color coat shall be a minimum dry film thickness of 1.0 mil (.025 mm).
   5. Approved Coating Manufactures:
      a. PPG Industries
      b. Valspar Corporation

EXECUTION

A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer’s instructions.

3.4 FIELD QUALITY CONTROL

A. Owner will engage an independent AAMA approved testing agency.
B. Conduct test under the supervision of and in the presence of the Owner, Architect, and Construction Manager.
C. Test wall in accordance with AAMA 501.2-94.
3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

G

DETAIL AT SPANDREL

PLCW-700  -  15

ph: (877) 775-2586
fx: (877) 274-8800

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5.000

7.000

45.0°

2.500

1.250

500
wind load design

Mullion deflection is limited per AAMA TIR-A11-04
deflection is limited to L/175 for spans up to 13’-6”
and L/240 for spans beyond 13’-6”

allowable stress for 6063-T6 aluminum alloy = 15000 p.s.i.
allowable stress for A-36 steel = 21600 p.s.i.

maximum deflection was based on the following equation:
\[ \Delta = \frac{5WL^3}{384EI} \]

maximum bending moment was based on the following equation:
\[ M = \frac{WL}{8} \]

assumptions:
W = total uniform load
L = length of mullion between anchors
E = 10 x 10^6 p.s.i.
I = moment of inertia of the mullion
M = maximum bending moment

* mullions are assumed to have equal size glass lights each side
check with local code requirements for acceptance of AAMA TIR-A11
PLCW-700 SERIES
2 1/2" x 7/8" WIND LOAD

PLCW-701

$\text{I}_{\alpha} = 7.771 \text{ IN}^4$
$S_{\alpha} = 2.359 \text{ IN}^2$

PLCW-701 with 2.2 x 4.5 x 10g steel reinforcing

$\text{I}_{\alpha} = 18.044 \text{ IN}^4$

CURVE REPRESENTATION
A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

PLCW-703 heavy wall mullion

$\text{I}_{\alpha} = 10.558 \text{ IN}^4$
$S_{\alpha} = 2.948 \text{ IN}^2$

PLCW-703 with 2.2 x 4.375 x 10g steel reinforcing

$\text{I}_{\alpha} = 20.214 \text{ IN}^4$

ph: (877) 775-2586
fx: (877) 274-8800

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PLCW-700 SERIES
2 1/2" x 7"
WIND LOAD

PLCW-608
135° inside corner mullion

\[ I_m = 4.084 \text{ in}^4 \]

\[ S_m = 1.780 \text{ in}^3 \]

PLCW-608 with 2.2 x 2.75 x 10g (hemed)
steel reinforcing

\[ I_m = 9.559 \text{ in}^4 \]

CURVE REPRESENTATION
A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.
dead load design

horizontal mullion deflection is limited to L/360 or 1/8" (whichever is less)
curves represent limitations based on 2 point loads, equal in magnitude
both located at 1/8 or 1/4 point of the horizontal mullions length

allowable stress for 6063-T6 aluminum alloy = 15000 p.s.i.
allowable stress for A-36 steel = 21600 p.s.i.

maximum deflection was based on the following equation:

$$\Delta = \frac{Pa}{24EI} (3L^2 - 4a^2)$$

maximum bending moment was based on the following equation:

$$M = Pa$$

assumptions:
P = 1/2 glass weight
a = 1/4 or 1/8 point of span (in inches)
E = 10 X 10^6 p.s.i.
I = moment of inertia of the mullion
L = length of horizontal mullion
**PLCW-700 SERIES**

**2 1/2" x 7" DEAD LOAD**

---

**PLCW-701**

**PLCW-702**

**CURVE REPRESENTATION**

A (----------------- ) = 1/8 PTS.

B ( ________ ) = 1/4 PTS.

---

**I_m = 1.716 IN^2**

**S_m = 1.373 IN**

---

**I_m = 1.103 IN^2**

**S_m = 0.735 IN**

---

[Diagram showing glass height and mullion spacing for PLCW-701 and PLCW-702]
ALUMINUM ENTRANCE DOORS SECTION
ALUMINUM ENTRANCE DOORS
SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum doors.

1.2 REFERENCES

A. ASTM International (ASTM):
   2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
C. Shop Drawings: Configuration and details for installation, maintenance and operation.
D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
B. Installer Qualifications: Minimum 2 year experience installing similar products.
C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS
A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web: prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 DOORS

A. Narrow Stile:
   1. 2 inches (51 mm) stile and rail.
   2. Strong reinforced corner construction permits use in heavy traffic areas of commercial applications.
   3. Narrow stile Center pivot single acting.
   4. Offset pivot single acting.
   5. Butt hinge single acting.

B. Medium Stile:
   1. 3-1/2 inches stile with 3-1/4 inches rail.
   2. Medium stile Center pivot double acting
   3. Offset pivot single acting
   4. Butt hinge single acting.
   5. A top performance door with a medium stile that accommodates standard and custom hardware and panic devices for commercial and institutional applications.
   6. Strong reinforced corner construction increases size limitation to a 4'-0" door width 9'0" maximum door height.

C. Wide Stile:
   1. 5 inches (127 mm) stile with 5-1/8 inches (130 mm) rail.
   2. Wide stile Center pivot double acting
   3. Offset pivot single acting
   4. Butt hinge single acting.
5. A monumental type door with strength and stability for heavy use. The wide stiles will accommodate most all standard and unusual hardware designs and operation requirements. Size limitations are 4'-0" door width and 9'0" maximum door height.

D. Custom Door:
1. Offer style and performance with unlimited adaptability to specific design requirements with combinations of stiles, top/bottom rails and intermediate vertical/horizontal muntins, will receive most standard pivot/hinges, lock and security hardware. Strong reinforced corner construction permits its use on a wide variety of applications. Some limitations apply please consult PRL Aluminum for details.

E. Accessories:
1. ADA Bottom Rail: 10-1/2 inches (267 mm) high.
2. Threshold: 4 inches (102 mm) extruded aluminum
   a. Finish: Mill.
   b. Finish: Clear anodized.
   c. Finish: Bronze.
3. Threshold: 5 inches (127 mm) extruded aluminum
   a. Finish: Mill.
   b. Finish: Clear anodized.
   c. Finish: Bronze.
4. Threshold: 5 inches (127 mm) extruded aluminum with bulb seal.
   a. Finish: Mill.
   b. Finish: Clear anodized.
   c. Finish: Bronze.
5. Threshold: 7 inches (178 mm) extruded aluminum.
   a. Finish: Mill.
   b. Finish: Clear anodized.
   c. Finish: Bronze.

F. Hardware:
1. Refer to Section 08 71 53 - Security Door Hardware.

PART 3 EXECUTION

3.1 EXAMINATION
A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION
A. Clean surfaces thoroughly prior to installation.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION
A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL
A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.
3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
All Entrance Doors are available in single acting offset pivot, butt hinge or center pivot operation. High bottom rails may be adapted to all sizes and to meet local codes. All doors are produced to specific size requirements in widths and heights within limits of each specific door.

**Narrow stile**

Narrow stile Center pivot single acting, Offset pivot single acting, Butt hinge single acting. An industry standard in style and performance. Narrow stiles and rails provide narrow sight lines yet receive most standard hardware designs. Strong reinforced corner construction permits use in heavy traffic areas of commercial applications.

**Medium stile**

Medium stile Center pivot double acting, Offset pivot single acting, Butt hinge single acting. A top performance door with a medium stile that accommodates standard and custom hardware and panic devices for commercial and institutional applications. Strong reinforced corner construction increases size limitation to a 4'-0" door width 9'0" maximum door height.

**Wide stile**

Wide stile Center pivot double acting, Offset pivot single acting, Butt hinge single acting. A monumental type door with strength and stability for heavy use. The wide stiles will accommodate most all standard and unusual hardware designs and operation requirements. Size limitations are 4'-0" door width and 9'0" maximum door height.

**Custom Doors**

Offer style and performance with unlimited adaptability to specific design requirements with combinations of stiles, top/bottom rails and intermediate vertical/horizontal muntins, will receive most standard pivot/hinges, lock and security hardware. Strong reinforced corner construction permits its use on a wide variety of applications. Some limitations apply please consult PRL Aluminum for details.
CENTER HUNG

Standard doors hardware includes std lock/cylinder on single doors and pairs active leaf, header/threshold bolt for pairs inactive leaf with push bars BTB.

All doors are prepared to receive side load arm for concealed closers ( pivots are not included).

OFFSET HUNG
MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.

ENTRANCE DOORS
1/2"-1" GLASS STOP
FULL SCALE

NARROW STYLE
2" VERTICAL STILE

CENTER HUNG
DOOR
1/4" BEVEL GLASS STOP

OFFSET HUNG
DOOR
1/4" SQUARE GLASS STOP

INACTIVE

ACTIVE

INACTIVE LEAF
OR
FLUSH BOLT STILE

LOCK STILE

MEETING STILES

ALUM. DOORS - 7
14760 Don Julian Rd.
Industry, CA 91746

www.praluminum.com
sales@praluminum.com

ph: (877) 775-2586
fx: (877) 274-8800
NOTES: Standard finishes are mill, clear and bronze anodized. All others are special order.

FINISH: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.

ALUM. DOORS - 8

ph: (877) 775-2586
fx: (877) 274-8800
www.praluminum.com
sales@praluminum.com

14760 Don Julian Rd.
Industry, CA 91746
MEDIUM STYLE
3 1/2' VERTICAL STILE

CENTER HUNG
DOOR STILE
1/4' GLASS STOP

INACTIVE LEAF
DOOR STILE
1' GLASS STOP

OFFSET HUNG
DOOR STILE
1/4' GLASS STOP

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

ALUM. DOORS - 9
14760 Don Julian Rd.
Industry, CA 91746
www.prlaluminum.com
sales@prlaluminum.com
MATERIAL: 6063-T5 aluminum alloy.

FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.

NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.

ALUM. DOORS - 10

ph: (877) 775-2586
fx: (877) 274-8800
MATERIAL: 6063-T5 aluminum alloy.

FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.

NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.
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FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
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MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.
10" BOTTOM RAIL MAY BE ADAPTED TO ALL DOOR STYLES TO MEET LOCAL CODES.

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.
MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
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MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.
DOOR RAIL
+BULK HEAD INSERT

HORIZONTAL
DOOR MUNTIN
+1/4'' BEVEL GLASS STOP

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

PH: (877) 775-2586
FX: (877) 274-8800
WWW.PRLALUMINUM.COM
SALES@PRLALUMINUM.COM
14760 DON JULIAN RD.
INDUSTRY, CA 91746
SLIDING DOORS
SECTION
SLIDING DOORS
SECTION
ALUMINUM SLIDING GLASS DOORS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum sliding glass doors - top hung.
B. Aluminum sliding glass doors - bottom roller supported.

1.2 REFERENCES

A. American Architectural Manufactures Association (AAMA):

B. ASTM International (ASTM):
   1. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
   3. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Provide AAMA test report in its entirety complete with drawing pages that show sill configuration tested.
   2. Storage and handling requirements and recommendations.
   3. Provide installation instructions, preparation instructions and recommendations.

C. Shop Drawings:
   1. Provide drawings showing each configuration.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
   1. Provide color samples of available finishes.
      a. Provide hardware samples.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.
   1. Provide color samples of specified finish.
      a. Provide hardware samples.
1.4 QUALITY ASSURANCE
   A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
   B. Installer Qualifications: Minimum 2 year experience installing similar products.
   C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
      1. Finish areas designated by Architect.
      2. Do not proceed with remaining work until workmanship is approved by Architect.
      3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS
   A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING
   A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
   B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS
   A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING
   A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS
   A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email:request info (info@prlglass.com); Web:prlglass.com
   B. Substitutions: Not permitted.
   C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM SLIDING GLASS DOORS - TOP HUNG
   A. Product: Max Slider - Cabo Series as manufactured by PRL Glass Systems, Inc.
   B. Hardware:
      1. Locks shall be stainless steel.
      2. Pull handles shall be stainless steel, aluminum or brass/bronze.
      3. Trolley Wheels:
   C. Performance:
      1. Rating: Provide Sliding Aluminum doors for exterior use that have a minimum AAMA - 101 rating of R-PG15-SD when the sill height is less than 5/8 inch (16 mm). Gateway
Size: 87 inches by 84 inches (2210 mm by 2134 mm).

2. Air Infiltration: Limit air leakage through fixed glazing and frames to 0.28 cfm/ft²/min (1.50 L/s/m²) when tested in accordance with ASTM E-283-04 at a cross pressure of 1.57 psf (75 Pa).

3. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 2.92 psf (180 Pa) when tested in accordance with ASTM-E331-00.

2.3 ALUMINUM SLIDING GLASS DOORS - BOTTOM ROLLER SUPPORTED

A. Product: Max Slider - Cancun Series as manufactured by PRL Glass Systems, Inc.

B. Hardware:
   1. Locks shall be stainless steel.
   2. Pull handles shall be stainless steel, aluminum or brass/bronze.
   3. Sliding wheels shall be a minimum diameter of 3 inches (76 mm) and be 100% stainless steel. No exceptions.

C. Performance:
   1. Rating: Provide Sliding Aluminum doors for exterior use that have a minimum AAMA - 101 rating of R-PG15-SD when the sill height is less than 5/8 inch (16 mm).
   2. Rating: Provide Sliding Aluminum doors for exterior use that have a minimum AAMA - 101 rating of CW-PG35-SD when the sill height is greater than 5/8 inch (16 mm).
   3. Air Infiltration: Limit air leakage through fixed glazing and frames to 0.30 cfm/ft²/min (1.50 L/s/m²) when tested in accordance with ASTM E-283-04 at a cross pressure of 1.57 psf (75 Pa).
   4. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 2.92 psf (180 Pa) when tested in accordance with ASTM-E331-00.
   5. Large Missile Impact: Design and fabrication shall meet the performance requirements in the referenced test procedures for a +1676/-2873 Pa (+35/-60 psf) design pressure with missile impacts corresponding to Missile Level D and Wind Zone 3 for a Basic Protection Rating. (Laminated I.G. 1-1/8 inches (29 mm) I.G. Marine glazed into a rubber glazing gasket.

2.4 MATERIALS

A. Extrusions: Frames, assembly clips, trims and miscellaneous extrusions shall be extruded from 6063-T6 aluminum alloy.

B. Glazing Gaskets: Marine type glazing gaskets shall meet the requirements of ASTM D-2287.

2.5 FABRICATION

A. Comply with the applicable provisions of the AAMA windows and sliding glass doors manual for materials, fabrication and installation of doors and components.

2.6 FINISH

A. Class II clear anodized aluminum shall conform to AA-M12-C22-A31.

B. Class I clear anodized aluminum shall conform to AA-M12-C22-A41.

C. Class II color anodized aluminum shall conform to AA-M12-C22-A34.
   2. Color: Light Bronze.
   3. Color: Medium Bronze.
5. Color: Black.

D. Class I color anodized aluminum shall conform to AA-M12-C22-A44.
   2. Color: Light Bronze.
   3. Color: Medium Bronze.
   5. Color: Black.

E. Fluorocarbon finish complying with AAMA 2605.
   1. Resin: 70% PVDF resin shall be Kynar using Kynar500/Hylar5000.
   2. Cleaned and pretreated with chromium phosphate
   3. Coat extrusions with approved primers to minimum dry film thickness of 0.20 mil (.0051 mm).
   4. Color coat shall be a minimum dry film thickness of 1.0 mil (.025 mm).
   5. Approved Coating Manufacturers: PPG Industries or Valspar Corp.

PART 3 EXECUTION

3.1 EXAMINATION
   A. Do not begin installation until substrates have been properly prepared.
   B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION
   A. Clean surfaces thoroughly prior to installation.
   B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION
   A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL
   A. Owner will engage an independent AAMA approved testing agency.
   B. Conduct test under the supervision of and in the presence of the Owner, Architect, and Construction Manager.
   C. Test wall in accordance with AAMA 501.2-94.

3.5 PROTECTION
   A. Protect installed products until completion of project.
   B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
PRL SL Series is a sliding door system designed as a versatile framed stacking system with a head/sill track, vertical jambs that allows unlimited adaptability with basic single pocket to multi slider configurations for areas where valuable space is critical.

**Pocket System**
Pocket system is the SL-series basic configuration, as a one way slider, requires design professionals to consider wall space requirements on pocket applications or the use of an optional custom offset surface mount bracket system for interior applications.

**Wall System**
This is the intermediate one way inset surface mount frame configuration that maximizes space on light duty traffic areas.

In addition to the standard SL features it offers a one piece vertical single weather stripped interlock system that reduces slide open efforts on multiple panels at one time.

**Custom System**
Custom doors will add unlimited design advantages on metal, glass and hardware options. Other optional choices range from custom glass to exotic metal finishes. Stronger reinforced construction permits increasing door heights. Please be advised there is some limitations, please consult PRL Aluminum for details.

**Multi_Track System**
Multi-Track maximizes the features of the stacking SL concept as two way, multiple track/panel system with unlimited applications.

Offers both standard and special features from basic configurations.

**Features/Hardware**
Bottom adjustable tandem rollers system will ease the open/close sliding efforts. Combination of weather stripped vertical stiles/head track and sill track minimizes the weather effects on exterior applications.

SL series standard hardware are flush handles, hooklock and cylinders. Other types of hardware are offered as options such as flush lockset or custom pulls.
MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.
SL-MEDIUM STYLE
3 1/2' VERTICAL STILE

SL-RADIUS STYLES
1" GLASS STOP

4-1/4"
1-1/2"

SL-OFFSET STYLE
1" GLASS STOP

4-1/16"
1-3/4"

SL-OFFSET STYLE
1/4" GLASS STOP

4-5/16"
2-1/8"

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.

ALUM. SLIDERS - 7

14760 Don Julian Rd.
Industry, CA 91746
www.prlaluminum.com
sales@prlaluminum.com
SL-RADIUS STYLES
1” GLASS STOP

SL-OFFSET STYLE
1/4” GLASS STOP

SL-WIDE STYLE
3 1/2” VERTICAL STILE

MATERIAL: 6063-T5 aluminum alloy.

FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.

NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.
SLIDING DOORS
1/4”-1” GLASS STOP
FULL SCALE

SL- STYLE
3 1/4” RAIL

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.

ALUM. SLIDERS - 9

ph: (877) 775-2586
fx: (877) 274-8800
14760 Don Julian Rd.
Industry, CA 91746
www.prlaluminum.com
sales@prlaluminum.com
SL- STYLE
3 1/4" RAIL

MATERIAL: 6063-T5 aluminum alloy.

FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.

NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.

ALUM. SLIDERS - 10

ph: (877) 775-2586
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Industry, CA 91746

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sales@praluminum.com
MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details.

ALUM. SLIDERS - 11
WALL SYSTEM DETAILS

INTERLOCKED WALL SYSTEM
HEAT ELEVATION

SL-JAMB

SL-HLD

SL-BSLT

SL-325TR

SL-325TR

SL-325TR

INTERLOCKED
VERTICAL SECTION

HORIZONTAL SECTION

OPENING

ALUM. SLIDERS - 12

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Industry, CA 91746

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WALL SYSTEM DETAILS

SLIDER WALL SYSTEM
ELEVATION

VERTICAL SECTION

HORIZONTAL SECTION

OPENING WIDTH

OPENING

ALUM. SLIDERS - 13
BREAKMETAL
SECTION
BREAKMETAL
SECTION
We offer Shear and Brake Metal

**CUSTOM SHAPES**
- HEAD/SILL FLASHING
- ANGLES
- HAT
- J-Z SHAPES
- OPEN/CLOSED CORNER
- CHANNEL

**HANDRAIL**
- TOP CAP
- MITER RETURN/CORNERS
- CONNECTORS

**CUSTOM WELDING**
- TACK WELDING

**METAL FINISHING**
- MIRROR POLISHING
- DIRECTIONAL SATIN BRUSH

**CLAD**
- FULL FRAME DOORS
- DOOR HEADER/JAMBS/T-HOLDS
- STOREFRONT FRAMING
- CANOPY
- COLUMN COVERS
- CORNICES
- PANEL PANS

**INVENTORY SHEET LIST**

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| .063 | DARK BRONZE ANO. | 14 GA | #8 MIRROR S/S |
| .090 | DARK BRONZE ANO. | 16 GA | #8 MIRROR S/S |
| .125 | BLACK ANO. | 18 GA | #8 MIRROR S/S |
| .040 | POLAR WHITE | 20 GA | #8 MIRROR S/S |
| .050 | POLAR WHITE | 14 GA | #4 BRUSHED S/S |
| .063 | POLAR WHITE | 16 GA | #4 BRUSHED S/S |
| .125 | #8 MIRROR NAVAL BRASS | 18 GA | #4 BRUSHED S/S |
| .040 | #4 BRUSHED NAVAL BRASS | 20 GA | #4 BRUSHED S/S |
| .040 | #4 BRUSHED MUNTZ | | |

(14' LENGTHS ARE SUBJECT TO AVAILABILITY, PLEASE CALL TO VERIFY STOCK)

CONSULT PRL FOR PRICES ON EXTENSIVE PROJECTS

NOTES: PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE REV 5/05
PMATERIAL IS SUBJECT TO FABRICATION LIMITATIONS PLEASE CONSULT PRL ALUMINUM FOR DETAILS

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CUSTOM DOORS
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WE OFFER AN EXTENSIVE LINE OF HARDWARE THAT FACILITATE A SAFE AND EASY DOOR OPERATION.

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PULLS

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FLOOR CLOSERS

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sales@prlaluminum.com

ph: (877) 775-2586
fx: (877) 274-8800
**HARDWARE**

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*call for details

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**NOTE:** PLEASE CALL PRL ALUMINUM FOR DETAILS ON FINISHES

**HARDWARE - 02**

14760 Don Julian Rd.
Industry, CA 91746

www.prlaluminum.com
sales@prlaluminum.com
# HARDWARE

## PIVOTS

<table>
<thead>
<tr>
<th>NAME</th>
<th>BUTT HINGE</th>
<th>CHB PIVOT</th>
<th>OFFSET PIVOT</th>
<th>INT PIVOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART NUMBER</td>
<td>BH</td>
<td>CHBP</td>
<td>OP</td>
<td>IPV</td>
</tr>
<tr>
<td>UNIT</td>
<td>PC/EA</td>
<td>PC/EA</td>
<td>SET</td>
<td>PC/EA</td>
</tr>
</tbody>
</table>

## GEAR HINGE

<table>
<thead>
<tr>
<th>NAME</th>
<th>OB PIVOT</th>
<th>WB TOP PIVOT</th>
<th>T-HOLD MOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART NUMBER</td>
<td>OBP</td>
<td>WBTOP</td>
<td>THMP</td>
</tr>
<tr>
<td>UNIT</td>
<td>PC/EA</td>
<td>PC/EA</td>
<td>PC/EA</td>
</tr>
</tbody>
</table>

## PULLS

<table>
<thead>
<tr>
<th>NAME</th>
<th>B/B OFFSET</th>
<th>SINGLE OFFSET</th>
<th>DB-PUSH/PULL</th>
<th>SB-PUSH/PULL</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART NUMBER</td>
<td>BBOP</td>
<td>SSOP</td>
<td>DBPP</td>
<td>SBPP</td>
</tr>
<tr>
<td>UNIT</td>
<td>PC/EA</td>
<td>PC/EA</td>
<td>PC/EA</td>
<td>PC/EA</td>
</tr>
</tbody>
</table>

## CLOSERS

<table>
<thead>
<tr>
<th>NAME</th>
<th>SURFACE MOUNT</th>
<th>OVERHEAD</th>
<th>FLOOR MOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART NUMBER</td>
<td>SMC</td>
<td>OHCC</td>
<td>FC</td>
</tr>
<tr>
<td>UNIT</td>
<td>PC/EA*</td>
<td>PC/EA</td>
<td>PC/EA</td>
</tr>
</tbody>
</table>

* MOUNTING BRACKET SOLD SEPARATELY

## ARMS

<table>
<thead>
<tr>
<th>NAME</th>
<th>FC OFFSET ARM</th>
<th>FC ARM</th>
<th>OH ARM</th>
<th>OH OFFSET ARM</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART NUMBER</td>
<td>FCOA</td>
<td>FCA</td>
<td>OHA</td>
<td>OHOA</td>
</tr>
<tr>
<td>UNIT</td>
<td>PC/EA</td>
<td>PC/EA</td>
<td>PC/EA</td>
<td>PC/EA</td>
</tr>
</tbody>
</table>

**FREE LOCAL DELIVERY! ON ORDERS ABOVE $500.00**

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**HARDWARE - 03**

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