

HISTORIC DISTRICT COMMISSION

CERTIFICATE OF APPROPRIATENESS

Application Number: HDC2025-00082

Project Address: 470 Brainard Street, Detroit, MI

Historic District: Willis-Selden

Description of Work:

Per submission.

Tuckpoint where necessary

· Install new aluminum windows at the rear and side walls

Install a new aluminum storefront and porch at the east side wall, second story

Install new stairs and door at the west side wall

• At front façade, repair or install a new aluminum storefronts per HDC conditions

Effective Date: 04/15/25

Issued to: Roland F Day, II, AIA, NOMA

2169 Hampton Rd

Grosse Pointe Woods, MI 48236

With the Conditions that:

• The current metal panels shall be removed in full and the conditions photographed for submission to HDC staff for review prior to the initiation of any work. If the historic steel storefronts remain largely intact, they shall be retained and repaired. If the steel storefronts remain but are deteriorated beyond repair, they shall be replicated in metal. If only small portions of the steel storefronts remain per the owner's submitted statement, then the proposed aluminum storefront may be installed. The documentation of the original storefront and the final proposal shall be submitted to HDC staff for review and approval.

Pursuant to Section 5(10) of the Michigan Local Historic District Act, as amended, being MCL 399.205 (10) and Sections 21-2-57 and 21-2-73 of the 2019 Detroit City Code, and Detroit Historic District Commission ("DHDC") delegation of administrative authority via Resolutions 97-01, 97-02, 98-01, 20-03, 21-04, and/or 21-07, as applicable, the staff of the DHDC has reviewed the above referenced application and hereby issues a Certificate of Appropriateness ("COA") for the description of work, effective date above, as it meets the Secretary of the Interior's Standards for Rehabilitation and the district's Elements of Design

For the Commission: PSR: 250416JR V. Krese

Daniel Rieden

Senior Clerk to the Historic District Commission

Post this COA at the subject property until work is complete. It is important to note that approval by the DHDC does not waive the applicable responsibility to comply with any other applicable ordinances or statutes.





HISTORIC DISTRICT COMMISSION ADDITIONAL INFORMATION REQUEST

City of Detroit - Planning & Development Department 2 Woodward Avenue, Suite 808 Detroit, Michigan 48226

Date: 3/14/2025 Application Number: HDC2025-00082

APPLICANT & PROPERTY INFORMATION NAME: Roland F Day, II, AIA, NOMA COMPANY NAME: N/A ADDRESS: 2169 Hampton Rd CITY: Grosse Pointe Woods PROJECT ADDRESS: 470 Brainard Street, Detroit, MI

HISTORIC DISTRICT: Willis-Selden

REQUESTED INFORMATION

We have received your application, but it is not yet complete for review. Please provide additional details based on the comments and questions listed below. Should you need to attach additional files per this request, use the paperclip icons at the end of this form. You may attach up to (5) files per icon up to 25MB:

This application is not complete. Please provide dimensioned plan for the new side porch which calls out materials. Also, note that this case will need to be reviewed by the Commission at a meeting. The next meeting is scheduled for 4/9/2025. In order for the case to be included on that agenda, we will need the outstanding info re: the side porch on 3/24/2025.

PSR: 250314jr

sponse Date: 03/20/2025	SE .		
eet A7.00 has new elevation and e elevation sheet, A7.00, is inclu			



Roland F. Day II, AIA, No. 2169 Hampton Road Grosse Pointe Park, MI 48236 313.407.0083

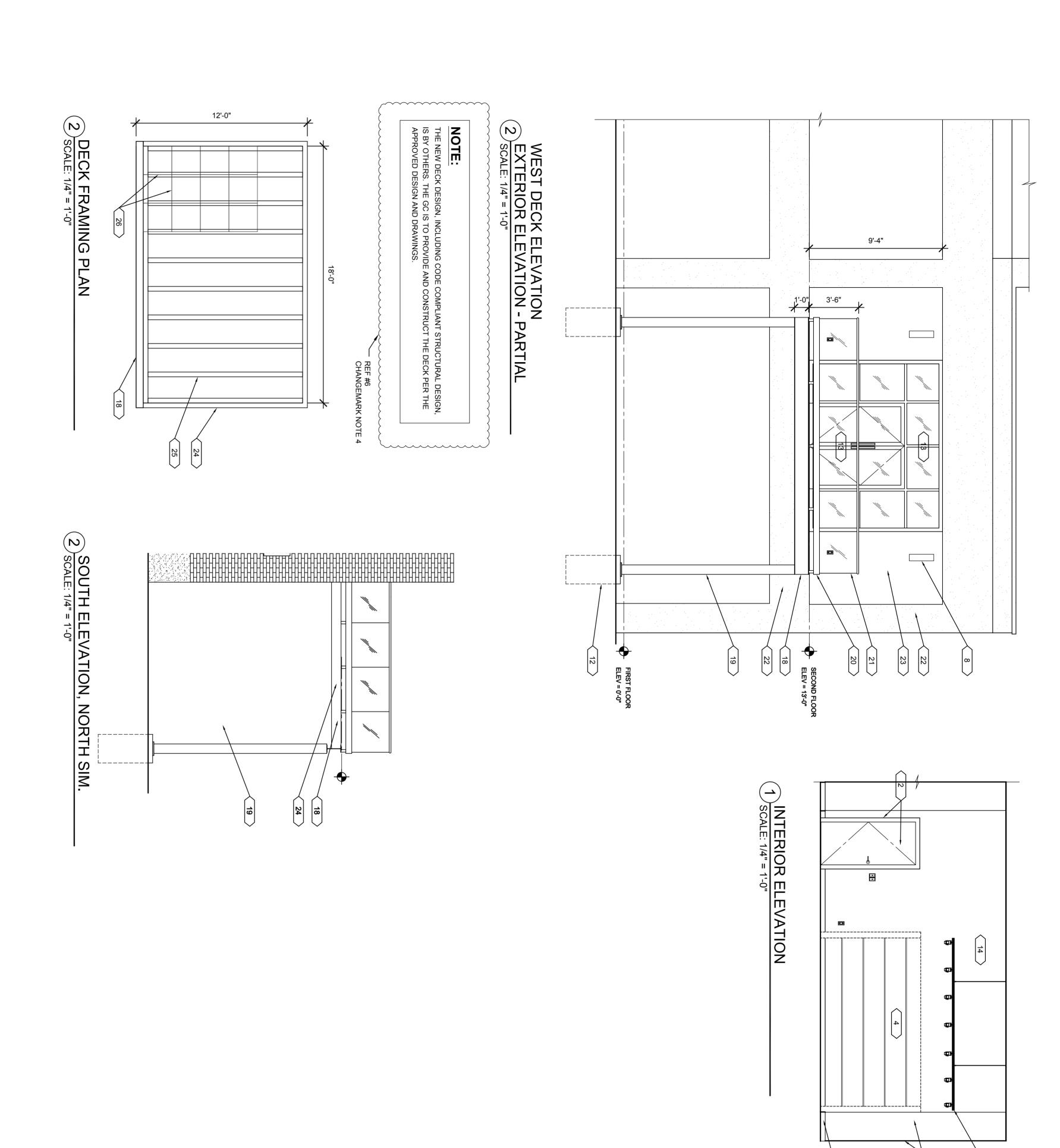
Building Renovations

Project Address
470 Brainard Avenue

RICHARD + TERI BENNETT

Detroit, MI 48201

Client Name



GENERAL CONSTRUCTION SHEET NOTES

2169 Hampton Road Grosse Pointe Park, MI 48236 313.407.0083

Roland F. Day II, AIA, NOMA

- OCCURRED TO MATCH ADJACENT CONSTRUCTION AND OCCURRED TO MATCH ADJACENT CONSTRUCTION AND PREP/LEVEL AS REQUIRED TO ACCOMMODATE NEW FINISHES.

 GC TO PROVIDE WOOD BLOCKING AT WINDOW AS REQUIRED TO ACCOMMODATE INSTALLATION OF NEW WINDOW TREATMENTS.

 ALL NEW SMOKE AND CO DETECTORS SHALL BE HARDWIRED.

 IT IS THE RESPONSIBILITY OF THE GC TO CHECK FOR WET MOLD INFESTATION AND NOTIFY THE PM OF ALL WET MOLD/OR WET/DAMP WALLS. IF DRY MOLD IS FOUND, CLEAN AS NECESSARY WITH BLEACH AND/OR MOLDICIDE.

 ALL NEW RATED WALL CONSTRUCTION SHALL REMAIN UNINTERRUPTED AND INTACT FROM CEILING TO FLOOR AND CORNER TO CORNER. ALL PENETRATIONS HALL BE PROPERLY SEALED WITH APPROVED AND CODE COMPLIANT RED FIRE STOP CAULK/SEALANT.

 PATCH DAMAGED WALLS TO ENSURE SMOOTH AND DEFECT FREE SUBSTRATE FOR NEW PAINT.

 GC TP PROVIDE AND INSTALL NEW GUTTERS AND DOWNSPOUTS GC TO PROVIDE IN-WALL FIRE RETARDANT BLOCKING FOR ALL NEW WALL MOUNTED FF&E MILLWORK.

 ALL INTERIOR DRYWALL SHALL BE 5/8 "FIRECODE X' OR EQUAL OLL INTERIOR DRYWALL BHALL BE 5/8 "FIRECODE X' OR EQUAL OLL INTERIOR DRYWALL BE 42" BELOW GRADE, MINIMUM

GENERAL CONSTRUCTION SHEET KEYNOTES

- NEW 2HR DOOR AND FRAME IN EXISTING OPENING, PAINTED

 NOT USED

 NOT USED

 NOT USED

 NOT USED

 NOT USED

 NEW WALL SCONCES, BY OWNER

 NEW WALL SCONCES, BY OWNER

 NEW WALL SCONCES, BY OWNER

 REW WALL SCONCES, BY OWNER

 NEW WALL DOOR AND FRAME, 3' X 6'-8", PAINTED

 NOT USED

 REINFORCED CONCRETE FOOTINGS

 NEW THERMALLY BROKEN ALUMINUM STOREFRONT SYSTEM WITH A PAIR OF 3' X 6-8" DOORS, TRANSOM AND SIDELITES.

 EXISTING MASONRY WALL

 NEW TRACK LIGHT @ 9' AFF

 NEW TRACK LIGHT @ 9' AFF

 NEW TRACK LIGHT @ 9' AFF

 NEW 12" D STEEL W SECT, PAINTED

 NEW 8" X 8" STEEL TUBE COLUMNS, PAINTED

 NEW STANLESS GLASS FRAME

 EXISTING REINFORCED CONCRETE BUILDING STRUCTURE

 EXISTING MASONRY INFILL

 4" X 8" STEEL TUBE

 EXISTING MASONRY INFILL

 4" X 6" STEEL TUBE

 25 4" X 6" STEEL TUBE

 26 2" X 2" NOM. CONCRETE PAVERS

NOTE:

DO NOT SCALE DRAWINGS; CONTRACTOR TO

NOTIFY ARCHITECT FOR MISSING DIMENSIONS

AR IS ONE INCH ON ORIGINAL DRAWING

ON THIS SHEET, ADJUST

GNED IN ACCORDANCE WITH MICHIGAN ABILITATION CODE 2015 - CHAPTER 14

AND F. AND S. AN

NTRACTOR TO FIELD VERIFY ALL DIMENSIONS, IGHTS & ELEVATIONS AND MUST NOTIFY

THESE PLANS ARE FOR ESTIMATING PUPOSES AND THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS.

AND HAVE COMPLETE KNOWLEDGE OF THE DRAWINGS PRIOR TO THE COMMENCEMENT OF ANY WORK ON THE PROJECT SITE.

NOTE:
THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CORRECT DESIGN SIZE OF ALL STRUCTURAL MEMBERS, INCLUDING, BUT NOT LIMITED TO; BEAMS, JOISTS, LINTELS, POSTS, LUMBER AND STEEL.

INTERIOR + EXTERIOR ELEVATIONS - NEW WORK

LASALLE ELECTRIC **MIDTOWN LOFTS Building Renovations**

Project Address 470 Brainard Avenue Detroit, MI 48201 Client Name RICHARD + TERI BENNETT

03.19.2025: HDC REVIEW

2025: HDC REVIEW

IMENTS



HISTORIC DISTRICT COMMISSION ADDITIONAL INFORMATION REQUEST

City of Detroit - Planning & Development Department 2 Woodward Avenue, Suite 808 Detroit, Michigan 48226

Date: 02/28/2025 Application Number: HDC2025-00082

APPLICANT & PROPERTY INFORMATION

NAME: Roland F Day, II, AIA, NOMA COMPANY NAME: N/A

ADDRESS: 2169 Hampton Rd | CITY: Grosse Pointe Woods | STATE: MI | ZIP: 48236

PROJECT ADDRESS: 470 Brainard Street, Detroit, MI

HISTORIC DISTRICT: Willis-Selden

REQUESTED INFORMATION

We have received your application, but it is not yet complete for review. Please provide additional details based on the comments and questions listed below. Should you need to attach additional files per this request, use the paperclip icons at the end of this form. You may attach up to (5) files per icon up to 25MB:

This application is not complete. Please provide the following: Elevation drawings that show the proposed window openings for each elevation that is being altered. Will there be in any changes to the front door, exterior lighting or signage? If so, please provide drawings that show the design, dimensions, and materials.

PSR: 250228dr

ADDI ICANT DESDONSE		
APPLICANT RESPONSE Response Date: 03/05/2025		
Nesponse Bate. 00/00/2020		
4 minimal, cylindrical wall mounted exterior	style to the existing Loft entry door to the east. Ight fixtures (dark brown anodized) featuring up and down lighting are proposed to ments on the south elevation. The 22" Lance 6 fixture cutsheet is attached for reference	ce.

ANCE E

ARCHITECTURAL GRADE **OUTDOOR WALL LUMINAIRE**

Housing

Diameter: Ø6.4" | Height: 20" | Weight: 15.2 lbs

Material

Housing: Extruded Aluminum Lens: Tempered Glass

Power Input

Downlight: 30W, 50W | 120-277V Uplight: 30W, 50W | 120-277V

Lumen Output

Downlight: 3,005 lm (30W), 5,010 lm (50W) Uplight: 3,005 lm (30W), 5,010 lm (50W)

Dimming

Standard 0-10V: Dims to 10% Superior 0-10V: Dim to 1% DMX: High resolution dims to 0.1%

Color Quality

CRI 85, CRI 93

Rated Life

> 100,000 Hours (L70)

Finish











Color Temperature









Optics







Warranty 5 Year limited warranty

Listing









Designed for Timeless Exteriors

This 6-inch round wall mount cylinder boasts an impressive lumen range of 6,010 to 10,020 lm, providing exceptional illumination while making a bold architectural statement.

The IP65 rated Lance 6 ensures durability and reliability in all outdoor environments, making it the ideal choice for accentuating architectural features and enhancing outdoor facades.







SPECIFICATION SHEET / WHITE UP & DOWN



LANCE 6 ARCHITECTURAL GRADE OUTDOOR WALL LUMINAIRE



PROJECT N	IAME				DATE	
CATALOG #	‡				QUANTITY	
The product co	onfigurator function	on thi	is page works only with the latest	version of Chrome or Add	bbe Acrobat Rea	rder.
LA6	MODEL	ı	LANCE 6			
	WATTAGE	0	60 Downlight: 30W Uplight: 30W			100¹ Downlight: 50W Uplight: 50W
	CCT/CRI	Ŏ	309 3000K/CRI 93	_		308 3000K/CRI 85 359 3500K/CRI 93
UNV	VOLTAGE	ı	UNV 120 – 277V			
	¬	0	NOD Non-Dimming	10% Single		STVD Standard 0-10V dims to 10% Dual (Up/Down Separately)
	DIMMING	0	SPVS Superior 0-10V dims to 1% Single (Up/Down Together)	1% Dual (I	Jp/Down	DMXD ² DMX dims to 0.1% Dual (Up/Down Separately)
	DEAM ANGLE	0	-	© 60°		○ WD³ Wide
	BEAM ANGLE	_	Continis page works only with the latest version of Chrome or Adobe Acrobat Reader. LANCE 6			
	FINISH	~		WHT ⁴ White		GRY Gray
	ACCESSORIES	5 🔲 1	FW ^{5,6} Forward Throw	WW ^{5,7} Wall Was	sh 20°	LL ^{5,7} Linear Lens
	RATING	0	OUT® Outdoor	O NAT ⁹ Natatoriur	n Rated	MAR¹º Marine Finish

C CLEAR FORM

- ¹ Option not compatible with DMX
- ² DMX does not feature XLR or RJ45 sockets; connections are hard-wired using three DMX wires
- ³ Please factor in change in lumen output with WD -12%
- ⁴ Option is not compatible with Marine Rating
- ⁵ Please factor in change in lumen output of -20%
- ⁶ Not compatible with 60° and WD option
- ⁷ Not compatible with WD option
- Outdoor Rating: Coating and wiring will be changed to high UV resistant and corrosion resistant materials for long-term operation in outdoor environments
- 9 Natatorium Rating: Coating and sealant will be changed to high corrosion resistant materials to prevent damage from long-term exposure to chlorine vapors
- 10 Marine Rating: Uses high corrosion-resistant materials for the coating and sealant to prevent damage from long-term exposure to saltwater environment

SPECIFICATION SHEET / WHITE UP & DOWN



LANCE 6 ARCHITECTURAL GRADE OUTDOOR WALL LUMINAIRE ARCHITECTURAL GRADE



TECHNICAL DETAILS

Electrical

- · Downlight: 3,005 lm (30W), 5,010 lm (50W)
- · Uplight: 3,005 lm (30W), 5,010 lm (50W)
- · Power Input: Universal (120/277V)
- · Operating Temperature: 14°F~104°F
- · Surge Protection: Built-in is 2.5KV
- · Power Factor Greater than 0.9

LED Features

- · Color Temperature: 2700K, 3000K, 3500K, 4000K
- · CRI 85, CRI 93
- · Long lasting LED luminaire tested under TM21 lumen maintenance L70 @ 100,000 Hrs

Optics

- · Precision molded high transmittance clear PC lens
- · Beam Angle: 40°, 60°, Wide

Advanced Dimming

- Proprietary VX Driver™ is incorporated to all dimming options for video flicker-free lighting
- · Standard 0-10V: Dims to 10% Single Dimming (Controls Up/Down together) Dual Dimming (Controls Up/Down separately)
- · Superior 0-10V: Dim to 1 % Single Dimming (Controls Up/Down together) Dual Dimming (Controls Up/Down separately)
- · DMXD: High resolution dims to 0.1% (Supports ANSI E1.20 RDM protocol) (Controls Up/Down separately)

Housing

- · Diameter: Ø6.4"
- · Height: 20" (50W), 22" (100W)
- · Material: Extruded Aluminum, Tempered Glass
- · Weight: 15.2 lbs (50W), 16.7lbs (100W)

Warranty

· 5-year limited warranty

Listing

- · ETL Wet Location Listed
- · CE
- · FCC
- · IP 65

PERFORMANCE SUMMARY*

shall be effective immediately. ©Meteor Illumination Technologies, Inc.

Delivered Lumens									
CCT/WATTAGE	2700K	3000K	3500K	4000K					
30W DOWN	2,660lm	2,890lm	2,960lm	3,005lm					
30W	2,660lm 2,890l		2,960lm	3,005lm					
50W DOWN	4,435lm	4,810lm	4,930lm	5,010lm					
50W UP	4,435lm	4,810lm	4,930lm	5,010lm					

Current	Consumption	
WATTAGE / VOLT	120V	277V
60W	0.55A	0.24A
80W	0.73A	0.32A
100W	0.92A	0.4A

^{*} For specifications requiring a CRI of 93, apply a 0.75 multiplier to the lumen output values listed.

SPECIFICATION SHEET / WHITE UP & DOWN

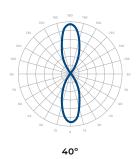


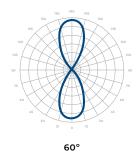
ARCHITECTURAL GRADE OUTDOOR WALL LUMINAIRE

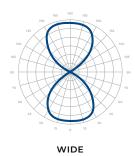


PHOTOMETRICS

Below is a typical photometric representation of the Lance 6 fixture. Please download IES files to ensure exact photometric value.







DMX REQUIREMENTS

The Lance 6 with DMX unit has two channels per fixture (1 to control uplight, 1 to control downlight). When placing an order, please indicate DMX address. (The DMX address will be listed on the back of the fixture). Do not connect more than 32 fixtures per DMX daisy chain.

DMX Address									
Fixture	Uplight (ex. X)	Downlight (ex. X+1)							
#1	1	2							
#2	3	4							
#3	5	6							

The fixture can be connected with 2 DMX positive / negative wires for connection. DMX cables are not included; please refer to compatible DMX cabling list for more information. The final fixture on each daisy chain should be terminated by the use of a DMX terminator purchased from a 3rd party or from Meteor.

COMPATIBLE DMX CABLING LIST

DMX uses a cable consisting of two twisted pairs plus a shield to carry data. The cable must be specifically impedance matched for the digital DMX signal, meaning that microphone cable or other non-rated cable must not be used to carry DMX. Network cable (Cat5, 5e or 6 cable) may be used to carry DMX in an installation; however special consideration must be given to shielding and termination. Under no circumstances should solid core cable like Cat5 be terminated into a screw down connector.

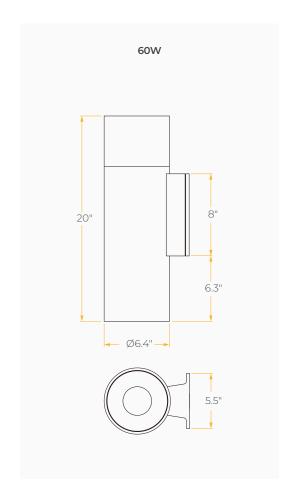
Meteor recommends the use of Belden 9729 or Belden 9841 for DMX installation. Belden 9729/9841 is a two pair cable, which allows for a spare pair for 'out and back' type terminations if needed.

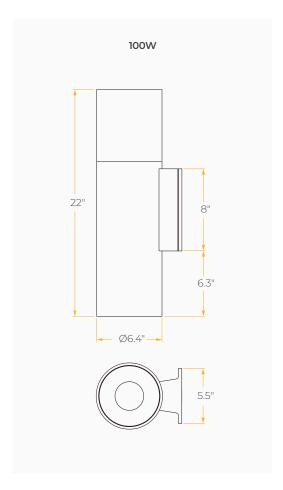


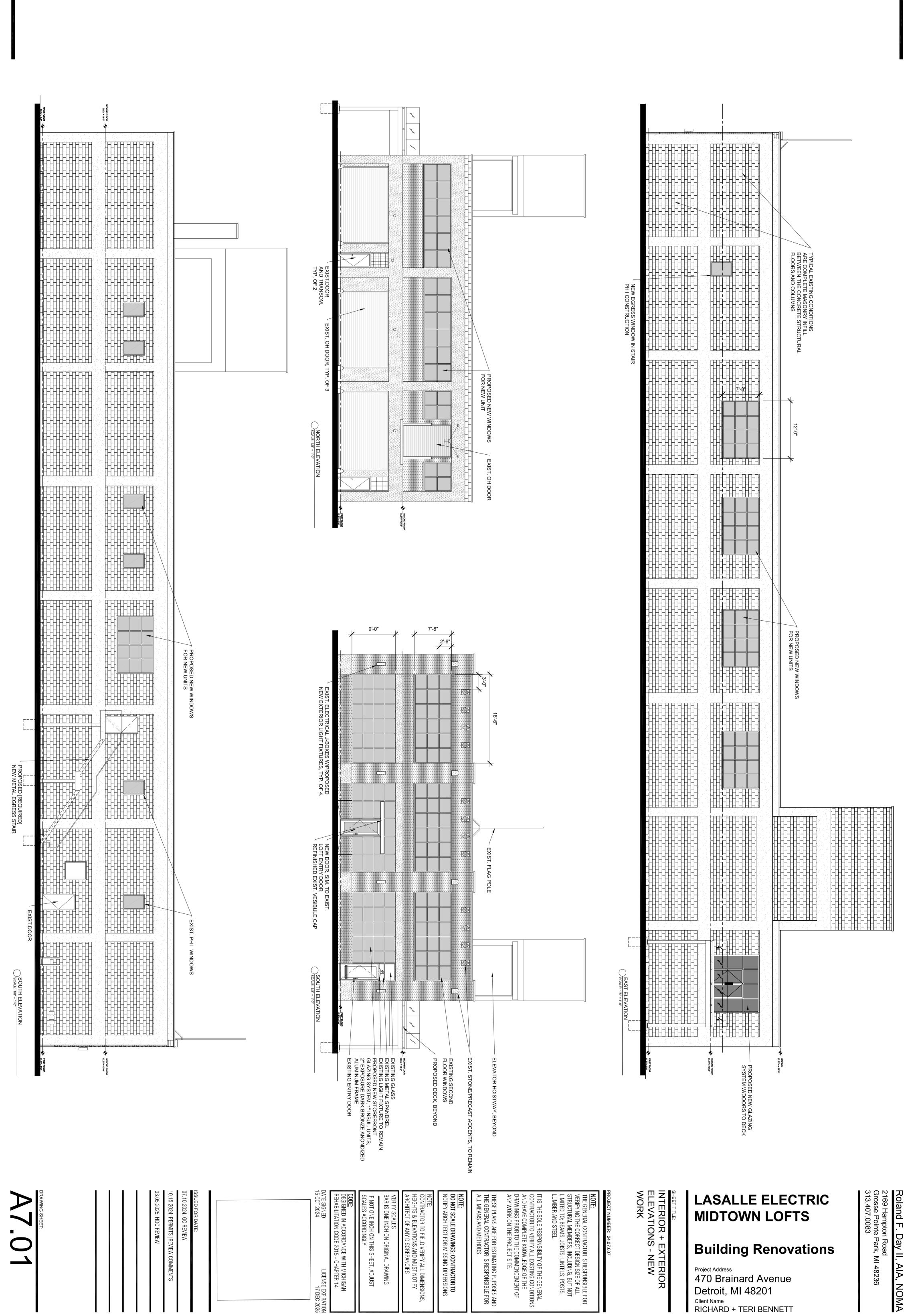
LANCE 6 ARCHITECTURAL GRADE OUTDOOR WALL LUMINAIRE



DIMENSIONS







RICHARD + TERI BENNETT



HISTORIC DISTRICT COMMISSION APPLICATION FOR WORK APPROVAL

City of Detroit - Planning & Development Department 2 Woodward Avenue, Suite 808 Detroit, Michigan 48226

APPLI	CATI	ON	ID

HDC2025-00082

Detroit, Michigan 40220	TIDC2023-00002
PROPERTY INFORMATION	
ADDRESS(ES): 470 Brainard Street, Detroit, MI	
HISTORIC DISTRICT: Willis-Selden	
SCOPE OF WORK: (Check ALL that apply)	
Windows/ Doors Walls/ Siding Painting	Roof/Gutters/ Chimney Porch/Deck/Balcony Other
Demolition Signage Mew Building	Addition Site Improvements (landscape, trees, fences, patios, etc.)
Phase I and occupied in 2020, 6 new units will be constructed in Exterior The exterior shall receive new windows, masonry and tuckpoin	n the second floor. In addition to 3 residential units completed in
APPLICANT IDENTIFICATION	
TYPE OF APPLICANT: Architect/Engineer/Consultant	
NAME: Roland F Day, II, AIA, NOMA	COMPANY NAME: N/A
ADDRESS: 2169 Hampton Rd	CITY: Grosse Pointe Woods STATE: MI ZIP: 48236
PHONE: +1 (313) 407-0083	EMAIL: rolandfday2@gmail.com
I AGREE TO AND AFFIRM THE FOLLOW	ING:
I understand that the failure to upload all required of project and/or a denied application.	documentation may result in extended review times for my
I understand that the review of this application by the responsibility to comply with any other applicable of sign, etc.) or other department approvals prior to be	rdinances including obtaining appropriate permits (building,
sign, etc.) or other department approvais prior to be	
	true and correct. I certify that the proposed work is authorized by the
I hereby certify that the information on this application is	true and correct. I certify that the proposed work is authorized by the

NOTE: Based on the scope of work, additional documentation may be required. See www/detroitmi.gov/hdc

for scope-specific requirements.

PROJECT DETAILS - TELL US ABOUT YOUR PROJECT

Instructions: Add project details using the text box in each section. If your details exceed the space provided, attach the details via the attachment icon for that section.

ePLANS PERMIT NUMBER:

(only applicable if you've already applied for permits through ePLANS)

N/A

GENERAL

1. DESCRIPTION OF EXISTING CONDITION

Please tell us about the current appearance and conditions of the areas you want to change. You may use a few sentences or attach a separate prepared document on the right. (For example, "existing roof on my garage is covered in gray asphalt shingles in poor condition.")

The existing 2 story building did not have any existing windows when it was purchased 1999-2000. The Phase I renovation completed within the last 2 years, included creating 3 new residential units on the second floor above a first floor showroom and work shop.

2. PHOTOGRAPHS

Help us understand your project. Please attach photographs of all areas where work is proposed.



3. DESCRIPTION OF PROJECT

In this box, tell us about what you want to do at the areas described above in box #1. (For example, Install new asphalt shingle roofing at garage.)

The LaSalle Electric Midtown Loft project is the continued renovation of an existing 2-story, masonry building with an existing first-floor art studio/gallery with multiple new residential units on the second floor. In addition to 3 residential units completed in Phase I and occupied in 2020, 6 new units will be constructed including the owner's unit. Exterior

The exterior shall receive new windows, masonry and tuckpointing as required to provide a complete building envelope. These materials are to match existing and provide a uniform fit and finish and comply with Historic District Commission requirements.

4. DETAILED SCOPE OF WORK

In this box, please describe all steps necessary to complete the work described in box #3. (For example, "remove existing shingles, replace wood deck as necessary, replace wood eaves, install roof vents, replace rotted fascia boards, paint, clean worksite.")

The proposed work is to perform partial demolition of existing masonry infill and install windows similar to the windows installed on the south elevation the east, west and north elevations. A new second floor steel deck is planned for the northeast corner of the building.

5. BROCHURES/CUT SHEETS

Please provide information on the products or materials you are proposing to install. For example, a brochure on the brand and color of the shingles proposed.



ADDITIONAL DETAILS

6. WINDOWS/DOORS Detailed photographs of window(s) and/or door(s) proposed for replacement showing the condition of the interior and exterior of the window(s) and/or door(s)	



LaSalle Electric Midtown Lofts EXTERIOR PHOTOGRAPHS

SOUTH ELEVATION



EAST ELEVATION



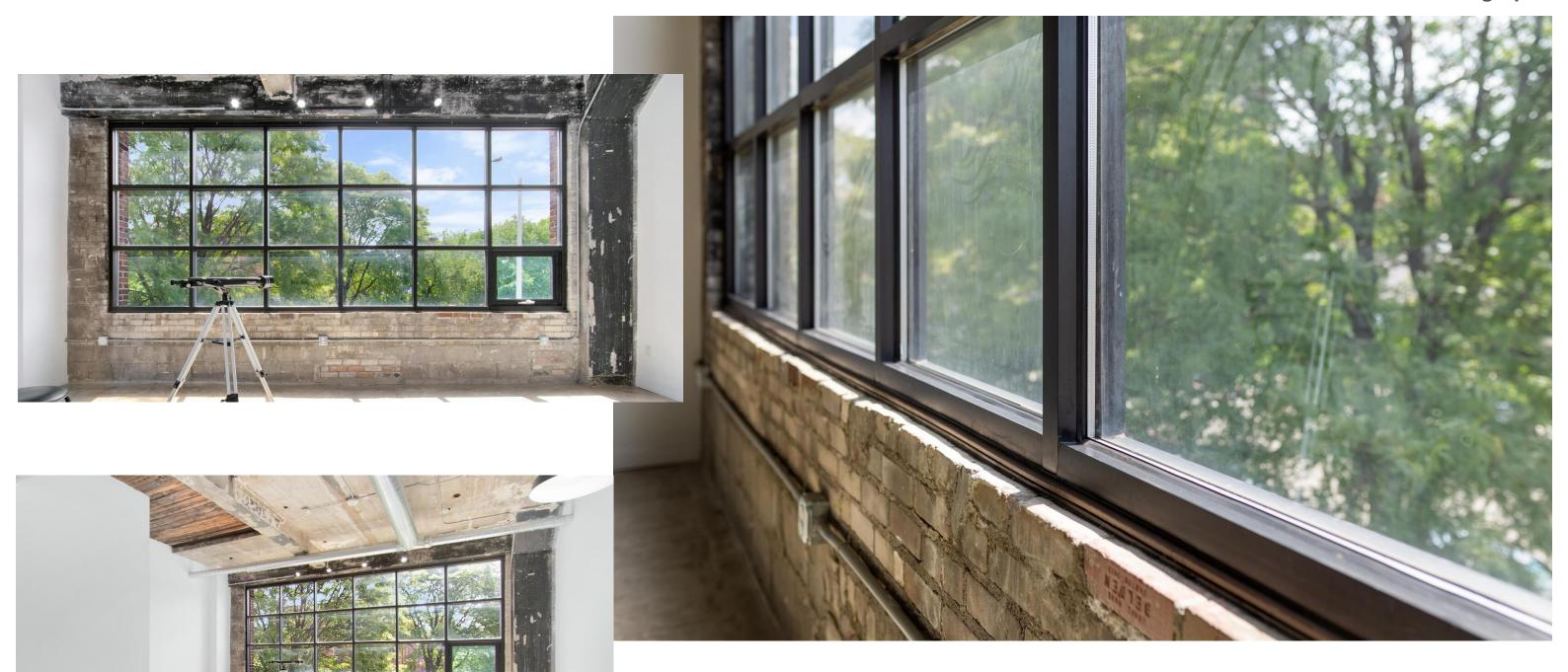
NORTH ELEVATION



WEST ELEVATION



Window Photographs



SPECIFICATIONS: RTF 1850 SERIES 2" x 4 1/2"

GENERAL DESCRIPTION

Work includes furnishing all necessary materials, labor and equipment for the installation of the aluminum framing system as specified herein.

NOT included: Structural support of the framing system.

PERFORMANCE REQUIREMENTS

Structural Performance-Deflection shall be tested in accordance with the ASTM E330. Maximum deflection of a member shall not exceed L/175 of its span, and when the load is removed there shall be no evidence of permanent deformation or damage when tested under a load of (SPECIFY) PSF. Thermal Performance when tested in accordance with AAMA 1503.1-88 and ASTM C 236-89 Condensation Resistance Factor (CRF) will be a minimum of 63, and Thermal Transmittance (U Value) will be 0.46 BTU/HR/FT²/°F or less.

PRODUCTS/MATERIALS

Extrusions shall be AA-6063-T5 alloy and temper (ASTM B221 alloy G.S.10A-T5) with a nominal wall thickness of .090". RTF 1850 Series is a thermally broken framing system with a pour and debridge process that combines a mechanical and adhesive bond between the urethane and the aluminum. Fasteners shall be aluminum; stainless steel or zinc plated steel in accordance with ASTM A 164. Glazing gaskets shall be EPDM elastomeric extrusions or vinyl with a fiberglass reinforcement cord to prevent stretching.

FABRICATION

The framing system shall provide for flush glazing on all sides with no projecting stops. Vertical and horizontal framing members shall have a nominal face dimension of 2" with an overall depth of $4\frac{1}{2}$ ".

FINISHES

All exposed framing surfaces shall be free of scratches and other serious blemishes. Aluminum extrusions shall be given an acid etch, followed by an anodic oxide treatment conforming to the American Architectural Metal Association to obtain a color anodized finish AA-M12C2XA31 class II (clear anodized) or AA-M12C2XA44 class I (dark bronze anodized). Black anodize, powder coat and Kynar finishes are available upon request.

EXECUTION

The framing system shall be installed, glazed, and adjusted by experienced workers in accordance with Ramco's installation instructions and the approved shop drawings.

CLEANING AND PROTECTION

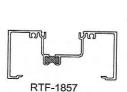
After installation all metal surfaces shall be cleaned to remove contaminants. All work shall be protected against damage until approved by the general contractor. Thereafter, it shall be the responsibility of the general contractor to provide protection and final cleaning.

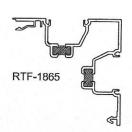
NOTE: "Always Service All Ways" is our trade mark and to keep up with today's innovations Ramco reserves the right to change specifications without written notice.



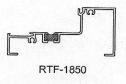
1850 SERIES

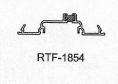
INDIVIDUAL EXTRUSIONS
1/4 SCALE

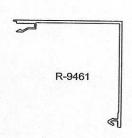


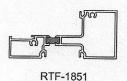


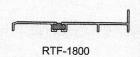




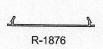




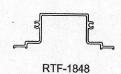














PERFORMANCE CALCULATOR

New Project 14

			Visible Light				t	Solar Energy				Thermal Properties	
Make-up Name	Make-up Icon	Glass 1 & Coating	Glass 2 & Coating	ass 2 & Transmitt oating ance		Reflectance		Reflectan ce	Solar Heat Gain	U-Value			
								Solar (te %)		Coefficient (SHGC)	Winter Night (Btu/hr-ft² F)	Summer Da	
Default Mak	e-up 01	A STATE OF THE PARTY OF THE PAR	SunGuar d® SN 68 (North America) on Guardian Clear Glass (North America)	Guardian Clear Glass (North America)	68	11	12	33	33	0.38	0.293	0.275	
GLASS 1		n Clear Glas	s (North Am	erica)		Outdoor							
	THICKIES	55 - 1/4 (611	im)			#2	SunGuard®	SN 68 (Nort	h America)				
GAP 1	100% Air, 1/2" (12.7mm)												
GLASS 2	Guardian Clear Glass (North America) #3 Thickness = 1/4" (6mm) #4												
	Total Un	it (Nominal)	= 1 in			Slo	pe = 90°		Window	Height = 1	meter		
	Estimate	d Nominal G	lazing Weig	ht: 5.75 lb/ft²						. The state of the			
						Indoors							

Important Notes

Calculations and terms in this report are based on NFRC 2010. The performance values shown above represent nominal values for the center of glass with no spacer system or framing.

Laminated products:

The Performance Calculator allows the user to model a wide variety of laminated glass makeups using different float glass substrates, coatings and interlayer material, including those makeups where the coating faces the interlayer. It is the user's responsibility to assess whether the laminated glass makeup meets relevant regional standards and complies with applicable laminated glass safety regulations.

In addition, when the laminated glass makeup includes a coating facing the interlayer material, there may be a loss of thermal insulation performance and a color change compared to non-embedded coated class.

Non-specular products (translucent or diffuse):

The performance measurement for non-specular (translucent or diffuse) materials such as translucent interlayers or acid etched glass surface, or surface with ceramic frit is limited by the current experimental technologies. Since measurements capture physically only a part of the resulting radiation, calculated performance results provided herein and based on such measurements are not compliant with any standard (including EN 410) and may only be used as a general reference. Actual values may vary significantly based upon exact fabrication process, as well as type, thickness and color of used non-specular material.

Please note that the Thermal Stress Guideline is only a general guide to the thermal safety of a glazing, and it is not a replacement for detailed thermal stress analysis.

Explanation of Terms



- Visible Light Transmittance (Tv, %) is the percentage of incident light in the wavelength range of 380 nm to 780 nm that is transmitted by the glass.
- Ultraviolet (UV) Transmittance (Tuv, %) is the percentage of the incident solar radiation transmitted by the glazing in the 300 nm to 380 nm range.
- Solar Energy Direct Transmittance (Te, %) is the percentage of incident solar energy in the wavelength range of 300 nm to 2500 nm that is directly transmitted by the glass.
- Visible Light Reflectance Outdoors/Indoor (Rv out/in, %) is the percentage of incident visible light directly reflected by the glass.
- Solar Direct Reflectance Outdoors/Indoors (Re out/in, %) is the percentage of incident solar energy directly reflected by the glass.
- Solar Energy Absorptance (Ae, %) is the percentage of the sun's energy that is absorbed by glass.
- **U-Value** is the glazing parameter that characterizes the heat transfer through the central part of the glazing, i.e. without edge effects, and expresses the steady-state density of heat transfer rate per temperature difference between the environmental temperatures on each side. US Standard units are Btu/hr·ft²·F and SI / Metric units are W/m² K.
- Relative Heat Gain (RHG) is the total net heat gain to the indoors due to both the air-to-air thermal conductance and the solar heat gain. US Standard units are Btu/hr.ft² and SI / Metric units are W/m².
- **Shading Coefficient (sc)** is Solar Factor divided by 0.87. It is a measure of the solar heat gain referenced to 3 mm clear glass which has the designated value of 1.00.
- **Solar Heat Gain Coefficient (SHGC)** is the sum of the solar direct transmittance and the secondary heat transfer factor of the glazing towards the inside, the latter resulting from heat transfer by convection and longwave IR-radiation of that part of the incident solar radiation which has been absorbed by the glazing.
- Light-to-Solar Gain (LSG) is the ratio of visible light gain to solar gain. LSG = (Visible Transmittance) / (SHGC)
- Color Rendering Index in transmission, D65 (Ra) is the change in color of an object as a result of the light being transmitted by the glass.
- Weighted Sound Reduction Index (Rw) is a single-number quantity which characterizes the airborne sound insulation of a material or building element over a range of frequencies.
- Sound Transmission Class (STC) is a single-number quantity which characterizes the airborne sound insulation of a material or building element over a range of frequencies.

Disclaimer

This performance analysis is provided for the limited purpose of assisting the user in evaluating the performance of the glass products identified on this report.

Spectral data for products manufactured by Guardian reflect nominal values derived from typical production samples or CE Initial Type Testing and subject to variations due to manufacturing and calculation tolerances. Spectral data for products not manufactured by Guardian were derived from the LBNL International Glazing Database and have not been independently verified by Guardian. Guardian recommends a full-size mock-up be approved.

The values provided herein are generated according to established engineering practices and applicable calculation standards. Many factors may affect glazing characteristics, including glass size, building orientation, shading, wind speed, type of installation, production process and others. The applicability and results of the analysis are directly related to user inputs and any changes in actual conditions can have a significant effect on the results. It is the responsibility of the users of the analysis to ensure that the intended application is appropriate and complies with all relevant laws, regulations, standards, codes of practices, processing guidelines and other requirements. Guardian makes no guarantee that any glazing modeled herein is available from Guardian or any other manufacturer. The user has the responsibility to check with the manufacturer regarding availability of any glass type or make-up.

While Guardian has made a good faith effort to verify the reliability of the tools used for this analysis, they may contain unknown programming errors that could result in inaccurate results. The user assumes all risk relating to the results provided and is solely responsible for selection of appropriate products for user's application. Guardian makes no express or implied warranty of any kind with respect to the tools used by Guardian and this analysis. There are no warranties of merchantability, non-infringement or fitness for a particular purpose with respect to the tools used by Guardian and this analysis and no warranty shall be implied by operation of law or otherwise. The only warranties applicable to Guardian products are those separately provided in writing for each product. In no event shall Guardian be liable for direct, indirect, special, consequential or incidental damages of any kind relating to or resulting from





