



ENGINEERING,  
INC.

ENGINEERS  
SURVEYORS

July 8, 2020

Attn: Mr. Kenneth Buckland, Director of Planning and Economic Development  
Town of Wareham Planning Board  
54 Marion Road  
Wareham, MA 02571

Re: Site Plan Review – Proposed Custom Woodwork Building  
Master Millwork, Inc.  
55 Charlotte Furnace Road  
G.A.F. Job No.: 19-9342

Dear Planning Board Members,


G.A.F. Engineering, Inc., on behalf of our client Master Millwork, Inc., hereby submits 14 sets of the following materials which comprise our application for Site Plan Review.

- Site Development Plans dated July 8, 2020. (10 sheets)
- Architectural Plans dated July 7, 2020. (2 sheets)
- Site Plan Review Application.
- Stormwater Report dated July 8, 2020. (3 Copies)
  - Project Narrative and Impact Assessment Report.
  - 300' Certified Abutters list.
  - Tax Verification Form.
  - Site Plan Review Checklist.
- Filing fee of seven hundred fifty dollars (\$750.00).
- Advertising fee of eighty dollars (\$80.00).

This project consists of the construction of a 43,400 square foot custom woodwork manufacturing building adjacent to the existing Master Millwork facility. The project has been designed in compliance with the applicable sections of the Wareham Zoning By-Laws.

Please contact me directly if you have any questions.

Sincerely,

  
William F. Madden, P.E.

Cc: Master Millwork, Inc.  
Town Clerk

266 MAIN ST.  
WAREHAM, MA  
02571

TEL 508.295.6600  
FAX 508.295.6634

gaf@gaf-eng.com

**APPLICATION FOR SITE PLAN REVIEW**

Applicant: Name: Master Millwork, Inc.

Mailing Address: 55 Charlotte Furnace Road, Wareham, MA 02576

Telephone: 508-273-0500

Project: Street & Number: 55 Charlotte Furnace Road

Assessor's Map: 105 Lot(s): MA2

Dwelling Units #: N/A

Parking Spaces #: 64

Acres: 6.0± Acres Square feet commercial space: 43,400 sf Custom Woodwork, Cabinetry Manufacturing, Processing, and Assembling Facility.

Briefly describe project: The project consists of the construction of a custom woodwork assembly facility to be used in conjunction with the existing building on the lot.

Date: 07/07/20

Signature of Applicant: Chanan Masse

**Town of Wareham**

**APPLICANT/CONTRACTOR/REPRESENTATIVE INFORMATION SHEET**

Check One:  Variance       Special Permit       Site Plan       Appeal

Date stamped in: \_\_\_\_\_ Date decision is due: \_\_\_\_\_

Applicant's Name: Master Millwork, Inc.

Applicant's Address: 55 Charlotte Furnace Road, Wareham, MA 02576

Telephone Number: 508-273-0500

Cell Phone Number: \_\_\_\_\_

Address of Property/Project: 55 Charlotte Furnace Road

Email Address: hmasse@mastermillwork.com

Landowner's Name: Master Millwork, Inc.

Owner's Address: 55 Charlotte Furnace Road, Wareham, MA 02576

Telephone Number: 508-273-0500

Contact Person: William F. Madden-G.A.F. Engineering, Inc. Telephone Number: 508-295-6600

Map 105      Lots MA2      Zone R-60/Business Dev. Overlay Dist.

Date Approved \_\_\_\_\_ Date Denied \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Town of Wareham Site Plan Review  
Application Checklist

**Applicability:** All new commercial and/or industrial structures or developments, multiple Family dwellings, apartment houses, changes in use, reconstruction, alteration, or extension of Existing uses, structures and/or developments. All developments of any type (i.e. subdivision) on 30 acres or greater.

**Name of Site:** Master Millwork, Inc. **Date:** June 10, 2020

**Owner(s):** Master Millwork, Inc.

**Address:** 55 Charlotte Furnace Road, Wareham, MA 02576

**Telephone Number:** 508-273-0500

**Developer(s):** Master Millwork, Inc.

**Address:** 55 Charlotte Furnace Road, Wareham, MA 02576

**Telephone Number:** 508-273-0500

**Relationship between Developer & Property Owner:** Same entity

**Surveyor:** G.A.F. Engineering, Inc., 266 Main Street, Wareham, MA 02571

**Engineer:** G.A.F. Engineering, Inc., 266 Main Street, Wareham, MA 02571

**Architect:** \_\_\_\_\_

**Landscape Architect:** EA Fuller & Associates, P.O. Box 48, N. Carver, MA 02355

ITEM	COMPLETED
Application filed with Planning Board and Zoning Board (in case of Special Permit)	X
Copy filed with Town Clerk	X
Preliminary plan and supplementary materials (14 copies)	
Filing fee	X
GENERAL INFORMATION	
Developer Name, address, telephone number	X
Property Owner Name, address, telephone number	X
Date of Application	X
Statement briefly describing project	X
Locus Map (1"=2000')	X
Location of property to surrounding area (scale should be no less than 1"=100') and general characteristics of all lands within 200' of the proposed site including	X

Structures, parking areas, driveways, pedestrian ways, and natural characteristics	X
Zoning district (sq. feet within each district if more than one)	X
Total area of project to include wetland and 100 year floodplain (both in sq. feet)	X
All contiguous land owned by the applicant or by owner of property	X
Photographs of site (8" by 10") – at discretion of Permitting Authority	
<b>EXISTING FEATURES</b>	
(Scale 1"=20', 1"=40', or 1"=100' where practical and appropriate to the size of the proposal) Must include at minimum the following:	
<b>1. Existing Natural Features</b>	
a. Tree line of natural area;	X
b. Individual trees 18" dbh or over;	
c. Bogs or agricultural areas;	N/A
d. All wetlands protected under 310 CMR 10.02 (1) (a-d); floodplain (100 year) with base flood elevation data;	N/A
e. Contour lines (2' intervals);	X
f. General soil types.	X
<b>2. Existing Man-Made Features</b>	
a. Vehicle accommodation areas; streets, roads, private ways, walkways;	X
b. Curbs, gutters, curb cuts, drainage grates;	X
c. Storm drainage facilities including manholes;	X
d. Utility lines including water, sewer, electric, telephone, gas, cable TV;	X
e. Fire hydrants and location of dumpsters;	X
f. Buildings, structures, and signs (free standing) including dimensions of each;	X
g. Exterior lighting features.	X
<b>3. Existing Legal Features</b>	
a. Zoning of property (district lines);	X
b. Property lines (with dimensions identified);	X
c. Street right-of-way lines;	X
d. Utility or other easement lines;	X
e. Monuments.	X
<b>DEVELOPMENT PLAN</b>	
Proposed changes to existing natural features, existing man-made features, and existing legal features including the following:	
• Area of each new lot in square feet;	X
• Lot dimensions;	X
• Location and dimensions of all buildings and freestanding signs as well as the distances from all buildings to lot lines, streets, or street;	X
• Location, dimension, and designated use for all recreation areas;	N/A
• Location and dimension of all open space (indicate whether such open space is to be dedicated to public use or to remain private);	N/A
• Streets (including street names) which conform to the design standards of the Planning Board's Rules and Regulations Governing the Subdivision of Land;	X
• Curbs and gutters, curb cuts, drainage grates;	X
• Drainage facilities including manholes, pipes, drainage ditches, and retention	X

ponds;	
• Sidewalks and walkways showing widths and materials;	X
• Outdoor illumination with lighting fixture size and type identified;	X
• Utilities- water, sewer, electric, telephone, gas, cable TV;	X
• Fire hydrant locations;	X
• Dumpster (trash collection facilities);	X
• New contour lines resulting from earth movement (2' intervals) and indication of types of ground cover and other precautions to stabilize slopes;	X
• Vehicle parking, loading, and circulation areas showing dimensions and layout of parking spaces, travel lanes, aisles, and driveways;	X
• Proposed new plantings by size and location or construction of other devices to comply with screening and shading requirements.	X
<b>IMPACT STATEMENT</b>	
<b>Part One:</b> Description of impact of proposed development on all applicable town services including but not limited to schools, sewer service, water system, parks, fire, and police protection; roads in the immediate vicinity of proposed development (include estimate of both peak and average daily traffic count); and the ecology of the area within the site and any significant off-site impacts.	X
<b>Part Two:</b> Description of actions that have been taken to mitigate the impacts described in part one.	X

**PLANNING BOARD**  
**TAX VERIFICATION FORM**

This verifies that Master Millwork, Inc. (name of applicant) is up-to date on the taxes for the property(ies) he/she owns in Wareham. If the applicant is not the current owner of the property that the application addresses, the current owner Master Millwork, Inc. (name of property owner) is up-to-date on taxes on all properties he/she owns in the Town of Wareham.

55 Charlotte Furnace Road – Map 105 Lot MA2

John Foster 5-28-20  
John Foster, Tax Collector

MAP & LOT	OWNER	CO-OWNER	STREET ADDRESS	TOWN	STATE	ZIP CODE
TOWN OF WAREHAM ABUTTERS						
MAP 105 LOT MA2						
OWNER MASTER MILLWORKS						
105-1048	TOWN OF WAREHAM		TOWN HALL	WAREHAM	MA	02571
105/A-90	TOWN OF WAREHAM		TOWN HALL	WAREHAM	MA	02571
105/A-81	MCNUITY NICHOLAS	MCNUITY LINDSEY	4 ACOAXET LN	W WAREHAM	MA	02576
105/A-145	GETCHELL IVETTE	GETCHELL RUSSELL	3 ACOAXET LN	W WAREHAM	MA	02576
105/A-144	BRIGHTMAN KATHLEEN F	BRIGHTMAN ARTHUR J	PO BOX 693	W WAREHAM	MA	02576
105/A-91	SYLVIA MICHAEL J	SYLVIA KELLEY M	66 CHARLOTTE FURNACE RD	W WAREHAM	MA	02576
105/A-80	MATTHEWS RICHMOND A	MATTHEWS DEBRA L	64 CHARLOTTE FURNACE RD	W WAREHAM	MA	02576
105/C2	MAKEPEACE CO A D		158 TTHONET RD	WAREHAM	MA	02571
105/1002-F	MAKEPEACE CO A D		158 TTHONET RD	WAREHAM	MA	02571
CERTIFIED ABUTTERS AS						
THEY APPEAR ON OUR TAX ROLLS						
AS OF 4/30/2020						
<i>By: Peter Akers</i>						
ASSESSORS OFFICE						
REQUESTED BY						
GAF ENGINEERING, INC						
KLOPES@GAF-ENG.COM						





# **Project Narrative & Impact Assessment Report**

For

## **“Proposed Custom Woodwork Facility”**

55 Charlotte Furnace Road  
Wareham, MA

Prepared for

### **Master Millwork, Inc.**

55 Charlotte Furnace Road  
Wareham, MA 02576

Prepared by

### **G.A.F. Engineering, Inc.**

266 Main Street  
Wareham, MA 02571

**July 8, 2020**

G.A.F. Job No.: 19-9342

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## **Project History**

Master Millwork, Inc. purchased this 6.00 acre site from A.D. Makepeace Company in March 2016 after receiving permits from the Town of Wareham to construct a 20,000 square foot custom woodwork building with associated access, parking, utilities, and drainage systems. The site design plans which were approved indicated a potential future building location on the east side of the property

The project was constructed in 2017 in compliance with the approved site design plans. Master Millwork, Inc. through this submission is proposing to construct a 43,400 square foot building on the east side of the lot in order to increase production at the current location.

## **Project Site**

The site is located within the Town's Business Development Overlay District (BDOD). Existing site features are consistent with the above referenced recent lot development. This property was selected for use as the company's headquarters partially because the land area is sufficient to allow the construction of additional manufacturing space.

The property is bordered by Charlotte Furnace Road on the west, a vacant lot to the north which is anticipated to be commercially developed, a ground mounted solar energy facility to the east, and an electric utility easement to the south. The access drive is located in the center of the property opposite Acoaxet Lane. The undeveloped portion of the property is wooded.

There are no jurisdictional wetland resources on the property. It is located, however, within Priority Habitat mapped by the Natural Heritage Endangered Species Program. The prior landowner, the A.D. Makepeace Company, created a master plan for its land in this area and provided conservation restrictions and other mitigation to the Commonwealth of Massachusetts so that this lot and others could be fully developed.

Permitting required for this project is limited to Site Plan Review/Special permit from the Wareham Planning Board. A Request for Determination of Applicability will be filed with the Wareham Conservation Commission as required under the SPR procedures. Once the permit is issued by the Planning Board the owner will apply for a building permit. Construction is expected to begin in the Fall of 2020.

## **Project Description**

The project consists of the construction of a 140'x 310' (43,400 sf) manufacturing building at the east side of the developed portion of the site. The new building will be connected to the existing building by the addition of a 15'x 30' link.

Access is provided to 3 sides of the new building for future maintenance and in the event that access for fire equipment is needed. Three truck docks are located at the front of the south end of the building to facilitate materials deliveries and shipping of finished products.

Parking is being increased to a total of 83 spaces. This will allow up to 50 employees to work on a single shift. The additional spaces will be available for customers.

A new main truck access drive is proposed to be located along the south property line, approximately 130' from the existing entrance. This is necessary for truck access and maneuvering to the loading docks on the south end of the new building. New parking areas are proposed. The existing gravel parking and access areas will be paved.

A new fire protection line and domestic water service will be installed from Charlotte Furnace Road within the new access drive. Electric and gas utilities are proposed to be provided from the connection of the existing and new buildings. The new building will have its own subsurface sewage disposal system.

The stormwater management system has been modified to accommodate the increased development of the lot. Several types of "Best Management Practices", or BMPs, have been specified in order to comply with the Massachusetts Stormwater Handbook and Town of Wareham regulations. A detailed description and calculations are provided in the Stormwater Management Report. The report documents the compliance of the design and protection provided for adjacent downstream properties.

In summary the successful completion of this expansion to an existing business will provide increased revenue and employment within the Town of Wareham consistent with the applicable Zoning and prior master planning efforts.

# **Environmental Impact Statement - Impacts and Mitigation**

## **Town Services**

There is no anticipated increase in demand for municipal services in association with the expanded site development. The new building and site work will significantly increase the value of the property. The project will create construction phase employment, increase long-term employment, and increase tax revenue to the Town of Wareham.

Mitigation: None required.

## **Water System**

A six-inch fire service and two-inch domestic water line will be connected to the new building. Large quantities of water are not needed for the warehouse building. The water distribution system will not be impacted by the project. It is estimated that actual domestic water use will be in the range of 750-1000 gallons per day.

Mitigation: None required.

## **Sanitary Sewer System**

This area of Wareham does not have municipal sewer available in Charlotte Furnace Road. The existing building has a subsurface sewage disposal system sized in accordance with 310 CMR 15.00, the state regulations governing such systems. The new building will have its own system based on the number of employees working in the building.

Mitigation: None required.

## **Parks and Recreation**

The project is classified as Light Manufacturing which is an allowed use in the Business Development Overlay District. The expanded development of the lot will not impact the current inventory of parks and recreational areas within the Town of Wareham. The building will not generate the need for recreational facilities.

Mitigation: None required.

## **Police Protection**

The police department currently patrols the area periodically and in response to specific calls. The site includes security fencing and lighting. No increase in the frequency of patrols is anticipated.

Mitigation: None required.

### Fire Protection

The warehouse building will be provided with an automatic sprinkler fire protection system. A new fire hydrant is proposed to be centrally located between the existing and proposed buildings in a new landscaped island. The buildings are accessible to emergency vehicles. Proposed rear access to the new building has been reviewed by the Fire Department. Once the plans have been filed with the Planning Board and officially submitted to the Fire Inspector an official determination will be provided.

Mitigation: None required.

### Schools

The proposed use will not generate additional demands on the school department as no new school age children will be introduced as a result of this project.

Mitigation: None required.

### Traffic

Traffic to and from the site will increase during construction and as a result of the additional employees working in the new building. Approximately 20-25 additional employees are anticipated. Each employee generates a minimum of 2 vehicle trips per day. Construction phase traffic and deliveries of raw materials and finished products predominantly arrive and depart from south of the site which is the direction for access to Route 6/28 and Route 195. The increased traffic to and from Route 6/28 due to the delivery of more raw materials and shipping of finished product will be occur throughout the range of normal business hours therefore no significant impact is anticipated for the level of service at the Charlotte Furnace Road/Route 28 intersection.

Mitigation: None required.

### Ecology of the Site

#### Land

This property is currently developed with an existing building and parking areas. The proposed use is consistent with the Town's Zoning By-Laws. The site will be improved with a new building, parking lot, lighting, stormwater management systems and site landscaping. Soils on the property are comprised of medium-coarse sand

which is conducive to the infiltration of stormwater runoff. The total lot coverage is proposed to be 57.7%. A minimum 10' wide buffer of natural trees will be preserved along the property lines.

Mitigation: None required.

### Surface Water

There are no surface waters on or adjacent to the proposed site. Stormwater runoff flows away from Charlotte Furnace Road toward the east and south. The runoff from the buildings and paved surfaces will be collected, treated, and infiltrated within crushed stone trenches and an infiltration basin in accordance with the MassDEP Stormwater Management Standards and Town of Wareham regulations. Surface runoff will be maintained at or below present rates and volumes. Surface runoff following construction will be limited to those treed and landscaped areas that are along the east and south property lines, downgradient from the collection system.

Mitigation: No additional mitigation required.

### Groundwater

This project will be developed without significant changes in topography. Several underground storage systems and an infiltration basin will store and infiltrate runoff within the property. Water quality structures will remove a minimum of 44% total suspended solids prior to infiltration. Total treatment of the runoff subsequent to infiltration is approximately 96% for total suspended solids. Seasonal high groundwater is greater than ten feet below existing grade. Recharge to groundwater far exceeds the minimum requirement of 0.60" over impervious surfaces.

Mitigation: No additional mitigation required.

### Air Quality

Minimal impact due to construction phase vehicle emissions and potential dust from excavation and site grading. Manufacturing activities will be performed within the existing and proposed buildings. The need for dust collection and air filtering will be addressed through the building permit process. No long-term air quality impacts will result from this project.

Mitigation: None required.

### Noise

The warehouse building will not generate any significant discernable noise in outside areas. There will be short term noise from the construction phase of the project. This



is consistent with activities which are allowed in the commercial activity zones in the Town.

Mitigation: No additional mitigation required.

### Wetlands

There are no jurisdictional wetland areas on the property or in the immediate area. A Request for Determination of Applicability will be filed with the Wareham Conservation Commission for confirmation as required by the Site Plan Review approval process.

Mitigation: No mitigation required.

### Wildlife

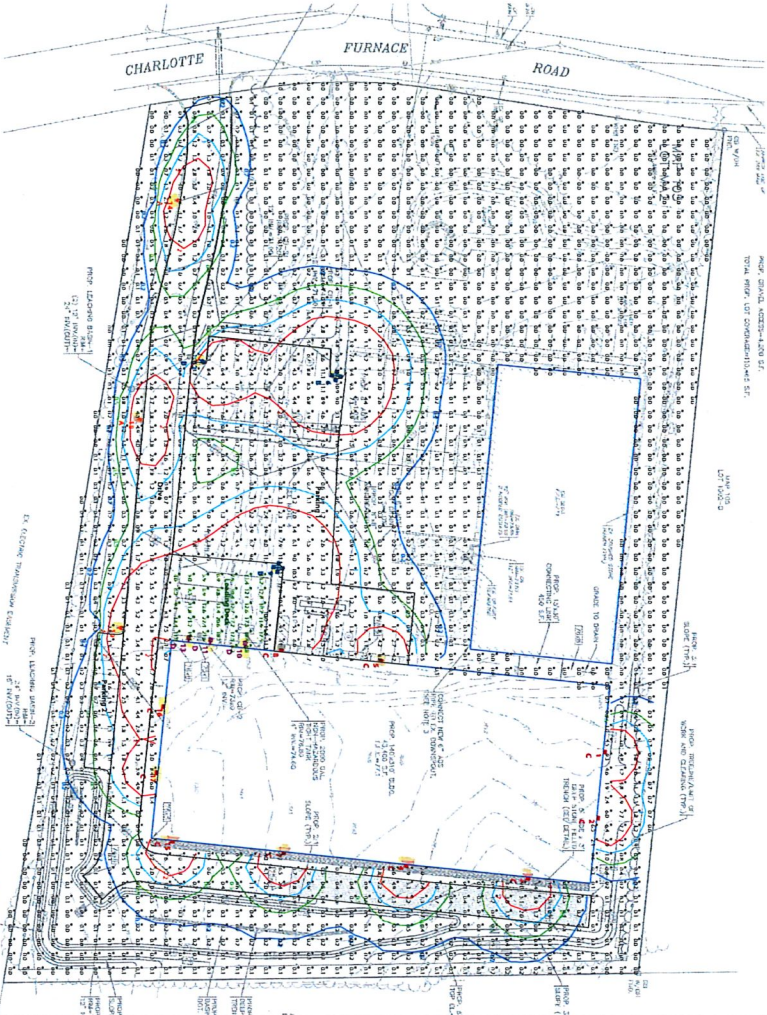
There will be no appreciable impact to wildlife, since the project is located on a previously developed parcel of land. The total lot disturbance is less than allowed by Zoning.

Mitigation: No further mitigation required.

### Rare Species

The site is located within a mapped Priority Habitat of Rare Species as determined by the Natural Heritage Endangered Species Program. This lot was identified by the prior owner, A.D. Makepeace Co., as a lot designated for development on a Master Plan which placed 436 acres in a Conservation Restriction for the benefit of the Commonwealth of Mass.

Mitigation: Previously provided per the Conservation Restriction



Scale: 1 inch= 40 Ft.



Label	CalcType	Units	Avg	Max	Min	AsymIn	Max/Min	Description
Loaded Deck	ILLUMINANCE	FC	15.34	22.4	4.0	314	500	nothing taken at grade
Drive	ILLUMINANCE	FC	1.67	6.5	0.1	1670	6500	nothing taken at grade
Parking 1	ILLUMINANCE	FC	3.00	17.8	0.3	1000	4247	nothing taken at grade
Parking 2	ILLUMINANCE	FC	1.13	3.3	0.5	226	660	nothing taken at grade

Label	CalcType	Units	Avg	Max	Min	AsymIn	Max/Min	Description
1	A	ALERTS	SINGLE	1200	Foot mounted (Type III)	B1-L0-C2	B1-L0-C2	
2	B	ALERTS	4 x 90°	1200	Foot mounted (Type IV)	B1-L0-C2	B1-L0-C2	
3	C	WYSERS	SINGLE	1200	Foot mounted	B1-L0-C2	B1-L0-C2	
4	D	WYSERS	SINGLE	1200	Wall mounted	B1-L0-C2	B1-L0-C2	

Label	CalcType	Units	Avg	Max	Min	AsymIn	Max/Min	Description
1	A	ALERTS	SINGLE	1200	Foot mounted (Type III)	B1-L0-C2	B1-L0-C2	
2	B	ALERTS	4 x 90°	1200	Foot mounted (Type IV)	B1-L0-C2	B1-L0-C2	
3	C	WYSERS	SINGLE	1200	Foot mounted	B1-L0-C2	B1-L0-C2	
4	D	WYSERS	SINGLE	1200	Wall mounted	B1-L0-C2	B1-L0-C2	



Prepared For:  
 Holbrook Associated  
 35 Reservoir Park Drive  
 Rockland, MA 02370  
 Tel: 781-671-0011

Job Name:  
 Master Millwork  
 Lighting Layout  
 Version A

Scale: as noted  
 PROJECT # 153767  
 Date: 6/10/2020  
 CASE # 00401768  
 Filename: Master Millwork 00401768A.AGI  
 Drawn By: K. Gonzales, LC

The Lighting Analysis, estimated Energy Analysis and/or Visual Simulation ("Lighting Design") provided by RAB Lighting Inc. ("RAB") represents an anticipated prediction of lighting system performance based upon design parameters and information supplied by others. These design parameters and information provided by others may not be verified by RAB and therefore actual measured results may vary from the actual field conditions. RAB does not warrant, either implied or stated, with respect to actual measured light levels or energy consumption levels as compared to those illustrated by the Lighting Design. RAB neither warrants, either implied or stated, nor represents the appropriateness, completeness or sufficiency of the Lighting Design when used as a compliance and regulatory code requirements with the exception of those specifically stated on drawings created and submitted by RAB. The Lighting Design is issued, in whole or in part, as advisory documents for informational purposes and is not intended for construction nor as being part of a project's construction documentation package.



Color: Bronze

Weight: 30.2 lbs

Project:

Type:

Prepared By:

Date:

### Driver Info

Type	Constant Current
120V	0.66A
208V	0.41A
240V	0.35A
277V	0.30A
Input Watts	77.10W

### LED Info

Watts	78W
Color Temp	5000K (Cool)
Color Accuracy	71 CRI
L70 Lifespan	100,000
Lumens	10,157
Efficacy	131.7 LPW

## Technical Specifications

### Listings

#### UL Listed:

Suitable for wet locations as a downlight

#### DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: P0000179P

#### IESNA LM-79 & IESNA LM-80 Testing:

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

#### Dark Sky Conformance:

Conforms to (allows for conformance to) the IDA's fully shielding requirement, emitting no light above 90 degrees (with the exclusion of incidental light reflecting from fixture housing, mounts, and pole).

### LED Characteristics

#### Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations

#### LEDs:

Six (6) multi-chip, 13W, high-output, long-life LEDs

#### Color Consistency:

3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color

#### Color Stability:

LED color temperature is warranted to shift no more than 200K in color temperature over a 5-year period

#### Color Uniformity:

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

### Construction

#### IES Classification:

The Type II distribution is ideal for wide walkways, on ramps and entrance roadways, bike paths and other long and narrow lighting applications. This type is meant for lighting larger areas and usually is located near the roadside. This type of lighting is commonly found on smaller side streets or jogging paths.

#### Effective Projected Area:

EPA = 0.75

#### Ambient Temperature:

Suitable For use in 40°C (104°F)

#### Cold Weather Starting:

Minimum starting temperature is -40°C (-40°F)

#### Thermal Management:

Superior heat sinking with external Air-Flow fins

#### Lens:

Tempered glass lens

#### Housing:

Die-cast aluminum housing, lens frame and mounting arm

#### IP Rating:

Ingress Protection rating of IP66 for dust and water

#### Mounting:

Universal mounting arm compatible for hole spacing patterns from 1" to 5 1/2" center to center. Round Pole Adaptor plate included as a standard. Easy slide and lock to mount fixture with ease. Round pole diameter must be >4" to mount fixtures at 90° orientation.

#### Reflector:

Specular vacuum-metallized polycarbonate

#### Gaskets:

High-temperature silicone gaskets

## Technical Specifications (continued)

### Construction

#### Finish:

Formulated for high durability and long-lasting color

#### Green Technology:

Mercury and UV free. RoHS-compliant components.

### Electrical

#### Driver:

Constant Current, Class 2, 2000mA, 100-277V, 50-60Hz, 1.1A, Power Factor 99%

#### THD:

5.0% at 120V, 12.3% at 277V

#### Power Factor:

99.5% at 120V, 93.6% at 277V

#### Surge Protection:

4kV

### Other

#### Patents:

The ALED design is protected by patents in the U.S. Pat. 668,370, Canada Pat. 144956, China ZL201230100154.X, and Mexico Pat. 38423. Pending patents in Taiwan.

#### BAA Compliance:

Click [here](#) for BAA compliance.

### Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at [rablighting.com/warranty](http://rablighting.com/warranty).

### Equivalency:

Equivalent to 250W Metal Halide

### Buy American Act Compliance:

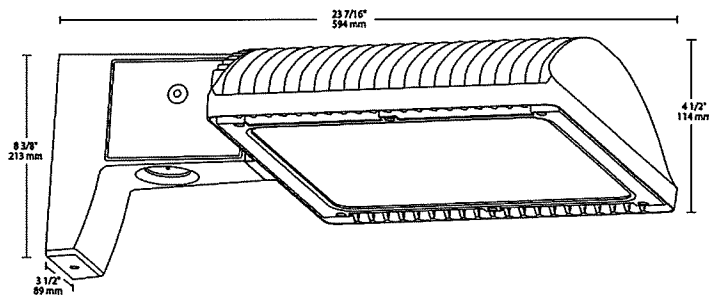
RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

### Optical

#### BUG Rating:

B1 U0 G2

### Dimensions



### Features

- 66% energy cost savings vs. HID
- 100,000-hour LED lifespan
- 5-Year, No-Compromise Warranty

## Ordering Matrix

Family	Optics	Wattage	Mounting	Color Temp	Finish	Driver Options	Options	Other Options
ALED	2T	78						
	4T = Type IV 3T = Type III 2T = Type II	50 = 50W 78 = 78W 105 = 105W 125 = 125W 150 = 150W	Blank = Pole mount SF = Slipfitter	Blank = 5000K (Cool) N = 4000K (Neutral) Y = 3000K (Warm)	Blank = Bronze RG = Roadway Gray W = White K = Black	Blank = 120-277V /480 = 480V /BL = Bi-Level /D10 = 0-10V Dimming	Blank = No Option /LC = Lightcloud® Controller /PCS = 120V Swivel Photocell /PCS2 = 277V Swivel Photocell /PCT = 120-277V Twistlock Photocell /PCS4 = 480V Swivel Photocell /PCT4 = 480V Twistlock Photocell /WS = Multi-Level Motion Sensor /WS2 = Multi-Level Motion Sensor 20 ft. /WS4 = Multi-Level Motion Sensor 40 ft.	Blank = Standard USA = BAA Compliant



Color: Bronze

Weight: 31.1 lbs

Project:

Type:

Prepared By:

Date:

### Driver Info

Type	Constant Current
120V	0.66A
208V	0.41A
240V	0.35A
277V	0.30A
Input Watts	77.10W

### LED Info

Watts	78W
Color Temp	5000K (Cool)
Color Accuracy	71 CRI
L70 Lifespan	100,000
Lumens	10,157
Efficacy	131.7 LPW

## Technical Specifications

### Listings

#### UL Listed:

Suitable for wet locations as a downlight

#### DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: P0000170X

#### IESNA LM-79 & IESNA LM-80 Testing:

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

#### Dark Sky Conformance:

Conforms to (allows for conformance to) the IDA's fully shielding requirement, emitting no light above 90 degrees (with the exclusion of incidental light reflecting from fixture housing, mounts, and pole).

### LED Characteristics

#### Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations

#### LEDs:

Six (6) multi-chip, 13W, high-output, long-life LEDs

#### Color Consistency:

3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color

#### Color Stability:

LED color temperature is warranted to shift no more than 200K in color temperature over a 5-year period

#### Color Uniformity:

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

### Construction

#### IES Classification:

The Type IV distribution (also known as a Forward Throw) is especially suited for mounting on the sides of buildings and walls, and for illuminating the perimeter of parking areas. It produces a semiCircular distribution with essentially the same candlepower at lateral angles from 90° to 270°.

#### Effective Projected Area:

EPA = 0.75

#### Ambient Temperature:

Suitable For use in 40°C (104°F)

#### Cold Weather Starting:

Minimum starting temperature is -40°C (-40°F)

#### Thermal Management:

Superior heat sinking with external Air-Flow fins

#### Lens:

Tempered glass lens

#### Housing:

Die-cast aluminum housing, lens frame and mounting arm

#### IP Rating:

Ingress Protection rating of IP66 for dust and water

#### Mounting:

Universal mounting arm compatible for hole spacing patterns from 1" to 5 1/2" center to center. Round Pole Adaptor plate included as a standard. Easy slide and lock to mount fixture with ease. Round pole diameter must be >4" to mount fixtures at 90° orientation.

#### Reflector:

Specular vacuum-metallized polycarbonate

#### Gaskets:

High-temperature silicone gaskets

## Technical Specifications (continued)

### Construction

#### Finish:

Formulated for high durability and long-lasting color

#### Green Technology:

Mercury and UV free. RoHS-compliant components.

### Electrical

#### Driver:

Constant Current, Class 2, 2000mA, 100-277V, 50-60Hz, 1.1A, Power Factor 99%

#### THD:

5.1% at 120V, 13.2% at 277V

#### Power Factor:

99.5% at 120V, 93.6% at 277V

#### Surge Protection:

4kV

### Other

#### Patents:

The ALED design is protected by patents in the U.S. Pat. 668,370, Canada Pat. 144956, China ZL201230100154.X, and Mexico Pat. 38423. Pending patents in Taiwan.

#### BAA Compliance:

Click [here](#) for BAA compliance.

### Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at [rablighting.com/warranty](http://rablighting.com/warranty).

### Equivalency:

Equivalent to 250W Metal Halide

### Buy American Act Compliance:

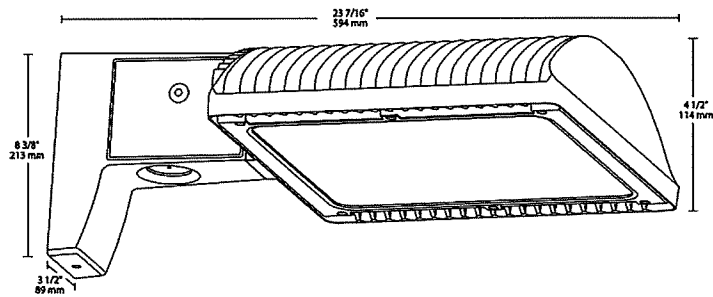
RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

### Optical

#### BUG Rating:

B1 U0 G2

## Dimensions



## Features

- 66% energy cost savings vs. HID
- 100,000-hour LED lifespan
- 5-Year, No-Compromise Warranty

## Ordering Matrix

Family	Optics	Wattage	Mounting	Color Temp	Finish	Driver Options	Options	Other Options
ALED	4T	78						
	4T = Type IV 3T = Type III 2T = Type II	50 = 50W 78 = 78W 105 = 105W 125 = 125W 150 = 150W	Blank = Pole mount SF = Slipfitter	Blank = 5000K (Cool) N = 4000K (Neutral) Y = 3000K (Warm)	Blank = Bronze RG = Roadway Gray W = White K = Black	Blank = 120-277V /480 = 480V /BL = Bi-Level /D10 = 0-10V Dimming	Blank = No Option /LC = Lightcloud® Controller /PCS = 120V Swivel Photocell /PCS2 = 277V Swivel Photocell /PCT = 120-277V Twistlock Photocell /PCS4 = 480V Swivel Photocell /PCT4 = 480V Twistlock Photocell /WS = Multi-Level Motion Sensor /WS2 = Multi-Level Motion Sensor 20 ft. /WS4 = Multi-Level Motion Sensor 40 ft.	Blank = Standard USA = BAA Compliant





Color: Bronze

Weight: 11.1 lbs

Project:

Type:

Prepared By:

Date:

### Driver Info

Type	Constant Current
120V	0.46A
208V	0.27A
240V	0.24A
277V	0.20A
Input Watts	55.10W

### LED Info

Watts	55W
Color Temp	5000K (Cool)
Color Accuracy	76 CRI
L70 Lifespan	100,000
Lumens	8,296
Efficacy	150.6 LPW

## Technical Specifications

### Listings

#### UL Listed:

Suitable for wet locations

#### IESNA LM-79 & IESNA LM-80 Testing:

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

#### DLC Listed:

This product is listed by Design Lights Consortium (DLC) as an ultra-efficient premium product that qualifies for the highest tier of rebates from DLC Member Utilities. DLC Product Code: PHGE72GZ

### LED Characteristics

#### Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations

#### LEDs:

Multip-chip, high-output, long-life LEDs

### Construction

#### Cold Weather Starting:

The minimum starting temperature is -30°C (-22°F)

#### Maximum Ambient Temperature:

40°C (104°F)

#### Housing:

Die-cast aluminum

#### Reflector:

Aluminum Alloy

#### Lens:

Glass

#### Gaskets:

High-temperature silicone gaskets

#### Mounting:

Surface mount

#### Finish:

Formulated for high durability and long-lasting color

#### Green Technology:

Mercury and UV free. RoHS-compliant components.

### Electrical

#### Drivers:

Constant Current, 120-277V, 50/60 Hz, 120V: 0.46A, 208V: 0.27A, 240V: 0.24A, 277V: 0.20A

#### Dimming Driver:

Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims as low as 10%.

#### THD:

10% at 120V, 8.6% at 277V

#### Power Factor:

99% at 120V, 98.4% at 277V

#### Surge Protection:

4kV

#### Note:

All values are typical (tolerance +/- 10%)

## Technical Specifications (continued)

### Other

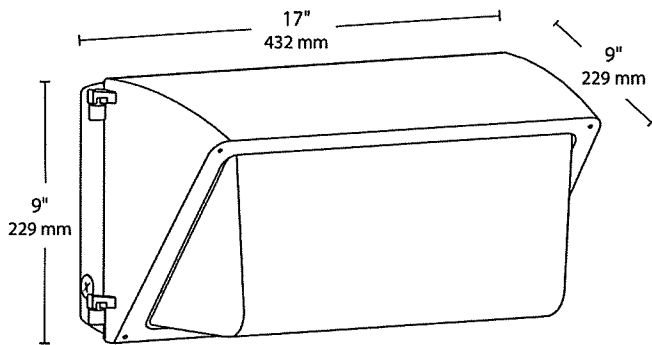
#### Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of ten (10) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at [rablighting.com/warranty](http://rablighting.com/warranty).

### Buy American Act Compliance:

RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

### Dimensions



### Features

- Affordable wall pack with traditional look
- Ultra-high efficacy
- Covers footprint of large HID wall packs
- 100,000-Hour LED lifespan

### Ordering Matrix

Family	Lumen Pack Wattage	CRI/Color Temp	Finish	Voltage	Options
WP3LED	83L	750		U	
	75L = 7500lumens, 51W 83L = 8300lumens, 55W 93L = 9300lumens, 65W 150L = 15,000lumens, 100W	750 = 70 CRI, 5000K 740 = 70 CRI, 4000K 730 = 70 CRI, 3000K	Blank = Bronze W = White	U = 120-277V, 0-10V Dimming H = 480V, 0-10V Dimming	Blank = No Options /PCU = 120-277V Button Photocell /PCS = 120V Swivel Photocell /PCS2 = 208V-277V Swivel Photocell /PCS4 = 480V Swivel Photocell /MVS = 120-277V Microwave Sensor /LC = Lightcloud® Controller /E2 = 120-277V Battery Backup



Color: Bronze

Weight: 34.8 lbs

Project:

Type:

Prepared By:

Date:

#### Driver Info

Type	Constant Current
120V	1.12A
208V	0.70A
240V	0.61A
277V	0.52A
Input Watts	134.80W

#### LED Info

Watts	125W
Color Temp	5000K (Cool)
Color Accuracy	70 CRI
L70 Lifespan	100,000
Lumens	16,328
Efficacy	121.1 LPW

## Technical Specifications

### Listings

#### UL Listed:

Suitable for wet locations

#### DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: P00001790

#### IESNA LM-79 & LM-80 Testing:

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

### LED Characteristics

#### Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations

#### LEDs:

Multi-chip, high-output, long-life LEDs

#### Color Consistency:

7-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color

#### Color Stability:

LED color temperature is warrantied to shift no more than 200K in color temperature over a 5-year period

#### Color Uniformity:

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

### Construction

#### IES Classification:

The Type IV distribution (also known as a Forward Throw) is especially suited for mounting on the sides of buildings and walls, and for illuminating the perimeter of parking areas. It produces a semiCircular distribution with essentially the same candlepower at lateral angles from 90° to 270°.

#### IP Rating:

Ingress Protection rating of IP66 for dust and water

#### Maximum Ambient Temperature:

Suitable for use in 40°C (104°F)

#### Cold Weather Starting:

Minimum starting temperature is -40°C (-40°F)

#### Thermal Management:

Superior thermal management with external "Air-Flow" fins

#### Housing:

Die-cast aluminum housing, lens frame and mounting arm

#### Mounting:

Heavy-duty mounting arm with "O" ring seal & stainless steel screws

#### Reflector:

Specular vacuum-metallized polycarbonate

#### Gaskets:

High-temperature silicone gaskets

#### Finish:

Formulated for high durability and long-lasting color

#### Green Technology:

Mercury and UV free. RoHS-compliant components.

### Electrical

#### Driver:

One Driver, Constant Current, Class 2, 1800mA 100-277V, 50-60Hz, Power Factor 99%

## Technical Specifications (continued)

### Electrical

#### THD:

5.3% at 120V, 15.4% at 277V

### Other

#### Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at [rablighting.com/warranty](http://rablighting.com/warranty).

### Patents:

The design of WPLED125 is protected by patents pending in US, Canada, China, Taiwan and Mexico

### Buy American Act Compliance:

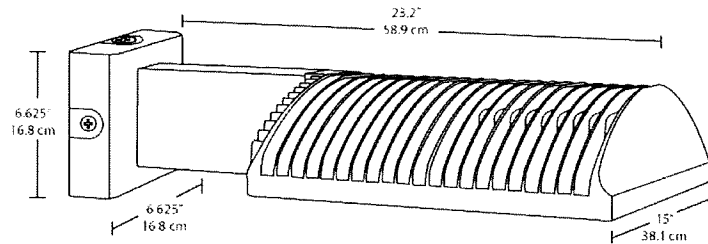
RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

### Optical

#### BUG Rating:

B1 U0 G2

## Dimensions



## Features

- High performance LED light engine
- Maintains 70% of initial lumens at 100,000-hours
- Weatherproof high temperature silicone gaskets
- Superior heat sinking with die cast aluminum housing and external fins
- Replaces 400W MH
- 100 up to 277 Volts
- 5-Year, No-Compromise Warranty

## Ordering Matrix

Family	Optics	Wattage	Color Temp	Mounting	Finish	Driver Options	Other Options
WPLED	4T	125					
	4T = Type IV 3T = Type III 2T = Type II	50 = 50W 78 = 78W 105 = 105W 125 = 125W 150 = 150W	Blank = 5000K (Cool) N = 4000K (Neutral) Y = 3000K (Warm)	Blank = Arm FX = Flat Mount	Blank = Bronze W = White	Blank = Standard /480 = 480V /BL = Bi-Level /D10 = 0-10V Dimming /480/D10 = 480V 0-10V Dimming	Blank = Standard /PC = 120V Photocell /PC2 = 277V Photocell /PCT = 120-277V Twistlock Photocell /PCT4 = 480V Twistlock Photocell /PCS = 120V Swivel Photocell /PCS2 = 277V Swivel Photocell /PCS4 = 480V Swivel Photocell /WS = Multi-Level Motion Sensor /WS2 = Multi-Level Motion Sensor (20 ft. mt. ht.) /WS4 = Multi-Level Motion Sensor (40 ft. mt. ht.) /LC = Lightcloud Controller



Color: Bronze

Weight: 233.0 lbs

Project:

Type:

Prepared By:

Date:

**Technical Specifications**

**Listings**

**CSA Listed:**

Suitable for wet locations

**Construction**

**Description:**

Steel pole 5" round 7 gauge 20 foot drilled two sides square base

**Shaft:**

46,000 p.s.i. minimum yield.

**Hand Holes:**

Reinforced with grounding lug and removable cover

**Base Plates:**

36,000 p.s.i. minimum yield.

**Color:**

Bronze powder coating

**Height:**

20 FT

**Gauge:**

7

**Wall Thickness:**

3/16"

**Shaft Size:**

5"

**Anchor Bolt Templates:**

WARNING Template must be printed on 12" x 18" sheet for actual size. CHECK SCALE BEFORE USING. Templates shipped with anchor bolts and available [online](#).

**Max EPA's/Max Weights:**

- 70MPH 25.0 ft./450 lb.
- 80MPH 18.2 ft./420 lb.
- 90MPH 13.6 ft./400 lb.
- 100MPH 10.2 ft./380 lb.
- 110MPH 7.8 ft./170 lb.
- 120MPH 5.9 ft./160lb.
- 130MPH 4.4 ft./150 lb.
- 140MPH 3.3 ft./135 lb.
- 150MPH 2.4 ft./50 lb

**Accessories:**

Base/Cap: [BCK-R5](#)

Anchor Bolts: [BOLT5-8](#)

**Other**

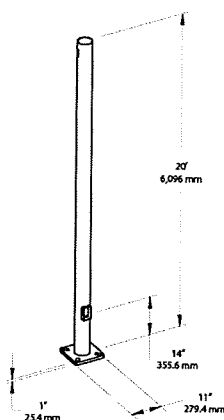
**Terms of Sale:**

Pole Terms of Sale is available [online](#).

**Buy American Act Compliance:**

RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

**Dimensions**



**Features**

- Designed for ground mounting
- Heavy duty TGIC polyester coating
- Reinforced hand holes with grounding lug and removable cover for easy wiring access
- Pole caps, base covers & bolts are sold separately
- Custom manufactured for each application

**Ordering Matrix**

Family	Shape	Size	Gauge	Height	Drilled/Welded Tenon
P	R	5	7	20	D2
	R = Round	4 = 4"	7 = 7	10 = 10'	D2 = Drilled
	TR = Taped Round	5 = 5"	11 = 11	15 = 15'	WT = Welded Tenon
		6 = 6"		20 = 20'	
		7 = 7"		25 = 25'	
		8 = 8"		30 = 30'	