



August 22, 2025

To All Bidders:

Subject: **Bid No. 8513-J6 – Dog Park Improvements / DPRC**

ADDENDUM NO. 1

To Whom It May Concern:

With reference to our bid request relative to the above subject, please refer to the changes/modifications/clarifications to the original proposal request.

General Bid Clarifications:

1. Trash Receptacles shall be Model #157-32SH with cover 25BT as manufactured by DuMor or approved equivalent.
2. Sheet L200A - Include in Base Bid one tree and stump removal located within the Limit of Work (LOW) at Beaver Brook Dog Park, initially to be removed by others. Trees T24 and T36 will be removed by others.
3. Sheet L901A – Detail 13 Light Post Footing. Delete “1’-6” DIA.” and replace with “22-inch square”. Total height of concrete footing is 8’-0”, with 2’-0” above finished grade.

General Bid Questions:

Question1: I am planning to submit for Bid # 8513-J6, Dog Park Improvements on the 27th. I have a question in regards to the light poles and associated conduits. I see the poles as called out of L300A and associated conduit/ handholes. Is there an existing power supply that you would like tied into the communication handhole @ the pole closest to Mann Street? I see the poles are to be solar powered so will need communication only as of now just wasn't sure if there are plans for provisions of future power to these locations.

Answer: **There is no connection to existing power within the scope of this project.**

Question2: What specification or we to use for the site lighting? Holophane or Evergen?

Answer: **Fixture – AEL Autobahn ATB0 P203 Solar R44K BK, or approved equal;
Pole – Holophane NYA 14 SL5 17S C03 BK AB, or approved equal;
With EverGen Solar System per Attachment 2, or approved equal.**

Question3: What is the size, height, and bolt pattern for the light poles?

Answer: **The size, height, and bolt pattern shall follow the manufacturer's specifications; see Attachment 2 at the end of this addendum.**

Question4: Is there a label wording for the water utility box covers required?

Answer: **Water utility box covers shall be labeled “Water”**



- Question5: Does the winterization box cover need special labeling?
Answer: **The winterization box cover shall be labeled “Water”**
- Question6: Can the 1” water service from the street to the meter be 1” HDPE per City of Worcester spec or is copper required for this project?
Answer: **1” water service to be copper.**
- Question7: Will the Winterization blow out connection be allowed to be before the meter? If NO what is the new location?
Answer: **The winterization blow out connection is to be placed as shown on the plans.**
- Question8: What is the surface treatment under the tree drip line?
Answer: **Protect existing soils from compaction within drip line, refer to detail 3 on sheet L901A.**
- Question9: What Geotextile fabric is to be used between the stone layers? (Spec book calls out Mirafi 140N plan shows Mirafi 600X).
Answer: **Mirafi 140N.**
- Question10: What is the required depth of the ¾” HDPE pipe from the point of connection to the bottle filling stations?
Answer: **This pipe should be placed at a minimum 3-foot depth.**
- Question11: Has consideration been given to the 6” layer of small stone holding on the slopes at Vernon Hill during heavy rain or dog traffic?
Answer: **Any movement of the small stone layer will not require corrective action within the scope of this construction contract.**
- Question12: Is there a Water meter cabinet size and/or supplier specified? (Page 29 of special conditions only lists PA and Irrigation controller cabinets).
Answer: **Refer to Article 42, Items 1a and 1c to determine size requirements for water meter/service cabinet. No supplier specified.**
- Question13: Is only two (2) trash cans, both at the same end of the site correct at Beaver Brook?
Answer: **Yes.**
- Question14: Are Replacement Dog Waste Stations called for at Vernon Hill? (Plan L200B shows R&D two (2) stations but does not show or specify replacement stations on L300B).
Answer: **For both dog parks, keep the existing stations, remove the attached trash box, and replace it with 32-gallon Dumor receptacles as specified in the general bid clarifications above. The receptacles shall be installed at the locations shown on sheets L300A and L300B.**



Question15: Sheet L300 A, calls out communication handholes with an electrical duct running to them. Will this electrical duct conduit be the standard city HDPE used on other parks?

Answer: **Electrical conduit shall be Schedule 40 PVC up to the footing connection, see detail 13 on sheet L901A. Furnish and install one communication and electrical handhole (HH) at each light pole and a fourth location at the southern end of small dog park as shown on plans. Provide a separate schedule 40 PVC conduits from both HH to light pole base connection. Conduits between communication HH shall be 2" HDPE. Conduit size for communication to light post footing is 2", Follow route shown on plans labeled as "E" for both types of conduit.**

Question16: Sheet L300 A, calls out an electrical duct going to the communications handholes. Is this duct to be routed from the handhole to the light pole foundations?

Answer: **See Question 15.**

Question17: Specification section 12 93 00 2.04A notes there is a total quantity of 4pcs of Dog Park Furniture, but the plans show furniture at both dog parks. Please clarify the quantities of furniture to be provided for each park.

Answer: **For Section 12 93 00 SITE FURNISHINGS 2.04 A. add the following: "c. Provide the above listed equipment for each park."**

2.04 DOG PARK FURNITURE

- A. Dog Park Furniture shall consist of the elements listed below as manufactured by American Parks Company or approved equal.
- Small Dog run: Bark Park Small Dog Kit Model Number: BARK-SMKIT consisting each of Doggie Crawl, Weave Posts, Small Ring Jump and Paws Table.
 - Large Dog run:

Quantity	Model Number	Product Name	Mount Style
1	PBARK-450	Rover Jump Over	Inground
1	PBARK-460	Weave Posts	Inground
1	PBARK-410	Dog Walk	Inground
1	PBARK-491	Doggie Crawl	Inground

- Provide the above listed equipment for each park.
- B. Equipment colors to be selected by Engineer during submittals process.
- C. Dog Park Furniture shall be furnished and installed in conformance with manufacturer's recommendations.

Each park shall include one kit that contains four pieces for the small dog run, and four individual units for the large dog run. The total for both parks shall be two kits containing four pieces each and eight individual units.



Question18: Article 28 of the Special Conditions notes that the cameras and appurtenances for both of the Dog Parks shall become the property of the owner at the conclusion of the project. Please clarify if we are to carry a cost to rent the equipment for the duration of the project with an option to purchase at the end of the project, or if we should carry the cost to purchase the equipment outright and permanently install it in our bid?

Answer: **Include in Base Bid, temporary construction camera(s), which become property of the Owner at the end of the Project.**

Attachments:

Attachment 2: Solar Product Cut Sheet

Attachment 3: DPRC Standard Handholes

END OF ADDENDUM ONE

Bidders are requested to acknowledge and/or include this addendum with submission. All other terms, conditions and specifications remain unchanged.

Very truly yours,

Jerry Kucera
Buyer



DETAILED SOLAR LIGHTING SPECIFICATIONS

PROJECT : RI/MA Example - ATB0

Location Boston, MA, USA	Application General Area	Estimate ID# 2-24118-1
	Dimensions 30' x 30' ft	Date 2024/10/04 12:57:43

System configuration

Model	EverGen™ M Series
System Color	NF
Tilt Angle	30 Degrees
Solar Panel Wattage	340W
Remote monitoring	Cloud-based dashboard and automatic notifications

Battery Details

Battery Type	GEL
Battery Quantity	2
Battery Capacity	95.0 Ah
Battery Location	HIGH

Fixture Details

LED Fixture	ATB0P20X
Lumens per Fixture (approx.)	7157 Lumens
Individual Fixture Wattage	44 W
Light Color Temperature	4000 K
Optical Distribution Type	R3
Fixtures per System	1

Warranty Details

Battery	5 Years
Solar PV Panel Output Power	Manufacturer's Warranty
Mounting Hardware and Electronics	10 Years
Pole (if provided)	Manufacturer's Warranty
LED Fixture	Manufacturer's Warranty

Additional Details

Weight (with batteries)	241 lb (109.41 kg)
EPA	16.3 Sq Ft (1.51 Sq m)
Tenon Requirement	3.5" OD x 6" long



System Order Key:

EVERGEN-NF-2-170-2-GEL5-HIGH-N-30-1-ATB0P20X-R3-40K-SV-EXCLUDE-NONE-NONE-NONE-44-5D2-NONE

Certifications

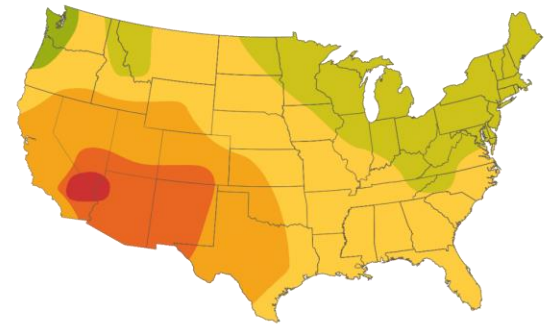


Custom-sized for your project

Location

Location	Boston, MA, USA
Latitude	42N
Longitude	71W
Wind Zone (per ASCE-7-05)	NONE

- Each Sol lighting system is tailored to its specific location and operating needs, ensuring reliable performance for 365 days/year. **Calculations are based on 20 years of NASA data and the location's shortest day.**



PEAK SUN HOURS



Sizing Parameters



We use **December 21st** as the longest night length of the year for this location.



Dusk

14.8 hrs

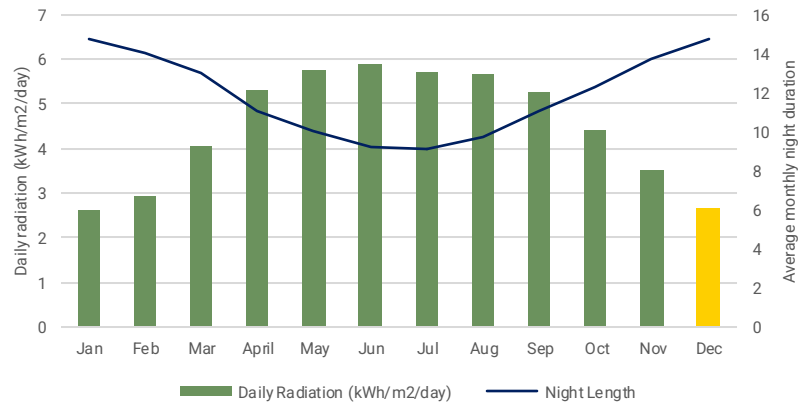


Dawn

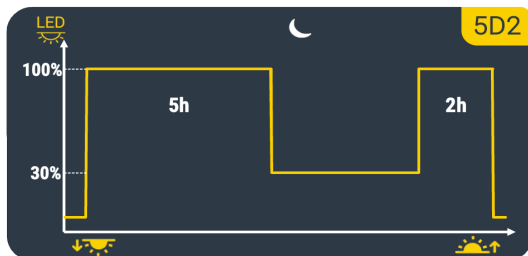


We use **December** in our sizing calculation. It has the worst average solar irradiation for this location.

2.52 kWh/m²/day



Operating profile



100% at dusk for 5 hours, then dim to 30%, then 100% for 2 hours before dawn.

Nominal load	44 W
Solar Panel size	340W
Battery quantity	2
Battery capacity	95.0 Ah

Backup power* 4.32 days

* Backup power is based on worst-case winter conditions.

Array-to-load ratio 1.36

- We size our solar panels to ensure we collect enough energy during the day to last through the night, maintaining an **Array-to-Load ratio of 1.2** or more. This ensures the solar array generates at least 20% more power than needed to fully recharge the battery.
- Without external power sources, solar lights need enough battery storage to last through low or no sunlight for multiple days. We collaborate with clients to determine the appropriate backup power based on their location and comfort level.

Benefits of the EverGen M



TOP-TIER LED FIXTURES

Compatible with a variety of cobra head and decorative fixtures from Acuity Brands, top-quality optics provide directional, uniform light without glare.



REMOTE MONITORING & ASSET MANAGEMENT

Access your systems remotely from any connected device. Locate systems on a map, view product types and warranties, download data, and receive alerts of system issues.



SIZED FOR YEAR- ROUND PERFORMANCE

Customizing the solar panel(s) and batteries to the project location and operational requirements ensures reliable, uninterrupted light 365 days a year.

MEETS IES ROADWAY LIGHTING STANDARDS



Achieve and maintain IES-recommended light levels for a variety of applications, including roadways, while avoiding negative health and gaining environmental benefits.



COMPLIANT WITH BUILD AMERICA, BUY AMERICA ACT

Up to 100% of the components used in our lights can be manufactured in America to comply with BABA requirements.



RoHS

EN 61547
Emissions



Component Specifications

Solar Panel

Technology	Photovoltaic module (Polycrystalline Silicon)
Power	340W
Electrical specifications per panel	Voc = 23.20 V / Vmp = 19.60 V / Isc = 9.35 A / Imp = 8.77 A / Number of cells = 36
Panel dimensions	59.06 x 26.30 x 1.57 in (1500 x 668 x 40 mm)
Lifespan	> 20 years at 80% of initial power
Tilt	30 Degrees
Structure	Clear anodized aluminum frame
Certificates	UL 1703

Battery

Technology	GEL
Voltage	12V
Capacity	95.0 Ah
Battery quantity	2
Operating temperature	Discharge: -4~140°F (-20~60°C) / Charge: 32~122°F (0~50°C)
Lifespan	> 10 years

Fixture

LED fixture type	ATB0P20X
Luminous flux	7157 Lumens
Nominal wattage	44 W
Color temperature	4000 K
Lifespan	100 000 hours certified by IESNA LM-90 B-50

General

Material	Aluminum frame and stainless steel fasteners
EPA (excluding pole and arm)	16.3 Sq Ft (1.51 Sq m)
Pole tenon requirement	3.5 in. OD x 6 in. long
Weight (excluding pole and arm)	241 lb (109.41 kg)
Warranty	System: 10 Years Battery: 5 Years
Monitoring	Sol Insight™ Cloud-based dashboard and automatic notifications
Communication technology	Bluetooth® app for commissioning and satellite modem for monitoring

Sol Insight™

Helpful data when you want it,
automatic alerts when you need it.™

- ▶ Insight remote monitoring allows you to view how your entire network of solar lights are performing on the ground – from the comfort of your desk.
- ▶ At any time, simply log in to the Insight platform to see the status and geolocation of each light. If further diagnostics are desired, you can drill down into recent data to determine if a system was commissioned properly and if it is working as expected. And if regularly reviewing your dashboard doesn't fit into your schedule, Insight will send automatic notifications if any system is compromised or not working the way it's supposed to.

Sol's Insight platform is a tool that can save your department time by removing the guesswork and by protecting your investment.

Sol Insight™: Monitor your lights remotely

Monitor your lights in real-time and be notified when maintenance is needed.

Sol Insight™ is included with your purchase for one year, after which you can continue to enjoy this service with a subscription.



API integration available



Check light status anytime



Receive automated notifications



Receive commissioning confirmation



Get help from expert product technologists



Sol Insight™, our cloud-based remote monitoring system, is the ideal solution for modern, efficient management of your solar street lighting. It utilizes one of the most reliable and affordable communication technology available today: **satellite**.



Learn more about our monitoring capabilities at www.solarlighting.com/monitoring/

To receive Insight remote monitoring, customers must sign off on terms and conditions.
An email address is also required to receive Insight services. Contact a Sol sales representative for details.

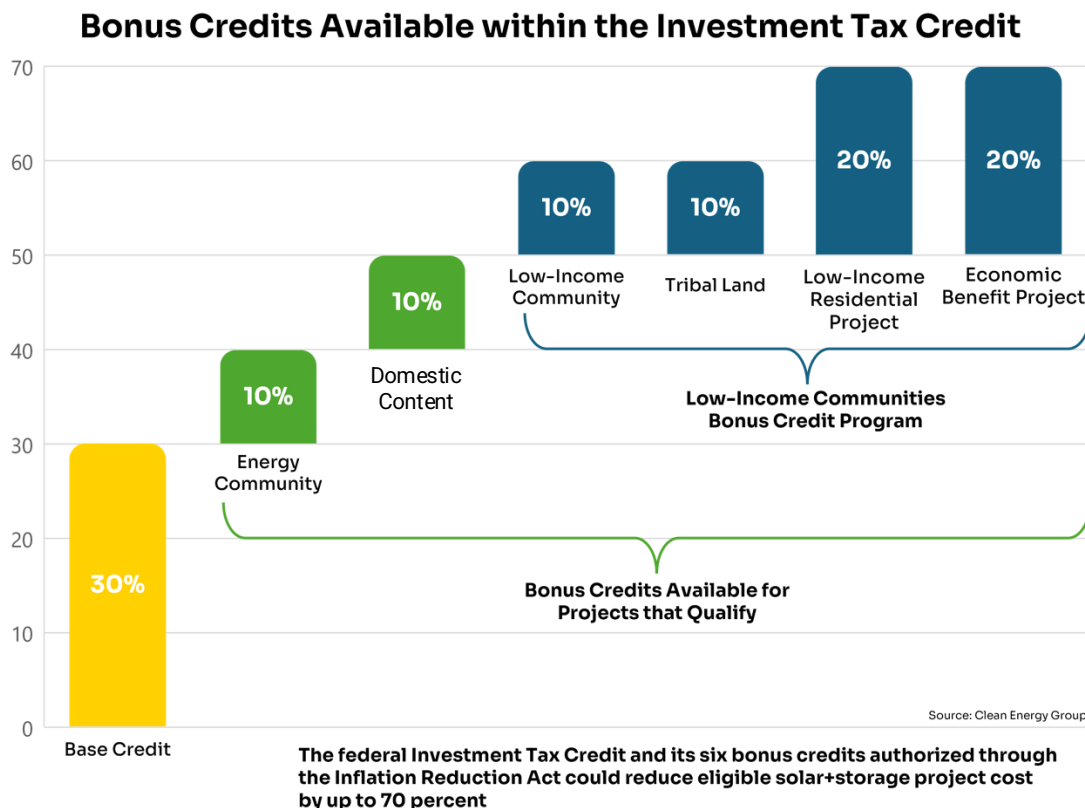
Available tax credits, grants, and leasing options



Did you know that if you **purchase and install a solar lighting system** in the **U.S. before 2033**, the federal government will **reimburse you 30% (or more)** of the cost?

It's true. The Investment Tax Credit was recently expanded and adapted under the Inflation Reduction Act (IRA), allowing businesses, state and local governments, tribal councils, and more to **significantly reduce the cost of their renewable infrastructure investments.**

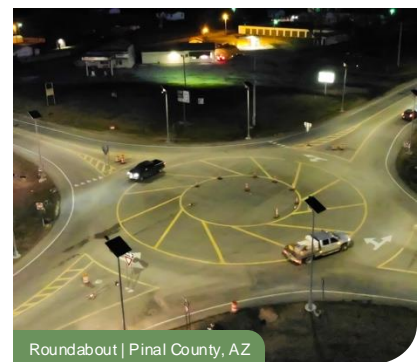
- Tax-exempt organizations like cities and counties can now receive cash payments instead of tax credits using a provision called “direct pay,” while for-profit companies can sell their credits to an unrelated party without having to partner with a bank. Plus, **the ITC can be combined** with other government incentives like the **Energy Efficiency and Conservation Block Grant Program** to make solar lighting even more affordable.



Learn about the ITC, available grants and our Solar Lighting as a Service program at www.solarlighting.com/financing/

Success stories

50,000+ systems installed in the U.S.



They also trust Sol.

D-R-HORTON
America's Builder

TECO
AN EMERA COMPANY

ENGIE

AMERESCO
Green • Clean • Sustainable

CITY OF ORLANDO

NYC

LOCKHEED MARTIN

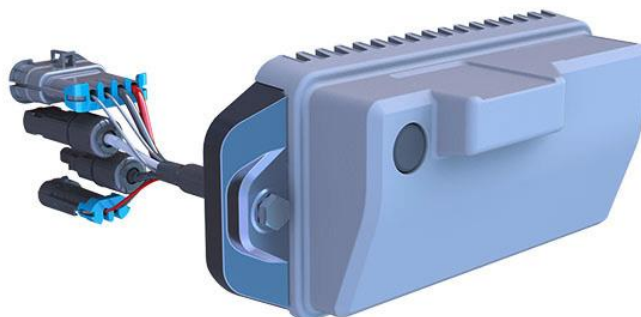
New Mexico DEPARTMENT OF
TRANSPORTATION
MOBILITY FOR EVERYONE



EverGen™ EMS Solar Lighting Controller / LED Driver

Programmed or custom run modes include:

- ▶ Hours after Dusk: 03, 05, 07, 09, or All Night
- ▶ Dimming Percentage: None, 30%
- ▶ Hours Before Dawn: 02, or All Nighty



Features

- ▶ Bluetooth and App for local configuration and testing
- ▶ Satellite modem for remote monitoring with Insight Remote Monitoring Platform Subscription
- ▶ Solar panel and battery overvoltage protection
- ▶ LED short circuit protection and unconnected LED protection
- ▶ Internal PV disconnect (no external diodes required)
- ▶ Reverse battery polarity protection
- ▶ Self calibrating load, timing, and charging circuitry

Benefits

- ▶ Flexible operating modes (dusk-to-dawn, split night, split night with dimming)
- ▶ Fully tested at the Sol factory before installation and shipment to ensure reliable operation and trouble-free startup
- ▶ Programmed by Sol based on your project requirements eliminating confusing switch and knob setting
- ▶ Bluetooth and app for simple and secure setup
- ▶ Integrated MPPT charging and LED driving system reduces system failures, overall system complexity, and cost
- ▶ Integrated surge protection and noise reduction
- ▶ Keyed connectors for simple and reliable assembly
- ▶ Temperature-compensated and MPPT-controlled battery charging to maximize battery life and energy collection
- ▶ High-temperature charge compensation to ensure component longevity
- ▶ Ruggedized solid-state design ensures long life and no maintenance
- ▶ Memory averaging to ensure accurate turn-on and turn-off of lights to prevent false responses due to weather variations
- ▶ Ten-year limited warranty

EverGen™ EMS Solar Lighting Controller / LED Driver

ELECTRICAL

Operating Voltage	12/24 VDC
Operating Current	25A max
LED Drive Current	3.5A max. 100W
Lamp Drive Voltage	65 VDC max.
PV Voltage Input	55 VDC max.
Low Voltage Disconnect (LVD)	11.6 / 23.2 VDC
Low Voltage Reconnect (LVR)	12.1 / 24.2 VDC

CHARGING

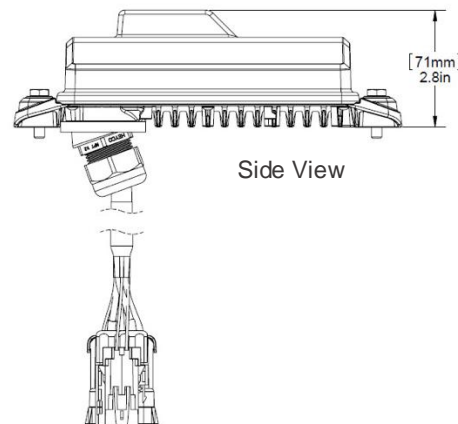
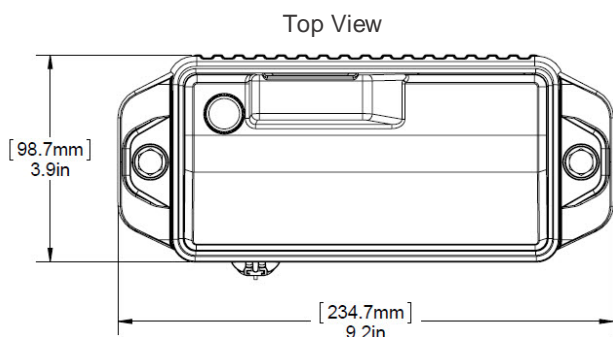
Self-consumption	< 5 mA
Charging Method	Maximum Power Point Tracking (MPPT)
Battery Fuse, External	30A max.

COMMUNICATION

Local Control	Bluetooth and app
Remote Monitoring	Satellite modem to Insight remote monitoring platform

PHYSICAL

Operating Temperature	-40 to +60 °C (-40 to +140 °F)
Humidity	100% Condensing
Packaging	Aluminum heatsink, polycarbonate cover, gasket and vent, IP68
Weight	0.74 kg (26 oz.)
Size (L x W x H)	234.7 x 98.7 x 71.0 mm (9.2 x 3.9 x 2.8 in)



Specifications subject to local environmental conditions.
Specifications may be subject to change.
US and International patents apply. Other patents pending.
"Sol" logo is a trademark of Sunna Design

All Sol products are manufactured in facilities certified to ISO quality standards.



Consistent with LEED® goals
& Green Globes™ criteria
for light pollution reduction



Autobahn Series ATB0 - Solar Roadway Lighting

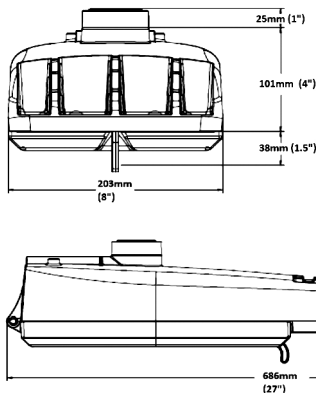
PRODUCT OVERVIEW



Applications:

Roadways
Off ramps
Residential streets
Parking lots

DIMENSIONS



Effective Projected Area (EPA): The EPA for the ATB0 is 0.76 sq. ft.
Approx. Wt. = 14 lbs.

STANDARDS

Color temperatures of $\leq 3000\text{K}$ must be specified for International Dark-Sky Association certification.

Rated for -40°C to 40°C ambient

Complies with ANSI: C136.2, C136.10, C136.14, C136.31, C136.15, C136.37

BUY AMERICAN ACT — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buyamerican for additional information.

Features:

OPTICAL

The Autobahn's new molded silicone optics provide exceptional performance. Silicone optics are superior to other polymeric materials in the areas of; optical efficiency, thermal performance, and reduction in dirt accumulation, all of which can lead to long term lumen degradation and a shift in optical distribution. Also, because silicone allows for the molding of fine details as well as thick sections, it produces the most crisp, clean and well-defined lighting distributions available. Silicone optics paired with modern LED's allow the Autobahn to take full advantage of both technologies.

Same Light: Performance is comparable to 100 - 400W HPS roadway luminaires.

White Light: Correlated color temperature - 4000K, or optional 2700K, 3000K or 5000K, all 70 CRI minimum.

Unique IP66 rated LED light engines provided 0% uplight and restrict backlight to within sidewalk depth, providing optimal application coverage and optimal pole spacing. Available in Type II, III, IV, and V roadway distributions.

ELECTRICAL

Expected Life: LED light engines are rated $>100,000$ hours at 25°C , L70.

Lower Energy: Saves an expected of 40-60% over comparable HID luminaires.

MECHANICAL

Includes standard AEL lineman-friendly features such as tool-less entry, 3 station terminal block and quick disconnects. Bubble level located inside the electrical compartment for easily leveling at installation.

Rugged die-cast aluminum housing and door are polyester powder-coated for durability and corrosion resistance. Rigorous five-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 7 (per ASTM D1654) after over 5000 hours exposure to salt fog chamber (operated per ASTM B117).

Mast arm mount is adjustable for arms from 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter. Provides a 3G vibration rating per ANSI C136.31

Wildlife shield is cast into the housing (not a separate piece).

Note: Specifications subject to change without notice. Actual performance may differ as a result of end-user environment and application.

Autobahn Series ATB0 - Solar Roadway Lighting

ORDERING INFORMATION

Series	Performance Packages	Solar	Optics
ATB0 Autobahn LED Roadway	P201 5,369 lumens nominal P202 6,943 lumens nominal P203 10,056 lumens nominal P204 12,176 lumens nominal P205 13,767 lumens nominal	Solar Only Compatible with Sol By Sunna Design's Solar Lighting Solutions ¹	R2 Roadway Type II R3 Roadway Type III R4 Roadway Type IV R5 Roadway Type V
Options			
<u>Color Temperature (CCT)</u> (Blank) 4000K CCT, 70 CRI Min. 27K 2700K CCT, 70 CRI Min. 3K 3000K CCT, 70 CRI Min. 5K 5000K CCT, 70 CRI Min. <u>Paint</u> (Blank) Gray (Standard) BK Black BZ Bronze DDB Dark Bronze WH White <u>Terminal Block</u> (Blank) Terminal Block (Standard)	<u>Misc.</u> BL External Bubble Level HSS House-Side Shield NL Nema Label XL Not CSA Certified UMR-XX 8" Horizontal Arm for Round Pole, Painted to match Fixture UMS-XX 8" Horizontal Arm for Square Pole, Painted to match Fixture UMR-GALV 8" Horizontal Arm for Round Pole, Galvanized UMS-GALV 8" Horizontal Arm for Square Pole, Galvanized BAA Buy America(n) Act Compliant <u>Packaging</u> (Blank) Single Unit (Standard) JP Job Pack (42/Pallet)	<u>Accessories:</u> House Side Shields for field installation ATB0P20XR2/R5HSS for use with P201 - P205, R2 & R5 distributions ATB0P20XR3/R4HSS for use with P201 - P205, R3 & R4 distributions ATB0P30XR2/R5HSS for use with P301 - P305, R2 & R5 distributions ATB0P30XR3HSS for use with P301 - P305, R3 distribution ATB0P30XR4HSS for use with P301 - P305, R4 distribution ATB0P45XR2/R5HSS for use with P451 - P457, R2 & R5 distributions ATB0P45XR3HSS for use with P451 - P457, R3 distribution	

Notes:

1. No Driver included, input power managed via Sol By Sunna's Solar Engine. Wattage depends on project location and Solar Engine size.



AEL Headquarters, One Lithonia Way, Conyers Georgia 30012
 www.americanelectriclighting.com Phone: 1-866-HOLOPHANE
 Email: TechSupportINF@AcuityBrands.com

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Warranty Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Please contact your sales representative for the latest product information.

Autobahn Series ATB0 - Solar Roadway Lighting

PERFORMANCE PACKAGE

ATB0	Distribution	Input Watts	2700K	3000K	4000K/5000K
			Lumens	Lumens	Lumens
P201	R2	*	4,983	5,473	5,488
	R3		4,952	5,107	5,553
	R4		5,045	5,130	5,346
	R5		5,084	5,384	5,387
P202	R2	*	6,429	7,100	7,203
	R3		6,390	6,679	7,237
	R4		6,517	6,749	6,906
	R5		6,560	6,988	6,951
P203	R2	*	9,005	10,050	10,150
	R3		8,951	9,471	10,260
	R4		9,494	9,673	10,060
	R5		9,188	9,784	9,736
P204	R2	*	11,007	11,800	12,410
	R3		10,940	11,490	12,470
	R4		11,485	11,900	12,170
	R5		11,230	11,780	11,900
P205	R2	*	12,339	12,650	13,920
	R3		12,264	13,110	14,130
	R4		13,051	13,680	13,830
	R5		12,589	13,080	13,340

*Wattage depends on project location and Solar Engine size. Contact the Sol By Sunna Design's Sales Team for quoting your Acuity Solar Lighting Solutions.
Email: sales@solarlighting.com or Call: 1-800-959-1329

ATB0	15C	20C	25C	30C	35C	40C
LLD Multiplier	1.02	1.01	1.00	0.99	0.98	0.97

To calculate the LLD for a temperature other than 25°C, multiply the LLD @ 25°C (shown in the performance package table) by the LLD multiplier for the selected temperature.



AEL Headquarters, One Lithonia Way, Conyers Georgia 30012
www.americanelectriclighting.com Phone: 1-866-HOLOPHANE
Email: TechSupportINF@AcuityBrands.com

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Warranty Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Please contact your sales representative for the latest product information.

Autobahn Series ATB0 - Solar Roadway Lighting

PERFORMANCE PACKAGE

LLD @ 25°C

ATB0	R2, R3 Distributions 3000K & 4000K CCT			R2, R3 Distributions 2700K & 5000K CCT*			R4 & R5 Distributions Any CCT		
	50k Hours	75k Hours	100k Hours	50k Hours	75k Hours	100k Hours	50k Hours	75k Hours	100k Hours
P201	0.96	0.95	0.94	0.92	0.88	0.85	0.92	0.88	0.85
P202	0.96	0.95	0.94	0.92	0.88	0.85	0.92	0.88	0.85
P203	0.96	0.95	0.93	0.91	0.88	0.85	0.91	0.88	0.85
P204	0.96	0.95	0.93	0.91	0.88	0.84	0.91	0.88	0.84
P205	0.96	0.95	0.93	0.91	0.87	0.83	0.91	0.87	0.83

* Also includes any custom (non-catalog) CCT



AEL Headquarters, One Lithonia Way, Conyers Georgia 30012
www.americanelectriclighting.com Phone: 1-866-HOLOPHANE
 Email: TechSupportINF@AcuityBrands.com

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Warranty Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Please contact your sales representative for the latest product information.

Autobahn Series ATB0 - Solar Roadway Lighting

B.U.G. Ratings

ATB0	Distribution	2700K			3000K			4000/5000K		
		B	U	G	B	U	G	B	U	G
P201	R2	1	0	1	2	0	2	2	0	2
	R3	1	0	1	1	0	1	1	0	1
	R4	1	0	2	1	0	2	1	0	2
	R5	3	0	1	3	0	1	3	0	1
P202	R2	2	0	2	2	0	2	2	0	2
	R3	1	0	2	1	0	2	1	0	2
	R4	1	0	2	1	0	2	1	0	2
	R5	3	0	1	3	0	2	3	0	2
P203	R2	2	0	2	2	0	2	2	0	2
	R3	2	0	2	2	0	2	2	0	2
	R4	2	0	3	2	0	3	2	0	3
	R5	3	0	2	4	0	2	4	0	2
P204	R2	3	0	3	3	0	3	3	0	3
	R3	2	0	2	2	0	2	2	0	2
	R4	2	0	3	2	0	3	2	0	3
	R5	4	0	2	4	0	2	4	0	2
P205	R2	3	0	3	3	0	3	3	0	3
	R3	2	0	2	2	0	2	2	0	2
	R4	2	0	3	2	0	3	2	0	3
	R5	4	0	2	4	0	2	4	0	2



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Warranty Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

www.acuitybrands.com/support/warranty/terms-and-conditions

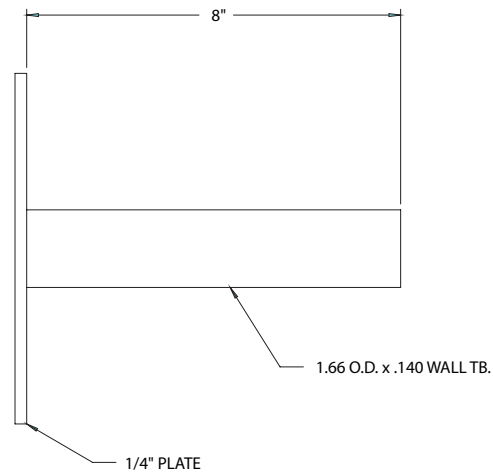
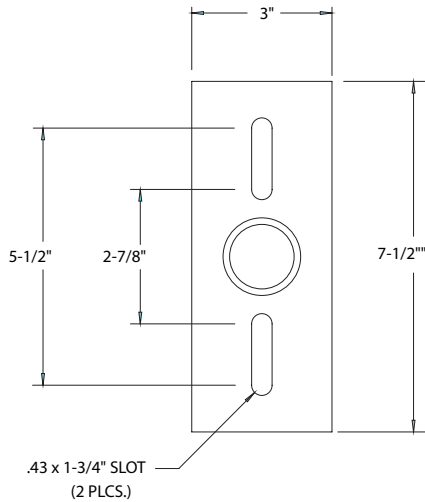
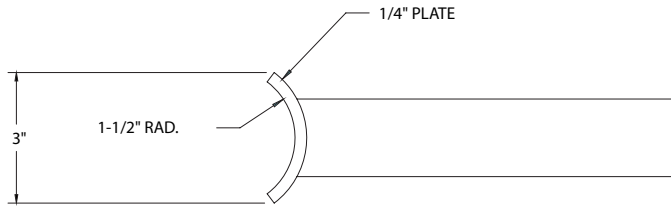
Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Please contact your sales representative for the latest product information.

Autobahn Series ATB0 - Solar Roadway Lighting

UMR POLE ADAPTOR

RECOMMENDED FOR USE WITH POLES OF 4" DIAMETER OR SMALLER



UMS POLE ADAPTOR



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www.americanelectriclighting.com Phone: 1-866-HOLOPHANE
Email: TechSupportINF@AcuityBrands.com

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Warranty Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Please contact your sales representative for the latest product information.

Gel Deep Cycle Solar Battery

FEATURES

- Gel deep cycle battery
- Ideal for solar applications
- Maintenance-free, sealed construction
- Spill proof / leak proof
- ABS case and cover
- UL recognized
- 100% recyclable
- **5-year warranty***



SOL-GEL-100

SPECIFICATIONS

Nominal Voltage	12V
Nominal Capacity	95.0 Ah
Rated Capacity (at 77°F//25°C)	100.0Ah/1.00A (100hr, 1.80V/cell) 85.0Ah/4.25A (20hr, 1.80V/cell)
Nominal Operating Temperature	77 ±5° F (25 ±3° C)
Operating Temperature Range	Discharge: -4-140°F (-20~60°C) Charge: 32-122°F (0~50°C)
Maximum Discharge Current	850A (5s)
Internal Resistance	Approx 6.0mΩ
Cycle Use	Initial Charging Current less than 25.0A. Voltage: 14.4V~15.0V at 77°F (25°C) Temp. Coefficient -30mV/°C
Standby Use	No limit on Initial Charging Current Voltage: 13.5V~13.8V at 77°F (25°C) Temp. Coefficient -20mV/°C
Self Discharge	Batteries can be stored for up to 6 months at 77°F (25°C) before a freshening charge is required. <i>*Batteries stored at temperatures greater than 77°F (25°C) will require a recharge sooner.</i>
Certifications	UL; CE; IEC60896-21 & 22

MATERIALS AND MECHANICAL

Case and Cover	ABS
Separator	PVC-SiO2
Active	PbO2 + Pb
Electrolyte	LPG Sulfuric Acid Gel
Venting Valve	Rubber, opening pressure 8-20k Pa
BCI Group #	27
Terminals	T6
Carrying	Integrated Flush Mount Handle

DIMENSIONS

Length	12.01 in / 305 mm
Width	6.61 in / 168 mm
Height	8.15 in / 207 mm
Total Height (including terminals)	8.38 in / 213 mm
Weight	59.8 lbs / 26.7 kg



UL Recognized
Component
MH29024



Specifications subject to local environmental conditions.
Specifications may be subject to change.
US and International patents apply. Other patents pending.
"Sol" logo is a trademark of Sunna Design

All Sol products are manufactured in facilities certified to ISO quality standards.

170 Watt Polycrystalline Solar Panel

Reliable

- ▶ Sol's CTI-170 is a high-efficiency polycrystalline solar module that provides outstanding performance and cost-effective solar power for high-end off-grid and mobile applications. The module is built to last and features a 20-year limited power output warranty.

Durable

- ▶ To ensure long life, the high-efficiency solar cells are encapsulated between a special tempered, low-iron solar glass and a Tedlar[®] / polyester backing material. The mounting frame, manufactured from anodized marine-grade aluminum, allows the CTI-170 to be installed in extreme conditions.

FEATURES

- Compact and rugged design
- Plug and play junction box
- Lightweight anodized aluminum frame
- High transmissivity tempered glass
- Industry standard quick-connect cables (MC4) work in series or in parallel
- **20-year limited power output warranty**



CTI-170



Specifications subject to local environmental conditions.
Specifications may be subject to change.
US and International patents apply. Other patents pending.
"Sol" logo is a trademark of Sunna Design

All Sol products are manufactured in facilities certified to ISO quality standards.

170 Watt Polycrystalline Solar Panel

SPECIFICATIONS

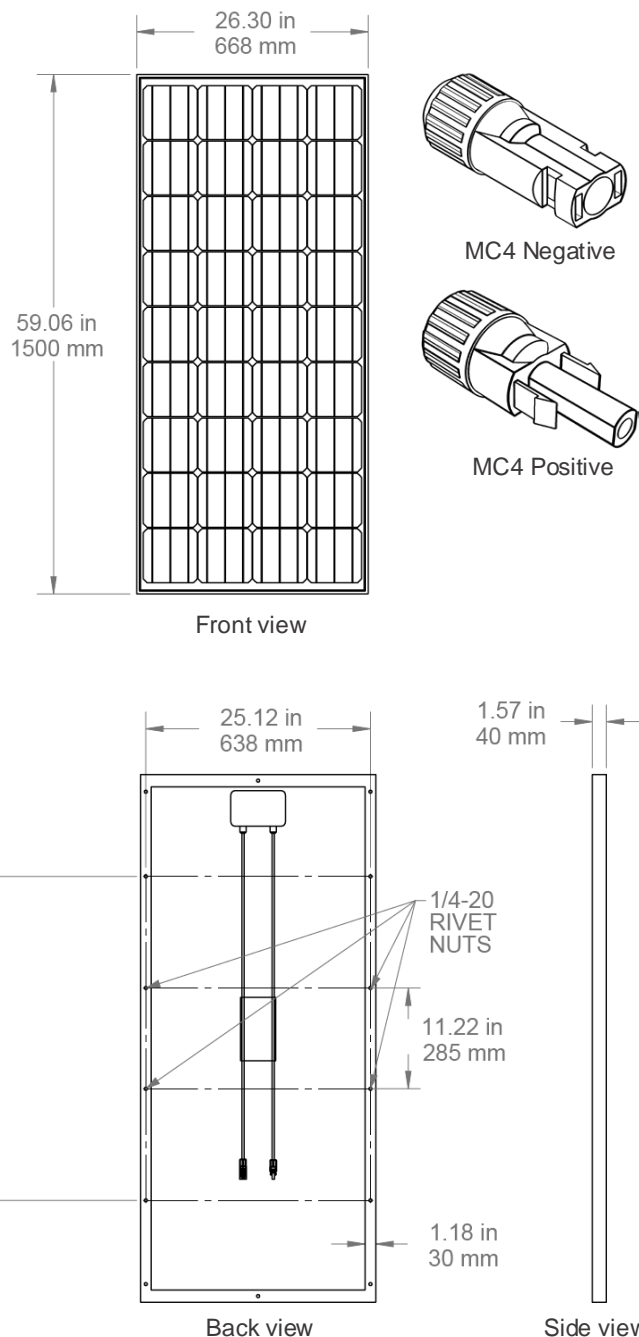
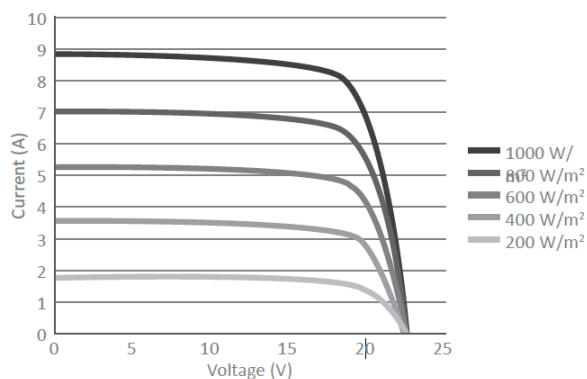
Rated power (Pm)	170W
Maximum power voltage (Vmp)	19.60V
Maximum power current (Imp)	8.77A
Open circuit voltage (Voc)	23.20V
Short circuit current (Isc)	9.35A
Power coefficient	-0.42% / °C
Voltage coefficient	-0.31% / °C
Current coefficient	0.033% / °C
Max power tolerance	+/- 3W
Cell type	Polycrystalline
Module efficiency	17.0%
Series fuse rating	15A
Maximum system voltage	600VDC
Operating temperature	-40°C to 85°C (-40°F to 185°F)
Weight	24.6 lbs (11.6 kg)
Dimensions	59.1 x 26.3 x 1.57 in 1500 x 668 x 40 mm
Frame type / material	Clear anodized aluminum
Certifications	UL 1703

Power specifications calculated at STC

- ▶ Irradiance: 1000 W/m²
- ▶ Cell Temperature: 77°F (25°C)
- ▶ Air Mass: 1.5

IV CURVE PARAMETERS

Dependence on irradiance

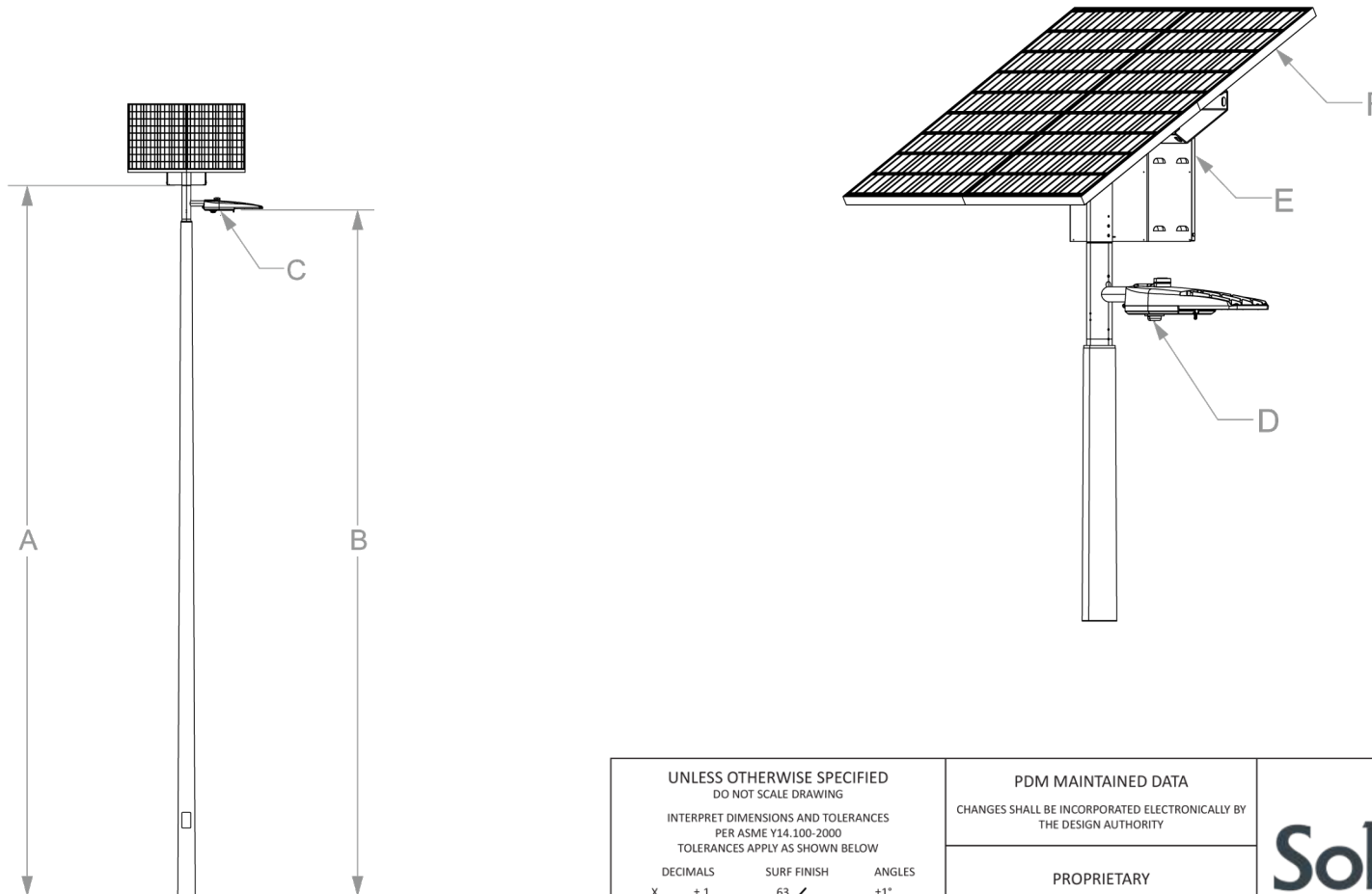


All Sol products are manufactured in facilities certified to ISO quality standards. Specifications subject to local environmental conditions. Specifications may be subject to change. US and International patents apply. Other patents pending. "Sol" logo is a trademark of Sunna Design

System Drawing



8		7		6		5		4		3		2		1					
MODEL		A [Pole Length Above Grade]		B [Fixture Mount Height]		C/D [Arm Type]		E [Battery Mount]		F [System EPA]		[System Weight]		POLE Type		POLE Info 1		POLE Info 2	
EverGen™ M Series		NONE		Based on Photometric Design**		NONE		HIGH		16.3 Ft² (1.51 m²)		241.0LB		No Pole Provided		N/A		N/A	

Note: Line Drawings May Not Entirely Resemble Shipped Product



****DISCLAIMER:** Arm(s) will be drilled and installed on site as per customer or photometric requirements.

WARNING: DO NOT INSTALL POLES WITHOUT SOLAR LIGHTING SYSTEMS

<p>UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING</p> <p>INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.100-2000 TOLERANCES APPLY AS SHOWN BELOW</p> <table><tr><td>DECIMALS</td><td>SURF FINISH</td><td>ANGLES</td></tr><tr><td>.X ±.1</td><td>63 ✓</td><td>±1°</td></tr><tr><td>.XX ±.01</td><td></td><td></td></tr><tr><td>.XXX ±.005</td><td></td><td></td></tr><tr><td>.XXXX ±.0005</td><td></td><td></td></tr></table>			DECIMALS	SURF FINISH	ANGLES	.X ±.1	63 ✓	±1°	.XX ±.01			.XXX ±.005			.XXXX ±.0005			<p>PDM MAINTAINED DATA</p> <p>CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN AUTHORITY</p>			<div><div><p>990 Biscayne Blvd., Office 701 Miami, FL 33132, USA Tel 1.800.959.1329</p></div></div>		
DECIMALS	SURF FINISH	ANGLES																					
.X ±.1	63 ✓	±1°																					
.XX ±.01																							
.XXX ±.005																							
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<p>THIRD ANGLE PROJECTION</p> <div></div>			<p>PROPRIETARY</p> <p>COPYRIGHT © 2020 BY Sol by Sunna Design.</p> <p>ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF Sol by Sunna Design.</p>			<p>Estimate ID: 2-24118-1</p> <p>Pole Part #: NONE</p>																	
<p>SCALE</p> <p>1:64</p>																							

Setting up your EverGen®

4 steps to get started

STEP 1

Ensure your installer has the right tools before going on site.

- Smartphone or tablet built within the last five years (running iOS 12.0+ / Android 6.0+)
- The EverGen Setup App (see step 2)
- The Sol order number (e.g. ORD12345)

STEP 2

Download the app.

From a smartphone/tablet, the installer can go to the iOS App Store or Google Play Store and search for **EverGen Setup App** by Sunna Design (or click the links below).



STEP 3

Sign up for access in the app.

Using the "sign up" tab, installers can enter their information to create a profile to access the app. A verification email will be sent to the address used for the profile. Once the account is verified, login and move to step 4.

STEP 4

Download the order information to the app.

Prior to installation, the installer will need to download their order information to the app so the correct settings can be applied to the EverGen. Enter the order number provided on the shipping documentation (ORDXXXXXX). Downloading requires an internet connection.



If there will be no internet access onsite, the contractor should download order information before arriving. After downloading the order information, the contractor can complete the rest of the steps even while offline. Order information remains available in the app for two weeks.

Next steps: Follow the EverGen Setup App instructions onsite.

To receive Insight remote monitoring, customers must sign off on terms and conditions. An email address is also required to receive Insight services. Contact a Sol sales representative for details.

Key figures

Bloomberg
NEW ENERGY
PIONEERS

MIT
Technology
Review
**Innovators
Under 35**



Assembled in
Texas



14
patents



35
years of
expertise



1000+
customers



60
employees



Factory awarded
« **Factory of the
Future** »

More than
150 000
products installed
worldwide

Operating in
60 countries

15 million +
people illuminated
every night

**Size or completed
projects:**

• < 10 units

• 10 to 50 units

• 51 to 250 units

• > 250 units

Ⓢ Offices and factories

6 reasons to choose Sol

10
years

INDUSTRY-LEADING WARRANTY

We offer a 10-year municipal-grade warranty on the entire solar lighting system, battery included.



PROMPT SERVICE & QUICK TURNAROUND

Whether you have a technical question, need a lighting layout, or require troubleshooting support, our highly qualified team is always quick to help. We can typically provide lighting layouts in 24 hours.



BUILT TO RESIST THE MOST SEVERE WEATHER

Sol's products are engineered tough and have been field-tested to withstand extreme heat, cold, wind, and precipitation. No matter the weather, they perform as intended.



BABA AND BAA COMPLIANT

Sol operates a manufacturing facility in Houston, Texas. 100% of the components used in the EverGen Series are Made in America.



REDUCED DOWN-TIME AND MAINTENANCE COSTS

Thanks to careful solar sizing and local and remote monitoring, required maintenance is greatly reduced or eliminated.



COMPREHENSIVE PORTFOLIO

Sol is the only solar lighting manufacturer offering both all-in-one and modular systems. Our range of low-power to high-power systems with unique aesthetics and performance capabilities means we have a product for every project and budget.

► Limited Warranty

By purchasing the Product, the Buyer, or the owner of the Product ("**you**") are agreeing to be bound by the terms of this limited warranty. The Company provides the following limited warranty coverage as applicable to the Product. Subject to the terms and conditions of the Limited Warranty as set forth herein (the "Terms and Conditions of Warranty"), a Product shall be considered a "Deficient Product" if Buyer provides written notification of the occurrence of the following within the associated warranty period enumerated below and proves to SUNNA DESIGN's satisfaction that the defect exists.

The Limited Warranty applies exclusively to the Buyer, and third parties will have no rights or benefits under the Limited Warranty. The Limited Warranty is non-assignable, except upon the written consent of SUNNA DESIGN INC. Claims for a breach of the Limited Warranty can only be made: (i) during the relevant Limited Warranty periods as set forth above, (ii) with a proof of purchase as was issued by SUNNA DESIGN to Buyer which includes the Product purchase date and (iii) written notification of such Limited Warranty claim being given in writing within thirty (30) days of the alleged occurrence giving rise to the Limited Warranty claim to SUNNA DESIGN INC at the following address: 990 Biscayne Boulevard, Suite 701, Miami, 33132 Florida.

► What the Warranty Covers and for How Long

- Subject to the exclusions and claim procedure set out below, the Company warrants each new lighting system to be free from defects in materials and workmanship that performs under normal use and service. The Company will, at its option and discretion, repair or replace any system or system component that is defective in materials or manufacture within a specific timeframe after purchase—the Warranty Period (the "Warranty"). Additionally, specific items within the system may have extended warranty protection, as noted.
- The Company shall be entitled, at its discretion, to use new and/or reconditioned parts or products to perform warranty repair or provide a replacement Product in accordance with the Warranty Coverage. The Company also reserves the right to use parts or products of original or improved design in any repair or replacement in accordance with the Warranty Coverage. It further reserves the right to make changes in design or improvements to its products without notice to you and without obligation to incorporate the same in any product previously manufactured. Any replaced products or parts shall become the Company's property.
- If the Company repairs or replaces a Product in accordance with the Warranty Coverage, the Warranty will continue to apply and remain in effect for the balance of the Warranty Period calculated from the date you purchased the Product from the Company (the "**Date of Purchase**") and not the repair or replacement date.
- If the Company chooses to offer a credit towards the purchase of a new Product in accordance with the Warranty Coverage, then the warranty applicable to the new product shall apply. All credits must be used within 90 days of issuance from the Company, or such credits become null and void.
- Shipping the Product to the Company's factory remains at the expense and responsibility of the Buyer. The Warranty does not cover import fees, duties, and taxes.

► What the Warranty Does Not Cover

The Warranty does not provide coverage for the following, which are expressly excluded from the Warranty:

- Failure due to normal wear and tear of the Product;
- Failure caused by improper user programming of Product settings through computer software supplied with or associated with the Product;
- Failure due to accident, abuse, misuse, liquid contact, neglect, improper installation, generalized corrosion, biological infestations, or input voltages that create operating conditions beyond the maximum or minimum listed in the Company's specifications;
- Products that have been repaired or altered other than by the Company or as authorized by its employees or agents;
- Products that have their original identification (including, but not limited to, trademarks or serial numbers) markings defaced, altered or removed;
- Products utilized as a component part of a product expressly warranted by another manufacturer;
- Operation or storage of the Product outside the specification ranges disclosed by the Company, and/or alteration or deployment of the Product other than in accordance with any published or provided user, storage, or maintenance requirements; Specifically, the warranty does not cover storage of the Product for more than 365 days, or in a location where temperatures may exceed 25°C (77°F).
- Failure that is in any way attributable to the improper use, storage, maintenance, installation, or placement of the Product;
- Failure caused by use in violation or contravention of any applicable laws, statutes, rules, regulations, and ordinances or any applicable standard, code, or instructions for use in installations, including, but not limited to, those contained in the National Electrical Code and published by the Standards for Safety of Underwriters Laboratory, the International Electrotechnical Commission, the American National Standards Institute, and the Canadian Standards Association;
- Failure caused by any acts of God, including, but not limited to, earthquakes, lightning strikes, and flooding; and
- Any additional costs required to repair or replace the defective Product, including, but not limited to, legislatively imposed fees where applicable.

► Restrictions and Limitations to Warranty

- The Company is not responsible for repairs, disassembly, or re-assembly of other products that are not supplied, provided, or sold by the Company.
- The Company is not liable for any losses, expenses, damages, or costs incurred by you incidental or collateral to the Warranty, including, but not limited to, shipping, retrieval, and redeployment of the Product.
- This Warranty is not transferable or assignable by you and only applies to you. Upon written notice to you, the Company may assign this Warranty. In other words, warranty claims can only be made by the company that purchased the products from the Company.
- The Company does not warrant the results obtained from the implementation of recommendations made by the Company or its authorized distributors concerning the use, design, or application of the Product.
- You assume all responsibility and liability for loss or damage resulting from your handling or use of the Product.
- The onus is on you to provide evidence satisfactory to the Company that any event that may invalidate the Warranty has not occurred, including, but not limited to, providing evidence of specific storage, maintenance, or operational procedures to assure Product performance.
- The Company has the sole discretion in determining the validity of any Warranty claim and reserves the right to determine the cause of Product defect including examining patterns in Product usage, trends in Product failure, and to review your documentation of installation, use, maintenance, storage procedures, and test results.
- The Company's liability on any claim, whether in warranty, contract, negligence, or any other legal theory, for loss, damage, or injury arising directly or indirectly from or in relation to the use of the Product shall in no event exceed the purchase price paid by you for the Product as stated in the original invoice.
- The repair or replacement of the Product or granting of credit by the Company in accordance with the Warranty Coverage shall be your sole remedy and IN NO EVENT SHALL THE COMPANY BE LIABLE FOR PUNITIVE, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES INCURRED BY YOU WHETHER FORSEEABLE OR NOT, INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUES, LOSS OF USE OF GOODS (EXCLUDING THE PRODUCT), LOSS OF BARGAIN, LOSS OF BUSINESS, LOSS OF OPPORTUNITY, OR LOSS OF REPUTATION.
- The Warranty set out above is the sole warranty granted by the Company with respect to the Product. No oral understanding, representations or warranties shall be of any effect and the Company makes no further warranties, express or implied, concerning the Product other than the Warranty. You, where permitted by applicable law, hereby expressly waive any statutory or implied warranties including, but not limited to, that the Product shall be merchantable, fit for a particular purpose, or durable. All other warranties, conditions, and representations are hereby cancelled and are null and void. This Warranty may only be modified or amended by written agreement signed by the Company.
- This Warranty Terms shall be governed exclusively by the laws of the state of Delaware, United States excluding rules of international law that would result in the application of the laws of any other jurisdiction. The United Nations Convention on Contracts for the International Sale of Goods (1980) does not apply to this Agreement. If Buyer's principal place of business is located within the United States, the parties hereby irrevocably attorn and submit to the exclusive jurisdiction of Delaware, United States of America regarding all disputes arising under or in respect of this Agreement. If Buyer's principal place of business is located outside of the United States of America, then all disputes arising out of or in respect of this Agreement shall be determined by arbitration administered by the International Centre for Dispute Resolution in accordance with its International Arbitration Rules. The number of arbitrators shall be one. The place of arbitration shall be Wilmington, Delaware, United States of America. The language of the arbitration shall be English.
- To the extent that this Warranty is inconsistent with mandatory applicable laws, this Warranty shall be deemed modified to be consistent with such mandatory applicable local laws.

SUNNA DESIGN shall, at its sole option and discretion, either repair or replace with a comparable product, or give a credit to Buyer ("Remedy"). Buyer and SUNNA DESIGN acknowledge and agree that the Remedy is SUNNA DESIGN's sole and exclusive obligation and Buyer's sole and exclusive remedy under this Limited Warranty and with respect to the Product. Where a Deficient Product is no longer being manufactured by SUNNA DESIGN, SUNNA DESIGN reserves the right to supply another type. Absence of SUNNA DESIGN's receipt of written notification within the applicable warranty period in compliance with the terms and conditions set forth herein shall constitute a waiver of all claims under the Limited Warranty.

SUNNA DESIGN's performance of a Remedy shall not cause the beginning of a new warranty period, nor otherwise extend the applicable warranty period. SUNNA DESIGN's cumulative aggregate liability under this Limited Warranty shall not exceed the original purchase price of the Product. Buyer shall bear all costs of shipment and transportation related to the repair or replacement of Deficient Product.

EXCEPT FOR THE LIMITED WARRANTY EXPRESSLY SET FORTH HEREIN, SUNNA DESIGN MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND WHATSOEVER REGARDING THE PRODUCT AND DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, COURSE OF DEALING AND USAGE OF TRADE.

IN NO EVENT SHALL SUNNA DESIGN BE LIABLE FOR, AND BUYER HEREBY AGREES TO INDEMNIFY SUNNA DESIGN FROM AND AGAINST, ANY AND ALL CLAIMS AND COSTS, INCLUDING ATTORNEY'S FEES, ARISING IN ANY WAY FROM THE SALE, USE OR INABILITY TO USE THE PRODUCT, BASED ON: LOSS OF USE, REVENUE OR PROFIT; DIRECT, INDIRECT, SPECIAL, PUNITIVE, LIQUIDATED, INCIDENTAL, CONSEQUENTIAL, OR ANY OTHER DAMAGE; OR INJURY TO PERSONS OR PROPERTY.

The rights, obligations and limitations contained herein are specifically negotiated as part of the agreement between the parties, and represent the specific intent to allocate risks, including those arising due to each party's own negligence or breach, and the potential of the Limited Warranty failing of its essential purpose. Neither the sales personnel of SUNNA DESIGN nor its distributors are authorized to make warranties or representations, whether oral or written about the Products beyond those set forth in these Warranty Terms and Conditions, and no other warranties are given to Buyer other than the Limited Warranty set forth herein. These Warranty Terms and Conditions constitute the final expression of the parties' agreement, and it is a complete and exclusive statement of the terms of that agreement and supersedes all prior agreements, warranties, or statements regarding Products or any warranty associated with the Products. These Warranty Terms and Conditions cannot be amended, altered or modified in any way except in writing signed by an authorized officer of SUNNA DESIGN. These Warranty Terms and Conditions shall be governed by and construed in accordance with the laws of the State of Delaware without regard to principles of conflicts of laws.

Terms and conditions of warranty

► 10 Year Limited Warranty

The Company warrants that each new solar lighting system to have a component or system free from defects in materials and workmanship that performs under normal use and service. The Company will, at its option, repair or replace any system or system component that is defective in materials or manufacture within a specific timeframe after purchase. Warranties are a minimum of five (5) years, with specific items within the system noted below having additional warranty protection against failure. For full details regarding this warranty, review the Terms and Conditions below.

Item	EverGen Series	iSSL & UP Series
Solar PV Panel Output Power	20 years	10 years
Mounting Hardware	10 years	10 years
Pole (if provided)	Manufacturer's warranty	Manufacturer's warranty
LED Fixture	Manufacturer's warranty	Manufacturer's warranty
Electronics (Charge Controller, LED Driver)	10 years	10 years
Energy Storage Array (Battery)	5 years / 10 years*	10 years**

* Batteries provided by the Company have a limited warranty for battery replacement (batteries must be provided by Sunna Design), based on the date of shipment, with the following pro-rated coverage:

** This warranty is applicable for products installed in the United States and Canada only. iSSL & UP systems installed in other territories benefit from a 6 Years warranty.

► 5 Year EverGen Series Battery Warranty

- 0 to 36 months: 100% credit (user pays 0% of replacement battery price)
- 37 to 48 months: 40% credit (user pays 60% of replacement battery price)
- 49 to 60 months: 20% credit (user pays 80% of replacement battery price)

► 10 Year EverGen, iSSL and UP Series Battery Warranty

- 0 to 84 months: 100% credit (user pays 0% of replacement battery price)
- 85 to 96 months: 30% credit (user pays 70% of replacement battery price)
- 97 to 108 months: 20% credit (user pays 80% of replacement battery price)
- 109 to 120 months: 10% credit (user pays 90% of replacement battery price)

OSTROW ELECTRIC COMPANY



Contractors • Engineers

9 MASON STREET, WORCESTER, MASSACHUSETTS 01609
ESTABLISHED 1939 TEL. 508-754-2641 FAX. 508-757-1645

ELECTRICAL PRODUCT SUBMITTALS

For

South Worcester Playground
Phase 1 & 2 - 2018
Worcester, MA

ENGINEER

Engineering Advantage, Inc.
880 Main Street, 5th Floor
Waltham, MA 02451

GENERAL CONTRACTOR

Busy Bee Nursery
57 Broad Street, Route 68
Jefferson, MA 01522

SUBMITTED BY:

Ostrow Electric Company
9 Mason Street
Worcester, MA 01609

DATE

August 14, 2018

SUBMITTAL

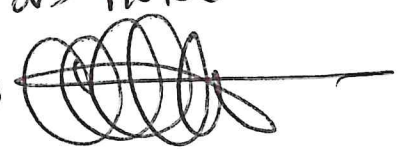
Electrical

MATERIAL


Handholes

SUBMISSION

Resubmittal

OK approved as noted
08-14-2018 

Remarks: Submittal has been reviewed by Ostrow Electric Company and has been found, to the best of our knowledge, to conform to contract documents.



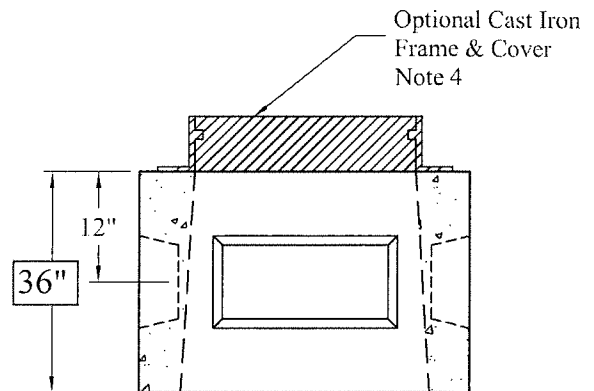
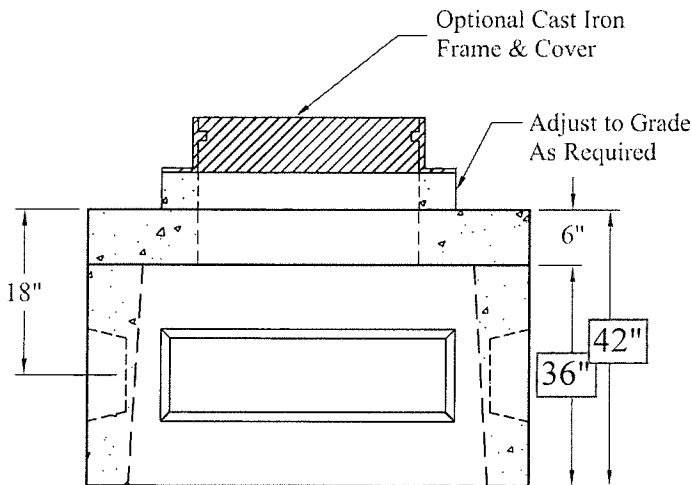
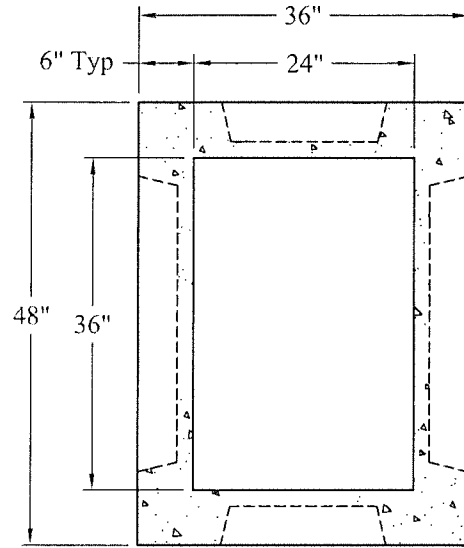
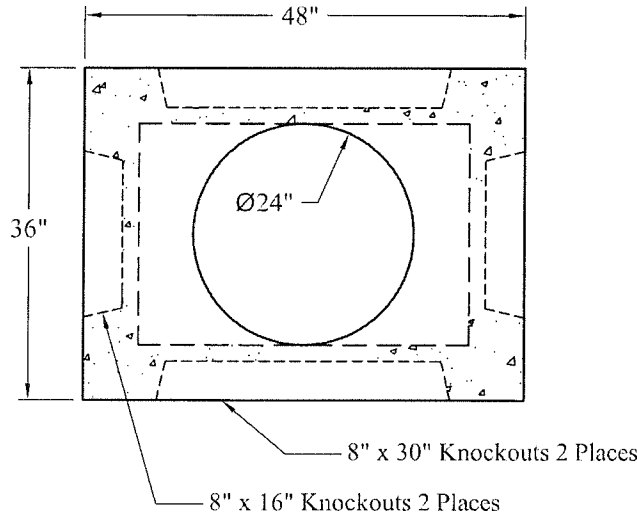
William H. Robinson, Jr.
Project Manager

1-800-639-2199

Fax (603) 224-2927

Electrical Pull Boxes 24" x 36" x 24" Inch Pull Box (v)

Phoenix Precast Products



Est Weight:

Top Slab:	660 Lbs
Base:	2355 Lbs
Total:	2955 Lbs

General Notes

- 1.) Concrete fc: 4,000 psi @ 28 Days Minimum
- 2.) Reinforcement Steel: ASTM A615 Grade 60 Rebar
- 3.) Design Loading: AASHTO-HS20-44
- 4.) Rectangular Cover N1878 B72

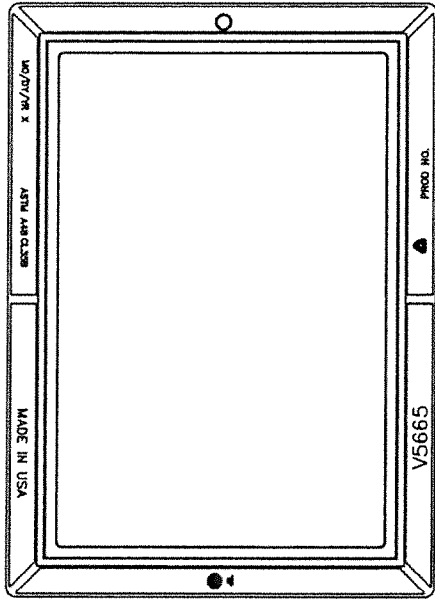
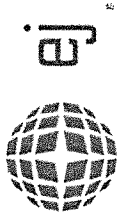
Phoenix
Precast
Products

24" x 36" x 36"
Pull Box

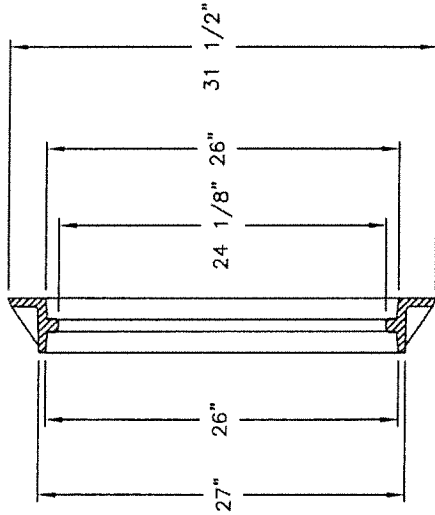
P/N:

Phoenix Precast Products

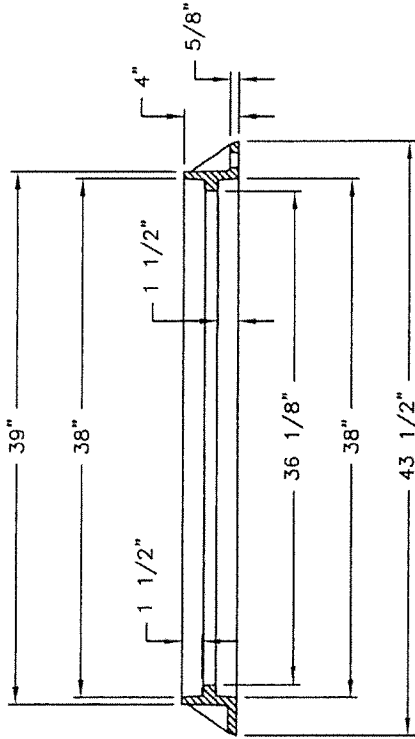
V5665 Frame



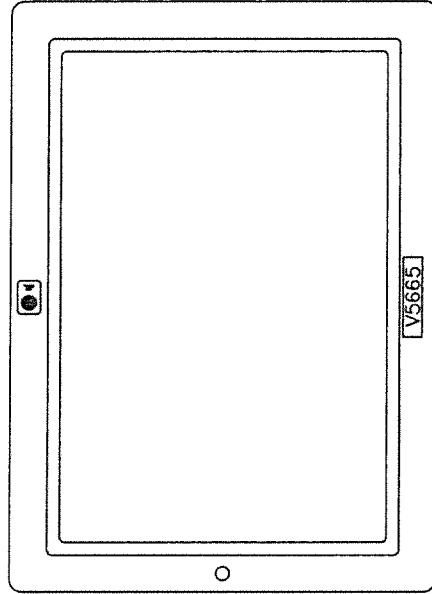
PLAN VIEW



FRAME SECTION



FRAME SECTION



TOP FLANGE VIEW

Product Number
45665010

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Undipped
- Designates Machined Surface

Certification
-ASTM A48

-Country of Origin: USA

Drawing Revision
05/02/2003 Designer: DEW
09/08/2016 Revised By: DVD

Disclaimer
Weights (lbs./kg) dimensions (inches/mm)
and drawings provided for your guidance. We
reserve the right to modify specifications without
prior notice.

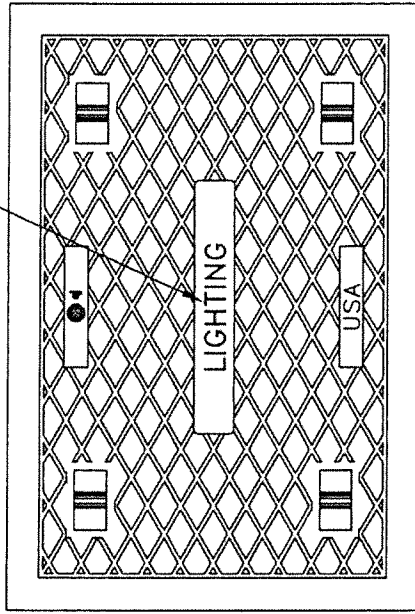
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Contact
800 626 4653
ejco.com

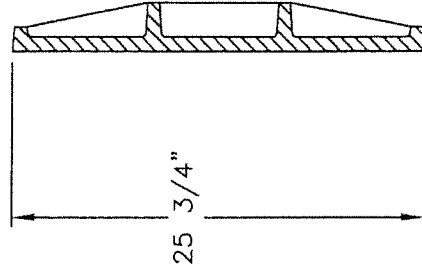
V6665 Cover



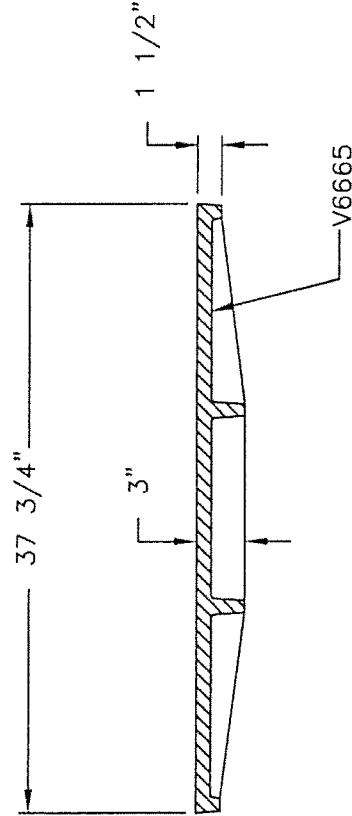
1 1/4" SHARP FACE
GOTHIC



COVER TOP VIEW

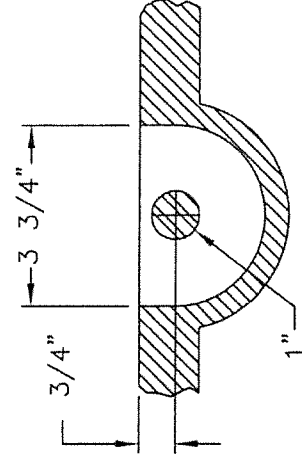


COVER SECTION



COVER SECTION

PROD NO.
MO/DY/YR X
ASTM A48
CL35B



(4) TYPE 4 STAINLESS STEEL PICKBARS
PICKBAR DETAIL

Product Number
46665022

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Undipped
- Designates Machined Surface

Certification
-ASTM A48

-Country of Origin: USA

Drawing Revision
06/12/2006 Designer: TCL
6/3/2015 Revised By: DAE

Disclaimer

Weights (lbs./kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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Contact

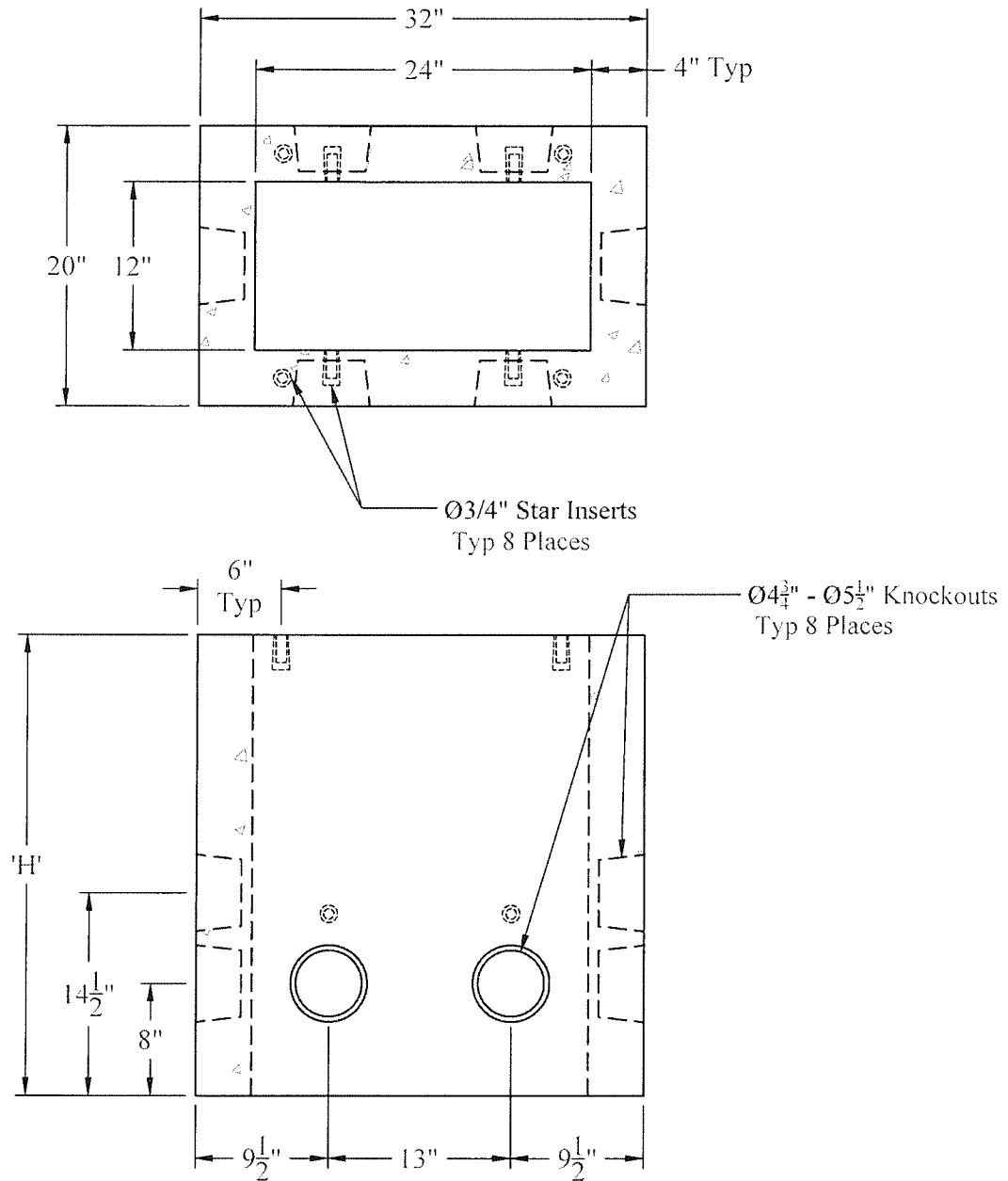
800 626 4653
ejco.com

1-800-639-2199

Fax (603) 224-2927

Electrical/Pull Boxes/12 X 24 Inch Pull Box_(v)_Rev0

Phoenix Precast Products



Dim 'H'	Est Weight:	P/N:
20"	600 Lbs	HH-12X24BOSSHT
33"	1,000 Lbs	HH-12X24BOSTALL

General Notes

1. Concrete: $f_c = 4,000$ psi @ 28 Days Minimum
2. Steel Reinforcement Conforms to Latest ASTM Specification:
ASTM A-615, Grade 60 Black Deformed Bars
3. Boston Standard Pull Box

Phoenix
Precast
Products

12" x 24" Electric
Handhole

77 Regional Drive

Concord, NH 03301

Phoenix Precast Products

EJW EAST JORDAN
IRON WORKS EST. 1883

800-626-4653

www.ejiw.com

MADE IN USA

PRODUCT NUMBER

00801312

CATALOG NUMBER

8013Z1

LV1325 FRAME

LOAD RATING

HEAVY DUTY

COATING

UNDIPPED

SPECIFICATION

FRAME-GRAY IRON

ASTM A48 CL35B

OPEN AREA

NA

✓ DESIGNATES

MACHINED SURFACE

DRAWN SBB

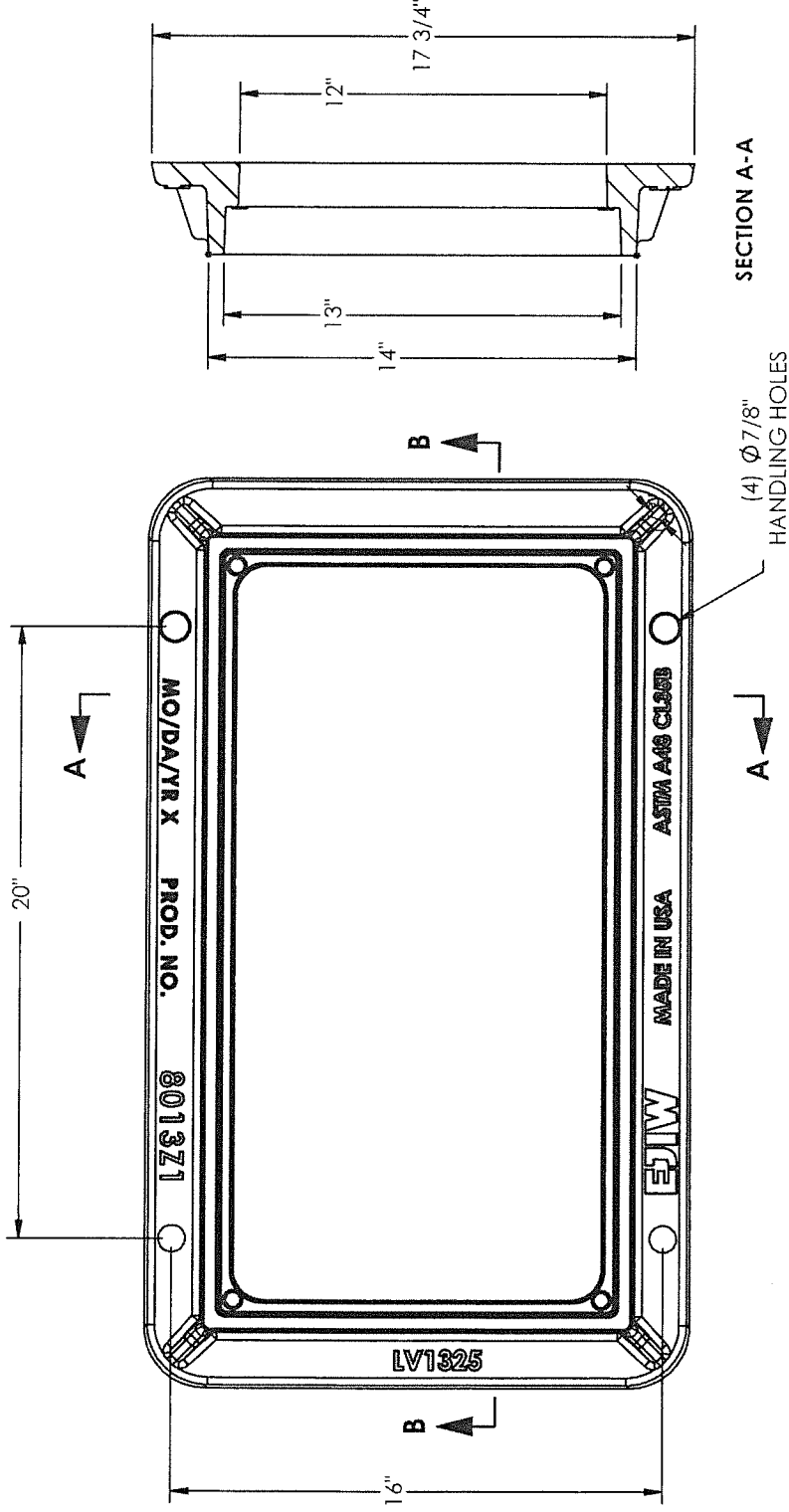
DATE

4/10/2009

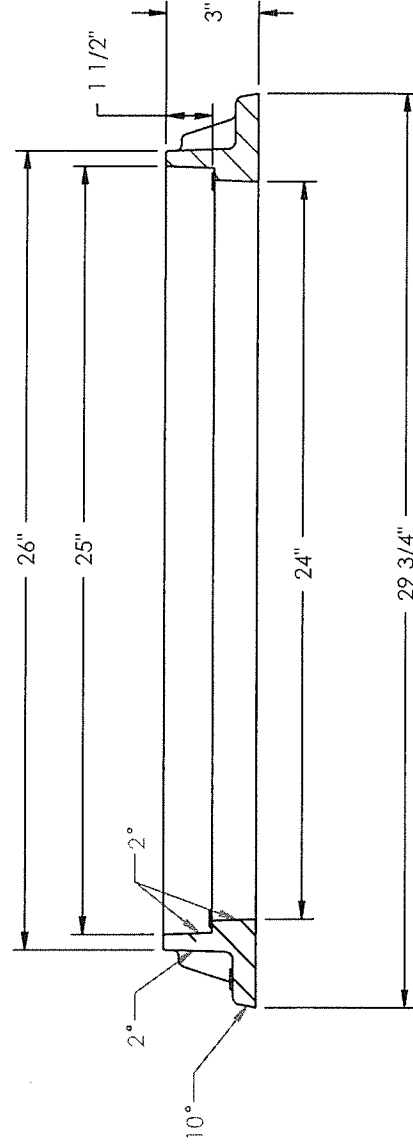
LAST REVISED

DATE

6/29/2009



SECTION A-A



SECTION B-B

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EJIW EAST JORDAN
IRON WORKS EST. 1883
800-626-4653
www.ejiw.com

MADE IN USA
PRODUCT NUMBER
00801321

CATALOG NUMBER
8013A

**MANHOLE
COVER**

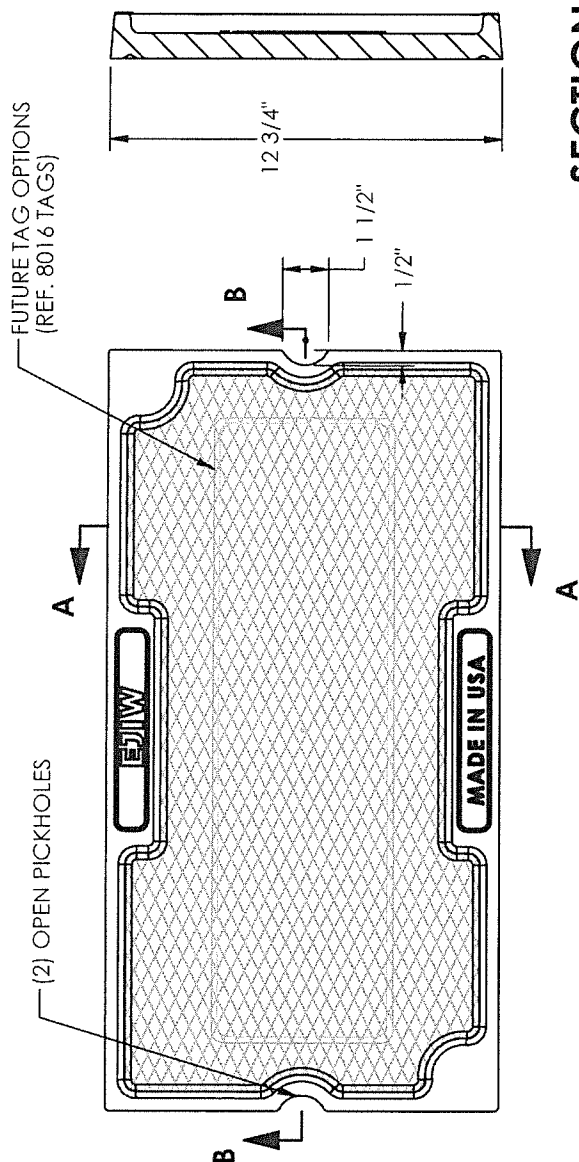
LOAD RATING
HEAVY DUTY

COATING
UNDIPPED

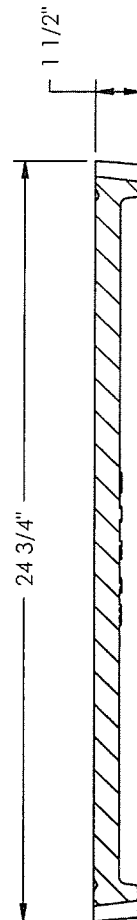
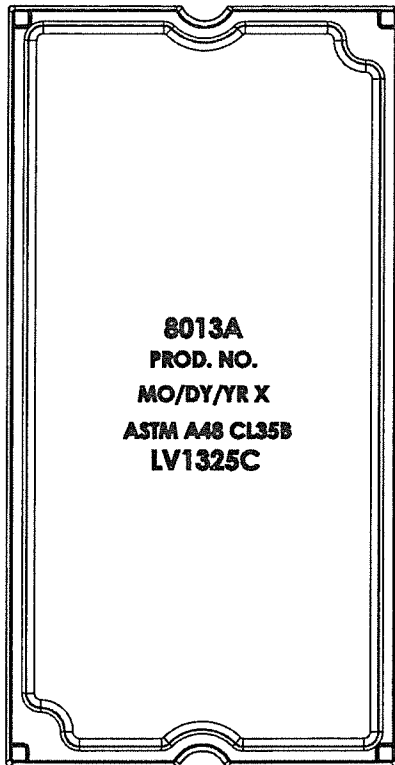
SPECIFICATION
COVER - GRAY IRON
ASTM A48 CL35B

OPEN AREA
N/A

✓ DESIGNATES MACHINED SURFACE	
DRAWN SBB	DATE 05/28/08
LAST REVISED SBB	DATE 04/13/09



SECTION A-A



SECTION B-B

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