

Ocean County Board of Commissioners

OFFICE OF THE OCEAN COUNTY COMMISSIONERS

Director John P. Kelly
Deputy Director Frank Sadeghi
Commissioner Robert S. Arace
Commissioner Jennifier Bacchione
Commissioner Virginia E. Haines

101 Hooper Avenue Toms River, New Jersey 08754-2191 (732)929-2005 (732)505-1918

Board Meeting Agenda

Date: April 2, 2025 - 4:00 PM Location: Administration Building

Room 119

101 Hooper Avenue Toms River, NJ 08754

Agenda: Awarding Contracts for the furnishing and delivery of SOLAR POWERED LED AND SPEED RADAR SIGNS to National Highway Products, Inc. and Eberl Iron Works, Inc., the lowest qualified bidders. (B2025-43)

Official Resolution#	2025000414
Meeting Date	04/02/2025
Introduced Date	04/02/2025
Adopted Date	04/02/2025
Agenda Item	m-13
CAF#	
Purchase Req. #	B2025-43
Result	Adopted

COUNTY COMMISSIONER	PRES.	ABS.	MOVE	SEC	AYE	NAY	ABST.
Kelly	~				~		
Sadeghi	~				~		
Arace	~			~	~		
Bacchione	~		~		~		
Haines		~					

I HEREBY CERTIFY THAT THIS DOCUMENT IS A TRUE, COMPLETE AND ACCURATE COPY OF THIS RESOLUTION, ADOPTED BY OCEAN COUNTY BOARD OF COMMISSIONERS, NJ AT THE MEETING REFERENCED THEREON

Michelle 1. Gunther

Clerk Of The Board

Res-Pq:m.13-2

CONTRACT NO MUST BE ON ALL PAPERS, DOCUMENTS, INVOICES, VOUCHERS

13025-43

RESOLUTION

April 2, 2025

WHEREAS, on February 25, 2025, pursuant to legal advertisements therefor, sealed bids were received for the furnishing and delivery of SOLAR POWERED LED AND SPEED RADAR SIGNS for the County of Ocean; and

WHEREAS, at the advertised time, responses were received from the following bidders:

Name and Address of Bidder

National Highway Products, Inc. 301 Riverside Drive Millville, NJ 08332 (856) 692-7572

Traffic Logix Corporation 3 Harriet Lane Spring Valley, NY 10977 (518) 744-8568

Name and Address of Bidder

Eberl Iron Works, Inc. 128 Sycamore Street Buffalo, NY 14204 (716) 854-7633

: and

WHEREAS, after receipt and examination of same, the County Purchasing Agent has now recommended to this Board that the lowest qualified bids, according to specifications, in each instance, be accepted namely that of EBERL IRON WORKS, INC., and NATIONAL HIGHWAY PRODUCTS, INC.

NOW, THEREFORE, BE IT RESOLVED by the BOARD OF COMMISSIONERS of the COUNTY OF OCEAN, STATE OF NEW JERSEY, as follows:

The Director and Clerk of this Board are hereby authorized and directed to enter into contracts, accepting the bids for the furnishing and delivery of Solar Powered LED and Speed Radar Signs for the County of Ocean; The contract shall be from May 1, 2025, through April 30, 2026, or until delivery is complete unless otherwise stated. The County reserves the right to extend the term of the contract pursuant to N.J.S.A. 40A:11-15.

A. EBERL IRON WORKS, INC. for twenty-nine (29) items, to wit:

ITEM NOS. 1, 1A, 1B, 1C, 2, 2A, 2B, 2C, 3, 3A, 3B, 3C, 4, 4A, 4B, 4C, 5, 5A, 5B, 5C, 6, 6A, 6B, 6C, 7, 8, 9, 11 and 12.

For a Total Lump Sum Award (Item Nos 1 - 1C) of \$12,660.60.

For a Total Lump Sum Award (Item Nos. 2 - 2C) of \$40,141.50.

For a Total Lump Sum Award (Item Nos. 3 - 3C) of \$72,224.00.

Introduced on Adopted on: Official Resolution#: 2025000414

April 2, 2025 April 2, 2025 For a Total Lump Sum Award (Item Nos. 4 - 4C) of \$6,871.05.

For a Total Lump Sum Award (Item Nos. 5 - 5C) of \$6,621.05.

For a Total Lump Sum Award (Item Nos. 6 - 6C) of \$6,612.95

This vendor has extended this contract to County Cooperative Contract System Participants, Identifier No. CK-02-OC.

B. NATIONAL HIGHWAY PRODUCTS, INC. for one (1) item, to wit: <u>ITEM NO.</u> 10.

This vendor has extended this contract to County Cooperative Contract System Participants, Identifier No. CK-02-OC.

- 2. Payments for the equipment to be acquired by this contract shall be made upon the approval of vouchers submitted by the successful bidders in accordance with the requirements of the Board of Commissioners and subject to the Board of Commissioners customary procedures. Delivery shall be made upon receipt of a Purchase Order issued by the Ocean County Department of Purchase, upon which delivery locations and needed quantities shall be indicated.
- 3. Funds for the equipment shall be available within the following funding Source: Buildings and Grounds Department O.E.
- 4. The contract number must be placed on all papers, documents, invoices and vouchers pertaining to said contract, the number being B2025-43.

BE IT FURTHER RESOLVED that certified copies of this Resolution shall be made available to the County Auditor, Department of Purchasing, Department of Finance, Buildings and grounds Department and the successful bidders.

Introduced on: Adopted on:

April 2, 2025 April 2, 2025

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Delivery A.R.O.	Comments
2	36" Solar Powered LED Sign Assembly, As Specified, or Equal	30	EA	\$1,059.45	\$31,783.50	_		
OPTIONS:				1	<u> </u>			
2A	Steel Sign Post, As Specified	30	EA	\$37.48	\$1,124.40	····		
2B	Battery for Solar-Powered LED Sign Assembly, As Specified	30	EA	\$170.56	\$5,116.80			
2C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	30	EA	\$70.56	\$2,116.80			
TOTAL			2		\$40,141.50		1	1

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Delivery A.R.O.	Comments	
3	48" Solar Powered LED Sign Assembly, As Specified, or Equal	50	EA	\$1,169.00	\$58,450.00				
OPTIONS:	,	•					-		
ЗА	Steel Sign Post, As Specified	50	EA	\$37.48	\$1,874.00				
3В	Battery for Solar-Powered LED Sign Assembly, As Specified	50	EA	\$169.00	\$8,450.00				
3C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	50	EA	\$69.00	\$3,450.00				
TOTAL				J	\$72,224.00			<u> </u>	

ITEM #4 - 48" X 24" SOLAR POWERED LED SIGN ASSEMBLY

SOLAR POWERED LED AND SPEED RADAR SIGNS

	Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
4	4	48" X 24" Solar Powered LED Sign Assembly, As Specified, or Equal	5	EA	\$1,056.69	\$5,283.45		
	OPTIONS:		1		, ,			
4	/ _{4A}	Steel Sign Post, As Specified	5	EA	\$37.48	\$187.40		1
4	4B	Battery for Solar-Powered LED Sign Assembly, As Specified	5 .	EA	\$190.02	\$950.10	3	
4	4C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	5	EA	\$90.02	\$450.10		
Ī	TOTAL				J	\$6,871.05	<u></u>	

ITEM #5 - 24" X 30" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments	
5	24" X 30" Solar Powered LED Sign Assembly, As Specified, or Equal	5	EA	\$1,006.69	\$5,033.45			
OPTIONS:		- 1						
5A	Steel Sign Post, As Specified	5	EA	\$37.48	\$187.40			
5B	Battery for Solar-Powered LED Sign Assembly, As Specified	5	EA	\$190.02	\$950.10			
5C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	5	EA	\$90.02	\$450.10			
TOTAL		-1	<u> </u>	1	\$6,621.05			

ITEM #6 - 30" X 36" SOLAR POWERED LED SIGN ASSEMBLY

Lir	ie Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
		30" X 36" Solar Powered LED Sign Assembly, As Specified, or Equal	5	EA	\$1,012.60	\$5,063.00		

Introduced on: April 2, 2025 Adopted 局景ERL IRONA分价度於2025ESPONSE DOCUMENT REPORT Official Regolution#R 2026/02年19 LED AND SPEED RADAR SIGNS

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments	
OPTIONS:					,			
6A	Steel Sign Post, As Specified	5	EA	\$37.48	\$187.40			360
6B	Battery for Solar-Powered LED Sign Assembly, As Specified	5	EA	\$184.64	\$923.20			
6C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	. 5	EA	\$87.87	\$439.35			
TOTAL		<u>.</u>		1	\$6,612.95			

SOLAR SPEED RADAR SIGNS AND ACCESSORIES, ITEM #'S 7 - 12

	Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
7	7	Solar Speed Radar Sign, 12", Traffic Logix Safepace Evolution 12, As Specified, or Equal	. 4	EA	\$2,087.58	\$8,350.32		
	8	Solar Speed Radar Sign, 15", Traffic Logix Safepace 450 Full Radar Speed Sign, As Specified, or Equal	50	EA	\$3,183.48	\$159,174.00		
7	9	Steel Sign Post, As Specified, or Equal	30	EA	\$37.48	\$1,124.40		
	10	Battery for Solar-Powered LED Sign Assembly, As Specified, or Equal	30	EA	\$245.01	\$7,350.30		
1	11	Solar Panel for Solar-Powered LED Sign Assembly, As Specified, or Equal	30	EA .	\$131.68	\$3,950.40		
	12	Solar-Powered LED Pedestrian Crossing Warning System with Push Buttons, As Specified, or Equal	4	EA	\$3,198.69	\$12,794.76		

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
5C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	5	. EA	\$225.00	\$1,125.00		TRAFFICALM
TOTAL			l	I	\$8,734.75	. T.	<u> </u>

ITEM #6 - 30" X 36" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
6	30" X 36" Solar Powered LED Sign Assembly, As Specified, or Equal	5	EA	\$1,650.00	\$8,250.00		TRAFFICALM
OPTIONS:					<u> </u>	2.5	
6A	Steel Sign Post, As Specified	5	EA	\$41.95	\$209.75	-	
6B	Battery for Solar-Powered LED Sign Assembly, As Specified	5	EA	\$60.00	\$300.00	-	TRAFFICALM
6C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	5	ΕA	\$225.00	\$1,125.00		TRAFFICALM
TOTAL				1	\$9,884.75	- 	

SOLAR SPEED RADAR SIGNS AND ACCESSORIES, ITEM #'S 7 - 12

	Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
	7	Solar Speed Radar Sign, 12", Traffic Logix Safepace Evolution 12, As Specified, or Equal	4	EA	\$3,825.00	\$15,300.00		TRAFFICALM
	8	Solar Speed Radar Sign, 15", Traffic Logix Safepace 450 Full Radar Speed Sign, As Specified, or Equal	50	ĒA	\$4,520.00	\$226,000.00		TRAFFICALM
	9	Steel Sign Post, As Specified, or Equal	30	EA	\$41.95	\$1,258.50		
4	10	Battery for Solar-Powered LED Sign Assembly, As Specified, or Equal	30	EA	\$60.00	\$1,800.00	· · · · · · · · · · · · · · · · · · ·	TRAFFICALM
	11	Solar Panel for Solar-Powered LED Sign Assembly, As Specified, or Equal	30	EA	\$225.00	\$6,750.00		TRAFFICALM

12. Acknowledgement of Submission of Forms from Current Bid Package*

Bidders shall complete all documents and acknowledge all terms included with the bid package. All documents should be from this bid package as forms change frequently and the most updated forms are provided in this specification. The forms must not be dated or executed prior to the date of advertising. Failure to follow these instructions is cause for rejection.

Confirmed

13. Submission of Bid Package*

By submitting a response to this solicitation, the Vendor understands and acknowledges that all required documents to this solicitation must be submitted and that failure to do so may be cause for rejection.

Bidder also understands that only one (1) bid submission shall be considered. Please DO NOT Submit a manual bid response. Submitting a manual response in addition to the electronic response is cause for rejection of your bid.

Confirmed

PRICE TABLES

ITEM #1 - 30" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Delivery A.R.O.	Comments
1	30" Solar Powered LED Sign Assembly, As Specified, or Equal	10	EA	\$979.42	\$9,794.20			
OPTIONS:	,			·			1	1
1A	Steel Sign Post, As Specified	10	EA	\$37.48	\$374.80	* .		
1B	Battery for Solar-Powered LED Sign Assembly, As Specified	10	£Α	\$172.97	\$1,729.70			
1C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	10	EA	\$76.19	\$761.90			
TOTAL		.l			\$12,660.60		L	1

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 1 of 36

ITEM #1 - 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

•				<u>COMPL</u>	<u>IANCE</u>
D			•	YES	<u>NO</u>
DESCRIPTION:					
Solar Powered and fully self-contained s U.S. Department of Transportation Federatevision 2 May 2012 Manual on Uniform section 2A.08 on retro reflectivity and ill	ral Highway A Traffic Cont	Administration 200	9	⊠	
MATERIALS:				× .	
The assembly shall include the following	r itams:			\boxtimes	П
	, items.				
Sign:			,		_
Sign blanks shall be .080" gauge aluming			1		
Sheeting shall be 3M DG Type IX or ap					Ц
Sign assembly shall use anti-vandal faste and sign for fixture	ner to mount	components to sig	n	\boxtimes	
Mounting hardware shall be Stainless Sta	nol 5/16"			\boxtimes	_
Mounting hardware shan be stanness sie	SCI 3/10				Ш
<u>LED</u> :					
Sign assembly shall utilize high-power 1 intensity of up to 600,000 mcd (millicand		4			
The various sign faces shall have a color noted below:	and minimum	n number of LEDs	as		
			<u>Minimum</u>		
	<u>SIGN</u>	LED Color	<u>Number</u>		
Ped Crossing 30" x 30" (Facing) Flyoreseent Velloy, Green	W11-2	White or	O	\boxtimes	
(Facing) Fluorescent Yellow Green Turn Symbol 30" x 30"	W 1 1-2	Yellow White or	8		
(Facing) Yellow	W1-1L	Yellow	8		-
Turn Symbol 30" x 30"		White or	-		
(Facing) Yellow	W1-1R	Yellow	8	\boxtimes	
Curve Symbol 30" x 30"		White or	_		_
(Facing) Yellow	W1-2L	Yellow	8	\boxtimes	LJ
Curve Symbol 30" x 30" (Facing) Yellow	W1-2R	White or Yellow	8		
Stop Ahead 30" x 30"	W 1 210	10110 **	Ü		
Stop Symbol, White on Red, Border &	, .				
Arrow Black On Yellow	XX2 1	White or		I SZ I	
(Facing)	W3-1	Yellow	8	\boxtimes	Ц
Yield Ahead 30" x 30" Ston Symbol White on Red Border &					v
Stop Symbol, White on Red, Border & Arrow Black On Yellow Introduced on Philip 2, 2025		White or			
April 2, 2025 A(bateing): April 2, 2025 Official Resolution#: 2025000414	W3-2	Yellow	8		

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 2 of 36

ITEM #1 - 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

g.				COMPL	IANCE
				YES	<u>NO</u>
	SIGN	LED Color	<u>Minimum</u> Number		
Signal Ahead 30" x 30"	SIGN	LED COIOI	Number		
Symbol, Border & Arrow Black on		White or			
(Facing) Yellow	W3-3	Yellow	8	\boxtimes	
<u>LED</u> : (CONT'D)	•				
Each LED shall be sealed in a heat-dissi to weather and vibration.	pating plastic	enclosure to provi	de resistance	\boxtimes	
Each LED enclosure shall be mounted to welded or mechanically fastened to the	_		onically		
All LEDs shall be wired in strings to act standard).	ivate simultan	eously (as per MU	TCD		
All wire used shall conform to military s nylon jacket.	specification M	11L-W-16878D, T	ype D, vinyl	\	
Wiring shall be covered and secured to t enclosure.	he sign assem	bly in a weather re	esistant		
All LED connectors shall conform to In	gress Protectio	n IP-65 rating or b	better.		
SOLAR PANEL:					
Solar panels shall be sized appropriately ensure operation in the Ocean County R		tain the battery suf	ficiently to	\boxtimes	
All panels shall be mounted to an alumin 60°.	num plate and	bracket at an angle	e of 45° to	\boxtimes	
All fasteners used shall be anti-vandal.					
Wire used shall conform to military specinylon jacket.	cification MIL	-W-16878D, Type	D, vinyl		
The solar panel assembly shall be moun	ted securely to	the sign assembly	7.	\boxtimes	
All solar panel connectors shall conform	to Ingress Pro	otection IP-65 ratio	ng or better.	\boxtimes	
CONTROL CIRCUIT:					
Control circuit shall have the capability	of independen	tly flashing dual o	utputs.	\boxtimes	
Flashing output shall be 50 to 60 flashes Outputs shall reach the output current as	1			⋈	
pulse.		dontines on desiring	ttim a	\boxtimes	<u></u>
Output current shall be individually progoperation for the purpose of adjusting to automatically be determined by solar particular particular and particular particul	ambient lighti	ing conditions. Mo		\boxtimes	
Control circuit covering shall be waterpi	roof and anti-v	andal.		\boxtimes	
Cottted circuit shall? 2, 2025 Cottted circuit shall? 2025 Gill Resolution#: 2025000414 All circuit connectors shall conform to I	between the te	mperatures of -40°	°F and 176°F.	\boxtimes	
All circuit connectors shall conform to I	ngress Protecti	ion IP-65 rating or	better.	\boxtimes	

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 3 of 36

	COMPL	IANCE
\cdot	YES	<u>NO</u>
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	\boxtimes	
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.		
Batteries shall not weigh more than 1.8 lbs.		
Batteries shall have a waterproof connection		
Batteries shall be sealed and spill-proof	\boxtimes	
Batteries shall have an in-line power connector	\boxtimes	
Batteries shall be replaceable independently of other components	\boxtimes	
Batteries shall be fused for short circuit protection	\boxtimes	
Batteries shall be protected from overheating by means of a thermocouple sensor	\boxtimes	
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D		
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
WARRANTY:		i.
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against	æ	
all defects in material and workmanship.		

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 4 of 36

ITEM #1 - 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPL	JANCE
OPTIONS:	YES	<u>NO</u>
1A – Steel Sign Post, As Specified	· .	
Description:		
Nucor RIB-BAK U-Channel Sign Support, galvanized, without breakaway (or approved equal).	· 🗵	
Measurements:	÷	
10' length	\boxtimes	
3-1/16" width	\boxtimes	
3/8" holes on 1" centers	\boxtimes	
2.5 lbs/ft linear weight	\boxtimes	□ .
Materials:		
Mounting hardware shall be Stainless Steel 5/16"	\boxtimes	
1B - Battery For Solar-Powered LED Sign Assembly, As Specified		
Description:		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.		
Materials: Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		
Battery:		
Batteries shall not weigh more than 1.8 lbs.	\boxtimes	
Batteries shall have a waterproof connection		
Batteries shall be sealed and spill-proof		
Batteries shall have an in-line power connector		
Batteries shall be replaceable independently of other components	\boxtimes	
Batteries shall be fused for short circuit protection		
Batteries shall be protected from overheating by means of a thermocouple sensor	\boxtimes	
Batteries shall have the following dimensions:		×
Grouped: 2.66" H X 2.66" W X 2.78" D		
Stacked: 1.34" H X 1.34" W X 10.6" D	\boxtimes	
ntroduced on: April 2, 2025 Adopte Flat pack: 5A34i 2140% 2.68" W X 0.67" D		

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 5 of 36

ITEM #1 - 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPI	IANCE
	YES	<u>NO</u>
OPTIONS: (CONT'D)		
1B - Battery For Solar-Powered Led Sign Assembly, As Specified (Cont'd)		
Operation:		
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.	\boxtimes	
Electrical:		5 g
All battery connectors shall conform to Ingress Protection IP-65 rating or better.		
1C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
<u>Description</u> :		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.	\boxtimes	
Mounting:		
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.		
Hardware:		
All fasteners used shall be anti-vandal.		
Electrical:	-	
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 6 of 36

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

				<u>COMPL</u>	<u>LIANCE</u>
				YES	NO
DESCRIPTION: Solar Powered and fully self-contained U.S. Department of Transportation Federevision 2 May 2012 Manual on Uniform	eral Highway A	Administration 2009	9		
section 2A.08 on retro reflectivity and i					
MATERIALS: The assembly shall include the following	g items:			a.	
SIGN:			i		
Sign blanks shall be .080" gauge alumir	num			\boxtimes	
Sheeting shall be 3M DG Type IX or a	pproved equal,	, with anti-graffiti o	verlay	\boxtimes	
Sign assembly shall use anti-vandal fas and sign for fixture		_		\boxtimes	
36" Signs shall have four (4) holes pund	hed to allow d	lual post mounting			
Mounting hardware shall be Stainless S					
LED:					
Sign assembly shall utilize high-power light intensity of up to 600,000 mcd (mi 20 degrees.		•			· ,
The various sign faces shall have a colo noted below:	r and minimun	n number of LEDs	as	1	•
Ston 2611 vr 2611	<u>SIGN</u>	LED Color	<u>Minimum</u> <u>Number</u>		
Stop 36" x 36" (Facing)(White on Red)	R1-1	White or Red	8	\boxtimes	
Yield 36" x 36" x 36" (Facing)(White on Red)	R1-2	White or Red	9	\boxtimes	
School Crossing (Symbol) 36" x 36" (Facing) Fluorescent Yellow Green/Black/ Red	S1-1	White or Yellow	6	\boxtimes	
Ped Crossing 36" x 36" (Facing) Fluorescent Yellow Green	W11-2	White or Yellow	8	\boxtimes	
Turn Symbol 36" x 36" (Facing) Yellow	W1-1L	White or Yellow	8		
Turn Symbol 36" x 36" (Facing) Yellow	W1-1R	White or Yellow	8	\boxtimes	
Turn Symbol L / speed 36" x 36" (MPH) to be noted at time of order (Facing Yellow April 2, 2025 dopted on: April 2, 2025 fficial Resolution#: 2025000414	W1-1a	White or Yellow	8	\boxtimes	

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 7 of 36

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

(CONT D)				COMPI YES	LIANCE NO
<u>LED</u> : (CONT'D)			<u>Minimum</u>		
	<u>SIGN</u>	LED Color	<u>Number</u>		
Turn Symbol R / speed 36" x 36"		TT 7 .			
(MPH) to be noted at time of order (Facing) Yellow	W1-1a	White or Yellow	8	\boxtimes	
Curve Symbol 36" x 36"	W 1-1a	White or	0	4	
(Facing) Yellow	W1-2L	Yellow	8	\boxtimes	
Curve Symbol 36" x 36"	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	White or	ŭ	_	
(Facing) Yellow	W1-2R	Yellow	8	\boxtimes	
Curve Symbol L / speed 36" x					
36"(MPH) to be noted at time of order		White or			
(Facing) Yellow	W1-2a	Yellow	8	\boxtimes	
Curve Symbol R / speed 36" x 36"					·
(MPH) to be noted at time of order		White or			_
(Facing) Yellow	W1-2a	Yellow	8	\boxtimes	
Each LED shall be sealed in a heat-dissipato weather and vibration.	ating plastic	enclosure to provid	de resistance		
Each LED enclosure shall be mounted to twelded or mechanically fastened to the sign	_	1" hole and ultrasc	onically		
All LEDs shall be wired in strings to active standard).	ate simultan	eously (as per MU	TCD	\boxtimes	
All wire used shall conform to military sp	ecification M	IIL-W-16878D, Ty	ype D, vinyl	_	_
nylon jacket.				\boxtimes	
Wiring shall be covered and secured to the enclosure.	e sign assemi	bly in a weather re	sistant	\boxtimes	\Box
All LED connectors shall conform to Ingr	ess Protectio	n IP-65 rating or b	etter.		
SOLAR PANEL :					
Solar panels shall be sized appropriately s ensure operation in the Ocean County Reg		ain the battery suf	ficiently to	\boxtimes	
All panels shall be mounted to an aluminu	ım plate and	bracket at an angle	e of 45° to		
60°.					Ц
All fasteners used shall be anti-vandal.					
Wire used shall conform to military specification nylon jacket.	fication MIL-	-W-16878D, Type	D, vinyl		
The solar panel assembly shall be mounted	d securely to	the sign assembly	•	\boxtimes	
All solar panel connectors shall conform to	o Ingress Pro	otection IP-65 ratin	ng or better.	\boxtimes	
Introduced on: April 2, 2025 Adopted on: April 2, 2025				ē	

Adopted on: April 2, 2025 Official Resolution#: 2025000414

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 8 of 36

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPI</u>	<u>LIANCE</u>
	<u>YES</u>	<u>NO</u>
CONTROL CIRCUIT:	_	
Control circuit shall have the capability of independently flashing dual outputs.		
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	\boxtimes	
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.		П
Control circuit covering shall be waterproof and anti-vandal.	⊠	
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	\boxtimes	
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	\boxtimes	П
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	\boxtimes	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
Batteries shall not weigh more than 1.8 lbs.		
Batteries shall have a waterproof connection		
Batteries shall be sealed and spill-proof		
Batteries shall have an in-line power connector		
Batteries shall be replaceable independently of other components	\boxtimes	
Batteries shall be fused for short circuit protection		
Batteries shall be protected from overheating by means of a thermocouple sensor		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D		
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
WARRANTY: Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against Intributeres in material 2005 workmanship. Adopted on: April 2, 2025 Official Resolution#: 2025000414	×	

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 9 of 36

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPL	IANCE
	YES	<u>NO</u>
OPTIONS:		
2A - Steel Sign Post, As Specified	•	
<u>Description:</u>		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	\boxtimes	
Measurements:		
10' length	\boxtimes	
3-1/16" width	\boxtimes	
3/8" holes on 1" centers	\boxtimes	
2.5 lbs/ft linear weight		
Materials:		
Mounting hardware shall be Stainless Steel 5/16"	\boxtimes	
2B - Battery For Solar-Powered LED Sign Assembly, As Specified		
Description:		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.	\boxtimes	
Materials: Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	\boxtimes	, -
Battery:		
Batteries shall not weigh more than 1.8 lbs.	\boxtimes	
Batteries shall have a waterproof connection	\boxtimes	
Batteries shall be sealed and spill-proof	\boxtimes	
Batteries shall have an in-line power connector	\boxtimes	
Batteries shall be replaceable independently of other components	\boxtimes	
Batteries shall be fused for short circuit protection	\boxtimes	
Batteries shall be protected from overheating by means of a thermocouple sensor		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		
Stacked: 1.34" H X 1.34" W X 10.6" D	\boxtimes	s 🔲
Flatpack: 5.24" H X 2.68" W X 0.67" D		

Introduced on: Adopted on:

April 2, 2025 April 2, 2025

Official Resolution#: 2025000414

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ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

\cdot	COMPL	IANCE
	YES	<u>NO</u>
<u>OPTIONS:</u> (CONT'D)		
2B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)		
Operation:		
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.		
Electrical:		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
2C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
Description:		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.		
Mounting:	4	
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.		
Hardware:		
All fasteners used shall be anti-vandal.		
Electrical:		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	

EBERL IRON WORKS, INC.

B2025-43

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COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS
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ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

	COMPL	LIANCE
	YES	NO
DESCRIPTION:		
Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices	v	
section 2A.08 on retro reflectivity and illumination.		
MATERIALS:		2 2
The assembly shall include the following items:		
SIGN:		
Sign blanks shall be .080" gauge aluminum	\boxtimes	
Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay	\boxtimes	
Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture	\boxtimes	
48" Signs shall have four (4) holes punched to allow dual post mounting		
Mounting hardware shall be Stainless Steel 5/16"		
LED:	v	
Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.	\boxtimes	
The sign faces shall have a color and minimum number of LEDs as noted below:		
Stop 48" x 48" Minimum Number		
(Facing)(White on Red) R1-1 White or Red 8	\boxtimes	
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.	\boxtimes	
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.	\boxtimes	
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).		
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.		
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.		
All LED connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	

Introduced on: Adopted on: Official Resolution#: 2025000414

April 2, 2025 April 2, 2025

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 12 of 36

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPI</u>	<u>LIANCE</u>
SOLAR PANEL:	YES	<u>NO</u>
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.		
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	\boxtimes	
All fasteners used shall be anti-vandal.		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes	
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	· 🗆
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.	\boxtimes	
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.		
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.		
Control circuit covering shall be waterproof and anti-vandal.	\boxtimes	
Control circuit shall remain operational between the temperatures of -40°F and 176°F.		
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.		
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	\boxtimes	
Batteries shall be sealed in a plastic film to provide resistance to moisture and		
corrosion.	\boxtimes	
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	\boxtimes	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
Batteries shall not weigh more than 1.8 lbs.	\boxtimes	
Batteries shall have a waterproof connection	\boxtimes	
Batteries shall be sealed and spill-proof		
Batteries shall have an in-line power connector	\boxtimes	
Batteries shall be replaceable independently of other components		
Batteries shall be fused for short circuit protection troduced on: April 2, 2025 Batteries shall be protected from overheating by means of a thermocouple sensor fficial Resolution#: 2025000414		. 🗆

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 13 of 36

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPL</u>	<u> JANCE</u>
	YES	<u>NO</u>
BATTERY: (CONT'D)		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D		
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	\boxtimes	
OPTIONS:		
3A - Steel Sign Post, As Specified		
Description:		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	\boxtimes	
Measurements:		
10' length	\boxtimes	
3-1/16" width		
3/8" holes on 1" centers	\boxtimes	
2.5 lbs/ft linear weight		
Materials:		,
Mounting hardware shall be Stainless Steel 5/16"	\boxtimes	
3B - Battery For Solar-Powered LED Sign Assembly, As Specified	ž	
Description:		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.		
Materials:		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	\boxtimes	
Battery:		
Batteries shall not weigh more than 1.8 lbs.	\boxtimes	
Batteries shall have a waterproof connection		
Batteries shall be sealed and spill-proof	\boxtimes	
Batteries shall have an in-line power connector	\boxtimes	
htsoduced on: Spril 2,12025 dopted on: Official Resolution#: 2025000414	\boxtimes	

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS

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ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

		IANCE
OPTIONS: (CONT'D)	YES	<u>NO</u>
3B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)		
Battery: (Cont'd)		
Batteries shall be fused for short circuit protection	\boxtimes	
Batteries shall be protected from overheating by means of a thermocouple sensor	\boxtimes	
		Ы
Batteries shall have the following dimensions: Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D	\boxtimes	
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
Operation: Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.	\boxtimes	
Electrical: All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
3C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
Description:		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.	\boxtimes	
Mounting:		
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	\boxtimes	
Hardware:		
All fasteners used shall be anti-vandal.	\boxtimes	
Electrical:		ē
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.		
ATPHUR Panel confile 1603 shall conform to Ingress Protection IP-65 rating or better. Adopted on: Adopted on: April 2, 2025 Official Resolution#: 2025000414		

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS

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ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL **DESCRIPTION:**

y Administration 200	09	\boxtimes	
		\boxtimes	
al, with anti-graffiti	overlay	\boxtimes	
ant components to sign	gn	\boxtimes	
dual post mounting		\boxtimes	
, p : 20 5			
		_	
		\boxtimes	
ber of LEDs as note			
I FD Color			
White or Yellow	8	\boxtimes	
White or Yellow	8	\boxtimes	
ic enclosure to provi	de resistance	\boxtimes	
	onically	\boxtimes	
aneously (as per MU	JTCD	\boxtimes	
n MIL-W-16878D, T	ype D, vinyl	\boxtimes	
embly in a weather re	esistant	F	
anoly in a woulder		\boxtimes	Ш
	y Administration 200 ontrol Devices al, with anti-graffitium components to sign with a viewing angle of LEDs as note LED Color White or Yellow White or Yellow ic enclosure to proving a 1" hole and ultrasoly. and MIL-W-16878D, Total and MIL-W-16878D, Total control of the co	al, with anti-graffiti overlay unt components to sign v dual post mounting nat provide a maximum with a viewing angle of nber of LEDs as noted below: Minimum LED Color White or Yellow 8 White or Yellow 8 ic enclosure to provide resistance a 1" hole and ultrasonically	y Administration 2009 control Devices S

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ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

·	<u>COMPI</u>	LIANCE
	YES	YES
SOLAR PANEL:		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	\boxtimes	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	\boxtimes	
All fasteners used shall be anti-vandal.	\boxtimes	
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes	
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.	\boxtimes	
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	\boxtimes	
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	\boxtimes	
Control circuit covering shall be waterproof and anti-vandal.		
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	\boxtimes	
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.		
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	\boxtimes	
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	\boxtimes	
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	\boxtimes	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
Batteries shall not weigh more than 1.8 lbs.	\boxtimes	
Batteries shall have a waterproof connection	\boxtimes	
Batteries shall be sealed and spill-proof	\boxtimes	
Batteries shall have an in-line power connector	\boxtimes	
Batteries shall be replaceable independently of other components	\boxtimes	
Batteries shall be fused for short circuit protection	\boxtimes	
Ratteries shall be protected from overheating by means of a thermocouple sensor Adopted on: April 2, 2025 Official Resolution#: 2025000414		

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 17 of 36

ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPLIA	
	YES	<u>NO</u>
BATTERY: (Cont'd)		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D	\boxtimes	
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	\boxtimes	
OPTIONS:		
4A – Steel Sign Post, As Specified		
Description:		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	\boxtimes	
Measurements:		
10' length	\boxtimes	
3-1/16" width	\boxtimes	
3/8" holes on 1" centers	\boxtimes	
2.5 lbs/ft linear weight	\boxtimes	
Materials:		
Mounting hardware shall be Stainless Steel 5/16"		
4B - Battery For Solar-Powered LED Sign Assembly, As Specified		
Description:		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.		
Materials:		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	\boxtimes	
Battery:		
Batteries shall not weigh more than 1.8 lbs.	\boxtimes	
Batteries shall have a waterproof connection	\boxtimes	
Batteries shall be sealed and spill-proof	\boxtimes	
Batteries shall have an in-line power connector	\boxtimes	
Batteries shall be replaceable independently of other components	\boxtimes	
Batteries shall be fused for short circuit protection Batteries shall be protested from overheating by means of a thermocouple sensor official Resolution#: 2025000414	\boxtimes	

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ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPL	IANCE
OPTIONS, (CONTIN)	YES	<u>NO</u>
OPTIONS: (CONT'D)		
4B - Battery For Solar-Powered LED Sign Assembly, As Specified (CONT'D)		
Battery: (Cont'd)		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D	\boxtimes	
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
Operation:		
Batteries shall remain operational between the temperatures of -40°F and 176°F		
(-40°C and 80°C), and shall utilize overheat protection.	\boxtimes	
Electrical:		P
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
4C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
Description:		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and		
parameters as necessary to maintain operation of a solar-powered LED sign assembly	()	
in the Ocean County Region.	\boxtimes	Ш
Mounting:		
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to		
60°.	\boxtimes	
Hardware:		
All fasteners used shall be anti-vandal.	\boxtimes	
Electrical:		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl		
nylon jacket.	\boxtimes	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	

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ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

				COMPLIAN	
				YES	<u>NO</u>
DESCRIPTION:					
Solar Powered and fully self-containe U.S. Department of Transportation Fe revision 2 May 2012 Manual on Uniforsection 2A.08 on retro reflectivity and	deral Highway A orm Traffic Cont	Administration 200	9	\boxtimes	
MATERIALS:					
The assembly shall include the follow	ing items:				
<u>SIGN:</u>					
Sign blanks shall be .080" gauge alum	inum			\boxtimes	
Sheeting shall be 3M DG Type IX or	approved equal,	with anti-graffiti o	overlay	\boxtimes	
Sign assembly shall use anti-vandal f and sign for fixture	astener to mount	components to sig	n	\boxtimes	
48" Signs shall have four (4) holes pu horizontal install	nched to allow d	ual post mounting	and	\boxtimes	
Mounting hardware shall be Stainless	Steel 5/16"			\boxtimes	
LED:					
Sign assembly shall utilize high-powelight intensity of up to 600,000 mcd (120 degrees.				\boxtimes	
The sign faces shall have a color and	minimum numb	er of LEDs as note	d below:		
	<u>SIGN</u>	LED Color	<u>Minimum</u> <u>Number</u>		
Speed Limit (blank) 24" x 30" (Facing) Black on White	R2-1	White	8	\boxtimes	
Each LED shall be sealed in a heat-di- to weather and vibration.	ssipating plastic	enclosure to provid	le resistance	\boxtimes	
Each LED enclosure shall be mounted welded or mechanically fastened to the			onically	\boxtimes	
All LEDs shall be wired in strings to a standard).	activate simultan	eously (as per MU	TCD	\boxtimes	
All wire used shall conform to militar nylon jacket.	y specification N	ИIL-W-16878D, Т <u>э</u>	ype D, vinyl	\boxtimes	
Wiring shall be covered and secured t enclosure.	o the sign assem	bly in a weather re	sistant	\boxtimes	
All LED connectors shall conform to	Ingress Protection	on IP-65 rating or b	etter.	\boxtimes	

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EBERL IRON WORKS, INC.

B2025-43

Res-Pg:m.13-28

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ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIA</u>	
	YES	NO NO
SOLAR PANEL:		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	\boxtimes	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	\boxtimes	
All fasteners used shall be anti-vandal.	\boxtimes	
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes	
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.	\boxtimes	
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms		_
pulse.	\boxtimes	
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	\boxtimes	
Control circuit covering shall be waterproof and anti-vandal.	\boxtimes	
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	\boxtimes	
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	\boxtimes	
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	\boxtimes	
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	\boxtimes	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
Batteries shall not weigh more than 1.8 lbs.		
Batteries shall have a waterproof connection	\boxtimes	
Batteries shall be sealed and spill-proof	\boxtimes	
Batteries shall have an in-line power connector	\boxtimes	
Batteries shall be replaceable independently of other components	\boxtimes	
Batteries shall be fused for short circuit protection	\boxtimes	
Retailer is a so shall be protected from overheating by means of a thermocouple sensor Adopted on: April 2, 2025 Official Resolution#: 2025000414		

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ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPLIA	
	<u>YES</u>	<u>NO</u>
BATTERY: (Cont'd)		
Batteries shall have the following dimensions: Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D	\boxtimes	
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
WARRANTY: Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	⊠	
OPTIONS:		
5A - Steel Sign Post, As Specified		
Description: Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	\boxtimes	
Measurements:		
10' length	\boxtimes	
3-1/16" width	\boxtimes	
3/8" holes on 1" centers	\boxtimes	
2.5 lbs/ft linear weight	\boxtimes	
Materials:		
Mounting hardware shall be Stainless Steel 5/16"	\boxtimes	
5B - Battery For Solar-Powered LED Sign Assembly, As Specified		
<u>Description</u> :		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.	\boxtimes	
Materials:		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	\boxtimes	
Battery: Batteries shall not weigh more than 1.8 lbs.		
Batteries shall have a waterproof connection	\bowtie	
	— ⊠	
Batteries shall be sealed and spill-proof]
Batteries shall have an in-line power connector		
Bradustes shall be replaced ble independently of other components April 2, 2025	\boxtimes	Ц
Official Resolution#: 2025000414 Batteries shall be fused for short circuit protection	\boxtimes	

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 22 of 36

ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPLIANO	
	YES	NO NO
OPTIONS (Cont'd)		
5B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)		
Batteries shall be protected from overheating by means of a thermocouple sensor	\boxtimes	
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D	\boxtimes	
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
Operation :		
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.	\boxtimes	
Electrical:		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
5C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
Description:		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.	\boxtimes	
Mounting:		
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	\boxtimes	
Hardware:		
All fasteners used shall be anti-vandal.	\boxtimes	
Electrical:		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.		
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 23 of 36

ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

	COMPL	IANCE
DESCRIPTION:	<u>YES</u>	NO
Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.		
MATERIALS:		
The assembly shall include the following items:		
Sign blanks shall be .080" gauge aluminum	\boxtimes	
Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay	\boxtimes	
Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture	\boxtimes	
Mounting hardware shall be Stainless Steel 5/16"	\boxtimes	
LED:		
Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.		
The sign faces shall have a color and minimum number of LEDs as noted below:		
<u>Minimum</u> <u>SIGN</u> <u>LED Color</u> <u>Number</u>		
Speed Limit (blank) 30" x 36" (Facing) Black on White SIGN LED Color Number R2-1 White 8	\boxtimes	
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.	\boxtimes	
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.	\boxtimes	
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).	\boxtimes	
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes	
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.	\boxtimes	
All LED connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
SOLAR PANEL:		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	\boxtimes	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to appropriet to a spril 2, 2025 Appropriet on: April 2, 2025 Affirial Resolution#: 2025 Affirial Resolution#: 2025 Affirial Resolution#: 2025 Affirial Resolution#: 20250001416		

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ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPLIANCE	
COL AD DANIEL (CONTIN)	YES	NO
SOLAR PANEL: (CONT'D)		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes	
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.	\boxtimes	
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	5 7	
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will		Ц
automatically be determined by solar panel charge input.	\boxtimes	
Control circuit covering shall be waterproof and anti-vandal.	\boxtimes	
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	\boxtimes	
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	\boxtimes	
Batteries shall be sealed in a plastic film to provide resistance to moisture and	_	_
corrosion.	\boxtimes	
Batteries shall remain operational between the temperatures of -40°F and 176°F, and	\square	
shall utilize overheat protection.	\boxtimes	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
Batteries shall not weigh more than 1.8 lbs. Batteries shall have a waterproof connection	\boxtimes	
Batteries shall be sealed and spill-proof		
Batteries shall have an in-line power connector		
Batteries shall be replaceable independently of other components		
Batteries shall be fused for short circuit protection		
Batteries shall be protected from overheating by means of a thermocouple sensor Batteries shall have the following dimensions:	\boxtimes	Ш
Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D	\boxtimes	
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
Platpack. 3.24 11 A 2.06 W A 0.07 D		لسا
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against		
all defects in material and workmanship. Introduced on: April 2, 2025 Adopted on: April 2, 2025 Official Resolution#: 2025000414		

EBERL IRON WORKS, INC.

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ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPLIANCE	
OPTIONS	YES	<u>NO</u>
OPTIONS:		
6A – Steel Sign Post, As Specified		
Description:	_	_
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	\boxtimes	
Measurements:		
10' length		
3-1/16" width		
3/8" holes on 1" centers		
2.5 lbs/ft linear weight	\boxtimes	Ш
Materials:		
Mounting hardware shall be Stainless Steel 5/16"	\boxtimes	
6B - Battery For Solar-Powered LED Sign Assembly, As Specified		
<u>Description</u> :		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO®		
Blinkersigns®.	\boxtimes	
Materials:		
Batteries shall be sealed in a plastic film to provide resistance to moisture and	∇	
corrosion.	\boxtimes	Ц
Battery:	r - a	_
Batteries shall not weigh more than 1.8 lbs.		
Batteries shall have a waterproof connection		
Batteries shall be sealed and spill-proof	\boxtimes	
Batteries shall have an in-line power connector	\boxtimes	
Batteries shall be replaceable independently of other components	\boxtimes	
Batteries shall be fused for short circuit protection	\boxtimes	
Batteries shall be protected from overheating by means of a thermocouple sensor		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D	\boxtimes	
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
Operation:		
Batteries shall remain operational between the temperatures of -40°F and 176°F		
(-40°C and 80°C), and shall utilize overheat protection.		
Electrical:		
Adopted on: April 2, 2025 Official Resolution#: 2025000414		

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ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

		COMPLIANCE	
	YES	NO	
<u>OPTIONS</u> : (CONT'D)			
6C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified			
Description:			
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.	\boxtimes		
Mounting:			
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes		
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	\boxtimes		
<u>Hardware</u> :			
All fasteners used shall be anti-vandal.	\boxtimes		
Electrical:			
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes		
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes		

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 27 of 36

ITEM #7 - SOLAR SPEED RADAR SIGN, 12", TRAFFIC LOGIX SAFEPACE EVOLUTION 12, AS SPECIFIED, OR EQUAL

	COMPLIANCE	
DESCRIPTION	YES	<u>NO</u>
<u>DESCRIPTION</u> : Changeable message sign which displays speed of oncoming vehicles. Includes MUTCD-compliant "YOUR SPEED" sign (black legend on yellow background). Sign shall warn drivers who exceed designated threshold speed.	X	
SPEED DISPLAY: Individual digits within display shall be 12" h x 6.4" w, and each digit shall be comprised of a matrix of no fewer than 196 yellow LEDs per digit; total 936 yellow		
LEDs.		
The LEDs shall be displayed on a black background.	\boxtimes	
The yellow digits shall have a viewing angle at 50% IV of 30° and a partial flux (brightness) of 9000-22400 Ev, [lux]/LED.		
Display face shall be constructed of non-glare UV stabilized polycarbonate.	\boxtimes	
Display shall have an operating temperature range of -40°F to 185°F with 95% humidity non-condensing. (-20°F for Bluetooth communication)		
Speed display size shall be maximum17.25" (h) x 23" (w) x 5.625" (d).	\boxtimes	
The speed display shall be capable of displaying speeds in miles per hour and ranging from $3-99$.		
There shall be a conformal coating on all circuit boards	\boxtimes	
There shall be a built in ambient light sensing and automatic brightness control.	\boxtimes	
SIGN: Sign shall conform to the 2009 Federal Highway MUTCD section 2A.08 on retroreflectivity and illumination.	×	
Sign shall measure at least 29" h x 23" w.	\boxtimes	
Sign blanks shall be aluminum.	\boxtimes	
Sheeting used shall be 3M DG3 diamond grade, or approved equal, with anti-graffiti overlay.	\boxtimes	
The sign shall measure 29.0" (h) x 23.0" (w) x 5.625" (d) and display the message "YOUR SPEED" on two (2) lines.	\boxtimes	
Sign weight with speed radar shall be a maximum of 20 pounds.	\boxtimes	
Mounting hardware shall be Stainless Steel 5/16"	\boxtimes	

Introduced on: Adopted on: Official Resolution#: 2025000414

April 2, 2025 April 2, 2025

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COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS

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ITEM #7 - SOLAR SPEED RADAR SIGN, 12", TRAFFIC LOGIX SAFEPACE EVOLUTION 12, AS SPECIFIED, OR EQUAL (CONT'D)

PROGRAMMING:	COMPL YES	IANCE NO
There shall be 24/7 365 day programming and scheduling.	\boxtimes	
The unit shall be capable of display On/Stealth Modes.	\boxtimes	
The unit shall display the closest/fastest vehicle speed.	\boxtimes	
The unit shall have a digit flashing speed threshold.	\boxtimes	
The following are the flashing speeds for the LEDs: Fast 1.5 Hz, Medium 1 Hz, and Slow 0.75 Hz.		
The unit shall be capable of collecting and storing traffic data by location.	\boxtimes	
The unit shall capture traffic data when in Stealth Mode.		
The data shall be downloaded via a wireless connection.	\boxtimes	
The program shall be capable of statistical reporting and charts.	\boxtimes	
The program shall be capable of compiling the reports as summaries, weekly reports, period comparison reports, or full custom reports and charts.	\boxtimes	
The program shall be capable of reporting the following parameters: average vehicle count, total vehicle count, average speed, average number of speed violations, total number of speed violations, minimum/maximum speed, 85th percentile speed.	\boxtimes	
The reports shall print directly and exported into CSV, MS Excel, Adobe Acrobat PDF and HTML formats.	\boxtimes	
SOLAR PANEL:		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently.	\boxtimes	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.		
All fasteners used shall be anti-vandal.	\boxtimes	
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes	
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
The solar panel shall be a 50W or 90W solar panel.		

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April 2, 2025 April 2, 2025

Official Resolution#: 2025000414

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COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 29 of 36

ITEM #7 - SOLAR SPEED RADAR SIGN, 12", TRAFFIC LOGIX SAFEPACE EVOLUTION 12,AS SPECIFIED, OR EQUAL (CONT'D)

,	COMPL	<u>IANCE</u>
ENCLOSURE:	<u>YES</u>	<u>NO</u>
The enclosure shall be vandal resistant and have a lightweight polymer.	\boxtimes	
The enclosure shall have a matte black front.	\boxtimes	
The enclosure shall have a light gray body.	\boxtimes	
The enclosure shall be weatherproof and be NEMA 4X-12 and IP65 compliant.	\boxtimes	
The enclosure shall be non-sealed and ventilated.	\boxtimes	
RADAR:		
The unit shall use an internal radar that is Doppler and FCC approved.	\boxtimes	
The radar RF out shall be 5 mW maximum.	\boxtimes	
The radar f-center shall be 24.125 GHz or 24.200 GHz.	\boxtimes	
The radar shall have a maximum pickup distance of 400 feet.	\boxtimes	
The beam angle shall be 24° (vertical) x 12° (horizontal).	\boxtimes	
The radar beam polarization shall be linear.	\boxtimes	
The radar shall have CE Mark.		
BATTERY:		
The sign shall have Lithium-ion batteries with a weight of 4 pounds.	\boxtimes	
The universal mounting bracket system shall come with a sign bracket (2 pounds) and a pole bracket (5 pounds).	\boxtimes	
The power input shall be 100~240V AC @ 150 mA, 12V DC (11-14.5V @ 1A).	\boxtimes	
The power input shall be capable of wireless battery charge monitoring via software interface.	\boxtimes	
COMMUNICATIONS:		
The device shall be Bluetooth Capable.		
ASSEMBLY:		
Assembly shall be capable of mounting to pole, timber post, or u-channel.		
Mounting hardware shall be tamper-resistant.	\boxtimes	

Introduced on:

April 2, 2025 April 2, 2025

Adopted on:

Official Resolution#: 2025000414

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ITEM #7 - SOLAR SPEED RADAR SIGN, 12", TRAFFIC LOGIX SAFEPACE EVOLUTION 12, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPL	<u>IANCE</u>
WARRANTY:	<u>YES</u>	<u>NO</u>
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.		
Manufacturer shall offer (at minimum) ten (10) years warranty on LEDs.	\boxtimes	
Manufacturer shall offer (at minimum) two (2) year warranty on the sign.	\boxtimes	
Manufacturer shall offer (at minimum) one (1) year warranty on the batteries.	\boxtimes	
ITEM # 8 - SOLAR SPEED RADAR SIGN, 15", TRAFFIC LOGIX SAFEPACE 45 SPEED SIGN, AS SPECIFIED, OR EQUAL	O FULL RA	<u>ADAR</u>
DESCRIPTION:		
Changeable message sign which displays speed of oncoming vehicles. Includes MUTCD – compliant "YOUR SPEED" sign (black legend on yellow background). Sign shall warn drivers who exceed designated threshold speed.	\boxtimes	
SPEED RADAR SIGN:		
The assembly shall include the following items: The Speed Radar Sign Digits shall be 15.0"(h)x8.0"(w) with 112 yellow LEDs per digit.	\boxtimes	
The "YOUR SPEED" text on the speed radar sign shall be 6" H and on two (2) lines.	\boxtimes	
The full Speed Radar Sign size shall be 40.0" H x 30.0" W x 3.5" D.	\boxtimes	
The sign weight without the "YOUR SPEED" sign and with the solar power panel and bracket shall be 20 pounds <i>maximum</i> .	\boxtimes	
The sign shall come with 4 cell lithium ion battery (4 lbs max).	\boxtimes	
The sign shall come with a universal mounting bracket system including the sign bracket (2 lbs) and pole bracket (5 lbs).	\boxtimes	
The speed radar sign shall measure the speed in miles per hour (MPH).	\boxtimes	
The speed radar sign shall have an aluminum protective cover 0.1875" D.	\boxtimes	
The sign shall have yellow high-intensity prismatic reflective sheeting on the sign face with black colored text in MUTCD approved colors and format.	\boxtimes	
The operating temperature shall be -40°F to 185°F minimum.		
The sign shall have a built in ambient light sensor.	\boxtimes	
The sign shall have a wireless battery charge monitor.	\boxtimes	
ROWER SOURGE 2, 2025 Adopted on: April 2, 2025 Sring Stand Jan 25, 2025 powered.	\boxtimes	

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COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 31 of 36

ITEM #8 - SOLAR SPEED RADAR SIGN, 15", TRAFFIC LOGIX SAFE PACE 450 FULL RADAR SPEED SIGN, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPL	LIANCE
	YES	<u>NO</u>
RADAR: The radar sign shall have a ten (10) year warranty on the LEDs.	\boxtimes	
• • • • • • • • • • • • • • • • • • • •		
The internal radar shall be Doppler (FCC approved).	\boxtimes	
The radar RF out shall be 5mW maximum.	\boxtimes	
The radar f-center shall be 24.125 GHz center ±25 MHz.	\boxtimes	
The radar pick-up distance shall go up to 1,200 feet minimum.	\boxtimes	
The radar beam angle shall be 11°x11°.	\boxtimes	
The radar beam polarization shall be linear.	\boxtimes	
The FCC ID for the radar shall be TIADR1500.	\boxtimes	
DISPLAY:		
LED Digits shall have 224 yellow LED, 23°, 5mm, luminous intensity (5,680-8,200 mcd/LED).	\boxtimes	
The display shall have an ambient light sensor and automatic brightness adjuster.	\boxtimes	
ENCLOSURE:		
The enclosure shall be 12 gauge aluminum with flat black powder coated front.	\boxtimes	
The body of the enclosure shall be light gray powder coated.	\boxtimes	
The enclosure shall be weather proof, non-sealed, and ventilated.	\boxtimes	
The enclosure shall be NEMA 4X-12 and IP65 level compliant.	\boxtimes	
MOUNTING:		
The brackets shall be theft resistant.	\boxtimes	
The sign shall lock into the bracket with a key.	\boxtimes	
The universal mounting bracket system shall have the following options: circular, square, and telspar poles.	\boxtimes	
The mounting system shall come with banding brackets.	\boxtimes	
COMMUNICATIONS:		
The system shall be both WiFi and Bluetooth 4.0 compatible.	\boxtimes	
PROGRAMMING:		
Safe Pace Pro management software or approved equal shall be utilized.	\boxtimes	
There shall be 24 hours a days a week, 365 days a year unlimited programming through the duling. April 2, 2025 Official Resolution#: 2025000414	\boxtimes	

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 32 of 36

ITEM #8 - SOLAR SPEED RADAR SIGN, 15", TRAFFIC LOGIX SAFE PACE 450 FULL RADAR SPEED SIGN, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPL	LIANCE
	YES	NO
<u>DISPLAY SETTINGS</u> :		
The display shall have both 'ON' and 'Stealth Mode' settings.	\boxtimes	
In stealth mode, the speed will not be displayed and the data will be collected.	\boxtimes	
The display with be capable of a minimum speed and maximum speed.	\boxtimes	
The display will be capable of flashing the digits when the speed is measured above the selected speed.	\boxtimes	
DATA COLLECTION:		
Traffic data shall be collected and stored by location.	\boxtimes	
Traffic data shall be downloaded through a wireless connection.	\boxtimes	
The program shall be capable of statistical reports and charts.	\boxtimes	
The following reports shall be compiled: summary reports, weekly reports, period comparison reports, and customizable reports.	\boxtimes	
The following shall be the reporting parameters: • average vehicle count • total vehicle count		
 average speed average number of speed violations total number of speed violations minimum and maximum speed 		
• 85 th percentile speed		
The reports shall be capable of printing directly from the program and exported into CSV format, MS Excel, Adobe Acrobat PDF, and HTML.		
The charts shall be capable of printing directly from the program and Adobe Acrobat PDF format.	\boxtimes	
SOLAR PANEL:		
The solar panel power output shall be 20 W.	\boxtimes	
The solar panel operation temperature range shall be -40°C to 85°C minimum.	\boxtimes	
The solar panel shall be composed of laminate: glass, EVA, TPT (tedlar/pet/tedlar), or TPE.	\boxtimes	
The front side of the solar panel shall have high-transmission 3.2mm tempered glass.	\boxtimes	
The back side of the solar panel shall be made of wither TPT or TPE.	\boxtimes	
The solar panel frame shall be clear anodized aluminum.		
The solar panel shall be output to a junction box. ntroduced on: April 2, 2025	\boxtimes	

Adopted on: April 2, 2025 Official Resolution#: 2025000414

EBERL IRON WORKS, INC.

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Res-Pg:m.13-41

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 33 of 36

ITEM #9 – STEEL SIGN POST, AS SPECIFIED, OR EQUAL

	COMPL	IANCE
DESCRIPTION:	YES	<u>NO</u>
Nucor RIB-BAK U-Channel Sign Support, galvanized, without breakaways (or		
approved equal)	\boxtimes	
MEASUREMENTS:	<u></u>	_
10' length	\boxtimes	
3-1/16" width		
3/8" holes on 1" centers		
2.5 lbs/ft linear weight	\boxtimes	
Materials:		
Mounting hardware shall be Stainless Steel 5/16"	\boxtimes	П
ITEM #10 - BATTERY FOR SOLAR-POWERED LED SIGN ASSEMBLY, AS SPIEQUAL	<u>ECIFIED, (</u>	<u>)R</u>
DESCRIPTION:		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO®		
Blinkersigns®.	\boxtimes	
MATERIALS:		
Batteries shall be sealed in a plastic film to provide resistance to moisture and	157I	
CORTOSION. DATTEDV.		لـا۔
BATTERY:	⊠	
Batteries shall not weigh more than 1.8 lbs.		
Batteries shall have a waterproof connection		
Batteries shall be sealed and spill-proof		
Batteries shall have an in-line power connector		
Batteries shall be replaceable independently of other components		
Batteries shall be fused for short circuit protection		
Batteries shall be protected from overheating by means of a thermocouple sensor	\boxtimes	L
Batteries shall have the following dimensions:		 1
Grouped: 2.66" H X 2.66" W X 2.78" D	\boxtimes	
Stacked: 1.34" H X 1.34" W X 10.6" D		
Flatpack: 5.24" H X 2.68" W X 0.67" D	\boxtimes	
OPERATION:		
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.	\boxtimes	
ELECTRICAL:		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
Introduced on: April 2, 2025 Adopted on: April 2, 2025 Official Resolution#: 2025000414		

EBERL IRON WORKS, INC.

B2025-43

Res-Pg:m.13-42

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 34 of 36

ITEM #11 - SOLAR PANEL FOR SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR **EQUAL**

	COMPI	
DESCRIPTION:	<u>YES</u>	<u>NO</u>
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.	\boxtimes	
MOUNTING:		
The solar panel assembly shall be mounted securely to the sign assembly. All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.		
		Ш
HARDWARE:	57	-
All fasteners used shall be anti-vandal.		Ш
ELECTRICAL: Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL		
DESCRIPTION: Fully self-contained Solar-Powered LED Pedestrian Crossing Warning System, including an LED-enhanced pedestrian crossing sign assembly (conforming to the 2009 Federal Highway MUTCD section 2A.08 on retroreflectivity and illumination). Each system shall consist of two (2) solar-powered LED pedestrian crossing signs, two (2) cabinets, two (2) pedestrian push button assemblies, two (2) sign mounting kits, two (2) wireless controller kits, and all appurtenances incidental to the Solar-Powered LED Pedestrian Crossing Warning System.		
MATERIAL:		
The system shall include the following items:		
SIGN:		
MUTCD compliant Pedestrian warning sign type W11-2. 36" x 36"	\boxtimes	
Sign blanks shall be .080" gauge aluminum.	\boxtimes	
Sheeting used shall be 3M DG3 diamond grade, or approved equal, with anti-graffiti overlay.		
Sign assembly shall use anti-vandal fasteners to mount components to sign and sign to fixture.	\boxtimes	
Mounting hardware shall be Stainless Steel 5/16"	\boxtimes	

Introduced on: Adopted on:

April 2, 2025 April 2, 2025

Official Resolution#: 2025000414

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 35 of 36

ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPI</u>	LIANCE
I DDG	YES	NO
LEDS: Sign assambly shall utilize a minimum of sight (9) high assamply LEDs that was it.		
Sign assembly shall utilize a minimum of eight (8) high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle		
of 20°.	\boxtimes	
LEDs shall be amber in color.	\boxtimes	
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance	لاعا	
to weather and vibration.	\boxtimes	
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically		
welded or mechanically fastened to the sign assembly.	\boxtimes	
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD	5 7	
standard).	\boxtimes	Ш
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	\boxtimes	П
Wiring shall be covered and secured to the sign assembly in a weather resistant		
enclosure.	\boxtimes	
All LED connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
1 m 222 commence sham comorm to ingress recovering a committee of comm	_	_
SOLAR PANEL:		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to		_
ensure operation in the Ocean County Region.	\boxtimes	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	\boxtimes	П
All fasteners used shall be anti-vandal.		
Wire used shall conform to military specification MIL-W-1687D, Type D, vinyl nylon		
jacket.		
The solar panel assembly shall be mounted securely to the sign assembly.	\boxtimes	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
DUCH DUTTON.		
<u>PUSH BUTTON:</u> Sign assembly shall include a Polara Bulldog Push Button (or approved Equal),		
yellow in color and with an LED for visual confirmation of activation.	\boxtimes	
Push button connectors shall conform to Ingress Protection, IP-65 rating or better.		
a de la company		
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.	\boxtimes	
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time.		
Outputs shall reach the output current as programmed for the duration of the 100 ms		
pulse.	\boxtimes	
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will		
automatically be determined by solar panel charge input.	\boxtimes	
ntroduced on: April 2 2025	\boxtimes	
donted on April 2, 2023 Gontrol recruit converging shall be waterproof and anti-vandal.	لاحا	

EBERL IRON WORKS, INC.

B2025-43

Res-Pg:m.13-44

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 36 of 36

ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL (CONT'D)

	COMPLIANC	
	YES	NO
CONTROL CIRCUIT : (CONT'D)		
Control circuit shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C).	\boxtimes	
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.		
BATTERY:		
Battery packs shall be 4.8V, 14000 mAh nickel metal hydride (NiMH).	\boxtimes	
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion. Dimensions shall be 10.5" x 1.5" to be house in a 2-3/8" aluminum tube.	\boxtimes	
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize heat protection.	\boxtimes	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	\boxtimes	
WIRELESS COMMUNICATION:		
Each system shall include a radio-control cabinet for communication with and synchronization within the system.	\boxtimes	
Each sign assembly shall include a self-powered wireless transmitter / receiver for communication with the control cabinet.	\boxtimes	
Transmitter units shall have a minimum operating range of 1000 ft (line of sight).		
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	\boxtimes	

B2025-43 Res-Pg:m.13-45

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS

Page 1 of 36

ITEM #1 - 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

				<u>COMPLIA</u>	
DESCRIPTION				YES	<u>NO</u>
DESCRIPTION:					
Solar Powered and fully self-contained U.S. Department of Transportation Federevision 2 May 2012 Manual on Uniform	eral Highway A m Traffic Cont	Administration 200)9		
section 2A.08 on retro reflectivity and i	llumination.			\boxtimes	
MATERIALS:					
The assembly shall include the following	a items:			\boxtimes	
•	ig items.			E SI	
SIGN:					
Sign blanks shall be .080" gauge alumin				\boxtimes	
Sheeting shall be 3M DG Type IX or ap			(2)	\boxtimes	
Sign assembly shall use anti-vandal fast and sign for fixture	ener to mount	components to sig	n		
and sign for fixture					
Mounting hardware shall be Stainless S	teel 5/16"			\boxtimes	
LED:					
Sign assembly shall utilize high-power	1W LEDs that	provide a maximu	m light		
intensity of up to 600,000 mcd (millican					\boxtimes
The various sign faces shall have a color noted below:			~		
	~~~		<u>Minimum</u>		
•	<u>SIGN</u>	LED Color	<u>Number</u>		
Ped Crossing 30" x 30"	****	White or	,	<del></del> 7	_
(Facing) Fluorescent Yellow Green	W11-2	Yellow	8		Ш
Turn Symbol 30" x 30"	3371 13	White or	0	( <del></del>	
(Facing ) Yellow	W1-1L	Yellow	8		L
Turn Symbol 30" x 30"	W1 1D	White or	0	$\square$	
(Facing ) Yellow	W1-1R	Yellow	8		
Curve Symbol 30" x 30" (Facing ) Yellow	W1-2L	White or Yellow	8		П
Curve Symbol 30" x 30"	W1 2D	White or	Ü		_
(Facing ) Yellow	W1-2R	Yellow	8	$\boxtimes$	
Stop Ahead 30" x 30"					
Stop Symbol, White on Red, Border &					
Arrow Black On Yellow		White or			
(Facing)	W3-1	Yellow	8	$\boxtimes$	
Yield Ahead 30" x 30"					
Stop Symbol, White on Red, Border &					
Arrow Black On Vellow Introduced off: On April 2, 2025 (Papierps)n: April 2, 2025 Official Resolution#: 2025000414	W3-2	White or Yellow	8		

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 2 of 36

#### ITEM #1 - 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

(CONT D)					
			Minimum	YES YES	IANCE NO
Signal About 1200 - 200	<u>SIGN</u>	LED Color	Number		
Signal Ahead 30" x 30" Symbol, Border & Arrow Black on (Facing) Yellow	W3-3	White or Yellow	8	$\boxtimes$	
<u>LED</u> : (CONT'D)		•			
Each LED shall be sealed in a heat-dissipate to weather and vibration.	ting plastic e	enclosure to provide	e resistance	$\boxtimes$	
Each LED enclosure shall be mounted to the welded or mechanically fastened to the sign	n assembly.		·		$\boxtimes$
All LEDs shall be wired in strings to activa standard).	te simultane	cously (as per MUT	CCD	$\boxtimes$	
All wire used shall conform to military spe nylon jacket.	cification M	IL-W-16878D, Ty	pe D, vinyl	$\boxtimes$	
Wiring shall be covered and secured to the enclosure.	sign assemb	ly in a weather res	istant	$\boxtimes$	
All LED connectors shall conform to Ingre	ss Protection	n IP-65 rating or be	etter.		
SOLAR PANEL:					
Solar panels shall be sized appropriately so ensure operation in the Ocean County Regi		ain the battery suffi	iciently to	$\boxtimes$	
All panels shall be mounted to an aluminur 60°.	n plate and b	oracket at an angle	of 45° to	$\boxtimes$	
All fasteners used shall be anti-vandal.				$\boxtimes$	
Wire used shall conform to military specifinylon jacket.	cation MIL-	W-16878D, Type l	D, vinyl	$\boxtimes$	
The solar panel assembly shall be mounted	securely to	the sign assembly.			$\boxtimes$
All solar panel connectors shall conform to	Ingress Pro	tection IP-65 rating	g or better.	$\boxtimes$	
<b>CONTROL CIRCUIT</b> :					
Control circuit shall have the capability of i	independent	ly flashing dual out	tputs.	$\boxtimes$	
Flashing output shall be 50 to 60 flashes pe Outputs shall reach the output current as pr pulse.				$\boxtimes$	
Output current shall be individually program operation for the purpose of adjusting to an automatically be determined by solar panel	nbient lightii	ng conditions. Mod		⊠	
Control circuit covering shall be waterproo				$\boxtimes$	
Introduced on: April 2, 2025 Apple of Freuit shall remain operational bet Official Resolution#: 2025000414 All circuit connectors shall conform to Ingr				$\boxtimes$	

#### NATIONAL HIGHWAY PRODUCTS, INC.

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#### ITEM #1 - 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPL	IANCE
BATTERY:	<u>YES</u>	<u>NO</u>
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).		$\boxtimes$
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		$\boxtimes$
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
Batteries shall not weigh more than 1.8 lbs.	$\boxtimes$	
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Batteries shall be replaceable independently of other components	$\boxtimes$	
Batteries shall be fused for short circuit protection	$\boxtimes$	
Batteries shall be protected from overheating by means of a thermocouple sensor	$\boxtimes$	
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	$\boxtimes$	

Introduced on: April 2, 2025 Adopted on: April 2, 2025 Official Resolution#: 2025000414

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#### ITEM #1 - 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	<b>IANCE</b>
OPTIONS:	<u>YES</u>	<u>NO</u>
1A - Steel Sign Post, As Specified		
<u>Description:</u> Nucor RIB-BAK U-Channel Sign Support, galvanized, without breakaway (or approved equal).	⋈	
Measurements:		
10' length	$\boxtimes$	
3-1/16" width	$\boxtimes$	
3/8" holes on 1" centers	$\boxtimes$	
2.5 lbs/ft linear weight	$\boxtimes$	
Materials: Mounting hardware shall be Stainless Steel 5/16"	$\boxtimes$	
1B - Battery For Solar-Powered LED Sign Assembly, As Specified		9
Description: 6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.		$\boxtimes$
Materials: Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		$\boxtimes$
Battery:		,
Batteries shall not weigh more than 1.8 lbs.	$\boxtimes$	
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Batteries shall be replaceable independently of other components	$\boxtimes$	
Batteries shall be fused for short circuit protection	$\boxtimes$	. 🗆
Batteries shall be protected from overheating by means of a thermocouple sensor	$\boxtimes$	
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D Introduced on: Adopted lat pack: 5 April 2,2025 Adopted lat pack: 5 April 2,2025 Official Resolution#: 2025000414		$\boxtimes$

NATIONAL HIGHWAY PRODUCTS, INC.

B2025-43

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS

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<u>ITEM #1 – 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL</u> (CONT'D)

	<u>COMPL</u>	<b>IANCE</b>
OPTHONIC (CONTENT)	<b>YES</b>	<u>NO</u>
OPTIONS: (CONT'D)		
1B - Battery For Solar-Powered Led Sign Assembly, As Specified (Cont'd)		
Operation: Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.	$\boxtimes$	
Electrical:		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
1C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
Description:		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.		$\boxtimes$
Mounting:		
The solar panel assembly shall be mounted securely to the sign assembly.		$\boxtimes$
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	$\boxtimes$	
<u>Hardware</u> :		
All fasteners used shall be anti-vandal.	$\boxtimes$	
Electrical:		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	$\boxtimes$	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 6 of 36

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

				COMPI	<b>JANCE</b>
DESCRIPTION.				<b>YES</b>	<u>NO</u>
DESCRIPTION: Solar Powered and fully self-contained U.S. Department of Transportation Federevision 2 May 2012 Manual on Unifor section 2A.08 on retro reflectivity and i	eral Highway . m Traffic Con	Administration 2009	9	$\boxtimes$	
MATERIALS: The assembly shall include the following	ng items:				
SIGN:					
Sign blanks shall be .080" gauge alumir	num			$\boxtimes$	
Sheeting shall be 3M DG Type IX or a	pproved equal	, with anti-graffiti o	verlay	$\boxtimes$	
Sign assembly shall use anti-vandal fas and sign for fixture	tener to moun	t components to sig	n	$\boxtimes$	
36" Signs shall have four (4) holes pund	hed to allow d	lual post mounting		$\boxtimes$	
Mounting hardware shall be Stainless S	teel 5/16"			$\boxtimes$	
LED: Sign assembly shall utilize high-power light intensity of up to 600,000 mcd (mi 20 degrees. The various sign faces shall have a colo noted below:	llicandelas) w	ith a viewing angle	of as		×
	<u>SIGN</u>	LED Color	<u>Minimum</u> <u>Number</u>		
Stop 36" x 36" (Facing)(White on Red)	R1-1	White or Red	8	$\boxtimes$	
Yield 36" x 36" x 36" (Facing)(White on Red)	R1-2	White or Red	9		
School Crossing (Symbol) 36" x 36" (Facing) Fluorescent Yellow Green/Black/ Red	S1-1	White or Yellow	6	$\boxtimes$	
Ped Crossing 36" x 36" (Facing) Fluorescent Yellow Green	W11-2	White or Yellow	8		
Turn Symbol 36" x 36" (Facing ) Yellow	W1-1L	White or Yellow	8	$\boxtimes$	
Turn Symbol 36" x 36" (Facing ) Yellow	W1-1R	White or Yellow	8	$\boxtimes$	
Turn Symbol L / speed 36" x 36" (MPH) to be noted at time of order (Firsting of CellowApril 2, 2025 Adopted on: April 2, 2025 Official Resolution#: 2025000414	W1-1a	White or Yellow	8	$\boxtimes$	

Res-Pg:m.13-51

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 7 of 36

#### ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

<u>(33.1.2)</u>				COMPL YES	IANCE NO
<u>LED</u> : (CONT'D)				IES	110
	<u>SIGN</u>	LED Color	<u>Minimum</u> <u>Number</u>		
Turn Symbol R / speed 36" x 36" (MPH) to be noted at time of order		White or			
(Facing ) Yellow	W1-1a	Yellow	8	$\boxtimes$	
Curve Symbol 36" x 36" (Facing ) Yellow	W1-2L	White or Yellow	8	$\boxtimes$	
Curve Symbol 36" x 36" (Facing ) Yellow	W1-2R	White or Yellow	8	$\boxtimes$	
Curve Symbol L / speed 36" x 36"(MPH) to be noted at time of order (Facing ) Yellow	W1-2a	White or Yellow	8		
Curve Symbol R / speed 36" x 36" (MPH) to be noted at time of order (Facing ) Yellow	W1-2a	White or Yellow	8	$\boxtimes$	
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.				$\boxtimes$	
Each LED enclosure shall be mounted to welded or mechanically fastened to the si		l" hole and ultraso	nically	$\boxtimes$	
All LEDs shall be wired in strings to activate standard).	vate simultane	eously (as per MU	TCD	$\boxtimes$	
All wire used shall conform to military sp nylon jacket.		•	•	$\boxtimes$	
Wiring shall be covered and secured to the enclosure.	e sign assemb	oly in a weather res	sistant	$\boxtimes$	
All LED connectors shall conform to Ingi	ress Protection	n IP-65 rating or be	etter.		
SOLAR PANEL:					
Solar panels shall be sized appropriately sensure operation in the Ocean County Re		ain the battery suff	iciently to	$\boxtimes$	
All panels shall be mounted to an alumina 60°.	ım plate and b	oracket at an angle	of 45° to	$\boxtimes$	
All fasteners used shall be anti-vandal.				$\boxtimes$	
Wire used shall conform to military specinylon jacket.	fication MIL-	W-16878D, Type	D, vinyl	$\boxtimes$	
The solar panel assembly shall be mounted	ed securely to	the sign assembly.		$\boxtimes$	
All solar panel connectors shall conform	to Ingress Pro	tection IP-65 rating	g or better.	$\boxtimes$	
Introduced on: April 2, 2025 Adopted on: April 2, 2025					٠

Adopted on:

April 2, 2025

Official Resolution#: 2025000414

82025-43 Res-Pg:m.13-52 COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 8 of 36

#### ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	<b>IANCE</b>
	<b>YES</b>	<u>NO</u>
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.	$\boxtimes$	
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	$\boxtimes$	
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	$\boxtimes$	
Control circuit covering shall be waterproof and anti-vandal.	$\boxtimes$	
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	$\boxtimes$	
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).		$\boxtimes$
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	$\boxtimes$	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
Batteries shall not weigh more than 1.8 lbs.		$\boxtimes$
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Batteries shall be replaceable independently of other components	$\boxtimes$	
Batteries shall be fused for short circuit protection	$\boxtimes$	
Batteries shall be protected from overheating by means of a thermocouple sensor	$\boxtimes$	
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against mllodefects in material, and workmanship.  Adopted on: April 2, 2025  Official Resolution#: 2025000414	$\boxtimes$	

Res-Pg:m.13-53

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS

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#### <u>ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL</u> (CONT'D)

	<b>COMPL</b>	<b>IANCE</b>
OPTIONS.	<u>YES</u>	<u>NO</u>
OPTIONS:		
2A – Steel Sign Post, As Specified		
Description:		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	$\boxtimes$	
Measurements:		
10' length	$\boxtimes$	
3-1/16" width	$\boxtimes$	
3/8" holes on 1" centers	$\boxtimes$	
2.5 lbs/ft linear weight	$\boxtimes$	
Materials:		
Mounting hardware shall be Stainless Steel 5/16"		
2B - Battery For Solar-Powered LED Sign Assembly, As Specified		
Description:		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.		$\boxtimes$
Materials:		
Batteries shall be sealed in a plastic film to provide resistance to moisture and		
corrosion.		$\boxtimes$
Battery:		
Batteries shall not weigh more than 1.8 lbs.		$\boxtimes$
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Batteries shall be replaceable independently of other components	$\boxtimes$	
Batteries shall be fused for short circuit protection	$\boxtimes$	
Batteries shall be protected from overheating by means of a thermocouple sensor	$\boxtimes$	
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$

Introduced on:

April 2, 2025 April 2, 2025

Adopted on:

Official Resolution#: 2025000414

NATIONAL HIGHWAY PRODUCTS, INC.

B2025-43

Res-Pg:m.13-54

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS

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## ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	<b>IANCE</b>
OPTIONS (CONTIN)	<u>YES</u>	<u>NO</u>
OPTIONS: (CONT'D)		
2B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)		
Operation:		
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.	$\boxtimes$	
Electrical:		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.		
2C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
Description:		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.		$\boxtimes$
Mounting:		
The solar panel assembly shall be mounted securely to the sign assembly.		$\boxtimes$
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	$\boxtimes$	
<u>Hardware</u> :		
All fasteners used shall be anti-vandal.		
Electrical: Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	$\boxtimes$	П
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.		

Introduced on: April 2, 2025 Adopted on: April 2, 2025 Official Resolution#: 2025000414 COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS

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### ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

				<u>COMPI</u>	<b>IANCE</b>
				<b>YES</b>	<u>NO</u>
DESCRIPTION: Solar Powered and fully self-conta U.S. Department of Transportation revision 2 May 2012 Manual on Usection 2A.08 on retro reflectivity	Federal Highway Aniform Traffic Con	Administration 200	9	$\boxtimes$	
MATERIALS:					
The assembly shall include the foll	owing items:				
SIGN:					e
Sign blanks shall be .080" gauge al	uminum			$\boxtimes$	
Sheeting shall be 3M DG Type IX	or approved equal.	, with anti-graffiti o	verlay	$\boxtimes$	
Sign assembly shall use anti-vanda and sign for fixture	al fastener to mount	t components to sig	n	$\boxtimes$	
48" Signs shall have four (4) holes	punched to allow d	ual post mounting			
Mounting hardware shall be Stainle	ess Steel 5/16"			$\boxtimes$	
LED:					
Sign assembly shall utilize high-polight intensity of up to 600,000 mcc 20 degrees.				$\boxtimes$	$\boxtimes$
The sign faces shall have a color a	nd minimum numb	er of LEDs as noted	d below:		
Stop 48" x 48"	<u>SIGN</u>	LED Color	<u>Minimum</u> <u>Number</u>		
(Facing)(White on Red)	R1-1	White or Red	8		
Each LED shall be sealed in a heat- to weather and vibration.	-dissipating plastic	enclosure to provid	e resistance	$\boxtimes$	
Each LED enclosure shall be moun welded or mechanically fastened to			nically	$\boxtimes$	
All LEDs shall be wired in strings t standard).	to activate simultan	eously (as per MU)	ГСD	$\boxtimes$	
All wire used shall conform to mili nylon jacket.	tary specification M	4IL-W-16878D, Ty	pe D, vinyl		
Wiring shall be covered and secure enclosure.	d to the sign assem	bly in a weather res	istant	$\bowtie$	
All LED connectors shall conform	to Ingress Protection	on IP-65 rating or be	etter.		

Introduced on: Adopted on: Official Resolution#: 2025000414

April 2, 2025 April 2, 2025

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 12 of 36

## ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	JANCE
SOLAR PANEL:	<u>YES</u>	<u>NO</u>
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.		
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	$\boxtimes$	
All fasteners used shall be anti-vandal.	$\boxtimes$	
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	$\boxtimes$	
The solar panel assembly shall be mounted securely to the sign assembly.	$\boxtimes$	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.	$\boxtimes$	
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.		
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	$\boxtimes$	
Control circuit covering shall be waterproof and anti-vandal.		
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	$\boxtimes$	
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).		$\boxtimes$
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		$\boxtimes$
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	$\boxtimes$	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
Batteries shall not weigh more than 1.8 lbs.		
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof		
Batteries shall have an in-line power connector	$\boxtimes$	
Batteries shall be replaceable independently of other components	$\boxtimes$	
Batteries shall be fused for short circuit protection Introduced on: April 2, 2025 Batteries shall be april 2, 2025 Grid Resolution#: 2025000414		

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 13 of 36

### <u>ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)</u>

	<u>COMPLIA</u>	
PATTEDY (CONTIN)	<b>YES</b>	<u>NO</u>
BATTERY: (CONT'D)  Ratteries shall have the following dimensions:		
Batteries shall have the following dimensions:	_	_
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.		
OPTIONS:		
3A - Steel Sign Post, As Specified		
Description:		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	$\boxtimes$	
Measurements:		
10' length	$\boxtimes$	
3-1/16" width		
3/8" holes on 1" centers	$\boxtimes$	
2.5 lbs/ft linear weight	$\boxtimes$	
Materials:		
Mounting hardware shall be Stainless Steel 5/16"	$\boxtimes$	
3B - Battery For Solar-Powered LED Sign Assembly, As Specified		
Description:		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.		$\boxtimes$
Materials:		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		$\boxtimes$
Battery:		
Batteries shall not weigh more than 1.8 lbs.	$\boxtimes$	
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Piraturies shall be Pribla 2025 ble independently of other components Adopted on: April 2, 2025  Official Resolution#: 2025000414	$\boxtimes$	

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 14 of 36

#### ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	<b>JANCE</b>
OPTIONS: (CONT'D)	<b>YES</b>	<u>NO</u>
3B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)		
Battery: (Cont'd)		
Batteries shall be fused for short circuit protection	$\boxtimes$	
Batteries shall be protected from overheating by means of a thermocouple sensor	$\boxtimes$	
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$
Operation:		
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.	$\boxtimes$	
Electrical:		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
3C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
Description:		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.		$\boxtimes$
Mounting:		
The solar panel assembly shall be mounted securely to the sign assembly.		$\boxtimes$
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.		
<u>Hardware</u> :		
All fasteners used shall be anti-vandal.	$\boxtimes$	
Electrical:		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	$\boxtimes$	
Mindus Pale Planel confider 2025 shall conform to Ingress Protection IP-65 rating or better. Adopted on: April 2, 2025 Official Resolution#: 2025000414		

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# <u>ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL</u> DESCRIPTION:

Solar Powered and fully self-contained U.S. Department of Transportation Forevision 2 May 2012 Manual on Unit section 2A.08 on retro reflectivity and	ederal Highway A form Traffic Cont	Administration 2009	9	$\boxtimes$	
MATERIALS:					
The assembly shall include the follow	ving items:				
<u>SIGN</u> :					
Sign blanks shall be .080" gauge alur	ninum			$\boxtimes$	
Sheeting shall be 3M DG Type IX or	r approved equal,	with anti-graffiti o	verlay	$\boxtimes$	
Sign assembly shall use anti-vandal and sign for fixture	fastener to mount	components to sig	n ·	$\boxtimes$	
48" Signs shall have four (4) holes pu	ınched to allow dı	ual post mounting		$\boxtimes$	
Mounting hardware shall be Stainless	s Steel 5/16"			$\boxtimes$	
Sign assembly shall utilize high-power light intensity of up to 600,000 mcd (20 degrees.  The sign faces shall have a color and Large Arrow Left 48" x 24"	millicandelas) wi	th a viewing angle	of		
(Facing) Black on Yellow	W1-6L	Yellow	8	$\boxtimes$	
Large Arrow Right 48" x 24" (Facing) Black on Yellow	W1-6R	White or Yellow	8	$\boxtimes$	
Each LED shall be sealed in a heat-di to weather and vibration.	ssipating plastic e	enclosure to provid	e resistance	$\boxtimes$	
Each LED enclosure shall be mounted welded or mechanically fastened to the		l" hole and ultrason	nically	$\boxtimes$	
All LEDs shall be wired in strings to standard).	activate simultane	eously (as per MU)	TCD	$\boxtimes$	
All wire used shall conform to militar nylon jacket.	ry specification M	IL-W-16878D, Ty	pe D, vinyl	$\boxtimes$	
Wiring shall be covered and secured tenclosure.	to the sign assemb	oly in a weather res	istant	$\boxtimes$	. 🗀
All LED connectors shall conform to	Ingress Protection	n IP-65 rating or be	etter.	$\boxtimes$	

Introduced on: April 2, 2025 Adopted on: April 2, 2025 Official Resolution#: 2025000414

B2025-43 Res-Pg:m.13-60

COMPLIANCE PAGES - SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 16 of 36

#### ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPLIA	
	<b>YES</b>	<b>YES</b>
SOLAR PANEL:		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	$\boxtimes$	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	$\boxtimes$	
All fasteners used shall be anti-vandal.	$\boxtimes$	
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	$\boxtimes$	
The solar panel assembly shall be mounted securely to the sign assembly.		$\boxtimes$
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.	$\boxtimes$	
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms	_	
pulse.		
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	$\boxtimes$	
Control circuit covering shall be waterproof and anti-vandal.	$\boxtimes$	
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	$\boxtimes$	
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).		$\boxtimes$
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	$\boxtimes$	
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	$\boxtimes$	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
Batteries shall not weigh more than 1.8 lbs.	$\boxtimes$	
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Batteries shall be replaceable independently of other components	$\boxtimes$	
Batteries shall be fused for short circuit protection	$\boxtimes$	
Ratteries shall be protected from overheating by means of a thermocouple sensor Adopted on: April 2, 2025 Official Resolution#: 2025000414		

NATIONAL HIGHWAY PRODUCTS, INC.

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COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 17 of 36

## ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	<b>IANCE</b>
	<b>YES</b>	<u>NO</u>
BATTERY: (Cont'd)		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.		
OPTIONS:		
4A - Steel Sign Post, As Specified		
Description:		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).		
Measurements:		
10' length	$\boxtimes$	
3-1/16" width	$\boxtimes$	
3/8" holes on 1" centers	$\boxtimes$	
2.5 lbs/ft linear weight	$\boxtimes$	
Materials:		
Mounting hardware shall be Stainless Steel 5/16"	$\boxtimes$	
4B - Battery For Solar-Powered LED Sign Assembly, As Specified		
Description:		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.		$\boxtimes$
Materials:		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		$\boxtimes$
Battery:		•
Batteries shall not weigh more than 1.8 lbs.	$\boxtimes$	
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Batteries shall be replaceable independently of other components	$\boxtimes$	
Batteries shall be fused for short circuit protection Introduced on:  April 2, 2025  Batteries: shall be protected from overheating by means of a thermocouple sensor Official Resolution#: 2025000414		

NATIONAL HIGHWAY PRODUCTS, INC.

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#### ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	<b>IANCE</b>
OPTIONS (CONTIN)	<b>YES</b>	<u>NO</u>
OPTIONS: (CONT'D)		
4B - Battery For Solar-Powered LED Sign Assembly, As Specified (CONT'D)		
Battery: (Cont'd)		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$
Operation:		
Batteries shall remain operational between the temperatures of -40°F and 176°F		
(-40°C and 80°C), and shall utilize overheat protection.	$\boxtimes$	
Electrical:		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
48.81.7.17.61.7		
4C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
Description:		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and		
parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.		$\boxtimes$
, .		
Mounting:		
The solar panel assembly shall be mounted securely to the sign assembly.		$\boxtimes$
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to		
60°.	$\boxtimes$	
Hardware:		
All fasteners used shall be anti-vandal.	$\boxtimes$	
Electrical:		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl		
nylon jacket.	$\boxtimes$	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	

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### ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

				<b>COMPLIA</b>	
				YES	NO
<b>DESCRIPTION:</b>					
Solar Powered and fully self-containe U.S. Department of Transportation Ferevision 2 May 2012 Manual on Uniformation 2A.08 on retro reflectivity and	ederal Highway A orm Traffic Cont	Administration 200	9	$\boxtimes$	
MATERIALS:					
The assembly shall include the follow	ing items:				
SIGN:					
Sign blanks shall be .080" gauge alum	ninum			$\boxtimes$	
Sheeting shall be 3M DG Type IX or	approved equal,	with anti-graffiti c	overlay	$\boxtimes$	
Sign assembly shall use anti-vandal f and sign for fixture	astener to mount	t components to sig	n	$\boxtimes$	
48" Signs shall have four (4) holes pu horizontal install	nched to allow d	lual post mounting	and	$\boxtimes$	
Mounting hardware shall be Stainless	Steel 5/16"			$\boxtimes$	
LED:					
Sign assembly shall utilize high-powelight intensity of up to 600,000 mcd (120 degrees.		-			
The sign faces shall have a color and	minimum numb	er of LEDs as note	d below:		
	<u>SIGN</u>	LED Color	<u>Minimum</u> <u>Number</u>		
Speed Limit (blank) 24" x 30" (Facing ) Black on White	R2-1	White	8	$\boxtimes$	
Each LED shall be sealed in a heat-distortion to weather and vibration.	ssipating plastic	enclosure to provid	le resistance	$\boxtimes$	
Each LED enclosure shall be mounted welded or mechanically fastened to the			onically	$\boxtimes$	
All LEDs shall be wired in strings to a standard).	activate simultan	eously (as per MU	TCD	$\boxtimes$	
All wire used shall conform to militar nylon jacket.	y specification N	⁄IIL-W-16878D, Ту	pe D, vinyl	$\boxtimes$	
Wiring shall be covered and secured t enclosure.	o the sign assem	bly in a weather re	sistant		
All LED connectors shall conform to	Ingress Protection	on IP-65 rating or b	etter.	$\boxtimes$	

Introduced on: Adopted on:

April 2, 2025 April 2, 2025

Official Resolution#: 2025000414

**B2025-43 Res-Pg:m.13-64** 

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#### ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPL	JANCI
· ·	<b>YES</b>	<u>NO</u>
SOLAR PANEL:		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	$\boxtimes$	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	$\boxtimes$	
All fasteners used shall be anti-vandal.	$\boxtimes$	
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.		
The solar panel assembly shall be mounted securely to the sign assembly.		$\boxtimes$
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.	$\boxtimes$	
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time.  Outputs shall reach the output current as programmed for the duration of the 100 ms		
pulse.	$\boxtimes$	
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will		
automatically be determined by solar panel charge input.	$\boxtimes$	
Control circuit covering shall be waterproof and anti-vandal.		
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	$\boxtimes$	
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).		$\boxtimes$
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		$\boxtimes$
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
Batteries shall not weigh more than 1.8 lbs.	$\boxtimes$	
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Batteries shall be replaceable independently of other components		
Batteries shall be fused for short circuit protection	$\boxtimes$	
Batteries shall be prible 925d from overheating by means of a thermocouple sensor Adopted on: April 2, 2025 Official Resolution#: 2025000414		

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### <u>ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL</u> (CONT'D)

	<b>COMPL</b>	<u>IANCE</u>
DATTEDY. (C41)	<u>YES</u>	<u>NO</u>
BATTERY: (Cont'd) Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D	П	⊠
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	$\boxtimes$	
OPTIONS:		
5A - Steel Sign Post, As Specified		
Description:		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	$\boxtimes$	
Measurements:		
10' length	$\boxtimes$	
3-1/16" width	$\boxtimes$	
3/8" holes on 1" centers	$\boxtimes$	
2.5 lbs/ft linear weight	$\boxtimes$	
Materials:		
Mounting hardware shall be Stainless Steel 5/16"	$\boxtimes$	
5B - Battery For Solar-Powered LED Sign Assembly, As Specified		
Description:		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.		$\boxtimes$
Materials:		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		$\boxtimes$
Battery:		
Batteries shall not weigh more than 1.8 lbs.	$\boxtimes$	
Batteries shall have a waterproof connection		
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Butteries shall be reptages ble independently of other components  Adopted on: April 2, 2025	$\boxtimes$	
Adopted on: April 2, 2025 Official Resolution#: 2025000414 Batteries shall be fused for short circuit protection	$\boxtimes$	

Res-Pg:m.13-66

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 22 of 36

## ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	JANCE
	<b>YES</b>	<u>NO</u>
OPTIONS (Cont'd)		
5B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)		
Batteries shall be protected from overheating by means of a thermocouple sensor	$\boxtimes$	
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$
Operation:		
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.	$\boxtimes$	
Electrical:		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
5C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
Description:		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.	$\boxtimes$	
Mounting:		Ч
The solar panel assembly shall be mounted securely to the sign assembly.		$\boxtimes$
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	$\boxtimes$	
Hardware:		
All fasteners used shall be anti-vandal.	$\boxtimes$	
Electrical:		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.		
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better	$\boxtimes$	П

Introduced on:

April 2, 2025 April 2, 2025

Adopted on:

Official Resolution#: 2025000414

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 23 of 36

### ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

				<b>COMPLIA</b>	
<b>DESCRIPTION:</b>				<b>YES</b>	<u>NO</u>
Solar Powered and fully self-contained s U.S. Department of Transportation Fede revision 2 May 2012 Manual on Uniform section 2A.08 on retro reflectivity and ill	ral Highway A n Traffic Cont	Administration 200		$\boxtimes$	
MATERIALS: The assembly shall include the following	g items:				
Sign blanks shall be .080" gauge alumin	um			$\boxtimes$	
Sheeting shall be 3M DG Type IX or ap	proved equal,	with anti-graffiti	overlay	$\boxtimes$	
Sign assembly shall use anti-vandal fast and sign for fixture	ener to mount	components to sig	gn	$\boxtimes$	
Mounting hardware shall be Stainless St	eel 5/16"			$\boxtimes$	
<u>LED</u> :					
Sign assembly shall utilize high-power 1 light intensity of up to 600,000 mcd (mil 20 degrees.		_			$\boxtimes$
The sign faces shall have a color and mi	nimum numb	er of LEDs as note	d below:		
	SIGN	LED Color	<u>Minimum</u> Number		
Speed Limit (blank) 30" x 36" (Facing ) Black on White	R2-1	White	8	$\boxtimes$	
Each LED shall be sealed in a heat-dissip to weather and vibration.	pating plastic	enclosure to provid	de resistance	$\boxtimes$	
Each LED enclosure shall be mounted to welded or mechanically fastened to the s		1" hole and ultraso	onically		$\boxtimes$
All LEDs shall be wired in strings to actistandard).	vate simultan	eously (as per MU	TCD	$\boxtimes$	
All wire used shall conform to military s nylon jacket.	pecification M	11L-W-16878D, T	ype D, vinyl		
Wiring shall be covered and secured to the enclosure.	he sign asseml	bly in a weather re	sistant		
All LED connectors shall conform to Ing	ress Protectio	n IP-65 rating or b	etter.	$\boxtimes$	
SOLAR PANEL:					
Solar panels shall be sized appropriately ensure operation in the Ocean County Re		ain the battery suf	ficiently to	$\boxtimes$	· 🗆
All panels shall be mounted to an alumin lattoduced on: April 2, 2025 Adopted on: April 2, 2025 April 2, 2025	um plate and	bracket at an angle	e of 45° to		
Affritastenetionse 203112014be anti-vandal.				$\boxtimes$	

**B2025-43 Res-Pg:m.13-68** 

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 24 of 36

#### ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPLIA</b>	
	<b>YES</b>	<u>NO</u>
SOLAR PANEL: (CONT'D)		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.		
The solar panel assembly shall be mounted securely to the sign assembly.		$\boxtimes$
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.	$\boxtimes$	
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	$\boxtimes$	П
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	_ ⊠	
Control circuit covering shall be waterproof and anti-vandal.		
Control circuit shall remain operational between the temperatures of -40°F and 176°F.  All circuit connectors shall conform to Ingress Protection IP-65 rating or better.		
An eneut connectors shan comorm to highess i forcetion if -05 fating of better.		
BATTERY:		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).		$\boxtimes$
Batteries shall be sealed in a plastic film to provide resistance to moisture and		
corrosion.		$\boxtimes$
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	$\boxtimes$	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
Batteries shall not weigh more than 1.8 lbs.		$\boxtimes$
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Batteries shall be replaceable independently of other components	$\boxtimes$	
Batteries shall be fused for short circuit protection	$\boxtimes$	
Batteries shall be protected from overheating by means of a thermocouple sensor	$\boxtimes$	
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against		
all defects in material and workmanship.  April 2, 2025  Adopted on: April 2, 2025  Official Resolution#: 2025000414		

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS Page 25 of 36

## ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPLIAN</b>	
OPTIONS	<b>YES</b>	<u>NO</u>
OPTIONS:		
6A – Steel Sign Post, As Specified		
Description:		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	$\boxtimes$	
Measurements:		
10' length	$\boxtimes$	
3-1/16" width	$\boxtimes$	
3/8" holes on 1" centers		
2.5 lbs/ft linear weight	$\boxtimes$	
Materials:		
Mounting hardware shall be Stainless Steel 5/16"	$\boxtimes$	
6B - Battery For Solar-Powered LED Sign Assembly, As Specified		
<u>Description</u> :		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO®	_	
Blinkersigns®.		$\boxtimes$
Materials:		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	$\boxtimes$	
		ш
Battery:		
Batteries shall not weigh more than 1.8 lbs.		$\boxtimes$
Batteries shall have a waterproof connection		
Batteries shall be sealed and spill-proof		
Batteries shall have an in-line power connector		
Batteries shall be replaceable independently of other components		
Batteries shall be fused for short circuit protection		
Batteries shall be protected from overheating by means of a thermocouple sensor		
Batteries shall have the following dimensions:	_	
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$
Operation:		
Batteries shall remain operational between the temperatures of -40°F and 176°F		
(-40°C and 80°C), and shall utilize overheat protection.		
Electrical:		
Athebattery:connectors \$1201 conform to Ingress Protection IP-65 rating or better.  Adopted on: April 2, 2025  Official Resolution#: 2025000414		

#### NATIONAL HIGHWAY PRODUCTS, INC.

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#### ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	<b>IANCE</b>
OPTIONS: (CONT'D)	<u>YES</u>	<u>NO</u>
6C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified		
Description:		
Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.		$\boxtimes$
Mounting:		
The solar panel assembly shall be mounted securely to the sign assembly.		$\boxtimes$
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	$\boxtimes$	
<u>Hardware</u> :		
All fasteners used shall be anti-vandal.	$\boxtimes$	
Electrical:		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	$\boxtimes$	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	

Introduced on: April 2, 2025 Adopted on: April 2, 2025 Official Resolution#: 2025000414

**B2025-43 Res-Pg:m.13-71** 

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#### ITEM #7 - SOLAR SPEED RADAR SIGN, 12", TRAFFIC LOGIX SAFEPACE EVOLUTION 12, AS SPECIFIED, OR EQUAL

	<b>COMPL</b>	<b>IANCE</b>
DESCRIPTION	<b>YES</b>	<u>NO</u>
<b>DESCRIPTION:</b> Changeable message sign which displays speed of oncoming vehicles. Includes MUTCD-compliant "YOUR SPEED" sign (black legend on yellow background). Sign shall warn drivers who exceed designated threshold speed.	$\boxtimes$	
SPEED DISPLAY: Individual digits within display shall be 12" h x 6.4" w, and each digit shall be comprised of a matrix of no fewer than 196 yellow LEDs per digit; total 936 yellow LEDs.	₩	
	$\boxtimes$	
The LEDs shall be displayed on a black background.		
The yellow digits shall have a viewing angle at 50% IV of 30° and a partial flux (brightness) of 9000-22400 Ev, [lux]/LED.		
Display face shall be constructed of non-glare UV stabilized polycarbonate.	$\boxtimes$	
Display shall have an operating temperature range of -40°F to 185°F with 95% humidity non-condensing. (-20°F for Bluetooth communication)	$\boxtimes$	
Speed display size shall be maximum17.25" (h) x 23" (w) x 5.625" (d).	$\boxtimes$	
The speed display shall be capable of displaying speeds in miles per hour and ranging from 3 – 99.	$\boxtimes$	
There shall be a conformal coating on all circuit boards	$\boxtimes$	
There shall be a built in ambient light sensing and automatic brightness control.	$\boxtimes$	
SIGN: Sign shall conform to the 2009 Federal Highway MUTCD section 2A.08 on retroreflectivity and illumination.	$\boxtimes$	
Sign shall measure at least 29" h x 23" w.	$\boxtimes$	
Sign blanks shall be aluminum.	$\boxtimes$	
Sheeting used shall be 3M DG3 diamond grade, or approved equal, with anti-graffiti overlay.	$\boxtimes$	
The sign shall measure 29.0" (h) x 23.0" (w) x 5.625" (d) and display the message "YOUR SPEED" on two (2) lines.	$\boxtimes$	
Sign weight with speed radar shall be a maximum of 20 pounds.	$\boxtimes$	
Mounting hardware shall be Stainless Steel 5/16"	$\boxtimes$	

Introduced on: Adopted on:

April 2, 2025 April 2, 2025

Official Resolution#: 2025000414

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#### ITEM #7 - SOLAR SPEED RADAR SIGN, 12", TRAFFIC LOGIX SAFEPACE EVOLUTION 12, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	<b>IANCE</b>
PROCE ANALYSIC	<u>YES</u>	<u>NO</u>
PROGRAMMING:		
There shall be 24/7 365 day programming and scheduling.	$\boxtimes$	
The unit shall be capable of display On/Stealth Modes.		
The unit shall display the closest/fastest vehicle speed.	$\boxtimes$	
The unit shall have a digit flashing speed threshold.		
The following are the flashing speeds for the LEDs: Fast 1.5 Hz, Medium 1 Hz, and Slow 0.75 Hz.	$\boxtimes$	
The unit shall be capable of collecting and storing traffic data by location.	$\boxtimes$	
The unit shall capture traffic data when in Stealth Mode.	$\boxtimes$	
The data shall be downloaded via a wireless connection.	$\boxtimes$	
The program shall be capable of statistical reporting and charts.	$\boxtimes$	
The program shall be capable of compiling the reports as summaries, weekly reports, period comparison reports, or full custom reports and charts.	$\boxtimes$	
The program shall be capable of reporting the following parameters: average vehicle count, total vehicle count, average speed, average number of speed violations, total number of speed violations, minimum/maximum speed, 85th percentile speed.	$\boxtimes$	
The reports shall print directly and exported into CSV, MS Excel, Adobe Acrobat PDF and HTML formats.	$\boxtimes$	
SOLAR PANEL:		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently.	$\boxtimes$	
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	$\boxtimes$	
All fasteners used shall be anti-vandal.	$\boxtimes$	
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	$\boxtimes$	
The solar panel assembly shall be mounted securely to the sign assembly.	$\boxtimes$	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
The solar panel shall be a 50W or 90W solar panel.	$\boxtimes$	

Introduced on: Adopted on:

April 2, 2025 April 2, 2025

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**B2025-43 Res-Pg:m.13-73** 

COMPLIANCE PAGES – SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS

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#### ITEM #7 - SOLAR SPEED RADAR SIGN, 12", TRAFFIC LOGIX SAFEPACE EVOLUTION 12,AS **SPECIFIED, OR EQUAL (CONT'D)**

	<b>COMPLIANCE</b>	
ENCLOSURE:	<b>YES</b>	<u>NO</u>
	_	_
The enclosure shall be vandal resistant and have a lightweight polymer.	$\boxtimes$	
The enclosure shall have a matte black front.		$\boxtimes$
The enclosure shall have a light gray body.		$\boxtimes$
The enclosure shall be weatherproof and be NEMA 4X-12 and IP65 compliant.		$\boxtimes$
The enclosure shall be non-sealed and ventilated.	$\boxtimes$	
RADAR:		
The unit shall use an internal radar that is Doppler and FCC approved.	$\boxtimes$	
The radar RF out shall be 5 mW maximum.	$\boxtimes$	
The radar f-center shall be 24.125 GHz or 24.200 GHz.	$\boxtimes$	
The radar shall have a maximum pickup distance of 400 feet.	$\boxtimes$	
The beam angle shall be 24° (vertical) x 12° (horizontal).	$\boxtimes$	
The radar beam polarization shall be linear.	$\boxtimes$	
The radar shall have CE Mark.	$\boxtimes$	
BATTERY:		
The sign shall have Lithium-ion batteries with a weight of 4 pounds.		$\boxtimes$
The universal mounting bracket system shall come with a sign bracket (2 pounds) and a pole bracket (5 pounds).	$\boxtimes$	
The power input shall be 100~240V AC @ 150 mA, 12V DC (11-14.5V @ 1A).	$\boxtimes$	
The power input shall be capable of wireless battery charge monitoring via software interface.		
COMMUNICATIONS:		
The device shall be Bluetooth Capable.		
ASSEMBLY:		2
Assembly shall be capable of mounting to pole, timber post, or u-channel.		
Mounting hardware shall be tamper-resistant.		

Introduced on:

April 2, 2025

Adopted on:

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#### ITEM #7 - SOLAR SPEED RADAR SIGN, 12", TRAFFIC LOGIX SAFEPACE EVOLUTION 12, AS SPECIFIED, OR EQUAL (CONT'D)

	<b>COMPL</b>	<b>IANCE</b>
WARRANTY:	<u>YES</u>	<u>NO</u>
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.		
Manufacturer shall offer (at minimum) ten (10) years warranty on LEDs.	$\boxtimes$	
Manufacturer shall offer (at minimum) two (2) year warranty on the sign.	$\boxtimes$	
Manufacturer shall offer (at minimum) one (1) year warranty on the batteries.		
ITEM # 8 - SOLAR SPEED RADAR SIGN, 15", TRAFFIC LOGIX SAFEPACE 45 SPEED SIGN, AS SPECIFIED, OR EQUAL	O FULL RA	<u>ADAR</u>
DESCRIPTION:		
Changeable message sign which displays speed of oncoming vehicles. Includes MUTCD – compliant "YOUR SPEED" sign (black legend on yellow background). Sign shall warn drivers who exceed designated threshold speed.	$\boxtimes$	
SPEED RADAR SIGN:		
The assembly shall include the following items: The Speed Radar Sign Digits shall be 15.0"(h)x8.0"(w) with 112 yellow LEDs per digit.	$\boxtimes$	
The "YOUR SPEED" text on the speed radar sign shall be 6" H and on two (2) lines.	$\boxtimes$	
The full Speed Radar Sign size shall be 40.0" H x 30.0" W x 3.5" D.	$\boxtimes$	
The sign weight without the "YOUR SPEED" sign and with the solar power panel and bracket shall be 20 pounds <i>maximum</i> .		$\boxtimes$
The sign shall come with 4 cell lithium ion battery (4 lbs max).		$\boxtimes$
The sign shall come with a universal mounting bracket system including the sign bracket (2 lbs) and pole bracket (5 lbs).	$\boxtimes$	
The speed radar sign shall measure the speed in miles per hour (MPH).	$\boxtimes$	
The speed radar sign shall have an aluminum protective cover 0.1875" D.	$\boxtimes$	
The sign shall have yellow high-intensity prismatic reflective sheeting on the sign face with black colored text in MUTCD approved colors and format.	$\boxtimes$	
The operating temperature shall be -40°F to 185°F minimum.	$\boxtimes$	
The sign shall have a built in ambient light sensor.	$\boxtimes$	
The sign shall have a wireless battery charge monitor.	$\boxtimes$	
POWERSOUROD:2, 2025 Adopted on: April 2, 2025 One: align: shall: hazaz soconolar powered.	$\boxtimes$	

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#### ITEM #8 - SOLAR SPEED RADAR SIGN, 15", TRAFFIC LOGIX SAFE PACE 450 FULL RADAR SPEED SIGN, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPL	JANCE
RADAR:	<u>YES</u>	<u>NO</u>
The radar sign shall have a ten (10) year warranty on the LEDs.	$\boxtimes$	
The internal radar shall be Doppler (FCC approved).	$\boxtimes$	
The radar RF out shall be 5mW maximum.	$\boxtimes$	
The radar f-center shall be 24.125 GHz center ±25 MHz.	$\boxtimes$	
The radar pick-up distance shall go up to 1,200 feet minimum.	$\boxtimes$	
The radar beam angle shall be 11°x11°.	$\boxtimes$	
The radar beam polarization shall be linear.	$\boxtimes$	
The FCC ID for the radar shall be TIADR1500.	$\boxtimes$	
DISPLAY:		
LED Digits shall have 224 yellow LED, 23°, 5mm, luminous intensity (5,680-8,200 mcd/LED).		
The display shall have an ambient light sensor and automatic brightness adjuster.	$\boxtimes$	
ENCLOSURE:		
The enclosure shall be 12 gauge aluminum with flat black powder coated front.		$\boxtimes$
The body of the enclosure shall be light gray powder coated.		$\boxtimes$
The enclosure shall be weather proof, non-sealed, and ventilated.	$\boxtimes$	
The enclosure shall be NEMA 4X-12 and IP65 level compliant.		$\boxtimes$
MOUNTING:		
The brackets shall be theft resistant.	$\boxtimes$	
The sign shall lock into the bracket with a key.	$\boxtimes$	
The universal mounting bracket system shall have the following options: circular, square, and telspar poles.	$\boxtimes$	
The mounting system shall come with banding brackets.	$\boxtimes$	
COMMUNICATIONS:		
The system shall be both WiFi and Bluetooth 4.0 compatible.		$\boxtimes$
PROGRAMMING:		
Safe Pace Pro management software or approved equal shall be utilized.	$\boxtimes$	
here shall be 24 அருத்தியர். 7 days a week, 365 days a year unlimited programming Address and April 2, 2025 official Resolution#: 2025000414	$\boxtimes$	

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#### ITEM #8 - SOLAR SPEED RADAR SIGN, 15", TRAFFIC LOGIX SAFE PACE 450 FULL RADAR SPEED SIGN, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPLIANC	
	<b>YES</b>	<u>NO</u>
DISPLAY SETTINGS:		
The display shall have both 'ON' and 'Stealth Mode' settings.	$\boxtimes$	
In stealth mode, the speed will not be displayed and the data will be collected.	$\boxtimes$	
The display with be capable of a minimum speed and maximum speed.	$\boxtimes$	
The display will be capable of flashing the digits when the speed is measured above the selected speed.	$\boxtimes$	
DATA COLLECTION:		
Traffic data shall be collected and stored by location.		
Traffic data shall be downloaded through a wireless connection.	$\boxtimes$	
The program shall be capable of statistical reports and charts.	$\boxtimes$	
The following reports shall be compiled: summary reports, weekly reports, period comparison reports, and customizable reports.	$\boxtimes$	
The following shall be the reporting parameters:	$\boxtimes$	
average vehicle count		
total vehicle count		
average speed		
average number of speed violations		
total number of speed violations		
• minimum and maximum speed		
• 85 th percentile speed		
The reports shall be capable of printing directly from the program and exported into CSV format, MS Excel, Adobe Acrobat PDF, and HTML.	$\boxtimes$	
The charts shall be capable of printing directly from the program and Adobe Acrobat PDF format.		
SOLAR PANEL:		
The solar panel power output shall be 20 W.		$\boxtimes$
The solar panel operation temperature range shall be -40°C to 85°C minimum.	$\boxtimes$	
The solar panel shall be composed of laminate: glass, EVA, TPT (tedlar/pet/tedlar), or TPE.		$\boxtimes$
The front side of the solar panel shall have high-transmission 3.2mm tempered glass.		$\boxtimes$
The back side of the solar panel shall be made of wither TPT or TPE.		$\boxtimes$
The solar panel frame shall be clear anodized aluminum.	$\boxtimes$	
The solar panel shall be output to a junction box.  Introduced on: April 2, 2025		

Adopted on: April 2, 2025 Official Resolution#: 2025000414

NATIONAL HIGHWAY PRODUCTS, INC.

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Res-Pg:m.13-77

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#### ITEM #9 - STEEL SIGN POST, AS SPECIFIED, OR EQUAL

	<u>COMPL</u>	<u> JANCE</u>
DECODIDETON	<b>YES</b>	<u>NO</u>
DESCRIPTION:  Nyong DID DAV II Channel Sing Grant and and a side of head and a side of he		
Nucor RIB-BAK U-Channel Sign Support, galvanized, without breakaways (or approved equal)	$\boxtimes$	П
• /		
MEASUREMENTS:	<u> </u>	_
10' length	$\boxtimes$	
3-1/16" width		
3/8" holes on 1" centers	$\boxtimes$	
2.5 lbs/ft linear weight	$\boxtimes$	
Materials:		
Mounting hardware shall be Stainless Steel 5/16"	$\boxtimes$	
ITEM #10 - BATTERY FOR SOLAR-POWERED LED SIGN ASSEMBLY, AS SP	ECIFIED, (	<u>OR</u>
<b>EQUAL</b>		
DESCRIPTION:		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.		$\boxtimes$
MATERIALS: Batteries shall be sealed in a plastic film to provide resistance to moisture and		
corrosion.		$\boxtimes$
BATTERY:		
Batteries shall not weigh more than 1.8 lbs.	$\boxtimes$	
Batteries shall have a waterproof connection	$\boxtimes$	
Batteries shall be sealed and spill-proof	$\boxtimes$	
Batteries shall have an in-line power connector	$\boxtimes$	
Batteries shall be replaceable independently of other components	$\boxtimes$	
Batteries shall be fused for short circuit protection	$\boxtimes$	
Batteries shall be protected from overheating by means of a thermocouple sensor	$\boxtimes$	
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D		$\boxtimes$
Stacked: 1.34" H X 1.34" W X 10.6" D		$\boxtimes$
Flatpack: 5.24" H X 2.68" W X 0.67" D		$\boxtimes$
OPERATION:		
Batteries shall remain operational between the temperatures of -40°F and 176°F		
(-40°C and 80°C), and shall utilize overheat protection.	$\boxtimes$	
ELECTRICAL:		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
Introduced on: April 2, 2025 Adopted on: April 2, 2025 Official Resolution#: 2025000414		

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#### ITEM #11 - SOLAR PANEL FOR SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR **EQUAL**

	<u>COMPLIANCE</u>	
	<b>YES</b>	<u>NO</u>
<b>DESCRIPTION:</b> Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly		
in the Ocean County Region.		$\boxtimes$
MOUNTING:		
The solar panel assembly shall be mounted securely to the sign assembly. All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.		
	$\boxtimes$	
HARDWARE:		_
All fasteners used shall be anti-vandal.		
ELECTRICAL: Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	<b> </b>	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL		
DESCRIPTION: Fully self-contained Solar-Powered LED Pedestrian Crossing Warning System, including an LED-enhanced pedestrian crossing sign assembly (conforming to the 2009 Federal Highway MUTCD section 2A.08 on retroreflectivity and illumination). Each system shall consist of two (2) solar-powered LED pedestrian crossing signs, two (2) cabinets, two (2) pedestrian push button assemblies, two (2) sign mounting kits, two (2) wireless controller kits, and all appurtenances incidental to the Solar-Powered LED Pedestrian Crossing Warning System.	$\boxtimes$	
MATERIAL:		
The system shall include the following items:		
SIGN:		
MUTCD compliant Pedestrian warning sign type W11-2. 36" x 36"	$\boxtimes$	
Sign blanks shall be .080" gauge aluminum.	$\boxtimes$	
Sheeting used shall be 3M DG3 diamond grade, or approved equal, with anti-graffiti overlay.	$\boxtimes$	
Sign assembly shall use anti-vandal fasteners to mount components to sign and sign to fixture.	$\boxtimes$	
Mounting hardware shall be Stainless Steel 5/16"	$\boxtimes$	

Introduced on:

April 2, 2025

Adopted on: Official Resolution#: 2025000414

April 2, 2025

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#### ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPL</u>	<u>LIANCE</u>
LEDS:	YES	<u>NO</u>
Sign assembly shall utilize a minimum of eight (8) high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle		
of 20°.	$\boxtimes$	
LEDs shall be amber in color.	$\boxtimes$	
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.		
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.  All LEDs shall be wired in strings to activate simultaneously (as per MUTCD		
standard).	$\boxtimes$	
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.		
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.	$\boxtimes$	
All LED connectors shall conform to Ingress Protection IP-65 rating or better.		
SOLAR PANEL: Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region. All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to	$\boxtimes$	
60°.	$\boxtimes$	
All fasteners used shall be anti-vandal.	$\boxtimes$	
Wire used shall conform to military specification MIL-W-1687D, Type D, vinyl nylon jacket.	$\boxtimes$	
The solar panel assembly shall be mounted securely to the sign assembly.	$\boxtimes$	
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
PUSH BUTTON: Sign assembly shall include a Polara Bulldog Push Button (or approved Equal), yellow in color and with an LED for visual confirmation of activation.	$\boxtimes$	
Push button connectors shall conform to Ingress Protection, IP-65 rating or better.	$\boxtimes$	
CONTROL CIRCUIT:		
Control circuit shall have the capability of independently flashing dual outputs.  Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time.  Outputs shall reach the output current as programmed for the duration of the 100 ms		
pulse. Output current shall be individually programmable for daytime and nighttime		
operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	$\boxtimes$	
Adonted Paircuit c April 2025 hall be waterproof and anti-vandal.	$\boxtimes$	

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### ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<b>YES</b>	<u>NO</u>
CONTROL CIRCUIT: (CONT'D)		
Control circuit shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C).	$\boxtimes$	_□
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.		
BATTERY:		
Battery packs shall be 4.8V, 14000 mAh nickel metal hydride (NiMH).		$\boxtimes$
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion. Dimensions shall be 10.5" x 1.5" to be house in a 2-3/8" aluminum tube.		$\boxtimes$
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize heat protection.	$\boxtimes$	
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	$\boxtimes$	
WIRELESS COMMUNICATION:		
Each system shall include a radio-control cabinet for communication with and synchronization within the system.	$\boxtimes$	
Each sign assembly shall include a self-powered wireless transmitter / receiver for communication with the control cabinet.	$\boxtimes$	
Transmitter units shall have a minimum operating range of 1000 ft (line of sight).		
WARRANTY:		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against	⊠	П