

# **Title 22 – State Historic and Archaeological Review Submittal Guidelines**

**Provide the Project Name and Number (e.g. Rochester ST BP19(4))**

## **Project Description**

Describe the work that will be undertaken for the project including, as applicable, the width and depth of material included in the proposed facility (e.g. 5 foot wide concrete sidewalk with 12 inches of sub-base.) Include as much detail as possible, noting things like tree removal, relocation of signs, sidewalk on new alignment, installation of Rectangular Rapid Flashing Beacons, etc. Provide enough detail so that environmental section staff and Division for Historic Preservation staff can understand the Area of Potential Effects (APE) of the project. The APE can be shown by a line indicating the maximum impact area, including items like sign installations that may impact subsurface material.

## **Design Details**

For linear project such as bike lanes, shared use paths or sidewalks, provide a diagram showing the basic typical section including the width and depth of the proposed facility and the relationship to existing features such as the existing edge of pavement, existing sidewalks or any other feature that helps define where the new facility will be (see example typical section.) For items like RRFBs, include material such as a manufacturer's cut sheet that illustrates what is being proposed and show the proposed location of the device clearly on a map of the area.

## **General Site Description**

Describe the context of the project such as whether it is in an urban or rural area and what are the surrounding land uses (e.g. commercial or residential development, village center, etc.) If it is known that there are historic resources in the area, describe them and indicate them on an attached project location map (note the map may be generated from open sources such as Google Maps or Bing.) Note if any of the following features are within the APE: foundation remains, mill ruins, stone walls, stone abutments or piers.

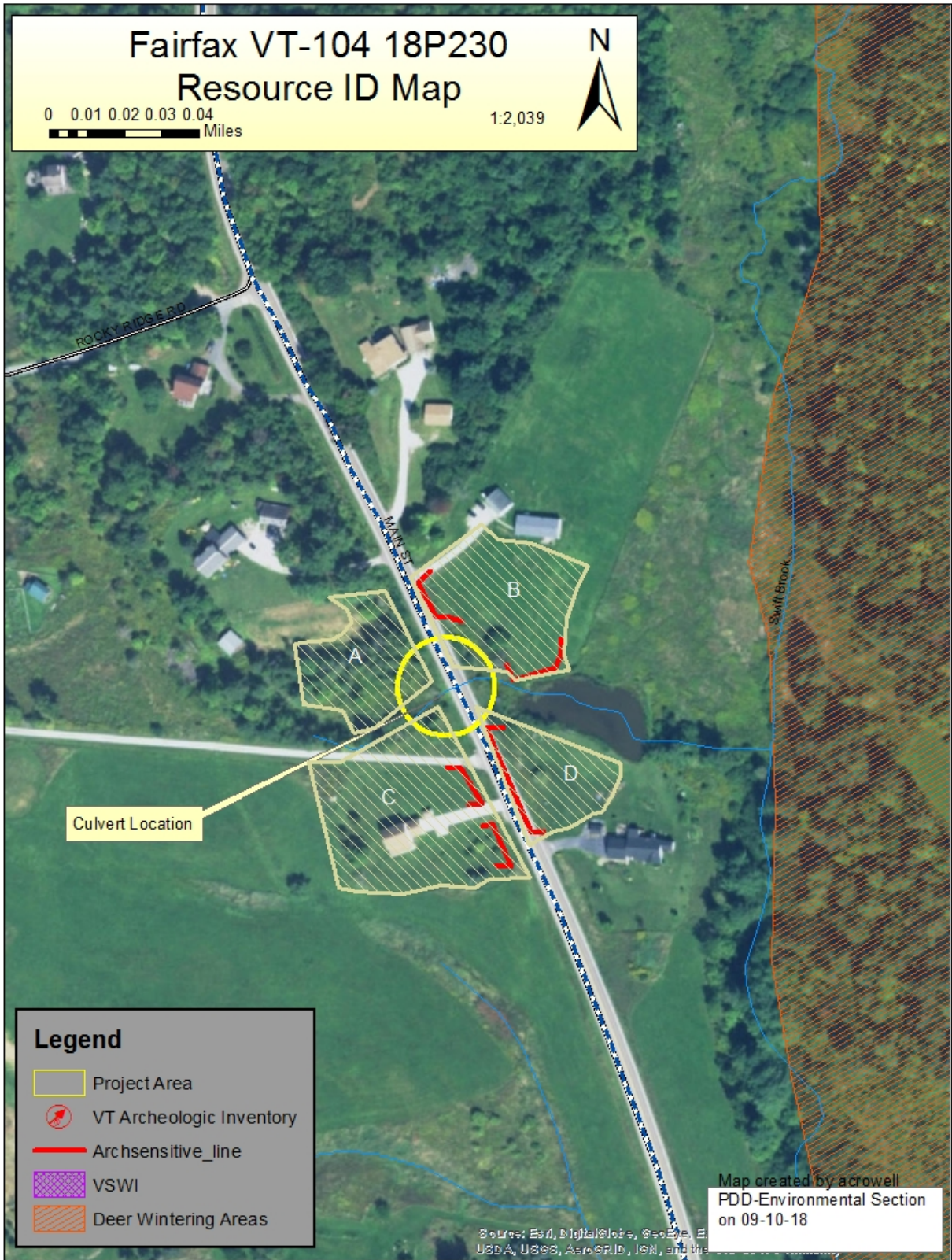
## **Project Area Photos**

Provide photos of the project area to confirm existing conditions and surroundings. Be sure to provide annotation that clearly indicates the direction faced when the photo was taken or other location information (see attached examples.)

## **Project Plans and Maps**

For projects with a very limited APE, an acceptable plan may be an open source map that is marked up. For more extensive projects, like lengths of new sidewalk, more detailed plans are helpful. An annotated sketch plan that shows the location of the new facility relative to existing features may suffice. If any record plans of the project area are available, they can be used as a base map on which the proposed work can be added. See example plans for what is an acceptable level of detail.

Project Location and Resource ID Map Example



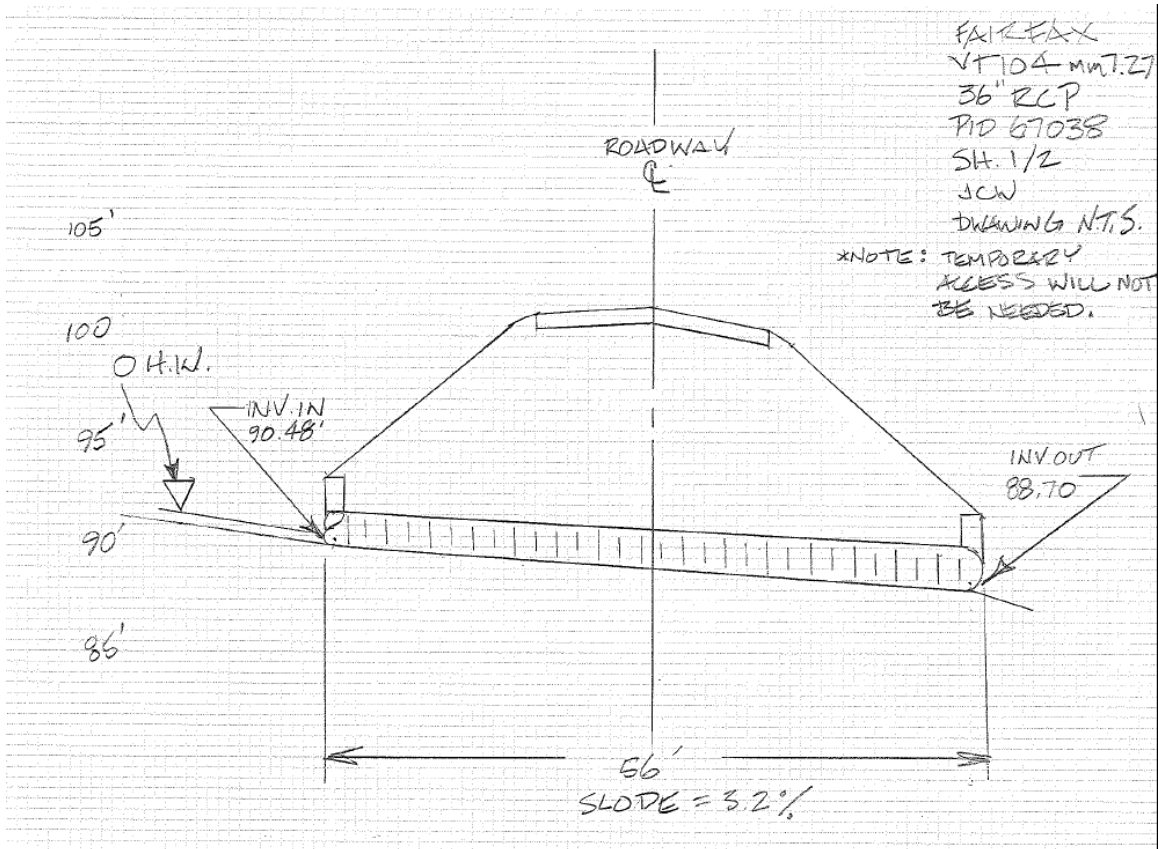
Project location showing archaeologically sensitive areas in red



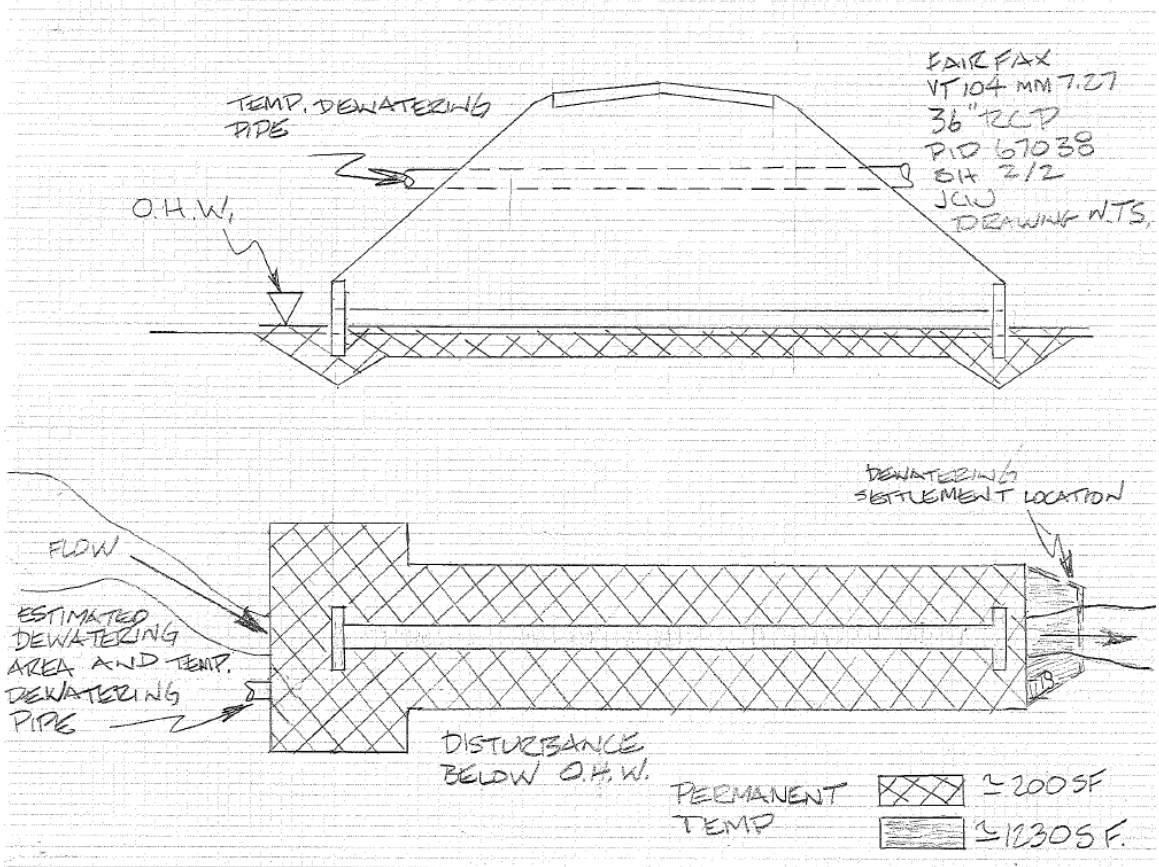
Example Sketch Plans and Sections



**Quadrant D: southeast quadrant. Level terrace slopes steeply toward wetland.**

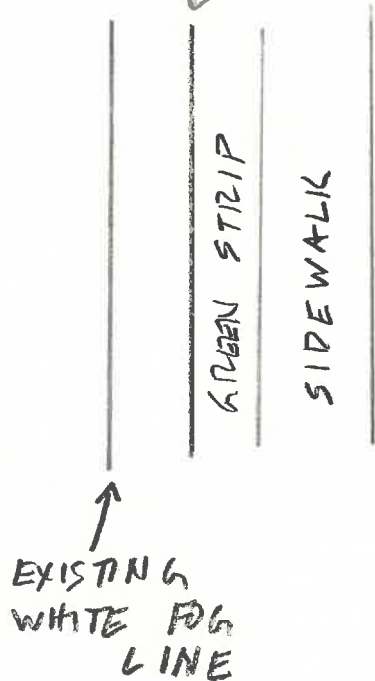
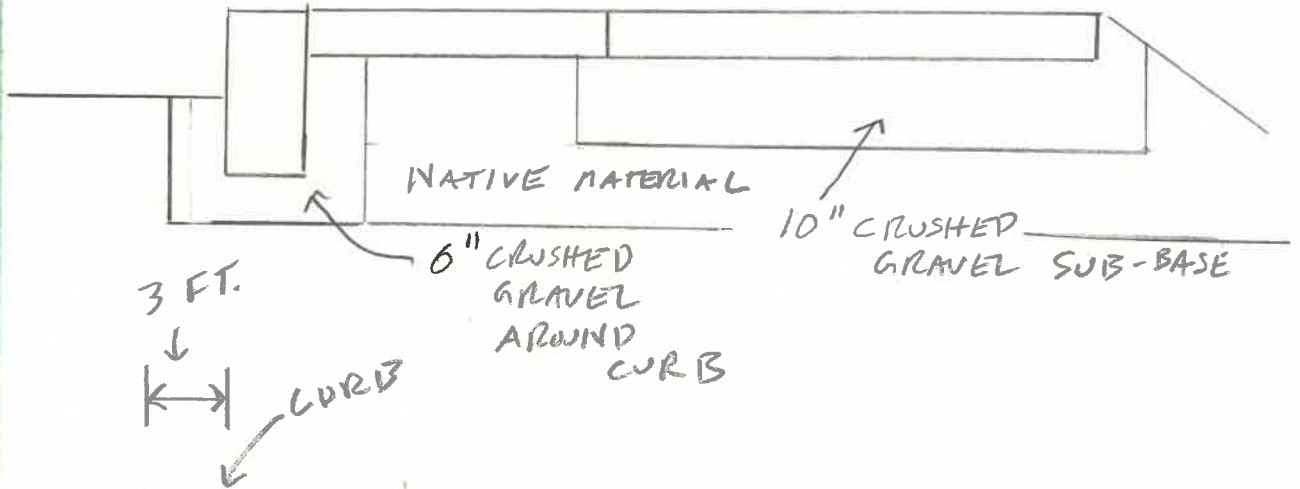
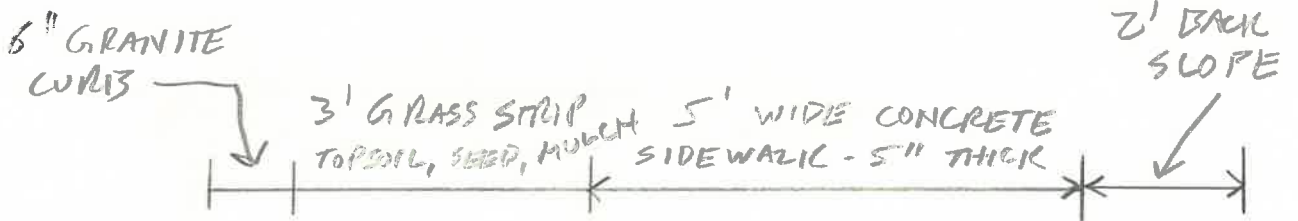


**Sketch showing culvert location beneath existing roadway**



Sketch showing temporary and permanent impacts involved with replacement

# EXAMPLE SIDEWALK TYPICAL SECTION & PLAN





Example of annotated Photos



**Quadrant C facing southwest – soil cores in this location indicated some fill**



**Quadrant B northeast quad – landform slopes down to wetland.  
Outlet of culvert and wetland within blue oval.**



# Rectangular Rapid Flash Beacon: RRFB-XL

Extra-large beacons provide greater visibility, ideal for high-speed and multi-lane pedestrian & school crossings

- Driver yielding rates of 80-90%
- Large LEDs exceed FHWA standards
- Wireless, synchronized LEDs
- Solar powered, eco-friendly
- Up to 30 days autonomy
- Easy installation, maintenance free
- Web-based monitoring/alert option

TAPCO's pedestrian-activated RRFB systems feature large, 7" x 3" LED arrays that exceed FHWA standards. They provide greater visibility, ideal for high speed and multi-lane pedestrian and school crossings. When activated, the SAE J595 certified LED arrays flash an FHWA specified, alternating 'wig-wag' pattern. Side-mounted LED arrays flash concurrently to advise pedestrians that the units are flashing.

RRFBs have produced 80% to 90% driver compliance in yielding to pedestrians at high-risk uncontrolled crossings. This is the highest yielding rate of all devices not featuring a red display, and up to 4 times greater than standard round beacons. RRFBs cost less than other devices with similar vehicular yield rates.

RRFB options include:

- Advance RRFB, wirelessly linked to Crossing RRFB
- Self-powered remote bollard-mounted pushbutton
- Passively activated systems: microwave or infrared





# Rectangular Rapid-Flash Beacon (RRFB) LED Crosswalk Warning System

Solar powered.  
No AC required.

RRFBs are user-actuated amber LEDs that supplement warning signs at intersections without signals or mid-block crosswalks. Two arrays of alternately flashing LEDs use an irregular flash pattern (similar to emergency flashers on police vehicles), commanding the attention of drivers day and night. The RRFB has been show to provide an 80% reduction to Yield-to-Pedestrian traffic, exceeding that of standard beacons. As a low cost alternative to traffic signals, it's no wonder why RRFB systems are taking the country by storm! The RRFB units install easily onto new or existing signal poles, and TAPCO can provide completed system with poles and hardware. The FHWA requires that RRFB systems are solely for use in pedestrian or school crossings, and must be pedestrian activated (actively or passively).



- TAPCO's RRFB LEDs are the brightest and most durable on the market
- Society of Automotive Engineers (SAE) standard J595 and FHWA compliant LED light intensity
- Modular component construction maintenance quick and easy
- Solar powered, no AC power required (110v optional)
- RRFB LEDs can flash on front and sides, alerting drivers and pedestrians simultaneously
- Compatible with Intelligent Transportation Systems (ITS)
- MUTCD interim approval



**2** BlinkerBeam® wirelessly activates the other RRFB unit

**3** RRFB LED arrays flash synchronously

**1** Pedestrian activates

80% reduction to Yield to Pedestrian traffic!\*

\*"An Analysis of the Efficacy of Rectangular-shaped Rapid-Flash LED Beacons to Increase Yielding to Pedestrians Using Crosswalks on Multilane Roadways in the City of St. Petersburg, FL", Center for Education and Research in Safety



## Applications

- High-speed and multi-lane crossings
- School crossings
- Pedestrian crossings
- Roundabout crossings

## Benefits

- Larger 7"x 3" LED arrays provide increased visibility
- Significantly higher driver awareness and compliance
- High-intensity leds command attention, day and night

## Features

- Multiple units are wirelessly synchronized, flash in unison
- Installation onto new or existing sign poles: single bar or back-to-back available
- Stand-alone, self-powered remote pushbutton bollard available
- 3-Year warranty



Visit **Traffic and Parking** on YouTube for videos on these products and more.



Pedestrian activated (active or passive)



### Optional Push Button Activation

Activated with less than 2 lbs. of force. Provides two-tone audible confirmation as well as visual confirmation. Meets ADA, MUTCD and TAC requirements, and housing meets NEMA specifications. Remote mounting available. Audible navigation units are available.



### Optional Pedestrian Motion Detector

Active infrared and microwave technologies work together to provide precise presence and accurate motion detection. Mountable between 8' and 16'. Impervious to light, sun rain and snow. Housing is rated NEMA-4.



### Optional Wireless Bollard Activation

Pedestrians and bicyclists can passively trigger flashing BlinkerSign™ LED signs, RRFB, BlinkerBeacon™ LED Beacons, in-pavement LEDs and other ITS devices. Actuators are housed in anodized aluminum cabinets that can be secured to concrete or asphalt. Battery operated: no grid wiring required.



Top view



Front view



Side view



Standard specifications (subject to change without notice)

#### Extra Large Rectangular Rapid Flash Beacon RRFB-XL

MUTCD Approval	Interim FHWA Approval Memorandum (1A-11)
Housing	Powder coated aluminum
LED modules: 7¼" x 3"	2 arrays of 8 amber LEDs, SAE J595 certified
Pedestrian LED module : 1½" x 3⅝"	Side-mounted, flash concurrent with Vehicle LEDs
Flash pattern	MUTCD specified 'wig-wag' flash pattern
Mounting hardware	Stainless steel u-bolts for 4" to 4½" O.D. pole

#### Solar-assisted Battery-powered System

Housing	NEMA 4X rated fiberglass or aluminum cabinet with lockable clasps
Solar panel: 55 watt	25¼"H x 25¾"W x 1½"D. Adjustable 40° to 60°. Articulating mount rotates and pivots. Conforms to IP-67
Mounting	Aluminum mounting bracket (fits 4" – 4½" O.D. pole)
Battery (one per assembly)	12V, 40AH sealed gel battery requires no periodic watering. Sealed construction eliminates corrosive acid fumes and spills.
Battery lifespan	Up to 5 years
Autonomy	Up to 30 days without sun
Control Circuit	IP-67 NEMA rated enclosure: dust proof and waterproof (up to 30 minutes in 3 feet of water)

#### BlinkerBeam™ Wireless Communication System

Frequency	900 MHz FHSS
Range	3 miles with optional external antennas. For system separation over 900', a site survey is recommended
Radio	Operates on 900 MHz frequency hopping spread spectrum network. Operating range from 3.6vdc to 15vdc
Connectivity	Crosswalk and optional Advance LEDs flash concurrently
BlinkSync™ Wireless Synchronized Activation	Individual units in one system flash in synchronized patterns (avoids light noise of system operation). Ideal for multiple assemblies flashing in the same direction.
Push-button activation*	ADA pushbutton, typical (<120 millisecond)

\*Optional remote, stand-alone pushbutton available (includes self-contained, replaceable battery with typical two-year life)

#### Programming

Windows TAPCO configuration software

Optional web -based cellular communication for monitoring and control available

Optional time clock system available for school zone signs

#### Warranty

3 year standard warranty



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