



1459 Washington St.
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Public Works

City Transit
263-8152

MEMORANDUM

Equipment Maintenance
Roadway Maintenance
Collection & Drainage
Building & Grounds
Engineering

To: Randy Hill, Public Works Director
FROM: Jim Edmond, City Engineer
DATE: Sept. 28, 2015
RE: Trail Crossing on Colorado Street Signage Enhancements

INTRODUCTION:

The trail crossing on Colorado Street is the major pedestrian crossing on Colorado. All pedestrian traffic due to the Colorado School is being encouraged to cross at this location and discouraged from crossing anywhere else.

BACKGROUND:

The new Colorado Street pavement is almost double the width of the old pavement. This increase in width and increase in pedestrian and trail traffic are concerns from the City's Traffic Committee. The Traffic Committee has looked at options and recommends that enhancements be added to the usual pedestrian crossing signage. The signage and solar powered Rapid Flashing Beacon (RFB) is a solution that has been used at many places in the United States. In a FHWA study done on these RFB's the compliance of drivers yielding to pedestrians increased from 20% to 80% when the RFB lights were installed. This increase in compliance by drivers will make the pedestrian/trail crossing significantly safer. City Street Department will install and maintain the lights. It is also the City's intent to evaluate this installation to see if it can be adopted as a standard for all trail/pedestrian crossings that have either high pedestrian volumes or higher speed and higher volumes for traffic.

RECOMMENDATION/RATIONALE:

Recommend purchase of the Rapid Flashing Beacon as outlined on the attached quote for \$6,925.00.

BACKUP INFORMATION:

1. Quote from TAPCO, Brown Deer, Wisconsin.

**"I remember Muscatine for its sunsets. I have never seen any
on either side of the ocean that equaled them" — Mark Twain**

Rectangular Rapid Flash Beacon: RRFB-XL2

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
- Completely modular
- Various mounting options

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



Applications

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

Benefits

- Larger LED arrays provide increased visibility
- Significantly higher driver awareness and compliance

Options

- Passive detection (see below)
- Stand-alone, self-powered remote bollard available

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

Optional BlinkerBeam® Wireless Communication

Push buttons can activate BlinkerBeam® solar/battery-powered transceiver radios. These compact controllers activate one or more BlinkerSign® LED Signs, BlinkerBeacon® LED Beacons, RRFB and other ITS devices wirelessly within a 1000 ft. range, up to one mile with an external antenna.



Other activation options:



This hardware controller is integrated into TAPCO BlinkerSign® LED signs and stores the schedule uploaded from the included Scheduling Software. In turn, the controller activates the BlinkerSign® according to the stored schedule.



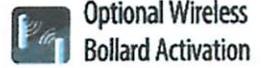
Activated with less than 2 lbs. of force. Provides two-tone audible confirmation as well as visual confirmation. Meets ADA, MUTCD and TAC requirements, and housing meets NEMA specifications. Remote mounting available. Audible navigation units are available.



The full featured model provides an instructional sign, a push button with directional arrow for activating the flashing lights, a group of 3 LEDs in the sign, a locate tone (optional), and a voice message. The volume of the locate tone and message is automatically adjusted up and down in relation to ambient sounds via a built-in microphone.



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.



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.



Front view



Top 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: 7" x 3"	2 arrays of 8 amber LEDs, SAE J595 certified
Pedestrian LED module: ½" x 1 ¼"	Side-mounted, flash concurrent with Vehicle LEDs
Flash pattern	MUTCD specified 2-4...1
Mounting hardware	

Solar-assisted Battery-powered System

Housing	3R aluminum cabinet with #2 Corbin lock (fiberglass available)
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 (larger packages for high use in colder climates)
Mounting	Aluminum mounting bracket (fits 4" - 4½" O.D. pole)
Battery (one per assembly)	12V, 48AH sealed gel battery requires no periodic watering. Sealed construction eliminates corrosive acid fumes and spills.
Battery lifespan	Up to 4 years
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	For system separation over 900', a site survey is recommended
Connectivity	Crosswalk and optional Advance LEDs flash concurrently
BlinkerSync™ 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

 **TAPCO**

1-800-236-0112 • www.tapconet.com • blinkersales@tapconet.com

Traffic & Parking Control Co, Inc. 5100 West Brown Deer Road, Brown Deer WI 53223 Phone 800-236-0112 FAX 800-444-0331
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1005-00001 (01/30/15)



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Number	ETO15-01267
Date	5/29/2015
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Sell To Cust C-14500 City of Muscatine Connie Mann 1459 Washington St. Muscatine, IA 52761 USA		Ship To Cust City of Muscatine 1459 Washington St. Muscatine, IA 52761 USA			
Reference #	Expires	Slsp	Terms	Freight	Ship Via
RRFB	7/6/2015	Richard Brown	Net 30 DAYS	QUOTED	BEST RATE

Item	Description	Quantity	UM	Price	UM	Extension
2180-RRFBXLS	RRFB-XL Pushbutton Activated Crosswalk System with Solar Power & Wireless Technology, Incl 2 13' Poles Includes:	1	EA	6,700.00	EA	\$6,700.00
RRFBXL2-NA1	RRFB XL2 Light Bar, One Ped Indicator Banding Mount w Snap Locks, for 2.375+ Inch OD	④	EA		EA	
RRFB-1DERABWNNAA 101620	RRFB Controller Kit, 55W/48Ah, 4.5" OD Round, Wireless, No Modem Push Button Bulldog Add-On Option Kit Yellow, ? With LED	②	EA		EA	
373-05073	S1-1,30"x30" DG3 FYG, School Crossing (Symbol) Fed Spec Sign	4	EA		EA	
373-01757	W16-7PR, 24"x12" DG3 FYG, Down Diagonal Right Arrow (Fed Spec) Sign	2	EA		EA	
373-01759	W16-7PL, 24"x12" DG3 FYG, Down Diagonal Left Arrow (Fed Spec) Sign	2	EA		EA	
107265	Sign Mounting Kit, Banded, Flared Leg, Standard For Mounting B2B Static Signs to a Large Pole	4	EA		EA	
109352	Pole Kit, 13' 4.5" OD Pole with 5' Helix Anchoring System for soil installation	2	KT		KT	

Thank you! - Rich Brown
 #414-292-6606
 richard.brown@tapconet.com

Shipment within _____
 Acceptance By _____
 Date _____
 By _____

Merchandise	Freight	Tax	Total
\$6,700.00	\$225.00	\$0.00	\$6,925.00

THANK YOU FOR CALLING TAPCO!!! THIS OFFER IS SUBJECT TO TERMS AND CONDITIONS SHOWN ON REVERSE SIDE