



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

November 3, 2023

SUBJECT: Various Routes
Project HSIP-FB7E(636)
Section D4 ADA Pushbuttons 2024-1
Various Counties
Contract No. 68H77
Item No. 55, November 17, 2023 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Revised the Schedule of Prices.
2. Revised page ii of the Table of Contents to the Special Provisions.
3. Revised pages 26-27 of the Special Provisions.
4. Added pages 51-52 to the Special Provisions.
5. Revised sheets 5-9 and 13 of the Plans.

Prime contractors must utilize the enclosed material when preparing their bid and must include any changes to the Schedule of Prices in their bid.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Jack A. Elston'.

Jack A. Elston, P.E.
Bureau Chief, Design and Environment

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Installation: The Contractor shall install the proposed APS stations with the sign housing/ button arrow parallel to the crosswalk. The Contractor shall furnish and install additional hardware, including a swivel kit, as required to meet this alignment requirement at locations determined by the Resident Engineer in addition to the locations listed in the plans.

Anti-seize past shall be installed on all threaded connections.

Basis of Payment: This work will be paid for at the contract unit price per Each for APS EXTENSION BRACKET and shall be payment in full for all labor, materials, and equipment required to furnish and install the APS extension bracket as described above, complete.

ACCESSIBLE PEDESTRIAN SIGNALS (APS)

Description. This work shall consist of furnishing and installing accessible pedestrian signals (APS). Each APS shall consist of an interactive vibrotactile pedestrian pushbutton with speaker, an informational sign, a light emitting diode (LED) indicator light, a solid-state electronic control board, a power supply, wiring, and mounting hardware. The APS shall meet the requirements of the MUTCD and Sections 801 and 888 of the Standard Specifications, except as modified herein.

Accessible Pedestrian Signals shall conform to Public Right-of-Way Accessibility Guidelines (PROWAG.)

Add the following to Article 888.03 of the Standard Specifications:

The Contractor is not allowed to install a push-button assembly with the sign below the push-button to meet mounting requirements.

Add the following to Article 1074.02(e) of the Standard Specifications:

Stations shall be designed to be mounted to a post, mast arm pole or wood pole. The station shall be aluminum and shall accept a 3 inch round push-button assembly and a regulatory pedestrian instruction sign according to MUTCD, sign series R10-3e, 9" x 15" sign (Type ZZ Sheeting) with arrow(s) for a count-down pedestrian signal. Stations shall be powder coated black with a black pushbutton and stainless-steel arrow on pushbutton.

Electrical Requirements. The APS shall operate with systems providing 95 to 130 VAC, 60 Hz and throughout an ambient air temperature range of -29°F to +160°F (-34°C to +70°C).

The APS shall be designed for two wire operation to allow APS stations to operate using existing 2/C pushbutton wires. The 2/C pushbutton wires shall be used to provide power and communications (placing pedestrian phase calls) from the APS station to the central control unit in the traffic signal cabinet. Wireless communications between the APS station and the central control unit shall only be used for programming, firmware updates, and APS station management, not for placing pedestrian phase calls.

The APS stations shall be equipped with a shelf mounted central control unit that is located inside the traffic signal controller cabinet and connects to each APS pushbutton station. The central control unit shall be equipped with an Ethernet port that can be used for remote system monitoring, configuration, and administration. A total of one central control unit shall be furnished for each traffic signal cabinet.

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The AC power input for the system shall be disconnected in the event that the intersection goes into flash.

The APS shall contain a power protection circuit consisting of both fuse and transient protection.

Locator Tone and Traffic Control Signal in Flashing Mode. When the traffic control signal is operating in a flashing mode, pedestrian push button locator tones shall remain active, and the pedestrian push button shall activate a speech message that communicates the operating mode of the traffic control signal.

Audible Indications. A pushbutton locator tone shall sound at each pushbutton and shall be deactivated during the associated walk indication and when associated traffic signals are in flashing mode. Pushbutton locator tones shall have a duration of 0.15 seconds or less and shall repeat at 1-second intervals. Each actuation of the pushbutton shall be accompanied by the speech message "Wait". Locator tones shall be audible 6 to 12 ft. from pushbutton.

If two accessible pedestrian pushbuttons are placed less than 10 ft. (3 m) apart or placed on the same pole, the audible walk and don't walk indication shall be a speech message. This speech message shall sound throughout the WALK interval only. Common street name shall be used and not the route number of the street unless there is no common street name. The street name used in programming shall reflect the street name mast arm mounted sign panel. Locations without street name (ex. private benefit driveways, shopping plaza entrance, etc.) shall use a general term "Commercial Driveway" as a street name for that leg. The speech message shall be modeled after: "Street Name.' Walk Sign is on to cross "Street Name.'" For signalized intersections utilizing exclusive pedestrian phasing, the verbal message shall be "Walk sign is on for all crossings". In addition, a speech pushbutton information message shall be provided by actuating the APS pushbutton when the WALK interval is not timing. This verbal message shall be modeled after: "Wait. Wait to cross 'Street Name' at 'Street Name'".

Railroad Preemption. At locations with railroad interconnection APS pushbutton shall be capable of receiving a railroad preemption similar to a traffic signal controller and shall be hard wired to the railroad preemption relay inside the traffic signal cabinet. A shelf mount control unit shall be provided and installed inside the cabinet capable of receiving and transmitting the railroad preemption to all the push buttons.

At railroad intersections all APS pushbuttons shall use the speech message and shall follow the below speech models.

During Don't Walk: "Wait to cross 'Street Name' at 'Street Name', Caution, Walk time shortened when train approaches" – this does not repeat, plays only once with every push button press.

During Walk: "Walk sign is on to cross 'Street Name'", – this repeats as many times as possible during Walk interval only.

During Railroad preemption: All push buttons at same time "Train Approaching" – this message shall be repeated two times.

At locations with emergency vehicle preemption, NO additional speech message shall be provided.

Locations with Corner Islands or Center Medians. At locations with corner islands pushbuttons shall follow the requirement of the 10 ft. as specified herein regarding the percussive tone versus a speech message. When push buttons are closer than 10 ft. apart the speech message shall follow the format specified herein for the main street crossing. The speech message shall follow the below speech models for the unusual configurations.

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MODIFY EXISTING CONTROLLER CABINET, SPECIAL

This work shall be in accordance with the applicable Articles of Sections 895, 1073, and 1074 of the Standard Specifications with the following modifications:

This item shall consist of providing equipment and modifying cabinet wiring as required to accommodate the installation of right turn overlaps with flashing yellow arrow sequencing at the intersection of Illinois Route 9 (Locust Street) and IL 78 (Main Street) in Canton.

The existing Type V controller cabinet is equipped with an Econolite ASC/3 TS2 Type 2 controller equipped with Ethernet, Reno MMU2-1600G malfunction management unit, and 16 position TS-2 backpanel. The existing controller and MMU will be re-used. Upon request, the Department will provide a complete list of equipment and a cabinet drawing for the intersection.

The Contractor shall perform the following:

- The Contractor shall furnish and install all items that are required for the proposed sequencing (load switches, jumpers, etc.).
- The Contractor shall program the proposed controller and MMU as required to accommodate the proposed sequencing.
- The Contractor shall provide red-lined prints in PDF electronic format that show the cabinet modifications.
- The Contractor shall re-arrange the existing cabinet components as needed to accommodate the installation of the proposed components.
- The Contractor will be allowed to place the intersection into all-way red flash mode and all-way stop control to facilitate the controller cabinet modification. The Contractor shall furnish and install a minimum of two stop signs per approach when the intersection is operating in all-red flash mode or all-way stop control.
- The cabinet sequencing shall conform to MUTCD requirements.
- At the conclusion of the cabinet modification prior to resuming normal signal operation, the Contractor shall test the modified cabinet by connecting a jumper to the cabinet field terminals to ensure that all conflicting signals will place the cabinet into conflict flash and to verify that the cabinet, controller, and malfunction management unit are operating correctly. The Contractor shall coordinate with the local police agency to provide traffic control during the conflict test.

Basis of Payment: This work will be paid for at the contract unit price per Each for MODIFY EXISTING CONTROLLER CABINET, SPECIAL which price shall be payment in full for all labor, materials, and equipment required to modify the cabinet to support flashing yellow operation and test the modified cabinet as described above.

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RELOCATE EXISTING SIGNAL HEAD

This work shall be in accordance with Sections 880, 895 and 1078 of the Standard Specifications except as modified herein.

The Contractor shall relocate the existing traffic signal heads as shown in the plans and in the table below.

IL 9 (Locust) & IL 78 (Main)					
Existing Location	Existing Mounting Type	Signal Head Type	Proposed Location	Proposed Mounting Type	Proposed Wiring
SB Mast Arm Over Thru Lane (center)	Mast Arm Mounted	3-Section	SB Mast Arm Over Thru Lane (left)	Mast Arm Mounted (re-used)	Re-use existing
SB Mast Arm Strain Pole	Bracket Mounted	3-Section	SB Mast Arm Over Thru Lane (right)	Mast Arm Mounted	Install new 5/C jumper wire (included in cost of relocation)
WB Mast Arm Over Thru Lane (center)	Mast Arm Mounted	3-Section	WB Mast Arm Over Thru Lane (left)	Mast Arm Mounted (re-used)	Re-use existing
WB Mast Arm Strain Pole	Bracket Mounted	3-Section	WB Mast Arm Over Thru Lane (right)	Mast Arm Mounted	Install new 5/C jumper wire (included in cost of relocation)

The minimum lateral spacing between signal heads shall be 8.0 ft.

The cost to furnish and install new 5/C signal cable between the two signal heads over each thru lane shall be included in the cost of the signal head relocation.

All costs associated with re-using mast arm mounted bracketing, and furnishing and installing new bracketing for signal heads relocated from the strain poles shall be included in the cost of this pay item. The Contractor shall minimize the total number of holes drilled in a mast arm to no more than three. The Contractor shall fill holes left in the mast arm from relocated signal heads using stainless steel plugs or aluminum plates with stainless steel banding.

Basis of Payment: This work will be paid for at the contract unit prices Each for RELOCATE EXISTING SIGNAL HEAD and will be payment in full for all labor, equipment, and materials required to relocate the existing signal heads, and re-use or furnish and install new bracketing as described above, complete.

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