



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

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Indianapolis, Indiana 46204

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Michael R. Pence, Governor
Karl B. Browning, Commissioner

AGENDA

November 22, 2013 Standards Committee Meeting

MEMORANDUM

November 05, 2013

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Agenda for the November 22, 2013 Standards Committee Meeting

A Standards Committee meeting is scheduled for 09:00 a.m. on November 22, 2013 in the N955 Bay Window Conference Room. Please enter meeting through the double doors directly in front of the conference room.

The following agenda items are listed for consideration.

A. GENERAL BUSINESS ITEMS

OLD BUSINESS

(No items on this agenda)

NEW BUSINESS

1. *Approval of the Minutes from the September 19, 2013 meeting*

B. CONCEPTUAL PROPOSAL ITEMS

OLD BUSINESS

(No items on this agenda)

NEW BUSINESS

(No items on this agenda)

C. STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
PROPOSED ITEMS

OLD BUSINESS

(No items on this agenda)

NEW BUSINESS

<u>Item No. 01</u>	<u>11/22/13 (2014 SS)</u>	<u>Mr. Boruff</u>	<u>pg 03</u>
805-T-XXX		ACCESSIBLE PEDESTRIAN SIGNALS	
805-T-XXX		ACCESSIBLE PEDESTRIAN SIGNALS	
		WITH SPEECH WALK MESSAGES	

<u>Item No. 02</u>	<u>11/22/13 (2014 SS)</u>	<u>Ms. Gottschalk</u>	<u>pg 11</u>
628-C-XXX		HANDS-FREE KITS FOR CELL PHONES	

cc: Committee Members
FHWA
ICA

SPECIFICATION, SPECIAL PROVISIONS AND DRAWINGS
REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The 2014 Standard Specifications contain several new material specifications for pedestrian push-buttons, but they omit specifications for push-buttons that meet the requirements of accessible pedestrian signals (APS) in sections 4E.09 - 4E.13 of the Indiana Manual on Uniform Traffic Control Devices. Pedestrian push-buttons with APS features include a locator tone, tactile arrow that vibrates during the walk interval, and a speech message or percussive tone during the walk interval.

PROPOSED SOLUTION: To establish: [1] an editable recurring special provision that indicates what crosswalks on a project are to receive APS and if there are any special instructions for the speech walk messages and [2] material specifications for APS. The proposed material specifications are adapted from the Vermont Agency of Transportation (§752.13 and §752.14).

APPLICABLE STANDARD SPECIFICATIONS: 805.05, 805.16, and 922.04

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: 77-5.03

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: 805-11817 Pedestrian Push Button, APS; and 805-78370 Pedestrian Push Button, Non-APS

Submitted By: Dave Boruff

Title: Manager, Office of Traffic Administration

Organization: INDOT

Phone Number: (317) 234-7975

Date: 10/28/2013

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Yes, traffic standards subcommittee

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS
PROPOSED NEW RSP 805-T-XXX ACCESSIBLE PEDESTRIAN SIGNALS

805-T-XXX ACCESSIBLE PEDESTRIAN SIGNALS

(Adopted XX-XX-13)

The Standard Specifications are revised as follows:

SECTION 805, AFTER LINE 29, INSERT AS FOLLOWS:

Pedestrian push buttons shall be the type designated in the contract documents, APS or Non-APS.

SECTION 805, AFTER LINE 216, INSERT AS FOLLOWS:

When installing push buttons with accessible pedestrian signal, APS, features the contractor shall verify that the audible tone is discernible from the mid-point of the crosswalk.

SECTION 805, BEGIN LINE 735, DELETE AS FOLLOWS:

The cost of the push button, pedestrian actuated signal sign, any accessible pedestrian signal components ~~as shown on the plans~~, and all hardware required to complete the installation shall be included in the cost of pedestrian push button.

SECTION 922, BEGIN LINE 816, DELETE AND INSERT AS FOLLOWS:

(b) Pedestrian Push Button

Pedestrian push button assemblies shall ~~be ADA compliant~~ *meet the standards of the Americans with Disabilities Act, ADA. Pedestrian push button assemblies shall be vandal and weather resistant, be pressure activated with minimal movement, and cannot be stuck in a closed or constant call position. A red latching LED and audible tone shall be provided for confirmation of an actuation call.*

A type D certification in accordance with 916 shall be provided.

1. Housing

The pedestrian push button housing shall be constructed of cast aluminum or stainless steel and powder coated yellow, and furnished with suitable mounting hardware.

2. Latching LED

The normal state of the LED shall be off. When the push button is pressure activated, the LED shall be lighted and remain on until the beginning of the walk phase. The latching relay shall be mounted in the signal cabinet, controlling two pedestrian phases.

3. Actuator

The actuator shall be stainless steel with *a minimum diameter of 2 in. and a solid state electronic Piezo switch rated for a minimum of 20 million cycles with no moving plunger or moving electrical contacts. The operating voltage shall be 12-24V AC/DC. The actuator's nominal operating force shall be approximately 1 not exceed 5 lb.*

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS
PROPOSED NEW RSP 805-T-XXX ACCESSIBLE PEDESTRIAN SIGNALS

4. Sign

The pedestrian ~~information~~ sign shall be ~~according to the R10-3e in accordance with the MUTCD, unless a different MUTCD sign code is indicated on the plans. The legend on the sign shall either be all words or a combination of words and symbol to match the pedestrian signal.~~ The sign base shall be sheet aluminum in accordance with 919.01(b).

5. Accessible Pedestrian Push Buttons

When accessible pedestrian signals, APS, are specified the push button shall have audible and tactile features. The push button shall activate both the Walk interval and the APS. The color of the actuator shall contrast visually with the housing or mounting. APS push-button assemblies shall meet the requirements of the MUTCD. A standard manufacturer's warranty shall be provided.

a. Audible Features

The pedestrian push-button assembly shall include an audible indication of the Walk interval by either tone or voice and shall be audible from the near side of the associated crosswalk. If the tone for the Walk interval is the same as the locator tone of the push-button it shall have a faster repetition rate than the associated locator tone. The volume of the audible features shall have automatic volume adjustment based on the ambient noise levels. Audible features shall be at least 2 dB but no more than 5 dB louder than ambient sound up to a maximum volume of 89 dB measured at 36 in. from the device. Audible features may be integral to the pedestrian push-button assembly or through a separate speaker housing.

When push buttons are separated by 10 ft or more, the audible indication shall be a tone. The audible indication shall meet the requirements of the MUTCD.

When push buttons are separated by less than 10 ft, the indication shall be a voice message. When voice messages are used, they shall include a clear message that the walk interval is in effect and shall indicate to which crossing it applies.

The pedestrian push button shall have an audible locator tone feature. The locator tone shall have a duration of 0.15 seconds or less and shall repeat at 1 second intervals.

b. Tactile Features

The push button assembly shall incorporate a raised arrow. The arrow shall be raised 0.03125 in. minimum and shall be 1.5 in. minimum in length. The arrow color shall contrast with the background. The push button shall vibrate to indicate that the walk interval is in effect.

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS
PROPOSED NEW RSP 805-T-XXX ACCESSIBLE PEDESTRIAN SIGNALS WITH SPEECH
WALK MESSAGES

805-T-XXX ACCESSIBLE PEDESTRIAN SIGNALS WITH SPEECH WALK MESSAGES

(Adopted XX-XX-13)

Accessible pedestrian push-buttons shall be provided at:

Name of intersection

The walk messages used shall be as follows:

Intersection	Push-button*	Walk Message**
North leg	_____	_____
South leg	_____	_____
East leg	_____	_____
West leg	_____	_____
* Enter "N/A", or "APS", or "Non-APS" ** Leave blank, enter "percussive tone" if applicable, or text for speech walk message		

(Leave remainder of this form blank if not applicable)

_____ (_____ leg of intersection)

Walk Message: _____

_____ (_____ leg of intersection)

Walk Message: _____

Special Instructions: _____

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS
BACKUP 01. PROPOSED REVISION TO IDM 77-5.03 (DRAFT)

77-5.03 Pedestrian Signal [Existing IDM Section Number]

502-3.04(05) Pedestrian Signal [New IDM Section Number]

Pedestrian-signal indications should be provided on a new or modernized traffic-signal installation in accordance with *IMUTCD* Section 4E.03.

An INDOT pedestrian-signal installation should satisfy the INDOT *Standard Specifications*. For a local-agency facility, a pedestrian-signal installation should satisfy ITE criteria and local practice. ~~A location where visually impaired pedestrians are anticipated may warrant the supplemental use of an accessible pedestrian signal.~~ *IMUTCD* Section 4E.04 provides additional information regarding the location of pedestrian-signal indications.

The use of an accessible *pedestrian* signal (*APS*) at a location will be ~~determined on a site-by-site basis~~ based on an *APS* study conducted by the designer or the District Traffic Engineer. When *APS* are used, the percussive tone should be specified for *APS* when the push buttons at a curb ramp are separated by 10 ft or more. The speech walk message should be specified for *APS* when the push buttons at a curb ramp are separated by less than 10 ft. The speech walk message should normally be patterned after the model: "Broadway. Walk sign is on to cross Broadway." The speech walk message must not include commands or tell pedestrians that it is safe to cross. The speech walk message should also avoid superfluous street name terms such as "street" or "avenue" unless necessary to avoid confusion. When a speech walk message is required the "ACCESSIBLE PEDESTRIAN SIGNALS WITH SPEECH WALK MESSAGES" recurring special provision should be completed and inserted into the contract.

Where crosswalks are longer or the ambient noise level is greater, speakers or baffling may need to be specified for the *APS*. A 7C/14 signal cable should be specified from the controller to each corner with *APS*.

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

BACKUP 02. COPY OF PAGES 197 AND 198 FROM 2011 STANDARD SPECIFICATIONS
FOR CONSTRUCTION BOOK. VERMONT AGENCY OF TRANSPORTATION.

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The wire loops shall consist of 3.31 mm² (No. 12 gage) AWG minimum size, Type TW stranded wire with 600 V insulation. Loop feeder wire shall be in accordance with the loop detector manufacturer's recommendations. Loop feeder length capability shall be at least 230 m (755 feet) for one loop, or a combined total feeder length capability of at least 230 m (755 feet) for multiple loops. Single conductor shall consist of seven-strand tinned copper.

The configurations and installation of the wire loops and loop feeder wires shall be in accordance with the loop detector manufacturer's recommendations and/or as shown on the Plans. The loops shall be located as shown on the Plans.

Vehicle detector feeder wire (lead-ins) shall be enclosed in a nonmetallic conduit for underground travel from the curb to the controller.

752.11 VEHICLE DETECTOR SLOT SEALANT. Vehicle detector slot sealant material shall be a standard of the trade for this purpose, and it shall have the approval of the Engineer prior to being used.

752.12 JUNCTION BOX. Junction boxes shall be constructed of fiberglass, high density polyethylene (HDPE), or acrylonitrile-butadiene-styrene (ABS). They shall be high-impact resistant at temperatures ranging from -35 to 50 °C (-30 to 120 °F), ultraviolet stabilized, and fire retardant. The side wall shall be ribbed for strength. The cover shall be non skid and shall be held down with recessed hex-head bolts. The junction box shall be capable of withstanding a loading of 67 kN (15 kips) over any 250 by 250 mm (10 × 10 inch) area on the cover. The size of the box shall be as specified in the Contract.

Certification. A Type A Certification shall be furnished in accordance with Subsection 700.02.

752.13 ACCESSIBLE PEDESTRIAN SIGNALS. Accessible Pedestrian Signals (APS) shall meet the standards of the American with Disabilities Act (ADA) and the most current edition of the Manual on Uniform Traffic Control Devices (MUTCD).

- (a) Wiring. The APS shall interface and be coordinated with the other features of a traffic control signal.

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REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

BACKUP 02. COPY OF PAGES 197 AND 198 FROM 2011 STANDARD SPECIFICATIONS
FOR CONSTRUCTION BOOK. VERMONT AGENCY OF TRANSPORTATION.

752

- (b) Audible Features. The APS shall include an audible indication of the Walk interval by either tone or voice and shall be audible from the near side of the associated crosswalk. If the tone for the Walk interval is the same as the locator tone of the pushbutton it shall have a faster repetition rate than the associated locator tone. The volume of the audible features shall have automatic volume adjustment based on the ambient noise levels. Audible features shall be no more than 5 dB louder than ambient sound up to a maximum volume of 89 dB measured at 36 inches (900mm) from the device. When voice messages are used, they shall include a clear message that the walk interval is in effect and shall indicate to which crossing it applies. Audible features may be integral to the Pedestrian Pushbutton Assembly (752.14) or through a separate speaker housing.
- (c) Certification. A Type A Certification shall be furnished in accordance with Subsection 700.02.

752.14 PEDESTRIAN PUSHBUTTON ASSEMBLIES. Pedestrian pushbutton assemblies shall meet all ADA requirements. The plunger head shall have a minimum diameter of 50 mm (2 inches) and the force required to operate the plunger shall not exceed 22.2 N (5 pounds). The pushbutton shall activate both the Walk interval and the APS (if one is provided).

- (a) Color. The color of the pushbutton shall contrast visually with the housing or mounting.
- (b) Audible Features. The pushbutton assembly shall include an integral locator tone. The locator tone shall have a duration of 0.15 seconds or less and shall repeat at 1 second intervals. The locator tone shall be 2 dB minimum and 5 dB maximum above ambient noise levels and shall be responsive to ambient noise levels.
- (c) Tactile Features. The pushbutton assembly shall incorporate a raised arrow. The arrow shall be raised 0.8 mm (1/32 inch) minimum and shall be 38 mm (1 ½ inches) minimum in length. The arrow color shall contrast with the background. The pushbutton shall vibrate to indicate that the walk interval is in effect.
- (d) Certification. A Type A Certification shall be furnished in accordance with Subsection 700.02.

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COMMENTS AND ACTION

805-T-XXX ACCESSIBLE PEDESTRIAN SIGNALS

805-T-XXX ACCESSIBLE PEDESTRIAN SIGNALS WITH SPEECH WALK MESSAGES

Motion: Second: Ayes: Nays:	Action: ☐ Passed as Submitted ☐ Passed as Revised ☐ Withdrawn
Standard Specifications Sections affected: 805.05 pg 762; 805.16 pg 773; 922.04 pg 1025 and 1026. Recurring Special Provision affected: NONE Standard Sheets affected: NONE Design Manual Sections affected: SECTION 77-5.03. GIFE Sections cross-references: NONE	☐ 2014 Standard Specifications Book ☐ Revise Pay Items List ☐ Create RSP (No.____) Effective ____ Letting RSP Sunset Date: ____ ☐ Revise RSP (No.____) Effective ____ Letting RSP Sunset Date: ____ Standard Drawing Effective ____ ☐ Create RPD (No. ____) Effective ____ Letting ☐ Technical Advisory GIFE Update Req'd.? Y ____ N ____ By ____ Addition or ____ Revision Frequency Manual Update Req'd? Y ____ N ____ By ____ Addition or ____ Revision Received FHWA Approval? ____

SPECIFICATIONS, SPECIAL PROVISION AND DRAWING
REVISION TO STANDARD SPECIFICATIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The new Mobile Device Policy strongly discourages operating a mobile device, namely cell phones, while driving in an effort to not jeopardize the safety of personnel and maintain a safe working environment. The Mobile Device Policy encourages all INDOT employees to use hands free devices, in the event an employee is operating a cell phone while driving.

PROPOSED SOLUTION: Revise section 628.04 of the Standard Specifications to include a hands-free kit which will enable the user to operate their cellular telephone with minimal need for using their hands, therefore facilitating the application of the recommendations in the Mobile Device Policy.

APPLICABLE STANDARD SPECIFICATIONS: 628.04

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: N/A

Submitted By: Michelle M. Gottschalk

Title: Construction Technical Support Director

Organization: INDOT, Division of Construction Management

Phone Number: 317-232-7758

Date: October 7, 2013

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad hoc committee consisting of Mark Miller, Shelly Gottschalk, Scott Trammell.

REVISION TO STANDARD SPECIFICATIONS

PROPOSED NEW 628-C-XXX HANDS-FREE KITS FOR CELL PHONES

628-C-XXX HANDS-FREE KITS FOR CELL PHONES

(Adopted XX-XX-13)

The Standard Specifications are revised as follows:

SECTION 628, BEGIN LINE 425, DELETE AND INSERT AS FOLLOWS:

Each cellular telephone unit shall have a service coverage area that includes the project limits. Each cellular telephone unit shall include a belt clip system, a 120V AC charger, ~~and a 12V DC mobile charger,~~ *and a hands-free kit consisting of a speaker and a microphone enabling the user to operate the unit with minimal need for the use of their hands. The hands-free kit may be either wired or wireless.*

REVISION TO STANDARD SPECIFICATIONS
BACKUP 01. MOBILE DEVICE POLICY, PG 1

Mobile Device
Policy

September 2013



MOBILE DEVICE POLICY

Responsible Department: Employee Safety

Last Updated: September 2013

PURPOSE

The use of mobile devices while at work may present a hazard and/or distraction to the employee and fellow employees working in the same area. The purpose of the mobile device policy is to provide standards for Indiana Department of Transportation (INDOT) employees to define the safe use, including appropriate times and place, to utilize mobile devices.

SCOPE

This policy applies to all Indiana Department of Transportation (INDOT) employees.

DEFINITION OF A MOBILE DEVICE

Mobile devices are defined in this policy as portable computing and/or communication devices, including but not limited to cellular phones, smart phones, laptops and tablets.

STATEMENT OF POLICY

The use of mobile devices shall not pose a safety hazard or disrupt business operations. INDOT work activities, the safety of personnel and safe operational procedures shall not be jeopardized by the use of mobile devices. Each work activity and work environment is unique and it is vital that employees evaluate the work activity and work environment for the safest possible locations to utilize a mobile device.

The use of mobile devices while driving is strongly discouraged. INDOT encourages all employees to use hands free devices. If a hands free device is not available, employees should pull over to the side of the road at the safest opportunity or pull into a rest stop or parking lot and stop the vehicle. Texting and/or reading text is not permitted while driving at any time (Indiana Code § IC 9-21-8-59).

Employees that are driving a Commercial Motor Vehicle (CMV) shall not use a hand held cellular phone. Driving means operating a commercial motor vehicle, including while temporarily stationary because of traffic, traffic control device, or other momentary delays. Using a hand-held mobile telephone is only permissible by drivers of a CMV when necessary to communicate with law enforcement officials or other emergency services. Hands free mobile devices may be used while driving as long as the driver remains stationary in the driver seat while reaching for the device. (Federal Code 49 C.F.R 392.82).

Employees working on jobsites and/or within work zones shall find a "safe zone" for use. Employees shall not use mobile devices:

- While driving through work zones/jobsites
- While walking through work zones/jobsites
- Near moving vehicles and/or heavy equipment without a physical barrier

RESPONSIBILITY

Employees are responsible for ensuring the safe use of mobile devices in accordance with agency, local, state and federal laws. Failure of employees to comply may result in disciplinary action up to and including dismissal.

REVISION TO STANDARD SPECIFICATIONS
BACKUP 01. MOBILE DEVICE POLICY, PG 2

Mobile Device
Policy

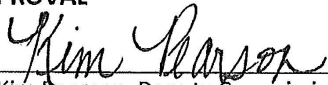
September 2013

Supervisors and managers are responsible for ensuring employee compliance with agency, local, state and federal laws. Failure of supervisors and managers to comply may result in disciplinary action up to and including dismissal.

REFERENCES

INDOT Employee Handbook
Indiana Department of Administration (IDOA) Fleet Management Policy
Indiana Code § IC 9-21-8-59
Federal Code 49 C.F.R 392.82

APPROVAL



Kim Pearson, Deputy Commissioner of Human Resources

9-16-13
Date

AGL

ACTION AND COMMENTS

628-C-XXX HANDS-FREE KITS FOR CELL PHONES

Motion: Second: Ayes: Nays:	Action: ☐ Passed as Submitted ☐ Passed as Revised ☐ Withdrawn
Standard Specifications Sections affected: Section 628 pg 479.	☐ 2014 Standard Specifications Book ☐ Revise Pay Items List
Recurring Special Provision possibly affected: 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT	☐ Create RSP (No.____) Effective ____ Letting RSP Sunset Date: ____
Standard Sheets affected: NONE	☐ Revise RSP (No.____) Effective ____ Letting RSP Sunset Date: ____
Design Manual Sections affected: NONE	Standard Drawing Effective ____ ☐ Create RPD (No. ____) Effective ____ Letting
GIFE Sections cross-references: NONE	☐ Technical Advisory GIFE Update Req'd.? Y ____ N ____ By ____ Addition or ____ Revision Frequency Manual Update Req'd? Y ____ N ____ By ____ Addition or ____ Revision Received FHWA Approval? ____