



**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**

# APPROVED MINUTES

## November 22, 2013 Standards Committee Meeting

### MEMORANDUM

December 31, 2013

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Minutes from the November 22, 2013 Standards Committee Meeting

The Standards Committee meeting was called to order by Mr. Miller at 09:01 a.m. on November 22, 2013 in the N755 Bay Window Conference Room. The meeting was adjourned at 10:49 a.m.

The following committee members were in attendance:

Mark Miller, Chairman, Construction Management Director  
Mike Beuchel\*, Contract Administration Division  
Dave Boruff, Traffic Engineering Division  
Elizabeth Phillips, INDOT Standards  
Greg Pankow, State Construction Engineer  
Jim Keefer, Fort Wayne District Construction Director  
Michael Buening, Pavement Engineering  
Michelle Gottschalk, Construction Technical Support  
Richard Vancleave, Highway Design and Technical Support Division  
Ron Walker, Materials Management

*\*Proxy for Bob Cales*

Also in attendance were the following:

Fred Boso, Javelina Construction Inc.  
John Mills, Javelina Construction Inc.  
Steve Apple, Indiana Sign and Barricade, Inc.  
Kurt Schleter, Gridlock Traffic Systems  
Jeff Johnson, CFO, Tyson OnSite  
Karen Guthrie, Tyson OnSite  
Dan Osborn, ICA  
Scott Sherrell, MAMCO  
David Holtz, INDOT (item 03)  
Wendy Chiles, INDOT  
Michael Prather, INDOT (item 03)  
Lana Podorvanova, INDOT

James Smith, Tyson Onsite  
Paul Berebitsky, ICA  
Tom Duncan, FHWA  
Scott Trammell, INDOT  
Ellis Holder, INDOT  
Joe Bruno, INDOT  
Steve Fisher, INDOT  
Joshua Kiilu, INDOT

The following items were listed for consideration.

A. GENERAL BUSINESS ITEMS

OLD BUSINESS

*(No items were listed for consideration)*

NEW BUSINESS

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

DISCUSSION: Mr. Miller requested a motion to accept the Minutes from the September 19, 2013 meeting.

Motion: Mr. Buening  
Second: Mr. Vancleave  
Ayes: 8  
Nays: 0

ACTION:

PASSED AS SUBMITTED

*2. Annual Publishing of Standard Drawings (Ms. Phillips)*

DISCUSSION: Ms. Phillips addressed the committee concerning the history of this practice and whether it needs to continue. Ms. Phillips also expressed the desire to discontinue rolling the IDM each year as well. There was a brief discussion as to whether or not it is still necessary to update the Standard Drawings each year. Mr. Miller offered that since everything is available on-line (INDOT web site), only the revised material needs to be published. Mr. Vancleave mentioned that the drawings used to be updated 3 times per year, then it decreased to 2 times per year and then once per year. Mr. Pankow's concern was that the drawings that are available are the most current. Further discussion ensued concerning the availability of the current drawings and having the history of past drawings accessible. Ms. Phillips said that she and her team will create an archived file of past standard drawings.

B. CONCEPTUAL PROPOSAL ITEMS

OLD BUSINESS

*(No items were listed for consideration)*

NEW BUSINESS

*(No items were listed for consideration)*

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

OLD BUSINESS

*(No items were listed for consideration)*

NEW BUSINESS

|                                       |                               |              |
|---------------------------------------|-------------------------------|--------------|
| <u>Item No. 01 11/22/13 (2014 SS)</u> | <u>Mr. Boruff</u>             | <u>pg 04</u> |
| 805-T-XXX                             | ACCESSIBLE PEDESTRIAN SIGNALS |              |
| 805-T-XXX                             | ACCESSIBLE PEDESTRIAN SIGNALS |              |
|                                       | WITH SPEECH WALK MESSAGES     |              |

ACTION:

PASSED AS SUBMITTED

Item No. 02 11/22/13 (2014 SS)      Ms. Gottschalk      pg 15  
628-C-XXX      HANDS-FREE KITS FOR CELL PHONES

ACTION:      PASSED AS SUBMITTED

Item No. 03 11/22/13 (2014 SS)      Mr. Buening      pg 20  
SECTION 306      MILLING

ACTION:      PASSED AS SUBMITTED

Item No. 04 11/22/13 (2014 SS)      Mr. Keefer      pg 29  
801-C-XXX      TEMPORARY CONSTRUCTION SIGNS

ACTION:      WITHDRAWN

Item No. 05 11/22/13 (2014 SS)      Mr. Pankow      pg 32  
628-C-586      FIELD OFFICE COMPUTER EQUIPMENT

ACTION:      PASSED AS REVISED

cc:    Committee Members  
      FHWA  
      ICA

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

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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

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805-T-XXX ACCESSIBLE PEDESTRIAN SIGNALS

(Adopted XX-XX-13)

The Standard Specifications are revised as follows:

SECTION 805, AFTER LINE 30, 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 MUTCD and 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. Such certification shall contain the contract number, manufacture's name, model name, supplier's name, location or intersection name, and for a type APS pedestrian push button, the sound level measurement of the audible features of the device.*

**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*

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

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plunger or moving electrical contacts. The operating voltage shall be 12-24V AC/DC. The actuator's nominal operating force shall be approximately ~~±~~ not exceed 5 lb.

#### **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~~dB but no more than 5 ~~Db~~dB louder than ambient sound up to a maximum volume of 89 ~~Db~~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.

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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 <del>"Non-APS"</del><br>**Leave blank, enter "percussive tone" if applicable, or text for<br>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)

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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 mm<sup>2</sup> (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.

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- (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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REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS  
 MEETING HANDOUT. ACCESSIBLE PEDESTRIAN SIGNALS (APS) STUDY REPORT FORM  
 (SEE DISCUSSION). PAGES 1 AND 2.



Accessible Pedestrian Signals (APS) Study Report Form

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------|
| Intersection:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |              |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Time: | Day of Week: |
| Weather Conditions:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |              |
| Investigator(s):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |              |
| Specific Needs of Requesting Party:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |              |
| <p>A. First Tier Criteria (check if any apply)</p> <p><input type="checkbox"/> 1. Sidewalks not present or would not be installed concurrently with APS</p> <p><input type="checkbox"/> 2. Pedestrian crosswalks are in an area with ambient noise above 100 dB</p> <p><input type="checkbox"/> 3. Installation of APS requires upgrade to controller cabinet and a larger controller cabinet would be technically infeasible as defined in the Americans with Disabilities Act</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |              |
| <p>If any of the boxes in Section A above are selected, the APS Study is complete and APS <b>should not</b> be used at the subject intersection.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |              |
| <p>B. Second Tier Criteria (check if any apply)</p> <p><input type="checkbox"/> 1. Traffic generators within 2 blocks of the intersection that serve the visually impaired<br/>         Traffic generator(s): _____</p> <p><input type="checkbox"/> 2. Exclusive pedestrian phase, leading pedestrian interval, or pedestrian phase not concurrent with parallel through movement</p> <p><input type="checkbox"/> 3. Intersection is in a jurisdiction that uses or will use APS at all pedestrian signals</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |              |
| <p>If any of the boxes in Section B above are selected, the APS Study is complete and APS <b>should</b> be used at the subject intersection.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |              |
| <p>C. Third Tier Criteria</p> <p><input type="checkbox"/> 1. Pedestrian traffic generator within 2 blocks?<br/>         Traffic generator(s): _____</p> <p><input type="checkbox"/> 2. Previous requests for APS?<br/>         Previous requestor(s): _____ Date(s): _____<br/>         Previous requestor(s) still reside in vicinity? <input type="checkbox"/></p> <p><input type="checkbox"/> 3(a). Daytime hourly volume on minor street less than 120 vehicles per hour for any hour during the day</p> <p><input type="checkbox"/> 3(b). Right turn on red volumes exceed 90 vehicles for any approach for any hour</p> <p><input type="checkbox"/> 4. Split phasing or protected left turn phasing</p> <p><input type="checkbox"/> 5(a). Crosswalk lengths (check if any length is more than 40 ft)<br/>         North Leg _____ East Leg _____<br/>         South Leg _____ West Leg _____</p> <p><input type="checkbox"/> 5(b). Skewed crossing? (attach aerial photo of intersection with study)</p> |       |              |

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

MEETING HANDOUT. ACCESSIBLE PEDESTRIAN SIGNALS (APS) STUDY REPORT FORM  
(SEE DISCUSSION). PAGES 1 AND 2.

Accessible Pedestrian Signals (APS) Study Report Form

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>C. Third Tier Criteria (continued):</b></p> <p><input type="checkbox"/> 5(c). Curb ramp radius &gt; 25 ft. for any ramp at the location</p> <p><input type="checkbox"/> 5(d). Curb ramp not aligned with crosswalk direction</p> <p><input type="checkbox"/> 5(e). Median greater than 4 ft wide?<br/>Median width: _____</p> <p><input type="checkbox"/> 5(f). Crosswalk transverse slope greater than 5%?<br/>Crosswalk transverse slope: _____</p> <p><input type="checkbox"/> 5(g). Speed limit greater than 40 mph on any approach?<br/>North Leg _____ East Leg _____<br/>South Leg _____ West Leg _____</p> <p><input type="checkbox"/> 6. Bike lanes, sidewalk, curb ramps present?</p> <p><input type="checkbox"/> 7. APS Present at Adjacent Intersections?</p> <p><input type="checkbox"/> 8. Other relevant factors (pedestrian crashes, channelized right-turn lane with yield control, etc):<br/><br/>Please describe: _____<br/>_____</p> |
| <p>For Section C, if study is being performed at the request of the public and any of the criteria are satisfied then APS should be used at the subject intersection. For studies performed as part of construction project planning if either box 1 or box 2 are selected and any one of boxes 3 through 8 are selected, APS should be used. APS may be used if any one box in line C is selected.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>D. Additional Comments:</b></p><br><br><br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>E. Recommendations:</b></p> <p><input type="checkbox"/> APS Recommended      <input type="checkbox"/> APS Not Recommended</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>F. Signatures:</b></p><br><p>_____ Date _____</p> <p>Title: _____ (typically designer or district investigations engineer)</p><br><p>_____ Date _____</p> <p>Title: _____ (typically project manager or district traffic engineer)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

COMMENTS AND ACTION

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805-T-XXX ACCESSIBLE PEDESTRIAN SIGNALS

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

DISCUSSION: Mr. Boruff introduced and presented this item stating that this revision is necessary to assist the visually impaired. Mr. Boruff stated that this has been discussed with industry and they are in agreement. Mr. Pankow asked if new drawings would be required and Ms. Phillips answered that additional drawings would not be needed. Mr. Bruno stated that this proposal includes a fillable form so that only what is required will be installed.

Mr. Miller asked if they had drafted out what the Type D certification would look like. Mr. Bruno and Mr. Boruff said they'll work on that.

Mr. Bruno handed out an Accessible Pedestrian Signals Study Report Form which will assist in determining the design criteria.

Ms. Phillips expressed concern that the APS may not always be required, and that if the requirements change, we would have to go back and install an APS system. Mr. Boruff stated that the MUTCD has guidelines which will need to be considered. Mr. Keefer asked if someone is going to inspect each installation to make sure it can be heard in the middle of the crosswalk. Mr. Pankow mentioned that the number of decibels should be determined. Mr. Miller suggested that there be a checklist made to coincide with the training being formulated by the ADA ramps committee.

Mr. Pankow asked if any new pay items would be needed. Mr. Bruno stated that the existing pay item has a "type" and this new item code could be entered. Mr. Fisher stated that changing the pay item code confuses the pay item history. Mr. Boruff agreed that a new pay item will be needed and that he and his team will look into it.

Mr. Boruff stated that the new RSP will be ready by December 2013, for March 2014 lettings.

COMMENTS AND ACTION

805-T-XXX ACCESSIBLE PEDESTRIAN SIGNALS

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

(CONTINUED)

|                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Motion: Mr. Boruff<br/>         Second: Ms. Phillips<br/>         Ayes: 9<br/>         Nays: 0</p>                                                                                                                                                                                                                                                                               | <p>Action:<br/> <input checked="" type="checkbox"/> Passed as Submitted<br/> <input type="checkbox"/> Passed as Revised<br/> <input type="checkbox"/> Withdrawn</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p>Standard Specifications Sections affected:<br/>         805.05 pg 762; 805.16 pg 773;<br/>         922.04 pg 1025 and 1026.</p> <p>Recurring Special Provision affected:<br/>         NONE</p> <p>Standard Sheets affected:<br/>         NONE</p> <p>Design Manual Sections affected:<br/>         SECTION 77-5.03.</p> <p>GIFE Sections cross-references:<br/>         NONE</p> | <p>2016 Standard Specifications Book<br/> <input type="checkbox"/> Revise Pay Items List</p> <p><input checked="" type="checkbox"/> Create RSP (No. 805-T-201 and 805-T-202)<br/>         Effective March 01, 2014 Letting<br/>         RSP Sunset Date: _____</p> <p><input type="checkbox"/> Revise RSP (No. _____)<br/>         Effective _____ Letting<br/>         RSP Sunset Date: _____</p> <p>Standard Drawing Effective _____<br/> <input type="checkbox"/> Create RPD (No. _____)<br/>         Effective _____ Letting<br/> <input type="checkbox"/> Technical Advisory</p> <p>GIFE Update Req'd.? Y ___ N ___<br/>         By _____ Addition or _____ Revision</p> <p>Frequency Manual Update Req'd? Y ___ N ___<br/>         By _____ Addition or _____ Revision</p> <p>Received FHWA Approval? <u>YES</u></p> |

SPECIFICATIONS, SPECIAL PROVISION AND DRAWING  
REVISION TO STANDARD SPECIFICATIONS

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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

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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 423, 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.*

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

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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

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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

APPROVED

COMMENTS AND ACTION

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

DISCUSSION: Ms. Gottschalk introduced and presented this item stating the need for revising this specification section in order to allow hands-free operation of cell phones per the new mobile device policy.

Mr. Berebitsky asked if this might encourage people to operate their phone more than usual while driving. Ms. Gottschalk stated that this was addressed in the policy which states that the use of mobile devices while driving is strongly discouraged.

|                                                                                             |                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motion: Ms. Gottschalk<br>Second: Mr. Buening<br>Ayes: 9<br>Nays: 0                         | Action:<br><input checked="" type="checkbox"/> Passed as Submitted<br><input type="checkbox"/> Passed as Revised<br><input type="checkbox"/> Withdrawn                                                                                         |
| Standard Specifications Sections affected:<br>Section 628 pg 479.                           | <input checked="" type="checkbox"/> 2016 Standard Specifications Book<br><input type="checkbox"/> Revise Pay Items List                                                                                                                        |
| Recurring Special Provision possibly affected:<br>628-C-586 FIELD OFFICE COMPUTER EQUIPMENT | <input checked="" type="checkbox"/> Create RSP (No. 628-C-236)<br>Effective March 01, 2014 Letting<br>RSP Sunset Date: Sept. 01, 2015<br><br><input type="checkbox"/> Revise RSP (No. ____)<br>Effective ____ Letting<br>RSP Sunset Date: ____ |
| Standard Sheets affected:<br>NONE                                                           | Standard Drawing Effective ____<br><input type="checkbox"/> Create RPD (No. ____)<br>Effective ____ Letting<br><input type="checkbox"/> Technical Advisory                                                                                     |
| Design Manual Sections affected:<br>NONE                                                    | GIFE Update Req'd.? Y ____ N ____<br>By ____ Addition or ____ Revision                                                                                                                                                                         |
| GIFE Sections cross-references:<br>NONE                                                     | Frequency Manual Update Req'd? Y ____ N ____<br>By ____ Addition or ____ Revision<br><br>Received FHWA Approval? YES                                                                                                                           |

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The Department sees a need to have fine milling criteria to accommodate our thinner asphalt surface treatments, i.e. UBWC, micro-surfacing, 4.75 mm HMA and chip-seals. The finer texture is appropriate for achieving good bond and smoothness in the thin overlays and can provide short-term corrective measures for rutting or loss of surface friction.

Sand-patch testing was conducted on the fine milled SR-58 surface thru Odon and the macrotexture ratio was determined to be  $> 5.00$  in accordance with ITM 812; the November 2012 milling on SR-58 was in response to removing a bleeding chip-seal constructed just months prior.

PROPOSED SOLUTION: Revise section 306 to address the need for fine milling criteria. The revision will include a macrotexture ratio  $\geq 5.00$  in accordance with ITM 812 for a single course overlay with a lay rate as shown on the plans  $< 165$  lb/sys. ITM 812 has already been edited to accommodate a larger range of macrotexture ratio values.

APPLICABLE STANDARD SPECIFICATIONS: 306

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: 304

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: Milling, PCCP and Milling, Scarification/Profile

Submitted By: Michael Prather

Title: Area Pavement Engineer

Phone Number: 234-8250

Date: October 2013

APPLICABLE SUB-COMMITTEE ENDORSEMENT: INDOT milling committee comprised of five industry representatives as well as INDOT and FHWA personnel. ICA was also provided final review.

REVISION TO STANDARD SPECIFICATIONS  
SECTION 306 – MILLING

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**SECTION 306 – MILLING**

**306.01 Description**

This work shall consist of the milling of asphalt and concrete pavements and the disposal of milled materials in accordance with 105.03.

**CONSTRUCTION REQUIREMENTS**

**306.02 General**

Milling operations shall be described in the QCP in accordance with ITM 803. Where the milling operation in a partial-day closure results in a longitudinal vertical or near vertical face exceeding 2 in. in height, the adjacent lane shall be milled during the same day, the milled lane resurfaced during the same day, or the vertical face tapered at a 45° angle or flatter. Where located within 3 in. of a curb, surface material that cannot be removed by the cold-milling machine shall be removed by other approved methods.

Transverse milled vertical faces greater than 1 in. that are exposed to traffic shall be transitioned in an approved manner.

Castings located in milling areas that are not to be adjusted may remain in place during the milling, or may be removed and replaced at the Contractor's option.

Localized weak areas uncovered by the milling process shall be patched in accordance with 304 or 305.

The milled material shall become the property of the Contractor, unless otherwise specified.

The roadway shall be cleaned before opening to traffic.

**306.03 Equipment**

Equipment for milling shall be in accordance with the following.

**(a) Roadway Milling Machine**

A milling machine shall be a power operated cold-milling machine, equipped with automatic control devices to establish profile grades by referencing from either the existing pavement or from independent grade control. The equipment shall have a positive means of controlling cross slope elevations, have an effective means for removing excess material from the surface, preventing airborne dust escaping from the operation, and producing a finished surface that provides a good bond to the new overlay.

Sufficient cutting teeth shall be on the *coarse milling or fine milling* cutting drum to produce cuttings such that 90% of the conglomerate particles pass a 2 in. sieve. A *coarse milling cutting drum shall have 5/8 in. spacing between the cutting teeth and be*

REVISION TO STANDARD SPECIFICATIONS  
SECTION 306 - MILLING

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*capable of producing a surface macrotexture ratio in accordance with ITM 812 equal to or greater than 1.8. A fine milling cutting drum shall have 5/16 in. or 3/8 in. spacing between the cutting teeth and be capable of producing a surface macrotexture ratio in accordance with ITM 812 equal to or greater than 5.0.*

**(b) Power Saw**

Sawing equipment shall be capable of maintaining the specified alignment and depth of cut without damaging the pavement.

**(c) Rotary Power Broom**

A motorized, pneumatic tired unit with rotary bristle broom head.

**(d) Straightedge**

**1. Straightedge – 16 ft**

A 16 ft straightedge shall be a rigid beam mounted on two solid wheels on axles 16 ft apart. The straightedge has a mounted push bar to facilitate propelling the device along or across the pavement. Tolerance points are located at the 1/4, 1/2, and 3/4 points and may be composed of threaded bolts capable of being adjusted to the tolerance required.

**2. Straightedge – 10 ft**

A 10 ft straightedge is the same as a 16 ft straightedge except that the wheels are mounted 10 ft apart. A handheld rigid beam may be substituted.

**306.04 Asphalt or PCCP Scarification Milling and Profile Preparation**

~~Asphalt scarification and profile preparation shall consist of preparing a base for resurfacing by removing existing asphalt material. The entire existing asphalt surface shall be roughened by the operations. The existing pavement shall be milled to the cross-slope as shown on the plans, and shall have a surface finish that does not vary longitudinally more than 1/4 in. from a 16 ft straightedge or as described in the QCP in accordance with 401.02. The milled surface shall have macrotexture equal to or greater than 2.2 for single course overlays and 1.8 for multiple course overlays in accordance with ITM 812. Frequency of macrotexture testing shall be a minimum of once per day and shall be described in the QCP. The cross-slope shall not vary more than 1/8 in. when measured with a 10 ft straightedge.~~

~~Milled mainline areas left open to traffic for longer than five work days will be assessed \$1,600.00 per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.~~

~~Milled non-mainline areas such as auxiliary lanes left open to traffic for longer than 10 work days will be assessed \$800.00 per day per lane mile, or portion thereof, as~~

REVISION TO STANDARD SPECIFICATIONS  
SECTION 306 - MILLING

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~~liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.~~

Scarification milling shall consist of preparing a base for resurfacing by roughening the entire existing asphalt or PCCP surface. The milled pavement profile shall have a surface finish that does not vary longitudinally more than 1/4 in. from a 16 ft straightedge or as described in the QCP in accordance with 401.02.

A fine milling cutting drum in accordance with 306.03(a) shall be used when a single course overlay is specified with a lay rate as shown on the plans less than 165 lb/sys and the maximum scarification mill cut depth is expected to be less than 3/4 in. for asphalt or PCCP, otherwise, a coarse milling cutting drum in accordance with 306.03(a) shall be used.

The scarified milled surface shall have a macrotexture ratio in accordance with ITM 812 as follows:

- (a) equal to or greater than 5.0 when using a fine milling cutting drum for a single course overlay, or;
- (b) equal to or greater than 2.2 for a single course overlay, or;
- (c) equal to or greater than 1.8 for multiple course overlays.

Frequency of macrotexture testing shall be a minimum of once per day and shall be described in the QCP. The cross-slope shall not vary more than 1/8 in. when measured with a 10 ft straightedge.

Milled traveled way areas left open to traffic for longer than five work days will be assessed \$1,600.00 per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

Milled non-traveled way areas such as auxiliary lanes and shoulders left open to traffic for longer than 10 work days will be assessed \$800.00 per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

**306.05 Asphalt or PCCP Profile Milling to Correct Cross-Slope**

Profile milling shall consist of preparing a base for resurfacing by removing the existing asphalt or PCCP material to the specified cross-slope as shown on the plans. The milled pavement profile shall have a surface finish that does not vary longitudinally more than 1/4 in. from a 16 ft straightedge or as described in the QCP in accordance with 401.02.

A fine milling cutting drum in accordance with 306.03(a) shall be used when a single course overlay is specified with a lay rate as shown on the plans less than 165

REVISION TO STANDARD SPECIFICATIONS  
SECTION 306 - MILLING

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*lb/sq yd and the maximum profile mill cut depth is expected to be less than or equal to 1 1/2 in. for asphalt or 3/4 in. for PCCP, otherwise, a coarse milling cutting drum in accordance with 306.03(a) shall be used.*

*The profile milled surface shall have a macrotexture ratio in accordance with ITM 812 as follows:*

- (a) equal to or greater than 5.0 when using a fine milling cutting drum for a single course overlay, or;*
- (b) equal to or greater than 2.2 for a single course overlay, or;*
- (c) equal to or greater than 1.8 for multiple course overlays.*

*Frequency of macrotexture testing shall be a minimum of once per day and shall be described in the QCP. The cross-slope shall not vary more than 1/8 in. when measured with a 10 ft straightedge.*

*Milled traveled way areas left open to traffic for longer than five work days will be assessed \$1,600.00 per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.*

*Milled non-traveled way areas such as auxiliary lanes and shoulders left open to traffic for longer than 10 work days will be assessed \$800.00 per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.*

**306.04.106 Approach Milling**

Approach milling shall consist of milling the surface and cutting a wedge at the driveways, commercial or public road approaches. The existing approach shall be milled a minimum depth of no less than 1/4 in. to accommodate the approach pavement. The approach milling shall be completed to provide a smooth transition from the ~~mainline~~ traveled way pavement to the termini of the approach. The existing approach pavement shall be cut to provide a vertical face of 1 1/2 in. for the termini of surface.

Mailbox approaches to be resurfaced shall be milled to maintain the ~~mainline~~ traveled way profile and cross-slope.

Automatic control devices will not be required on surface milling equipment used for approach milling. Milling shall not damage any pavement that is to remain in place.

Approach milling shall not be performed at driveways unless it is required to meet a paved surface that continues beyond the construction limit. If the driveway is other than HMA or PCC beyond the construction limits, the approach milling is not required.

REVISION TO STANDARD SPECIFICATIONS  
SECTION 306 - MILLING

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The transverse vertical cut face for commercial or public road approaches shall be transitioned at a rate of 24:1 or as approved.

**306.0507 Asphalt or PCCP Milling to a Specified Average Depth**

~~Asphalt~~ Milling shall consist of preparing a base for resurfacing by removing the existing asphalt material *or PCCP* ~~at a~~ to the specified average depth as shown on the plans. The ~~existing~~ milled pavement shall be milled to the cross-slope as shown on the plans, and shall have a surface finish that does not vary longitudinally more than 1/4 in. from a 16 ft straightedge or as described in the QCP in accordance with 401.02. ~~The milled surface shall have macrotexture equal to or greater than 2.2 for single course overlays and 1.8 for multiple course overlays in accordance with ITM 812.~~

*A fine milling cutting drum in accordance with 306.03(a) shall be used when a single course overlay is specified with a lay rate as shown on the plans less than 165 lb/sq yd and the average mill cut depth is less than or equal to 1 1/2 in. for asphalt or 3/4 in. for PCCP, otherwise, a coarse milling cutting drum in accordance with 306.03(a) shall be used.*

*The milled surface shall have a macrotexture ratio in accordance with ITM 812 as follows:*

- (a) equal to or greater than 5.0 when using a fine milling cutting drum for a single course overlay, or;*
- (b) equal to or greater than 2.2 for a single course overlay, or;*
- (c) equal to or greater than 1.8 for multiple course overlays.*

Frequency of macrotexture testing shall be a minimum of once per day and shall be described in the QCP. The cross-slope shall not vary more than 1/8 in. when measured with a 10 ft straightedge.

If shoulders or turn lanes are not milled and the overlay material is not placed in the milled areas within the same day, drainage slots shall be provided to eliminate ponding of water.

Milled ~~mainline~~ traveled way areas left open to traffic for longer than five work days will be assessed \$1,600.00 per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

Milled non-~~mainline~~ traveled way areas such as auxiliary lanes *and shoulders* left open to traffic for longer than 10 work days will be assessed \$800.00 per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

REVISION TO STANDARD SPECIFICATIONS  
SECTION 306 - MILLING

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The transverse vertical cut face shall be transitioned by HMA, CMA or prefabricated materials at a rate of 24:1 or as approved.

**306.0608 Asphalt Overlay Removal**

Asphalt removal shall consist of complete removal of *an* asphalt overlay by milling from a portland cement concrete or brick base and the satisfactory disposal of the milled materials. Minor amounts of asphalt pavement material bonded to a concrete base at joints or cracks may remain in place. If this material becomes displaced during subsequent operations it shall be removed. Minor amounts of asphalt pavement material bonded to a brick base may remain in place. Removal of minor areas of portland cement concrete or brick base during the milling operations is acceptable.

Milled areas shall be cleaned prior to reopening to traffic or before continuing construction operations.

The transverse vertical cut face shall be transitioned by HMA, CMA or prefabricated materials at a rate of 24:1 or as approved.

**306.07 PCCP Milling**

~~PCCP milling shall consist of preparing a base for resurfacing by removing the existing PCCP material at a specified average depth. The existing pavement shall be milled to the cross-slope as specified in the plans, and shall have a surface finish that does not vary longitudinally more than 1/4 in. from a 16 ft straightedge or as described in the QCP in accordance with 401.02. The milled surface shall have macrotexture equal to or greater than 1.8 in accordance with ITM 812. Frequency of macrotexture testing shall be a minimum of once per day and shall be described in the QCP. The cross-slope shall not vary more than 1/8 in. when measured with a 10 ft straightedge or as directed by the Engineer.~~

~~A milled surface shall not be left open to traffic for longer than 14 calendar days. If the milled surface is not overlaid after 14 calendar days, \$1,600.00 per day per lane mile, or portion thereof, will be assessed as liquidated damages, not as a penalty, but as damages sustained for each calendar day that the milled area remains left open to traffic.~~

~~Milled non-mainline areas such as auxiliary lanes left open to traffic for longer than 10 work days will be assessed \$100.00 per day per transition as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.~~

~~The transverse vertical cut face shall be transitioned by HMA, CMA or prefabricated materials at a rate of 24:1 or as approved.~~

**306.0809 Transition Milling**

Transition milling shall consist of cutting a wedge at the beginning and ending of projects, and paving exceptions. The existing pavement shall be cut to provide a nearly



COMMENTS AND ACTION

SECTION 306 - MILLING

DISCUSSION: Mr. Buening introduced this item which was presented by Mr. Prather. Mr. Prather explained that the fine milling is substantially finer than our current process. Mr. Prather explained the process behind determining this revision to the milling procedure, and that all results observed to-date have been positive.

Mr. Miller asked about the macrotexture test results, and if the spacing on the milling teeth will change, using a fine head as opposed to a coarse head. Mr. Prather said that changing to a finer head will not increase productivity. Mr. Miller asked if we would care if someone wanted to achieve the same result with a finer head. Mr. Prather said they hadn't considered that option. Mr. Walker mentioned that we should get some feedback from industry.

Mr. John Mills from Javelina Construction, Inc., asked what determined the 5.0 as the macrotexture ratio as the baseline. Mr. Prather responded that it was derived from a series of observations made at varying the speed of the machine. The question arose if the contractor can use a different mill head, different speeds, to achieve the 5.0 macrotexture ratio. Mr. Prather said the teeth and spacing and other criteria was stated in the provision in an effort to avoid a process of more experimentation on the job.

Ms. Phillips asked about the change in language from mainline to traveled way. Mr. Prather responded that the language was revised to match other specified standards. Mr. Prather also stated that this process will only be invoked for lay rates below 165 lbs/sq yd.

|                                                                                                                                     |                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motion: Mr. Buening<br>Second: Mr. Boruff<br>Ayes: 9<br>Nays: 0                                                                     | Action:<br><input checked="" type="checkbox"/> Passed as Submitted<br><input type="checkbox"/> Passed as Revised<br><input type="checkbox"/> Withdrawn                                                                                                                                     |
| Standard Specifications Sections affected:<br><br>305.04 pg 229; 305.06 and .07 pg 232; SECTION 306 pg 233 thru 238; 410.11 pg 293. | <input checked="" type="checkbox"/> 2016 Standard Specifications Book<br><input type="checkbox"/> Revise Pay Items List<br><br><input checked="" type="checkbox"/> Create RSP (No. <u>306-R-613</u> )<br>Effective March <u>01</u> , 2014 Letting<br>RSP Sunset Date: <u>Sep. 01, 2015</u> |
| Recurring Special Provision affected:<br><br>NONE                                                                                   | <input type="checkbox"/> Revise RSP (No. <u>    </u> )<br>Effective <u>    </u> Letting<br>RSP Sunset Date: <u>    </u>                                                                                                                                                                    |
| Standard Sheets affected:<br><br>NONE                                                                                               | Standard Drawing Effective <u>    </u><br><input type="checkbox"/> Create RPD (No. <u>    </u> )                                                                                                                                                                                           |
| Design Manual Sections affected:<br><br>SECTION 304.                                                                                | Effective <u>    </u> Letting<br><input type="checkbox"/> Technical Advisory                                                                                                                                                                                                               |
| GIFE Sections cross-references:<br><br>NONE                                                                                         | GIFE Update Req'd.? Y <u>    </u> N <u>    </u><br>By <u>    </u> Addition or <u>    </u> Revision                                                                                                                                                                                         |
|                                                                                                                                     | Frequency Manual Update Req'd? Y <u>    </u> N <u>    </u><br>By <u>    </u> Addition or <u>    </u> Revision                                                                                                                                                                              |
|                                                                                                                                     | Received FHWA Approval? <u>YES</u>                                                                                                                                                                                                                                                         |

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The need has arisen for more clarity to the frequency of payment for particular temporary construction signs.

PROPOSED SOLUTION: Add Road Closure Sign Assemblies and Detour Route Marker Assemblies to the language stating which temporary construction signs will only be paid for once regardless of how many times they are moved or replaced during the contract, and reinstate previously removed language about "how many times each is altered to change the sign message" for temporary construction signs paid for once.

APPLICABLE STANDARD SPECIFICATIONS: 801.18

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: Detour Route Marker Assemblies..... EACH  
Road Closure Sign Assembly..... EACH

Submitted By: James W. Keefer

Title: Ft Wayne District Construction Engineer

Organization: INDOT

Phone Number: 260-969-8245

Date: September 19, 2013

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc: Jim Keefer, Tom Keefer

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS  
PROPOSED NEW RSP 801-C-XXX TEMPORARY CONSTRUCTION SIGNS

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801-C-XXX TEMPORARY CONSTRUCTION SIGNS

(Adopted XX-XX-13)

The Standard Specifications are revised as follows:

SECTION 801, BEGIN LINE 1126, INSERT AS FOLLOWS:

Each construction sign, barricade, temporary worksite speed limit sign assembly, *detour route marker assembly, road closure sign assembly, portable changeable message sign,* or flashing arrow sign will be paid for only once regardless of how many times each is moved, ~~or replaced,~~ *or how many times each is altered to change the sign message.* Payment will not be made for signs or barricades used for the convenience of the Contractor.

Additional materials necessary to place the ~~PCMS~~ *portable changeable message sign* in a secure and level manner for site conditions shall be included in the cost of the pay item. All costs to furnish, install, program, activate, deactivate, change messages, *move, replace,* and maintain the PCMS shall be included in the cost of the pay item. The cost of IP cellular phone service shall be included in the cost of the pay item.

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COMMENTS AND ACTION

NEW RSP 801-C-XXX TEMPORARY CONSTRUCTION SIGNS

DISCUSSION: Mr. Keefer introduced this item and explained the need to revise this portion of 801 in an effort to avoid further confusion in the field with regard to moving or altering sign locations. Mr. Keefer provided examples and a brief history of revisions to this revision of 801.18 that led to revising this once again.

Mr. Miller provided further clarification in that we are not trying to take advantage of the contractor.

Mr. Berebitsky asked that this issue be reviewed by the traffic committee and expressed concerns from industry.

Mr. Steve Apple from Indiana Sign & Barricade, stated that the language was revised previously to accommodate the PCMS, and not affect changes made to signs in the field that would require a new sign, not a change to an existing sign.

A great deal of discussion ensued as to how to revise this item in an effort to make it acceptable to all.

Mr. Keefer asked to withdraw this item at this time pending further review. Mr. Pankow and Mr. Miller stressed that this needs to be re-addressed at next month's meeting.

|                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motion: Mr. Keefer<br>Second: Mr. Walker<br>Ayes:<br>Nays:                                                                                                                                                                                                                            | Action:<br><input type="checkbox"/> Passed as Submitted<br><input type="checkbox"/> Passed as Revised<br><input checked="" type="checkbox"/> Withdrawn                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Standard Specifications Sections affected:<br><br>SECTION 801.18 pg 742.<br><br>Recurring Special Provision affected:<br><br>NONE<br><br>Standard Sheets affected:<br><br>NONE<br><br>Design Manual Sections affected:<br><br>NONE<br><br>GIFE Sections cross-references:<br><br>NONE | <input type="checkbox"/> 2016 Standard Specifications Book<br><input type="checkbox"/> Revise Pay Items List<br><br><input type="checkbox"/> Create RSP (No. ____)<br>Effective ____ Letting<br>RSP Sunset Date: ____<br><br><input type="checkbox"/> Revise RSP (No. ____)<br>Effective ____ Letting<br>RSP Sunset Date: ____<br><br>Standard Drawing Effective ____<br><input type="checkbox"/> Create RPD (No. ____)<br>Effective ____ Letting<br><input type="checkbox"/> Technical Advisory<br><br>GIFE Update Req'd.? Y ____ N ____<br>By ____ Addition or ____ Revision<br><br>Frequency Manual Update Req'd? Y ____ N ____<br>By ____ Addition or ____ Revision<br><br>Received FHWA Approval? ____ |

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Recurring Special Provision 628-C-586 currently does not specify wireless printing capabilities associated with the Department provided iPads, which require the AirPrint system.

PROPOSED SOLUTION: As the Department will be providing field personnel with iPads for use in the field, it will be necessary to be able to print from those iPads using the AirPrint™ wireless technology. Therefore the Recurring Special Provision 628-C-586 for Department supplied Field Office Computer Equipment is in need of revision to include language requiring the Contractor to provide printers which contain this AirPrint™ technology. The revision also give the option for both Contractor supplied and Department supplied computers.

APPLICABLE STANDARD SPECIFICATIONS: 628

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: 628-C-586

PAY ITEMS AFFECTED:

Submitted By: Greg Pankow

Title: State Construction Engineer

Organization: INDOT

Phone Number: 317-232-5502

Date: 11-14-13

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad hoc: Ellis Holder, Joshua Kiilu, Shelly Gottschalk, Scott Trammell, Derrick Hauser, Greg Pankow.

REVISION TO SPECIAL PROVISION

RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT

Proposed changes shown as highlighted in gray.  
Statements that are proposed to be reinstated shown as underlined.  
Proposed Draft of this revised RSP shown on pages 22 thru 24.  
Current Basis for Use: "As determined necessary by District Construction".  
Proposed Basis for Use: "Required for all contracts with 628 pay items, except LPA projects.

628-C-586 FIELD OFFICE COMPUTER EQUIPMENT

(Revised XX-XX-13)

The Standard Specifications are revised as follows:

SECTION 628, BEGIN LINE 8, DELETE AND INSERT AS FOLLOWS:

**628.02 Field Office and Laboratory Requirements**

When specified, the Contractor shall provide a field office, computer ~~system~~equipment, office machines, field laboratory, services, equipment and supplies for the Department's exclusive use in accordance with the minimum requirements listed below.

SECTION 628, BEGIN LINE 28, DELETE AND INSERT AS FOLLOWS:

The field office shall be complete and ready for use by the Department, including all utility connections and specified computer ~~system~~equipment, office machines, internet service, equipment and supplies, prior to the start of work. If the Contractor is unable to provide the permanent field office prior to the start of the work, the Engineer shall be notified in writing and the Contractor and the Engineer will agree to temporary field office arrangements prior to the start of work. A temporary field office will not be accepted by the Department for more than two months, at which time a permanent field office shall be ready for the Department's use.

SECTION 628, BEGIN LINE 191, DELETE AND INSERT AS FOLLOWS:

**(c) Field Office Computer ~~System~~Equipment**

~~When specified in the Schedule of Pay Items, the Contractor shall provide one field office computer system for the Department's exclusive use the following for each field office specified. The Contractor has the option to provide either a desktop or a laptop computer system in accordance with the minimum requirements listed below.~~

**1. Field Office Desktop Computer System**

- a. Processor – Intel or AMD compatible, 2.0 GHz
- b. Memory – 1.0 GB, 533 MHz
- c. Hard Drive – 60 GB, 5,400 rpm
- d. Optical Drive – 24X CD-RW drive
- e. Ports – Two USB 2.0 compliant ports
- f. Network/Wireless – Ethernet or wireless card to be compatible with the selected internet and office network connections
- g. Graphics – Integrated graphics card
- h. Monitor – 22 in. widescreen digital flat panel

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RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT

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- i. Keyboard –USB enhanced multimedia keyboard
- j. Mouse – USB 2-button scroll mouse

**2. Field Office Laptop Computer System**

- a. Processor – Intel or AMD compatible, 2.0 GHz
- b. Memory – 1.0 GB, 533 MHz
- c. Hard Drive – 60GB, 5,400 rpm
- d. Module Bay Device – 24X CD-RW drive
- e. Ports – Two USB 2.0 compliant ports
- f. Network/Wireless – Ethernet or wireless card to be compatible with the selected internet and office network connections
- g. Graphics – Integrated graphics card
- h. Display – 15” XWGA LCD panel
- i. Battery – 9 cell lithium ion
- j. External Monitor – 22 in. widescreen digital flat panel
- k. External Keyboard – USB enhanced multimedia keyboard
- l. External Mouse – USB 2-button scroll mouse
- m. Miscellaneous – One compatible port replicator with AC adapter, one additional AC adapter, one DC adapter and one padded carrying case.

**3. Field Office Computer Equipment for Department Provided Laptop**

- 1a. External Monitor – 22 in. widescreen digital flat panel, with VGA and DVI connections*
- 2b. External Keyboard – USB enhanced multimedia keyboard*
- 3c. External Mouse – USB 2- button scroll mouse*
- 4d. DELL E-series port replicator with AC adapter, and one DC adapter*
- 5e. Wireless router compatible with IEEE 802.11 a/b/g, or b/g/n, and shall have 1 input and 4 output 10/100 Ethernet ports. The router shall have WI-FI protected access (WPA2-PSK, WPA-PSK) and WEP security.*

**34. Computer Software**

The Contractor shall provide software for the computer system in accordance with the minimum requirements listed below.

- a. Operating System Software – Windows XP Professional.
- b. Productivity Software – Microsoft Office 2003 Small Business and Adobe Acrobat Professional.
- c. Security Software – McAfee Virus Scan Plus.

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RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT

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All software shall include the most current updates and patches at the time the computer system is provided to the Department. The Contractor shall provide for installation of updates and patches for the operating system, productivity and security software during the term of use of the computer system by the Department. Updates and patches shall be provided by an automatic update method.

The Department may install and maintain proprietary software on the computer in order to run the Department's construction management programs.

**45. Miscellaneous Computer Requirements**

The initial condition of the computer system/equipment shall be nearly pristine. All owner installed e-mail accounts, games, spyware, online services, applications, network or other profiles previously set up on the system shall be removed prior to placement in the field office. If the system was provided for a previous Department contract, all software not specified shall be removed prior to placement in the current field office.

The Contractor shall provide an uninterruptible power supply, UPS, minimum 120 VA, 100 Watts and full time surge suppression for each field office computer system specified in the contract.

The Contractor shall provide all cables, connections and software required to connect the field office computer system to the printer and the scanner.

When more than one computer system is specified for a field office, the Contractor shall provide either an Ethernet or wireless office network to enable all computer systems in the field office to access the field office internet service, the printer and the scanner.

The Contractor shall provide appropriate dust covers for all field office desktop computer systems.

The Contractor shall provide all manuals necessary for operation of the computer system and software with the system and shall include all documentation normally furnished with the equipment and software when purchased.

The Department will be utilizing the computer system to run or access Department provided construction management software applications. These applications are known to run on Intel and AMD compatible equipment when using the Windows XP Professional operating system. If the Department experiences problems running these applications due to hardware or software compatibility, the Contractor shall replace the equipment to ensure compatibility to the satisfaction of the Engineer within five business days.

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RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT

The computer system shall be maintained in good working order. If a portion of the system becomes defective, inoperable, damaged, or stolen, that portion shall be repaired or replaced within five business days after the Contractor is notified by the Engineer. If the computer system and related accessories are not maintained by the Contractor as required, the Engineer may withhold partial payments until the computer system is operational to the Department's satisfaction.

SECTION 628, BEGIN LINE 311, DELETE AND INSERT AS FOLLOWS:

**2. Printer**

The printer shall be compatible with the computer system provided by the Contractor or the Department for use by the Department in the field office. The printer shall be capable of printing single-sided, black and white letter, legal and ledger US paper size documents at a rate of 20 pages per minute and capable of automatic duplex printing. More than one printer may be used to meet this requirement. *All devices shall be compatible with the Department's laptops or iPads and accommodate wireless mobile printing from the iPads using AirPrint™ technology.*

**3. Document Scanner**

The document scanner shall be compatible with the computer system provided by the Contractor or the Department for use by the Department in the field office. The scanner shall be capable of scanning letter and legal size documents and shall have an automatic document feeder and be capable of 200 to 600 dpi black and white resolution, *preset to 200 dpi.*

SECTION 628, BEGIN LINE 383, DELETE AND INSERT AS FOLLOWS:

**628.03 Additional Computer Systems and Mobile Internet Service**

When specified, the Contractor shall provide the following computer systems and internet services for the Department's exclusive use.

**(a) Additional Field Office Computer System**

The additional field office computer system shall be either a desktop or laptop computer system in accordance with 628.02(c)1 or 628.02(c)2 except that the monitor for a desktop system may be a 19 in. flat panel and the external monitor for a laptop system will not be required. The requirements of 628.02(c)34 and 628.02(c)45 shall apply to each additional field office computer.

**(b) Mobile Laptop Computer System**

The mobile laptop computer system shall be in accordance with 628.02(c)2 except that the external monitor, integrated graphics card, external keyboard and port replicator with AC adapter will not be required. Mobile laptop computers will be used by the Department for contracts that do not include a field office. The requirements of 628.02(c)34 and 628.02(c)45 shall apply to each mobile laptop computer except that those requirements specifically for a field office computer will not apply.

**(c) Mobile Internet Service**

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RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT

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The mobile broadband internet service access card will be used by the Department in a laptop computer provided by either the Contractor or the Department.

The card shall connect to the laptop via a type II PC card slot, an express card slot or a USB 2.0 compliant port. The card and service shall be capable of a minimum average upload speed of 350 Kbps. The internet service rate plan shall include unlimited data and time usage with no roaming charge for national domestic use. All software necessary for the operation of the card shall be provided to the Engineer.

The Contractor shall not purchase any card or enter into any service agreement until authorized by the Engineer. The Engineer will provide a minimum of 10 business days notice prior to the date the card will be required.

**628.043. Cellular Telephones**

SECTION 628, BEGIN LINE 465, DELETE AND INSERT AS FOLLOWS:

**628.054 Method of Measurement**

Field office and field laboratory will be measured by the month for the specified type. Partial months will be rounded up to the next 1/2 or whole month. The Department will provide two weeks advanced notice prior to when the facility will be vacated.

If a field laboratory is specified and is included in the same space as the field office, the field laboratory will not be measured for payment.

Additional field office computer system, mobile laptop computer system, mobile internet service, and cCellular telephone service will be measured by the month for each system or service provided. Partial months will be rounded up to the next 1/2 or whole month. The Department will provide two weeks advanced notice prior to when mobile internet service and cellular telephone service will no longer be required.

**628.065 Basis of Payment**

Field office and field laboratory will be paid for at the contract unit price per month, complete in place until released.

Additional field office computer system, mobile laptop computer system and mobile internet service will be paid by the month for each system or service provided.

Cellular telephone units will be paid for at the contract unit price per each per each type specified. Cellular telephone service will be paid for at the contract unit price per month per each phone. Monthly charges for cellular telephone minutes and data in excess of those specified in the contract will be paid for by the dollar amount for the invoiced price per each occurrence as cellular telephone, additional charges.

Payment will be made under:

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RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT

| Pay Item                                                             | Pay Unit Symbol       |
|----------------------------------------------------------------------|-----------------------|
| Cellular Telephone Service, _____<br>anytime minutes                 | MOS                   |
| Cellular Telephone _____<br>type                                     | EACH                  |
| Cellular Telephone, Additional Data .....                            | DOL                   |
| Cellular Telephone, Additional Minutes .....                         | DOL                   |
| Field Laboratory, _____<br>type                                      | MOS                   |
| <u>Field Office Computer System, Additional, _____</u><br><u>qty</u> | <u>Each</u> ..... MOS |
| Field Office, _____<br>type                                          | MOS                   |
| <u>Mobile Internet Service, _____</u><br><u>qty</u>                  | <u>Each</u> ..... MOS |
| <u>Mobile Laptop Computer System, _____</u><br><u>qty</u>            | <u>Each</u> ..... MOS |

SECTION 628, BEGIN LINE 533, DELETE AND INSERT AS FOLLOWS:

All costs necessary to provide *and maintain* the field office computer ~~system~~*equipment*, including the required software, manuals, ~~peripherals and related equipment~~, technical support and miscellaneous computer requirements shall be included in the cost of the field office.

All costs necessary to establish, install and maintain field office internet service, *both wireless and Ethernet*, including any required hardware, software, fees, monthly charges, setup, installation and technical support shall be included in the cost of the field office.

All costs necessary to provide the copier, printer, document scanner and fax machine, including setup, installation, all required connections to computers ~~systems~~, technical support and miscellaneous office machine requirements shall be included in the cost of the field office.

All costs necessary to establish and maintain a field office network when one or more additional field office computer systems are specified shall be included in the cost of the field office.

All cost necessary to provide an additional field office computer system, including the required software, manuals, peripherals and related equipment and technical support shall be included in the cost of the additional field office computer.

All costs necessary to provide the mobile laptop computer system, including the required software, manuals, peripherals and related equipment, technical support and

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RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT

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miscellaneous computer requirements shall be included in the cost of the mobile laptop computer.

All costs necessary to establish, install and maintain mobile internet service, including required hardware, software, fees, monthly charges, setup, installation and technical support shall be included in the cost of mobile internet service.

The Contractor shall provide a copy of the detailed invoice from the service provider for each cellular telephone unit each month.

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APPROVED MINUTES

REVISION TO SPECIAL PROVISION

RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT (PROPOSED DRAFT)

628-C-586 FIELD OFFICE COMPUTER EQUIPMENT

(Revised XX-XX-13)

The Standard Specifications are revised as follows:

SECTION 628, BEGIN LINE 8, DELETE AND INSERT AS FOLLOWS:

**628.02 Field Office and Laboratory Requirements**

When specified, the Contractor shall provide a field office, computer ~~system~~equipment, office machines, field laboratory, services, equipment and supplies for the Department's exclusive use in accordance with the minimum requirements listed below.

SECTION 628, BEGIN LINE 28, DELETE AND INSERT AS FOLLOWS:

The field office shall be complete and ready for use by the Department, including all utility connections and specified computer ~~system~~equipment, office machines, internet service, equipment and supplies, prior to the start of work. If the Contractor is unable to provide the permanent field office prior to the start of the work, the Engineer shall be notified in writing and the Contractor and the Engineer will agree to temporary field office arrangements prior to the start of work. A temporary field office will not be accepted by the Department for more than two months, at which time a permanent field office shall be ready for the Department's use.

SECTION 628, BEGIN LINE 191, DELETE AND INSERT AS FOLLOWS:

**(c) Field Office Computer ~~System~~Equipment**

When specified in the Schedule of Pay Items, ~~The~~ Contractor shall provide one field office computer system for the Department's exclusive use for each field office specified. ~~The Contractor has the option to provide either a desktop or a laptop computer system in accordance with the minimum requirements listed below.~~

SECTION 628, AFTER LINE 229, INSERT AS FOLLOWS:

**3. Field Office Computer Equipment for Department Provided Laptop**

- a. External Monitor – 22 in. widescreen digital flat panel, with VGA and DVI connections
- b. External Keyboard – USB enhanced multimedia keyboard
- c. External Mouse – USB 2- button scroll mouse
- d. DELL E-series port replicator with AC adapter, and one DC adapter
- e. Wireless router compatible with IEEE 802.11 a/b/g, or b/g/n, and shall have 1 input and 4 output 10/100 Ethernet ports. The router shall have WI-FI protected access (WPA2-PSK, WPA-PSK) and WEP security.

**34. Computer Software**

SECTION 628, BEGIN LINE 248, DELETE AND INSERT AS FOLLOWS:

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RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT (PROPOSED DRAFT)

**45. Miscellaneous Computer Requirements**

The initial condition of the computer ~~system~~ *equipment* shall be nearly pristine. All owner installed e-mail accounts, games, spyware, online services, applications, network or other profiles previously set up on the system shall be removed prior to placement in the field office. If the system was provided for a previous Department contract, all software not specified shall be removed prior to placement in the current field office.

The Contractor shall provide an uninterruptible power supply, UPS, minimum 120 VA, 100 Watts and full time surge suppression for each field office ~~computer system specified in the contract.~~

The Contractor shall provide all cables, connections and software required to connect the field office computer ~~system~~ to the printer and the scanner.

~~When more than one computer system is specified for a field office, the~~ Contractor shall provide either an Ethernet or wireless office network to enable all computer systems in the field office to access the field office internet service, the printer and the scanner.

SECTION 628, BEGIN LINE 311, DELETE AND INSERT AS FOLLOWS:

**2. Printer**

The printer shall be compatible with the computer system provided by the Contractor *or the Department* for use by the Department in the field office. The printer shall be capable of printing single-sided, black and white letter, legal and ledger US paper size documents at a rate of 20 pages per minute and capable of automatic duplex printing. More than one printer may be used to meet this requirement. *All devices shall be compatible with the Department's laptops or iPads and accommodate wireless mobile printing from the iPads using AirPrint™ technology.*

**3. Document Scanner**

The document scanner shall be compatible with the computer system provided by the Contractor *or the Department* for use by the Department in the field office. The scanner shall be capable of scanning letter and legal size documents and shall have an automatic document feeder and be capable of *200 to 600 dpi* black and white resolution, *preset to 200 dpi.*

SECTION 628, BEGIN LINE 387, DELETE AND INSERT AS FOLLOWS:

**(a) Additional Field Office Computer System**

The additional field office computer system shall be ~~either a desktop or laptop computer system in accordance with 628.02(c)1 or 628.02(c)2 except that the monitor for a desktop system may be a 19 in. flat panel and the external monitor for a laptop system will not be required.~~ The requirements of 628.02(c)-34 and 628.02(c)-45 shall apply to each additional field office computer.

**(b) Mobile Laptop Computer System**

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RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT (PROPOSED DRAFT)

The mobile laptop computer system shall be in accordance with 628.02(c)2 except that the external monitor, integrated graphics card, external keyboard and port replicator with AC adapter will not be required. Mobile laptop computers will be used by the Department for contracts that do not include a field office. The requirements of 628.02(c)34 and 628.02(c)45 shall apply to each mobile laptop computer except that those requirements specifically for a field office computer will not apply.

SECTION 628, BEGIN LINE 533, DELETE AND INSERT AS FOLLOWS:

All costs necessary to provide *and maintain* the field office computer ~~system~~*equipment*, including the required software, manuals, ~~peripherals and related equipment~~, technical support and miscellaneous computer requirements shall be included in the cost of the field office.

All costs necessary to establish, install and maintain field office internet service, *both wireless and Ethernet*, including any required hardware, software, fees, monthly charges, setup, installation and technical support shall be included in the cost of the field office.

All costs necessary to provide the copier, printer, document scanner and fax machine, including setup, installation, all required connections to computers ~~systems~~, technical support and miscellaneous office machine requirements shall be included in the cost of the field office.

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**ACTION AND COMMENTS**

**RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT**

DISCUSSION: Mr. Pankow introduced this item stating the need for having a field office printer system with the necessary technology to facilitate printing from the Department provided iPads.

Also, the Districts would like to be able to include a Contractor provided "Additional Field Office Computer System" should the District or designer determine it to be necessary. Mr. Holder offered that 628 will under more changes and revisions as operating systems and computer requirement progress.

Mr. James Smith of Tyson Onsite Co., asked about the wireless system for printing from the iPads and if the operator will need to be able to print from anywhere or just from inside the field office. Mr. Holder stated that it would only be from within the field office. Mr. Smith also asked about using the camera in the iPad to scanned items into SiteManager. Mr. Fisher replied that it is being considered for use in the future.

Language was added to include AirPrint™ technology for printing from the iPads. Mr. Pankow revised his motion to approve as revised. Ms. Gottschalk seconded. Basis for Use is all contracts except LPA's.

|                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motion: Mr. Pankow<br>Second: Mr. Boruff<br>Ayes: 9<br>Nays: 0                                                                                                                                                                                                                                                                      | Action:<br><input type="checkbox"/> Passed as Submitted<br><input checked="" type="checkbox"/> Passed as Revised<br><input type="checkbox"/> Withdrawn                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Standard Specifications Sections affected:<br><br>SECTION 628 pg 470 thru 482<br><br>Recurring Special Provision affected:<br><br>RSP 628-C-586 FIELD OFFICE COMPUTER EQUIPMENT<br><br>Standard Sheets affected:<br><br>NONE<br><br>Design Manual Sections affected:<br><br>NONE<br><br>GIFE Sections cross-references:<br><br>NONE | <input type="checkbox"/> 2016 Standard Specifications Book<br><input type="checkbox"/> Revise Pay Items List<br><br><input type="checkbox"/> Create RSP (No. <input type="text"/> )<br>Effective <input type="text"/> Letting<br>RSP Sunset Date: <input type="text"/><br><br><input checked="" type="checkbox"/> Revise RSP (No. 628-C-586)<br>Effective January 1, 2014 Letting<br>RSP Sunset Date: <input type="text"/><br><br>Standard Drawing Effective <input type="text"/><br><input type="checkbox"/> Create RPD (No. <input type="text"/> )<br>Effective <input type="text"/> Letting<br><input type="checkbox"/> Technical Advisory<br><br>GIFE Update Req'd.? Y <input type="checkbox"/> N <input type="checkbox"/><br>By <input type="text"/> Addition or <input type="text"/> Revision<br><br>Frequency Manual Update Req'd? Y <input type="checkbox"/> N <input type="checkbox"/><br>By <input type="text"/> Addition or <input type="text"/> Revision<br><br>Received FHWA Approval? YES |