

April 15, 2014

SUBJECT: FAI Route 55 (I-55) Project ACCM-0055(406) Section 2014-009 SG Cook County Contract No. 60X90 Item No. 114, April 25, 2014 Letting Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

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

- 1. Revised the Recurring Special Provision Check Sheet
- 2. Revised the Table of Contents to the Special Provisions
- 3. Revised pages 23-26, 28 and 33-36 of the Special Provisions
- 4. Added pages 64 & 65 to the Special Provisions

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

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

John D. Baranzelli, P.E. Acting Engineer of Design and Environment

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By: Ted B. Walschleger, P. E. Engineer of Project Management

cc: John Fortmann, Region 1, District 1; Tim Kell; Estimates

MS/kf

RECURRING SPECIAL PROVISIONS

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

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HOT-MIX ASPHALT – PRIME COAT (D-1)

Effective: February 19, 2013 Revised: April 1, 2014

Revise Note 1 of Article 406.02 of the Standard Specifications to read:

"Note 1. The bituminous material used for prime coat shall be one of the types listed in the following table.

When emulsified asphalts are used, any dilution with water shall be performed by the emulsion producer. The emulsified asphalt shall be thoroughly agitated within 24 hours of application and show no separation of water and emulsion.

Application	Bituminous Material Types
Prime Coat on Brick, Concrete, or HMA Bases	SS-1, SS-1h, SS-1hP, SS-1vh, CSS-1, CSS-1h, CSS-1hP, HFE-90, RC-70
Prime Coat on Aggregate Bases	MC-30, PEP"

Add the following to Article 406.03 of the Standard Specifications:

"(i) Regenerative Air Vacuum Sweeper......1101.19"

Revise Article 406.05(b) of the Standard Specifications to read:

- "(b) Prime Coat. The bituminous material shall be prepared according to Article 403.05 and applied according to Article 403.10. The use of RC-70 shall be limited to air temperatures less than 60 °F (15 °C)."
 - (1) Brick, Concrete or HMA Bases. The base shall be cleaned of all dust, debris and any substance that will prevent the prime coat from adhering to the base. Cleaning shall be accomplished by sweeping to remove all large particles and air blasting to remove dust. As an alternate to air blasting, vacuum sweeping may be used to accomplish the dust removal. Vacuum sweeping shall be accomplished with a regenerative air vacuum sweeper. The base shall be free of standing water at the time of application. The prime coat shall be applied uniformly and at a rate that will provide a residual asphalt rate on the prepared surface as specified in the following table.

Type of Surface to be Primed	Residual Asphalt
	Rate
	lb/sq ft (kg/sq m)
Milled HMA, Aged Non-Milled HMA, Milled	0.05 (0.244)
Concrete, Non-Milled Concrete & Tined Concrete	
Fog Coat between HMA Lifts, IL-4.75 & Brick	0.025 (0.122)

The bituminous material for the prime coat shall be placed one lane at a time. The primed lane shall remain closed until the prime coat is fully cured and does not pickup under traffic. When placing prime coat through an intersection where it is not possible to keep the lane closed, the prime coat may be covered immediately following its application with fine aggregate mechanically spread at a uniform rate of 2 to 4 lb/sq yd (1 to 2 kg/sq m).

(2) Aggregate Bases. The prime coat shall be applied uniformly and at a rate that will provide a residual asphalt rate on the prepared surface of 0.25 lb/sq ft \pm 0.01 (1.21 kg/sq m \pm 0.05).

The prime coat shall be permitted to cure until the penetration has been approved by the Engineer, but at no time shall the curing period be less than 24 hours for MC-30 or four hours for PEP. Pools of prime occurring in the depressions shall be broomed or squeegeed over the surrounding surface the same day the prime coat is applied.

The base shall be primed 1/2 width at a time. The prime coat on the second half/width shall not be applied until the prime coat on the first half/width has cured so that it will not pick up under traffic.

The residual asphalt binder rate will be verified a minimum of once per type of surface to be primed as specified herein for which at least 2,000 tons of HMA will be placed. The test will be according to the "Determination of Residual Asphalt in Prime and Tack Coat Materials" test procedure.

Prime coat shall be fully cured prior to placement of HMA to prevent pickup by haul trucks or paving equipment. If pickup occurs, paving shall cease in order to provide additional cure time.

Prime coat shall be placed no more than five days in advance of the placement of HMA. If after five days loss of prime coat is evident prior to covering with HMA, additional prime coat shall be placed as determined by the Engineer at no additional cost to the Department."

Revise the last sentence of the first paragraph of 406.13(b) to read:

"Water added to emulsified asphalt at the source as allowed in article 406.02 will not be included in the quantities measured for payment."

Revise the second paragraph of Article 406.13(b) of the Standard Specifications to read:

"Aggregate for covering prime coat will not be measured for payment."

Revise the first paragraph of Article 406.14 and the second paragraph of Article 407.12 of the Standard Specifications to read:

"Prime Coat will be paid for at the contract unit price per pound (kilogram) of residual asphalt applied for BITUMINOUS MATERIALS (PRIME COAT), POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT) or NON-TRACKING BITUMINOUS MATERIALS (PRIME COAT)."

Revise Article 407.06(b) of the Standard Specifications to read:

"A bituminous prime coat shall be applied between each lift of HMA according to Article 406.05(b)."

Revise Article 1032.02 of the Standard Specifications to read:

"1032.02 Measurement. Asphalt binders, emulsified asphalts, rapid curing liquid asphalt, medium curing liquid asphalts, slow curing liquid asphalts, asphalt fillers, and road oils will be measured by weight.

A weight ticket for each truck load shall be furnished to the inspector. The truck shall be weighed at a location approved by the Engineer. The ticket shall show the weight of the empty truck (the truck being weighed each time before it is loaded), the weight of the loaded truck, and the net weight of the bituminous material.

When an emulsion or cutback is used for prime coat, the percentage of asphalt residue of the actual certified product shall be shown on the producer's bill of lading or attached certificate of analysis. If the producer adds extra water to an emulsion at the request of the purchaser, the amount of water shall also be shown on the bill of lading.

Payment will not be made for bituminous materials in excess of 105 percent of the amount specified by the Engineer."

Add the following to the table in article 1032.04 of the Standard Specifications:

"SS-1vh 160 - 180 70 - 80"

Add the following to Article 1032.06 of the Standard Specifications:

"(g) Non Tracking Emulsified Asphalt SS-1vh:

		٦			
	Test		•	SPEC	AASHTO Test Method
Saybolt SFS	Viscosity	@	25C,	20-200	T 72
Storage %	Stabilit	y,	24hr.,	1 max.	T 59
Residue %	by	Evap	oration,	50 min.	T 59
Sieve %			Test,	0.3 max.	T 59
		Tests c	on Residu	ie from Evapo	ration
Penetration dmm	n @25°C,	100g.,	5 sec.,	20 max.	T 49
Softening I	Point,		°C	65 min.	T 53
Solubility,			%	97.5 min.	T 44
Orig. kPa	DSR	@	82°C,	1.00 min.	T 315"

Revise the last table of Article 1032.06 to read:

"Grade	Use		
SS-1, SS-1h, CSS-1, CSS- 1h, HFE-90, SS-1hP,CSS- 1hP, SS-1vh	Prime or fog seal		
PEP	Bituminous surface treatment prime		
RS-2, HFE-90, HFE-150, HFE-300, CRSP, HFP, CRS-2, HFRS-2	Bituminous surface treatment		
CSS-1h Latex Modified	Microsurfacing"		

Add the following to Article 1101 of the Standard Specifications:

"1101.19 Regenerative Air Vacuum Sweeper. The regenerative air vacuum sweeper shall blast re-circulated, filtered air through a vacuum head having a minimum width of 6.0 feet at a minimum rate of 20,000 cubic feet per minute."

Water samples will be taken on the same date and sampled as follows: three liters from the tank containing water that conforms to Art. 1002.01 and three liters from the filtered tank. Both samples must be submitted to the Department for testing every 4 months and when requested by the Engineer. A state representative must witness the sampling. The results from these samples shall serve as a check to the data provided by the contractor.

One Trial Batch per proposed mix design is required to verify minimum strengths can be achieved as defined in Article 1020.04 of the Standard Provision.

- (b) Quality Assurance by the Engineer. The Engineer will conduct independent assurance tests on split samples taken by the Contractor for quality control testing.
- (c) Documentation. The Contractor shall be responsible for documenting all test results. Records of testing shall be kept for a minimum of three years. The Contractor shall provide the Engineer full access to all documents.

TRAFFIC CONTROL PLAN

Effective: September 30, 1985 Revised: January 1, 2007

Traffic Control shall be according to the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and Highway Standards contained in the plans, and the Special Provisions contained herein.

Special attention is called to Article 107.09 of the Standard Specifications and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

The Contractor shall contact the District One Bureau of Traffic at least 72 hours in advance of beginning work.

STANDARDS:

701101, 701400, 701401, 701411, 701426, **701428**, 701901

DETAILS:

Multi-Lane Freeway Pavement Markings Traffic Control Details for Freeway Shoulder Closures and Partial Ramp Closures (TC-17) Signing for Flagging Operations at Work Zone Openings

TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)

Effective: March 8, 1996 Revised: February 13, 2014

<u>Description</u>. This work shall include furnishing, installing, maintaining, replacing, relocating, and removing all traffic control devices used for the purpose of regulating, warning, or directing traffic. Traffic control and protection shall be provided as called for in the plans, applicable Highway Standards, District One Expressway details, Standards and Supplemental Specifications, these Special Provisions, or as directed by the Engineer.

<u>General</u>. The governing factor in the execution and staging of work for this project is to provide the motoring public with the safest possible travel conditions on the expressway through the construction zone. The Contractor shall arrange his operations to keep the closing of lanes and/or ramps to a minimum.

The Contractor shall be responsible for the proper location, installation, and arrangement of all traffic control devices. Special attention shall be given to existing warning signs and overhead guide signs during all construction operations. Warning signs and existing guide signs with down arrows shall be kept consistent with the barricade placement at all times. The Contractor shall immediately remove, completely cover, or turn from the motorist's view all signs which are inconsistent with lane assignment patterns.

The Contractor shall coordinate all traffic control work on this project with adjoining or overlapping projects, including barricade placement necessary to provide a uniform traffic detour pattern. When directed by the Engineer, the Contractor shall remove all traffic control devices that were furnished, installed, or maintained by him under this contract, and such devices shall remain the property of the Contractor. All traffic control devices shall remain in place until specific authorization for relocation or removal is received from the Engineer.

Additional requirements for traffic control devices shall be as follows.

(a) Traffic Control Setup and Removal. The setting and removal of barricades for the taper portion of a lane closure shall be done under the protection of a vehicle with a truck/trailer mounted attenuator and arrow board per State Standard 701428 and the Traffic Control Setup and Removal Freeway/Expressway BDE Special Provision. Failure to meet this requirement will be subject to a Traffic Control Deficiency. The deficiency will be calculated as outlined in Article 105.03 of the Standard Specifications. Truck/trailer mounted attenuators shall comply with Article 1106.02(g) or shall meet the requirements of NCHRP 350 Test Level 3 with vehicles used in accordance with manufacturer's recommendations and requirements.

- (b) Sign Requirements
 - (1) Sign Maintenance. Prior to the beginning of construction operations, the Contractor will be provided a sign log of all existing signs within the limits of the construction zone. The Contractor is responsible for verifying the accuracy of the sign log. Throughout the duration of this project, all existing traffic signs shall be maintained by the Contractor. All provisions of Article 107.25 of the Standard Specifications shall apply except the third paragraph shall be revised to read: "The Contractor shall maintain, furnish, and replace at his own expense, any traffic sign or post which has been damaged or lost by the Contractor or a third party. The Contractor will not be held liable for third party damage to large freeway guide signs".
 - (2) Work Zone Speed Limit Signs. Work zone speed limit signs shall be installed as required in Article 701.14(b) and as shown in the plans and Highway Standards. Based upon the exiting posted speed limit, work zone speed limits shall be established and signed as follows.
 - a. Existing Speed Limit of 55mph or higher. The initial work zone speed limit assembly, located approximately 3200' before the closure, and shall be 55mph as shown in 701400. Additional work zone 45mph assemblies shall be used as required according to Article 701.14(b) and as shown in the Highway Standards and plans. WORK ZONE SPEED LIMIT 55 PHOTO ENFORCED assemblies may be omitted when this assembly would normally be placed within 1500 feet of the END WORK ZONE SPEED LIMIT sign.
 - b. Existing Speed Limit of 45mph. The advance 55mph work zone speed limit assembly shown in 701400 shall be replaced with a 45mph assembly. Additional work zone 45mph assemblies shall be used as required according to Article 701.14(b) and as shown in the Highway Standards and plans. WORK ZONE SPEED LIMIT 55 PHOTO ENFORCED assemblies shall be eliminated in all cases. END WORK ZONE SPEED LIMIT signs are required.
 - (3) Exit Signs. The exit gore signs as shown in Standard 701411 shall be a minimum size of 48 inch by 48 inch with 12 inch capital letters and a 20 inch arrow. EXIT OPEN AHEAD signs shown in Standard 701411 shall be a minimum size of 48 inch by 48 inch with 8 inch capital letters.
 - (4) Uneven Lanes Signs. The Contractor shall furnish and erect "UNEVEN LANES" signs (W8-11) on both sides of the expressway, at any time when the elevation difference between adjacent lanes open to traffic equals or exceeds one inch. Signs shall be placed 500' in advance of the drop-off, within 500' of every entrance, and a minimum of every mile.
- (c) Drums/Barricades. Check barricades shall be placed in work areas perpendicular to traffic every 1000', one per lane and per shoulder, to prevent motorists from using work areas as a traveled way. Check barricades shall also be placed in advance of each open patch, or excavation, or any other hazard in the work area, the first at the edge of the open traffic lane and the second centered in the closed lane. Check barricades, either Type I or II, or drums shall be equipped with a flashing light.

To provide sufficient lane widths (10' minimum) for traffic and also working room, the Contractor shall furnish and install vertical barricades with steady burn lights, in lieu of Type II or drums, along the cold milling and asphalt paving operations. The vertical barricades shall be placed at the same spacing as the drums.

- (d) Vertical Barricades. Vertical barricades shall not be used in lane closure tapers, lane shifts, exit ramp gores, or staged construction projects lasting more than 12 hours. Also, vertical barricades shall not be used as patch barricades or check barricades. Special attention shall be given, and ballast provided per manufacture's specification, to maintain the vertical barricades in an upright position and in proper alignment.
- (e) Temporary Concrete Barrier Wall. Prismatic barrier wall reflectors shall be installed on both the face of the wall next to traffic, and the top of sections of the temporary concrete barrier wall as shown in Standard 704001. The color of these reflectors shall match the color of the edgelines (yellow on the left and crystal or white on the right). If the base of the temporary concrete barrier wall is 12 inches or less from the travel lane, then the lower slope of the wall shall also have a 6 inch wide temporary pavement marking edgeline (yellow on the left and white on the right).
- (f) Full Expressway Closures. Full Expressway Closures will only be permitted for a maximum of 15 minutes during the allowable hours listed in the Keeping the Expressway Open to Traffic Special Provision. During Full Expressway Closures, the Contractor will be required to close off all lanes except one, using Freeway Standard Closures. The Contractor will be required to provide one changeable message sign to be placed at the direction of the Engineer. The sign shall display a message as directed by the Engineer. A Maintenance of Traffic Plan shall be submitted to the District One Traffic Operations Department Two Weeks in advance of the planned work. The Maintenance of Traffic Plan shall include, but not be limited to: lane and ramp closures, existing geometrics, and equipment and material location. The District One Traffic Operations Department shall be contacted (847-705-4151) at least 3 working days in advance of the proposed road closure and will coordinate the closure operation with police forces.

<u>Method of Measurement</u>. This item of work will be measured on a lump sum basis for furnishing, installing, maintaining, replacing, relocating, and removing traffic control devices required in the plans and these Special Provisions. Traffic control and protection required under Standards 701101, 701400, 701401, 701402, 701406, 701411, 701416, 701426, 701428, 701446, 701901 and District details TC-8, TC-9, TC-17, TC-18 and TC-25 will be included with this item.

Basis of Payment.

(a) This work will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS). This price shall be payment in full for all labor, materials, transportation, handling, and incidental work necessary to furnish, install, maintain, replace, relocate, and remove all Expressway traffic control devices required in the plans and specifications.

In the event the sum total value of all the work items for which traffic control and protection is required is increased or decreased by more than ten percent (10%), the contract bid price for TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS) will be adjusted as follows:

Adjusted contract price = $.25P + .75P [1 \pm (X-0.1)]$

Where: "P" is the bid unit price for Traffic Control and Protection

 Where: "X" =
 Difference between original and final sum total value of all work items for which traffic control and protection is required

 Original sum total value of all work items for which traffic control and protection is required.

The value of the work items used in calculating the increase and decrease will include only items that have been added to or deducted from the contract under Article 104.02 of the Standard Specifications and only items which require use of Traffic Control and Protection.

- (b) The <u>Engineer</u> may require additional traffic control be installed in accordance with standards and/or designs other than those included in the plans. In such cases, the standards and/or designs will be made available to the Contractor at least one week in advance of the change in traffic control. Payment for any additional traffic control required will be in accordance with Article 109.04 of the Standard Specifications.
- (c) Revisions in the phasing of construction or maintenance operations, requested by the <u>Contractor</u>, may require traffic control to be installed in accordance with standards and/or designs other than those included in the plans. Revisions or modifications to the traffic control shown in the contract shall be submitted by the Contractor for approval by the Engineer. No additional payment will be made for a Contractor requested modification.
- (d) Temporary concrete barrier wall will be measured and paid for according to Section 704.
- (e) Impact attenuators, temporary bridge rail, and temporary rumble strips will be paid for separately.
- (f) Temporary pavement markings shown on the Standard will be measured and paid for according to Section 703 and Section 780.
- (g) All pavement marking removal will be measured and paid for according to Section 703 or Section 783.
- (h) Temporary pavement marking on the lower slope of the temporary concrete barrier wall will be measured and paid for as TEMPORARY PAVEMENT MARKING, 6".
- (i) All prismatic barrier wall reflectors will be measured and paid for according to the Recurring Special Provision Guardrail and Barrier Wall Delineation.
- (j) <u>The Changeable Message Sign required for Full Expressway Closures shall not be paid for</u> <u>separately.</u>

GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1)

Effective: June 26, 2006 Revised: January 1, 2013

Add the following to the end of article 1032.05 of the Standard Specifications:

"(c) Ground Tire Rubber (GTR) Modified Asphalt Binder. A quantity of 10.0 to 14.0 percent GTR (Note 1) shall be blended by dry unit weight with a PG 64-28 to make a GTR 70-28 or a PG 58-28 to make a GTR 64-28. The base PG 64-28 and PG 58-28 asphalt binders shall meet the requirements of Article 1032.05(a). Compatible polymers may be added during production. The GTR modified asphalt binder shall meet the requirements of the following table.

Test	Asphalt Grade GTR 70-28	Asphalt Grade GTR 64-28
Flash Point (C.O.C.), AASHTO T 48, °F (°C), min.	450 (232)	450 (232)
Rotational Viscosity, AASHTO T 316 @ 275 °F (135 °C), Poises, Pa·s, max.	30 (3)	30 (3)
Softening Point, AASHTO T 53, °F (°C), min.	135 (57)	130 (54)
Elastic Recovery, ASTM D 6084, Procedure A (sieve waived) @ 77 °F, (25 °C), aged, ss, 100 mm elongation, 5 cm/min., cut immediately, %, min.	65	65

Note 1. GTR shall be produced from processing automobile and/or light truck tires by the ambient grinding method. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois modified AASHTO T 27, *a* 50 g sample of the GTR shall conform to the following gradation requirements:

Sieve Size	Percent Passing	
No. 16 (1.18 mm)	100	
No. 30 (600 μm)	95 ± 5	
No. 50 (300 μm)	> 20	

Add the following to the end of Note 1. of article 1030.03 of the Standard Specifications:

"A dedicated storage tank for the Ground Tire Rubber (GTR) modified asphalt binder shall be provided. This tank must be capable of providing continuous mechanical mixing throughout by continuous agitation and recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of \pm 0.40 percent."

Revise 1030.02(c) of the Standard Specifications to read:

"(c) RAP Materials (Note 3)1031"

Add the following note to 1030.02 of the Standard Specifications:

Note 3. When using reclaimed asphalt pavement and/or reclaimed asphalt shingles, the maximum asphalt binder replacement percentage shall be according to the most recent special provision for recycled materials.

Added 4/15/14