SAVANNAH HILTON HEAD INTERNATIONAL

400 AIRWAYS AVENUE
SAVANNAH, GA 31408

912.964.0514

TO: All Plan Holders
Dodge Data & Analytics
Construction Market Data Group
ISQFT
Savannah Entrepreneurial Center
Construction Journal

FROM: James Aiello
Director of Engineering

DATE: October 30, 2026

SUBJ: SAC 30639
Gulfstream Road and James Blackburn Dr Rehabilitation
Savannah Airport Commission

Attached please find Addendum No. 1 to the contract documents. All bidders shall acknowledge the receipt of Addendum No. 1 in the place provided in the bid proposal.

CM
ENCL: SAC 30639 – Addendum No. 1
CC: Engineering Files

SAVANNAH AIRPORT COMMISSION

SAC 30639
Gulfstream Road and James Blackburn Rehabilitation
Addendum No. 1

The following amendments, additions, deletions shall be made to the contract documents. In so far as these documents are at variance with this Addendum No. 1 dated October 30, 2026, the addendum shall govern:

Changes to Specifications

Changes to Drawings

Revised Bid Form

Questions/Answers

Pre-Bid Conference Agenda, Minutes, and Record of Attendance

Changes to Specifications:

1. The specification for asphalt has been changed to allow for RAP in the asphalt mix. References to GDOT Spec 400 have been replaced with GDOT Spec 402. A revised specification P-099, detail sheets, and bid form have been issued with this addendum reflecting this change. This specification also includes the addition on the grading and compaction of existing base course.

Changes to Drawings:

1. Revised Drawing G-001. Please note clouded changes regarding asphalt pay item and quantity, phasing notes, and general construction notes in reference to submitted questions and stated clarification.
2. Revised Drawing G-004. Please note the revised Contractor's Staging Area location and location and guidance on placement of asphalt millings.
3. Revised Drawing C-201. Please note clouded changes in response to questions and added guidance on the compaction and grading of existing base course on Blackburn Dr.
4. Revised Specification P-099. Please note the change from GDOT Spec 400 to GDOT Spec 402.

Revised Bid Form: This Revised Bid Form must be used and submitted with the bid proposal. This form may not be altered or amended.

Questions 1 & 2 are from Trey Evans from Platinum Paving:

1. Will any of the 4.5" asphalt included in the Full Depth Pavement Reconstruction detail be paid for in the 12.5 mm asphalt item #4, or will all of this asphalt have to be covered in the Full Depth Pavement Reconstruction items?
   Response: For the Gulfstream Road Rehab the top 2" of asphalt shall be included in pay item 402-1 and the remaining asphalt shall be in item 1000-1. For Blackburn Drive all asphalt in the Full Depth Reconstruction shall be in pay item 1000-2. See sheet C-201, details 2 and 4 for additional information.

2. Will all temporary pavement markings on both the milled surface and the final surface be paid for with item #7, Temporary Pavement Markings?
   Response: Yes, and temporary markings shall be paid under pay item 652-1 and will just be the minimum amount of markings so the road can be operating until final markings can be applied. Final thermoplastic markings shall be paid for under 653-1.

Questions 3 through 12 are from Mike Kleuckling from C.W. Matthews:

3. Can you please confirm that All Asphalt Materials are to be Virgin Asphalt and that No RAP Asphalt Mixes will be allowed?
   Response: RAP asphalt mixes will be allowed. The asphalt specification has been changed from GDOT 400 to GDOT 402 and reflected in the revised documents included in Addendum 1.

4. What is the anticipated Notice to Proceed date for the work to begin on this project?
   Response: A notice to proceed is anticipated to be late to mid-January 2027.

5. What will be the widths of the Full Depth Pavement Reconstruction areas? Will it be wide enough for the Contractor to use a Milling Machine for the Removals? Or do you expect these areas to be Saw Cut, Removed with an Excavator and then built back according to the typical section provided?
   Response: On Gulfstream Road the reconstruction limits are expected to be wide enough for a milling machine. On Blackburn Drive the reconstruction limits are defined on the plans.

6. Will you clarify if a Shuttle Buggy will be required for the placement of any of the asphalt on this project?
   Response: The use of a shuttle buggy shall be accounted for in the contractor's bid and be planned to be used during the project.

7. Would you allow the Contractor to use 25.0mm Asphalt in lieu of the Graded Aggr Base layer? This will allow for faster construction especially if the goal is to open the road back up after every shift. Typically, 4.0" of 25.0mm is equal to the 9.0" of Graded Aggr Base. If allowed, please provide a 25.0mm equivalent to 9.0" of Graded Aggr Base.
   Response: A full depth asphalt equivalent section will be considered for use in reconstruction areas. Notes have been added to revised sheet C-201 clarifying this

work.

8. Would you consider adding an Asphalt Patching Alternate, similar to what GDOT would do on roads like this? Typically, we could mill 2.0" first, then patch 6.0" deep with 25.0mm Asphalt, then place back the final 2.0" 12.5mm Final Layer.
   Response: A full depth asphalt repair will be considered for use in reconstruction areas. Notes have been added to revised sheet C-201 clarifying this work.

9. Would you reconsider the Crack Seal bid item? Typically, crack seal when placed on milled surface will peel back up on the tires of the trucks when the paving is installed.
   Response: Crack sealing shall be left in the contractor's bid as specified. Potential removal of this item will be evaluated during construction with the awarded contractor. Areas requiring significant crack sealing will be able to have crack sealing completed in a separate night and the requirement for milling areas to only be exposed for one night will be waived so that the appropriate staff can be mobilized on site. Notes have been added to sheet G-001 clarifying this.

10. If your intent on using Graded Aggr Base for the Full Depth Reconstruction, would you at least eliminate the need for Prime Coat? Keep in mind that prime coat has to cure out for several days before you can pave on it.
    Response: Please see revised details on sheet C-201 for clarification on the pavement reconstruction areas. Prime coat has been removed from the specified paving section.

11. Will the Contractor need to provide any stockpiling support for dumping millings or excavated dirt/GAB/debris at the Airport Dump Sites? If so, please provide clarification for what will be expected.
    Response: The dump site and notes regarding contractor requirements have been added to G-004. A revised drawing has been included in Addendum 1.

12. Can you please provide clarification for the allowable Lane Closure Hours for this project?
    Response: Lane closure hours are defined on G-001.

13. At the Pre-Bid Meeting you mentioned a notice to proceed during the winter months (Dec-Mar), this is not the ideal time for placement of these asphalt mixes, especially if we are paving at night.
    - Will you allow for Daytime Lane Closures so paving can be done during the warmest part of the day?
    - Will you allow more time if weather does not allow for productive paving?

    Response: See notes on sheet G-001 for closure and working hours. Daytime paving is allowed on weekends per General Phasing Note 1. The contract start time may be delayed shall weather conditions do not permit paving to take place per the existing contract schedule.

SAVANNAH AIRPORT COMMISSION

SAC 30639 GULFSTREAM ROAD REHABILITATION
PRE-BID CONFERENCE AGENDA
TUESDAY, OCTOBER 20, 2026 – 10 AM EST

I. INTRODUCTIONS

1. Airport Staff & Project POCs
2. Design Engineer – Mead & Hunt

II. SCOPE OF WORK

Bidders shall carefully examine the Contract documents consisting of the plans and specifications and thoroughly familiarize himself with the detailed requirements prior to submitting a proposal.

All plans and drawings are for reference; verification of existing conditions is the contractor's responsibility. Pre-construction inspections of existing conditions are required, with documentation of surface and sewer conditions.

The project involves rehabilitation of Gulfstream Road and James B Blackburn Drive at Savannah-Hilton Head International Airport. It includes pavement milling, overlay, full-depth reconstruction, and pavement details across multiple sheets.

Work for Gulfstream Road begins off Airways Avenue and ends approximately at the Airport's Taxiway G underpass.
As noted in the plans, a section of Gulfstream Road is not included as part of this project. It has been completed by Chatham County in front of the new EOC building.

James Blackburn Drive is located by the hotels and the golf course. Contractor is responsible for maintaining access to the hotels, The Toasted Yolk, and Crosswinds Golf Course. This road will need base repair and be reconstructed.

The plan features 2-inch milling and overlay with 12.5 mm Superpave asphalt, and full-depth reconstruction where necessary.

All quality control testing is the responsibility of the contractor. All testing data including density reports, asphalt cores, and other requirements per GDOT specifications shall be provided to the Owner for review and approval. Existing pavement sections vary, with removal of asphalt, base, and subgrade in areas requiring extensive repairs.

Pavement removal depths range from 2 inches to 13.5 inches, depending on condition.

Contractors are responsible for verifying limits, grades, and existing conditions, with no additional payment for tie-in work.

Subgrade must be compacted to specified standards, with payment for removal and replacement based on actual quantities.

Markings include double yellow lines, white stop bars, arrows, and pavement messages.

Marking placement follows GDOT standards, with reflective markers installed in conjunction with new markings.

Temporary markings and tapers are required during construction, with specific spacing and orientation.

The contractor must obtain any permits, pay fees, and coordinate with airport authorities.

The project emphasizes restoring disturbed areas and maintaining safety and operational continuity.

A. **Project Schedule**

Notice To Proceed is estimated to be issued in mid to late January.

1. **75 calendar days (total)**
   - Mobilization - 30 Calendar Days
   - Phase 1 - 45 Calendar Days

B. **Control of Work**

Existing storm sewers, electrical manholes, and conduits must be inspected, protected, and documented.
Coordination is necessary for utility work, especially near active facilities like the EOC and air cargo areas.

Work around existing infrastructure must be carefully phased to maintain access and safety. Pavement work includes milling, overlay, crack sealing, tack coats, and pavement markings.

Full-depth reconstruction is planned if required after milling, with specific pay items and scope.

Materials testing and approval are the contractor's responsibility, following GDOT and FAA standards.

1. Maintenance of Work **-** The Contractor is responsible for the site and the work until final acceptance.

2. Utilities
   a. The contractor is responsible for coordination with City Water and Sewer for utility work.
   b. The Contractor is responsible for locating all utilities prior to construction, plan locations are approximate locations only.
   c. The Contractor is responsible for any damage to any utilities.

C. **Control of Materials**
1. Contractor is responsible for the quality and quantity of materials as specified.

III. SAFETY/SECURITY

Safety protocols include fire precautions, debris control, and safety meetings.

The contractor must submit work schedules, material submittals, and safety plans before starting.
Construction activities must not restrict airport operations without approval.
Specific attention is needed for intersections, utility crossings, and phased closures.

A. **Badging – Not Required**

B. **Maintenance of Traffic – Work Hours**

   a. **Contractor is responsible for Maintenance of Traffic.**
   b. **Work hours will be from 8pm to 5am. Weekend work is acceptable and can be completed in the daytime.**

IV. BID PROPOSAL

a. General Requirements: One copy with original signatures and corporate seals
b. Addenda: Must Acknowledge Receipt of all
c. **Deadline for Questions: Tuesday, October 27th, 2026, at 3 PM EST.** All questions must be emailed to cmercado@flysav.com

d. **Deadline for Bids: Tuesday, November 10th, 2026, at 1:30 PM EST.**
   1. Bids must be time and date stamped by the Savannah Airport Commission prior to 1:30pm. Late bids will be considered non-responsive.
   2. Bids must be hand delivered or mailed to:
      Savannah Airport Commission, 400 Airways Ave., Savannah, GA 31408
      Office Hours are from 9AM-5PM EST. Bids must be mailed or hand delivered within SAC Office Hours. SAC is not responsible for issues with deliveries.

e. Must be a plan holder to automatically receive addenda.
f. Out-of-State contractors must have a Georgia State Tax Registration ID#
g. Out of state contractors must be registered with the Secretary of State to do business in the state of Georgia.
h. Include E-Verify form for Prime Contractor
i. Bid Bond is required.
j. Awarding the Contract – After the bid opening, the Apparent Low Bidder will be notified. All bids will be reviewed, and if accepted, then the Apparent Low Bidder will be awarded the contract after approval of the Savannah Airport Commission and the City of Savannah City Council.

V. GENERAL ITEMS

1. Insurance Requirements

1. See Supplementary General Conditions for Insurance details.

2. Federal Requirements

a. **DBE Requirements – DBE Goal is 0%. No documentation is required for DBE.**

b. **Davis-Bacon Act Applies –** Wage Rates are included in the Specifications. Certified Payrolls will be required to be submitted for all laborers working on the project.

3. **Payment and Performance Bonds will be required** – Bonds are included in the bid documents, and the Awarded Contractor will be required to submit them with the Contract documents.

VI. QUESTIONS/ANSWERS

VII. ADJOURN

SAVANNAH AIRPORT COMMISSION
SAVANNAH / HILTON HEAD INTERNATIONAL AIRPORT

RECORD OF MEETING ATTENDANCE

SUBJECT: SAC 30639 Gulfstream Road/James Blackburn Dr Rehabilitation Pre-Bid Meeting **DATE – TIME:** October 20, 2026 – 10 AM EST

NAME & TITLE	ORGANIZATION & ADDRESS	TELEPHONE NUMBER	EMAIL ADDRESS
Jim Aiello, Director of Engineering	SAC, 400 Airways Ave, Savannah, GA 31408		jaiello@flysav.com
Jerry McLean, Senior Engineering Inspector	SAC, 400 Airways Ave, Savannah, GA 31408		jmclean@flysav.com
Crystal Mercado, Senior Engineering Administrator	SAC, 400 Airways Ave, Savannah, GA 31408	Ext. 4478	cmercado@flySAV.com
Heath Maines, Airport Engineer	SAC, 400 Airways Ave, Savannah, GA 31408		hmaines@flysav.com
Dave Schmidgall, P.E.	Mead & Hunt		Dave.schmidgall@meadhunt.com
Jonathan Crouse	Reeves Construction	912 813 4814	jcrouse@reevescc.com
Trey Evans	Platinum Paving & Concrete	912-713-7283	tevans@platinumpavingga.com
Ralph Hamilton	APAC	9123463321	Estimating GASC@APAC Atlantic .com

NAME & TITLE	ORGANIZATION & ADDRESS	TELEPHONE NUMBER	EMAIL ADDRESS
Sean M. Scott	C.W. Matthews	912-682-1535	sscott@cwmatthews.com
Connor Colbert	C.W. Matthews	912-293-4244	ccolbert@cwmatthews.com
Shawn Schroeder	SAC		sschroeder@flySAV.com

Savannah Hilton-Head International Airport
Gulfstream Road and James B Blackburn Drive Rehabilitation
SAC JOB ID 30639
MH #: 3020900.262403.01
REVISED BID SCHEDULE

Item No.	Spec.	Description	Unit of Issue	Quantity	Unit Price	Extended Price
1	C-105-1	MOBILIZATION	LS	1		
2	C-105-2	MAINTENANCE OF TRAFFIC AND TEMPORARY CONSTRUCTION ITEMS	LS	1		
3	411-1	MILL 2" EXISTING ASPHALT PAVEMENT	SY	20,500		
4	**402-1**	ASPHALTIC CONCRETE 12.5MM SUPERPAVE (2" SURFACE COURSE)	TN	**3,000**		
5	407-1	CRACK SEAL REPAIR, TYPE M	LF	10,000		
6	413-1	BITUMINOUS TACK COAT	GAL	1,100		
7	652-1	TEMPORARY PAVEMENT MARKINGS	SF	5,000		
8	653-1	THERMOPLASTIC PERMANENT PAVEMENT MARKINGS	SF	18,000		
9	919-1	REFLECTIVE PAVEMENT MARKERS	EA	583		
10	937-4	REPLACE AND RECONNECT PRESENCE LOOPS IN NEW PAVEMENT	LS	1		
11	P-152-1	UNCLASSIFIED EXCAVATION- REMOVAL AND REPLACEMENT OF EXISTNG SUBGRADE	CY	600		
12	1000-1	FULL DEPTH PAVEMENT RECONSTRUCTION - GULFSTREAM ROAD	SY	1800		
13	1000-2	FULL DEPTH PAVEMENT RECONSTRUCTION - JAMES B BLACKBURN DRIVE	SY	300		
14	**1000-3**	**COMPACT AND GRADE EXISTING AGGREGATE BASE COURSE**	**SY**	**1900**		
					CONSTRUCTION TOTAL BID AMOUNT:	

SAVANNAH AIRPORT COMMISSION

REVISED BID SCHEDULE

In accordance with all bid documents, addenda, plans, and specifications, the undersigned proposes to furnish all services, material labor, tools, equipment, and other means of construction required for the **SAC 30639 Gulfstream Road Rehabilitation.**

TOTAL AMOUNT BID: $_____

TOTAL AMOUNT BID WRITTEN IN WORDS: _____

_____

NAME OF BIDDER: _____

BY: _____

TITLE: _____

BUSINESS: _____

ADDRESS: _____

WITNESS: _____

WITNESS: _____

SECTION P-099– GDOT AND MISCELLANEOUS SPECIFICATIONS

The GDOT and Miscellaneous specifications listed below shall be used for all project area applications. All areas shown in the Savannah-Hilton Gulfstream Road and James B Blackburn Drive Rehabilitation and project staging areas are considered project areas.

1.01 DEFINITIONS

GDOT Standard Specifications shall include applicable referenced sections in the Georgia Department of Transportation, State of Georgia, Standard Specifications Construction of Transportation Systems, FY 2021 Edition. Specification sections not specifically listed below or on the drawings shall not apply.

Whenever the word "Department" or “City” appears within the referenced GDOT Standard Specifications, it shall be understood to mean "Owner- Savannah Airport Commission (SAC) / Savannah-Hilton Head International Airport".

Whenever the words "Chief Engineer," "Engineer," "Inspector," "Superintendent," or "Treasurer" appear within the referenced GDOT Standard Specifications, it shall be understood to mean an "Authorized representative of Mead & Hunt or SAC”.

Whenever the words or “Construction Manager” appear within the referenced GDOT Standard Specifications, it shall be understood to mean “ Owner or Engineer ”

The Contractor shall be responsible for all “Quality Control” required in the specifications.

1.02 REFERENCES

The following GDOT Standard Specifications sections are referenced in the plans. All commands and references in, or in connection with, these Specifications (including all text, related documents, electronic media, graphics, or photographs) are written to imply Contractor responsibility for action unless otherwise specified.

Additional modifications to any GDOT specifications are included herein as Special Provisions.

NOTE:

Disregard any references to the International System of Units (SI or "metric" units)

SPECIFICATION SECTIONS SPECIFICALLY LISTED BELOW OR ON THE DRAWINGS SHALL APPLY:

Section 310- Graded Aggregate Construction

Section 402 – Hot Mix Recycled Asphaltic Concrete

Section 411 – Asphaltic Concrete Pavement, Partial Removal

Section 412 – Bituminous Prime

Section 413 – Bituminous Tack Coat

Section 652 – Painting Traffic Stripe

Section 653 – Thermoplastic Traffic Stripe

Section 919 – Raised Pavement Markers

Section 937 – Detection Systems

GDOT Division 3 Related Materials that Apply to Above Specifications

1.03 METHOD OF MEASUREMENT & BASIS OF PAYMENT

Of the utilized GDOT and Miscellaneous specifications, pay items have been established for specific items as defined in the bid schedule. Measurement of these items and payment for these items shall follow GDOT standard specifications unless noted otherwise. Any items listed above that do not have a direct pay item are considered incidental to the work item they are associated. Payment shall be defined by the below pay item prefixes and as follows:

310 Graded Aggregate Construction – Graded aggregate construction shall not be specifically measured and paid for separately. It shall be included in the square yard cost of full depth pavement reconstruction as defined in item 1000 Full Depth Pavement Reconstruction.

402 Hot Mix Recycled Asphaltic Concrete – The quantity of asphalt constructed as shown by the limits of the plans shall be the actual number of tons of asphalt constructed. Payment shall be made at the contract unit price per ton of asphalt constructed. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

411 Asphaltic Concrete Pavement, Partial Removal – The quantity of asphalt to be removed as shown by the limits of the plans shall be the actual number of square yards of asphalt to be milled and removed. Payment shall be made at the contract unit price per square yard. This price shall be full compensation for furnishing all materials for labor, equipment, tools, disposal of materials, and incidentals necessary to complete the item.

412 Bituminous Prime – Bituminous prime shall not be specifically measured and paid for separately. It shall be included in the square yard cost of full depth pavement reconstruction as defined in item 1000 Full Depth Pavement Reconstruction.

413 Bituminous Tack Coat – The quantity of tack coat constructed as shown by the limits of the plans shall be the actual number of gallons of tack coat constructed. Payment shall be made at the contract unit price per gallon of tack coat constructed. This price shall be full compensation for furnishing all materials for all labor, equipment, tools, and incidentals necessary to complete the item.

652 Painting Traffic Stripe – The quantity of markings applied as shown by the limits of the plans shall be the actual number square footage of markings specially constructed. Payment shall be made at the contract unit price per square foot of markings constructed. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

653 Thermoplastic Traffic Stripe - The quantity of thermoplastic markings applied as shown by the limits of the plans shall be the actual number square footage of markings specially constructed. Payment shall be made at the contract unit price per square foot of markings constructed. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

919 Raised Pavement Markers - The quantity of raised pavement markers applied as shown by the limits of the plans shall be the actual number of raised pavement markers specially constructed. Payment shall be made at the contract unit price per each raised pavement marker constructed. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

937 Detection Systems – The replacement of existing detection loops includes the removal of existing detection loops. It also includes the installation of new detection loops and connections to existing conduits. Payment shall be per lump sum. The price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the included items.

1000- 1 1000-2 Full Depth Pavement Reconstruction – Full depth pavement reconstruction includes the removal of existing pavement (pavement remaining after the 2” mill) and existing base course. It also includes the construction of 9” of graded aggregate construction and 2” of Hot Mix Asphalt Construction and the application of Bituminous Prime as defined above and on the project drawings, The price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the included items. This item will only be used after approval from the owner or engineer and will be paid for by the actual SY of work completed.

1000-3 Grading and Compaction of Existing Base Course– Grading and compaction of the existing bae our includes the compaction of grading of exposed base course after milling is completed on the mill and replace section of Blackburn Drive. Should milling remove all existing asphalt and base course material is exposed, the contractor shall be responsible for grading and compacting the exposed base course material to GDOT roadway compaction requirements. The price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the included items. This item will only be used after approval from the owner or engineer and will be paid for by the actual SY of work completed.

END OF SECTION P-099

Section 402—Hot Mix Recycled Asphaltic Concrete

402.1 General Description

This work includes producing and placing hot mix recycled asphaltic concrete that incorporates reclaimed asphalt pavement (RAP), reclaimed asphalt shingles (RAS), virgin aggregate, hydrated lime, and neat asphalt cement.

402.1.01 Definitions

General Provisions 101 through 150.

402.1.02 Related References

A. Standard Specifications

Section 400—Hot Mix Asphaltic Concrete Construction

Section 800—Coarse Aggregate

Section 828—Hot Mix Asphaltic Concrete Mixtures

B. Referenced Documents

SOP 41 *Guidelines for RAP Stockpile Approval*

402.1.03 Submittals

A. Certified Weight Tickets

Notify the Engineer before removing RAP from a stockpile that belongs to the Department. Submit to the Engineer the certified weight tickets of materials removed from the stockpile.

B. Affidavit

Submit to the laboratory an affidavit stating the sources of stockpiled materials to be used on a State project. Include the following information in the letter:

- State project number
- Location from which the material was removed
- Approximate removal dates
- Mix types removed and the estimated quantity of each type in the stockpiles
- Other available information about the stockpiled material such as percentage of local sand in the RAP

Obtain specific approval from the laboratory to use RAP or RAS stockpiles.

Adhere to Guidelines for RAP Stockpile Approval.

402.2 Materials

A. RAP Material Composition

Use RAP materials from any of the following:

- Existing roadway
- Contractor's RAP stockpile that has been approved by the Department
- Department stockpile

NOTE: The location of Department RAP material stockpiles will be given on the plans.

Do not use RAP materials that contain alluvial gravel or local sand in any mixture placed on interstate projects except for mixtures used in shoulder construction. When used in shoulder construction, limit RAP containing local sand or alluvial gravel so that the sand or gravel contributes no more than 20 percent of the total aggregate portion of the mix.

1. RAP Percentage

   For non-interstate projects, limit the percentage of RAP allowed in recycled mixes so that the overall amount of alluvial gravel does not exceed 5 percent of the total mix. The percentage of alluvial gravel, local sand, and Group I material in the RAP will be determined through petrographic analysis or available records.

2. RAP furnished to the Contractor but not used in the work remains the Contractor's property.

   RAP used in the recycled mixtures for mainline or ramps (if applicable) may make up from 0 to 40 percent of the mixture depending on the amount of RAP available, the production facilities, and whether the mixture meets the requirements in Section 828.

   The maximum ratio of RAP material to the recycled mixtures other than SMA is 40 percent for continuous mix type plants and 25 percent for batch type plants. The maximum ratio of RAP material to the recycled mixture is 15 percent for Stone Matrix Asphalt (SMA) mixes.

3. Process RAP Material

   Process RAP material to be used in the recycled mixture so that 100 percent will pass the 2 in. (50 mm) sieve. Additional crushing and sizing may be required if the RAP aggregate exceeds the maximum sieve size for the mix type as shown in Section 828. Obtain representative materials from the RAP stockpile for the mix design.

B. RAS Material

RAS materials are produced as a by-product of manufacturing roofing shingles and/or discarded shingle scrap from the reroofing of buildings.

1. Limit the amount of RAS material used in the recycled mixture to no greater than 5 percent of the total mixture weight.
2. Shred the RAS material before incorporating it into the mix to ensure that 100 percent of the shredded pieces are less than 1/2 in. (12.5 mm) in any dimension.
3. Remove all foreign materials such as paper, roofing nails, wood, or metal flashing.
4. Provide test results for Bulk Sample Analysis, known as Polarized Light Microscopy, if post-consumer shingles are used to certify the RAS material is free of asbestos. Test stockpiles at the rate of one test per 1000 tons (megagrams) prior to processing.

Other than as specifically stated in this Subsection, ensure that RAS material is used according to the same requirements as described for RAP material.

C. Asphaltic Concrete Removed from an Existing Roadway

Asphaltic concrete removed from an existing roadway becomes the Contractor's property unless specified otherwise on the plans. RAP material retained by the Department is designated on the plans, and the RAP shall be stockpiled at the location specified on the plans.

D. Local Sand and Group I Material in RAP

Use of local sand in recycled mixes is restricted as stipulated in Section 828 for the Project. However, RAP which contains local sand may be used in surface and intermediate layers of non-interstate projects so long as the RAP percentage used does not contribute more than 5% local sand to the total aggregate portion of the mix. The amount of local sand in the RAP material shall be considered when determining the percentage of local sand in the total mix.

Where Pay Items specify that Group II only aggregate is to be used, RAP which consists primarily of Group II aggregate, but contains some Group I aggregate, shall be limited such that the Group I aggregate makes up no more than 5 percent of the total aggregate portion of the mix. When a Blend I mix is specified, any Group I materials in the RAP will be considered when determining the Group I portion allowed in the total mix as specified in Subsection 828.2.A.2.

E. Asphalt Cement

Using laboratory evaluations, the Department will determine the asphalt cement grade to be used in the recycled mixture. The asphalt cement shall meet the requirements of Section 820.

When the asphalt cement is blended with asphalt cement recovered from the RAP material and after tests on residue from thin film oven tests, the asphalt cement shall have a viscosity of 6,000 to 16,000 poises (600 to 1600 Pa) or as approved by the Engineer. Recover asphalt cement from the recycled mixture to verify that the specified viscosity is being met.

If the Engineer determines during construction that the selected asphalt cement grade is not performing satisfactorily, the Department may change the asphalt cement grade in the mixture, with no change in the Contract Unit Price.

F. Recycled Mixture

The recycled mixture shall be a homogenous mixture of RAP or RAS material, virgin aggregate, hydrated lime, and neat asphalt cement. Ensure that the mixture conforms to an approved mixture design outlined in Section 828.

402.2.01 Delivery, Storage, and Handling

Separate the stockpiles by Project sources and by Group I and Group II aggregate types. Erect a sign on each stockpile to identify the source(s).

If RAP material from different project sources becomes intermixed in a stockpile, only use those materials when approved by the laboratory.

The Department may reject by visual inspection stockpiles that are not clean and free of foreign materials.

402.3 Construction Requirements

402.3.01 Personnel

General Provisions 101 through 150.

402.3.02 Equipment

A. Hot Mix Plant

Use a hot mix plant for the recycling process with necessary modifications approved by the Engineer to process recycled material. Design, equip, and operate the plant so that the proportioning, heating, and mixing yields a uniform final mixture within the job mix formula tolerances.

B. Cold Feed Bin

Proportion the RAP or RAS material using a separate cold feed bin. Ensure that the material meets the size requirements in Subsection 402.2, *Materials*. The ratio of the RAP or RAS to virgin aggregate shall be controlled gravimetrically.

C. Electronic Belt Weighing Devices

Use electronic belt weighing devices to monitor the flow of RAP or RAS and the flow of virgin aggregate. For batch-type plants, the RAP or RAS portion of the mix may be weighed in a weigh hopper before incorporating it into the pugmill. The RAP shall be screened through a 2-inch maximum sized screen prior to crossing the cold feed weigh. Ensure the amount of RAP material incorporated into the asphalt plant does not change after this final measurement is processed by the asphalt plant computer.

D. Feeders and Conveyors

Equip plants with an interlocking system of feeders and conveyors that synchronize the RAP or RAS material flow with the virgin aggregate flow. Ensure that the electronic controls track the flow rates indicated by the belt weighing devices and develop the signal to automatically maintain the desired ratio at varying production rates. Design the RAP or RAS feeder bins, conveyor system, and auxiliary bins (if used) to prevent RAP material from segregating and sticking.

402.3.03 Preparation

General Provisions 101 through 150.

402.3.04 Fabrication

General Provisions 101 through 150.

402.3.05 Construction

Follow the requirements in Section 400 for hot mix recycled asphaltic concrete production and placement, materials, equipment, and acceptance plans except as noted or modified in this specification.

402.3.06 Quality Acceptance

The Department may require additional quality control tests to determine the RAP stockpile consistency and the RAP aggregate quality. In this case, conduct at least three extraction/gradation tests from each individual source. Ensure that aggregate meets the quality standards in Section 800.

402.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

402.4 Measurement

Recycled asphaltic concrete mixture, complete in place and accepted, is measured in tons (megagrams). The weight is determined by recorded weights if an approved recording device is used. Or, the weight is determined by weighing each loaded vehicle on an approved motor truck scale as the material is hauled to the roadway.

402.4.01 Limits

General Provisions 101 through 150.

402.5 Payment

The work performed and the materials furnished as described in this specification will be paid for at the Contract Unit Price per ton (megagram). Payment is full compensation for providing materials, hauling and necessary crushing, processing, placing, rolling and finishing the recycled mixture, and providing labor, tools, equipment, and incidentals necessary to complete the work, including hauling and stockpiling RAP or RAS material.

Payment will be made under:

Item No. 402	Recycled asphaltic concrete ___ mm Superpave, group-blend, including bituminous materials	Per ton (megagram)
Item No. 402	Recycled asphaltic concrete ___ mm Superpave, group-blend, including bituminous materials and hydrated lime	Per ton (megagram)
Item No. 402	Recycled asphaltic concrete ___ mm Superpave, group-blend, including polymer-modified bituminous materials and hydrated lime	Per ton (megagram)
Item No. 402	Recycled asphaltic concrete ___ mm Superpave, Type__, group-blend, including bituminous materials and hydrated lime	Per ton (megagram)
Item No. 402	Recycled asphaltic concrete _____mm mix, group-blend, including bituminous materials and hydrated lime	Per ton (megagram)
Item No. 402	_____in. (mm) recycled asphaltic concrete type Superpave, group-blend, including bituminous materials	Per square yard (meter)
Item No. 402	_____in. (mm) recycled asphaltic concrete type Superpave, group-blend, including bituminous materials and hydrated lime	Per square yard (meter)
Item No. 402	_____in. (mm) recycled asphaltic concrete type Superpave, group-blend, including polymer-modified bituminous materials and hydrated lime	Per square yard (meter)
Item No. 402	_____in. (mm) recycled asphaltic concrete _____ mm mix, group-blend, including bituminous materials and hydrated lime	Per square yard (meter)
Item No. 402	Recycled asphaltic concrete patching including bituminous materials	Per ton (megagram)
Item No. 402	Recycled asphaltic concrete patching including bituminous materials and hydrated lime	Per ton (megagram)
Item No. 402	Recycled asphaltic concrete leveling including bituminous materials	Per ton (megagram)
Item No. 402	Recycled asphaltic concrete leveling including bituminous materials and hydrated lime	Per ton (megagram)
Item No. 402	Recycled asphaltic concrete type Stone Matrix Asphalt, group-blend, including polymer-modified bituminous materials and hydrated lime	Per ton (megagram)

A. Materials Produced and Placed During the Adjustment Period

An adjustment period is allowed at the start of mixing operations for each type of mix placed on the Contract. A new adjustment period shall not be granted for a change of producer, mix design or asphalt plant location. The adjustment period is provided to adjust or correct the mix and to establish the construction procedures and sequence of operations.

The adjustment period consists of the tons (megagrams) of the affected mix produced and placed on the first day of operation. If this quantity is less than 500 tons (500 Mg), the Engineer may combine the tons (megagrams) produced and placed on the first day of operation with the tons (megagrams) produced and placed on the next production day of the affected mix for the adjustment period.

The material produced and placed during the mixture adjustment period is one lot. If the mix is adjusted during this period, a new lot may be necessary, but a new adjustment period will not be permitted.

This material shall be paid for at 100 percent of the Contract Unit Price provided it meets the minimum requirements for a 1.00 pay factor for asphalt cement content and a 0.90 pay factor for gradation in the Mixture Acceptance Schedule—Table 9 or 10.

If the material placed during the adjustment period fails to meet the above requirements, it will be paid for using the applicable acceptance schedule. However, when mixture used for leveling at a spread rate of 90 lbs./yd^2 (50 kg/m^2) or less is also used for the surface mix at a spread rate greater than 90 lbs./yd^2 (50 kg/m^2), an additional adjustment period will be allowed for compaction only. This material will be paid for at a 1.00 pay factor provided it:

- Meets the minimum requirements for a 1.00 pay factor in the Mixture Acceptance Schedule—Table 9 or 10 for both asphalt content and gradation.
- Meets the minimum requirements for a 0.90 pay factor in Table 12 of Subsection 400.5.01C, *Calculate Mean Pavement Air Voids*.

Mixture which does not meet these requirements shall be paid for using the applicable acceptance schedule.

B. Determine Lot Acceptance

Pay factor adjustments are based on control sieves and asphalt cement content. The control sieves used in the mixture acceptance schedule for the various types of mix are indicated below:

Control Sieves Used in the Mixture Acceptance Schedule	
Asphaltic concrete 25 mm Superpave	1/2 in., No. 8 (12.5 mm, 2.36 mm) sieves and asphalt cement
Asphaltic concrete 19 mm SMA	1/2 in., No. 8 (12.5 mm, 2.36 mm) sieves and asphalt cement
Asphaltic concrete 19 mm Superpave	3/8 in., No. 8 (9.5 mm, 2.36 mm) sieves and asphalt cement
Asphaltic concrete 12.5 mm Superpave	3/8 in., No. 8 (9.5 mm, 2.36 mm) sieves and asphalt cement
Asphaltic concrete 12.5 mm SMA	3/8 in., No. 8 (9.5 mm, 2.36 mm) sieves and asphalt cement
Asphaltic concrete 9.5 mm Superpave	No. 4, No. 8 (4.75 mm, 2.36 mm) sieves and asphalt cement
Asphaltic concrete 9.5 mm SMA	No. 4, No. 8 (4.75 mm, 2.36 mm) sieves and asphalt cement
Asphaltic concrete 4.75 mm Mix	No. 8 (2.36 mm) sieve and asphalt cement

The Department will perform the following tasks:

1. Using the Mixture Acceptance Schedule—Table 9 or 10, of Subsection 400.3.06 to determine the mean of the deviations from the job mix formula per test results per lot.
2. Determine this mean by averaging the actual numeric value of the individual deviations from the job mix formula; disregard whether the deviations are positive or negative amounts.
3. Use the Asphalt Cement Content and Aggregate Gradation of Asphalt Concrete Mixture Acceptance Schedule—Table 9 or 10 of Subsection 400.3.06 to determine acceptance of surface mixes and the Mixture Acceptance Schedule—Table 10 of Subsection 400.3.06 to determine acceptance of subsurface mixes.

On Contracts involving 1,000 tons (1000 Mg) or less of asphaltic concrete, the mixture is accepted for 100 percent payment of the asphaltic concrete Unit Price provided it meets the following:

4. Minimum requirements for a 1.00 pay factor for asphalt cement content and a 0.90 pay factor for gradation in the applicable Mixture Acceptance Schedule—Table 9 or 10 of Subsection 400.3.06.

5. Minimum requirements for a 0.90 pay factor in Table 12 of Subsection 402.5.01.C, *Calculate Pavement Mean Air Voids*.

If the material placed on Contracts involving 1,000 tons (1000 Mg) or less of asphaltic concrete does not meet the above requirements, the material will be paid for using the applicable acceptance schedule.

C. Calculate Pavement Mean Air Voids

The Department will determine the percent of maximum air voids for each lot by dividing the pavement mean air voids by the maximum pavement mean air voids acceptable.

The Department will determine the payment for each lot by multiplying the Contract Unit Price by the adjusted pay factor shown in the following Air Voids Acceptance schedule:

TABLE 12 - AIR VOIDS ACCEPTANCE SCHEDULE

Pay Factor	Percent of Maximum Air Voids (Lot Average of Tests)	Percent of Maximum Air Voids (Lot Average all Tests) (for Reevaluations)
1.00	≤100	≤100
0.97	100.1 — 105	100.1 — 104
0.95	105.1 — 112	104.1— 109
0.90	112.1 — 124	109.1 — 118
0.80	124.1 — 149	118.1 — 136
0.70	149.1 —172	136.1 — 153
0.50	172.1 — 191	153.1 — 166

When the range tolerance is exceeded, the Department will apply a pay factor of 0.95 as described in Subsection 400.3.06.B.2.

D. Asphaltic Concrete for Temporary Detours

Hot mix asphaltic concrete placed on temporary detours that will not remain in place as part of the permanent pavement does not require hydrated lime. Hot mix used for this purpose is paid for at an adjusted Contract Price. The payment for this item shall cover all cost of construction, maintenance and removal of all temporary mix. Hot mix asphaltic concrete placed as temporary mix shall meet requirements established in Subsection 400.3.05.F.

Where the Contract Price of the asphaltic concrete for permanent pavement is let by the ton (megagram), the Contract Price for the asphaltic concrete placed on temporary detours is adjusted by subtracting $0.75/ton ($0.85/mg) of mix used.

Where the Contract price of the mix in the permanent pavement is based on the square yard (meter), obtain the adjusted price for the same mix used on the temporary detour by subtracting $0.04/yd² ($0.05/ m²) per 1- in. (25-mm) plan depth.

Further price adjustments required in Subsection 400.3.06, *Quality Acceptance*, which are based on the appropriate adjusted Contract Price for mix used in the temporary detour work shall apply should temporary mix be left in place. Hot mix asphalt produced as temporary mix containing no hydrated lime shall be removed and replaced with permanent mix containing hydrated lime.

E. Determine Lot Payment

Determine the lot payment as follows:

1. When one of the pay factors for a specific acceptance lot is less than 1.0, determine the payment for the lot by multiplying the Contract Unit Price by the adjusted pay factor.

2. When two or more pay factors for a specific acceptance lot are less than 1.0, determine the adjusted payment by multiplying the Contract Unit Price by the lowest pay factor.

If the mean of the deviations from the job mix formula of the tests for a sieve or asphalt cement content exceeds the tolerances established in the Mixture Acceptance Schedule—Table 9 or 10 and if the Engineer determines that the material need not be removed and replaced, the lot may be accepted at an adjusted unit price as determined by the Engineer. If the pavement mean air voids exceed the tolerances established in the Air Voids Acceptance Schedule – Table 12, remove and replace the materials at the Contractor's expense.

If the Engineer determines that the material is not acceptable to leave in place, remove and replace the materials at the Contractor's expense.