ADDENDUM NO. 2
Airfield Pavement and Marking Maintenance, Phase 3
State of Tennessee Airports
TAD # 99-555-1303-19
AERO-22-999-00

The following additional project information and clarifications are hereby incorporated into the bidding requirements for the referenced project:

1. Revised Project Manual Sections:

    a. Item P-605, page 2 of 4
    b. Item P-620, page 5 of 6

2. Revised Drawing Sheets

    a. C3.02

3. Additional Items

    a. The Excel spreadsheet "Subcontractor TDOT Aeronautics Form" is attached.

4. Questions

    Q: Is it required per section 608-3.2 of the spec: *A qualified manufacturer's representative shall be present in the field to assist the Contractor in applying control areas and/or control strips to determine the appropriate application rate of both emulsion and aggregate to be approved by the RPR.*

    A: Yes

    Q: Line items 620-4.1d and 620-5.4d states the Temporary markings are not required and Items P-620-5.1 & P-620-5.2 are temporary markings. What are the requirements for temporary markings?

    A: Temporary markings are required. We will issue a corrected spec in the next addendum.

    Q: What is the availability of water for this project?

    A: Unknown

Q: What are the surveyor requirements for this project?

A: A set of redlines should be kept with a record of any changes in the field. Your team will be responsible for any layout of the markings. If needed, they will also be responsible for establishing control, etc.

Q: Does the final friction testing and application of the final pavement markings count toward the total project phase duration?

A: Yes, the testing and final pavement markings will be included in the duration. Upon request, the time may temporarily stop between temporary markings & final markings, if the airport has use of the area of concern.

Q: What is the timeline that the final permanent paint can be applied after the seal coat application? Is up to 60 days after the initial curing period acceptable?

A: 30 Days minimum is required for the sealcoat to cure.

Q: In the plans for FGU, the P-605-5.1 it is listed in SY in the specs the P-605-5.1 is measured in LF.

A: The Joint Sealing Filler will be measured by Linear Feet (LF).

Q: For the concrete joint filler can we use D6690 for the material application? It states that sandblasting is not allowed so silicone will not stick to concrete. Will D6690 material be approved for the concrete joint filler?

A: Sandblasting will be permitted, if required. ASTM D5893, Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements is required.

Q: The requested CQCP organization requires a high-level professional engineer program administrator and professional level quality control technicians that normally may be assigned to a large general construction, paving, earth work or other civil engineering project. Is this your intent to have this high level of professional inspectors assigned to this project or are you looking for a good system to provide the best quality controls possible?

A: The intent is to provide a good system to provide the best quality controls possible.

Q: 100-6 through 100-8 do not seem to have relevance to this scope of work as the specifically discuss production and testing facilities. Is this the intent to have material tested at the manufacturer or laboratory?

A: No, those sections pertain to paving type projects.

Q: In a few words, can you explain what was the intent of C-100, and explain the approved QC programs used in the prior Tennessee DOT Statewide, Airfield Pavement and Markings Maintenance Phases 1 and 2 contracts (# 99-555-1303-19 and #99-555-1318-21)?

A: It is strongly encouraged that a Contractor Quality Control Program (CQCP) be developed for all projects. The intent of the CQCP is to ensure that quality of materials and production is monitored to be within acceptance limits and that as soon as materials or production processes vary beyond pre-established limits that the Contractor implements corrective action plans. Rather than waiting to develop the corrective action plan after the problem is identified it is preferable to implement a preapproved plan. In addition, the purpose of the CQCP is to ensure that Contractor Quality Control (CQC) personnel are coordinating with owners Quality Assurance (QA) personnel throughout the project, not just when disputes arise. QA is the Owner's responsibility to assure payment is only for acceptable work.

Q: For C-100, would it be acceptable to provide the following:

- Manufacturer specifications and batch numbers for paint and sealer
- Maintain paint application records and mill thickness test for all airports
- Maintain all approved application records for all P-608.
- Deliver all friction test reports as required
- Provide visual inspection for sig off by the RPR for P-608 application rates
- Provide retroreflectometer readings the meet or exceed the FAA P-620 specifications
- Provide Redline drawings of all airfields

A: Yes, those will be accepted. In addition, a corrective action plan should be provided to provide direction when a quality problem develops.

Q: Were all quantities field verified?

A: On-site inspections were done to estimate quantities.

Q: If the contractor finds discrepancies in the field as it relates to markings that do not match

the plans, will there be additional payment made for the survey and layout?

A: The location of the markings are approximate and not survey verified. The proposed markings are laid out in accordance with FAA specifications. Should existing conditions not match what is shown on the plans, then the Contractor shall be prepared to coordinate with the Engineer and RPR for the final layout of the markings prior to application. No additional payment will be made for such coordination. In the event of any major discrepancies and/or errors found in the drawings, or if problems are encountered during construction, the Contractor shall be required to notify the Engineer in writing before proceeding with the work.

Q: Who will be responsible for determining the runway centerline if the PK Nails are not clearly established on both ends?

A: In the event there are no PK nails, the Contractor shall be prepared to coordinate with the Engineer. It is not expected for the Contractor to set new PK nails to establish the existing centerline. No additional payment will be made for such coordination.

Q: Since there are no control points provided in the plans, does the contractor have any liability if the PK Nails are in the wrong location?

A: No. In the event the PK nails are noticeably incorrect, the Contractor shall be prepared to coordinate with the Engineer. It is not expected for the Contractor to correct the PK nails to establish the existing centerline. No additional payment will be made for such coordination.

Q: Will the concrete apron areas be seal coated over as directed in the plans?

A: No, the concrete aprons are to have the joints and cracks sealed.

Q: Will there be any crack sealing/joint sealing required on the joint where the apron meets the hangar?

A: No, the joint adjacent to the hangars were not included in the measurements.

Q: Who will be responsible for any apron markings that are not shown in the plans? Will these be required to be removed before seal coat application? And if so, is the contractor responsible for putting them back?

A: In the event there are additional markings not shown on the plans, the Contractor shall be prepared to coordinate with the Engineer. It will be determined if the markings need to be removed and/or replaced. The Contractor will be paid unit prices for such work.

Q: If any of the quantities change by more than 25% on a specific airport site, will the contractor be allowed to requote it?

A: Refer to General Provision paragraphs 40-02 & 90-03.

Q: Is a major contract item calculated per airport or just based on the total quantities across all airports in the contract?

A: Total quantities.

Q: Will the contractor be required to remove markings that are showing through a previously seal coated area?

A: This will be decided on a case by case basis. The Contractor will be paid unit prices for such work.

Q: Will the engineer or inspector be marking out the cracks prior to the contractor starting the crack repair work? How will they distinguish between Type 1 and Type 2?

A: The area should walked and examined by the Contractor and Inspector to determine the cracks to be sealed prior to starting. Type 1 & Type 2 will be distinguished by width. Please refer to detail 1/C0.04A on the plans.

Q: Would it be possible to provide an optimized fillable PDF version of the quantities pages to be filled out with the bid (PDF pages 19-24)?

A: Please use the form provided.

Q: Have the airport managers been notified about the phasing plans?

A: Coordination with the Airport Managers will be expected by the Contractor based on the scheduled work dates.

Q: Will an RPR be required to be always onsite during construction.

A: Coordination with the RPR for scheduled working times & days is required.

Q: What are the requirements for the RPR qualifications?

A: The RPR is the Owner's representative and will be assigned as such.

Q: Can the Engineer/RPR reduce the quantities of a single pay item by more than 25% without the contractor being allowed to adjust pricing

A: Refer to General Provision paragraphs 40-02 & 90-03.

Q: What is the Engineer's Estimate for this project?

A: An estimate is not available currently.

Please see Verification of Receipt form, next page.

END OF ADDENDUM NO. 2

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. *The Contractor must demonstrate sandblasting equipment including the air compressor, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the Resident Project Representative (RPR), that the method cleans the joint and does not damage the joint.*

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

g. Cold-applied, single-component sealing equipment. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment**,** concrete saw, or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

620-5.4d *Payment for temporary markings shall be made at the contract price for by the number of square feet of painting.*

Payment will be made under:

Item P-620-5.1	Temporary White Paint - per square foot
Item P-620-5.2	Temporary Yellow Paint - per square foot
Item P-620-5.3	White Paint with Reflective Media - per square foot
Item P-620-5.4	Yellow Paint with Reflective Media - per square foot
Item P-620-5.5	Black Paint - per square foot
Item P-620-5.6	Red Paint with Reflective Media - per square foot

REFERENCES

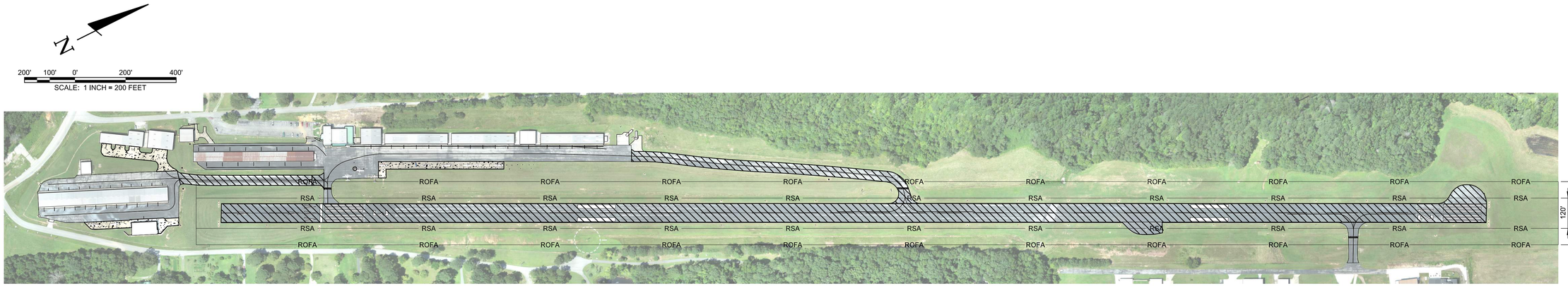
The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D1652	Standard Test Method for Epoxy Content of Epoxy Resins
ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness
ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments
ASTM E303	Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester
ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

Code of Federal Regulations (CFR)

40 CFR Part 60, Appendix A-7, Method 24	Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings
29 CFR Part 1910.1200	Hazard Communication



PROJECT PHASING: 15 CALENDAR DAYS

PHASE 1: RUNWAY WORK (MARKING REMOVAL, SEAL COAT, REMARKING ONLY)
(7 CALENDAR DAYS OF RUNWAY CLOSURE)
PHASE 2: SOUTHERN TAXIWAY & T-HANGAR APRON WORK (3 DAYS)
(MARKING REMOVAL, CRACK REPAIR, SEAL COAT, REMARKING,
& CONCRETE JOINT REPAIR)
PHASE 3: NORTHERN TAXIWAY (3 DAYS)
(MARKING REMOVAL, CRACK REPAIR, SEAL COAT, REMARKING)
PHASE X: MAIN APRON CONCRETE SECTION (2 DAYS)
(CONCRETE JOINT REPAIR) (CAN BE COMPLETED WITH ANY PHASE)

LEGEND

—ROFA— RUNWAY OBJECT FREE AREA
— RSA — RUNWAY SAFETY AREA
CONCRETE JOINT REPAIR
CRACK REPAIR, REMARKING, SEAL COAT

SCHEDULE OF QUANTITIES

ITEM	BASE BID	QUANTITY	UNIT
C-100	CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)	1	LS
C-105	MOBILIZATION	1	LS
P-101-5.1	CRACK REPAIR (TYPE I)	21,800	LF
P-101-5.2	CRACK REPAIR (TYPE II)	21,250	LF
P-101-5.3	AIRFIELD PAVEMENT MARKING REMOVAL	58,200	SF
P-101-5.4	CRACK REPAIR (TYPE III)	375	LF
P-605-5.1	JOINT SEALING FILLER	2,300	LF
P-608-8.1	EMULSIFIED ASPHALT SEAL COAT	51,420	SY
P-620-5.1	TEMPORARY WHITE PAINT	26,630	SF
P-620-5.2	TEMPORARY YELLOW PAINT	1,455	SF
P-620-5.3	WHITE PAINT WITH REFLECTIVE MEDIA	26,630	SF
P-620-5.4	YELLOW PAINT WITH REFLECTIVE MEDIA	1,455	SF

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BARGE DESIGN SOLUTIONS
615 3rd Avenue South // Suite 700 // Nashville, Tennessee 37210
PHONE (615) 254-1500 // FAX (615) 255-6572

PRELIMINARY
NOT FOR
CONSTRUCTION

OVERALL SITE LAYOUT PLAN

AIRFIELD PAVEMENT AND MARKING MAINTENANCE, PHASE 3
COLLEGEDALE MUNICIPAL AIRPORT, FGU
COLLEGEDALE, TENNESSEE

REVISION INFORMATION			
REV.	DR.	CHK.	DATE	DESCRIPTION
JRM	JAC	JDG	02-11-2022	ISSUED FOR BID
1	JAC	JDG	03-10-2022	ADDENDUM No. 2

C3.02

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VERIFICATION OF RECEIPT

Receipt of Addendum No. 2 for the referenced project shall be acknowledged by signing below and immediately returning this verification of receipt via email to jeff.redmill@bargedesign.com. A copy of this addendum **must** also be submitted with the bid proposal.

COMPANY: _____

NAME: _____

TITLE: _____

DATE: _____