

ATTACHMENT B
BASIC SERVICES TO BE PROVIDED BY THE ENGINEER
TxDOT CSJ NO.

Engineer shall provide the Sponsor professional engineering services in all phases of the Project to which this Agreement applies as hereinafter provided. These services will include serving as the Sponsor's professional engineering representative for the project and providing professional engineering consultation and advice incidental thereto.

A. Construction Phase

After written authorization to proceed with the Construction Phase, Engineer shall:

1. Conduct a preconstruction conference with representatives of the Agent, the Sponsor, the contractor(s) and other interested parties. The Engineer shall prepare and distribute a record of the preconstruction conference to the attendees within five (5) calendar days. For projects involving the placement of HMAC and/or concrete, the engineer shall furnish the contractor an agenda or checklist of items which will be addressed during the pre paving conference.

2. Provide Resident Project Representative electronic and hardcopies of Construction Management Plan, Approved Submittals and other documents necessary for construction observation.

3. Conduct a meeting with airport users, and the contractor to explain the construction project, delineate lines of authority, and review the construction Phasing and Safety Plan.

4. Perform the necessary field surveys for establishing horizontal and vertical controls for the use of the contractor(s) during the performance of the construction. Perform the necessary field surveys to verify design elevations of top of base, flowlines, and PAPI foundations.

5. Attend and conduct on-site construction progress meetings at minimum of one (1) per month. Prepare and distribute a record of the meetings to the attendees within five (5) calendar days.

6. Conduct and schedule construction progress meetings on a weekly schedule. Frequency can be changed at the Agent's discretion. Prepare and distribute a record of the meetings to the attendees within five (5) calendar days.

7. If applicable, coordinate and schedule flight checks with FAA and include any required documents.

8. Make visits to the site at a minimum of 30 day intervals appropriate to the various stages of construction as necessary in order to observe as an experienced and qualified design professional the progress and quality of the various aspects of the Contractor(s) work. Based on information obtained during such visits and on such observations, Engineer shall determine if such

work is proceeding in accordance with the contract documents, plans, technical specifications, approved submittals, Advisory Circulars and compliance with local, state and International Building Codes. The Engineer shall notify the Agent and contractor(s) of any patent defects or deficiencies in the work performed by the contractor(s) upon discovery. **Within three (3) calendar days the Engineer shall advise the Agent and notify the contractor(s) of corrective actions needs to bring the work into compliance with the contract documents, plans, technical specifications, approved submittals, Advisory Circulars and local, state and international Building Codes.** Engineer shall provide minutes and photos to Agent of site visit with detailed documentation within five (5) calendar days.

9. Consult with and advise the Agent, issue all instructions to the contractor(s) as may be requested by the Agent and prepare change orders and provide necessary documentation for supplemental Agreements as required.

10. Conduct a pre-paving meeting prior to HMAC and/or concrete placement, which involves the contractor, RPR and testing labs; and which clarifies all paving specification requirements and procedures. **The Engineer shall prepare and distribute a record of the meeting to all attendees within five (5) calendar days.**

11. Review: (a) samples; (b) catalog data; (c) schedules; (d) shop drawings; (e) laboratory, shop, and mill tests of materials and equipment; (f) request for information; (g) submittals and, other data submitted by the contractor. Such reviews will be for conformance with the design concept of the Project, compliance with the information given in the Agreement documents and specific project bid items requiring **Buy American and Buy America** compliance. Compliances **should be noted on cover sheet of approved submittals.** The Engineer shall provide one copy of the approved documents with comments and responses to the Agent, Sponsor, Contractor and Resident Project Representative within five (5) calendar days of receipt.

Track all shop drawing submittals, reviews, and approvals. Provide Agent, Sponsor, Contractor and Resident Project Representative copy of submittal log two (2) calendar days prior to construction progress meeting.

Track all Request for Information (RFI) submittals and responses. Provide Agent, Sponsor, Contractor and Resident Project Representative copy of RFI log two (2) calendar days prior to construction progress meeting.

12. The Engineer shall promptly submit to the Agent formal reports from the Laboratory of all tests and inspections indicating, where applicable, compliance with the Project Specifications or other Contract Documents. Such reports shall be complete and factual, citing the tests performed, methods employed, values obtained, project area involved, and other pertinent data. These reports shall be signed by a licensed professional engineer with expertise in the area for which the report is made. **Engineer's acceptance of out of tolerance material shall be noted and should include justification such as references from General Provisions, industry standard publications, etc that support the decision.** The reports shall be distributed only as specifically designated by the Agent.

13. Prepare and provide Engineer's **Recommendation** for any change orders to include but not limited to the following in a single pdf format except for Change Order Worksheet Exhibit 1:

- Justification of Change Order: What, Where and Why
- Price justification containing fair and reasonable statement
- Contractor supporting documentation
- Plan sheets and Specifications if required (new, removed or modified)
- TxDOT Aviation Change Order Worksheet Exhibit 1 (Excel format)

After each change order execution, update Aviation Division Contractor Pay Request Form and Summary of Work Performed with revised items/quantities and submit to Resident Project Representative and Agent's Project Manager.

14. Verify the accuracy and completeness of all Daily Work Reports, Buy America and Buy American documentation submitted by the Contractor and verified by the Resident Project Representative prior to approval and payment to the contractor. Prepare and/or verify any periodic and final estimates for payments to the contractor(s), furnish the Agent with any necessary certifications/affidavits as to payments to subcontractors and suppliers. ~~Prepare final reconciliation change order prior to Contractor's final pay request.~~

15. Conduct, in the company of the Contractor, Resident Project Representative, Agent and the Sponsor, a final inspection of the Project for conformance with the design concept of the Project and compliance with the Agreement documents, and approve, in writing, final acceptance of the project. The Engineer shall prepare and distribute copies of the punchlist to the Agent, the Sponsor and the Contractor within five (5) calendar days.

16. Participate in lessons learned meeting with Agent.

17. Provide Agent with a copy of Engineer's letter of final acceptance to Contractor detailing 1 year warranty activation and end dates.

B. Closeout Phase

After written authorization to proceed with the Closeout Phase, Engineer Shall submit all items below into eGrants Contract Deliverables Tab:

1. Provide Agent with a copy of Engineer's letter to Contractor detailing analysis and recommendation of any liquidated damages, PWL calculations for Items P-401/P-501 (if any) and summary of charges for failed tests (if any). Assist Agent with resolution to liquidated damages negotiations with Contractor.

2. Provide Agent and Contractor signed copy of final pay request (including affidavit of all bills paid)

3. Electronically provide Agent and Sponsor the final test and quality control report.

Report shall include the following:

- PDF format cover letter summarizing all failed tests, reasons for accepting out of tolerance material, including supporting documentation from General Provisions, Industry standard publications that support decision any pay reduction applied. Engineer of Record stamp and signature.
- Results of all tests performed provided in table format that includes, specification number, test date, report date, test name, ASTM testing procedure, location, report number, test result, required acceptance limits, Test Pass/Fail, retest, and remarks. Highlighting those tests that failed or did not meet the applicable acceptance and the actions(s) taken.
- All testing reports organized by specification and report number in a single pdf document.

4. Prepare and Furnish Agent and Sponsor 1 electronic copy and upload a copy into eGrants Contracts Deliverables Section containing plan drawings in single file PDF format at a minimum resolution of 400 dpi or a maximum sheet size of ANSI D (22" x 34") showing those changes made during the construction phase based on the marked-up prints, drawings, change orders and other data.

5. Furnish Agent a geometry data file on a computer aided design and drafting (CADD) format to indicate items completed during construction.

6. Electronically provide Agent and Sponsor a copy of all approved catalog cuts, warranties, maintenance data, parts lists, and names of equipment and materials suppliers.

7. Electronically provide Agent in a single PDF format all approved submittals organized numerically by specification.

8. Electronically provide Agent material tickets of all incorporated materials in a single PDF format organized numerically by specification.

9. If applicable, coordinate with Agent to provide as-built survey data for the runway extension to include the runway endpoint and 50-foot stations on centerline. Survey data submission will be conducted per FAA Advisory Circulars 150/5300-16, 150/5300-17 and 150/5300-18 and submitted on-line via the FAA's Airport GIS web application. Use latest edition of Advisory Circulars.

10. Verify all Daily Construction Progress and Inspection Report Summaries are

submitted and compliant with Agent.

11. If applicable, furnish Agent with a copy of the contractor's Notice of Termination (NOT) to TCEQ as necessary for SWP3.

12. If applicable, furnish Agent completed pavement strength change form(s) and supporting documentation including any necessary follow-up documentation for FAA approval in accordance with latest editions of Advisory Circulars.

13. For Discretionary projects, prepare and furnish Agent the following items in the order shown below

1. Contractor Change Orders with all supporting documentation organized by change order number in a single pdf document
2. Contractor Pay requests with all supporting documentation organized by pay request number
3. Construction Photos in a single pdf document
4. All Daily Construction Progress and Inspection Report Summaries organized by report number in a single pdf document.
5. Engineer's letter of Final Acceptance

14. Conduct an inspection of the Project prior to the expiration of any warranty period and advise the Agent and Contractor of any recommended action to be taken under the terms of any warranty.

15. Engineer shall submit only one pay request for closeout phase upon completion of all tasks associated with closeout with the exception of the warranty period.