

**CONTRACT DOCUMENTS
AND
SPECIFICATIONS
FOR
TAXIWAY PAVEMENT REHABILITATION
AT THE
DALTON MUNICIPAL AIRPORT
DALTON, GEORGIA**

**GDOT Project No. AP025-9084-49(313) Whitfield County
PID – T008974
Croy Engineering Project No. 2106.006**



**CROY ENGINEERING
200 North Cobb Parkway, Suite 413
Marietta, Georgia 30062**

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ADDENDUM NO. 1
TO
CONTRACT DOCUMENTS AND SPECIFICATIONS FOR
TAXIWAY PAVEMENT REHABILITATION

Dalton Municipal Airport (DNN), Dalton, Georgia
Croy Engineering Project No. 2106.006

Date Addendum Issued:
April 27th, 2025

Bid Opening Date:
May 12th, 2025

TO ALL BIDDERS: The original contract documents for the above reference project are amended as noted herein. This Addendum hereby becomes a part of said contract documents. Acknowledge receipt of this Addendum in the space provided in the bid package. Insofar as those documents are at variance with this Addendum, this Addendum will govern.

General: This addendum consists of the meeting agenda, questions, and sign-in sheets from the Pre-Bid Conference held on April 25th, 2025 at the airport terminal. This addendum also consists of the addition of a new additive bid for full-depth taxiway fillet widenings as well as the demolition and relocation of a connector taxiway.

Contractors must be GDOT Pre-qualified to bid on this project.

Runway closure for this project shall be limited to two calendar days for work in Additive Bid within RSA. Contractor is responsible for coordination of runway closure with Airport staff. Contractor shall provide all necessary runway closure markings and barricades.

No additional contract time shall be awarded for Additive Bid.

Summary of Revisions to the Contract Documents:

1. **Advertisement for Bids** – Replace pages 7-9. Advertisement was updated to remove certain federal requirements and added requirement for GDOT pre-qualification.
2. **Instructions to Bidders** – Replace pages 10-13 and 15. Instructions were updated to remove certain federal requirements and added requirement for GDOT pre-qualification.
3. **Checklist for Bid Documents** – Replace page 70. Bid checklist was updated to remove federal certifications and forms that are no longer applicable to the project.
4. **Bid Proposal Form** – Insert bid proposal form for new additive bid (pages 35-a, 35-b, and 35-c).

5. **Item C-102 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control** – Replace pages 293-294. Additional erosion control pay items were added for the Additive Bid.
6. **Item P-101 Preparation/Removal of Existing Pavements** – Replace pages 302 and 303. Drainage structure, lighting, and signage removal pay items were added for the Additive Bid.
7. **Item P-152 Excavation and Embankment** – Replace pages 304, 310, and 311. Embankment in place pay item was added for the Additive Bid.
8. **Section 310 Graded Aggregate Construction** – Add in its entirety. Specification was added to address full depth placement of pavement section for fillet widenings and new taxiway in Additive Bid.
9. **Section 412 Bituminous Prime** – Add in its entirety. Specification was added to address full depth placement of pavement section for fillet widenings and new taxiway in Additive Bid.
10. **Section 815 Graded Aggregate** – Add in its entirety. Specification was added to address full depth placement of pavement section for fillet widenings and new taxiway in Additive Bid.
11. **Item D-701 Pipe for Storm Drains and Culverts** – Add in its entirety. 15" RCP pay item was added for the Additive Bid.
12. **Item D-751 Manholes, Catch Basins, Inlets and Inspection Holes** – Add in its entirety. Drop inlet pay item was added for the Additive Bid.
13. **Item D-752 Concrete Culverts, Headwalls, and Miscellaneous Drainage Structures** – Add in its entirety. Headwall, flared end section, and concrete pipe collar pay items were added for the Additive Bid.
14. **Item L-108 Underground Power Cable for Airports** – Add in its entirety. Trenching, cable, and counterpoise pay items were added for the Additive Bid.
15. **Item L-110 Airport Underground Electrical Duct Banks and Conduits** – Add in its entirety. Concrete encased underground duct bank pay item was added for the Additive Bid.
16. **Item L-115 Electrical Manholes and Junction Structures** – Add in its entirety. Electrical junction box pay item was added for the Additive Bid.
17. **Item L-125 Installation of Airport Lighting Systems** – Add in its entirety. Elevated Taxiway Retroreflective Marker pay item was added for the Additive Bid.

Summary of Revisions to the Contract Drawings:

1. **SHEET G-001A** – Add in its entirety. Summary of Quantities, General Notes, and Sheet Index for Additive Bid plans.
2. **SHEETS C-101A – C102A** – Add in its entirety. Existing conditions and demolition plans for taxiway fillet widenings and relocation of connector taxiway.

3. **SHEETS C-201A – C-202A** – Add in its entirety. Paving plans for taxiway fillet widenings and relocation of connector taxiway.
4. **SHEETS C-301A – C-302A** – Add in its entirety. Typical paving section details for taxiway fillet widenings and new connecting taxiway, centerline profile of new connecting taxiway, and details for electrical portions of work.
5. **SHEETS C-401A – C-402A** – Add in its entirety. Grading and Drainage plans for taxiway fillet widenings and relocation of connector taxiway.
6. **SHEETS C-451A – C-455A** – Add in its entirety. GDOT Standard Details for drainage items.
7. **SHEETS C-501A – C-508A** – Add in its entirety. Three phase erosion control notes and plans for NPDES permit submittal prior to start of construction. Additive bid is over 1 acre of disturbed area.

Attachments:**SPECIFICATIONS Addendum 1.pdf**

Advertisement pg. 7-9, Instructions to Bidders pg. 10-13 & 15, Bid Checklist pg. 70, Bid Proposal Form pg. 35a-35c, Item C-102 pg. 293-294, Item P-101 pg. 302-303, Item P-152 pg. 304, pg. 310-311, Section 310 (new spec), Section 412 (new spec), Section 815 (new spec), Item D-701 (new spec), Item D-751 (new spec), Item D-752 (new spec), Item L-108 (new spec), Item L-110 (new spec), Item L-115 (new spec), Item L-125 (new spec)

PLANS Addendum 1.pdf

Sheets G-001A, C-101A, C-102A, C-201A, C-202A, C-301A, C-302A, C-401A, C-402A, C-451A, C-452A, C-453A, C-454A, C-455A, C-501A, C-502A, C-503A, C-504A, C-505A, C-506A, C-507A and C-508A.

Pre-Bid Conference.pdf

Pre-Bid Conference Agenda, Questions, and Sign-in Sheets

Questions received to date:

No questions received to date. Please send all questions in writing to Sam.Malte@kimley-horn.com.

**END OF ADDENDUM NO. 1
THIS ADDENDUM MUST BE ACKNOWLEDGED IN BID**

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ADDENDUM NO. 2
TO
CONTRACT DOCUMENTS AND SPECIFICATIONS FOR
TAXIWAY PAVEMENT REHABILITATION

Dalton Municipal Airport (DNN), Dalton, Georgia
Croy Engineering Project No. 2106.006

Date Addendum Issued:
May 5th, 2025

Bid Opening Date:
May 12th, 2025

TO ALL BIDDERS: The original contract documents for the above reference project are amended as noted herein. This Addendum hereby becomes a part of said contract documents. Acknowledge receipt of this Addendum in the space provided in the bid package. Insofar as those documents are at variance with this Addendum, this Addendum will govern.

General: This addendum answers questions received following the pre-bid conference.

Summary of Revisions to the Contract Documents:

1. **Bid Proposal Form – Additive Bid** – Replace pages 35-a through 35-c. Bid proposal form for Additive Bid revised to add Mobilization line item, include place for overall job total amount, revise unit of measurement for items C-102-5.1d and C-102-5.1e, and remove Topsoil and Mulching line items.

Summary of Revisions to the Contract Drawings:

1. **No revisions to Contract Drawings**

Attachments:

ADD 2_Bid Proposal Form_Additive Bid.pdf

Questions received to date:

- On the Additive Bid there is not a mobilization item. I understand that quantities are typically over-inflated for budgeting purposes so projects don't overrun, but this gives us nowhere to recover our lump sum FIXED costs we will incur on the project. Please add a mobilization item.
 - **A mobilization line item has been added to the Additive Bid.**
- There is not a place to put the overall job total (Base Bid + Additive Bid). Does this overall total need to be on the bid form?
 - **A place for the overall job total (Base Bid + Additive Bid) has been added to the bid form.**
- Will the low bidder be determined and awarded on the Base Bid only?
 - **Low bidder will be determined and awarded by the combination of the base and additive bids.**
- Item 9 of the additive bid – Inlet Protection has a unit of measurement of LF. Shouldn't this be a per Each unit?
 - **The Inlet Protection unit of measurement has been revised to be per each.**
- Item 21 Embankment In Place, is dirt volume measured in its final location including onsite cut to fill and any needed offsite fill to complete the embankment. Item 22 Excavation also covers the onsite cut to fill. Only one item is needed. Which one will be removed?
 - **Both line items have been included due to the phasing of the relocated taxiway. The new taxiway is shown to be constructed (with embankment) prior to the demolition of the existing taxiway (in cut). Since the area of cut may take place after all embankment is in place, we added another line item to cover any on-site cut needed following placement of embankment.**
- Pay Item 30 Permanent Grassing states that it is to include Mulch and Topsoil. Pay Items 31 and 32 are for Topsoil and Mulch. Will the description of grassing be changed or will items 31 and 32 be deleted?
 - **Pay Items 31 and 32 have been removed.**
- Just to verify, there are no DBE requirements on the Base Bid or the Additive Bid?
 - **There is no DBE Goal for this Bid.**

**END OF ADDENDUM NO. 2
THIS ADDENDUM MUST BE ACKNOWLEDGED IN BID**

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END OF SECTION

DIVISION 1 – ADVERTISEMENT**ADVERTISEMENT FOR BIDS****DALTON MUNICIPAL AIRPORT
DALTON, GEORGIA**

Sealed bids will be received by the *City of Dalton, Dalton, Georgia* at the City Hall **300 W. Waugh Street, Dalton, Georgia 30720** on **May 12th, 2025**, until **2:00 PM EST** and at that hour opened and publicly read aloud for the improvements to the Airport as listed herein.

A non-mandatory pre-bid meeting will be held at the project site, the Dalton Municipal Airport, at 4483 Airport Road SE, Dalton GA 30721 on **April 25th, 2025, at 11:00 AM EST.**

PROJECT DESCRIPTION

The work consists of overlaying of taxiway pavement, remark the taxiway, and furnishing all labor, equipment, and materials and performing all work in strict accordance with the plans and specifications for:

TAXIWAY PAVEMENT REHABILITATION

The location of the work is at the *Dalton Municipal Airport, Dalton, Georgia*.

Prospective bidders should read the following instructions carefully before submitting their bids. For each item on the bid form there is a space provided for the price to be shown in numerals and words. All notations must be in ink. Totals read at the opening of bids are not guaranteed to be correct and no final award of contract will be made until the bid and extensions have been verified.

A Bidder's bond must be executed on the form furnished by the Sponsor, and the required bond, cash, cashier's check, or certified check must accompany each proposal, in the amount of 5% of the total amount of the proposal. A 100% performance bond and a 100% payment bond will be required of the Contractor at time of contract execution. A Georgia Resident Agent must countersign all bonds from a surety company authorized by law to do business in this State pursuant to a current certificate of authority to transact surety business by the Commissioner of Insurance; no bond shall be approved unless the surety is on the United States Department of Treasury's list of approved bond sureties.

The successful bidder will be required to provide the Sponsor with the affidavit required by OCGA 36-91-21 (e) *Competitive Award Requirements*.

All work under the contract shall be completed within **Ninety (90) Calendar Days** from the issuance of the notice to proceed.

Liquidated Damages: Liquidated damages for delays in completion will be One Thousand Five Hundred Dollars (\$1,500.00) per calendar day.

Payment will be made monthly on completed work. Retainage will be held by the Sponsor to a maximum of ten percent (10%) of each progress payment.

Copies of the plans, specifications, and bid forms may be on file at the following locations:

the Document Processing Center, Construct Connect:

- 3825 Edwards Rd., Suite 800, Cincinnati, Ohio 45209

the Dalton Municipal Airport:

- 4483 Airport Road SE, Dalton, GA 30721

and the Bid Phase Consultant's office, Kimley-Horn and Associates, Inc.:

- 11720 Amber Park Drive, Suite 600, Alpharetta, GA 30009

They may be examined at these offices without charge.

Bidder may request a complete electronic copy of the Bidding Documents and join the Plan Holders List by email to the bid phase consultant:

- **Sam Malte** at sam.malte@kimley-horn.com

No prints or sets of drawings will be issued by the Owner. Cost of reproduction for printing shall be paid by the Bidder. **All Bidders must be on the plan holders list in order to be considered for work on the project.** Addenda and additional information will only be provided to those contractors on the plan holders list.

Envelopes containing bids must be sealed, addressed to the undersigned, and marked as follows: **"Bid for Construction at Dalton Municipal Airport, Taxiway Pavement Rehabilitation, Dalton, Georgia. Croy Engineering Project 2106.006."** Bids will be required to remain open for acceptance or rejection for **one-hundred and twenty (120) calendar days** after the date of opening of bids.

IMPORTANT NOTICE TO BIDDERS

The following regulations and requirements apply to this project:

~~**Buy American Preferences** (Title 49 USC, Chapter 501) All acquired steel and manufactured products installed under the AIP assisted project must be produced in the United States.~~

~~**Foreign Trade Restriction:** Denial of Public Works contracts to suppliers of goods and services of countries that deny procurement market access to US contractors (DOT Reg. 49 CFR Part 30)~~

~~**Government wide debarment and suspension and government wide requirements for drug free workplace.** (DOT Regulation 49 CFR Part 29)~~

~~**Davis-Bacon Act** (DOL Regulation 29 CFR Part 5)~~

~~**Affirmative Action to Ensure Equal Employment Opportunity** (Executive Order 11246 and DOL Regulation 41 CFR Part 60)~~

~~**DBE OBLIGATION.** The bidder shall make good faith efforts, as defined in Appendix A of 49 CFR Part 26, Regulations of the Office of the Secretary of Transportation, to subcontract **0.00% percent** of the dollar value of the prime contract to small business concerns owned and controlled by socially and economically disadvantaged individuals (DBE). In the event that the bidder for this solicitation qualifies as a DBE, the contract goal shall be deemed to have been met. Individuals who are rebuttably presumed to be socially and economically disadvantaged including: women, African American, Hispanics, and Native Americans, Asian Pacific Americans, and Asian-Indian Americans. The apparent successful competitor will be required to submit, with the bid, information concerning the DBE's that will participate in this contract. The information will include the name and address of each DBE, a description of the work to be performed by each named firm, and the dollar value of the contract. If the bidder fails to achieve the contract goal~~

~~stated herein, it will be required to provide, with the bid, documentation demonstrating that it made good faith efforts in attempting to do so. A bid that fails to meet these requirements will be considered non-responsive.~~

Contractor and Subcontractor must state affirmatively that the firm has registered with and is participating in a federal work authorization program in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

Title VI Solicitation Notice:

The City of Dalton, Georgia, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The bidder must have at his disposal the necessary equipment to put on the project when notice is given to begin work and to do the work within the time specified. The proposal of any bidder will be rejected if the award of the work for which the proposal is submitted, may, in the judgment of the Sponsor, affect the workmanship, financing or progress of other work awarded to the bidder in the same letting or other work which the bidder may have under contract.

THE RIGHT TO REJECT ANY OR ALL BIDS AND TO WAIVE INFORMALITIES IS RESERVED TO THE SPONSOR.

Bidders are required to be either a GDOT registered subcontractor or GDOT prequalified contractor.

Andrew Wiersma, Airport Manager
City of Dalton, Georgia

END OF ADVERTISEMENT

DIVISION 2 – INSTRUCTIONS TO BIDDERS

INSTRUCTIONS TO BIDDERS

GENERAL

ALL PROVISIONS OF THE FEDERAL AVIATION ADMINISTRATION SPECIFICATIONS SHALL APPLY AS MODIFIED IN TECHNICAL SPECIFICATIONS SECTION, EXCEPT WHERE SPECIFIED THAT SECTION APPLIES TO GEORGIA STANDARD SPECIFICATIONS CONSTRUCTION OF TRANSPORTATION SYSTEM, 2021 EDITION.

The following requirements apply to the contract(s) for this project:

PREQUALIFICATIONS OF BIDDER

As per Rules 672-5-.04 and 672-5-.11 in the Rules and Regulations of the State of Georgia, All persons proposing to bid on Department work, except as otherwise provided in Rule 672-5-.05, for the performance of any contract in excess of \$2,000,000, must submit an application under oath on forms to be furnished by the office of the Prequalification Committee. The application must be filed at least ten (10) days prior to the opening of any bids the prospective bidder proposes to submit. All persons proposing to bid on Department work for the performance of any contract below the requirements set forth in Rule 672-5-.04(1) must be registered as a subcontractor as provided for in Rule 672-5-.11. In order for the Department to maintain a register of subcontractors, any person desiring to perform work on Department projects as a subcontractor must submit a notification of such desire under oath to the Department on forms to be furnished by the Department. The original notification may be filed at any time, but in no case less than ten (10) days prior to the prime contractor's requesting approval of the subcontract to which the prospective subcontractor will be a party.

Bidders that are not pre-qualified and have submitted an application with the above stated rules shall also furnish the Sponsor satisfactory evidence of his/her competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, a list of equipment that would be available for the work, and a list of key personnel that would be available. In addition, each bidder shall furnish the Sponsor satisfactory evidence of his/her financial responsibility. Such evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the Contractor's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether his/her financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect his/her (bidder's) true financial condition at the time such qualified statement or report is submitted to the Sponsor.

Unless otherwise specified, a bidder may submit evidence that he is prequalified with the Georgia DOT and is on the current "bidder's list" of the state in which the proposed work is located. Such evidence of Georgia DOT prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports hereinbefore specified.

Each bidder shall submit "evidence of competency" and "evidence of financial responsibility" to the Sponsor at the time of bid opening.

Bids will only be considered by those bidders and subcontractors currently pre-qualified with the Georgia DOT for work in the vicinity of the proposed work.

BID GUARANTEE BOND OF 5%

(49 CFR Part 18.36 (h)(1)) Each Bidder shall post a proposal guarantee bond in the amount of 5% of the bid price. No bids shall be read or considered without a proper form of security.

PERFORMANCE BOND OF 100%

(49 CFR Part 18.36 (h)(2)), Bidder shall post a performance bond in the amount of 100% of the bid price if awarded the contract. Such bond(s) are due prior to contract execution as a guarantee of timely delivery and that equipment, materials and /or goods are delivered according to specifications.

PAYMENT BOND OF 100%

(49 CFR Part 18.36 (h)(3)), Bidder shall post a payment bond payable to the SPONSOR in the amount of 100% of the bid price if awarded the contract. Such bond(s) are due prior to contract execution to guarantee timely payment of invoices to any subcontractors.

AUTHORITY TO SIGN

If an individual makes a Proposal, his name and post office address must be shown. If made by a firm or partnership, the name and post office address of each member of the firm or partnership must be shown. If made by a corporation, the person or persons signing the Proposal must show the name of the State under the laws of which the corporation is chartered and his, or their, authority for signing same, and the names, titles and addresses of the President, Secretary and Treasurer, and the corporate authority for doing business in this State. In the case of a Limited Liability Corporation a Certificate of Authority shall be executed by the Chief Officer certifying that he/she has the authority to execute contracts between the LLC and SPONSOR. A bid executed by an attorney or agent on behalf of the Bidder shall be accompanied by an authenticated copy of the Power of Attorney or other evidence of authority to act on behalf of the Bidder.

NON-CONCLUSION

By submitting a bid in response to this solicitation, the Bidder represents that in the preparation and submission of this bid, said Bidder did not either directly or indirectly, enter into any combination or arrangement with any person, Bidder, Corporation or enter into any agreement, participate in any collusion, or otherwise take any action in the restraint of free, competitive bidding in violation of the Sherman Act (15 U.S.C. Section 1 or Section 59.1-9.1 through 59.1-9.17 or Sections 59.1 – 68.6 through 59.68.8). Collusion and fraud in bid preparation shall be reported to the State of Georgia Attorney General and the United States Justice Department.

DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

(49 CFR Part 29), The bidder/offeror certifies, by submission of this proposal or acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the bidder/offeror/Contractor or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this solicitation/proposal.

BUY AMERICAN PREFERENCES *(Not Applicable to this project)*

The Contractor certifies that its bid/offer is in compliance with 49 USC § 50101, BABA and other related Made in America Laws, U.S. statutes, guidance, and FAA policies, which provide that Federal funds may not be obligated unless all iron, steel and manufactured goods used in AIP funded projects are produced in the United States, unless the Federal Aviation Administration has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in

Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

The bidder or offeror must complete and submit the certification of compliance with FAA's Buy American Preference, BABA and Made in America laws included herein with their bid or offer. The Airport Sponsor/SPONSOR will reject as nonresponsive any bid or offer that does not include a completed certification of compliance with FAA's Buy American Preference and BABA.

The bidder or offeror certifies that all construction materials, defined to mean an article, material, or supply other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber; or drywall used in the project are manufactured in the U.S.

FOREIGN TRADE RESTRICTION (Not Applicable to this project)

(49 CFR Part 30), Denial of Public Works Contracts to Suppliers of Goods and Services of Countries that Deny Contracts to Suppliers of Goods and Services of Countries that Deny Procurement Market Access to U. S. Contractors. The successful bidder must comply with 49 CFR Part 30 and submit the Certification Regarding Foreign Participation provided in the proposal documents.

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

- 1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);
- 2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and
- 3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC § 1001.

The Offeror/Contractor must provide immediate written notice to the SPONSOR if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR § 30.17, no contract shall be awarded to an Offeror or subcontractor:

- 1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR; or

- 2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list; or
- 3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the SPONSOR cancellation of the contract or subcontract for default at no cost to the SPONSOR or the FAA.

CERTIFICATION OF NONSEGREGATED FACILITIES *(Not Applicable to this project)*

(41 CFR Part 60-1.8), The successful bidder must comply with 41 CFR Part 60-1.8 and submit the Certification of Nonsegregated Facilities provided in the proposal documents.

EQUAL EMPLOYMENT OPPORTUNITY *(Not Applicable to this project)*

(Executive Order 11246 & 41 CFR Part 60), The successful bidder must comply with 41 CFR Part 60 and submit the Equal Opportunity Report Statement provided in the proposal documents.

During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff, or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's

essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractor's commitments under this section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any such rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The Contractor will include the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: *Provided*, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

NONDISCRIMINATION

Notwithstanding any other provision of this Agreement, during the performance of this Agreement CONTRACTOR, for itself, its heirs, personal representatives, successors in interest and assigns, as part of the consideration of this Agreement does hereby covenant and agree, as a covenant running with the land, that:

1. No person on the grounds of race, color, religion, sex or national origin shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination;
2. In the production of the vehicle(s), and the furnishing of services therein or thereon, no person on the grounds of race, color, religion, sex or national origin shall be excluded from participation in, or denied the benefits of, such activities, or otherwise be subjected to discrimination.

DISADVANTAGED BUSINESS ENTERPRISE (Not Applicable to this project)

(49 CFR Part 26) The Contractor and/or its subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate. The overall DBE goal for this project is **0.00%**.

DAVIS BACON ACT (Not Applicable to this project)

(29 CFR Part 5) This project is partially funded by the U. S. Department of Transportation under the Federal Aviation Administration's Airport Improvement Program. Therefore, the project is subject to minimum wages as determined by the U. S. Dept. of Labor. The applicable Wage Determination is a part of Section 130.

DRUG FREE WORKPLACE CERTIFICATION

The CONTRACTOR must certify that they are in full compliance with the provisions of Code Sections 50-24-1 through 50-24-6 of the Official Code of Georgia Annotated, relating to the "Drug-free Workplace Act". The undersigned further certifies that:

- a. A drug-free workplace will be provided for the CONTRACTOR'S employees during performance of the contract; and
- b. Each CONTRACTOR who hires a subcontractor to work in a drug-free work place shall secure from that subcontractor the following written certification:
"As part of the subcontracting agreement with (CONTRACTOR's name), (Subcontractor's name) certifies to the CONTRACTOR that a drug-free workplace will be provided for the subcontractor's employees during the performance of this Contract pursuant to Paragraph (7) of Sub-section (b) of Code Section 50-24-3".
- c. The CONTRACTOR further certifies that he will not engage in the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the Contract.
- d. CONTRACTOR may be suspended, terminated, or debarred if it is determined that:
 - (1) The CONTRACTOR has made false certification hereinabove; or
 - (2) The CONTRACTOR has violated such certification by failure to carry out the requirements of the Official Code of Georgia Section 50-24-3.

PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to use and procurement of certain telecommunications and video surveillance services or equipment in compliance with the National Defense Authorization Act [Public Law 115-232 § 889(f)(1)].

SUBCONTRACTORS, SUPPLIERS AND OTHERS

All BIDDERS shall submit as part of their BID on the prescribed schedules a list of all subcontractors and other persons and organizations (including those who are to furnish principle items of material and equipment) proposed for those portions of the Work as to which such identification is required. If requested by SPONSOR, the low BIDDER shall submit an experience statement with pertinent information as to similar projects and other evidence of qualification for each subcontractor, other person or organization. If SPONSOR after due investigation has reasonable objection to any proposed subcontractor, other person or organization, the SPONSOR may before giving the NOTICE OF AWARD require the apparent Successful BIDDER to submit an acceptable substitute without an increase in Bid Price. If the apparent Successful BIDDER declines to make any such substitution, the Contract shall not be awarded to such BIDDER, but his declining to make any such substitution will not constitute grounds for sacrificing his Bid Security. Any subcontractor, other person, or organization so listed and to whom the SPONSOR does not make written objection prior to giving the NOTICE OF AWARD will be deemed acceptable to SPONSOR.

GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT

Pursuant to the Georgia Security and Immigration Compliance Act of 2006, the successful CONTRACTOR understands and agrees that compliance with the requirements of O.C.G.A. 13-10-91 and Georgia Department of Labor Rule 300-10-02 are conditions of this bid and contract document. The CONTRACTOR further agrees that such compliance shall be attested by the CONTRACTOR and any of his Subcontractors by execution of the appropriate Affidavit and Agreement which will be included and become a part of the Agreement between the SPONSOR and the successful CONTRACTOR. The Affidavits must be provided to the SPONSOR within five (5) business days of the Subcontractor being hired to work on the project.

SYSTEMATIC ALIEN VERIFICATION FOR ENTITLEMENTS (SAVE) PROGRAM

Since a contract has been deemed a "public benefit," the CONTRACTOR or other party to the contract must be run through the federal Systematic Alien Verification for Entitlements (SAVE) Program. This program requires that local government verify the legal status of non-U.S. citizens who apply for certain benefits. The CONTRACTOR must execute a SAVE affidavit attesting that either he or she is a U.S. citizen or legally qualified to receive the benefit. If the contractor is not a U.S. citizen, then the local government has to run that contractor through the SAVE system. Only non-U.S. citizens can be processed through the SAVE program.

BID FORM AND SCHEDULES

One copy of the Bid Form and Schedules is included with the Bidding Documents.

All blanks on the Bid Forms and schedules must be completed by permanent marking. Each Bid must be submitted on the prescribed form. The Bid Price must be stated in words and numerals or as indicated in the BID FORM.

BIDS by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or assistant secretary of the corporation. The corporate address and state of incorporation shall be shown in the space provided.

BIDS by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature. The address and telephone numbers to which communications regarding the BID are to be directed must be shown on the Bid Form.

All names must be typed or printed below the signatures. The individual SPONSOR and the terms "doing business" must sign BIDS by individuals or "sole SPONSOR" must appear under the signature.

The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of all addenda and the date each was received shall be filled in on the BID form).

ADDENDA AND INTERPRETATIONS

All questions about the meaning or intent of the Contract Documents are to be directed to ENGINEER. Requests for interpretations of drawings and specifications must be made in writing to the Engineers not later than **five (5) days** (weekends and holidays not included) prior to receipt of Proposals. Any interpretations made to bidders will be issued in the form of Addenda to the specifications and furnished to all bidders. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by ENGINEER as having received the Bidding Documents. Only questions

answered by formal written Addenda will be binding. Oral explanations and interpretations made prior to the bid opening shall not be binding and without legal effect. Addenda may also be issued to modify the Bidding Documents as deemed advisable by SPONSOR and ENGINEER.

Failure of any BIDDER to receive and/or acknowledge any such Addendum or interpretation shall not relieve BIDDER from any obligation under this BID as submitted.

EXCEPTIONS AND OMISSIONS

If exceptions are taken to any portion of these specifications, such exception must accompany the bid and must be in writing. If any feature normally included in a complete job of this nature is omitted from these specifications, it too must be so stated in writing and be included with the bid.

PREPARATION OF BIDS

Negligence on the part of the Bidder in preparing the bid confers no right for withdrawal or modification in any way after the deadline for the bid opening.

Unit price must be shown on the Bid Cost Submittal Form in this document. All bids should be tabulated, totaled and checked for accuracy. The unit price will prevail in case of errors.

All product, equipment, article or material must be new and unused or current production. No reconditioned or used item(s) will be accepted except as specifically requested herein. Units that are classified as prototype or discontinued models are not acceptable.

EXAMINATION OF PLANS, SPECIFICATIONS AND SITE

The bidder is expected to carefully examine the site of the proposed work, the proposal, plans specifications, and contract forms. He shall satisfy himself as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Sponsor's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which he may make or obtain from his/her examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Sponsor.

ESTIMATED QUANTITIES

Estimated Quantities: Where quantities of work are given in the BID they are approximate and are assumed solely for comparison of the BIDS. They are not guaranteed to be accurate statements or estimates of quantities of work that are to be performed under the contract, it being presumed that the BIDDER has verified the quantities necessary to complete the Work of the contract as intended, and any departure therefrom will not be accepted as valid grounds for any claim for damages, for extension of time or for loss of profits; not with any additional payment be made, regardless of the actual quantities required or ordered to complete the Work.

SUBMISSION OF BIDS

BIDS shall be submitted at the time and place indicated in the Advertisement. Each BID shall be enclosed in a sealed envelope and marked and addressed as required in the below and in the

Advertisement and shall be accompanied by the Bid Security and other required documents. If the BID is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED for (Project Name)" on the face thereof. Submit original and one copy of the Bid Form, Schedules and other required documents.

Indicate the following information on the outside of the sealed envelope containing the bid:

- a. Project Name as stated on page one of the Bid Forms
- b. Project Number
- c. Location of Airport
- d. Bidder's Name and Address

**Submit Bids to: City of Dalton
 300 W. Waugh Street
 Dalton, Georgia 30722**

The Submittal Checklist must be reviewed, and the bidder is to comply with the order of the submittal of documents. This document is to be included with the bid.

Bids may be submitted by mail, common carrier or delivered in person. Fax or electronic bids are not acceptable. It shall be the duty of each Bidder to ensure that their bid is delivered within the time and at the place prescribed in this document. Bids received prior to the time fixed in this bid document will be securely kept unopened. Any bid received at the office designated in this document after the exact time and date specified, will not be considered. If a late bid is received via carrier, it will be marked "late bid" and will not be opened. If a late bid is hand delivered, it will be returned unopened to the presenter.

At the date and time specified for the opening of the bid, the bid shall be publicly opened and read aloud for the information of Bidders and others present.

If descriptive literature is attached to the bid, your firm's name must be on all sheets submitted.

Each bid submitted shall be deemed to have been made with full knowledge of all terms, conditions, and requirements contained in this Bid request. The failure or omission of any Bidder to examine any form, instrument or document shall in no way relieve any Bidder from obligations in respect to the bid submittal or the compliance of the terms, conditions and requirements of the bid.

Individual contractors shall provide their Social Security number and proprietorships; partnerships and corporations shall provide their Federal Employer Identification number and provide a completed W9 form to be submitted with the bid.

The authorized representative whose signature will appear on the bid submitted certifies that the Bidder has carefully examined the instructions of this bid and the terms and specifications applicable to and made a part of this bid. The Bidder further certifies that the prices shown on the Bid Price Submittal Form is in accordance with the conditions, terms and specifications of the bid and that any exception taken thereto may disqualify the bid.

Bids shall be made on the enclosed form if a form is provided.

Any documentation submitted with or in support of a bid or bid shall become subject to public inspection under the Georgia Open Records Act. Labeling such information "Confidential", "Proprietary", or in any other manner shall not protect this material from public inspection upon

request. All records become subject to public inspection only after award of the contract or purchase order.

WITHDRAWAL OR REVISION OF PROPOSALS

A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Sponsor in writing or by telegram before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

PUBLIC OPENING OF PROPOSALS

Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

CONSIDERATION OF PROPOSALS

After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit price written in words shall govern.

Until the award of a contract is made, the Sponsor reserves the right to reject a bidder's proposal for any of the following reasons:

- a. If the proposal is irregular as specified in the subsection titled IRREGULAR PROPOSALS.
- b. If the bidder is disqualified for any of the reasons specified in the subsection titled DISQUALIFICATION OF BIDDERS.

In addition, until the award of a contract is made, the Sponsor reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Sponsor and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Sponsor's best interests.

IRREGULAR PROPOSALS

Proposals may be considered irregular for the following reasons:

- a. If the proposal is on a form other than that furnished by the SPONSOR, or if the SPONSOR'S form is altered or if any part of the proposal form is detached.
- b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite or otherwise ambiguous.
- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the BIDDER is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guarantee specified by the SPONSOR.

The SPONSOR reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the SPONSOR and conforms to local laws and ordinances pertaining to the letting of construction contracts.

DISQUALIFICATION OF BIDDERS

A bidder may be considered disqualified for any of the following reasons:

- a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.
- b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Sponsor until any such participating bidder has been reinstated by the Sponsor as a qualified bidder.
- c. If the bidder is considered to be in "default" for any reason specified in the subsection titled ISSUANCE OF PROPOSAL FORMS of this section.

RETURN OF PROPOSAL GUARANTY

All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Sponsor has made a comparison of bids. Proposal guaranties of the two lowest bidders will be retained by the Sponsor until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Sponsor receives the contracts bonds.

RIGHTS RESERVED

SPONSOR reserves the right to reject any and all Proposals, to waive any and all informalities not involving price, time or changes in the work, and to negotiate contract terms with the Successful BIDDER, and the right to disregard all nonconforming, non-responsive, unbalanced or conditional Proposals. Discrepancies between words and figures will be resolved in favor of words. Also, SPONSOR reserves the right to reject the Proposals of any BIDDER if SPONSOR believes that it would not be in the best interest of the Project to make any award to that BIDDER, whether because the Proposal is not responsive or the BIDDER is unqualified or of doubtful financial ability or fails to meet any other pertinent standards or criteria established by SPONSOR. Discrepancies between the indicated sum or any column of figures and the correct sum thereof will be resolved in favor of the correct sum. On contract where unit prices are required, the right is reserved to increase or decrease the quantities specified, without changing the unit prices bid.

SUBSTITUTE OR "OR-EQUAL" ITEMS

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" Items. Whenever it is indicated on the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used if acceptable to ENGINEER, application for such acceptance will not be considered by ENGINEER until after the Effective Date of the Agreement.

AWARD OF CONTRACT

Responsiveness - The determination of the Bidder's responsiveness will be made by the SPONSOR based on a consideration of whether the Bidder has submitted the following:

- Complete bid documents meeting bid requirements without irregularities, obviously unbalanced unit prices, excisions, special conditions, or alternatives bids for any item unless specifically requested in the bid solicitation.
- A properly executed Bid Bond.

In evaluation of Proposals, SPONSOR will consider qualifications of the BIDDERS and whether or not the Proposals comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Proposal form or prior to the Notice of Award.

SPONSOR may consider the qualifications and experience of subcontractors, other persons or organizations (including those who are to furnish the principle items of materials and equipment)

proposed for those portions of the work as to which the identity of subcontractors and other persons and organizations must be submitted. SPONSOR may also consider operating costs, maintenance considerations, performance data and guarantees of materials may also be considered by SPONSOR, when such data is submitted prior to Notice of Award.

SPONSOR may conduct such investigations as he deems necessary to assist in the evaluation of any Proposal and to establish the responsibility, qualifications and other persons and organizations to do the work in accordance with the contract documents to Sponsor's satisfaction within the prescribed time.

Responsibility - The determination of the Bidder's responsibility will be made by the SPONSOR based on whether the Bidder meets the following minimum standard requirements:

- Maintains a physical location presence and permanent place of business.
- Has the appropriate and adequate technical experience required.
- Has adequate personnel and equipment to perform the work expeditiously
- Able to comply with the required or proposed delivery and installation schedule.
- Has a satisfactory record of performance.
- The ability of Bidder to provide future maintenance and service for the use of the contract under consideration.
- Has adequate financial means to meet obligations incidental to the work.
- Such other factors as appear to be pertinent to either the bid or the contract.

In considering BIDS for this Work, particular attention will be given to the method of construction which the BIDDER plans to follow; the available experienced and skilled men which he plans to use in the prosecution of Work; the types of equipment and materials he plans to install; and, he shall prepare and furnish this information in writing at the SPONSOR's request.

Furthermore, the successful BIDDER must, prior to the award of the Contract, be prepared to discuss in detail all manners relating to any special features of the Work with the end view of obtaining high-grade workmanship and proper performance of the Contract.

SPONSOR reserves the right to reject the BID of any BIDDER who does not pass any evaluation to Sponsor's satisfaction.

If a contract is to award, it will be awarded to the lowest BIDDER whose evaluation by SPONSOR indicates to SPONSOR that the award will be in the best interests of the Project.

If the lowest or the best BID exceeds the funds available for the work, the SPONSOR may reject all BIDS, or reduce the Scope of Work as necessary to diminish the total cost of the project to a sum compatible with the funds available for the specified work.

Award of the Contract, if awarded, will be made by the SPONSOR, upon the recommendation of the ENGINEER to the lowest responsible, responsive BIDDER, whose Proposal meets the requirement of the SPONSOR, and complies with the applicable laws of the State of Georgia.

If a contract is to be awarded, SPONSOR will give the Successful BIDDER a NOTICE OF AWARD within **one-hundred and twenty (120) calendar days** after the day of bid Opening, or such mutually agreeable extension of time.

CANCELLATION OF AWARD

The SPONSOR reserves the right to cancel the award without liability to the BIDDER, except

return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the SPONSOR.

SIGNING OF AGREEMENT

After the SPONSOR gives a NOTICE OF AWARD to the successful BIDDER, they will submit **three (3)** unsigned counterparts of the Agreement and all other required Contract Documents. Within **fifteen (15) days** following the effective date of "Award" CONTRACTOR shall sign and deliver all executed counterparts of the Agreement to the SPONSOR with all other Contract Documents including insurance certificates and executed bonds attached thereto. SPONSOR will identify those portions of the Contract Documents not fully signed by the SPONSOR and CONTRACTOR and such identification shall be binding on all parties.

FAILURE TO EXECUTE CONTRACT

Failure to execute contract and file acceptable bonds as provided herein within **fifteen (15) days** from the date of award shall cause forfeiture of the Proposal Guaranty to the SPONSOR not as a penalty, but in liquidation of damages sustained. At the discretion of the SPONSOR, the award may then be made to the next lowest responsible BIDDER, or the work may be re-advertised.

CONTRACT ASSURANCE

The BIDDER/OFFERER certifies, by submission of this proposal or acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the BIDDER/OFFERER/CONTRACTOR or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this solicitation/proposal.

The CONTRACTOR or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the CONTRACTOR to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

PROMPT PAYMENT

The prime CONTRACTOR agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than **ten (10)** days from the receipt of each payment the prime CONTRACTOR receives from the Airport SPONSOR. The prime CONTRACTOR agrees further to return retainage payments to each subcontractor within **ten (10)** days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Airport SPONSOR. This clause applies to both DBE and non-DBE subcontractors.

INDEMNIFICATION

The vendor that is selected as the contractor shall, at its own expense, protect, defend, indemnify, save and hold harmless the SPONSOR and its elected and appointed officers, employees, servants and agents from all claims, damages, lawsuits, costs and expenses including, but not limited to, all costs from administrative proceedings, court costs and attorney fees that the SPONSOR and its elected and appointed officers, employees, servants and agents may incur as a result of the acts, omissions or negligence of the contractor or its employees, servants, agents or subcontractors that may arise out of the agreement.

The CONTRACTOR's indemnification responsibility under this section shall include the sum of damages, costs and expenses which are in excess of the sum of damages, costs and expenses which are paid out in behalf of or reimbursed to the SPONSOR, its officers, employees, servants and agents by the insurance coverage obtained and/or maintained by the CONTRACTOR.

CONTRACT TIME

The numbers of days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment (the Contract Time) are set forth in the Bid Form and the Agreement. Contract Time for this project is **Ninety (90) Calendar Days** from issuance of notice to proceed.

LIQUIDATED DAMAGES

Liquidated damages for the delays in completion will be One Thousand Five Hundred Dollars (\$1,500.00) per calendar day.

PROJECT SCHEDULE

A project schedule showing the work in the order proposed by the CONTRACTOR and the time required to complete each phase will be required before the signing of contract. This schedule shall include the dates for beginning and completion of all phases of the work. If, in the opinion of the ENGINEER, the CONTRACTOR falls behind in his schedule or will not be able to complete the project in the time limits, he may require the CONTRACTOR to revise his schedule and put additional manpower and equipment on the project if so ordered.

Notice to Proceed shall not be issued until the ENGINEER has approved the schedule in writing. Failure of the CONTRACTOR to comply with the schedule may be cause for withholding payments due the CONTRACTOR.

CODES, PERMITS, FEES, LICENSES, AND LAW

All permits, fees, arrangements for inspections, licenses, and costs incurred for the same shall be the sole responsibility of the successful Bidder. All materials, labor and construction must comply with all applicable rules and regulations of local, state and/or national codes, laws and ordinances of all authorities having jurisdiction over the project, shall apply to the contract throughout and will be deemed to be included in the contract the same as though herein written out in full.

Effective July 1, 2008: All General Contractors must have a current valid license from the State Licensing Board for Residential and General Contractors, unless specifically exempted from holding such license pursuant to Georgia law, O.C.G.A. Section 43-41-17.

COPIES FURNISHED

The ENGINEERS shall furnish the successful CONTRACTOR, free of charge, **two (2) copies** of the plans and specifications. If additional copies are the CONTRACTOR requests copies, they will be furnished at the price specified elsewhere in these documents.

DRAWINGS AND SPECIFICATIONS ON THE SITE

The CONTRACTOR shall keep one copy of all drawings and specifications on the site of the work in good order, available to the ENGINEERS and to their representatives.

SANITARY PROVISIONS

The CONTRACTOR shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as may be necessary to comply with the regulations of the State Board of Health and all local ordinances. No nuisance will be permitted.

SAFETY

All vendors and subcontractors performing services are required and shall comply with all Occupational Safety and Health Administration (OSHA), State and County Safety and Occupational Health Standards and any other applicable rules and regulations. Also, all contractors and subcontractors shall be held responsible for the safety of their employees and any unsafe acts or conditions that may cause injury or damage to any persons or property within and around the work site area under this Contract.

RESPONSIBILITY

The CONTRACTOR shall be responsible for all material and work until they are finally accepted by the SPONSOR and shall repair at his own expense any damage they sustain before their final acceptance. The CONTRACTOR shall be responsible for all damages caused by him of whatever nature and must settle all claims arising from such damage without cost to the SPONSOR; he shall act as defendant in, and bear the expense of each and every suit, if any, and of every nature, which may be brought against him or the SPONSOR by reason of, or connected with the work under the contract; should any claim arise, the SPONSOR may hold back sufficient money to meet said claims until the CONTRACTOR has satisfied the SPONSOR that all claims against him as the result of his work have been adjusted. He must also show that there are no claims or liens whatsoever outstanding at the completion of the contract before final payment is made.

TESTING - GENERAL

The CONTRACTOR shall use an independent testing laboratory for Quality Control project tests. A separate independent testing laboratory will be selected by the SPONSOR for the Quality Assurance Testing. The CONTRACTOR is responsible for Quality Control Testing, including costs. (See General Provisions Section 100-07 Quality Control Testing Plan.)

When the CONTRACTOR has prepared an item of work to the stage where testing is required, he shall notify the ENGINEER what portion of the project he desires to have tested. The ENGINEER shall initiate the tests required by the contract specifications.

However, the payment of the tests by the SPONSOR and scheduling by the ENGINEER does not relieve the CONTRACTOR of any responsibility in regards to meeting the job specification. If the CONTRACTOR desires additional tests, he may provide same for his own information.

Major testing to be done during construction is listed for each item in the Construction Details for that item.

DESIGN, STANDARDS AND PRACTICES

Design, strength, quality of materials and workmanship must conform to the highest standards of engineering practices and/or professional services.

CLAIMS

The SPONSOR reserves the right to refuse to issue any vouchers and to direct that no payment shall be made to the CONTRACTOR in case the SPONSOR has reason to believe that said CONTRACTOR has neglected or failed to pay any subcontractor, materialmen, workmen, or employee for work performed on or about the work included in these specifications until the SPONSOR is satisfied that such subcontractors, materialmen, workmen, or employees have been fully paid.

MANUFACTURER'S CERTIFICATION AND DELIVERY TICKETS

The CONTRACTOR shall furnish a manufacturer's certificate of compliance with the

Specifications on all materials furnished. A delivery ticket on all material delivered to job site shall be furnished to the ENGINEER.

STATEMENT OF WARRANTY

A Statement of Warranty should include all applicable manufacturers' warranty as well as the manufacturer's required minimum 1 year warranty in regard to equipment, materials and workmanship. This statement shall include the terms, conditions and the period of warranty coverage. Any exclusion(s) must be clearly stated.

CONSTRUCTION OPERATIONS PLANS

Specific guidelines for working on the airport apply to this project. These minimum guidelines are set forth on the Plans and in Section 01030 "Airport Project Procedures".

CONSTRUCTION AS INDEPENDENT CONTRACTOR

In conducting its business hereunder, CONTRACTOR acts as an independent contractor and not as an employee or agent of the SPONSOR. The selection, retention, assignment, direction and payment of CONTRACTOR's employees shall be the sole responsibility of CONTRACTOR.

ASSIGNMENT

The Agreement, in whole or any part hereof, created by the award to the successful CONTRACTOR shall not be sold, not be assigned or transferred by CONTRACTOR by process or operation of law or in any other manner whatsoever, including intra-corporate transfers or reorganizations between or among a subsidiary of CONTRACTOR, or with a business entity which is merged or consolidated with CONTRACTOR or which purchases a majority or controlling interest in the Ownership or assets of CONTRACTOR without the prior written consent of the SPONSOR.

PERFORMANCE OF CONTRACT

The SPONSOR reserves the right to enforce the CONTRACTOR's performance of this Agreement in any manner prescribed by law or deemed to be in the best interest of the SPONSOR in the event of breach or default or resulting contract award. It will be understood that time is of the essence in the Bidder's performance.

The successful CONTRACTOR shall execute the entire work described in the Contract Documents, except to the extent specifically indicated in the Contract documents to be the responsibility of others.

The CONTRACTOR accepts the relationship of trust and confidence established by the award of this bid solicitation. The CONTRACTOR covenants with the SPONSOR to utilize the CONTRACTOR's best skill, efforts and judgment in furthering the interest of the SPONSOR; to furnish efficient business administration and supervision; to make best efforts to furnish at all times an adequate supply of workers and materials; and to perform the work in the best way and most expeditious and economical manner consistent with the interest of the SPONSOR.

All purchases for goods or services are subject to the availability of funds for this particular purpose.

FAILURE TO COMPLY WITH PROVISIONS

Failure to comply with the terms of these contract provisions may be sufficient grounds to:

- 1) Withhold progress payments or final payment,

- 2) Terminate the contract,
- 3) Seek suspension/debarment, or
- 4) Any other action determined to be appropriate by the sponsor or the FAA.

DEFAULT AND TERMINATION

Termination by CONTRACTOR: The agreement resulting from this bid shall be subject to termination by CONTRACTOR in the event of any one or more of the following events: The default by SPONSOR in the performance of any of the terms, covenants or conditions of this Agreement, and the failure of SPONSOR to remedy, or undertake to remedy such default, for a period of thirty (30) days after receipt of notice from CONTRACTOR to remedy the same.

Termination by SPONSOR: The agreement resulting from this bid shall be subject to termination by the SPONSOR at any time in the opinion of the SPONSOR; the CONTRACTOR fails to carry out the contract provisions of any one or more of the following events:

1. The default by CONTRACTOR in the performance of any of the terms, covenants or conditions of the Agreement, and the failure of CONTRACTOR to remedy, or undertake to remedy with sufficient forces and to the SPONSOR's reasonable satisfaction, the SPONSOR shall provide the vendor with notice of any conditions which violate or endanger the performance of the Agreement. If after such notice the CONTRACTOR fails to remedy such conditions within thirty (30) days to the satisfaction of the SPONSOR, the SPONSOR may exercise their option in writing to terminate the Agreement without further notice to the CONTRACTOR and order the CONTRACTOR to stop work immediately and vacate the premises, to cancel ordered products and/or services with no expense to the SPONSOR.
2. CONTRACTOR files a voluntary petition in bankruptcy, including a reorganization plan, makes a general or other assignment for the benefit of creditors, is adjudicated as bankrupt or if a receiver is appointed for the benefit of creditors, is adjudicated as bankrupt or if a receiver is appointed for the property or affairs of CONTRACTOR and such receivership is not vacated within thirty (30) days after the appointment of such receiver.
3. CONTRACTOR'S failure to conduct services according to the approved bid specifications.
4. CONTRACTOR'S failure to keep, perform, or observe any other term or condition of this Agreement.
5. CONTRACTOR'S performance of the contract is unreasonably delayed.
6. Should the successful Bidder fail to provide the commodities or services when ordered, and in accordance with the General Terms and Conditions, specifications and any other requirements contained herein are not met, the SPONSOR reserves the right to purchase commodities or services covered by this contract elsewhere if available from an alternate source.
7. The CONTRACTOR agrees by its bid submission that the SPONSOR's decision is final and valid.

Force Majeure: Neither party shall be held to be in breach of the Agreement resulting from this bid, because of any failure to perform any of its obligations hereunder if said failure is due to any act of God, fire, flood, accident, strike, riot, insurrection, war, or any other cause over which that party has no control. Such party shall give notice and full particulars of such Force Majeure in writing to the other party within a reasonable time after occurrence of the event and the obligation of the party giving such notice shall endeavor to remove or overcome such inability with all

reasonable dispatch.

Waiver: The waiver of any breach, violation or default in or with respect to the performance or observance of the covenants and conditions contained herein shall not be taken to constitute a waiver any subsequent breach, violation or default in or with respect to the same or any other covenant or condition hereof.

END OF INSTRUCTIONS TO BIDDERS



Russell R. McMurtry, P.E., Commissioner
One Georgia Center
600 West Peachtree Street, NW
Atlanta, GA 30308
(404) 631-1000 Main Office

July 24, 2024

CERTIFICATE OF QUALIFICATION
Vendor ID: 2MA850

C. W. Matthews Contracting Company, Inc.
1600 Kenview Drive
Marietta, GA 30060

In accordance with The Rules and Regulations governing the Prequalification of Prospective Bidders, the Georgia Department of Transportation has assigned the following Rating. This Certificate of Qualification is effective on the date of issue stated above and cancels and supersedes all Certificates previously issued:

MAXIMUM CAPACITY RATING: \$3,683,400,000.00

CERTIFICATE EXPIRES: June 30, 2026

PRIMARY WORK CLASS/CODE: 400

SECONDARY WORK CLASS(ES)/CODE(S): 149, 150, 163, 167, 201, 205, 208, 209, 310, 432, 439, 441,
452, 461, 500, 500A, 501, 502, 507, 511, 513, 520, 524, 525,
550, 603A, 615, 622, 624, 626, 636, 660, 668 and 670.

The total amount of incomplete work, regardless of its location and with whom it is contracted, whether in progress or awarded but not yet begun, shall not exceed the Maximum Capacity Rating. If dissatisfied with the Rating, we direct you to the Appeals Procedures in §672-5-.08 (1) & (2) and §672-1-.05, Rules of the State Department of Transportation.

A Prequalified Contractor may request an extension of its current prequalification prior to the expiration date of the prequalification by providing the Department with the following information: the amount of time requested for the extension (either 30, 60 or 90 days), the reason for the extension request and the original expiration date of the prequalification. The Department in its discretion will determine whether the extension should be granted and will notify the Contractor of its determination.

Allowing approved prequalification to lapse will leave the Contractors without the ability to bid work until such time as the standing returns to an approved status. If you desire to apply at some intermediate period before the expiration date, your Rating will be reviewed based on the new application.

This Prequalification Certificate is issued for contractors to be eligible for work with the Georgia Department of Transportation (GDOT) only. GDOT does not certify contractors as eligible to do business with entities other than GDOT. *Work class codes are for reference only and do not represent a certification to be provided in support of contractor ability or NAICS code determinations. NAICS Codes are assigned by the office of Equal Employment Opportunity.*

Sincerely,

Patrick Allen, P.E.
Chairman, Prequalification Committee/Contractors

PA:TKA

DIVISION 3 – PROPOSAL DOCUMENTS**PROPOSAL****IMPROVEMENTS TO DALTON MUNICIPAL AIRPORT
DALTON, GEORGIA**

Failure to furnish all requested data will be cause for considering Bidder nonresponsive and may render this Bid invalid on that basis.

**BID FOR: DALTON MUNICIPAL AIRPORT
TAXIWAY PAVEMENT REHABILITATION**

**SUBMITTED TO: CITY OF DALTON
300 W. WAUGH STREET
DALTON, GEORGIA 30722**

SUBMITTED BY: C. W. MATTHEWS CONTRACTING CO., INC.
Bidder's Name

1600 Kenview Drive
Address

Marietta, Georgia 30060
City, State and Zip Code

770-422-7520 Ext. 1254 mikek@cwmatthews.com
Telephone email

The undersigned bidder has carefully examined the site of the work described herein, has become familiar with local conditions and the character and extent of the work, has carefully examined the drawings, the Advertisement, Proposal, Proposal Bond, Contract, Performance and Payment Bonds, Instructions to Bidders, General Conditions, General Provisions, and Special Provisions; and thoroughly understands their stipulations, requirements and provisions.

The undersigned bidder has determined the quality and quantity of materials required; has investigated the location and determined the sources of supply of the materials required; has investigated labor conditions; and has arranged for the continuous prosecution of the work herein described.

The undersigned bidder hereby agrees to be bound by the award of the contract and, if awarded the contract on this Proposal, to execute within **fifteen** calendar days after notice of award, the required Contract and the Performance Bond and Payment Bond, of which Contract this Proposal, the Plans for the work, and the Standard Specifications, with subsequent revisions shall be a part.

The undersigned bidder further agrees if awarded the contract on this proposal to begin work within **ten** days after the date of issuance of the Notice to Proceed unless otherwise authorized by the Engineer, and further agrees that within **fifteen** days after the date of the notice to proceed

to have at work all the equipment specified, along with such other necessary equipment as set out in the specifications.

The undersigned bidder further agrees to provide all necessary equipment, tools, labor, incidentals and other means of construction to do all the work, and furnish all the materials of the specified requirements which are necessary to complete the work in accordance with the Proposal, the Plans and the Specifications and set forth in the Proposal and to all "extra work" which may be required in connection with the construction and completion of the work as required by the Specifications Plans and Special Provisions.

For construction, the undersigned bidder has confirmed that the bidder's organization and equipment are available to perform the project. The bidder agrees, if deemed necessary by the Engineer, to increase this schedule of operations in order to complete the work within the time stated and to the satisfaction of the Engineer.

The bidder understands that the quantities of work shown herein are approximate only and are subject to increase or decrease and agrees that all quantities of work, whether increased or decreased, are to be performed at the unit prices stated in the following estimate of quantities and schedule of prices for the work described.

The undersigned bidder declares that this proposal is made without connection with any other person or persons making proposals for the same work, and is in all respects fair and without collusion or fraud. The bidder also declares that he/she will perform a minimum of **30%** of the contract work by his/her own forces.

The bidder/offeror certifies, by submission of this proposal or acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the bidder/offer/Contractor or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this solicitation/proposal.

Contract Time: Bidder agrees that:

- (A) The Project Work will be completed within **Ninety (90) Calendar Days** from the date when the Contract Time commences.
- (B) He will commence work with an adequate force and equipment at the time stated in the Notice to Proceed, and complete all work in the number of days stipulated from the date stated in said notice.
- (C) The quantities of work listed in the Bid Schedule are approximate and are assumed solely for comparison of Bids. Compensation will be based upon the price bid and actual quantities of work performed in accordance with the Contract Documents.
- (D) Liquidated damages for the delay in completion will be One Thousand Five Hundred Dollars (\$1,500.00) per calendar day.

The undersigned bidder submits herewith proposal guarantee in an amount of not less than five percent (5%) of the total amount of the proposal offered and agrees and consents that the

proposal guarantee shall be forfeited to the Sponsor as liquidated damages if the required Contract, Performance Bond and Payment Bond are not executed within fifteen (15) calendar days from the Notice of Award and work has not started as required in the previous statements.

C. W. MATTHEWS CONTRACTING CO., INC.

BY: Michael Kleuckling
NAME
Vice President
TITLE



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PROPOSAL BID FORM

Base Bid						
Item No.	Spec. Item No.	Description	Approx. Qty	Unit	Unit Price	Cost
1	FAA C-105	Mobilization @ One Hundred Four Thousand Six Hundred Thirty Seven Dollars & Seventy Six Cents	1	LS	104,637.76	104,637.76
2	FAA P-101-5.1	Cold Milling Variable Depth (Transition) - incl haul off @ Five Dollars & Twenty Three Cents	3,500	SY	5.23	18,305.00
3	GDOT 400-A	Asphaltic concrete 12.5 mm Superpave, Group 1, Including polymer- modified bituminous materials (PG76-22) and hydrated lime @ One Hundred Forty Two Dollars & Six Cents	4,200	TON	142.06	596,652.00
4	GDOT 400-B	Asphaltic concrete 19 mm Superpave, Group 1, Including polymer- modified bituminous materials (PG76-22) and hydrated lime @ One Hundred Seventy Dollars & Forty Five Cents	200	TON	170.45	34,090.00
5	GDOT 413	Tack Coat @ Zero Dollars & Fifty Four Cents	4,000	GAL	0.54	2,160.00
6	FAA P-620-5.1	Temporary Taxiway Marking, Type III (Yellow), including Microbicide @ Three Dollars & Seventeen Cents	5,300	SF	3.17	16,801.00
7	FAA P-620-5.2	Permanent Taxiway Marking, Type III (Yellow), including Reflective Material (Type III) and Microbicide @ Two Dollars & Twelve Cents	5,300	SF	2.12	11,236.00
8	FAA P-901-5.1	Permanent Seeding, including Mulch, Seed, Fertilizer, Lime, Topsoil, Tackifiers, and Minor Shoulder Grading @ Twenty Four Thousand Seven Hundred Fifty Seven Dollars & Eighty Nine Cents	3.0	AC	24,757.89	74,273.67
9	FAA C-102-5.1a	Construction Entrance/Exit, including installation, maintenance and removal @ Seven Thousand Four Hundred Fifty Four Dollars & Sixty Seven Cents	1	EA	7,454.67	7,454.67
10	FAA P-101-5.3	Full Depth Pavement Removal - including haul off @ Twenty Five Dollars & Twelve Cents	550	SY	25.12	13,816.00
11	FAA P-152-4.2	Structural Fill Material for Pavement Repair Backfill (Off-Site) including hauling and install (Embankment) @ Ninety One Dollars & Eleven Cents	550	CY	91.11	50,110.50
12	FAA P-101-5.2	Surface Preparation and Cleaning including Herbicide and Soil Sterilant @ Zero Dollars & Eleven Cents	31,000	SY	0.11	3,410.00

13	GDOT 310	GAB 6" (Pavement Repair) incl hauling and install @ Twenty Seven Dollars & Forty Nine Cents	550	SY	27.49	15,119.50
14	FAA P-605	Crack Seal @ Two Dollars & Thirty Eight Cents	30,000	LF	2.38	71,400.00
15	FAA P-152-4.1	Unclassified Excavation (including hauling off-site) @ Sixty Four Dollars & Sixty Seven Cents	550	CY	64.67	35,568.50


Total Bid = 1,055,034.60

Signature:  (Bidder)
Michael Kleuckling, Vice President

Bidder hereby acknowledges receipt of the following addenda:

Addendum No.	Dated
<u>1</u>	<u>April 27, 2025</u>
<u>2</u>	<u>May 5, 2025</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

C. W. MATTHEWS CONTRACTING CO., INC.

BY: 
NAME
Michael Kleuckling, Vice President
TITLE

Business Address: 1600 Kenview Drive

Marietta, Georgia 30060

Telephone Number 770-422-7520 Ext. 1254

Manufacturer's or
Contractor's I.D. No. GCCO007346 (Copy Attached)

SUBCONTRACTORS, SUPPLIERS AND OTHERS:

Subcontractor/Supplier/Others	Subcontract Work Item	Dollar value of Subcontract work
-------------------------------	-----------------------	-------------------------------------

<u>TCA Electrical</u>	<u>Electrical</u>	<u>\$ 65,000.00</u>
<u>Soil Erosion & Education</u>	<u>Erosion & Grassing</u>	<u>\$ 40,250.00</u>
<u>Hasco</u>	<u>Pavement Markings & Crack Seal</u>	<u>\$ 122,600.00</u>
<u> </u>	<u> </u>	<u>\$</u>
<u> </u>	<u> </u>	<u>\$</u>

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BID PROPOSAL FORM

ADDITIVE BID

Additive Bid No. 1 - Taxiway Fillet Widening and Relocated Taxiway Connector						
No.	Item No.	Description	Estimated Quantity	Unit	Unit Price in Numbers	Total Amount Per Item
1	GDOT 310	Graded Aggregate Base Course, 12" - Including Material @ <u>Fifty Four Dollars & Eighty Four Cents</u>	3,300	SY	\$ <u>54.84</u>	\$ <u>180,972.00</u>
2	GDOT 400-A	Asphaltic concrete 12.5 mm Superpave, Group 1, Including polymer- modified bituminous materials (PG76-22) and hydrated lime @ <u>One Hundred Fifty Eight Dollars & Sixty Four Cents</u>	360	TON	\$ <u>158.64</u>	\$ <u>57,110.40</u>
3	GDOT 400-B	Asphaltic concrete 19 mm Superpave, Group 1, Including polymer- modified bituminous materials (PG76-22) and hydrated lime @ <u>One Hundred Fifty Seven Dollars & Ninety Three Cents</u>	540	TON	\$ <u>157.93</u>	\$ <u>85,282.20</u>
4	GDOT 413	Tack Coat @ <u>Zero Dollars & Fifty Four Cents</u>	260	GAL	\$ <u>0.54</u>	\$ <u>140.40</u>
5	C-105	Mobilization @ <u>Sixty Seven Thousand Twenty One Dollars & Seventy Five Cents</u>	1	LS	\$ <u>67,021.75</u>	\$ <u>67,021.75</u>
6	C-102-5.1a	Construction Entrance/Exit, including installation, maintenance and removal @ <u>Seven Thousand Four Hundred Fifty Four Dollars & Sixty Seven Cents</u>	1	EA	\$ <u>7,454.67</u>	\$ <u>7,454.67</u>
7	C-102-5.1b	NPDES Permits, Fees, Monitoring Implementation, NOI, NOT, etc. @ <u>Five Thousand Five Hundred Twenty Six Dollars & Forty Six Cents</u>	1	LS	\$ <u>5,526.46</u>	\$ <u>5,526.46</u>
8	C-102-5.1c	Temporary Seeding and Mulching @ <u>Zero Dollars & Forty Cents</u>	15,750	SY	\$ <u>0.40</u>	\$ <u>6,300.00</u>
9	C-102-5.1d	Installation, maintenance, and removal of Silt Fence @ <u>Seven Dollars & Forty One Cents</u>	725	LF	\$ <u>7.41</u>	\$ <u>5,372.25</u>
10	C-102-5.1e	Installation, maintenance, and removal of Inlet Protection with Filter Fabric @ <u>Four Hundred Seventeen Dollars & Ninety Nine Cents</u>	4	EA	\$ <u>417.99</u>	\$ <u>1,671.96</u>
11	C-102-5.1f	Installation, maintenance, and removal of Outlet Protection, Rip Rap (6" Stone) @ <u>One Hundred Fifty Four Dollars & Sixty Eight Cents</u>	18	CY	\$ <u>154.68</u>	\$ <u>2,784.24</u>
12	C-102-5.1g	Installation, maintenance, and removal of Haybale Check Dam @ <u>Four Hundred Twenty Three Dollars & Twenty Eight Cents</u>	2	EA	\$ <u>423.28</u>	\$ <u>846.56</u>
13	C-102-5.1h	Installation, maintenance, and removal of Filter Ring, Stone @ <u>One Hundred Fifty Two Dollars & Four Cents</u>	24	CY	\$ <u>152.04</u>	\$ <u>3,648.96</u>
14	P-101-5.1	Cold Milling Variable Depth (Transition) - incl haul off @ <u>Five Dollars & Forty Nine Cents</u>	1,600	SY	\$ <u>5.49</u>	\$ <u>8,784.00</u>

15	P-101-5.3	Full-Depth Pavement Removal - including haul off @ <u>Twelve Dollars & Thirty Eight Cents</u>	860	SY	\$ <u>12.38</u>	\$ <u>10,646.80</u>
16	P-101-5.4	Removal of Existing 15" RCP @ <u>Fifty Dollars & Seventy Eight Cents</u>	90	LF	\$ <u>50.78</u>	\$ <u>4,570.20</u>
17	P-101-5.5	Removal of Existing Inlet @ <u>Seven Hundred Fifty Seven Dollars & Twenty Cents</u>	1	EA	\$ <u>757.20</u>	\$ <u>757.20</u>
18	P-101-5.6	Removal of Existing Flared End Section @ <u>Five Hundred Seven Dollars & Ninety Eight Cents</u>	3	EA	\$ <u>507.98</u>	\$ <u>1,523.94</u>
19	P-101-5.7	Removal of Existing Existing Taxiway Edge Light, incl. Concrete Apron, Base Can, and Cabling @ <u>Two Hundred Eleven Dollars & Sixty Four Cents</u>	33	EA	\$ <u>211.64</u>	\$ <u>6,984.12</u>
20	P-101-5.8	Removal of Existing Existing Runway Sign, incl. Concrete Foundation, Base Can, and Cabling @ <u>One Thousand Fifty Eight Dollars & Twenty Cents</u>	2	EA	\$ <u>1,058.20</u>	\$ <u>2,116.40</u>
21	P-101-5.9	Sawed Joints in Existing Asphalt Pavement @ <u>Three Dollars & Seventeen Cents</u>	2,000	LF	\$ <u>3.17</u>	\$ <u>6,340.00</u>
22	P-152-4.3	Embankment in Place @ <u>Thirty Four Dollars & Ten Cents</u>	1,100	CY	\$ <u>34.10</u>	\$ <u>37,510.00</u>
23	P-152-4.4	Unclassified Excavation @ <u>Twenty Seven Dollars & Forty Five Cents</u>	900	CY	\$ <u>27.45</u>	\$ <u>24,705.00</u>
24	P-620-5.1	Temporary Taxiway Marking, Type III, (Yellow), including Microbicide @ <u>Five Dollars & Twenty Nine Cents</u>	750	SF	\$ <u>5.29</u>	\$ <u>3,967.50</u>
25	P-620-5.2	Permanent Taxiway Marking, Type III, (Yellow), including Reflective Material (Type III) and Microbicide @ <u>Five Dollars & Twenty Nine Cents</u>	750	SF	\$ <u>5.29</u>	\$ <u>3,967.50</u>
26	D-701-5.1	Reinforced Concrete Pipe, 15 inch, Class V @ <u>Seventy Six Dollars & Fifty Four Cents</u>	190	LF	\$ <u>76.54</u>	\$ <u>14,542.60</u>
27	D-751-5.1	Pre-Cast Drop Inlet for 15" RCP (GDOT 1019A, Type A) @ <u>Four Thousand Five Hundred Ninety Two Dollars & Thirty Eight Cents</u>	1	EA	\$ <u>4,592.38</u>	\$ <u>4,592.38</u>
28	D-752-5.1	Pre-cast Reinforced Concrete Headwall for 15" RCP (GDOT Std. 1001-B) @ <u>One Thousand Four Hundred Thirty Seven Dollars & Seventy Seven Cents</u>	2	EA	\$ <u>1,437.77</u>	\$ <u>2,875.54</u>
29	D-752-5.2	Flared End Section for 15" RCP @ <u>One Thousand Forty Six Dollars & Fifty Five Cents</u>	1	EA	\$ <u>1,046.55</u>	\$ <u>1,046.55</u>
30	D-752-5.3	Concrete Pipe Collar for 15" RCP (GDOT Standard 9031U) @ <u>Five Hundred Twenty Nine Dollars & Ten Cents</u>	2	EA	\$ <u>529.10</u>	\$ <u>1,058.20</u>
31	T-901-5.1	Permanent Seeding, including Mulch, Seed, Fertilizer, Lime, Topsoil, Tackifiers, and Minor Shoulder Grading @ <u>Twenty Four Thousand Seven Hundred Fifty Seven Dollars & Ninety Cents</u>	2.5	AC	\$ <u>24,757.90</u>	\$ <u>61,894.75</u>

32	L-108-5.1	Trenching for direct-buried cable, 18-inch minimum depth @ Five Dollars & Twenty Nine Cents	1,950	LF	\$ 5.29	\$ 10,315.50
33	L-108-5.2	Trenching for Duct Bank, 30" minimum depth @ One Hundred Five Dollars & Eighty Two Cents	120	LF	\$ 105.82	\$ 12,698.40
34	L-108-5.3	No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit @ Three Dollars & Seventeen Cents	1,950	LF	\$ 3.17	\$ 6,181.50
35	L-108-5.4	No. 6 AWG, Solid, Bare Copper Counterpoise Wire, Installed in Trench or Above the Duct Bank or Conduit, Including Connections/Terminations @ Two Dollars & Twelve Cents	1,950	LF	\$ 2.12	\$ 4,134.00
36	L-110-5.1	Concrete Encased, Electrical Duct Bank, 2-way 4-inch C, 24-inch Minimum Cover @ Eighty Nine Dollars & Ninety Five Cents	120	LF	\$ 89.95	\$ 10,794.00
37	L-115-5.1	L-867 Electrical Junction Box, Class 1A, Size B (12") @ One Thousand Five Hundred Eighty Seven Dollars & Thirty Cents	3	EA	\$ 1,587.30	\$ 4,761.90
38	L-125-5.1	L-853 Elevated Taxiway Retroreflective Marker, Blue, 14" @ Two Hundred Sixty Four Dollars & Fifty Five Cents	44	EA	\$ 264.55	\$ 11,640.20

ADDITIVE BID – TOTAL AMOUNT \$ 682,540.03

ADDITIVE BID – TOTAL AMOUNT (IN WORDS):

Six Hundred Eighty Two Thousand Five Hundred Forty Dollars & Three Cents

_____ Dollars and
_____ Cents



(BASE BID + ADDITIVE BID) TOTAL AMOUNT \$ 1,737,574.63

Bidder: C. W. MATTHEWS CONTRACTING CO., INC.



STATE OF GEORGIA

BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
LICENSE NO. **GCCO007346**
C.W. Matthews Contracting Co. Inc.

Daniel P. Garcia
1600 Kenview Drive
Marietta GA 30060

Qualifying Agent: Kevin Thomas Eubanks
Qualifying Agent License NO: GCQA007342
General Contractor Company

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

C.W. Matthews Contracting Co. Inc.
1600 Kenview Drive
Marietta GA 30060

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia State Licensing Board for Residential and General Contractors
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STATE OF GEORGIA

BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
LICENSE NO. GCQA007342

Kevin Thomas Eubanks
161 Celestial Ridge Drive
Dallas GA 30132

Company Name: C.W. Matthews Contracting Co. Inc.
Company License NO: GCCO007346
General Contractor Qualifying Agent

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

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STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State

Georgia State Licensing Board for Residential and General Contractors
License No. GCQA007342

Kevin Thomas Eubanks

161 Celestial Ridge Drive
Dallas GA 30132

Company Name: C.W. Matthews Contracting Co. Inc.
Company License NO: GCCO007346
General Contractor Qualifying Agent

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

PROPOSAL GUARANTEE (5%)**DALTON MUNICIPAL AIRPORT
DALTON, GEORGIA**

Know All Men By These Presents, that _____

of _____
(Address)

has tendered the attached (cashier's or certified) check payable to CITY OF DALTON, DALTON, GEORGIA to be held, cashed, forfeited or returned, pending the fulfillment of the following obligating conditions.

The conditions of this obligation are such as to operate as a guarantee that the Contractor will fully and promptly execute a contract and cause to be executed Performance and Payment Bonds acceptable to the Sponsor, as set forth in the Proposal or bid, should the same be accepted, and that not longer than fifteen (15) days after the receipt of notification of acceptance of his proposal and the receipt by the Contractor of contract forms from the Sponsor, he will execute in his Proposal or bid, together with and accompanied by Performance and Payment Bonds, satisfactory to the Sponsor, in the amount of the contract. It is also required that the Contractor begin work within ten (10) days after notice to proceed by the Sponsor, and further agrees that within fifteen (15) days after given notice to proceed by the Sponsor to have at work all of the equipment specified, along with such other necessary equipment as set out in the Special Provisions; and that failure to perform or comply with any or all of the foregoing requirements, within the time set forth above, shall be just and adequate cause for the annulment of the award, and it is understood that, in the event of the annulment of the award, the amount of this guarantee shall immediately be at the disposal of the Sponsor, not as a penalty, but as an agreed liquidated damage. Should each and all of the foregoing conditions be fulfilled, this obligation shall be null and void, otherwise to remain in full force and effect.

In testimony whereof, the Contractor has caused these presents to be fully signed, witnessed and attested.

WITNESS: _____ CONTRACTOR: _____

ATTEST: _____ ADDRESS: _____

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PROPOSAL GUARANTEE BOND (5%)**DALTON MUNICIPAL AIRPORT
DALTON, GEORGIA**

KNOW All Men By These Presents, that _____

C.W. Matthews Contracting Co., Inc., 1600 Kenview Drive NW, Marietta, GA 30060

(hereinafter called the "Principal"), Principal and the ^{Federal Insurance Company}
202B Hall's Mill Road, Whitehouse Station, NJ 08889

a corporation created and existing under the laws of the State of Indiana

with its principal office in the City of Whitehouse Station, NJ and licensed to do business in the State

of Georgia (hereinafter called the "Surety"), is held and firmly bound unto CITY OF DALTON,

DALTON, GEORGIA or their duly authorized representative, acting for the Sponsor, hereinafter

called the "Sponsor"), in the full and just sum of _____

Five Percent Of The Total Amount Bid (\$ 5% total amount bid)

good and lawful money of the United States of America, to be paid at sight, without protest, of which sum of money will and truly to be paid, the said Surety binds itself, its heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such as to operate as a guarantee that the Principal will fully and promptly execute a contract and cause to be executed performance and payment bonds acceptable to the Sponsor, all set forth in the Proposal or bid, should the same be accepted, and that not longer than fifteen (15) days after the receipt by the notification of acceptance of this Proposal and this receipt by the Principal of contract forms from the Sponsor, he will execute a contract on the basis of the terms, conditions and unit prices set forth in his Proposal or bid, together with and accompanied by performance and payment bonds, satisfactory to the Sponsor, in the amount determined by the Sponsor, not to exceed the total amount of the contract; it is also required that the Contractor begin work within ten (10) days after notice to proceed by the Sponsor, and further agrees that within fifteen (15) days after given notice to proceed by the

Sponsor to have at work all of the equipment specified, along with other necessary equipment as set out in the Special Provision; and that failure to perform or comply with any or all of the foregoing requirements within the time set forth above, shag be just and adequate cause for the annulment of the award, the amount of this guarantee shall immediately be at the disposal of the Sponsor, not as a penalty, but as an agreed liquidated damage. Should each and all of the foregoing conditions be fulfilled and Performance and Payment Bonds, as set forth in the Proposal, be executed, bonds being satisfactory to the Sponsor, this obligation shall be null and void, otherwise in full force and effect.

In testimony whereof, the Principal and Surety have caused these presents to be duly signed and sealed.

This 12 day of May, A.D. 2025.

WITNESS:

Brenda B. Nation
Brenda B. Nation
C.W. Matthews Contracting Co., Inc.
(Principal)

BY:

Michael Kleuckling, Vice President
Federal Insurance Company
(Surety)

BY:

Jaclyn Maffey
General Agent of Attorney-in Fact
Jaclyn Maffey, Attorney-in-Fact



(SEAL)

NOTE: Each agent representing such Surety Company must file with the Sponsor his Power of Attorney duly executed by said Surety Company. The Surety Company must be listed on U.S. Treasury Circular 570.



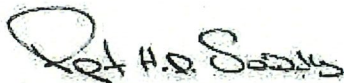
Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company
Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that **FEDERAL INSURANCE COMPANY**, an Indiana corporation, **VIGILANT INSURANCE COMPANY**, a New York corporation, **PACIFIC INDEMNITY COMPANY**, a Delaware corporation, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint Ryan Gray, Marisol Mojica, Andraeh Moran, Krystal L. Stravato, Jaclyn Maffey and Kevin T. Walsh Jr. of Whippany, New Jersey; Andrea E. Gorbett and Mariya Leonidov of Jericho, New York; Neil C. Donovan and Gerard Leib of Berwyn, Pennsylvania -----

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said **FEDERAL INSURANCE COMPANY**, **VIGILANT INSURANCE COMPANY**, **PACIFIC INDEMNITY COMPANY**, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** have each executed and attested these presents and affixed their corporate seals on this 7th day of October, 2024.



Rupert HD Swindells, Assistant Secretary



Warren Eichhorn, Vice President



STATE OF NEW JERSEY

County of Hunterdon

SS.

On this 7th day of October, 2024 before me, a Notary Public of New Jersey, personally came Rupert HD Swindells and Warren Eichhorn, to me known to be Assistant Secretary and Vice President, respectively, of **FEDERAL INSURANCE COMPANY**, **VIGILANT INSURANCE COMPANY**, **PACIFIC INDEMNITY COMPANY**, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY**, the companies which executed the foregoing Power of Attorney, and the said Rupert HD Swindells and Warren Eichhorn, being by me duly sworn, severally and each for himself did depose and say that they are Assistant Secretary and Vice President, respectively, of **FEDERAL INSURANCE COMPANY**, **VIGILANT INSURANCE COMPANY**, **PACIFIC INDEMNITY COMPANY**, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



Albert Contursi
NOTARY PUBLIC OF NEW JERSEY
No 50202369
Commission Expires August 22, 2027


Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of **FEDERAL INSURANCE COMPANY**, **VIGILANT INSURANCE COMPANY**, and **PACIFIC INDEMNITY COMPANY** on August 30, 2016; **WESTCHESTER FIRE INSURANCE COMPANY** on December 11, 2006; and **ACE AMERICAN INSURANCE COMPANY** on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
- (2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
- (3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

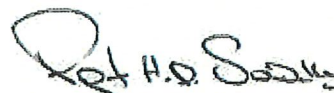
FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, Rupert HD Swindells, Assistant Secretary of **FEDERAL INSURANCE COMPANY**, **VIGILANT INSURANCE COMPANY**, **PACIFIC INDEMNITY COMPANY**, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
- (ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this May 12, 2025




Rupert HD Swindells, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:

Telephone (908) 903-3493

Fax (908) 903-3656

e-mail: surety@chubb.com

CERTIFICATE OF CORPORATE BIDDER

I, Michael D. Bell, certify that I am Secretary of the corporation named as bidder herein, same being organized and incorporated to do business under the laws of the State of Georgia; that Michael Kleuckling ~~and~~ who executed this proposal on behalf of the bidder were, then and there, Vice President ~~and~~ respectively, and that said proposal was duly signed by said officers for and in behalf of said corporation, pursuant to the authority of its governing body and within the scope of its corporate powers.

I further certify that the names and addresses of the Sponsors of all outstanding stock of said corporation as of this date are as follows:

Please See Attached

This 12th day of May, 2025.



Michael D. Bell Secretary

(Corporate Seal)

MATSCO, INCORPORATED
SUMMARY OF SHAREHOLDERS
AS OF JANUARY 1, 2025

<i>SHAREHOLDER</i>	<i>TOTAL NUMBER OF SHARES OWNED</i>	<i>% Ownership</i>
The Charles Matthews Qualified Subchapter S Trust	8,395	4.36523%
The Mary Matthews Burton Qualified Subchapter S Trust	8,395	4.36523%
The Esther Elizabeth Burton Qualified Subchapter S Trust	567	0.29483%
The Esther Elizabeth Burton Family Trust	19,231	9.99974%
The 2011 Esther Elizabeth Burton Family Trust	5,277	2.74394%
The Katherine Dawn Matthews Qualified Subchapter S Trust	567	0.29483%
The Katherine Dawn Matthews Family Trust	19,231	9.99974%
The 2011 Katherine Dawn Matthews Family Trust	5,277	2.74394%
The Luke Doran Burton Qualified Subchapter S Trust	567	0.29483%
The Luke Doran Burton Family Trust	19,231	9.99974%
The 2011 Luke Doran Burton Family Trust	5,277	2.74394%
The Lydia Dianne Burton Qualified Subchapter S Trust	103	0.05356%
The Lydia Dianne Burton Family Trust	19,696	10.24150%
The 2011 Lydia Dianne Burton Family Trust	5,276	2.74342%
The Mary Grace Burton Qualified Subchapter S Trust	567	0.29483%
The Mary Grace Burton Family Trust	19,231	9.99974%
The 2011 Mary Grace Burton Family Trust	5,277	2.74394%
The Michael Scott Matthews Qualified Subchapter S Trust	567	0.29483%
The Michael Scott Matthews Family Trust	19,231	9.99974%
The 2011 Michael Scott Matthews Family Trust	5,277	2.74394%
The William Robert Burton Qualified Subchapter S Trust	567	0.29483%
The William Robert Burton Family Trust	19,231	9.99974%
The 2011 William Robert Burton Family Trust	5,277	2.74394%
TOTAL:	192,315	100.00000%

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**CERTIFICATE OF AUTHORITY FOR LIMITED LIABILITY CORPORATION,
PARTNERSHIP OR SOLE OWNER**

I, the undersigned _____, am the
_____ of _____,
a Georgia limited liability company (the "LLC") or Partnership, or Sole Owner. In order to
induce CITY OF DALTON, DALTON, GEORGIA (the CITY) to enter into a contract with the LLC,
Partnership, or Sole Owner executed on its behalf by me, I do hereby personally guarantee to the
CITY that I, acting alone as _____, am vested with full power and
authority to act for and on behalf of the LLC, Partnership, or Sole Owner in the execution of
contracts between the LLC, Partnership or Sole Owner and the CITY, and any such contract(s)
will be binding on the LLC, Partnership, or Sole Owner.

This _____ day of _____, 2025.

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FORM OF NONCONCLUSION AFFIDAVIT

(This Affidavit is Part of Bid)

STATE OF GeorgiaCOUNTY OF CobbMichael Kleuckling
being first duly sworn, deposes and says that he/she isVice President
(Sole owner, a partner, president, secretary, etc.)of C. W. MATTHEWS CONTRACTING CO., INC.

the party making the foregoing Proposal or BID that such BID is genuine and not collusive or sham; that said BIDDER has not colluded, conspired, connived, or agreed, directly or indirectly, with any BIDDER or person, to put in a sham BID, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the Bid Price of affiant or any other BIDDER, or to fix any overhead, profit or cost element of said Bid Price, or of that of any other BIDDER, or to secure any advantage against SPONSOR any person interested in the proposed Contract; and that all statements in said Proposal or Bid are true; and further, that such BIDDER has not, directly or indirectly submitted this BID, or the contents thereof, or divulged information or data relative thereto to any association or to any member or agent thereof.

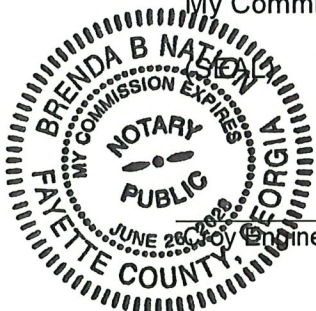
(Bidder) Michael Kleuckling, Vice President for
C. W. MATTHEWS CONTRACTING CO., INC.

Sworn to and subscribed before me this
12th day of May, 2025.

Brenda B. Nation
Notary Public in and for Brenda B. Nation

Fayette County Georgia

My Commission expires June 26, 2028.



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CERTIFICATION OFFEROR/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The Bidder/Offeror must complete the following two certification statements. The Bidder/Offeror must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The Bidder/Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

- 1) The Bidder/Offeror represents that it is () is not (✓) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
- 2) The Bidder/Offeror represents that it is () is not (✓) a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

Note

If a Bidder/Offeror responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the Sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The Bidder/Offeror therefore must provide information to the Sponsor about its tax liability or conviction to the Sponsor, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twenty four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. Code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 USC § 3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.


Signature of Bidder/Offeror Michael Kleuckling

Vice President
Title


Date: May 12, 2025



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**CERTIFICATION REGARDING DEBARMENT, SUSPENSION,
INELIGIBILITY AND VOLUNTARY EXCLUSION**

The Bidder/offer certifies, by submission of this Proposal or acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntary excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier, transactions, proposals, contracts, and subcontracts. Where the Bidder/offeror or any lower tier participant is unable to certify to this statement, it shall attach an explanation of this solicitation/proposal.



Signature of Contractor Michael Kleuckling

Vice President

Title

Date: May 12, 2025



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CERTIFICATE OF COMPLIANCE WITH FAA BUY AMERICAN PREFERENCE – CONSTRUCTION PROJECTS

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with its proposal. The bidder or offeror must indicate how it intends to comply with 49 USC § 50101, BABA and other related Made in America Laws, U.S. statutes, guidance, and FAA policies, by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e., not both) by inserting a checkmark (✓) or the letter "X".

☒ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101, BABA and other related U.S. statutes, guidance, and policies of the FAA by:

- a) Only installing iron, steel and manufactured products produced in the United States;
- b) Only installing construction materials defined as: an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber or drywall that have been manufactured in the United States.
- c) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
- d) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

- a) To provide to the Airport Sponsor or the FAA evidence that documents the source and origin of the iron, steel, and/or manufactured product.
- b) To faithfully comply with providing U.S. domestic products.
- c) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.
- d) Certify that all construction materials used in the project are manufactured in the U.S.

☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

- a) To submit to the Airport Sponsor or FAA within 15 calendar days of being selected as the responsive bidder, a formal waiver request and required documentation that supports the type of waiver being requested.

- b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the proposal.
- c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
- d) To furnish U.S. domestic product for any waiver request that the FAA rejects.
- e) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

Required Documentation

Type 3 Waiver – The cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the “facility/project.” The required documentation for a Type 3 waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire including;
- b) Listing of all manufactured products that are not comprised of 100 percent U.S. domestic content (excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
- c) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.
- d) Percentage of non-domestic component and subcomponent cost as compared to total “facility” component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.

Type 4 Waiver (Unreasonable Costs) - Applying this provision for iron, steel, manufactured goods or construction materials would increase the cost of the overall project by more than 25 percent. The required documentation for this waiver is:

- a) A completed Content Percentage Worksheet and Final Assembly Questionnaire from
- b) At minimum two comparable equal bids and/or offers;
- c) Receipt or record that demonstrates that supplier scouting called for in Executive Order 14005, indicates that no domestic source exists for the project and/or component;
- d) Completed waiver applications for each comparable bid and/or offer.

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code

May 12, 2025

Date

Signature

Michael Kleuckling

C. W. MATTHEWS CONTRACTING CO., INC.

Company Name

Vice President

Title



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CERTIFICATION REGARDING FOREIGN PARTICIPATION

The contractor or subcontractor, by submission of an offer and/or execution of a contract, certifies that it:

- a. Is not owned or controlled by one or more citizens or nationals of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
- b. Has not knowingly entered into any contract or subcontract for this project with a contractor that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;
- c. Has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the Contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on the said list for use on the project, the Federal Aviation Administration may direct, through the sponsor, cancellation of the contract at no cost to the Government.

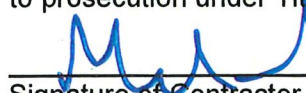
Further, the Contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. This Contractor may rely upon the certification of a prospective subcontractor unless it has knowledge of the certification of erroneous.

The Contractor shall provide immediate written notice to the sponsor if the Contractor learns that is certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide immediate written notice to the Contractor, if at any time it learns that its certification was erroneous by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct, through the sponsor, cancellation of the contract or subcontract for default at no cost to the Government.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a Contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

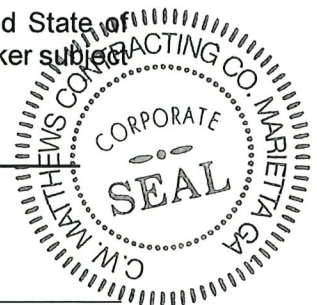


Signature of Contractor

Michael Kleuckling

Vice President

Title



Bidder: C. W. MATTHEWS CONTRACTING CO., INC.

Croy Engineering # 2106.006

PROPOSAL DOCUMENTS

53

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CERTIFICATE OF NONSEGREGATED FACILITIES

The federally-assisted construction contractor certifies that she or he does not maintain or provide, for his employees, any segregated facilities at any of his establishments and that she or he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally-assisted construction contractor certifies that she or he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that she or he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The federally-assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally-assisted construction contractor agrees that (except where she or he has obtained identical certifications from proposed subcontractors for specific time periods) she or he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that she or he will retain such certifications in his files.

If the bidder has participated in a previous contract subject to the nondiscrimination clause and has not submitted compliance reports as required by applicable instructions, the bidder shall submit written evidence of required compliance prior to award and within ten (10) days after opening of bids.

The Contractor or Subcontractor, by submission of an offer and/or execution of a contract, certifies that it:

- a. is not owned or controlled by one or more citizens or nationals of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
- b. has not knowingly entered into any contract or subcontract for this project with a contractor that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list.
- c. has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on the said list for use on the project, the Federal Aviation Administration may direct, through the sponsor, cancellation of the contract at no cost to the Government.


Further, the Contractor agrees that, if awarded a contract resulting from this solicitation, it will

incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The Contractor may rely upon the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.

The Contractor shall provide immediate written notice to the sponsor if the Contractor learns that its certification or that a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide immediate written notice to the Contractor, if at any time it learns that its certification was erroneous by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct, through the sponsor, cancellation of the contract or subcontract for default at no cost to the Government.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings. This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under title 18, United States Code, Section 1001.



Contractor Date
Michael Kleuckling, Vice President May 12, 2025

Bidder: C. W. MATTHEWS CONTRACTING CO., INC.



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EQUAL OPPORTUNITY REPORT STATEMENT

The bidder shall complete the following statement by checking the appropriate spaces. Failure to complete these blanks may be grounds for rejection of bid.

The Bidder ☒ has not ☐ participated in a previous contract subject to the nondiscrimination clause prescribed by Executive Order 11246 dated 24 September, 1965, or Executive Order 11114, dated 2 June, 1963.

The Bidder ☒ has not ☐ submitted compliance reports in connection with any such contract as required by applicable instructions.

If the bidder has participated in a previous contract subject to the nondiscrimination clause and has not submitted compliance reports as required by applicable instruction, the bidder shall submit written evidence of required compliance within **ten (10)** days after opening of bids.

The bidder certifies that he does ☒ does not ☐ employ **fifty (50)** or more employees.

PERFORMANCE OF WORK BY SUBCONTRACTORS

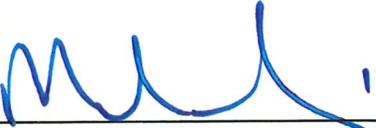
The BIDDER hereby states that he proposes, if awarded the Contract, to use the following subcontractors on this project: List below all proposed subcontractors and trade specialties. (List only one subcontractor for each item.)

Item	Subcontractor
Electrical	TCA Electrical
Erosion & Grassing	Soil Erosion & Education
Pavement Markings & Crack Seal	Hasco

Other (Describe)

Estimated Total Cost of Items that BIDDER states will be performed by Subcontractor(s):

(\$ 227,850)


Signature of Contractor Michael Kleuckling

Vice President

Title

Bidder: **C. W. MATTHEWS CONTRACTING CO., INC.**

Croy Engineering # 2106.006

PROPOSAL DOCUMENTS



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REQUIREMENT OF 49 CFR PART 26 – (AS AMENDED) DISADVANTAGED BUSINESS ENTERPRISE

The following bid conditions apply to this Department of Transportation (DOT) assisted contract. Submission of a bid/proposal by a prospective Contractor shall constitute full acceptance of these bid conditions.

1. Definition - Disadvantaged Business Enterprise (DBE) as used in this Contract shall have the same meaning as defined in 49 CFR Part 26, as amended.
2. Policy - It is the policy of DOT that disadvantaged business enterprise as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with federal funds. Consequently, the DBE requirements of 49 CFR Part 26 apply to this contract.
3. DBE Obligation - The Contractor agrees to ensure that disadvantaged business enterprises as defined in 49 CFR Part 26 have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with federal funds. In this regard, all Contractors shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that disadvantaged business enterprises have the maximum opportunity to compete for and perform contracts. Contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of DOT assisted contracts.
4. Compliance - All bidders, potential contractors, or subcontractors for this DOT assisted contract are hereby notified that failure to carry out the DOT policy and the DBE obligations, as set forth above, shall constitute a breach of contract which may result in termination of the contract or such other remedy as deemed appropriate by the Sponsor.
5. Subcontract Clause - All bidders and potential Contractors hereby assure that they will include the above clauses in all subcontracts which offer further subcontracting opportunities.
6. Contract Award - Bidders are hereby advised that meeting DBE subcontract goals or making an acceptable good faith effort to meet such goals are conditions of being awarded this DOT assisted contract.

The Sponsor proposes to award the contract to the lowest responsive and responsive bidder submitting a reasonable bid provided he has met the goals for DBE participation or, if failing to meet the goals, he has made an acceptable good faith effort to meet the established goals for the DBE participation. The bidder is advised that the Sponsor reserves the right to reject any or all bids submitted.

7. Subcontract Goals - The attainment of goals established for this contract are to be measured as a percentage of the total dollar value of the contract. The goals established for this contract is 7.28% to be performed by the DBE's.
8. Available Certified DBEs - The Sponsor has developed an DBE Program and DBE Directory as required by 49 CFR Part 26. For this contract, the Sponsor will accept as certified, those DBE firms which are identified by the Small Business Administration (SBA) as 8(a) firms and those firms which are currently certified by other Department of Transportation (DOT) agencies (such as the Department of Transportation). Firms which

desire certification which do not meet the SBA or other DOT agencies previous certification criteria are required by the Sponsor to complete the DOT recommended Schedule A or Schedule B (as applicable) in its entirety before they can be certified for this contract. Copies of Schedule A or Schedule B may be obtained from Sponsor. The act of simply filling out the Schedule A or Schedule B does not mean automatic certification by the Sponsor. The rules and procedures of 49 CFR Part 26 shall govern the certification process of the Sponsor.

9. **Contractor's Required Submission** - Prospective Contractors shall submit with his bid the following summary of "Letters of Intent" information concerning DBE participation.

The bidder/offeror will also be required to submit the following information:

1. The names and addresses of DBE firms that will participate in the contract;
2. Written documentation of the bidder/offeror's commitment to use a DBE subcontractor whose participation it submits to meet the contract goal;
3. Written confirmation from the DBE that it is participating in the contract as provided in the commitment made under (2);

MINORITY SUBCONTRACTS

Minority Subcontractor	Subcontract Work Item	Dollar value of Subcontract work
		\$ _____
		\$ _____
		\$ _____
		\$ _____
		\$ _____

WOMEN SUBCONTRACTS

Minority Subcontractor	Subcontract Work Item	Dollar value of Subcontract work
		\$ _____
		\$ _____
		\$ _____
		\$ _____
		\$ _____
Total Value of Subcontract Work		\$ _____
Total Dollar Value of Base Bid		\$ _____
Percent of Total		\$ _____

If the Contractor fails to meet the DBE subcontract goals established in paragraph 7 above, the following information must be submitted with prospective Contractor's bid to assist the Sponsor in evaluating the efforts of the Contractor toward meeting DBE goals.

- a. Specify efforts used to identify and award contracts to minority businesses on this project;
- b. Describe the method used to notify the public and minority community of your solicitation of bids, quantities, specifications and delivery schedule;
- c. Identify the solicitation time set up in b. above and describe any follow-up action taken after the initial solicitation to determine if DBEs were interested in subcontract work;

- d. Under this contract what work do you feel will be suitable for subcontracting?
 - (1) Number of Contracts _____
 - (2) Total Dollar Value \$ _____
 - e. List the name, address and bid prices of minority businesses that submitted bids for subcontracts under this project;
 - f. List DBEs that were rejected and give reasons for rejection; and,
 - g. Describe efforts made to assist DBEs in obtaining bonding or insurance and sub-mission of bids.
 - h. Other actions to secure DBE participation.
10. CONTRACTOR ASSURANCES - The bidder hereby assures that he will meet one of the following as appropriate:
- a. The DBE participation goals as established in paragraph 7 above.
 - b. The DBE participation percentage shown in paragraph 9 which was submitted as a condition of contract award.

Agreements between bidder/proposer and a DBE in which the DBE promises not to provide subcontracting quotations to other bidders/proposers are prohibited. The bidder shall make an acceptable good faith effort to replace a DBE subcontractor that is unable to perform successfully with another DBE subcontractor. Substitutions must be coordinated with and approved by the Sponsor.

The bidder shall establish and maintain records and submit regular reports, as required, which will identify and assess progress in achieving DBE subcontract goals and other DBE affirmative action efforts.

NAME OF BIDDER: _____

IRS NUMBER: _____

BY: _____

TITLE: _____

DATE: _____

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**CONTRACTOR - GEORGIA SECURITY AND IMMIGRATION
COMPLIANCE ACT AFFIDAVIT AND AGREEMENT**

By executing this affidavit, the undersigned Contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of the CITY OF DALTON has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned Contractor will continue to use the federal work authorization program throughout the contract period and the undersigned Contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the Contractor with the information required by O.C.G.A. § 13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

32751

Federal Work Authorization/ E-Verify User Identification Number

August 18, 2006

Date of Authorization

C. W. MATTHEWS CONTRACTING CO., INC.

Name of Contractor

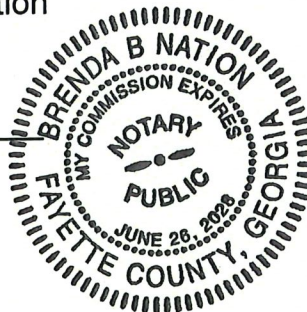
I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on May, 12, 2025 in Marietta (city), Georgia (state).
Signature of Authorized Officer or AgentMichael Kleuckling, Vice President

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE 12th DAY OF May, 2025.
NOTARY PUBLIC Brenda B. Nation

My Commission Expires:

June 26, 2028

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**SUBCONTRACTOR - AFFIDAVIT
UNDER O.C.G.A. § 13-10-91(b)(3)**

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with (name of contractor) on behalf of the SPONSOR NAME has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned subcontractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the subcontractor with the information required by O.C.G.A. § 13-10-91(b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor to the contractor within five business days of receipt. If the undersigned subcontractor receives notice that a sub-subcontractor has received an affidavit from any other contracted sub-subcontractor, the undersigned subcontractor must forward, within five business days of receipt, a copy of the notice to the contractor. Subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

386313

Federal Work Authorization/ E-Verify User Identification Number

1/27/11

Date of Authorization

Soil Erosion and Education

Name of Sub-Contractor

Dalton Municipal Airport - Taxiway Pavement Rehabilitation

Name of Project

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on May 9, 2025 in Maricopa (city), AZ (state).

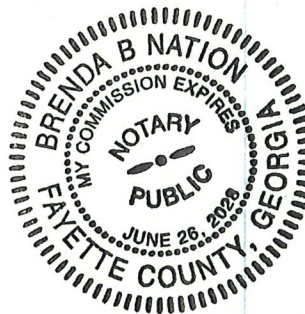
Signature of Authorized Officer or Agent

Michael Gibson President

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE 9th DAY OF May, 2025.Brenda B. Nation
NOTARY PUBLIC Brenda B. Nation

My Commission Expires:

June 26, 2028

**SUBCONTRACTOR - AFFIDAVIT
UNDER O.C.G.A. § 13-10-91(b)(3)**

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with **(name of contractor)** on behalf of the SPONSOR NAME has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned subcontractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the subcontractor with the information required by O.C.G.A. § 13-10-91(b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor to the contractor within five business days of receipt. If the undersigned subcontractor receives notice that a sub-subcontractor has received an affidavit from any other contracted sub-subcontractor, the undersigned subcontractor must forward, within five business days of receipt, a copy of the notice to the contractor. Subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

826089

Federal Work Authorization/ E-Verify User Identification Number

05/12/2025

Date of Authorization

Hasco, Inc.

Name of Sub-Contractor

Dalton Municipal Airport - Taxiway Pavement Rehabilitation

Name of Project

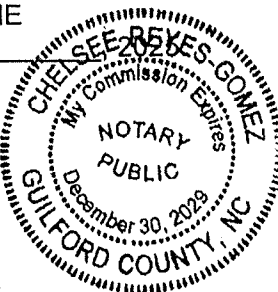
I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on May, 12, 2025 in ASO (city), NC (state).Ashton Garcia

Signature of Authorized Officer or Agent

Ashton Garcia Secretary

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE 12 DAY OF MayChelsea Reyes-Gomez
NOTARY PUBLIC

My Commission Expires:

December 30, 2029

**SUBCONTRACTOR - AFFIDAVIT
UNDER O.C.G.A. § 13-10-91(b)(3)**

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with **(name of contractor)** on behalf of the SPONSOR NAME has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned subcontractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the subcontractor with the information required by O.C.G.A. § 13-10-91(b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor to the contractor within five business days of receipt. If the undersigned subcontractor receives notice that a sub-subcontractor has received an affidavit from any other contracted sub-subcontractor, the undersigned subcontractor must forward, within five business days of receipt, a copy of the notice to the contractor. Subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

135394
Federal Work Authorization/ E-Verify User Identification Number

8/8/2011
Date of Authorization

TCA Electrical Contractor Inc.
Name of Sub-Contractor

Dalton Municipal Airport - Taxiway Pavement Rehabilitation
Name of Project

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on 5, 12, 2025 in Tifton (city), Ga (state).

Marty H. Bennett
Signature of Authorized Officer or Agent

Marty Bennett Vice-President
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE 12th DAY OF May, 2025.

Peggy Golden
NOTARY PUBLIC

My Commission Expires:

July 07, 2028



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SAVE AFFIDAVIT**REQUIRED FOR LOCAL GOVERNMENT THAT MUST BE EXECUTED BY ANYONE ENTERING INTO A CONTRACT WITH A LOCAL GOVERNMENT**

STATE OF GEORGIA
WHITFIELD COUNTY, CITY OF DALTON

By executing this affidavit under oath, as an applicant for a Whitfield County, Dalton, Georgia contract as referenced in O.C.G.A. § 50-36-1 and the August 1, 2010, "Report of the Attorney General on Public Benefits," I am stating the following with respect to my ability to enter into a contract with Whitfield County, Dalton, Georgia:

Michael Kleuckling, Vice President

[Name of natural person applying on behalf of individual, business, corporation, partnership or other private entity]

As a representative of:

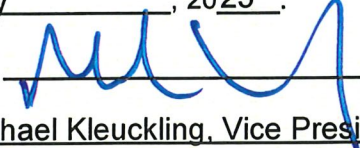
C. W. MATTHEWS CONTRACTING CO., INC.

(Name of the business, corporation, partnership, or other private entity)

- 1) ☒ I am a United States citizen
- OR
- 2) ☐ I am a legal permanent resident 18 years of age or older or I am an otherwise qualified alien or non-immigrant under the Federal Immigration and Nationality Act 18 years of age or older and lawfully present in the United States.*


In making the above representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious, or fraudulent statement or representation in an affidavit shall be guilty of a violation of O.C.G.A. § 16-10-20.

This 12th day of May, 2025.

Signature of Applicant: 

Printed Name: Michael Kleuckling, Vice President

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
12th DAY OF May, 2025


Notary Public Brenda B. Nation
My Commission Expires: June 26, 2028



*Note: O.C.G.A. § 50-36-1(e)(2) requires that aliens under the federal Immigration and Nationality Act, Title 8 U.S.C., as amended, provide their alien registration number. Because legal permanent residents are included in the federal definition of "alien," legal permanent residents must also provide their alien registration number. Qualified aliens that do not have an alien registration number may supply another identifying number below:
Alien Registration number for non-citizens: *

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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

05/05/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER CERTIFICATE OF SELF INSURANCE	CONTACT NAME: BRET STANLEY	
	PHONE (A/C, No, Ext): 678-809-8119	FAX (A/C, No): 770-423-7529
	E-MAIL ADDRESS: BSTANLEY@CWMATTHEWS.COM	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: C.W. MATTHEWS CONTRACTING CO., INC.	
INSURED C.W. MATTHEWS CONTRACTING CO., INC. P.O. DRAWER 970 MARIETTA, GA 30061	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY	Y	Y	SI-2025-CGL	01/01/2025	12/31/2025	EACH OCCURRENCE	\$ 3,000,000	
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$	
							MED EXP (Any one person)	\$	
							PERSONAL & ADV INJURY	\$	
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$ 6,000,000	
	<input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG	\$ 6,000,000	
	OTHER:							\$	
A	AUTOMOBILE LIABILITY	Y	Y	SI-52729014	01/01/2025	12/31/2025	COMBINED SINGLE LIMIT (Ea accident)	\$ 3,000,000	
	<input type="checkbox"/> ANY AUTO						BODILY INJURY (Per person)	\$	
	<input checked="" type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY						BODILY INJURY (Per accident)	\$	
	<input type="checkbox"/> HIRED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	\$	
								\$	
	UMBRELLA LIAB						EACH OCCURRENCE	\$	
	EXCESS LIAB						CLAIMS-MADE	AGGREGATE	\$
	DED						RETENTION \$		\$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	N/A	Y	Qualified Self- Insurer State of Georgia	01/01/2025	12/31/2025	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER		
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT	\$ 1,000,000	
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000	
							E.L. DISEASE - POLICY LIMIT	\$ 1,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

CANCELLATION

PROOF OF COVERAGE

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, (30) THIRTY-DAY NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Sheldon Fram
Director of Risk Management

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DESCRIPTIONS (Continued from Page 1)

This is to certify that C. W. Matthews Contracting Co., Inc. has qualified as required by law, as a self insurer with the appropriate agencies within the State of Georgia, and provides coverages under its program of self-insurance as noted above.

Automobile Liability: Certificate No. SI-52729014 issued by Georgia Department of Insurance.

Worker' Compensation and Employers Liability: Qualified Self-Insurer with Georgia State Board of Workers' Compensation by proof of ability to pay compensation direct.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

00/00/0000

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Hub International Mid-South 3011 Armory Drive Suite 250 Nashville TN 37204	CONTACT NAME: Lisa Garner PHONE (A/C, No, Ext): 615-383-9761 FAX (A/C, No): 615-383-4628 E-MAIL ADDRESS: lisa.garner@hubinternational.com
INSURED C. W. Matthews Contracting Co., Inc. P O Drawer 970 Marietta, GA 30061	INSURER(S) AFFORDING COVERAGE INSURER A : Key Risk Insurance Company INSURER B : ACE American Insurance Company INSURER C : Homesite Insurance Company of Florida INSURER D : Starr Indemnity and Liability INSURER E : INSURER F :

License#: 1298
CWMATTH-01

COVERAGES

CERTIFICATE NUMBER: 1172214602

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
B	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:		G47320148	3/31/2025	3/31/2026	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 2,000,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 \$
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY		H10721921	3/31/2025	3/31/2026	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
C D	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 0		CXP-047296-00 1000586937251	3/31/2025 3/31/2025	3/31/2026 3/31/2026	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 Excess over \$5M \$ \$15,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N Y N/A	KRM933682041	3/31/2025	3/31/2026	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Any person or organization who the Named Insured is required by written contract to add as an additional insured is included as Additional Insured for General Liability and Automobile Liability as outlined in the policy forms referenced below. Additional Insured status is not applicable to Workers' Compensation.

Excess General Liability

Blanket Additional Insured - Automatic Status if Required in Construction Agreement With You - Form # XS21165a 04/13

Additional Insured Primary and Non-Contributory Insurance If Required by Written Contract - Commercial General Liability Coverage Form # XS20288a 05/14

Designated Construction Project General Aggregate Limit - Form # XS21159 11/06

Waiver of Transfer of Rights of Recovery Against Others by Us - Person or Organization: Any person or organization against whom you have agreed to waive See Attached...

CERTIFICATE HOLDER

CANCELLATION

For Information Only

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Daniel D. Hite

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ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

AGENCY Hub International Mid-South		NAMED INSURED C. W. Matthews Contracting Co., Inc. P O Drawer 970 Marietta, GA 30061
POLICY NUMBER		
CARRIER	NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

your right of recovery in a written contract, provided such contract was executed prior to the date of loss – Form #XS6W34a 02/20
 Blanket Notice of Cancellation – 60 Days

Automobile Liability

Blanket Additional Insured – Automatic Status if Required in Construction Agreement With You

Blanket Primary and Non-Contributory of Other Insurance

Waiver of Transfer of Rights of Recovery Against Others by Us – Person or Organization: Any person or organization against whom you have agreed to waive your right of recovery in a written contract, provided such contract was executed prior to the date of loss – Form #DA20345 06/06

Blanket Notice of Cancellation – 60 Days

Excess Liability limits are in excess of \$2,000,000 General Liability and \$2,000,000 Automobile Liability (excess of \$3,000,000 Self-Insured Retention for General Liability and Automobile Liability – refer to the Self-Insured Certificate of Insurance, issued by C. W. Matthews Contracting Co., Inc.).

A.M. Best Ratings:

Ace American Insurance Company: A++ XV

Homesite Insurance Company of Florida dba Homesite Assurance Company: A XV

Subject to the terms, conditions, exclusions and definitions of the above-referenced policies, as issued by the carrier(s).

**** Workers Comp Information ****

Proprietors/Partners/Executive Officers/Members Excluded:

Matthew Burton, Chairman

Daniel Garcia, President

Michael Bell, Executive Vice President/Secretary/Treasurer

Benny Brown, VP/Asst. Secretary

Brandon Forrest, Vice President

**Request for Taxpayer
Identification Number and Certification**

Go to www.irs.gov/FormW9 for instructions and the latest information.

Give form to the
requester. Do not
send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See Specific Instructions on page 3.	1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.) C. W. MATTHEWS CONTRACTING CO., INC.	
	2 Business name/disregarded entity name, if different from above.	
	3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only one of the following seven boxes. <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C corporation <input checked="" type="checkbox"/> S corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) _____ Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see Instructions) _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) 5 Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) _____ <i>(Applies to accounts maintained outside the United States.)</i>
	3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions. <input type="checkbox"/>	
	5 Address (number, street, and apt. or suite no.). See instructions. P. O. BOX 970 6 City, state, and ZIP code MARIETTA, GEORGIA 30061 7 List account number(s) here (optional)	Requester's name and address (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number								
			-					
or								
Employer identification number								
5	8		-	0	6	5	2	7 2 9

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person Quenda B. Nation

Date **May 12, 2025**

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

Our History

A History of Innovation

From the humble beginning of one tractor and two dump trucks, C.W. Matthews and two local businessmen formed a company in 1946 after he returned from the World War II Pacific Theater. Their goal was to provide grading services for farm ponds. In 1954 Mr. Matthews formed C.W. Matthews Contracting Co., Inc. and three years later made the pivotal decision to enter the plant-mixed asphalt business.

The next decade was busy with defense work for the Armed Forces, concentrating on reconstruction of runways and taxiways at military bases throughout the Southeast.

In 1967 the founder's oldest son, Bob, graduated from the University of Georgia Law School. Following military service and a tour in Vietnam, he returned to work in the family business as president and established branch offices in North Carolina and Florida. The next expansion was the acquisition of a bridge and culvert company and a sizeable grading contractor, transforming C.W. Matthews Contracting Co. into a multi-faceted general contractor in highway and heavy construction. Bolstering its position as one of the leading producers of plant-mixed asphalt, the Company began acquiring single plant operators in addition to erecting new asphalt plants at strategic locations around metropolitan Atlanta and north Georgia.

A few years later, in a position to accept more challenges, C.W. Matthews Contracting Co. devoted assets, management capabilities, and skilled workers to the daunting task of improving Atlanta's Hartsfield International Airport through the Midfield Terminal Expansion Program. Additionally, the MARTA rail system and the \$1 billion expansion of Atlanta's freeway system provided opportunities for growth and expansion. C.W. Matthews Contracting Co. continued its substantial market presence in the private sector through providing stone base and asphalt paving for the residential and commercial projects resulting from Atlanta's explosive population growth. In the 1990's the Company aided in the construction effort of readying Atlanta for the 1996 Olympic Games through the addition of high occupancy vehicle lanes on I-75, constructed at night in order to maintain traffic flow during daylight hours.

The dawn of the 21st century provided opportunities in the brown field rehabilitation of the old Atlantic Steel plant site in downtown Atlanta. Today the Atlantic Station development and the adjoining 17th Street bridge are a testimony to the Company's dedication to quality, safety, and expedited project delivery.

Beginning in 2002, C.W. Matthews Contracting Co. served as the managing partner of a three-company consortium for the construction of the 5th Runway at Hartsfield-Jackson Atlanta International Airport, the largest public works project to date undertaken in the State of Georgia. A thirty-eight year veteran of CWM, Bill Hammack has served in numerous capacities during his career including the company's Chief Operating Officer for the previous fifteen years prior to assuming the role as president in July of 2005.

In September 2006, CWM purchased the assets from Oldcastle of the Georgia and MacDougald Divisions of APAC-Southeast, Inc., which was the largest asphalt and roadway contractor in Georgia. This acquisition doubled the size of CWM and greatly expanded the territory in which we supply product and services.

In early 2009, CWM began operating a new liquid asphalt storage facility which it constructed in Rockmart, Georgia. The facility is for internal use and has a capacity of 391,000 barrels in 11 tanks. The facility also has a plant that can produce 30 tons per hour of Polymer Modified Asphalt (PG Grade 76-22). The truck loading facilities are state of the art with computer

automated self-loading capabilities. The control building for the facility contains a complete physical properties laboratory for quality control testing.

In 2012, CWM was proud to have been a part of constructing the International Terminal Roadways complex, ahead of schedule and within budget.

At the end of 2014, Bill Hammack, CWM's President and Chief Operating Officer, retired after a career of over 43 years with the company. During his tenure, he helped guide and facilitate changes within the Company to maintain its position as an industry leader.

Day-to-day operations and administration are handled by Daniel Garcia, appointed president of C. W. Matthews Contracting in 2015, and Michael Bell, as president of Matsco, Incorporated. Ethics, honor, quality, and commitment to excellence continue to be a Matthews' tradition as the Company moves forward into the 21st century.

Timeline

1946

C.W. Matthews returns from WWII and starts pond grading business

1954

Company becomes C.W. Matthews

1957

Enters asphalt manufacturing

1967

Son Bob Matthews joins as President

North Carolina and Florida office established

Enters asphalt and heavy construction

Midfield terminal expansion at Hartsfield International Airport

MARTA rail system work

1988

Grandson Charles Matthews joins the company

\$1 billion expansion of Atlanta's freeway system

Strategic acquisition and construction of additional plants

1990s

Helped prepare Atlanta for the Olympic Games

2000

Site remediation for Atlantic Station

17th Street Bridge

2001

GDOT called on CWM for emergency repairs to restore bridge at I-285 over 400 that shut down both corridors

2002

5th runway at Hartsfield International Airport

2005

After a distinguishing career, Bill Hammack, the Chief Operating Officer becomes President

Began major GDOT work under governor's Fast Forward Program

2006

Formal launch of internal mentoring program

Purchased Georgia operations of APAC-Southeast

2008

Began construction of Liquid Asphalt Terminal in Rockmart GA

2009

Operating CWM Rockmart Terminal

2012

Completed International Terminal Roadway complex.

2014

Bill Hammack, CWM's President and Chief Operating Officer, retired after a career of over 43 years with the company.

2015

Daniel Garcia appointed president CWM, and Michael Bell appointed president of Matsco Inc. Charles Matthews and Matt Burton are appointed to the Executive Operating Committee.

2016

Celebrating 70 Years of Service

2017

Bob Matthews receives Lifetime Achievement Award from Georgia Highway Contractors Association. Emergency I-85 Bridge Collapse-Repair. Frontline Leadership Academy started.

2018

Bill Hammack receives Lifetime Achievement Award from Georgia Highway Contractors Association. Michael Bell begins 2-year term as President of Georgia Highway Contractors Association.

2019

Purchase of Georgia Asphalt in Macon, Georgia. Constructed Asphalt Plant in Savannah, Georgia.

2021

Acquired McCarthy Improvements Company and 5 Concrete Plants.

2022

Acquired Tippens Contracting Co., Inc.

2024

Acquired Baker Constructors, Inc.

Acquired Lewallen Construction

79 Years of Service
(1946 - 2025)

C.W. Matthews Contracting Company, Inc.

1600 Kenview Drive

Marietta, GA 30060

President's Statement

As you can see, big things are happening at CWM.

Our company has a rich, 79-year heritage. But even more exciting than where we've been, is where we're headed.

With Bill Hammack's retirement I am only the 4th President in the Company's history. The leadership team that has been assembled is made up of myself, Michael D. Bell and Matt D. Burton. Working together our leadership team will ensure that CWM maintains its position as the leader in our industry.

Building on our core competency of superior riding asphalt at a competitive price, we're meeting exciting new challenges head-on.

Quality asphalt production and placement along with major highway construction remain the heart of our endeavors. Today's economic climate tests our cost controls, management, and operations expertise daily.

Our Company is considered a leader in the Design Build arena. From concept to completion, we have completed numerous projects which includes 14th Street Bridge, Panola Road, Edgewood Avenue Bridge Replacement, Atlanta Streetcar, and are currently working on the South Managed Lane Project.

Projects like Atlantic Station, the 5th Runway Embankment Project, 17th Street Bridge, International Terminal, and most recently the I-85 Bridge Repair continue stretching the limits, challenging our brightest and best. These demanding jobs keep expanding our creativity, engineering skills and technical expertise. So, whether it's designing and creating a system to move and place soil embankment at a record pace or remediating a century-old manufacturing site like Atlantic Steel, our team gets the job done right when others might not even try.

That's what makes working with CWM challenging and rewarding – for every project, every career. No job is too difficult; no challenge is too great.

We have a tradition of nurturing leadership. In fact, almost all of our top management have come up through the ranks. We're a dynamic company of energetic men and women (1,800+ active employees), who are truly helping shape the future of transportation.

We're proud of our company, our work product, and our tradition of building roads and building futures. We invite you to contact us today.

Dan Garcia
President

79 Years of Service
(1946-2025)

STATE OF GEORGIA

Secretary of State

Corporations Division

313 West Tower

2 Martin Luther King, Jr. Dr.

Atlanta, Georgia 30334-1530

CERTIFICATE OF EXISTENCE

I, **Brad Raffensperger**, the Secretary of State of the State of Georgia, do hereby certify under the seal of my office that

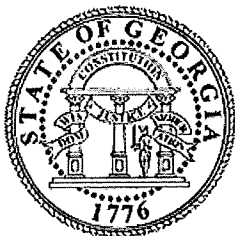
C.W. MATTHEWS CONTRACTING CO., INC.
a Domestic Profit Corporation

was formed in the jurisdiction stated below or was authorized to transact business in Georgia on the below date. Said entity is in compliance with the applicable filing and annual registration provisions of Title 14 of the Official Code of Georgia Annotated and has not filed articles of dissolution, certificate of cancellation or any other similar document with the office of the Secretary of State.

This certificate relates only to the legal existence of the above-named entity as of the date issued. It does not certify whether or not a notice of intent to dissolve, an application for withdrawal, a statement of commencement of winding up or any other similar document has been filed or is pending with the Secretary of State.

This certificate is issued pursuant to Title 14 of the Official Code of Georgia Annotated and is prima-facie evidence that said entity is in existence or is authorized to transact business in this state.

Docket Number : 20661146
Date Inc/Auth/Filed: 02/27/1946
Jurisdiction : Georgia
Print Date : 03/29/2021
Form Number : 211



Brad Raffensperger

Brad Raffensperger
Secretary of State

City of Marietta Business License and Revenue Division

205 LAWRENCE ST NE * DRAWER 609 * MARIETTA GA 30061
(770) 794-5520



BUSINESS LICENSE/OCCUPATION TAX CERTIFICATE PLEASE DISPLAY AT ALL TIMES

SUBJECT TO ALL ORDINANCES OF MAYOR AND COUNCIL
NOT TRANSFERABLE

ACCOUNT NUMBER 3478000 1521000

NUMBER 00018140

MATTHEWS CONTRACTING CO IN;CW
PO BOX 970
MARIETTA GA 30061-0970

FOR YEAR 2025
EXPIRATION DATE 12/31/25
BEGIN OPERATION DATE 8/01/08

NOTIFY THIS OFFICE OF ANY
CHANGE OF ADDRESS,
OWNERSHIP, FIRM NAME, OR
CLASSIFICATION

OWNER MATTHEWS ROBERT E PRESIDENT

DESCRIPTION OF SIC CODE

GENERAL CONTRACTORS

\$ 39737.69

CLASS 2E

BUSINESS ADDRESS:
1600 KENVUE DR
MARIETTA GA 30060-1026

TAX \$ 39737.69

PENALTY \$.00

TOTAL \$ 39737.69

DATE PAID 4/07/25

SIGNED

Kimberly Robinson

**COBB COUNTY
OCCUPATION TAX CERTIFICATE**

P.O. BOX 649 MARIETTA, GEORGIA 30061-0649
(770) 528-8410

BUSINESS LOCATION

1600 KENVIEW DR

DATE ISSUED

01-01-2025

D/B/A C W MATTHEWS CONTRACTING CO

PO DRAWER 970

MARIETTA, GA 30061



CERTIFICATE NUMBER

52660

FOR YEAR

2025

CERTIFICATE EXPIRES

12-31-2025

TYPE GENERAL



**CERTIFICATE MUST BE DISPLAYED
THIS CERTIFICATE IS NOT VALID IF OWNERSHIP OR BUSINESS LOCATION CHANGES
PROFESSIONALS & ATTORNEYS AT LAW ARE NOT REQUIRED TO DISPLAY**

BUSINESS DESCRIPTION

CLASSIFICATION CODE

CLASSIFICATION NAME

AMOUNT

161101

PAVING CONTRACTOR

0.00

4332 0.00

4312 0.00

4314 0.00

4316 0.00

4318 0.00

SUB TOTAL \$

0.00

4545 0.00

PENALTY \$

0.00

INTEREST \$

0.00

TOTAL \$

0.00

CD - Bus License Certificate, 52660, 2025, C W MATTHEWS CONTRACTING CO

E. Lisa Wells

BUSINESS LICENSE DIVISION MANAGER

VG

AUTHORIZED INITIALS

IMPORTANT NOTICE

1. Interest as provided by law will be imposed for failure to renew certificate prior to expiration date.
2. Please document to Cobb County Business License Office when business goes out of business.
3. Please provide written notification of any change in address or ownership change. A fee of \$10 will be charged to reprint certificate.
4. Please contact the business license office if you have not received a renewal notice two weeks prior to expiration of certificate.
5. Interest can not be waived despite failure to receive renewal notice. Contact the business license office for fee information.

PLACE ON DISPLAY

389639

C.W. Matthews Contracting Co., Inc.

Schedule of Bank References

Name of Bank

JPMorgan Chase Bank, N.A.

Name & Address of Officer

Jeffrey B. McCoy, Executive Director
Middle Market Banking
3475 Piedmont Road NE, 18th Floor
Atlanta, Georgia 30305-2954
404-926-2700
404-926-2579 (Fax)
Jeffrey.b.mccoy@chase.com

C. W. MATTHEWS CONTRACTING CO., INC.
BONDING CAPACITY STATEMENT
December 31, 2024

C. W. Matthews Contracting Co., Inc. has never been refused a bond. The Company has bonded single jobs up to \$160,000,000 and has had bonded work under contract at one time in excess of \$750,000,000.

STATUS OF CONTRACTS ON HAND MARCH 31, 2025

Contractor: C. W. Matthews Contracting Co., Inc.

Give full information about all of your contracts, with all agencies,
public and private; whether in progress or awarded but not yet begun.
Attach additional sheets if required.

CONTRACT AMOUNT

1	2	3	4	5	6	
					NET UNCOMPLETED	DEFERRED WORK DUE TO
PROJECTS	TOTAL	SUBCONTRACTED	NET	PORTION OF NET	WORK UNDER CONTRACT	CONTRACT LASTING 12 MONTHS
LOCATION AND DESCRIPTION	OBLIGATIONS	TO OTHERS (-)	OBLIGATIONS	COMPLETED (%)		FROM THIS LETTING DATE
CSSTP-0007-001(691) WIDEN/RECONSTR SR92, DOUGLAS/PAULDING	\$34,249,873.30	\$28,920,925.73	\$28,920,925.73	\$23,815,122.98	\$1,105,802.75	
FC-10077 CITY OF ATL SPRING ST VIADUCT, FULTON	\$21,242,990.66	\$9,428,947.57	\$12,717,910.27	\$10,821,192.16	\$1,896,718.11	
PI0012375/780012758-1-16 RECON/WIDEN/CHATHAM(SUB TO SMC)	\$38,551,278.03	\$0.00	\$38,551,278.03	\$35,077,559.84	\$3,473,738.19	
PI 722030 TARA BLVD US19/A1/SR3, CLAYTON	\$18,632,604.39	\$7,734,750.47	\$10,897,853.92	\$10,036,738.93	\$861,114.99	
2604- 0012577 1-185/SR411 DOI BUENA VISTA RD, MUSCOGEE	\$76,719,859.85	\$8,365,503.75	\$18,354,356.10	\$14,479,736.70	\$3,874,619.40	
2612 - 621410 OLD ALABAMA RD WIDEN AND RECONSTR, BARTOW	\$75,835,837.98	\$19,835,635.39	\$56,000,202.59	\$45,896,872.08	\$10,103,330.51	
2641 - 1TB#20-95 WIDEN BATTLE CRK @ MT ZION, CLAYTON	\$40,089,759.46	\$10,805,660.58	\$29,294,098.88	\$9,661,953.00	\$19,632,145.89	
2650-0007526 SR 400 Widen & Int Imp McGinnis, Fulton/Forsyth	\$64,290,206.89	\$23,107,130.37	\$41,183,076.52	\$27,759,484.30	\$13,423,592.22	
2661-0009975;0013999 CONST. OF A ROUNDABOUT, TROUP	\$10,732,710.97	\$4,167,961.99	\$6,564,748.98	\$6,243,238.39	\$326,510.59	
2673 - 1-15 @ 1-16 WIDEN & RECONSTR (SUB TO WEBBER/UGI), BIBB	\$7,742,267.48	\$0.00	\$7,742,267.48	\$5,089,093.59	\$2,653,173.89	
2678 2678- ATLANTA GA DEKALB AVE SAFETY IMPROVEMENTS	\$3,643,642.94	\$344,650.30	\$3,298,992.64	\$2,566,794.72	\$732,197.92	
0017038 SR 5, WIDENING & RECONSTRUCTION, FANNIN	\$24,785,765.98	\$9,576,330.65	\$15,209,435.33	\$3,291,758.57	\$11,917,676.76	
0015051 1-75/SR401 AKERS MILL ROAD, COBB	\$24,242,777.18	\$13,339,197.82	\$10,904,579.36	\$9,943,785.24	\$960,794.12	
0013601 CONST. OF A BRIDGE & APPROACHES SR 219, MUSCOGEE	\$3,324,114.72	\$574,980.59	\$2,749,134.13	\$2,523,631.08	\$225,503.05	
2715 - 0013971 INTERSECTION IMPROVMENTS SR 42 @ SR 236, DEK	\$4,971,965.20	\$1,926,669.60	\$3,045,295.60	\$9,555.63	\$3,035,739.97	
2730 - PR-IMP(1846)-1 SEVEN HILLS BLVD ROUND ABOUT, PAULDING	\$2,704,176.69	\$1,394,627.00	\$1,309,549.69	\$1,269,829.69	\$39,720.00	
2742 - IFR-C-1210246-CASCADE ROAD JIV WITH KELLY	\$14,639,055.61	\$860,725.00	\$13,778,330.61	\$4,602,252.37	\$9,176,078.24	
0004428, LEE ROAD/SR 1161, DOUGLAS (SUB TO CMES, INC.)	\$7,562,843.50	\$0.00	\$7,562,843.50	\$1,981,977.30	\$5,580,866.20	
2757 - MODERN CARGO FC-9142 JV CHANGE ORDER, CLAYTON	\$27,274,453.38	\$2,406,943.33	\$24,867,510.05	\$16,988,943.61	\$7,878,566.44	
IFB-C-1220165 HUAIA TAXIWAY PAVEMENT REPLCMNT 2022, ATLANTA	\$20,273,679.82	\$14,053,701.85	\$6,219,977.97	\$6,149,671.87	\$70,306.10	
GATEWAY PEDESTRIAN BRIDGE, COLLEGE PARK	\$13,182,282.71	\$4,439,006.53	\$8,743,276.18	\$8,699,832.54	\$53,443.64	
0006857, 0006866 WIDEN& RECONSTRUCTION SR 92, COBB/PAULDING	\$46,653,178.00	\$10,387,474.54	\$36,265,703.46	\$16,734,965.44	\$19,530,738.02	
ELBERTA ROAD PHASE 1 IMPROV, 22-03, SRLOST CW42-04, HOUSTON	\$9,063,819.54	\$3,623,771.40	\$5,440,048.14	\$3,969,902.16	\$1,470,145.98	
713900 RECONSTR & REHAB DISTR LANES 1-285/SR 475, DEKALB	\$94,755,524.31	\$26,802,475.73	\$67,953,048.58	\$37,245,695.38	\$30,707,353.20	
0013697 CONSTRUCTION OF A ROUND ABOUT SR 81, HENRY	\$2,248,352.16	\$885,976.20	\$1,362,375.96	\$1,162,362.50	\$200,013.46	
X2407 SOUTH BARRETT RELIEVER PHASE 3, COBB	\$37,646,784.88	\$13,584,726.40	\$24,062,058.48	\$16,157,569.07	\$7,904,489.41	
0013373 DIVERGING DIAMON US 80/SR 22, MUSCOGEE	\$18,173,239.53	\$6,907,489.51	\$11,265,750.02	\$8,017,557.57	\$3,248,192.45	
0015670, 0016000 PEDESTRIAN UPGRADES & REALIGNMENT, BANKS	\$8,130,772.78	\$2,870,821.18	\$5,259,951.60	\$4,189,894.31	\$1,070,057.29	
0008357 SR 9 WIDENING & RECONSTRUCT & A BRIDGE, FORSYTH	\$41,866,057.90	\$12,233,476.13	\$29,632,581.77	\$26,715,502.06	\$2,917,079.11	
0015686 CONST. OF A ROUNDABOUT US41/SR247, BIBB	\$6,014,797.37	\$2,631,924.52	\$3,382,872.85	\$2,560,954.16	\$821,970.36	
0013926 CONST. OF A BRIDGE & APPROACHES US27, MUSCOGEE	\$18,101,501.92	\$2,704,609.83	\$15,396,892.09	\$8,408,472.76	\$6,988,419.33	
631490 VILLA RICA BYPASS (SUB TO ASTRA), CARROLL	\$7,604,222.58	\$0.00	\$7,604,222.58	\$1,597,390.57	\$6,006,832.01	
IFB-C-1230027 JV-HAIA AIRFIELD REPAIRS 2207, CLAYTON	\$13,037,782.25	\$288,638.70	\$12,749,143.55	\$7,462,214.35	\$5,286,929.20	
322250 WIDENING & RECONSTRUCTION, US27/SR 1, TROUP	\$23,042,008.03	\$6,287,460.62	\$16,754,547.41	\$7,775,262.43	\$8,979,284.98	
0007844 HWY 9 PART 2 (SUB TO VERTICAL EARTH), FORSYTH	\$7,545,897.73	\$0.00	\$7,545,897.73	\$452,484.31	\$7,093,413.42	
0014896 CONST. OF A BRIDGE & APPROACHES BASS ROAD, BIBB	\$10,976,075.28	\$3,970,088.53	\$7,005,986.75	\$970,695.75	\$6,035,291.00	
IFB-C-DOA-2211-1230145 AIRFIELD SHOULDER REPLCMNT, CLAYTON	\$88,723,875.11	\$28,960,039.50	\$59,763,835.61	\$50,890,940.82	\$8,872,894.79	
0013948; 0013949 WIDENING & RECONSTRUCTION SR 14, FULTON	\$32,620,842.21	\$7,255,656.29	\$25,365,205.92	\$7,622,590.26	\$17,742,615.66	
0015544 CONST. OF A BRIDGE & APPROACHES SR 293, FLOYD	\$8,483,076.25	\$3,360,758.87	\$5,122,317.38	\$2,791,554.48	\$2,330,762.90	
#23-075 JONES BRIDGE ROAD WIDENING (CMES), JOHNS CREEK	\$2,390,442.40	\$0.00	\$2,390,442.40	\$1,104,548.75	\$1,285,893.65	
X2415 & B2112 SILVER COMET TRAIL CONN. & ATL RD BRIDGE, COBB	\$7,027,365.90	\$4,165,307.22	\$3,737,058.68	\$2,506,561.40	\$1,230,497.28	
AIRPORT PARKWAY EXTENSION PROJECT, PAULDING	\$6,025,148.14	\$1,309,580.37	\$4,715,567.77	\$1,419,683.40	\$3,295,884.37	
0015534, 0015535 BRIDGE & APPROACHES US 41/SR 3, BARTOW	\$24,772,682.84	\$6,096,276.19	\$18,676,406.65	\$5,183,242.48	\$13,493,164.17	
650540 WIDENING & RECONSTRUCTION SR 101, FLOYD	\$19,182,813.15	\$3,591,257.35	\$15,591,555.80	\$3,905,193.00	\$11,686,362.80	
0017782 WIDENING & RECONSTRUCTION SR 5, FANNIN	\$21,601,333.20	\$7,657,032.02	\$13,944,301.17	\$2,112,123.14	\$11,832,178.03	
HIGHWAY 9 ROAD WIDEN PART 1 (SUB TO VERTICAL EARTH), FORSYTH	\$3,991,255.68	\$0.00	\$3,991,255.68	\$2,177,358.11	\$1,813,897.57	
521855-US 80/SR 2 OGEECHEE ROAD(SUB TO ASTRA), CHATHAM	\$5,450,613.16	\$0.00	\$5,450,613.16	\$250,630.20	\$5,199,982.96	
0014906 CONST. OF A BRIDGE & APPROACHES US 27 BUS/SR 1, POLK	\$11,431,920.13	\$3,406,737.56	\$8,025,182.57	\$5,194,838.29	\$2,830,344.28	
721290 WIDENING & RECONSTRUCTION SR 85, CLAYTON & FAYETTE	\$43,823,389.83	\$9,918,521.60	\$33,904,868.23	\$3,436,920.15	\$25,467,948.08	
332180 CONST. OF A ROUNDABOUT SR 16/SR34, COWETA	\$6,670,641.24	\$1,351,672.28	\$5,318,968.96	\$3,166,769.14	\$2,152,199.82	
0014897 CONST. OF A BRIDGE & APPROACHES 1-16/SR 404, BIBB	\$14,815,378.82	\$2,162,836.54	\$12,652,542.28	\$7,338,437.93	\$5,314,104.35	
0015692 CONST. OF A ROUNDABOUT SR 87/CR 742/CR 85, BIBB	\$4,805,939.43	\$1,093,034.19	\$3,712,905.24	\$2,427,864.74	\$1,285,040.50	

PROJECTS	LOCATION AND DESCRIPTION	1		2		3		4		5		6	
		TOTAL	OBLIGATIONS	SUBCONTRACTED TO OTHERS (+)	NET OBLIGATIONS	PORTION OF NET COMPLETED (%)	WORK UNDER CONTRACT	NET UNCOMPLETED	DEFERRED WORK DUE TO CONTRACT LASTING 12 MONTHS FROM THIS LETTING DATE				
CEDAR GROVE ROAD DESIGN BUILD, DEKALB		\$11,097,348.07	\$3,146,852.98	\$7,950,495.09	\$698,838.81	\$7,311,656.28	\$7,311,656.28	\$7,311,656.28	\$7,311,656.28				
2023 LMIG PAVING, DEKALB COUNTY		\$25,692,425.58	\$4,488,650.72	\$21,203,774.86	\$12,396,920.35	\$8,724,650.36	\$8,724,650.36	\$8,724,650.36	\$8,724,650.36				
HYUNDAI S-JV BATTERY CELL PROJECT (PLATEAU EXCAVATION)		\$12,396,920.35	\$0.00	\$12,396,920.35	\$5,264,552.26	\$7,132,368.09	\$7,132,368.09	\$7,132,368.09	\$7,132,368.09				
0017482, 0019545 WIDENING/TS REST US76/SR 515/SR 15, TOWNS		\$25,698,969.58	\$7,332,241.10	\$9,603,513.64	\$18,366,728.48	\$9,413,873.38	\$9,413,873.38	\$9,413,873.38	\$9,413,873.38				
0013921 CONST OF A BRIDGE & APRR 1-475/SR 408, BIBB		\$13,070,202.77	\$3,466,689.13	\$1,262,188.54	\$9,603,513.64	\$2,399,875.54	\$2,399,875.54	\$2,399,875.54	\$2,399,875.54				
0013921 INTERSECTION IMPROVEMENTS US341/SR 7, PEACH		\$3,890,420.70	\$1,262,188.54	\$2,628,232.16	\$1,540,504.72	\$1,087,727.43	\$1,087,727.43	\$1,087,727.43	\$1,087,727.43				
322050 WIDENING & RECONSTRUCTION SR 42, CLAYTON & HENRY		\$27,410,582.74	\$6,254,252.41	\$21,156,330.33	\$4,520,978.92	\$16,635,351.41	\$16,635,351.41	\$16,635,351.41	\$16,635,351.41				
SHADOWBOX ATL 2, (BRASFIELD & GORRIE), DEKALB		\$22,167,701.55	\$3,777,851.42	\$18,389,850.13	\$15,725,166.89	\$2,664,683.24	\$2,664,683.24	\$2,664,683.24	\$2,664,683.24				
US 280/SR 30 WIDEN & INTERCHG IMPRV DB (MCLENDON JV), BRYAN		\$42,215,281.43	\$8,138,826.41	\$34,076,455.02	\$11,163,859.03	\$22,912,595.99	\$22,912,595.99	\$22,912,595.99	\$22,912,595.99				
FC-1220100 HIAIA CONC'D WIDEN JV/TECHNIQUE (SUB TO HIMS, JV)		\$13,403,977.98	\$2,090,541.61	\$11,313,436.37	\$3,278,617.39	\$8,034,818.98	\$8,034,818.98	\$8,034,818.98	\$8,034,818.98				
0015679 CONSTRUCTION OF A ROUNDABOUT US78/SR 8, DOUGLAS		\$4,145,934.32	\$1,570,832.06	\$2,575,102.86	\$546,931.04	\$2,028,171.82	\$2,028,171.82	\$2,028,171.82	\$2,028,171.82				
0013937 CONST OF A BRIDGE & APPROACHES US27/SR 1, FLOYD		\$8,188,374.61	\$1,472,137.53	\$6,716,237.08	\$3,599,604.46	\$3,116,632.62	\$3,116,632.62	\$3,116,632.62	\$3,116,632.62				
122890 - CLARKE-ATLANTA HWY INTERCHANGE		\$6,083,430.95	\$277,700.49	\$5,805,730.46	\$0.00	\$5,805,730.46	\$5,805,730.46	\$5,805,730.46	\$5,805,730.46				
OLD MILL RD @ I-20 DESIGN BUILD, MORGAN & WALTON		\$46,590,008.18	\$18,165,933.88	\$28,424,074.30	\$10,887,900.79	\$17,536,173.51	\$17,536,173.51	\$17,536,173.51	\$17,536,173.51				
0211201 HIAIA E-GATES (NMSM JV), CONCORSE E CLAYTON		\$7,217,012.75	\$1,856,047.33	\$5,360,970.42	\$5,091,453.59	\$2,691,516.84	\$2,691,516.84	\$2,691,516.84	\$2,691,516.84				
0013100 1-85/SR 403 (SUB TO CMES), GWINNETT		\$2,788,911.50	\$0.00	\$2,788,911.50	\$2,027,266.09	\$758,645.41	\$758,645.41	\$758,645.41	\$758,645.41				
B2913 2024-4 RESURF COUNTYWIDE MAJOR THOROUGHFARES, COBB		\$11,437,704.64	\$1,007,649.00	\$10,430,055.64	\$8,841,231.94	\$1,588,823.70	\$1,588,823.70	\$1,588,823.70	\$1,588,823.70				
IFB-1240069 HIAIA RAMP 21 PAVEMENT REPLACEMENT, CLAYTON		\$17,905,086.61	\$13,318,597.55	\$3,986,489.06	\$3,347,546.91	\$638,942.15	\$638,942.15	\$638,942.15	\$638,942.15				
0015652 CONST BRIDGE & APPROACHES 670, TALBOT		\$5,407,384.49	\$1,081,161.25	\$4,326,223.24	\$1,382,479.57	\$2,943,743.66	\$2,943,743.66	\$2,943,743.66	\$2,943,743.66				
PLANE TRAIN TUNNEL WEST EXTENSION (SUB TO CAT JV), FULTON		\$2,703,051.28	\$274,906.60	\$2,428,144.68	\$2,003,636.22	\$424,508.46	\$424,508.46	\$424,508.46	\$424,508.46				
M006350 MILL, INLAY, RESURFACING SR22/SR 540, MUSCOGEE		\$13,755,103.30	\$6,907,950.21	\$12,947,153.09	\$3,919,290.62	\$9,027,862.47	\$9,027,862.47	\$9,027,862.47	\$9,027,862.47				
12-1890 WIDENING & RECONSTRUCTION SR 9, FORSYTH		\$24,822,292.20	\$6,922,665.93	\$17,899,626.26	\$1,605,639.80	\$16,293,986.45	\$16,293,986.45	\$16,293,986.45	\$16,293,986.45				
2024/02/05/2026 CAPITAL PAVING, CITY OF BROOKHAVEN		\$16,619,838.79	\$3,727,942.31	\$12,891,896.48	\$4,662,102.53	\$8,229,793.95	\$8,229,793.95	\$8,229,793.95	\$8,229,793.95				
X238 OLD FLOYD RD @ VETERANS MEMORIAL HIGHWAY, COBB		\$4,465,368.66	\$896,869.05	\$3,568,499.61	\$719,145	\$3,559,308.16	\$3,559,308.16	\$3,559,308.16	\$3,559,308.16				
KIMBALL BRIDGE ROAD CORRIDOR/TIMODAL GAP CONN, ALPHARETTA		\$976,802.36	\$117,815.22	\$858,987.13	\$0.00	\$858,987.13	\$858,987.13	\$858,987.13	\$858,987.13				
23015 COLONIAL GKT - CEMENT OPERATION MODIFICATIONS		\$265,698.94	\$0.00	\$265,698.94	\$122,832.92	\$142,866.02	\$142,866.02	\$142,866.02	\$142,866.02				
22001 CHESWICK SOUTH PH I & II		\$2,161,107.22	\$0.00	\$2,161,107.22	\$1,290,975.43	\$870,131.79	\$870,131.79	\$870,131.79	\$870,131.79				
22021 WILFORD PRESERVE PH 4		\$4,149,209.98	\$0.00	\$4,149,209.98	\$2,143,609.72	\$2,005,600.26	\$2,005,600.26	\$2,005,600.26	\$2,005,600.26				
23008 LONGLEAF PINE PARKWAY WIDENING		\$7,534,543.15	\$0.00	\$7,534,543.15	\$2,524,571.96	\$5,009,971.19	\$5,009,971.19	\$5,009,971.19	\$5,009,971.19				
23016 SE TOYOTA EARLY SITE WORK		\$8,462,434.45	\$649,793.59	\$7,812,640.86	\$4,141,310.49	\$3,671,330.37	\$3,671,330.37	\$3,671,330.37	\$3,671,330.37				
23019 JAXPORT CONTAINER TERMINAL		\$14,406,982.75	\$9,305,667.31	\$5,101,315.44	\$4,829,096.27	\$772,219.17	\$772,219.17	\$772,219.17	\$772,219.17				
24004 JIA ECONOMY PARKING LOT		\$2,217,302.87	\$322,920.39	\$1,894,382.48	\$1,171,259.34	\$723,123.14	\$723,123.14	\$723,123.14	\$723,123.14				
24007 OCEAN TERMINAL CONTAINER EXP. PHASE 3, CHATHAM		\$46,138,166.02	\$25,030,093.74	\$23,108,072.28	\$19,301,981.18	\$3,806,091.10	\$3,806,091.10	\$3,806,091.10	\$3,806,091.10				
23-ITB-053 TSPLOST RESURFACING PACKAGE DIST 1 & 2, EFFINGHAM		\$5,341,515.00	\$408,648.26	\$4,932,865.74	\$3,159,557.56	\$1,773,308.18	\$1,773,308.18	\$1,773,308.18	\$1,773,308.18				
M006448 MILLING & RESURFACING L7/SR 401, CLAYTON & FULTON		\$43,398,549.52	\$2,411,076.45	\$40,987,473.07	\$24,803,242.61	\$16,184,230.46	\$16,184,230.46	\$16,184,230.46	\$16,184,230.46				
M006523 MILLING, INLAY, RESURFACING SR 70, FULTON		\$121,891.56	\$0.00	\$121,891.56	\$4,712.97	\$117,178.59	\$117,178.59	\$117,178.59	\$117,178.59				
0003682 WIDENING FOR ADDITIONAL LANES SR 20, FORSYTH		\$55,557,974.35	\$12,114,642.08	\$43,443,332.27	\$9,855,732.57	\$33,587,599.70	\$33,587,599.70	\$33,587,599.70	\$33,587,599.70				
Ineson Port Center PH 2 & 3		\$8,045,163.00	\$1,029,226.71	\$7,015,936.29	\$3,509,857.43	\$3,506,078.86	\$3,506,078.86	\$3,506,078.86	\$3,506,078.86				
BUENA VISTA ROAD IMPROVEMENTS @ SPIDERWEB-PHASE II, MUSCOGEE		\$35,310,599.90	\$7,670,509.78	\$28,240,090.11	\$0.00	\$28,240,090.11	\$28,240,090.11	\$28,240,090.11	\$28,240,090.11				
AIRPOK Co Airport Runway Line of Sight/RT RUNWAY LINE OF S		\$7,031,975.59	\$1,650,506.50	\$5,381,469.09	\$0.00	\$5,381,469.09	\$5,381,469.09	\$5,381,469.09	\$5,381,469.09				
30620 SAVANNAH HILTON HEAD INT. EXTEND TAXIWAY G, CHATHAM		\$15,731,999.00	\$5,139,517.83	\$10,592,481.17	\$893,037.12	\$9,699,444.05	\$9,699,444.05	\$9,699,444.05	\$9,699,444.05				
#24-203 TAXIWAY F RECONSTRUCTION, AUGUSTA REGIONAL AIRPORT		\$8,128,418.19	\$4,481,862.95	\$3,646,555.24	\$0.00	\$3,646,555.24	\$3,646,555.24	\$3,646,555.24	\$3,646,555.24				
2024 LMIG STREET IMPROVEMENTS, BUTTS COUNTY		\$1,894,897.91	\$79,360.40	\$1,815,537.51	\$1,046,997.70	\$768,539.81	\$768,539.81	\$768,539.81	\$768,539.81				
0019223 RESURFACING, SHOULDER REHAB SR 53, JACKSON		\$1,513,741.54	\$441,514.90	\$1,072,226.64	\$940,064.96	\$132,161.78	\$132,161.78	\$132,161.78	\$132,161.78				
0013628 2312/D WIDENING & RECONSTR SR 162, NEWTON & ROCKDALE		\$26,549,715.86	\$4,440,690.84	\$22,109,025.01	\$0.00	\$22,109,025.01	\$22,109,025.01	\$22,109,025.01	\$22,109,025.01				
0019451 OLD CUYLER ROAD-NEW INTERCHANGE, BRYAN		\$25,963,765.99	\$4,115,965.05	\$21,847,800.94	\$75,179.54	\$21,772,621.39	\$21,772,621.39	\$21,772,621.39	\$21,772,621.39				
Ineson Port Center 2 - IPC ONE		\$587,396.41	\$11,694.00	\$575,702.41	\$489,458.78	\$86,243.63	\$86,243.63	\$86,243.63	\$86,243.63				
Ineson Port Center 2 - IPC TWO		\$1,008,979.97	\$132,985.97	\$875,994.00	\$0.00	\$875,994.00	\$875,994.00	\$875,994.00	\$875,994.00				
Ineson Port Center 2 IPC Three		\$683,391.23	\$566,045.65	\$117,345.58	\$99,143.81	\$78,201.77	\$78,201.77	\$78,201.77	\$78,201.77				
MMCNOUGH PKWY EXT (SUB TO SOUTHEASTERN SITE), HENRY		\$1,225,089.62	\$0.00	\$1,225,089.62	\$0.00	\$1,225,089.62	\$1,225,089.62	\$1,225,089.62	\$1,225,089.62				
CHATHAM PKWY OVER I-16 DB EMERGENCY JOB		\$11,974,999.47	\$3,494,562.45	\$8,480,437.02	\$2,532,407.40	\$5,958,029.62	\$5,958,029.62	\$5,958,029.62	\$5,958,029.62				
SIP 95 - Buildings (Phase 2.1 Silework)		\$16,695,156.00	\$1,555,698.07	\$15,129,457.93	\$4,847,221.67	\$10,282,236.26	\$10,282,236.26	\$10,282,236.26	\$10,282,236.26				
Project Bobcat		\$7,041,873.25	\$2,047,351.78	\$4,994,521.47	\$2,681,907.99	\$2,312,613.48	\$2,312,613.48	\$2,312,613.48	\$2,312,613.48				
0013918 I-285/I-20 WEST INTERCHANGE PROJECT DB COBB & FULTON		\$201,558,419.20	\$13,889,672.91	\$187,668,746.29	\$2,409,215.77	\$185,259,530.53	\$185,259,530.53	\$185,259,530.53	\$185,259,530.53				
0014072 CONSTRUCT BRIDGE & APPROACHES I-16/SR 404, BIBB		\$14,258,950.61	\$3,583,830.13	\$10,675,120.48	\$1,554,150.14	\$9,120,970.33	\$9,120,970.33	\$9,120,970.33	\$9,120,970.33				
W2886 WATER MAIN RELOCATION @ OLLEY CREEK INTERCEPTOR, COBB		\$170,952.00	\$161,007.50	\$9,944.50	\$0.00	\$161,007.50	\$161,007.50	\$161,007.50	\$161,007.50				
2024 LRA PAVING, JASPER		\$1,067,902.76	\$225,418.10	\$842,484.66	\$574,374.15	\$268,160.51	\$268,160.51	\$268,160.51	\$268,160.51				
24-11 INTERSECT IMPROVEMENTS S. HOUSTON LAKE ROAD, HOUSTON		\$1,992,497.35	\$770,900.33	\$1,221,597.02	\$581,443.59	\$640,153.43	\$640,153.43	\$640,153.43	\$640,153.43				
SR 20 NO.694 WATER & SEWER IMPROV PH I & II, CITY OF CUMMING		\$22,673,741.66	\$5,513,962.13	\$17,159,779.53	\$1,397,361.77	\$15,762,417.76	\$15,762,417.76	\$15,762,417.76	\$15,762,417.76				
B2116 CAMP HIGHLAND ROAD BRIDGE, COBB		\$3,145,107.77	\$1,440,479.18	\$1,704,628.59	\$0.00	\$1,704,628.59	\$1,704,628.59	\$1,704,628.59	\$1,704,628.59				
M006430 MILL, RESURF & SHOULDER REHAB US 27/SR 1, CHATTOOGA		\$2,968,620.16	\$166,696.60	\$2,801,923.56	\$0.00	\$2,801,923.56	\$2,801,923.56	\$2,801,923.56	\$2,801,923.56				
M006489 MILL & RESURF VAR LC-185/285, CLAYTON & FULTON		\$19,493,155.00	\$1,079,347.25	\$18,413,807.75	\$0.00	\$18,413,807.75	\$18,413,807.75	\$18,413,807.75	\$18,413,807.75				
M006468 MILL & RESURFACING SR 5 TO SR 166, DOUGLAS		\$766,660.48	\$90,388.50	\$676,271.98	\$0.00	\$676,271.98	\$676,271.98	\$676,271.98	\$676,271.98				
M006538 MILL, INLAY, RESURF SR 37/SR 13/SR 8, GWINNETT		\$5,708,617.00	\$696,294.80	\$5,012,322.20	\$0.00	\$5,012,322.20	\$5,012,322.20	\$5,012,322.20	\$5,012,322.20				

1 PROJECTS LOCATION AND DESCRIPTION	2 TOTAL OBLIGATIONS	3 SUBCONTRACTED TO OTHERS (-)	4 NET OBLIGATIONS	5 PORTION OF NET COMPLETED (-)	6 NET UNCOMPLETED WORK UNDER CONTRACT	DEFERRED WORK DUE TO CONTRACT LASTING 12 MONTHS FROM THIS LETTING DATE
M006489 MILL, INLAY, RESURF SR 20/SR 81, HENRY	\$10,722,572.00	\$807,404.75	\$9,915,167.25	\$0.00	\$9,915,167.25	
M006493 MILL, RESURF, SURF TREATMENT KIA BOULEVARD, TROUP	\$6,032,975.21	\$790,582.44	\$5,242,392.77	\$0.00	\$5,242,392.77	
SR 369 PAVEMENT PRESERVATION, FORSYTH	\$1,343,300.00	\$176,848.44	\$1,166,451.56	\$720,689.20	\$445,762.36	
2024 PAVEMENT RESURF OF COUNTY ROADS (#24-0121-5), CHATHAM	\$2,920,710.00	\$464,372.10	\$2,456,337.90	\$0.00	\$2,456,337.90	
JIA Valet Parking Lot Modifications	\$1,612,630.13	\$620,525.91	\$992,104.19	\$311,801.30	\$680,302.89	
0015687 CONST OF A ROUNDABOUT SR 1, CHATTAHOOCHEE	\$4,196,255.13	\$1,563,361.99	\$2,632,893.14	\$344,119.03	\$2,288,774.10	
SIP 95 - BLDG 900A - PH 2.3 - Contract	\$2,290,381.74	\$728,577.69	\$1,561,804.05	\$513,687.68	\$1,048,116.37	
22-55-09,107-151 HIGHLAND 75 WATER TRANSMISSION MAIN, BARTOW	\$3,734,056.31	\$451,445.61	\$3,282,610.70	\$0.00	\$3,282,610.70	
GOOD PMT PRESERVATION SR 36, LAMAR	\$1,754,000.00	\$177,627.52	\$1,581,372.48	\$0.00	\$1,581,372.48	
GOOD PMT PRESERVATION SR 7, HOUSTON/PEACH	\$1,186,700.00	\$813,425.54	\$373,274.46	\$0.00	\$373,274.46	
SIP 95 - Building 600	\$680,348.50	\$213,524.05	\$466,824.45	\$124,096.50	\$342,727.95	
B-2919 MAJOR THROUGHFARES (LMIG) RESURF 2025-4, COBB	\$9,534,604.41	\$935,992.50	\$8,600,611.91	\$0.00	\$8,600,611.91	
M006477 MILL, INLAY, RESURF, SHOULDER REHAB SR 156, FLOYD	\$2,588,162.59	\$526,094.23	\$2,062,068.36	\$0.00	\$2,062,068.36	
M006504 MILL & RESURFACING SR 18, JONES	\$2,090,709.07	\$189,680.38	\$1,901,028.69	\$0.00	\$1,901,028.69	
M005283 MILL, INLAY, RESURF, SHOULDER REHAB SR 109, MERIWETHER	\$4,123,752.00	\$276,127.55	\$3,847,624.45	\$0.00	\$3,847,624.45	
0002862 WIDENING & RECONSTR SR 20/ SR369, CHEROKEE/FORSYTH	\$104,351,255.67	\$16,353,691.18	\$87,997,564.49	\$0.00	\$87,997,564.49	
WALMART #4621	\$13,146,363.60	\$5,053,362.61	\$8,093,000.99	\$1,645,594.09	\$6,447,406.90	
M006487 MILL, INLAY, RESURFACING SR 74, BIBB	\$4,073,365.00	\$1,093,319.75	\$2,980,045.25	\$0.00	\$2,980,045.25	
M006468 MILL, INLAY, RESURFACING SR 314 & SR 138, CLAYTON	\$1,914,974.88	\$292,202.50	\$1,622,772.38	\$0.00	\$1,622,772.38	
M006567 MILL & RESURFACING I-20/SR 402, DOUGLAS	\$14,925,950.00	\$523,170.58	\$14,402,779.42	\$0.00	\$14,402,779.42	
M006166 MICRO-MILL, ASPHALT CONC PMT, DADE (SUB TO TALLEY)	\$1,448,720.00	\$0.00	\$1,448,720.00	\$0.00	\$1,448,720.00	
GOOD PMT PRESERVATION SR 41,34,16, COWETA	\$1,269,770.00	\$469,646.63	\$800,123.37	\$0.00	\$800,123.37	
PURCHASE & DELIVERY OF SAND & STONE VARIOUS FACILITIES, COBB	\$62,700.00	\$0.00	\$62,700.00	\$5,680.00	\$57,020.00	
CO174 - FY25-FY26 COMPREHENSIVE WATER & SEWER, COBB	\$5,220,428.54	\$281,082.72	\$4,939,345.82	\$0.00	\$4,939,345.82	
2025 TSPLOST RESURFACING (2025-002), LUMPKIN	\$2,050,865.00	\$54,604.02	\$1,996,260.98	\$0.00	\$1,996,260.98	
#25-41 ATLANTA SPEEDWAY AIRPORT RUNWAY PAVEMENT REHAB, HENRY	\$2,146,100.00	\$466,920.01	\$1,679,179.99	\$0.00	\$1,679,179.99	
North Gate Entrances @ Old Augusta Road	\$3,117,663.10	\$1,602,392.89	\$1,515,270.21	\$0.00	\$1,515,270.21	
Fawcett Tract - Centerpoint Industrial Market Phase II	\$580,991.19	\$0.00	\$580,991.19	\$128,500.00	\$452,491.19	
M006428 MILL, INLAY, RESURFACING SR 85, CLAYTON	\$3,220,474.78	\$258,118.72	\$2,962,356.06	\$0.00	\$2,962,356.06	
TROUP COUNTY RESURFACING, TROUP, 2025 5 YEAR CONTRACT	\$425,842.00	\$0.00	\$425,842.00	\$0.00	\$425,842.00	
251TB124532K-JAJ AIRPORT RUNWAY 8-26 PAVEMENT REHAB, FULTON	\$2,482,900.00	\$866,739.01	\$1,616,160.99	\$0.00	\$1,616,160.99	
VULCAN NORCROSS	\$174,854.00	\$0.00	\$174,854.00	\$0.00	\$174,854.00	
					\$1,109,080,379.94	



C. W. MATTHEWS CONTRACTING COMPANY

DRAWER 970

MARIETTA, GEORGIA 30061

TELEPHONE (770) 422-7520

FAX (770) 422-1068

April 11th, 2025

Georgia Department of Transportation
Office of Construction Bidding

Dear Sir or Madam,

C.W. Matthews Contracting Co., Inc. ("CWM") is under contract on several long-term contracts with the State of Georgia and other municipalities. Due to the nature of these contracts and related project schedules, we have made adjustments to accurately identify work that is to be completed within the next twelve months, in accordance with the rules for completing GDOT Form 484. As the work progresses over time, the schedule will be adjusted to reflect the most accurate short-term contractual obligations. The amount of work currently under contract but not scheduled to begin within the next twelve months, is \$1,004,078,441.44 and can be identified in the attached Form 484 by an asterisk.

Should you have any questions, please do not hesitate to contact us.

Sincerely,

C. W. Matthews Contracting Company, Inc.

C. Michael Morales

C. Michael Morales
Assistant Controller

LIST OF REFERENCES FOR PROJECTS COMPLETED IN 2024

G. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2024

CONTRACT NO., DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
CSSTP-0006-00(000801), STP00-0186-01(011), Douglas					
STP00-001-00(017), Clayton, CW Grant Hwy	91,341,589	RELOCATION AND WIDENING	GEORGIA DOT	ABREHAM MEDHIN	404-559-6699
STP00-001-00(015), SR 140 COTH CREEK (GPS), BARTOW/MLOYD	47,336,688	WIDENING/RECONSTRUCTION CONSTRUCT BRIDGES	GEORGIA DOT	DALE FERRIS	404-559-6699
STP00-001-00(018), SR 140 COTH CREEK (GPS), BARTOW/MLOYD	65,306,419	MILLING/RESURFACING	GEORGIA DOT	GARY PHILLIPS (G.P.'S ENTERPRISES)	678-714-3751
ITB#16-149 REPLACEMENT VALLEY HILL RD BRIDGE, CLAYTON	45,985,989	WIDENING AND RECONSTRUCTION	GEORGIA DOT	LANKSTON JOHNSON	404-559-6699
0096862, 731865 SR62 RECONSTRUCTION, COBB	82,010,410	REPLACE/ WIDENING BRIDGE	CLAYTON COUNTY	LYNN HOOVER	770-477-3592
0012700 / NHI00-0016-01(004) BIBB (SUB TO ERS)	62,425,078	WIDENING & RECONSTRUCTION	GEORGIA DOT	DAN WILLARD	770-885-1011
009164, SR 20 WIDENING AND RECONSTRUCTION, CHEROKEE	5,145,279	MILLING/RESURFACING	GEORGIA DOT	JAMES HARRIS	678-885-0600
19-198-1150, RONALD REGAN BLVD. EXT. (SUB TO GPS), FORSYTH	3,745,289	WIDENING/RECONSTRUCTION	GEORGIA DOT	GARY PHILLIPS (G. P.'S ENTERPRISES)	770-945-0810
JV-IFB-C-1210235 DEKALB AVE. SAFETY IMPROVEMENTS, DEKALB	3,168,448	MILLING/RESURFACING	CITY OF ATLANTA	MICHAEL WOOD	770-945-0810
21007-IFB-C-1210094 RAMP 19 & TAXILANE A3 PAVT REPLACEMENT	54,223,664	ASPHALTIC CONCRETE PAVT REPLACEMENT	CITY OF ATLANTA	ANGELA M. HINTON	404-330-5204
CARGO MAINTENANCE BUILDING	4,299,833	CARGO EXPANSION	CWMI Kelly JV	ANGELA M. HINTON	404-330-5204
CARGO K-9 BUILDING	4,431,675	CARGO EXPANSION	CWMI Kelly JV	Benny Brown	770-422-7520
0090901 CONSTR. OF A ROUNDABOUT I-20/SR 402, HARALSON	5,029,337	CONSTRUCTION OF A ROUNDABOUT	GEORGIA DOT	NATHAN HOWELL	770-646-5522
0013266 CONSTR. OF 2 ROUNDABOUTS @I-75/SR 401, BARTOW	9,472,798	CONSTRUCTION OF A ROUNDABOUT	GEORGIA DOT	KEITH DAY	770-367-3680
#21-209 INTERSECTION IMPROVEMENT, JOHNS CREEK	5,911,369	INTERSECTION IMPROVEMENTS	GEORGIA DOT	BRIAN O'CONNOR	678-350-4719
1013721 WIDENING & RECONSTRUCTION ON I-85/SR 403, COMETA	3,157,632	WIDENING & RECONSTRUCTION	GEORGIA DOT	WILLIAM BOYD	706-845-4115
RHODES STREET WIDENING & IMPROVEMENTS, CITY OF COLLEGE PARK	11,550,127	WIDENING AND RECONSTRUCTION	CITY OF COLLEGE PARK	WILLIS MOODY	404-305-1340
IFB-C-1220165 HAJIA TAXWAY PAVEMENT REPLCMENT 2022, ATLANTA	30,757,896	TAXWAY PAVEMENT REPLACEMENT	CITY OF ATLANTA	NORMA CLICK	404-971-3312
0095660 CONST OF A ROUNDABOUT ON US 80/SR 22, BIBB	2,175,006	CONSTRUCTION OF A ROUNDABOUT	GEORGIA DOT	Danny Miller	478-757-3601
19-198-1150, RONALD REGAN BLVD. EXT. (SUB TO GPS), FORSYTH	9,068,551	REHABILITATION OF EXISTING SANITARY	CITY OF ATLANTA	CRAIG GARLAND	404-427-5375
0013470 MILL, INLAY, RESURF. BRIDGE CONSTR, MUSCOGEE	7,532,765	MILLING/RESURFACING	COBB COUNTY DOT	DENISE HATABIAN	770-528-1600
0014076 CONST OF A BRIDGE & APPROACHES US27/SR1, TROUP	7,205,268	MILL/INLAY/RESURF/ BRIDGE CONSTRUCTION	GEORGIA DOT	JEFFREY PRUITT	770-528-1600
RF3 #2022-042 HOLLY SPRINGS PARKWAY WIDENING PHASE II	5,640,312	WIDENING AND RECONSTRUCTION	GEORGIA DOT	Gulberne Jean Millan	706-646-6100
001757 SR 400 PHASE I DESIGN BUILD PROJECT, FULTON	50,326,499	CONSTRUCTION OF 3 BRIDGES	City of Holy Springs	Mark Bryant	770-345-5538
115357 US 27/SR 1 (SUB TO WRIGHT BROTHERS), CARROLL	2,280,509	MILL & RESURFACING	Wright Brothers Construction Company	Kelly A. Roan	404-559-6699
001842 SR 1 BRIDGE & APPROACHES (SUB TO ERS), TROUP	937,988	MILL & RESURFACING	GPA Enterprises Inc	Tim Phillips, George Flanigan	423-335-2261
0015539 CONSTR OF A BRIDGE & APPROACHES SR 101, POLK	5,067,980	CONSTRUCTION OF A BRIDGE & APPROACHES	GEORGIA DOT	Barbara Grigby	770-985-0600
IFB-C-1220387 HAJIA RAMP 2 PAVEMENT REPLACEMENT, ATLANTA	15,566,065	ASPHALTIC CONCRETE PAVT REPLACEMENT	Georgia DOT	Jordan Clement	706-295-6025
IFB-C-1220387 HAJIA RAMP 2 PAVEMENT REPLACEMENT, ATLANTA	2,365,755	GRADING/RESURFACING	City of Atlanta	ANGELA M. HINTON	404-330-5204
HAY 36, BARNESVILLE-JACKSON ROAD (NULCAN)	21,777,717	ROAD RESURFACING	YONKERS TERTIALS COMPANY	Rebecca Whittle	478-675-2217
ITB #22-101519 2022 LMIG ROAD RESURFACING PROJECT, DEKALB	43,094,720	ROAD RESURFACING	YONKERS TERTIALS COMPANY	KINDY KELLER	904-253-0077
US 278, FRONTAGE ROAD DESIGN BUILD, MORGAN, NEWTON, WALTON	9,093,788	WIDENING AND RECONSTRUCTION - DESIGN BUILD	DEKALB COUNTY BOC	Kathy Briard	404-371-7683
TECHNOLOGY RIDGE PKWY PHASE I #73121 #2022-072, CHEROKEE	12,146,952	REHAB & RSA IMPROVEMENTS	GEORGIA DOT	Lot M. Jones	678-483-0881
22-101517 RUNWAY 16-34 REHAB & RSA IMPRV@ PKX AIRPORT/DEKALB	3,674,523	REHAB & RSA IMPROVEMENTS	CHEROKEE COUNTY BOC	JOVAN HOOPER	404-330-5204
IFB-C, 1220345 PAVE 400 BRIDGE (SUB TO ASTRA), FULTON	32,634,207	BRIDGE CONSTRUCTION	DEKALB COUNTY BOC	ANGELA M. HINTON	404-330-5204
HAJIA RAMP 20 PAVEMENT REPLACEMENT, (FBDOA/2209-1230102, CLAYTON	411,019	WATER & SEWER	City of Atlanta	Victoria Onyiahuchi	404-546-1000
20024-DALLAS ACHWAY @ FREY/MOUNT TABOR (TIPPINS), PAULDING	62,715	WATER & SEWER	BARTOW PAVING	Ray Woodson	770-222-8688
20020-CHURCH ROAD SIDEVAL, (TIPPINS), COBB	62,715	WATER & SEWER	GLOSSON ENTERPRISES	Andrew Kennedy	770-419-5200
20028-OLD ALABAMA RD UTILITY REL PH3 (TIPPINS), BARTOW	62,715	WATER & SEWER	GLOSSON ENTERPRISES	Trent Lard	678-569-4290
22032-HILLSIDE MANOR, COBB	4,616,509	WATER & SEWER	BEZART HOMES	CASEY HLD	678-265-1142
22035-FR23 UPC FOR MH & VB ADJUSTMENTS (TIPPINS), COBB	395,288	WATER & SEWER	COBB COUNTY WATER SYSTEM	Ray Elkins	770-419-5200
22038-MONTVIEW ESTATES (TIPPINS)	2,009,895	WATER & SEWER	BEZART HOMES	Lisa Prater	770-590-5400
22037-SWEET LAKE GROVE (TIPPINS)	175,259	WATER & SEWER	Becher Homes	Dan Mason	404-409-7957
LIBERTY SQUARE PH 2 (TIPPINS), BARTOW	116,888	WATER & SEWER	Kelley Family Homes	Dan Mason	404-409-7957
M005331 MILL, INLAY, RESURFACING SR 5/SR 280, COBB	399,272	WATER & SEWER	Daniel Investment Group Properties	Jennifer Dandil	770-362-2379
M005230 MILL, INLAY, RESURFACING SR 14, TROUP	6,629,143	MILL INLAY, RESURFACING	Georgia DOT	Lee Upton	478-234-7985
M005326 MILL, INLAY, RESURFAC SR 25, CHATHAM	7,169,931	MILL INLAY, RESURFACING	Georgia DOT	Randy Rhodes	706-845-4115
M005326 MILL, INLAY, RESURFAC SR 25, CHATHAM	4,043,365	MILL INLAY, RESURFAC	Georgia DOT	Barrie Rogers	478-234-7885
M005173 MILLING, RESURFAC, SHOULDER REHAB SR 136, DAWSON	2,797,717	MILLING, RESURFAC, SHOULDER REHAB	Georgia DOT	William Edwards	770-531-5880
M005332 MILL, INLAY, RESURFAC SR 8, DOUGLAS	2,045,915	MILL, INLAY, RESURFAC	Georgia DOT	Ruben McCullors	404-559-6699
M005952 MILL & PLANT RESURFACING I-75/SR401, BARTOW & GORDON	3,045,200	MILL & PLANT RESURFACING I-75/SR401	Georgia DOT	Joel Settarfield	770-531-5880
M005368 MILL & PLANT RESURF US16/SR 400, DAWSON & FORSYTH	15,860,100	MILL & PLANT RESURFACING	Georgia DOT	Simon Fox	404-559-6699
M005329 MILL, INLAY, RESURFACING SR 139, FULTON	1,740,543	MILL INLAY, RESURFACING	GEORGIA DOT	BORDEN POLK	706-843-9100
M005902 MILL, INLAY, RESURFACING SR 92/SR 3, SPALDING	1,794,882	MILL INLAY, RESURFACING	Georgia DOT	Chuck Pann	770-403-9110
#2021-06 PAULDING LANE WATER LINE REPLCEMENT, CITY OF DALLAS	718,501	PAULDING LANE WATER LINE REPLCEMENT	City of Dallas	Valerie Sanders	478-885-1472
ITB#23-01 2023 SPLOST MILL & RESURF VARIOUS STREETS, CLAYTON	6,414,000	MILL & RESURF VARIOUS STREETS	Clayton County BOC	Valerie Sanders (LONG)	770-367-5690
M005295 MILL, INLAY, RESURFACING SR 20, BARTOW	6,414,000	MILL & RESURF VARIOUS STREETS	Georgia DOT	Kellie Day	770-367-5690
M005352 MILLING & RESURFACING SR 247, BIBB	1,267,005	MILLING & RESURFACING	Georgia DOT	Williams Bailey	478-757-3601
M005330 MILL, INLAY, RESURFACING SR 120, COBB	6,827,989	MILL INLAY, RESURFACING	Georgia DOT	Percy Combsay	478-965-7151
0018042 RESURFACING & SHOULDER REHAB VARIOUS ROADS, HALL	1,134,048	RESURFACING & SHOULDER REHAB VARIOUS ROADS	Georgia DOT	Simon Fox	770-528-3232
BENSON ESTATES PHASE II	205,783	WATER & SEWER	Keystone Communities	Mark Tagliabari	478-965-7151
AIRPORT PARKWAY EXTENSION PROJECT, PAULDING	4,560,915	AIRPORT PARKWAY EXTENSION PROJECT	Paulding County Airport Authority	Chris Lowrey	770-880-4576
M005353 MILL, INLAY, PLANT MIX RESURF, US 27/SR 1, TROUP	7,620,365	MILL INLAY, PLANT MIX RESURF	Georgia DOT	Nedda Jaramila	803-771-4658
0017878 CONSTR OF A BRIDGE & APPROACHES, SR 179, TROUP	1,877,478	CONST OF A BRIDGE & APPROACHES	GEORGIA DOT	AMANDA MCCART	706-845-4115
2023 23-01 JERUSALEM CHURCH RD PAVING PROJECT, PICKENS	1,251,071	MILING & RESURFACING	PICKENS COUNTY	EUGENE HOPKINS	706-253-8809
2023 23-02 LMIG SPLOST COUNTYNIDE PAVING PROJECT, PICKENS	2,047,800	MILING & RESURFACING	PICKENS COUNTY	EUGENE HOPKINS	706-253-8809
Great Valley Parkway Extension, Bartow	3,717,717	GREAT VALLEY PARKWAY EXTENSION	Bartow Co Commissioner	Ashlon Stewart	770-387-0440
MIDWAY ROAD SIDEWALKS, COBB	332,131	WATER & SEWER	GLOSSON ENTERPRISES	Andrew Kennedy	770-419-5200
RUNWAY OVERLAY & WIDENING, CHEROKEE	8,034,190	RUNWAY OVERLAY & WIDENING	Cherokee Airport Authority	Whitney Dandil	770-422-7520
M005104 MILL, INLAY, RESURF, & SHOULDER REHAB SR 219, HARRIS	3,513,973	MILL INLAY, RESURF, & SHOULDER REHAB	Georgia DOT	Randy Hines	706-568-2165

LIST OF REFERENCES FOR PROJECTS COMPLETED IN 2024

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2024

CONTRACT NO.	DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
* ATL SOUTH PARKING DECK PHASE 1 (SUB TO HAMB JV), CLAYTON 107437 -CITS AT102 SITE MAKE READY, FAYETTE COUNTY	ATL SOUTH PARKING DECK PHASE 1 (SUB TO HAMB JV), CLAYTON 107437 -CITS AT102 SITE MAKE READY, FAYETTE COUNTY	9,000,000	ATL SOUTH PARKING DECK PHASE 1 (SUB TO HAMB JV), CLAYTON 107437 -CITS AT102 SITE MAKE READY, FAYETTE COUNTY	CITY OF ATLANTA	Miles Nannor	404-546-1000
2023-06-01-SP-COST RESURFACING PHASE II, SPALDING	2023-06-01-SP-COST RESURFACING PHASE II, SPALDING	6,950,948	MILLING & RESURFACING	Spalding Co Public Works	Harrison Kennedy	312-658-0747
2023-06-01-SP-COST IMPROVEMENTS, BUTTS	2023-06-01-SP-COST IMPROVEMENTS, BUTTS	7,387,400	LMG STREET IMPROVEMENTS	Butts County Board of Commissioners	Kellie Cook	770-667-4215
BARMECK LAFAYETTE AIRPORT RUNWAY PAYMENT REHAB, LAFAYETTE	BARMECK LAFAYETTE AIRPORT RUNWAY PAYMENT REHAB, LAFAYETTE	1,025,457	AIRPORT RUNWAY PAVEMENT REHAB	City of Lafayette	Hayes Holstadter	770-775-8200
ITR2023-03-FALL STREET RESURFACING, CITY OF TUCKER	ITR2023-03-FALL STREET RESURFACING, CITY OF TUCKER	9,045,094	FALL STREET RESURFACING	City of Tucker	Jason Elliot	919-256-0561
21-4600-COVUS LPO, P223 CONT SAND & STONE (COBB)	21-4600-COVUS LPO, P223 CONT SAND & STONE (COBB)	4,077,953	HAULING	COBB COUNTY WATER SYSTEM	Ken Hildebrandt	678-597-9040
NCSS COTTBALL FIELD	NCSS COTTBALL FIELD	58,900	WATER & SEWER	North Cobb Christian School	Cameron Eveler	770-528-8400
2023 ASPHALTIC CONCRETE PMWT PRESERVATION, CITY OF NEWMAN	2023 ASPHALTIC CONCRETE PMWT PRESERVATION, CITY OF NEWMAN	433,141	ASPHALTIC CONCRETE PMWT PRESERVATION	City of Newnan Public Work	Todd Cligman	770-575-0252
MD06163 MILL & RESURFACING L-95SR405, MCINTOSH	MD06163 MILL & RESURFACING L-95SR405, MCINTOSH	8,143,649	MILL & RESURFACING	Georgia DOT	Mike Klatr	678-573-5560
GDOT EMERGENCY - 285 EB OFF RAMP TO 41	GDOT EMERGENCY - 285 EB OFF RAMP TO 41	19,593,300	EMERGENCY	Georgia DOT	Korey Murray	912-466-7247
* CITY OF LAGRANGE RENEVABLE FOB 2023	* CITY OF LAGRANGE RENEVABLE FOB 2023	25,000	EMERGENCY	Georgia DOT	Shane Bramlett	770-268-1208
2023-27 CDDOT LMG RESURFACING SR 5280, COBB	2023-27 CDDOT LMG RESURFACING SR 5280, COBB	2,329,669	MILL & RESURFACING	Cobb County DOT	Robert Gallante	770-528-1600
M006347 MILL, INLAY, RESURFACING SR 5280, COBB	M006347 MILL, INLAY, RESURFACING SR 5280, COBB	2,417,544	LMG RESURFACING	City of Lagrange	Robert Prather	706-302-2899
M006347 MILL, INLAY, RESURFACING SR 5280, COBB	M006347 MILL, INLAY, RESURFACING SR 5280, COBB	1,087,414	LMG RESURFACING	Calhoun-Gordon County Airport Authority	John Smith	706-365-0551
M006394 MILL, INLAY, RESURFACING SR156R 365, HABERSHAM	M006394 MILL, INLAY, RESURFACING SR156R 365, HABERSHAM	18,888,242	MILL INLAY, RESURFACING	Georgia DOT	Charles Kelley	770-268-1208
M006394 MILL, INLAY, RESURFACING SR156R 365, HABERSHAM	M006394 MILL, INLAY, RESURFACING SR156R 365, HABERSHAM	12,666,953	MILL INLAY, RESURFACING	Georgia DOT	Tony Richardson	706-368-2165
JULLETTE ROAD RESURFACE & SAFETY IMPROVEMENT, CITY OF TUCKER	JULLETTE ROAD RESURFACE & SAFETY IMPROVEMENT, CITY OF TUCKER	15,090,705	MILL & RESURFACING	Georgia DOT	Daniel Frenkel	706-344-4816
ITB# 2335-B FY24 RESURFACING PROJECT, FAYETTE	ITB# 2335-B FY24 RESURFACING PROJECT, FAYETTE	1,149,112	ROAD RESURFACE & SAFETY IMPROVEMENT	City of Tucker	Enrihan Rodriguez	770-466-5522
AIRPORT AUTHORITY-RUNWAY OVERLAY, CALHOUN/GORDON	AIRPORT AUTHORITY-RUNWAY OVERLAY, CALHOUN/GORDON	2,253,668	RESURFACING PROJECT	Fayette Co Bid Of Comm	Ken Hildebrandt	678-597-9040
M006400M09641 MILL/RESURF L-185SR 411, HARRIS/MUSCOGEE	M006400M09641 MILL/RESURF L-185SR 411, HARRIS/MUSCOGEE	3,303,900	RESURFACING PROJECT	CALHOUN-GORDON COUNTY AIRPORT AUTHORITY	Bradley Vinjor	478-955-7151
M006105 MILLING & RESURFACING H-95SR 403, GWINNETT	M006105 MILLING & RESURFACING H-95SR 403, GWINNETT	42,171,300	MILL & RESURFACING	Georgia DOT	Amara Rodin	770 846 3596
COB# - OLD ALABAMA RD UTILITY, BARTOW	COB# - OLD ALABAMA RD UTILITY, BARTOW	5,494,935	WATER & SEWER	Cobb County DOT	Randy Hines	706-466-5769
M006377 MILL, INLAY, RESURFACING SR 1, FLOYD	M006377 MILL, INLAY, RESURFACING SR 1, FLOYD	548,022	MILL & RESURFACING	Georgia DOT	Robert Gallante	770-528-1600
SHERRILL ROAD DEVELOPMENT PROJECT, CHEROKEE	SHERRILL ROAD DEVELOPMENT PROJECT, CHEROKEE	1,988,796	WATER & SEWER	Cobb County DOT	Kody Parlin	706-300-0829
* CHEROKEE BRIDGE OVER CHEROKEE CREEK, EMERGENCY	* CHEROKEE BRIDGE OVER CHEROKEE CREEK, EMERGENCY	4,047,864	EMERGENCY	Daniel Investment Group Properties	Jennifer Daniel	770-982-2379
S, COBB DRIVE CULVERT REPLACEMENT, EMERGENCY	S, COBB DRIVE CULVERT REPLACEMENT, EMERGENCY	9,538,800	WATER & SEWER	Bartow County Water Department	Trent Land	678-599-4290
GDOT PMWT PRESERVATION SR 11, UNION	GDOT PMWT PRESERVATION SR 11, UNION	702,072	MILL, INLAY, RESURFACING	Georgia DOT	Carol Tate	678-424-0344
TRUMP COUNTY RESURFACING, TROUP, 2024.5 YEAR CONTRACT	TRUMP COUNTY RESURFACING, TROUP, 2024.5 YEAR CONTRACT	114,202	BRIDGE REPAIR	BEAZER HOMES	Sherry Thomas	770-425-7520
US 41/RSR 247 EMERGENCY BRIDGE REPAIR, BIBB	US 41/RSR 247 EMERGENCY BRIDGE REPAIR, BIBB	55,116	BRIDGE REPAIR	CWM Kelly JV	Benny Brown	770-425-7520
* 20005-001275/0012758 /1-95A-16 INTERCHANGE	* 20005-001275/0012758 /1-95A-16 INTERCHANGE	3,426,541	WIDENING AND RECONSTRUCTION	Georgia DOT	James McCoy	770-397-3628
* 21003 VETERANS PARKWAY	* 21003 VETERANS PARKWAY	16,117	EMERGENCY	Troup County Board	Debra Gogel / Maly Storey	770-397-3628
* 21008/21014 SAVANNAH HARBOR - SAMET	* 21008/21014 SAVANNAH HARBOR - SAMET	58,426,706	WIDENING AND RECONSTRUCTION	Georgia DOT	Kraig Collins	770-397-3628
21025 GPA STEAMSHIP	21025 GPA STEAMSHIP	76,497	SITE DEVELOPMENT	Savannah Mobility Contractors JV	Ryan Jackson	478-361-2090
* 22022/22023 CROSSGATE - NR BLDG A & B	* 22022/22023 CROSSGATE - NR BLDG A & B	159,537	SITE DEVELOPMENT	Georgia DOT	David Dizon	913-888-5800
22024 BROADHURST LANDFILL - CELL 10B	22024 BROADHURST LANDFILL - CELL 10B	32,801	SITE DEVELOPMENT	Georgia DOT	David Dizon	913-888-5800
* 22028 BIG FISH-TRACT 1- CENTRAL, PORT PARTNERS	* 22028 BIG FISH-TRACT 1- CENTRAL, PORT PARTNERS	439,419	SITE DEVELOPMENT	Samet	Lee Mims	678-713-7616
* 22028 KOMAR PROJECT - EVANS	* 22028 KOMAR PROJECT - EVANS	2,607,285	SITE DEVELOPMENT	Evans General Contractors	Jason Woods	470-519-0249
* 22032 BIG FISH 1 - UTILITIES EE REED	* 22032 BIG FISH 1 - UTILITIES EE REED	1,197,943	ROUNDABOUT	Republic Services of GA	Nick Webber	843-266-6200
23025 GPA SR 25 ROUNDABOUT	23025 GPA SR 25 ROUNDABOUT	677,829	ROUNDABOUT	Central Port Partners	Shawn Carpenter	321-217-1940
* 24003 OAP ROADWAY	* 24003 OAP ROADWAY	4,165,016	SITE DEVELOPMENT	E. E. Reed Construction	Lee Mims	678-713-7616
* 24006 JMW BUILDING A SHELL IMPROVEMENTS	* 24006 JMW BUILDING A SHELL IMPROVEMENTS	5,183,930	SITE DEVELOPMENT	MDH F2 SAV Bldg	JC Roussel	912-964-3914
* 23014 FLEX COLD PHASE 2	* 23014 FLEX COLD PHASE 2	383,481	SITE DEVELOPMENT	Georgia Ports Authority	Judd Crawford	912-964-3914
PNV-2024-LMG COUNTYWIDE PAVING PROJECT, MURRAY	PNV-2024-LMG COUNTYWIDE PAVING PROJECT, MURRAY	219,050	SITE DEVELOPMENT	ARCO Design/Build	Charles Tinsley	678-551-8641
GDOT PMWT PRESERVATION I-20, COBB, FULTON, & DOUGLAS	GDOT PMWT PRESERVATION I-20, COBB, FULTON, & DOUGLAS	5,214,516	PAVING	Evans General Contractors	Jason Woods	470-519-0249
SAVANNAH BRIDGE REPAIR, EMERGENCY, COBB	SAVANNAH BRIDGE REPAIR, EMERGENCY, COBB	972,765	ASPHALTIC CONCRETE PMWT PRESERVATION	ARCO Design/Build	Jason Woods	470-519-0249
COOPER'S CREEK DRIVE, EMERGENCY, COBB	COOPER'S CREEK DRIVE, EMERGENCY, COBB	1,866,955	MILL INLAY, RESURFACING	The Concan Company	Charlie Reynolds	904-309-4724
GDOT PMWT PRESERVATION SR 11, UNION	GDOT PMWT PRESERVATION SR 11, UNION	302,089	EMERGENCY	Murray County	Matthew Sanford	706-695-1337
GDOT PMWT PRESERVATION SR 8, CLARKE & MADISON	GDOT PMWT PRESERVATION SR 8, CLARKE & MADISON	1,000,000	ASPHALTIC CONCRETE PMWT PRESERVATION	Georgia DOT	Justin Vaughn	404-326-5326
107892 ATS AL20 NORTH CAMPUS SITE MAKE READY, FAYETTEVILLE	107892 ATS AL20 NORTH CAMPUS SITE MAKE READY, FAYETTEVILLE	1,199,300	ASPHALTIC CONCRETE PMWT PRESERVATION	Georgia DOT	Michael Fairbanks	470-571-4655
I-75 EXPRESS LANES EMERGENCY SINK HOLE	I-75 EXPRESS LANES EMERGENCY SINK HOLE	1,088,940	BRIDGE CONSTRUCTION	Cobb County DOT	Joel Anderson	912-402-3001
		833,919	EMERGENCY	Georgia DOT	Robert Gallante	770-528-1600
		982,249	EMERGENCY	Georgia DOT	James McCoy	770-387-3628
			EMERGENCY	Clayco Inc.	Harrison Kennedy	312-658-0747
			EMERGENCY	Georgia DOT	Miligan De Telle	404-326-5545

* We are Subcontractors on these jobs.
* Joint Ventures
Five year contract was agreed upon with unit prices, not quantities. No official contract amount

LIST OF REFERENCES FOR PROJECTS COMPLETED IN 2023

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2023

CONTRACT NO., DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
NHIMO-0016-01(092), MDENRECON1-16, BIBB	70,047,148	WIDENING AND RECONSTRUCTION	GEORGIA DOT	DONALD STULL	478-757-2601
0000297 MDENRECON1 US19SR3, UPSON	16,228,127	WIDENING AND RECONSTRUCTION	GEORGIA DOT	CRAG SWEENEY	770-446-4100
BLU16-18 HARBINS RD AT SR316, GWINNETT	30,311,137	ROAD IMPROVEMENTS	GWINNETT COUNTY PURCHASING DEPARTMENT	FRANCES MOULAFONG	678-581-6404
0009851 US41 OVER ROCKY CREEK PAVING,BIBB (Sub to Brasfield)	2,353,422	MILLING/RESURFACING	GEORGIA DOT	ISABEL REYES (BRASFIELD & GORRIE, LLC)	678-581-6404
0009814 SR136 CONN AND EXT TO SR515, PICKENS	15,471,770	REALIGNMENT	GEORGIA DOT	TIM GRIFFIN	678-581-6404
0013545 DB L-68 WIDENING PH 2, JACKSON	97,498,837	WIDENING AND RECONSTRUCTION - DESIGN BUILD	GEORGIA DOT	TIM KNIGHT-HNTB	404-931-4428
006979 SPOUT SPRINGS ROAD, HALL (Sub to GP%)	8,500,300	WIDENING	GEORGIA DOT	GARY PHILLIPS (G. P.'S ENTERPRISES)	770-945-0810
GREENSBORO E LOOP CD04096, GULFPORT COUNTY NC	6,549,047	CONCRETE PAVING	NORTH CAROLINA DOT	ROQUE ROMERO	478-681-8651
IPBC-C-1210316 HANA SOUTH CARGO PARKING LOT EXP, CLAYTON	19,983,117	SITE PAVING & CONCRETE	CITY OF ATLANTA	CHDY MIKOLAJCZYK (E.S. WAGNER CO.)	404-387-5392
AIRPORT TERMINAL AREA SITE PREP & PAVING	18,796,666	PARKING LOT EXPANSION	CITY OF ATLANTA	JOHN CARMICHAEL (SNFS,V)	404-382-1120
MD06127 RESURFACING & SHOULDER REHAB, FRANKLIN	736,697	RESURFACING	PICKENS COUNTY	TRAVIS SCOTT	770-387-3680
11306-Lagrange GA-2021 LMIG Resurfacing	4,487,020	RESURFACING & SHOULDER REHAB	GEORGIA DOT	KEITH DAY	706-384-7269
MD06082 MILL, INLAY, RESURFACING & SHOULDER REHAB, CHATHAM	755,900	RESURFACING	CITY OF LAGRANGE	Brenda Livett	706-302-2899
MD05950 MILL, INLAY, RESURFACING, DEKALB	2,674,111	MILLING/INLAY/RESURFACING	GEORGIA DOT	Randy Rhodes	(912) 851-2144
MD06066 MILL, RESURFACING, SHORE ROAD SR 113, CARROLL	3,496,161	MILLING/INLAY/RESURFACING	GEORGIA DOT	Borden Folk	(770) 216-3910
MD06066 MILL, RESURFACING, SHORE ROAD SR 113, CARROLL	2,826,952	MILLING/INLAY/RESURFACING	GEORGIA DOT	Estevan Rodriguez	(770)946-5522
MD06440 RECONSTRUCT & REHAB FOR TURN LANES SR 85, MONROE	3,986,684	MILLING/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	Jonathan Galvin	478-757-2601
MD06244 MILLING & RESURFACING SR 247SR 11, BIBB	1,284,609	RECONSTRUCTION & REHAB FOR TURN LANES	GEORGIA DOT	Tony Richardson	706-589-2165
MD06060 MILL, INLAY, RESURFACING 176SR 401, FULTON	5,744,428	MILLING/RESURFACING	GEORGIA DOT	Danny Miller	478-757-2601
MD06183 MILLING, RESURFACING SR 21, SCREVEN	27,693,405	MILLING/INLAY/RESURFACING	GEORGIA DOT	Ruben McCullers	404-559-6699
MD06175 MILL, RESURFACING, SHOULDER REHAB SR 184, STEPHENS	1,739,834	MILLING/RESURFACING	GEORGIA DOT	Kevin Chibbs	(912) 871-1103
EA-C-1220285 DB CHESHIRE BRIDGE ROAD REPLACE BRIDGE, DEKALB	9,727,036	RESURFACING & SHOULDER REHAB	GEORGIA DOT	Kevin Barrett	(706) 384-7269
FY23 CAPACITY IMPROVEMENTS, RAPID DISPATCH (SUB TO BAKERY	747,071	BRIDGE REPAIR/ACEMNT	CITY OF ATLANTA	Courtney Hunt	404-530-5204
MD04842 MILL, INLAY, RESURFACING SR 54, CLAYTON/DEKALB	9,727,036	BRIDGE REPAIR/ACEMNT	BAKER CONSTRUCTION	Terence Cooper	404-559-6699
MD06180 MILL/RESURFACING SR17/SR 184, STEPHENS	800,587	MILLING/INLAY/RESURFACING	GEORGIA DOT	Shane Jones	770-384-7269
MD06290 MILL, INLAY, RESURFACING SR 280, COBB	2,216,214	MILLING/INLAY/RESURFACING	GEORGIA DOT	Jean Lima	770-528-3232
TSR LOST RESURFACING PHASE 1 2022-0006, SPALDING	5,688,366	MILLING/INLAY/RESURFACING	GEORGIA DOT	Scott Sullivan	770-467-4774
SOUTH HOUSTON LAKE RD & FEAGIN MILL INTERSECT IMPRV, HOUSTON	7,185,095	INTERSECTION IMPROVEMENTS	SPALDING COUNTY PUBLIC WORKS	Alan Mason	478-687-4280
MD06292 MILL, INLAY, RESURFACING SR 155, DEKALB	2,536,081	MILL/INLAY/RESURFACING	HOUSTON COUNTY PUBLIC WORKS	LEE UPKINS	770-216-3810
MD06267 MILL, INLAY, RESURFACING SR 141, FORSYTH	7,130,859	MILL/INLAY/RESURFACING	GEORGIA DOT	SIMON FOX	770-531-5880
MD06285 MILL, INLAY, RESURFACING SR3, FULTON	7,842,955	MILL/INLAY/RESURFACING	GEORGIA DOT	Kevin Bailey	404-559-6699
T01601224 PATCH, MILL & RESURF OF VARIOUS ROADS, DOUGLAS	2,306,333	MILLING/RESURFACING	DOUGLAS COUNTY BOC	Jack Burnside	770-920-7296
#22-T001 RESURFACING 40 ROADS, CITY OF LOCUST GROVE	9,863,469	MILL/INLAY/RESURFACING	THE CITY OF LOCUST GROVE	Randy Rhodes	912-651-2144
MD06343 MILL, INLAY, RESURFACING SR 16SR 1, CARROLL	1,649,294	RESURFACING	MURRAY COUNTY GOVERNMENT	Andrew Johnson	770-285-3416
MD06343 MILL, INLAY, RESURFACING SR16/SR 1, CARROLL	3,877,843	MILLING/RESURFACING	GEORGIA DOT	Matt Sanford	706-423-2141
IPBC-1220143 JAIL CENTER, FULTON	6128,322	MILL/INLAY/RESURFACING	GEORGIA DOT	Estevan Rodriguez	(770)946-5522
2022 STREET RESURFACING, CITY OF ATLANTA	1,082,413	PANEL REPLACEMENT	CITY OF ATLANTA	Borden Folk	(770) 216-3910
EMAS INSTALL-PHASE II, CARTERSVILLE-BARTOW AIRPORT AUTHORITY	1,784,920	RESURFACING	CITY OF KENNESAW	STEVE WOODS (BBH)	770-874-1162
GDOT SR 5 PMVT PRESERVATION, FANNIN	1,774,097	RESURFACING	CARTERSVILLE-BARTOW COUNTY AIRPORT AUTHORITY	Ricky Stewart	678-456-4179
MD06320 MILL, INLAY, RESURFACING SR 120, GWINNETT	730,000	EMAS INSTALL	GEORGIA DOT	Chance Stokes	770-971-5407
GATE 69 MODULAR YARD (HOLDER, MOODY, AND BRYSON A JV)	4,524,525	MILNEMENT PRESERVATION	GEORGIA DOT	Kevin Matthew Bailey	770-272-2211
MD04865 MILL, INLAY, RESURFACING SR92, DOUGLAS	1,570,000	MILNEMENT PRESERVATION	GEORGIA DOT	ERIC DURHAM (HOLDER)	770-531-5880
MD06321 MILL, INLAY, RESURF, SHOULDER REHAB SR 58, FRANKLIN	5,058,176	RELOCATION LOT	GEORGIA DOT	John Coleman	770-988-3045
MD06103 MILL, INLAY, RESURF, SHOULDER REHAB SR 219, HARRIS	6,302,196	MILL/INLAY/RESURFACING	GEORGIA DOT	John Coleman	404-559-6699
MD05262 MILL, INLAY, RESURF, SHOULDER REHAB SR 219, HARRIS	3,409,044	MILL/INLAY/RESURFACING SHOULDER REHAB	GEORGIA DOT	JD Ables	770-588-2165
MD06102 MILL, INLAY, RESURFACING, SR 219, MUSCOGEE	4,409,550	MILL/INLAY/RESURFACING/ SHOULDER REHAB	GEORGIA DOT	Daniel Emonsone	478-757-2601
GDOT SR 145 PMVT PRESERVATION, FRANKLIN	4,769,094	MILL/INLAY/RESURFACING	GEORGIA DOT	James Hines	706-589-2165
MD06319 MILL, INLAY, RESURFACING SR 15 & SR 10, CLARKE	522,020	PAVEMENT PRESERVATION	GEORGIA DOT	Phillip Shane Jones	(706) 384-7269
MD06328 MILL, INLAY, RESURF, SHOULDER REHAB SR 139, COBB	2,984,773	MILL/INLAY/RESURFACING	GEORGIA DOT	Rodney Hance	706-583-2644
MD06249 MILL, INLAY, RESURF, SHOULDER REHAB SR 34 & SR 16, COWETA	3,312,544	MILL/INLAY/RESURFACING	GEORGIA DOT	Percy Combay	(478) 234-7985
MD06272 MILL, INLAY, RESURF, SHOULDER REHAB, DAWSON/FORSYTH	3,922,316	MILL/INLAY/RESURFACING	GEORGIA DOT	Guilherme Jean Millian	(706) 845-4115
MD06253 MILL, INLAY, RESURF, SURFACE TREAT SR 1, FLOYD/POLK	4,380,152	MILL/INLAY/RESURFACING/ SHOULDER REHAB	GEORGIA DOT	Kevin Bailey	770-531-5880
MD06322 MILL, INLAY, RESURF, SHOULDER REHAB SR 60, HALL	7,226,128	MILL/INLAY/RESURFACING/ SURFACE TREATMENT	GEORGIA DOT	Carol Tate	478-955-7151
	3,497,679	MILL/INLAY/RESURFACING/ SHOULDER REHAB	GEORGIA DOT	Kevin Matthew Bailey	(770) 531-5880

483,229,565

We are Subcontractors on these jobs.
Joint Ventures
Five year contract was agreed upon with unit prices, not quantities. No official contract amount

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2022

23Comp-Ct corrected-BRENDA.xlsx

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2022

CONTRACT NO., DESCRIPTION, LOCATION

- GDOT PMVT PRESERVATION SR 98, SR 326, SR 15, JACKSON D2875, TWIN BRANCHES CIRCLE DRAINAGE, COBB EMERGENCY HARALSON COUNTY LMG & TSP/LOST ROAD PROJECT 2022
- GDOT PMVT PRESERVATION SR 60, LUMPKIN
- 2022 RECLAMATION & RESURFACING VARIOUS ROADS, LAMAR
- T-North PBB Foundations-Sub To Player & Company
- 2022 ASPHALT CONTRACT 1, PAULDING COUNTY
- GDOT PMVT PRESERVATION SR11, WHITE
- NCCS MCPHAL DRIVE, COBB
- TERMINAL B EMERGENCY REPAIRS
- GDOT PMVT PRESERVATION SR 17, WHITE
- GDOT PMVT PRESERVATION SR 13, WHITE
- COBB EMERGENCY GORDY PARKWAY
- # CITY OF LAGRANGE (RENEWABLE FOR
- Fuel Slab Replacement (Player & Company)

AMOUNT OF CONTRACT	TYPE OF WORK
824,100	PAVEMENT PRESERVATION
406,715	DRAINAGE REPAIR
2,353,897	MILLING/RESURFACING
466,503	PAVEMENT PRESERVATION
1,276,753	RESURFACING
190,975	FOUNDATION DEMO & INSTALL
4,530,162	MILLING/RESURFACING
576,820	PAVEMENT PRESERVATION
79,500	ROAD IMPROVEMENTS
20,617	EMERGENCY REPAIR
1,086,050	PAVEMENT PRESERVATION
1,118,600	PAVEMENT PRESERVATION
499,212	EMERGENCY REPAIR
-	MILLING/RESURFACING
148,294	FUEL SLAB REPLACEMENT
480,974,690	

OWNER

- GEORGIA DOT
- COBB COUNTY DOT
- HARALSON COUNTY COB
- GEORGIA DOT
- LAMAR COUNTY BOC
- CITY OF ATLANTA
- PAULDING COUNTY BOC
- GEORGIA DOT
- NORTH COBB CHRISTIAN SCHOOL
- CITY OF ATLANTA
- GEORGIA DOT
- COBB COUNTY DOT
- CITY OF LAGRANGE
- CITY OF ATLANTA

ENGINEER/OFFICER

- Blake Jennings
- DENISE HATABIAN
- Terry Edwards
- Ruben McCullers
- JAMES RIGDON
- BRIAN RISCHAR (PLAYER & COMPANY)
- DERRICK BAXTER
- Mitch Garmon
- TODD CLINGMAN
- JIM REZAC (BRENT SCARBROUGH)
- Mitch Garmon
- TIMOTHY SWINK
- DENISE HATABIAN
- CHRIS PRATHER
- BRIAN RISCHAR (PLAYER & COMPANY)

PHONE #

- 706-583-2644
- 770-528-3656
- 770-646-3278
- 706-348-4848
- 770-358-5090
- 678-469-5301
- 770-445-4759
- 706-348-4848
- 770-975-0252
- 770-461-8603
- 706-348-4848
- 404-631-1367
- 770-528-3656
- 706-302-2899
- 678-469-5301

* We are Subcontractors on these jobs.
^ Joint Ventures
Five year contract was agreed upon with unit prices, not quantities. No official contract amount

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF PRINCIPAL INDIVIDUALS
January 1, 2025

<u>Individual's Name</u>	<u>Present Position Or Office</u>	<u>Years of Construction Experience</u>	<u>Hire Date</u>	<u>Years With CWM</u>	<u>Magnitude and Type of Work</u>	<u>In What Capacity</u>
Robert E. Matthews	Chairman Emeritus Director	62	1965	60	Executive	Management
Matthew D. Burton	Chairman of Board Director	35	1990	33	Executive	Management
Daniel P. Garcia	President	30	2013	13	Executive	Management
Michael D. Bell	Executive Vice President Secretary/Treasurer	30	1995	30	Executive	Management
Jeff C. Shropshire	Senior Vice President	37	1990	35	Major Projects	Field Management
William G. White	Senior Vice President	37	1988	37	Asphalt Construction	Field Management
Frank P. Crumbley	Senior Vice President	42	1996	29	Roadway Construction	Field Management
Lee T. Smith, Jr.	Senior Vice President	25	2000	25	Asphalt Plants	Field Management
Stoy F. Marlow	Senior Vice President	36	2024	1	Baker Division	Field Management
Mike L. Kleuckling	Vice President	43	1988	37	Estimating	Management
Benny M. Brown, Jr.	Vice President Assistant Secretary	22	2003	22	General & Administration	Management
John M. Faress	Vice President	32	2009	16	Equipment	Field Management
Adam M. Grist	Vice President	26	2005	20	Structures Division	Field Management
Kevin T. Eubanks	Vice President	27	1998	27	Roadway Constructoin	Field Management
Sheldon K. Fram	Corporate Counsel	28	2006	19	Risk Management	Management
Robert W. Thompson, Jr.	Division Vice President	47	1979	46	Estimating & Design Build	Management
Thomas J. Roginsky	Division Vice President	43	1995	30	Information Technology	Management
Ray A. Rodriguez	Division Vice President	33	1995	30	Human Resources	Management
Ryan L. Beech	Division Vice President	25	2006	19	Major Projects	Field Management
Andrew G. Brooks	Division Vice President	22	2005	20	Terminal and Quality Control	Field Management
Michael P. Nadolski	Division Vice President	19	2008	17	Design Build	Management
Ronald C. Eubanks, Jr.	Division Vice President	25	2023	2	Water & Sewer	Field Management
Jarrold W. Crum	Division Vice President	29	2023	2	Safety	Field Management
Robert B. Forrest	Division Vice President	35	2024	1	Baker Division	Field Management
Joe J. DeFiore	Division Vice President	25	2024	1	Estimating & Design Build	Management
Robert L. Bird III	Division Vice President	30	2024	1	Major Projects	Field Management

C.W. Matthews Contracting Co., Inc. - Asphalt Plants

Updated: 2/3/2025

Lee Moore - FOB Sales 404-285-8190			Andrew Thompson - FOB Sales 470-232-4162		Lee Smith - Vice President - 404-218-2830		
Plant No.	Location	Mailing Address	Plant Phone	Plant Foreman	Foreman Cell	General Supt.	General Supt Cell
3	Kennesaw	850 Duncan Road, NW Kennesaw, GA 30144	770-428-8045	DANIEL RAMPLEY	678-294-2820	Greg Taylor	770-597-8523
4	Griffin	195 Moreland Rd. Griffin, GA 30224	770-228-5795	JOSH DUCHESNEAU	770-596-9484	Danny Jackson	678-227-3818
5	Big Creek	3561 Peachtree Pkwy Suwanee, GA 30024	770-887-8509	DAVID TAYLOR	678-294-6399	Jason Evans	770-608-0253
6	Bartow	5840-A Highway 20, SE Cartersville, GA 30120	770-607-1827	DREW HAMMONDS	404-632-5301	Greg Taylor	770-597-8523
9	Cumming	1475 Ronald Reagan Blvd. Cumming, GA 30140	770-887-6924	BRIAN MULLINS	770-656-7330	Jason Evans	770-608-0253
11	Dahlonega	1149 Red Oak Flats Rd. Dahlonega, GA 30533	706-867-8780	JACOB HOWARD	407-306-7065	Greg Taylor	770-597-8523
12	Douglasville	2586 Cochran Ind. Blvd. Douglasville, GA 30134	770-949-4674	CHAD VASSER	770-298-2983	Danny Calaway	404-444-3803
14	Bolton	5170 South Atlanta Rd. Smyrna, GA 30080	404-355-8344	BYRON CARRILLO	678-815-8907	Danny Calaway	404-444-3803
15	Blairsville	1208 Rock Rd. Blairsville, GA 30512	706-745-9436	JASON ROSS	770-335-0049	Greg Taylor	770-597-8523
16	Villa Rica	25 Old Rock Quarry Rd. Villa Rica, GA 30180	770-459-4104	DANIEL McGHEE	770-656-7313	Danny Calaway	404-444-3803
17	Ellijay	16678 GA- 515 Ellijay, GA 30536	706-276-4931	C.J. MILLER	678-767-2556	Greg Taylor	770-597-8523
22	Toccoa	2600 Rock Quarry Circle Toccoa, GA 30577	706-282-0041	NICK CARPENTER	678-429-2703	Jason Evans	770-608-0253
24	Rockmart	1851 Rome Highway Rockmart, GA 30153	770-684-8833	JOHN MASON	770-656-6770	Greg Taylor	770-597-8523
26	Dalton	570 Cherokee Boys Estate Rd, NE Dalton, GA 30721	706-259-4988	RONALD DRAKE	770-656-5590	Greg Taylor	770-597-8523
27	Ball Ground	950 Old Nelson Rd. Ball Ground, GA 30151	770-735-4154	NEIL YOUNG	770-364-2249	Greg Taylor	770-597-8523
42	Bolingbroke	4957 Highway 41 South Bolingbroke, GA 31004	478-994-3549	ADRIAN WALKER	404-263-3249	Danny Jackson	678-227-3818
43	Columbus	2930 Smith Rd. Fortson, GA 31808	706-256-2291	SHAUN EDWARDS	770-881-6578	Danny Jackson	678-227-3818
44	Savannah	226 Dean Forest Road Garden City, GA 31408	912-231-3177	BLAKE NASH	678-294-8388	Danny Jackson	678-227-3818
48	Macon	7547 Georgia Highway 87 Juliette, GA 31046	478-394-8890	DAN CURRY	678-983-2321	Danny Jackson	678-227-3818
52	Candler	2955 Candler Highway Gainesville, GA 30507	770-536-5178	ALFONSO MORALES	678-296-1564	Jason Evans	770-608-0253
53	Athens	1675 Winterville Rd. Athens, GA 30605	706-546-1727	TIM THOMAS	404-732-5964	Jason Evans	770-608-0253
56	Forest Park	297 Lee's Mill Rd. Forest Park, GA 30297	404-766-8564	ALEX GARCIA	770-235-0926	Danny Calaway	404-444-3803
59	LaGrange	628 Vulcan Materials Rd. LaGrange, GA 30241	706-883-6673	ANTONIO ALEXANDER	470-298-1993	Danny Jackson	678-227-3818
60	Norcross	1411 Hill Crest Rd. Norcross, GA 30093	770-279-1356	OMAR HERRERA	678-772-2822	Jason Evans	770-608-0253
62	Paulding	3513 Mulberry Rock Rd. Dallas, GA 30132	678-363-6067	STEVEN WEEKS	678-294-9990	Danny Calaway	404-444-3803
63	Stockbridge	124 Rock Quarry Rd. Stockbridge, GA 30281	770-474-8786	FILEMON PAYAN	678-216-2631	Danny Jackson	678-227-3818
64	Tyrone	218 B Rockwood Rd. Tyrone, GA 30290	770-487-6201	BILL MILLER	770-656-7329	Danny Calaway	404-444-3803

C.W. MATTHEWS CONTRACTING CO., INC.
EQUIPMENT INVENTORY
Revised 2/19/2025

CATEGORY DESCRIPTION	CAT. NO	Number of Assets
BUS	3	63
FLAT BEDS	14	134
FLAT BEDS, DUMP & MIXER TRUCK DIV 2	15	72
FLAT BEDS, WATER	16	24
ALL TERRAIN AUTOS	21	25
SUPERINTENDENT, PICK-UP	30	222
TRUCK, PICKUP	31	607
UTILITY FLATBED	33	39
SMALL FLAT BED	34	76
SCHEDULE C		
TRUCK, SMALL WATER	16	28
TRUCK, TANDEM WATER	17	16
TRUCK, MILLING WATER	19	7
DISTRIBUTOR - ASPHALT CONSTRUCTION DIVISION	21	25
TRUCK, ARTICULATED WATER (8,000 GAL)	24	6
TRUCK, ARTICULATED (25 TON/17 CY)	25	28
TRUCK, ARTICULATED (40 TON/27 CY)	26	13
SKID STEER, TRACK	28	52
SKID STEER, CONSTRUCTION/PLANTS	36	33
SKID STEER, ASPHALT CONSTRUCTION	37	46
MAN LIFT, 60 FT/80 FT	40	16
TELESCOPIC FORKLIFT (CONSIDER NON-RATED CAT)	42	9
BACKHOE, MINI EXCAVATOR	120	29
BACKHOE, TRACK, HAMMER (321 / 325)	121	8
BACKHOE, DRESS RUBBER TIRED (318)	123	3
BACKHOE, TRACK, HAMMER (335 / 336)	124	4
BACKHOE, RUBBER TIRED, (4X4 / 420)	125	19
BACKHOE, 30,000 LB TRACK / CAT 315	126	19
BACKHOE, 55,000 LB TRACK / CAT 321D / 325F	128	31
BACKHOE, 62,000 LB TRACK; CAT 329	129	3
BACKHOE, 80,000 LB TRACK; CAT 335 / 336	130	59
BACKHOE, 100,000 LB TRACK; 349	132	13
BACKHOE, 329 W/ LO-DRILL	135	2
BACKHOE, 308	139	32
TRACTOR, CONCRETE DEMO 225 - 274 HP	143	1
FARM TRACTOR 75 TO 124 HP	144	2
FARM TRACTOR 125 TO 174 HP	145	3
FARM TRACTOR 175 TO 224 HP	146	3
CRANE, TELESCOPIC CRAWLER 120 TON	156	1
CRANE, TELESCOPIC CRAWLER 75 TON	157	3
ROUGH TERR. CRANE (50 TON) HYDRAULIC	161	6
CRANE, MOBILE (70 TON)	165	2
CRANE, HEAVY (110 TON) LS-218	166	12
CRANE, HEAVY (200 TON)	168	1
CRANE, HEAVY (150 TON) LS-238	169	3

C.W. MATTHEWS CONTRACTING CO., INC.
EQUIPMENT INVENTORY
Revised 2/19/2025

CATEGORY DESCRIPTION	CAT. NO	Number of Assets
DOZER, D6K; D6N, D4/5 (NEW CAT) D6	201	59
DOZER, D-7 (Asphalt)	205	4
DOZER, D-8	206	6
DOZER, CAT D3 & D4, D39	210	42
LOADER, SMALL RUBBER TIRED, CAT 930	212	77
LOADER, LARGE RUBBER TIRED, CAT 966 / 972	214	50
MOTOR GRADER, LARGE Cat 12M	303	28
SCRAPER, SELF LOADING Cat 613	413	2
SPREADER, ASPHALT WIDENING	703	2
SPREADER, ASPHALT	706	32
SPREADER, RUBBER TRACK, 4FT VOGELE	707	1
MATERIAL TRANSFER DEVICE	708	21
SPREADER, WEILER 430A SHOULDER WIDENING	710	1
MATERIAL PLACER (GOMACO RTP-500)	711	4
CONCRETE PAVER W/ GPS (GOMACO GP-2400)	712	6
CONCRETE SPREADER (GOMACO PS-2600)	713	3
CURB MACHINE	714	2
TEXTURE CURE MACHINE	715	2
CONCRETE PAVER - MILLER FORMLESS	716	1
ROLLER, SMALL VIB. (Soil, CS 323)	748	5
ROLLER,(5,400 lb/35-39" DUAL DRUM CB214/CB14/CB1.8	750	4
ROLLER, (8,700 LB/ 51") DUAL DRUM CB34	751	9
ROLLER, FINISH(22,000 LB/66") CB 534/ CB10 / HD90	753	25
ROLLER FINISH 66" DUAL DRUM / SPLIT; HD90	754	3
ROLLER, BREAK-DOWN(32,000 LB/84"); CB13/ CB15 / HD140	755	16
ROLLER, PNEUMATIC; PS 150	756	25
ROLLER, SOIL / SMOOTH (15,000 LB/66") CS 431	758	9
ROLLER, SOIL / SMOOTH (25,000 LB/84") CS54 / H10i	759	58
ROLLER, SOIL / PADFOOT (25,000 LB/84") CP54 / H10iP	760	30
SOIL COMPACTOR 815	761	3
BROOM - ASPHALT DIVISION	800	43
SWEEPER / VAC TRUCK	801	2
BROOM - ROADWAY DIVISION	802	36
PICK UP BROOM	803	6
SKID-STEER BROOM	804	13
PAVEMENT PROFILERS (MINI)- W50	806	2
PAVEMENT PROFILERS 600 HP - RX-600 / W200 / W210 / W220	808	23
PAVEMENT PROFILERS 900 HP - RX-900 / W250	809	7
SOIL MIXER - SMALL RM-300	810	1
SOIL MIXER - LARGE 250I	814	3

C. W. MATTHEWS CONTRACTING CO., INC.
INDIVIDUALS AUTHORIZED TO SUBMIT BIDS

<u>NAME</u>	<u>TITLE</u>
Daniel P. Garcia	President
Michael D. Bell	Executive Vice President, Secretary/Treasurer
Jeff C. Shropshire	Senior Vice President - Major Projects
Stoy F. Marlow	Senior Vice President - Baker Division
Mike L. Kleuckling	Vice President - Estimating
Benny M. Brown	Vice President - General & Administration, Asstistant Secretary
Robert W. Thompson, Jr.	Division Vice President - Estimating & Design/Build
Thomas J. Roginsky	Division Vice President - Information Technology
Robert B. Forrest	Division Vice President - Baker Division

C. W. MATTHEWS CONTRACTING CO., INC.
OFFICERS AND DIRECTORS
P. O. Drawer 970, Marietta, Georgia 30061

Robert E. Matthews
Chairman Emeritus
Director
Bobm@cwmatthews.com
(770) 422-7520

Matthew D. Burton
Chairman of the Board
Director
Mattb@cwmatthews.com
(770) 422-7520

Daniel P. Garcia
President
Dgarcia@cwmatthews.com
(770) 422-7520

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Secretary/Treasurer
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(770) 422-7520

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(770) 422-7520

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(770) 422-7520

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(770) 422-7520

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(770) 422-7520

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(770) 422-7520

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(770) 422-7520

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(770) 422-7520

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Major Projects
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(770) 422-7520

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(770) 422-7520

Michael P. Nadolski
Division Vice President
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MNadolski@cwmatthews.com
(770) 422-7520

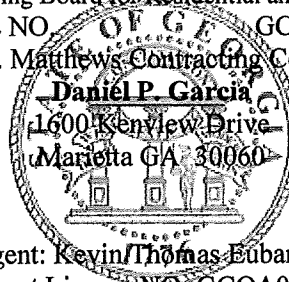
Ronald C. Eubanks, Jr.
Division Vice President
Water & Sewer Construction
Ceubanks@cwmatthews.com
(770) 422-7520

Robert B. Forrest
Division Vice President
Baker
Bforrest@cwmatthews.com
(770) 422-7520



STATE OF GEORGIA

BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
LICENSE NO. **GCCO007346**
C.W. Matthews Contracting Co. Inc.



Daniel P. Garcia
1600 Kenview Drive
Marietta GA 30060
Qualifying Agent: Kevin Thomas Eubanks
Qualifying Agent License NO: GCQA007342
General Contractor Company

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

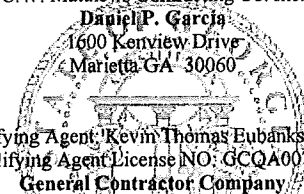
Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

C.W. Matthews Contracting Co. Inc.
1600 Kenview Drive
Marietta GA 30060



STATE OF GEORGIA

BRAD RAFFENSPERGER, Secretary of State
Georgia State Licensing Board for Residential and General Contractors
License No. **GCCO007346**
C.W. Matthews Contracting Co. Inc.



Daniel P. Garcia
1600 Kenview Drive
Marietta GA 30060
Qualifying Agent: Kevin Thomas Eubanks
Qualifying Agent License NO: GCQA007342
General Contractor Company

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021



STATE OF GEORGIA

BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
LICENSE NO. GCQA007342

Kevin Thomas Eubanks
161 Celestial Ridge Drive
Dallas GA 30132

Company Name: C.W. Matthews Contracting Co. Inc.
Company License NO: GCCQ007346
General Contractor Qualifying Agent

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

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Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

Kevin Thomas Eubanks
161 Celestial Ridge Drive
Dallas GA 30132



STATE OF GEORGIA

BRAD RAFFENSPERGER, Secretary of State
Georgia State Licensing Board for Residential and General Contractors
License No. GCQA007342

Kevin Thomas Eubanks

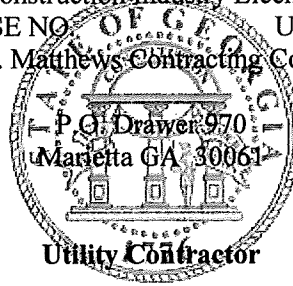
161 Celestial Ridge Drive
Dallas GA 30132

Company Name: C.W. Matthews Contracting Co. Inc.
Company License NO: GCCQ007346
General Contractor Qualifying Agent

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021



STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Construction Industry Licensing Board
LICENSE NO. UC300337
C. W. Matthews Contracting Co., Inc.



EXP DATE - 04/30/2027 Status: Active
Issue Date: 06/21/1994

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

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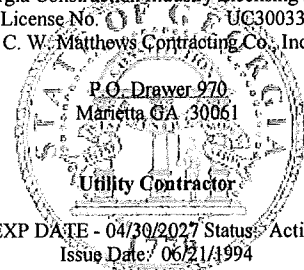
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Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

C. W. Matthews Contracting Co., Inc.
P.O. Drawer 970
Marietta GA 30061



STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Construction Industry Licensing Board
License No. UC300337
C. W. Matthews Contracting Co., Inc.



EXP DATE - 04/30/2027 Status: Active
Issue Date: 06/21/1994



Russell R. McMurry, P.E., Commissioner
One Georgia Center
600 West Peachtree Street, NW
Atlanta, GA 30308
(404) 631-1000 Main Office

July 24, 2024

CERTIFICATE OF QUALIFICATION
Vendor ID: 2MA850

C. W. Matthews Contracting Company, Inc.
1600 Kenview Drive
Marietta, GA 30060

In accordance with The Rules and Regulations governing the Prequalification of Prospective Bidders, the Georgia Department of Transportation has assigned the following Rating. This Certificate of Qualification is effective on the date of issue stated above and cancels and supersedes all Certificates previously issued:

MAXIMUM CAPACITY RATING: \$3,683,400,000.00

CERTIFICATE EXPIRES: June 30, 2026

PRIMARY WORK CLASS/CODE: 400

SECONDARY WORK CLASS(ES)/CODE(S): 149, 150, 163, 167, 201, 205, 208, 209, 310, 432, 439, 441,
452, 461, 500, 500A, 501, 502, 507, 511, 513, 520, 524, 525,
550, 603A, 615, 622, 624, 626, 636, 660, 668 and 670.

The total amount of incomplete work, regardless of its location and with whom it is contracted, whether in progress or awarded but not yet begun, shall not exceed the Maximum Capacity Rating. If dissatisfied with the Rating, we direct you to the Appeals Procedures in §672-5-.08 (1) & (2) and §672-1-.05, Rules of the State Department of Transportation.

A Prequalified Contractor may request an extension of its current prequalification prior to the expiration date of the prequalification by providing the Department with the following information: the amount of time requested for the extension (either 30, 60 or 90 days), the reason for the extension request and the original expiration date of the prequalification. The Department in its discretion will determine whether the extension should be granted and will notify the Contractor of its determination.

Allowing approved prequalification to lapse will leave the Contractors without the ability to bid work until such time as the standing returns to an approved status. If you desire to apply at some intermediate period before the expiration date, your Rating will be reviewed based on the new application.

This Prequalification Certificate is issued for contractors to be eligible for work with the Georgia Department of Transportation (GDOT) only. GDOT does not certify contractors as eligible to do business with entities other than GDOT. *Work class codes are for reference only and do not represent a certification to be provided in support of contractor ability or NAICS code determinations. NAICS Codes are assigned by the office of Equal Employment Opportunity.*

Sincerely,

Patrick Allen, P.E.
Chairman, Prequalification Committee/Contractors

PA:TKA

TAXIWAY PAVEMENT REHABILITATION

CHECKLIST FOR BID DOCUMENTS

Failure to include all required documents will result in proposal being removed for consideration for award.

DOCUMENTATION DESCRIPTIONPlease check

- | | |
|---|-------------------------------------|
| 1. Prequalification Documents | <input checked="" type="checkbox"/> |
| 2. Proposal | <input checked="" type="checkbox"/> |
| 3. Proposal Bid Form | <input checked="" type="checkbox"/> |
| 4. Addenda Acknowledgement | <input checked="" type="checkbox"/> |
| 5. Proposal Guarantee (5%) | <input checked="" type="checkbox"/> |
| 6. Proposal Guarantee Bond (5%) | <input checked="" type="checkbox"/> |
| 7. Certificate of Corporate Bidder <u>OR</u>
Certificate of Authority for LLC, Partnership or Sole Owner | <input checked="" type="checkbox"/> |
| 8. Form of Noncollusion Affidavit | <input checked="" type="checkbox"/> |
| 9. Certification Regarding Debarment, Suspension, Ineligibility
and Volunteer Exclusion | <input checked="" type="checkbox"/> |
| 10. Buy American Certification | <input type="checkbox"/> |
| 11. Certification Regarding Foreign Participation | <input type="checkbox"/> |
| 12. Certification of Nonsegregated Facilities | <input type="checkbox"/> |
| 13. Equal Opportunity Report Statement | <input type="checkbox"/> |
| 14. Performance of Work by Subcontractors | <input checked="" type="checkbox"/> |
| 15. Disadvantaged Business Enterprise Program | <input type="checkbox"/> |
| 16. Contractor – Georgia Security and Immigration Compliance Act
Affidavit and Agreement | <input checked="" type="checkbox"/> |
| 17. Subcontractor – Georgia Security and Immigration Compliance Act
Affidavit and Agreement | <input checked="" type="checkbox"/> |
| 18. SAVE Affidavit | <input checked="" type="checkbox"/> |
| 19. Proof of Insurance | <input checked="" type="checkbox"/> |
| 20. Bid Documents Submittal Checklist (This Page) | <input checked="" type="checkbox"/> |

This affirms that all documents are included with the bidder's bid package.

C. W. MATTHEWS CONTRACTING CO., INC.

May 12, 2025

Company's Name

Date

Michael Kleuckling, Vice President

Authorized Representative's Name
(Print or Type)

 Authorized Representative's Signature

END OF PROPOSAL DOCUMENTS



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DIVISION 4 – CONTRACT DOCUMENTS**CONTRACT****STATE OF GEORGIA****WHITFIELD COUNTY, CITY OF DALTON**

THIS AGREEMENT made and entered into this _____ day of _____, 2025 by and between **CITY OF DALTON, DALTON, GEORGIA** (Party of the, First Part, hereinafter called the Sponsor) and **C.W. MATTHEWS CONTRACTING CO., INC.** Party of the Second Part, hereinafter called the Contractor).

WITNESSETH: That the said Contractor has agreed, and by these presents does agree with the said Sponsor, for the consideration herein mentioned and under the provision of the Performance Bond and Labor and Materials Payment Bond required by the Specifications to furnish all equipment, tools, materials, skill and labor of every description necessary to carry out and complete in a good, firm and substantial and workmanlike manner, the work specified, in strict conformity with the drawings and specifications, together with the foregoing proposal made by the Contractor, the Advertisement, the Instructions to Bidders, General Conditions and this Agreement, shall all form essential parts to this Agreement. The work covered by this Agreement includes all work shown on plans and specifications and listed in the conditions and specifications, to wit: Improvements to DALTON MUNICIPAL AIRPORT, DALTON, GEORGIA and CROY Engineering, LLC project No. 2106.006.

The Contractor awarded work under this contract shall commence work within **ten** days after the issuance of the Notice to Proceed. **All work shall be fully completed within Ninety (90) Calendar Days** from the Notice to Proceed.

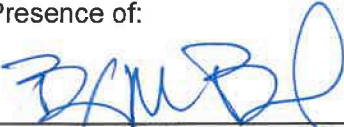
If said work is not completed within the time stated, the Contractor shall be liable and hereby agrees to pay the Sponsor as liquidated damages and not as a penalty, the amount of One Thousand Five Hundred Dollars (\$1,500.00) per calendar day for a delay in completion.

The Sponsor shall pay and the Contractor shall receive the prices stipulated in the proposal hereto attached as full compensation for everything furnished and done by the Contractor under this contract, the full sum of One Million Seven Hundred Thirty-Seven Thousand Five Hundred Seventy-Four Dollars and Sixty-Three Cents (\$ 1,737,574.63) based on the quantities shown in the proposal which sum shall be paid in the manner and terms specified in the Contract Documents, but before issuance of certificate of payment, if the Contractor shall not have submitted evidence satisfactory to the Sponsor that all payrolls, materials bills, and other indebtedness connected with the work have been paid, the Sponsor may withhold, in addition to the retained percentages, such amount or amounts as may be necessary to pay just claims for labor and services rendered and materials in and about the work, and such amount or amounts withheld or retained may be applied by the Sponsor to the payment of such just claims.

It is further mutually agreed between the Parties hereto that if, at any time after the execution of agreement and the Performance Bond for its faithful performance and the Labor and Materials Payment bond, the first party shall deem the surety or sureties upon such bond to be inadequate to cover the performance of the work, the second party shall, at its expense, within five (5) days after the receipt of notice from the first party to do so, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the first party. In such event, no further payment to the second party shall be deemed to be due under this agreement until such new or additional security for the faithful performance of the work shall be furnished in a manner and form satisfactory to the first party.

IN WITNESS WHEREOF the parties hereto have executed this agreement in triplicate this day of _____ day of _____, 2025.


ATTEST: (As to Contractor)
Signed and sealed in the
Presence of:


BENNY M. BROWN
VICE PRESIDENT
& ASSISTANT SECRETARY

(SEAL)

ATTEST:

CONTRACTOR
C.W. MATTHEWS CONTRACTING CO., INC.

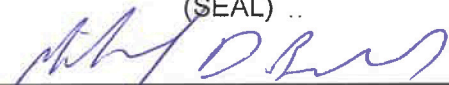
L.S. By: 

L.S. Title:

DANIEL P. GARCIA
PRESIDENT

(SEAL) ..



 L.S.
Secretary MICHAEL D. BELL
EXECUTIVE VICE PRESIDENT
& SECRETARY

ATTEST:(As to Sponsor)

CITY OF DALTON
WHITFIELD COUNTY/DALTON, GEORGIA

By: _____ L.S. By: _____ L.S.

APPROVED AS TO FORM BEFORE EXECUTION

By:  L.S.
Attorney for City of Dalton

CERTIFICATE OF CORPORATE AUTHORITY

I, Michael Bell, certify that I am Secretary of the Corporation named as Contractor herein, same being organized and incorporated to do business under the laws of the State of Georgia; that DAN GARCIA PRESIDENT who executed this contract on behalf of the Contractor was, then and there, C.W. Matthews Contracting Co., Inc.; and that said contract was duly signed by said officer and in behalf of said corporation, pursuant to the authority and its governing body and within the scope of its corporate powers.

I further certify that the names and addresses of the owners of all the outstanding stock of said corporation as of this date are as follows:

Enclosed

This 28th day of May, 2025.

Michael D. Bell

MICHAEL D. BELL
EXECUTIVE VICE PRESIDENT
& SECRETARY



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**CERTIFICATE OF AUTHORITY FOR LIMITED LIABILITY
CORPORATION, PARTNERSHIP OR SOLE OWNER**

I, the undersigned _____, am
the _____ of _____, a
Georgia limited liability company (the "LLC") or Partnership, or Sole Owner. In order to induce
CITY OF DALTON (the CITY) to enter into a contract with the LLC, Partnership, or Sole Owner
executed on its behalf by me, I do hereby personally guarantee to the CITY that I, acting alone
as _____, am vested with full power and authority to act for and on
behalf of the LLC, Partnership, or Sole Owner in the execution of contracts between the LLC,
Partnership or Sole Owner and the CITY, and any such contract(s) will be binding on the LLC,
Partnership, or Sole Owner.

This _____ day of _____, 2025.

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May 23, 2025

C.W. Matthews Contracting Co., Inc.

1600 Kenview Drive NW

Marietta, GA 30060

Surety: Federal Insurance Company

Bond Number: K42001107

Owner: The City of Dalton

Bond Amount: \$1,737,574.63

Project: Taxiway Pavement Rehabilitation At Dalton Municipal Airport, Dalton, Georgia

To Whom it May Concern:

Enclosed you will find the requested performance and payment bond forms in the required amount covering the above captioned project. As a precaution, please check all dates, descriptions, names, seals, surety signatures and remember that the appropriate required contractor's signature is necessary.

American Global, LLC and Federal Insurance Company, as Surety, understand and agree that Bond Number K42001107, written for C.W. Matthews Contracting Co., Inc. in the amount of \$1,737,574.63 will be dated the same date as the Agreement.

Kindly furnish a copy of the fully executed bond. Please contact us if you have any questions.

Sincerely,

Holli Orr

Attorney-in-Fact

American Global, LLC

PERFORMANCE BOND (100%)

KNOW ALL MEN BY THESE PRESENTS, that we, C.W. Matthews Contracting Co., Inc., as Principal, and Federal Insurance Company, as Surety, licensed to do business in the State of Georgia, are held and firmly bound unto **CITY OF DALTON, DALTON, GEORGIA** as Obligee, hereinafter called the Sponsor, in the sum of One Million Seven Hundred Thirty Seven Thousand Five Hundred Seventy Four and 63/100's (\$ 1,737,574.63), for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally firmly by these presents.

The condition of this obligation is such, as whereas the Principal entered into a certain contract, hereto attached, with the Sponsor, dated _____ 2025, for **IMPROVEMENTS TO DALTON MUNICIPAL AIRPORT, DALTON, GEORGIA, and CROY ENGINEERING Project No. 2106.006.**

NOW, THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Sponsor, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made, except that no change will be made which increases the total contract price more than twenty percent in excess of the original contract price without notice to the Surety, then this obligation to be void, otherwise to remain in full force and effect.

Whenever Principal shall be, and declared by Sponsor to be in default under the Contract, the Sponsor having performed Sponsor's obligations thereunder, the Surety may promptly remedy

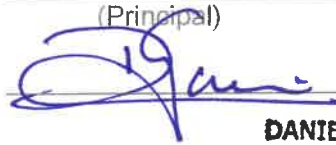
the default, or shall promptly:

- (1) Complete the Contract in accordance with its terms and conditions, or
- (2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Sponsor elects, upon determination by the Sponsor and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Sponsor, and make available as Work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price", as used in this paragraph, shall mean the total amount payable by Sponsor to Principal under the Contract and any amendments thereto, less the amount properly paid by Sponsor to Principal.

Signed, Sealed and Dated this _____ day of _____, A.D., 2025

C.W. Matthews Contracting Co., Inc.
(Principal)

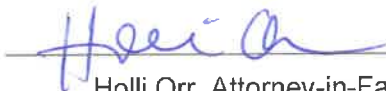
BY:



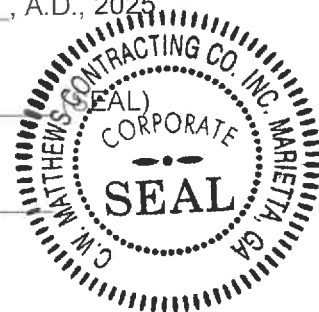
DANIEL P. GARCIA
PRESIDENT

Federal Insurance Company
(Surety) (SEAL)

BY:



Holli Orr, Attorney-in-Fact



Power of Attorney is attached.

CHUBB

Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company

Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that **FEDERAL INSURANCE COMPANY**, an Indiana corporation, **VIGILANT INSURANCE COMPANY**, a New York corporation, **PACIFIC INDEMNITY COMPANY**, a Wisconsin corporation, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint **Holli Orr, Jennifer Westmoreland and Wesley P. Williams** of Atlanta, Georgia -----

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** have each executed and attested these presents and affixed their corporate seals on this 8th day of April 2024.



Rupert HD Swindells, Assistant Secretary



Warren Eichhorn, Vice President



STATE OF NEW JERSEY
County of Hunterdon

SS.

On this 8th day of April, 2024 before me, a Notary Public of New Jersey, personally came Rupert HD Swindells and Warren Eichhorn, to me known to be Assistant Secretary and Vice President, respectively, of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY**, the companies which executed the foregoing Power of Attorney, and the said Rupert HD Swindells and Warren Eichhorn, being by me duly sworn, severally and each for himself did depose and say that they are Assistant Secretary and Vice President, respectively, of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



Albert Contursi
NOTARY PUBLIC OF NEW JERSEY
No 50202369
Commission Expires August 22, 2027


Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY** on August 30, 2016; **WESTCHESTER FIRE INSURANCE COMPANY** on December 11, 2006; and **ACE AMERICAN INSURANCE COMPANY** on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
- (2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
- (3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

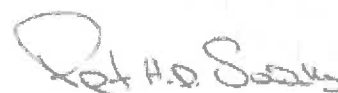
I, Rupert HD Swindells, Assistant Secretary of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
- (ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this

2025





Rupert HD Swindells, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:
Telephone (908) 903-3493 Fax (908) 903-3656 e-mail: surety@chubb.com

Dalton Municipal Airport

March 2025

PAYMENT BOND (100%)

KNOW ALL MEN BY THESE PRESENTS: That C.W. Matthews Contracting Co., Inc., as Principal, and Federal Insurance Company a corporation of the State of Indiana with its principal office in City of Whitehouse Station (hereinafter called the Surety), as Surety, licensed to do business in the State of Georgia, are held and firmly bound unto **CITY OF DALTON, DALTON, GEORGIA** (hereinafter called the Obligee), for the use and protection of all subcontractors and all persons supplying labor, machinery, materials, and equipment in the prosecution of the work provided for in the contract hereinafter referred to in the full and just sum of One Million Seven Hundred Thirty Seven Thousand Five Hundred Seventy Four and 63/100's (\$ 1,737,574.63), to the payment of which sum, well and truly to be made, the Principal and Surety bind themselves, their, and each of their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract, dated the _____ day of _____, 2025, with the Obligee for **DALTON MUNICIPAL AIRPORT, DALTON, GEORGIA, and CROY ENGINEERING Project No. 2106.006** which Contract is by reference made a part hereof.

NOW, THEREFORE THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall faithfully perform said Contract according to its terms, covenants and conditions, and shall promptly pay all persons furnishing labor or material for use in the performance of said Contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

ALL persons who have furnished labor, material, machinery or equipment for use in the performance of said contract shall have a direct right of action on this Bond, provided payment has not been made in full within **ninety (90) days** after the last day on which labor was performed, materials, machinery, and equipment furnished or the subcontract completed.

PROVIDED, HOWEVER, that no suit or action shall be commenced hereunder by any person furnishing labor or material having a direct contractual relationship with a subcontractor, but no contractual relationship express or implied with the Principal:

Unless such person shall have given notice to the Principal within ninety (90) days after such person did, or performed the last of the work or labor, or furnished the last of the materials for which claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such a notice shall be served by mailing the same by registered mail, postage prepaid, in an envelope addressed to the Principal, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State in which the aforesaid project is located, save that such service need not be made by a

public officer.

PROVIDED, FURTHER, that any suit under this bond must be instituted before the expiration of one (1) year after the acceptance of the public works covered by the contract by the proper authorities.

Signed, Sealed and Dated this _____ day of _____, A.D., 2025.

C.W. Matthews Contracting Co., Inc.

(Principal)

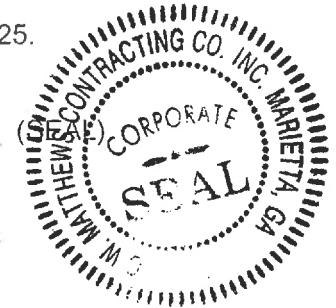
BY:



DANIEL P. GARCIA
PRESIDENT

Federal Insurance Company

(Surety)



(SEAL)

BY:



Holli Orr, Attorney-in-Fact

Power of Attorney is attached.

The Surety Company must be listed on U.S. Treasury Circular 570.

END OF CONTRACT DOCUMENTS



Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company

Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that **FEDERAL INSURANCE COMPANY**, an Indiana corporation, **VIGILANT INSURANCE COMPANY**, a New York corporation, **PACIFIC INDEMNITY COMPANY**, a Wisconsin corporation, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint **Holli Orr, Jennifer Westmoreland and Wesley P. Williams** of Atlanta, Georgia

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said **FEDERAL INSURANCE COMPANY**, **VIGILANT INSURANCE COMPANY**, **PACIFIC INDEMNITY COMPANY**, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** have each executed and attested these presents and affixed their corporate seals on this 8th day of April 2024.



Rupert HD Swindells, Assistant Secretary



Warren Eichhorn, Vice President



STATE OF NEW JERSEY

County of Hunterdon

SS.

On this 8th day of April, 2024 before me, a Notary Public of New Jersey, personally came Rupert HD Swindells and Warren Eichhorn, to me known to be Assistant Secretary and Vice President, respectively, of **FEDERAL INSURANCE COMPANY**, **VIGILANT INSURANCE COMPANY**, **PACIFIC INDEMNITY COMPANY**, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY**, the companies which executed the foregoing Power of Attorney, and the said Rupert HD Swindells and Warren Eichhorn, being by me duly sworn, severally and each for himself did depose and say that they are Assistant Secretary and Vice President, respectively, of **FEDERAL INSURANCE COMPANY**, **VIGILANT INSURANCE COMPANY**, **PACIFIC INDEMNITY COMPANY**, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



Albert Contursi
NOTARY PUBLIC OF NEW JERSEY
No 50202369
Commission Expires August 22, 2027


Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of **FEDERAL INSURANCE COMPANY**, **VIGILANT INSURANCE COMPANY**, and **PACIFIC INDEMNITY COMPANY** on August 30, 2016; **WESTCHESTER FIRE INSURANCE COMPANY** on December 11, 2006; and **ACE AMERICAN INSURANCE COMPANY** on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
- (2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
- (3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

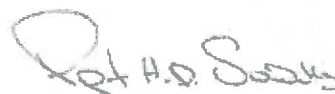
I, Rupert HD Swindells, Assistant Secretary of **FEDERAL INSURANCE COMPANY**, **VIGILANT INSURANCE COMPANY**, **PACIFIC INDEMNITY COMPANY**, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
- (ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this

2025




Rupert HD Swindells, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:
Telephone (908) 903-3493 Fax (908) 903-3656 e-mail: surety@chubb.com

05/23/2025

11:54

505907

Dalton Airport Taxiwy Pvmnt Rehab ASPH

*** Mike Kleuckling x1254

BID TOTALS

<u>Biditem</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Bid Total</u>
BASE BID					
10	MOBILIZATION	1.000	LS	104,637.76	104,637.76
20	COLD MILLING VARIABLE DEPTH (TRANSITION) INCLU	3,500.000	SY	5.23	18,305.00
30	ASPH CONC 12.5MM SP, GRP 1 INLCU POLY BM/HL	4,200.000	TN	142.06	596,652.00
40	ASPH CONC 19MM SP, GRP 1 POLY BM/HL	200.000	TN	170.45	34,090.00
50	TACK COAT	4,000.000	GAL	0.54	2,160.00
60	TEMP TWAY MARKING TP III (YELLOW) INCLU MICROB	5,300.000	SF	3.17	16,801.00
70	PERM TWAY MARK TP III(YELL) REFL MATL(TP 3) MICR	5,300.000	SF	2.12	11,236.00
80	PERM SEEDING INCLU MULCH, SEED. FERT. LIME. TOPS	3.000	AC	24,757.89	74,273.67
90	CONST ENTRANCE/EXIT INCLU INSTALL, MAINT & REM	1.000	EA	7,454.67	7,454.67
100	FULL DEPTH PAVEMENT REMOVAL - INCLU HAUL OFF	550.000	SY	25.12	13,816.00
110	STRUCTURAL FILL MATL FOR PVMNT REPAIR BKFILL(O	550.000	CY	91.11	50,110.50
120	SURFACE PREP & CLEANING INCLU HERBICIDE & SOIL	31,000.000	SY	0.11	3,410.00
130	GAB 6" (PVMNT REPAIR) INCLU HAUL & INSTALL	550.000	SY	27.49	15,119.50
140	CRACK SEAL	30,000.000	LF	2.38	71,400.00
150	UNCLASS EXCAVATION (INCLU HAUL OFF SITE)	550.000	CY	64.67	35,568.50

BASE BID TOTAL

\$1,055,034.60

ADDITIVE BID					
1010	GRADED AGGREGATE BASE, 12" INCL MATL	3,300.000	SY	54.84	180,972.00
1020	ASPH CONC 12.5MM SP, GP1 INCL POLY&H LIME	360.000	TON	158.64	57,110.40
1030	ASPH CONC 19MM SP, GP1 INCL POLY&H LIME	540.000	TON	157.93	85,282.20
1040	TACK COAT	260.000	GAL	0.54	140.40
1045	MOBILIZATION	1.000	LS	67,021.75	67,021.75
1050	CONST ENTR/EXIT INCL I/M/R	1.000	EA	7,454.67	7,454.67
1060	NPDES PERMITS, FEES, NOI, NOT, MONITORING	1.000	LS	5,526.46	5,526.46
1070	TEMPORARY SEEDING AND MULCHING	15,750.000	SY	0.40	6,300.00
1080	I/M/R SILT FENCE	725.000	LF	7.41	5,372.25
1090	I/M/R INLET PROTECTION W/FILTER FABRIC	4.000	EA	417.99	1,671.96
1100	I/M/R OUTLET PROTECTION, RIP RAP (6" STONE)	18.000	CY	154.68	2,784.24
1110	I/M/R HAYBALE CHECK DAM	2.000	EA	423.28	846.56
1120	I/M/R FILTER RING STONE	24.000	CY	152.04	3,648.96
1130	COLD MILLING VARIABLE DEPTH (TRANSITION) INCL H	1,600.000	SY	5.49	8,784.00
1140	FULL-DEPTH PAVEMENT REMOVAL - INCL HAUL OFF	860.000	SY	12.38	10,646.80
1150	REMOVAL OF EXISTING 15" RCP	90.000	LF	50.78	4,570.20
1160	REMOVAL OF EXISTING INLET	1.000	EA	757.20	757.20
1170	REMOVAL OF EXISTING FLARED END SECTION	3.000	EA	507.98	1,523.94
1180	REMOVAL OF EXIST TAXIWAY EDGE LIGHTS INCL CON	33.000	EA	211.64	6,984.12
1190	REMOVAL OF EXIST RUNWAY SIGN INCL CONC	2.000	EA	1,058.20	2,116.40
1200	SAWED JOINTS IN EXISTING ASPHALT PAVEMENT	2,000.000	LF	3.17	6,340.00
1210	EMBANKMENT IN PLACE	1,100.000	CY	34.10	37,510.00
1220	UNCLASSIFIED EXCAVATION	900.000	CY	27.45	24,705.00
1230	TEMPORARY TAXIWAY MARKING, TYPE III (YELLOW)	750.000	SF	5.29	3,967.50
1240	PERMANENT TAXIWAY MARKING, TYPE III (YELLOW)	750.000	SF	5.29	3,967.50
1250	REINFORCED CONCRETE PIPE, 15 INCH CLASS V	190.000	LF	76.54	14,542.60
1260	PRE-CAST DROP INLET FOR 15" RCP (GDOT 1019A, TP A)	1.000	EA	4,592.38	4,592.38
1270	PRE-CAST CONCRETE HEADWALL FOR 15" RCP (GDOT 1	2.000	EA	1,437.77	2,875.54
1280	FLARED END SECTION FOR 15" RCP	1.000	EA	1,046.55	1,046.55
1290	CONCRETE PIPE COLLAR FOR 15" RCP (GDOT 9031U)	2.000	EA	529.10	1,058.20
1300	PERMANENT SEEDING INCL MULCH, SEED, FERT, LIME,	2.500	AC	24,757.90	61,894.75
1330	TRENCHING FOR DIRECT BURIED CABLE, 18 IN MIN DE	1,950.000	LF	5.29	10,315.50
1340	TRENCHING FOR DUCT BANK, 30" MIN DEPTH	120.000	LF	105.82	12,698.40
1350	NO. 8 AWG, 5KV, L-824, TP C CABLE INSTALLED IN TRE	1,950.000	LF	3.17	6,181.50
1360	NO 6 AWG, SOLID BARE COPPER COUNTERPOISE WIRE IN	1,950.000	LF	2.12	4,134.00
1370	CONCRETE ENCASED, ELEC DUCT BANK, 2-WAY 4-INCH	120.000	LF	89.95	10,794.00
1380	L-867 ELECTRICAL JUNCTION BOX, CL 1A, SIZE B(12")	3.000	EA	1,587.30	4,761.90

05/23/2025
505907
*** Mike Kleuckling x1254

11:54
Dalton Airport Taxiwy Pvmt Rehab ASPH

BID TOTALS

<u>Biditem</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Bid Total</u>
1390	L-853 ELEVATED TAXIWAY RETROREFLECTIVE MARKE	44.000	EA	264.55	11,640.20
ADDITIVE TOTAL					\$682,540.03
Bid Total					\$1,737,574.63



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
05/27/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER CERTIFICATE OF SELF-INSURANCE	CONTACT NAME: BRET STANLEY	
	PHONE (A/C No. Ext): 678-809-8119	FAX (A/C No): 770-423-7529
	E-MAIL ADDRESS: BSTANLEY@CWMATTHEWS.COM	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: C.W. MATTHEWS CONTRACTING CO., INC.	
INSURED C.W. MATTHEWS CONTRACTING CO., INC. P.O. DRAWER 970 MARIETTA, GA 30061	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR	Y	Y	SI-2025-CGL	01/01/2025	12/31/2025	EACH OCCURRENCE \$ 3,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ 6,000,000 PRODUCTS - COMP/OP AGG \$ 6,000,000 OTHER: \$	
	GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC							
	OTHER:							
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	Y	Y	Self-Insurance Certificate No. SI-52729014	01/01/2025	12/31/2025	COMBINED SINGLE LIMIT (Ea accident) \$ 3,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ OTHER: \$	
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> EXCESS LIAB DED \$ RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ OTHER: \$	
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N	N/A	Y	Qualified Self-Insurer State of Georgia	01/01/2025	12/31/2025	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

The City of Dalton, Georgia, Croy Engineering, and the Georgia Department of Transportation are named as Additional Insureds on a primary and non-contributory basis with respect to General Liability and Auto Liability coverage for all operations performed by or on behalf of the insured in connection with Project #2106.006 - Dalton Taxiway Pavement Rehabilitation. Waiver of Subrogation is granted in favor of the above-referenced entities for General Liability, Auto Liability, and Workers' Compensation. This certificate affirms that the Explosion, Collapse, and Underground exclusions do not apply. 30 days' notice of cancellation will be provided to certificate holders. Coverage applies to all owned, hired, and non-owned vehicles. Completed Operations coverage shall be maintained for at least two years following final acceptance.

CERTIFICATE HOLDER

CANCELLATION

City of Dalton, Georgia
300 W. Waugh Street
Dalton, GA 30720

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Sheldon Fram

Sheldon Fram
Director of Risk Management



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
5/27/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Hub International Mid-South 3011 Armory Drive Suite 250 Nashville TN 37204	CONTACT NAME: Lisa Garner	FAX (A/C, No): 615-383-4628	
	PHONE (A/C, No, Ext): 615-383-9761	E-MAIL ADDRESS: lisa.garner@hubinternational.com	
INSURED C. W. Matthews Contracting Co., Inc. P O Drawer 970 Marietta, GA 30061	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A: Midwest Employers Casualty Company		23612
	INSURER B: ACE American Insurance Company		22667
	INSURER C: Homesite Insurance Company of Florida		11156
	INSURER D: Starr Indemnity and Liability		38318
	INSURER E:		
INSURER F:			

COVERAGES **CERTIFICATE NUMBER:** 1474587619 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
B	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> 3,000,000 GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:		G47320148 001	3/31/2025	3/31/2026	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$2,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$4,000,000 PRODUCTS - COMP/OP AGG \$4,000,000 \$
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY		H10721921	3/31/2025	3/31/2026	COMBINED SINGLE LIMIT (Ea accident) \$2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 0		CXP-047296-00 1000586937251	3/31/2025 3/31/2025	3/31/2026 3/31/2026	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000 Excess over \$5M \$15,000,000
A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N N/A	EWC006277	3/31/2025	3/31/2026	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Any person or organization who the Named Insured is required by written contract to add as an additional insured is included as Additional Insured for General Liability, Automobile Liability and Excess Liability as outlined in the policy forms referenced below. Additional Insured status is not applicable to Workers' Compensation.

Excess General Liability
Blanket Additional Insured - Automatic Status if Required in Construction Agreement with You - Form # XS21165a 04/13
Blanket Additional Insured Where Required by Written Contract - Form # XS-2124b 08/13
Additional Insured Primary and Non-Contributory Insurance If Required by Written Contract - Commercial General Liability Coverage Form # XS20288a 05/14
See Attached...

CERTIFICATE HOLDER City of Dalton, Georgia 300 W. Waugh Street Dalton GA 30720	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Daniel D. Harte</i>
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ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

AGENCY Hub International Mid-South		NAMED INSURED C. W. Matthews Contracting Co., Inc. P O Drawer 970 Marietta, GA 30061	
POLICY NUMBER		EFFECTIVE DATE:	
CARRIER	NAIC CODE		

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** CERTIFICATE OF LIABILITY INSURANCE

Designated Construction Project General Aggregate Limit - Form # XS21159 11/06

Waiver of Transfer of Rights of Recovery Against Others by Us - Person or Organization: Any person or organization against whom you have agreed to waive your right of recovery in a written contract, provided such contract was executed prior to the date of loss - Form #XS6W34a 02/20

Blanket Notice of Cancellation - 60 Days - Form # ALL10167b 06/14

Automobile Liability

Additional Insured - Designated Persons or Organizations - Any person or organization whom you have agreed to include as an additional insured under a written contract, provided such contract was executed prior to the date of the loss - Form # DA9U74c 03/16

Non-Contributory Endorsement for Additional Insureds Form # DA 51537 01/19

Waiver of Transfer of Rights of Recovery Against Others: Any person or organization against whom you have agreed to waive your right of recovery in a written contract, provided such contract was executed prior to the date of loss - Form #DA20345 06/06

Blanket Notice of Cancellation - 60 Days - Form # DA20349 01/09

Excess Workers Compensation

Waiver of Subrogation by Written Contract - Form # ISI-265 (8-13)

Excess Liability - Bowhead/Homesite

Contractors Endorsement - Blanket Additional Insured - Non-Contributing - Waiver of Subrogation Form # CXS2050 (08-21)

Excess Workers' Compensation and Employers Liability - Limits are in excess of \$850,000 Self Insured Retention (C. W. Matthews Contracting Co., Inc. is a qualified self-insurer with the Georgia State Board of Workers' Compensation).

Excess Liability limits are in excess of \$2,000,000 General Liability and \$2,000,000 Automobile Liability (excess of \$3,000,000 Self-Insured Retention for General Liability and Automobile Liability - refer to the Self-Insured Certificate of Insurance, issued by C. W. Matthews Contracting Co., Inc.).

A.M. Best Ratings:

Ace American Insurance Company: A++ XV

Midwest Employers Casualty Company: A+ XV

Homesite Insurance Company of Florida dba Homesite Assurance Company: A XV

Subject to the terms, conditions, exclusions and definitions of the above-referenced policies, as issued by the carrier(s).

Project #2106.006 - Dalton Taxiway Pavement Rehabilitation



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
5/27/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION** IS **WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER CERTIFICATE OF SELF-INSURANCE	CONTACT NAME: BRET STANLEY		
	PHONE (A/C, No, Ext): 678-809-8120	FAX (A/C, No): 770-423-7530	
	E-MAIL ADDRESS: BSTANLEY@CWMATTHEWS.COM		
	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A : C.W. MATTHEWS CONTRACTING CO., INC.		
	INSURER B :		
	INSURER C :		
	INSURER D :		
	INSURER E :		
	INSURER F :		


COVERAGES	CERTIFICATE NUMBER:	REVISION NUMBER:
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THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y	SI-2025-CGL	01/01/2025	12/31/2025	EACH OCCURRENCE \$ 3,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ 6,000,000 PRODUCTS - COMP/OP AGG \$ 6,000,000 \$
	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	Y	Self-Insurance Certificate No. SI-52729015	01/01/2025	12/31/2025	COMBINED SINGLE LIMIT (Ea accident) \$ 3,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> EXCESS LIAB DED RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$ \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N	N/A Qualified Self-Insurer State of Georgia	01/01/2025	12/31/2025	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Airport Project: Project #2106.006 - Dalton Taxiway Pavement Rehabilitation
Certificate Holder is listed as an Additional Insured with regard to General Liability and Auto Liability coverage in relation to work performed by C. W. Matthews Contracting Co., Inc. regarding the above-referenced Project as required by written agreement. Should any of the above described coverages be changed before the expiration date thereof, C. W. Matthews Contracting Co., Inc. will mail thirty (30) days written notice to the below named certificate holder.

CERTIFICATE HOLDER	CANCELLATION
Georgia Dept. of Transportation One Georgia Center-19th Floor 600 West Peachtree Street, NW Atlanta, GA 30308	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE  Sheldon Fram Director of Risk Management

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DESCRIPTIONS (Continued from Page 1)

This is to certify that C. W. Matthews Contracting Co., Inc. has qualified as required by law, as a self insurer with the appropriate agencies within the State of Georgia, and provides coverages under its program of self-insurance as noted above.

Automobile Liability: Certificate No. SI-52729014 issued by Georgia Department of Insurance.

Worker' Compensation and Employers Liability: Qualified Self-Insurer with Georgia State Board of Workers' Compensation by proof of ability to pay compensation direct.

ADDITIONAL INSURED ENDORSEMENT

This endorsement modifies insurance provided under the following:

C. W. MATTHEWS CONTRACTING CO., INC.
PLAN OF SELF-INSURANCE (GENERAL LIABILITY AND AUTOMOBILE LIABILITY)
POLICY NO.: SI-2025-CGL
POLICY TERM: 01/01/2025 - 12/31/2025

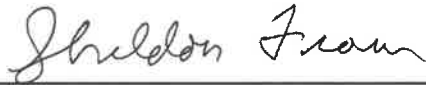
SCHEDULE

Name of Additional Insured Person Or Organization:	Description of Operations/ Locations
Georgia Department of Transportation	Certificate Holder is listed as additional named insured based on written agreement relative to Airport Project: #2106.006 – Dalton Taxiway Pavement Rehabilitation

The policy is modified and amended to include as an additional insured the person or organization shown in the Schedule, but only with respect to liability arising out of Policyholder's acts or omissions, or the acts or omissions of those acting on Policyholder's behalf, in the performance of ongoing operations for the additional insured at the Scheduled location.

To the fullest extent permitted by law, the Policyholder waives any rights of recovery it may have against the persons or organizations shown in the Schedule above because of payments it makes for "bodily injury" or "property damage" arising out of Policyholder's ongoing operations, when required in a written contract or agreement. This waiver applies only to the persons or organizations shown in the Schedule above.

Date Issued: 05/27/2025

By: 
Sheldon Fram
Director of Risk Management
C. W. Matthews Contracting Co., Inc.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
5/27/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Hub International Mid-South 3011 Armory Drive Suite 250 Nashville TN 37204 License#: 1298 CWMATTH-01	CONTACT NAME: Lisa Garner PHONE (A/C, No, Ext): 615-383-9761 E-MAIL ADDRESS: lisa.garner@hubinternational.com FAX (A/C, No): 615-383-4628													
	<table border="1"><thead><tr><th>INSURER(S) AFFORDING COVERAGE</th><th>NAIC #</th></tr></thead><tbody><tr><td>INSURER A : Midwest Employers Casualty Company</td><td>23612</td></tr><tr><td>INSURER B : ACE American Insurance Company</td><td>22667</td></tr><tr><td>INSURER C : Homesite Insurance Company of Florida</td><td>11156</td></tr><tr><td>INSURER D : Starr Indemnity and Liability</td><td>38318</td></tr><tr><td>INSURER E :</td><td></td></tr><tr><td>INSURER F :</td><td></td></tr></tbody></table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : Midwest Employers Casualty Company	23612	INSURER B : ACE American Insurance Company	22667	INSURER C : Homesite Insurance Company of Florida	11156	INSURER D : Starr Indemnity and Liability	38318	INSURER E :		INSURER F :
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COVERAGES **CERTIFICATE NUMBER:** 1343098293 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
B	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> 3,000,000 GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:		G47320148 001	3/31/2025	3/31/2026	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$2,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$4,000,000 PRODUCTS - COMP/OP AGG \$4,000,000 \$
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY		H10721921	3/31/2025	3/31/2026	COMBINED SINGLE LIMIT (Ea accident) \$2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
C D	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 0		CXP-047296-00 1000586937251	3/31/2025 3/31/2025	3/31/2026 3/31/2026	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000 Excess over \$5M \$15,000,000
A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below Y/N N	N/A	EWC006277	3/31/2025	3/31/2026	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Any person or organization who the Named Insured is required by written contract to add as an additional insured is included as Additional Insured for General Liability, Automobile Liability and Excess Liability as outlined in the policy forms referenced below. Additional Insured status is not applicable to Workers' Compensation.

Excess General Liability
Blanket Additional Insured - Automatic Status if Required in Construction Agreement with You - Form # XS21165a 04/13
Blanket Additional Insured Where Required by Written Contract - Form # XS-2124b 08/13
Additional Insured Primary and Non-Contributory Insurance If Required by Written Contract - Commercial General Liability Coverage Form # XS20288a 05/14
See Attached...

CERTIFICATE HOLDER Georgia Dept. of Transportation One Georgia Center-19th Floor 600 West Peachtree Street, NW Atlanta GA 30308	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Daniel D. Hite</i>
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ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

AGENCY Hub International Mid-South		NAMED INSURED C. W. Matthews Contracting Co., Inc. P O Drawer 970 Marietta, GA 30061	
POLICY NUMBER		EFFECTIVE DATE:	
CARRIER	NAIC CODE		

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** CERTIFICATE OF LIABILITY INSURANCE

Designated Construction Project General Aggregate Limit - Form # XS21159 11/06

Waiver of Transfer of Rights of Recovery Against Others by Us - Person or Organization: Any person or organization against whom you have agreed to waive your right of recovery in a written contract, provided such contract was executed prior to the date of loss - Form #XS6W34a 02/20

Blanket Notice of Cancellation - 60 Days - Form # ALL10167b 06/14

Automobile Liability

Additional Insured - Designated Persons or Organizations - Any person or organization whom you have agreed to include as an additional insured under a written contract, provided such contract was executed prior to the date of the loss - Form # DA9U74c 03/16

Non-Contributory Endorsement for Additional Insureds Form # DA 51537 01/19

Waiver of Transfer of Rights of Recovery Against Others: Any person or organization against whom you have agreed to waive your right of recovery in a written contract, provided such contract was executed prior to the date of loss - Form #DA20345 06/06

Blanket Notice of Cancellation - 60 Days - Form # DA20349 01/09

Excess Workers Compensation

Waiver of Subrogation by Written Contract - Form # ISI-265 (8-13)

Excess Liability - Bowhead/Homesite

Contractors Endorsement - Blanket Additional Insured - Non-Contributing - Waiver of Subrogation Form # CXS2050 (08-21)

Excess Workers' Compensation and Employers Liability - Limits are in excess of \$850,000 Self Insured Retention (C. W. Matthews Contracting Co., Inc. is a qualified self-insurer with the Georgia State Board of Workers' Compensation).

Excess Liability limits are in excess of \$2,000,000 General Liability and \$2,000,000 Automobile Liability (excess of \$3,000,000 Self-Insured Retention for General Liability and Automobile Liability - refer to the Self-Insured Certificate of Insurance, issued by C. W. Matthews Contracting Co., Inc.).

A.M. Best Ratings:

Ace American Insurance Company: A++ XV

Midwest Employers Casualty Company: A+ XV

Homesite Insurance Company of Florida dba Homesite Assurance Company: A XV

Subject to the terms, conditions, exclusions and definitions of the above-referenced policies, as issued by the carrier(s).

Airport Project: Project #2106.006 - Dalton Taxiway Pavement Rehabilitation

MATSCO, INCORPORATED
SUMMARY OF SHAREHOLDERS
AS OF JANUARY 1, 2025

<i>SHAREHOLDER</i>	<i>TOTAL NUMBER OF SHARES OWNED</i>	<i>% Ownership</i>
The Charles Matthews Qualified Subchapter S Trust	8,395	4.36523%
The Mary Matthews Burton Qualified Subchapter S Trust	8,395	4.36523%
The Esther Elizabeth Burton Qualified Subchapter S Trust	567	0.29483%
The Esther Elizabeth Burton Family Trust	19,231	9.99974%
The 2011 Esther Elizabeth Burton Family Trust	5,277	2.74394%
The Katherine Dawn Matthews Qualified Subchapter S Trust	567	0.29483%
The Katherine Dawn Matthews Family Trust	19,231	9.99974%
The 2011 Katherine Dawn Matthews Family Trust	5,277	2.74394%
The Luke Doran Burton Qualified Subchapter S Trust	567	0.29483%
The Luke Doran Burton Family Trust	19,231	9.99974%
The 2011 Luke Doran Burton Family Trust	5,277	2.74394%
The Lydia Dianne Burton Qualified Subchapter S Trust	103	0.05356%
The Lydia Dianne Burton Family Trust	19,696	10.24150%
The 2011 Lydia Dianne Burton Family Trust	5,276	2.74342%
The Mary Grace Burton Qualified Subchapter S Trust	567	0.29483%
The Mary Grace Burton Family Trust	19,231	9.99974%
The 2011 Mary Grace Burton Family Trust	5,277	2.74394%
The Michael Scott Matthews Qualified Subchapter S Trust	567	0.29483%
The Michael Scott Matthews Family Trust	19,231	9.99974%
The 2011 Michael Scott Matthews Family Trust	5,277	2.74394%
The William Robert Burton Qualified Subchapter S Trust	567	0.29483%
The William Robert Burton Family Trust	19,231	9.99974%
The 2011 William Robert Burton Family Trust	5,277	2.74394%
TOTAL:	192,315	100.00000%

DIVISION 5 - FAA – General Contract Provisions

Section 10 Definition of Terms

When the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be defined as follows:

Paragraph Number	Term	Definition
10-01	AASHTO	The American Association of State Highway and Transportation Officials.
10-02	Access Road	The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.
10-03	Advertisement	A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.
10-04	Airport	Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; airport buildings and facilities located in any of these areas, and a heliport.
10-05	Airport Improvement Program (AIP)	A grant-in-aid program, administered by the Federal Aviation Administration (FAA).
10-06	Air Operations Area (AOA)	The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

Paragraph Number	Term	Definition
10-07	Apron	Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.
10-08	ASTM International (ASTM)	Formerly known as the American Society for Testing and Materials (ASTM).
10-09	Award	The Sponsor's notice to the successful bidder of the acceptance of the submitted bid.
10-10	Bidder	Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.
10-11	Building Area	An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.
10-12	Calendar Day	Every day shown on the calendar.
10-13	Certificate of Analysis (COA)	The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.
10-14	Certificate of Compliance (COC)	The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative.
10-15	Change Order	A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project.
10-16	Contract	<p>A written agreement between the Sponsor and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment.</p> <p>The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans,</p>

Paragraph Number	Term	Definition
		Supplemental Provisions, standards incorporated by reference and issued addenda.
10-17	Contract Item (Pay Item)	A specific unit of work for which a price is provided in the contract.
10-18	Contract Time	The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.
10-19	Contractor	The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.
10-20	Contractors Quality Control (QC) Facilities	The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).
10-21	Contractor Quality Control Program (CQCP)	Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.
10-22	Control Strip	A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.
10-23	Construction Safety and Phasing Plan (CSPP)	The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
10-24	Drainage System	The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.
10-25	Engineer	The individual, partnership, firm, or corporation duly authorized by the Sponsor to be responsible for engineering, inspection, and/or observation of the

Paragraph Number	Term	Definition
		contract work and acting directly or through an authorized representative.
10-26	Equipment	All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work.
10-27	Extra Work	An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Sponsor's Engineer or Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified.
10-28	FAA	The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.
10-29	Federal Specifications	The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.
10-30	Force Account	<p>a. Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis.</p> <p>b. Sponsor Force Account - Work performed for the project by the Sponsor's employees.</p>
10-31	Intention of Terms	<p>Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer and/or Resident Project Representative (RPR) is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer and/or RPR, subject in each case to the final determination of the Sponsor.</p> <p>Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general</p>

Paragraph Number	Term	Definition
		requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.
10-32	Lighting	A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.
10-33	Major and Minor Contract Items	A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.
10-34	Materials	Any substance specified for use in the construction of the contract work.
10-35	Modification of Standards (MOS)	Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.
10-36	Notice to Proceed (NTP)	A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.
10-37	Sponsor	The term "Sponsor" shall mean the party of the first part or the contracting agency signatory to the contract. Where the term "Sponsor" is capitalized in this document, it shall mean airport Sponsor only. The Sponsor for this project is CITY OF DALTON .
10-38	Passenger Facility Charge (PFC)	Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.
10-39	Pavement Structure	The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.
10-40	Payment bond	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will

Paragraph Number	Term	Definition
		pay in full all bills and accounts for materials and labor used in the construction of the work.
10-41	Performance bond	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.
10-42	Plans	The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications. Plans may also be referred to as 'contract drawings.'
10-43	Project	The agreed scope of work for accomplishing specific airport development with respect to a particular airport.
10-44	Proposal	The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.
10-45	Proposal guaranty	The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Sponsor.
10-46	Quality Assurance (QA)	Sponsor's responsibility to assure that construction work completed complies with specifications for payment.
10-47	Quality Control (QC)	Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.
10-48	Quality Assurance (QA) Inspector	An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.
10-49	Quality Assurance (QA) Laboratory	The official quality assurance testing laboratories of the Sponsor or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Sponsor's, or QA Laboratory.

Paragraph Number	Term	Definition
10-50	Resident Project Representative (RPR)	The individual, partnership, firm, or corporation duly authorized by the Sponsor to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.
10-51	Runway	The area on the airport prepared for the landing and takeoff of aircraft.
10-52	Runway Safety Area (RSA)	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.
10-53	Safety Plan Compliance Document (SPCD)	Details how the Contractor will comply with the CSPP.
10-54	Specifications	A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.
10-55	Sponsor	A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Sponsor of a public-use airport that submits to the FAA an application for an AIP grant for the airport.
10-56	Structures	Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.
10-57	Subgrade	The soil that forms the pavement foundation.
10-58	Superintendent	The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction.

Paragraph Number	Term	Definition
10-59	Supplemental Agreement	A written agreement between the Contractor and SPONSOR that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%; (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item.
10-60	Surety	The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Sponsor by the Contractor.
10-61	Taxilane	A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.
10-62	Taxiway	The portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.
10-63	Taxiway/Taxilane Safety Area (TSA)	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA.
10-64	Work	The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.
10-65	Working day	A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.

Paragraph Number	Term	Definition
10-66	Sponsor Defined terms	None

END OF SECTION 10

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders). See Advertisement in Front End Documents.

20-02 Qualification of bidders. Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Sponsor at the time of bid opening.

Evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

Each bidder shall furnish the Sponsor satisfactory evidence of their financial responsibility. Evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether their financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Sponsor.

Unless otherwise specified, a bidder may submit evidence that they are prequalified with the State Highway Division and are on the current "bidder's list" of the state in which the proposed work is located. Evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

20-03 Contents of proposal forms. The SPONSOR's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The SPONSOR will accept only those Proposals properly executed on physical forms or electronic forms provided by the SPONSOR. Bidder actions that may cause the SPONSOR to deem a proposal irregular are given in paragraph 20-09 *Irregular proposals*.

Mobilization is limited to 10 percent of the total project cost.

20-04 Issuance of proposal forms. The Sponsor reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is in default for any of the following reasons:

a. Failure to comply with any prequalification regulations of the Sponsor, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.

b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Sponsor at the time the Sponsor issues the proposal to a prospective bidder.

c. Documented record of Contractor default under previous contracts with the Sponsor.

d. Documented record of unsatisfactory work on previous contracts with the Sponsor.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Sponsor does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, without in any way invalidating the unit bid prices.

20-06 Examination of plans, specifications, and site. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves to the character, quality, and quantities of work to be performed, materials to be furnished, and to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

20-07 Preparation of proposal. The bidder shall submit their proposal on the forms furnished by the SPONSOR. All blank spaces in the proposal forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals which they propose for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

Prices should generally be written in whole dollars and cents. The extended total amount of each item should not be rounded.

The bidder shall correctly sign the proposal in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

20-08 Responsive and responsible bidder. A responsive bid conforms to all significant terms and conditions contained in the SPONSOR's invitation for bid. It is the SPONSOR's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 2 CFR § 200.318(h). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 Irregular proposals. Proposals shall be considered irregular for the following reasons:

- a. If the proposal is on a form other than that furnished by the Sponsor, or if the Sponsor's form is altered, or if any part of the proposal form is detached.
- b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.
- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guaranty specified by the Sponsor.
- f. If the applicable Disadvantaged Business Enterprise information is incomplete.

The SPONSOR reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Sponsor and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, check, or collateral, shall be made payable to the Sponsor.

20-11 Delivery of proposal. See Instructions to Bidders

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Sponsor before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 Disqualification of bidders. A bidder may be considered disqualified for any of the following reasons:

- a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion may be disqualified as bidders for any future work of the Sponsor until any such participating bidder has been reinstated by the Sponsor as a qualified bidder.

c. If the bidder is considered to be in “default” for any reason specified in paragraph 20-04, *Issuance of Proposal Forms*, of this section.

20-15 Discrepancies and Omissions. A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Sponsor’s Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Sponsor’s Engineer a written request for interpretation no later than **7** days prior to bid opening.

Any interpretation of the project bid documents by the Sponsor’s Engineer will be by written addendum issued by the Sponsor. The Sponsor will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

END OF SECTION 20

Section 30 Award and Execution of Contract

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit bid price written in words shall govern.

Until the award of a contract is made, the Sponsor reserves the right to reject a bidder's proposal for any of the following reasons:

- a. If the proposal is irregular as specified in Section 20, paragraph 20-09, *Irregular Proposals*.
- b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, *Disqualification of Bidders*.

In addition, until the award of a contract is made, the Sponsor reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Sponsor and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Sponsor's best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within **120** calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

If the Sponsor elects to proceed with an award of contract, the Sponsor will make award to the responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

30-03 Cancellation of award. The Sponsor reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Sponsor in accordance with paragraph 30-07 *Approval of Contract*.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Sponsor has made a comparison of bids as specified in the paragraph 30-01, *Consideration of Proposals*. Proposal guaranties of the two lowest bidders will be retained by the Sponsor until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Sponsor receives the contract bonds as specified in paragraph 30-05, *Requirements of Contract Bonds*.

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Sponsor a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds

shall be acceptable to the Sponsor. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

All Bonds (Proposal, Payment and Performance) must be signed or countersigned by the surety company's proper resident agent, authorized to do business in the State of Georgia, on whom service can be made in the event of litigation.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Sponsor, along with the fully executed surety bond or bonds specified in paragraph 30-05, *Requirements of Contract Bonds*, of this section, within **15** calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Sponsor shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Sponsor's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the period specified in paragraph 30-06, *Execution of Contract*, of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidated damages to the Sponsor.

END OF SECTION 30

Section 40 Scope of Work

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 Alteration of work and quantities. The Sponsor reserves the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Sponsor's Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities*.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. If the Sponsor and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Sponsor reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

40-03 Omitted items. The SPONSOR, the SPONSOR's Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with Section 90, paragraph 90-04, *Payment for Omitted Items*.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, SPONSOR may issue a Change Order to cover the necessary extra work. Change orders for extra work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the RPR's opinion, is necessary for completion of the extra work.

When determined by the RPR to be in the Sponsor's best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, *Payment for Extra Work*. Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a supplemental agreement as defined in Section 10, paragraph 10-59, *Supplemental Agreement*.

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Sponsor shall initiate a change order or supplemental agreement to cover the extra work.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Sponsor.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, *Limitation of Operations*. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in Section 70, paragraph 70-15, *Contractor's Responsibility for Utility Service and Facilities of Others*.

b. With respect to their own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (<http://mutcd.fhwa.dot.gov/>), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

d. **The Contractor shall make his/her own estimate of all labor, materials, equipment, and incidentals necessary for providing the maintenance of aircraft and vehicular traffic as specified in this subsection.**

e. The cost of maintaining the aircraft and vehicular traffic specified in this subsection shall not be measured or paid for directly, but shall be included in the various contract items.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, *Rights in and Use of Materials Found in the Work*, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Sponsor when so used in the work.

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be embankment, the Contractor may at their own option either:

a. Use such material in another contract item, providing such use is approved by the RPR and is in conformance with the contract specifications applicable to such use; or,

b. Remove such material from the site, upon written approval of the RPR; or

c. Use such material for the Contractor's own temporary construction on site; or,

d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the RPR's approval in advance of such use.

Should the RPR approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at their expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the RPR approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of their own exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of the property Sponsor.

END OF SECTION 40

Section 50 Control of Work

50-01 Authority of the Resident Project Representative (RPR). The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans, or specifications.

If the RPR finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications, but that the portion of the work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Sponsor, the RPR will advise the Sponsor of their determination that the affected work be accepted and remain in place. The RPR will document the determination and recommend to the Sponsor a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the RPR's written orders.

The term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the RPR's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the RPR's opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term "reasonably close conformity" is also intended to provide the RPR with the authority, after consultation with the Sponsor and FAA, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy,

calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the RPR for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Sponsor or the designated representative in writing requesting their written interpretation and decision.

50-04 List of Special Provisions.

SPECIAL PROVISION: Section 70 Legal Regulations and Responsibility to Public

SPECIAL PROVISION: Section 90 Measurement and Payment

SPECIAL PROVISION: Section 100 Construction Contract Clauses – Airport Development Program

SPECIAL PROVISION: Section 163 Miscellaneous Erosion Control Items

SPECIAL PROVISION: Section 402 Hot Mix Recycled Asphaltic Concrete

SPECIAL PROVISION: Section P-620 Runway and Taxiway Marking

SPECIAL PROVISION: Section T-901 Seeding

50-05 Cooperation of Contractor. The Contractor shall be supplied with five hard copies or an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the RPR and their inspectors and with other Contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as their agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the RPR or their authorized representative.

50-06 Cooperation between Contractors. The Sponsor reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with their own contract and shall protect and hold harmless the Sponsor from any and all damages or claims that may

arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-07 Construction layout and stakes. The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): **hard copy and electronic format (pdf and AutoCAD).**

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Sponsor.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

50-08 Authority and duties of Quality Assurance (QA) inspectors. QA inspectors shall be authorized to inspect all work done and all material furnished. Such QA inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

QA Inspectors are authorized to notify the Contractor or their representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the RPR for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The RPR shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the RPR requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor's expense.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Sponsor, authorized representatives of the Sponsors of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility Sponsor a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the RPR as provided in paragraph 50-02, *Conformity with Plans and Specifications*.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 70, paragraph 70-14, *Contractor's Responsibility for Work*.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base,

or structure before the expiration of the curing period. The Contractor, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in paragraph 50-12, *Maintenance during Construction*, the RPR shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the RPR's notification, the Sponsor may suspend any work necessary for the Sponsor to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Sponsor, shall be recovered as a liquidated damage against the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Sponsor, the Contractor may request the RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Sponsor shall not void or alter any provision of the contract.

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the RPR and Sponsor will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The RPR shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the RPR will notify the Contractor and the Contractor shall correct the unsatisfactory work. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the RPR will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the RPR in writing of their intention to

claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the RPR is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the RPR has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the RPR who will present it to the Sponsor for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

END OF SECTION 50

Section 60 Control of Materials

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

Federal Contract Clauses are available at the following FAA website:
www.faa.gov/airports/aip/procurement/federal_contract_provisions/

At the RPR's option, materials may be approved at the source of supply before delivery. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that meets the requirements of the specifications; and is listed in AC 150/5345-53, *Airport Lighting Equipment Certification Program and Addendum*, that is in effect on the date of advertisement.

60-02 Samples, tests, and cited specifications. All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the RPR, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Sponsor in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), federal specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the RPR.

A copy of all Contractor QC test data shall be provided to the RPR daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

The Contractor shall employ a Quality Control (QC) testing organization to perform all Contractor required QC tests in accordance with Item C-100 Contractor Quality Control Program (CQCP).

60-03 Certification of compliance/analysis (COC/COA). The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified. The COA is the manufacturer's COC and includes all applicable test results.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the RPR.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "or equal," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

- a. Conformance to the specified performance, testing, quality or dimensional requirements; and,
- b. Suitability of the material or assembly for the use intended in the contract work.

The RPR shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The RPR reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The RPR or their authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the RPR conduct plant inspections, the following conditions shall exist:

- a. The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.
- b. The RPR shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.
- c. If required by the RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location with respect to the plant.

It is understood and agreed that the Sponsor shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The RPR shall have the

right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 Engineer/ Resident Project Representative (RPR) field office. An Engineer/RPR field office is not required.

60-06 Storage of materials. Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the RPR. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans and/or CSPP, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the RPR. Private property shall not be used for storage purposes without written permission of the Sponsor or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the RPR a copy of the property Sponsor's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at their expense, except as otherwise agreed to (in writing) by the Sponsor or lessee of the property.

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the RPR.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the RPR has approved its use in the work.

60-08 Sponsor furnished materials. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Sponsor. Sponsor-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Sponsor-furnished materials shall be included in the unit price bid for the contract item in which such Sponsor-furnished material is used.

After any Sponsor-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Sponsor-furnished material. The Sponsor will deduct from any monies due or to become due the Contractor any cost incurred by the Sponsor in making good such loss due to the Contractor's handling, storage, or use of Sponsor-furnished materials.

END OF SECTION 60

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Section 70 Legal Regulations and Responsibility to Public

70-01 Laws to be observed. The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Sponsor and all their officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

Effective July 1, 2008: All General Contractors must have a current valid license from the State Licensing Board for Residential and General Contractors, unless specifically exempted from holding such license pursuant to Georgia law, O.C.G.A. Section 43-41-17.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Sponsor. The Contractor and the surety shall indemnify and hold harmless the Sponsor, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Sponsor for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Sponsor reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Sponsor, such authorized work (by others) **shall be indicated in writing prior to the work being performed.**

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the RPR.

Should the Sponsor of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Sponsors by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the RPR, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 Federal Participation. The United States Government has agreed to reimburse the Sponsor for some portion of the contract costs. The contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

70-07 Public convenience and safety. The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, *Maintenance of Traffic*, and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, *Limitation of Operations*.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

70-08 Construction Safety and Phasing Plan (CSPP). The Contractor shall complete the work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is on sheet(s) **G-100** of the project plans.

70-09 Use of explosives. The use of explosives is not permitted on this project.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer/RPR has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at their expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 Responsibility for damage claims. The Contractor shall indemnify and hold harmless the Engineer/RPR and the Sponsor and their officers, agents, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of their own contract considered necessary by the Sponsor for such purpose may be retained for the use of the Sponsor or, in case no money is due, their own surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Sponsor, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third-party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 Opening sections of the work to traffic. If it is necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Sponsor prior to completion of the entire contract, such "phasing" of the work must be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

Upon completion of any portion of work listed above, such portion shall be accepted by the Sponsor in accordance with Section 50, paragraph 50-14, *Partial Acceptance*.

No portion of the work may be opened by the Contractor until directed by the Sponsor in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Sponsor shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor's responsibility for work. Until the RPR's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, *Partial Acceptance*, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 Contractor's responsibility for utility service and facilities of others. As provided in paragraph 70-04, *Restoration of Surfaces Disturbed by Others*, the Contractor shall cooperate with the Sponsor of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Sponsor to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and/or in the contract documents.

Contractor shall make every effort to protect the utilities in place. Contractor shall coordinate with utility companies for relocation where necessary. Airport Sponsor and/or Engineer will provide contact information when needed. Utility companies to be contacted prior to making modifications.

It is understood and agreed that the Sponsor does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Sponsors of all utility services or other facilities of their plan of operations. Such notification shall be in writing addressed to "The Person to Contact" as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others*. A copy of each notification shall be given to the RPR.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Sponsors advised of changes in their plan of operations that would affect such Sponsors.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Sponsor of their plan of operation. If, in the Contractor's opinion, the Sponsor's assistance is needed to locate the utility service or facility or the presence of a representative of the Sponsor is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility Sponsor's "Person to Contact" no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the RPR.

The Contractor's failure to give the two days' notice shall be cause for the Sponsor to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the RPR and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility Sponsor and the RPR continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility Sponsor.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Sponsor reserves the right to deduct such costs from any monies due or which may become due the Contractor, or their own surety.

70-16 Furnishing rights-of-way. The Sponsor will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, RPR, their authorized representatives, or any officials of the Sponsor either personally or as an official of the Sponsor. It is understood that in such matters they act solely as agents and representatives of the Sponsor.

70-18 No waiver of legal rights. Upon completion of the work, the Sponsor will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Sponsor from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Sponsor be precluded or stopped from recovering from the Contractor or their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the contract. A waiver on the part of the Sponsor of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Sponsor for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Sponsor's rights under any warranty or guaranty.

70-19 Environmental protection. The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other

harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter **and shall comply with 49 CFR § 18.36(i)(12).**

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the RPR. The RPR will immediately investigate the Contractor's finding and the Sponsor will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Sponsor order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in Section 40, paragraph 40-04, *Extra Work*, and Section 90, paragraph 90-05, *Payment for Extra Work*. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, *Determination and Extension of Contract Time*.

70-21 Insurance Requirements. Contractor shall purchase and maintain such comprehensive general liability, comprehensive automobile liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance and furnishing of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed or furnished by Contractor, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:

1. Claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts;
2. Claims for damages because of bodily injury, occupational sickness or disease or death of Contractor's employees;
3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
4. Claims for damages insured by personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or (b) by any other person for any other reason;
5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use of resulting therefrom;
6. Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and
7. Claims for damages because of bodily injury or death of any person or property damage arising out of the Ownership, maintenance or use of any motor vehicle.

The insurance required shall include the specific coverages and be written for no less than the limits of liability and coverages specified or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to Sponsor and Engineer by certified mail. All such insurance shall remain in effect until final payment and at all times thereafter when Contractor may be correcting, removing or replacing defective Work in accordance with subsection 50-18. In addition, Contractor shall maintain such completed operations insurance for at least two years after final payment and furnish Sponsor with evidence of continuation of such insurance at final payment and one year thereafter, with the exception of Sponsor's Protective Liability coverage.

Indemnification: In any and all claims against Sponsor or Engineer or any of their consultants, agents or employees by any employee of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 70-11 above shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

Coverages: The limits of liability for the insurance required by Paragraph 70-11 shall provide coverage for not less than the following amounts or greater where required by law:

1. Workers' Compensation, etc.:

- | | |
|--------------------------|-----------|
| a. State: | Statutory |
| b. Applicable Federal: | Statutory |
| (e.g. Longshoreman's) | |
| c. Employer's Liability: | \$500,000 |

2. Comprehensive General Liability:

- | | |
|---|---|
| a. Bodily Injury and Property Damage: | Combined Single Limit
\$5,000,000 Per Occurrence |
| b. The Contractor's General Liability insurance shall provide coverage for the following: (1) Premises - Operations, (2) Independent Contractors, (3) Products/Completed Operations Hazard, (5) Underground Hazard, (6) Broad Form Property Damage, (7) Where applicable, Explosion and Collapse Hazard, and (8) Personal Injury. | |

3. Comprehensive Automobile Liability:

- | | |
|---------------------------------------|--|
| a. Bodily Injury and Property Damage: | Combined Single Limit
\$1,000,000(Per Occurrence) |
|---------------------------------------|--|

- b. The Contractor's Comprehensive Automobile Liability Insurance shall provide coverage for Bodily Injury and Property Damage Per Occurrence for owned, hired and non-owned vehicles.

Contractor will provide such additional information in respect of insurance provided by him as the Sponsor may reasonably request. Failure by Sponsor to give any such notice of objection within the time provided shall constitute an acceptance of such insurance purchased by Contractor as complying with the Contract Documents.

The Sponsor, its officials and staff and the Engineer shall be names as additional insured with respect of notice in the Policy, A Certificate of Insurance naming the Sponsor as a certificate holder shall be issued by the Contractor's insurance provider to Sponsor. Certificates in triplicate from the insurance carrier stating the limits of liability and expiration date shall be filed with Sponsor before operations are begun. Certificates shall not merely name the types of policy provided but shall specifically refer to this Contract and shall contain a separate express statement of compliance with each of the requirements as set forth in this subsection. The certificates shall, in addition to the information relative to the insurance required, contain the following:

- (1) Inception and expiration dates of insurance policy.
- (2) Limits of liability provided (Public Liability and Property Damage).
- (3) Coverage provided, including special hazards if required.
- (4) Name of insurance company.
- (5) Policy Number.
- (6) Additional interests covered.
- (7) Statement that the Explosion, Collapse, and Underground exclusions do not apply.
- (8) Certificate shall reflect self-insured retention applicable to any contract of insurance.
- (9) Excess liability certified contracts must state underlying insurance requirements.
- (10) Project number and nature of work.

No certificate will be accepted which exculpates the issuer or reduces any rights conferred on the Sponsor by the above certificates, nor will they be accepted unless the certificates bear a live signature of a direct representative of a company authorized to do business in the state where the work is located.

No certificate will be accepted unless the person signing the certificate certifies, in a separate letter, his exact relationship with the insurance carrier or carriers indicated in the certificate.

The Sponsor may, at his discretion, modify or waive any of the foregoing requirements.

No contract of insurance containing a "claims made" insuring agreement will be acceptable unless the Contractor offering such insurance to fulfill the requirements of this Contract agrees that each such contract of insurance shall be renewed for the entire existence of the Contractor, their successors or

assigns; and that on termination of such coverage which is not replaced by a similar contract with the required limits of liability, a "tail policy" will be purchased with limits not less than those required by this Contract."

The Contractor shall additionally provide insurance as described in Section 9 of the GDOT Construction Contract with the Sponsor. Prior to beginning work, Contractor shall furnish to the Georgia Department of Transportation (the DEPARTMENT), a copy of the certificates and the endorsement page for the minimum amounts of insurance indicated below:

1. Prior to beginning the work, the CONTRACTOR shall obtain and furnish certificates and the endorsement page to the DEPARTMENT for the following minimum amount of insurance from insurers rated at least A- by A. M. Best's and registered to do business in the State of Georgia: Commercial General Liability Insurance of at least \$1,000,000 per occurrence \$3,000,000 aggregate, including Automobile Comprehensive Liability Coverage with bodily injury in the minimum amount of \$1,000,000 combined single limits each occurrence. The DEPARTMENT shall be named as an additional insured and a copy of the policy endorsement shall be provided with the insurance certificate. The above-listed insurance coverages shall be maintained in full force and effect for the entire term of the Contract.
2. The insurance certificate must provide the following:
 - a. Name, address, signature and telephone number of authorized agents.
 - b. Name and address of insured.
 - c. Name of Insurance Company.
 - d. Description of coverage in standard terminology.
 - e. Policy number, policy period and limits of liability.
 - f. Name and address of the DEPARTMENT as certificate holder.
 - g. Thirty (30) day notice of cancellation.
 - h. Details of any special policy exclusions.
3. Waiver of Subrogation: There is no waiver of subrogation rights by either party with respect to insurance.

70-22 Distracted Driving. *In accordance with Executive Order 1351, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10, "Text Messaging While Driving" (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or a sub-grant.*

In support of this initiative, the Sponsor encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding \$3,500 and involve a driving motor vehicle in performance of work activities associated with the project.

END OF SECTION 70

Section 80 Execution and Progress

80-01 Subletting of contract. The Sponsor will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least **30%** of the total contract cost.

Should the Contractor elect to assign their contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Sponsor, and shall be consummated only on the written approval of the Sponsor.

The Contractor shall provide copies of all subcontracts to the RPR 14 days prior to being utilized on the project. As a minimum, the information shall include the following:

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

80-02 Notice to proceed (NTP). The Sponsors notice to proceed will state the date on which contract time commences. The Contractor is expected to commence project operations within **7** days of the NTP date. The Contractor shall notify the RPR at least **24 hours** in advance of the time contract operations begins. The Contractor shall not commence any actual operations prior to the date on which the notice to proceed is issued by the Sponsor.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their coordinated construction schedule showing all work activities for the RPR's review and acceptance at least **10 days** prior to the start of work. The Contractor's progress schedule, once accepted by the RPR, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the RPR's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the RPR at least **24 hours** in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Sponsor.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a **twice** monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

80-04 Limitation of operations. The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least **48 hours** prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, *Construction Safety and Phasing Plan (CSPP)*.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as described in the CSPP.

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

80-04.1 Operational safety on airport during construction. All Contractors' operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Sponsor for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Sponsor. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

80-05 Character of workers, methods, and equipment. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall not cause injury to previously completed work, adjacent property, or existing airport facilities due to its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorized by the RPR. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the RPR to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the RPR determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the RPR may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this paragraph.

80-06 Temporary suspension of the work. The Sponsor shall have the authority to suspend the work wholly, or in part, for such period or periods the Sponsor may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Sponsor, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the written order to suspend work to the effective date of the written order to resume the work. Claims for such compensation shall be filed with the RPR within the time period stated in the RPR's order to resume work. The Contractor shall submit with their own claim information substantiating the amount shown on the claim. The RPR will forward the Contractor's claim to the Sponsor for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather or for any other delay provided for in the contract, plans, or specifications.

If it becomes necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 Determination and extension of contract time. The **number of calendar days** shall be stated in the proposal and contract and shall be known as the Contract Time.

If the contract time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

80-07.1 Contract time based on calendar days. Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the Notice to Proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Sponsor's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, *Determination and Extension of Contract Time*) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional

engineering services that will be incurred by the Sponsor should the Contractor fail to complete the work in the time provided in their contract.

See Proposal Form for Schedule of Liquidated Damages.

The maximum construction time allowed for Schedules **is shown on the Proposal Form**. Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Sponsor of any of its rights under the contract.

80-09 Default and termination of contract. The Contractor shall be considered in default of their contract and such default will be considered as cause for the Sponsor to terminate the contract for any of the following reasons, if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or
- b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or
- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or
- d. Discontinues the execution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or
- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Sponsor consider the Contractor in default of the contract for any reason above, the Sponsor shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Sponsor's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Sponsor will, upon written notification from the RPR of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Sponsor may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the RPR will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Sponsor, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Sponsor the amount of such excess.

80-10 Termination for national emergencies. The Sponsor shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate work in accordance with the approved CSPP and SPCD.

END OF SECTION 80

Section 90 Measurement and Payment

90-01 Measurement of quantities. All work completed under the contract will be measured by the RPR, or their authorized representatives, using **United States Customary Units of Measurement**.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the RPR.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract. When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When requested by the Contractor and approved by the RPR in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Measurement and Payment Terms

Term	Description
Excavation and Embankment Volume	In computing volumes of excavation, the average end area method will be used unless otherwise specified.
Measurement and Proportion by Weight	The term "ton" will mean the short ton consisting of 2,000 pounds (907 kg) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight

Term	Description
	shall be weighed empty daily at such times as the RPR directs, and each truck shall bear a plainly legible identification mark.
Measurement by Volume	Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.
Asphalt Material	Asphalt materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.
Cement	Cement will be measured by the ton (kg) or hundredweight (km).
Structure	Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
Timber	Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.
Plates and Sheets	The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.
Miscellaneous Items	When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
Scales	Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be

Term	Description
	<p>installed and maintained with the platform level and rigid bulkheads at each end.</p> <p>Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted.</p> <p>In the event inspection reveals the scales have been “overweighing” (indicating more than correct weight) they will be immediately adjusted. All materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%.</p> <p>In the event inspection reveals the scales have been under-weighing (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded.</p> <p>Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.</p> <p>Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.</p> <p>All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.</p>
Rental Equipment	<p>Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 <i>Payment for Extra Work</i>.</p>
Pay Quantities	<p>When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the RPR. If revised dimensions result in an increase or decrease in the quantities of</p>

Term	Description
	such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of Section 70, paragraph 70-18, *No Waiver of Legal Rights*.

When the “basis of payment” subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in Section 40, paragraph 40-02, *Alteration of Work and Quantities*, will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 Payment for omitted items. As specified in Section 40, paragraph 40-03, *Omitted Items*, the RPR shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Sponsor.

Should the RPR omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the RPR’s order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the RPR’s order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Sponsor.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the RPR’s order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with Section 40, paragraph 40-04, *Extra Work*, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the RPR, of the value of the

work performed and materials complete and in place, in accordance with the contract, plans, and specifications. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than **10 days** after the Contractor has received a partial payment. The Sponsor must ensure prompt and full payment of retainage from the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Sponsor. When the Sponsor has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

From the total of the amount determined to be payable on a partial payment, **10 percent** of such total amount will be deducted and retained by the Sponsor for protection of the Sponsor's interests. Unless otherwise instructed by the Sponsor, the amount retained by the Sponsor will be in effect until the final payment is made except as follows:

1. Contractor may request release of retainage on work that has been partially accepted by the Sponsor in accordance with Section 50-14. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Sponsor for partially accepted work.
2. In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.
3. The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. Contractor must provide the Sponsor evidence of prompt and full payment of retainage held by the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Sponsor. When the Sponsor has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.
4. When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR shall, at the Sponsor's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done. The Sponsor may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the RPR to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Sponsor to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in paragraph 90-09, *Acceptance and Final Payment*.

The Contractor shall deliver to the Sponsor a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Sponsor to indemnify the Sponsor against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Sponsor may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments for **materials on hand are not allowed in this contract.**

90-08 Payment of withheld funds. At the Contractor's option, if a Sponsor withholds retainage in accordance with the methods described in paragraph 90-06 *Partial Payments*, the Contractor may request that the Sponsor deposit the retainage into an escrow account. The Sponsor's deposit of retainage into an escrow account is subject to the following conditions:

a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Sponsor.

b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Sponsor and having a value not less than the retainage that would otherwise be withheld from partial payment.

c. The Contractor shall enter into an escrow agreement satisfactory to the Sponsor.

d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of Section 50, paragraph 50-15, *Final Acceptance*, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR's final estimate or advise the RPR of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the RPR shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the RPR's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Sponsor as a claim in accordance with Section 50, paragraph 50-16, *Claims for Adjustment and Disputes*.

After the Contractor has approved, or approved under protest, the RPR's final estimate, and after the RPR's receipt of the project closeout documentation required in paragraph 90-11, *Contractor Final Project Documentation*, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of Section 50, paragraph 50-16, *Claims for Adjustments and Disputes*, or under the provisions of this paragraph, such claims will be considered by the Sponsor in accordance with local laws or ordinances. Upon final

adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work, except as noted. If the Sponsor takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Sponsor takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work. Light Emitting Diode emitting diode (LED) light fixtures with the exception of obstruction lighting, must be warranted by the manufacturer for a minimum of four (4) years after date of installation inclusive of all electronics.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Sponsor real or personal property, when that damage is the result of the Contractor's failure to conform to contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Sponsor will notify the Contractor, in writing, within **seven (7)** days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within **14** days after receipt of notice, the Sponsor shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Sponsor, as directed by the Sponsor, and (3) Enforce all warranties for the benefit of the Sponsor.

h. This warranty shall not limit the Sponsor's rights with respect to latent defects, gross mistakes, or fraud.

90-11 Contractor Final Project Documentation. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the RPR approves the Contractor's final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

- b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.
- c. Complete final cleanup in accordance with Section 40, paragraph 40-08, *Final Cleanup*.
- d. Complete all punch list items identified during the Final Inspection.
- e. Provide complete release of all claims for labor and material arising out of the Contract.
- f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.
- g. When applicable per state requirements, return copies of sales tax completion forms.
- h. Manufacturer's certifications for all items incorporated in the work.
- i. All required record drawings, as-built drawings or as-constructed drawings.
- j. Project Operation and Maintenance (O&M) Manual(s).
- k. Security for Construction Warranty.
- l. Equipment commissioning documentation submitted, if required.

END OF SECTION 90

SPECIAL PROVISION: Section 100 Construction Contract Clauses
Airport Development Program

PART I - WAGE AND LABOR PROVISIONS

DAVIS-BACON REQUIREMENTS:

A. Minimum Wages.

1. All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

2. a. The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination;

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

b. If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

c. In the event the Contractor, the laborers, or mechanics to be employed in the classification, or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

3. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

4. If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

B. Withholding.

The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by

the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the Contractor, Sponsor, Applicant, or SPONSOR, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

C. Payrolls and Basic Records.

1. Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records that show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
2. a. The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, Sponsor, or SPONSOR, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR § 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <https://www.dol.gov/agencies/whd/government-contracts/construction/payroll-certification> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the Federal Aviation

Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit them to the applicant, Sponsor, or SPONSOR, as the case may be, for transmission to the Federal Aviation Administration, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, Sponsor, or SPONSOR).

- b. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i), and that such information is correct and complete;

(2) That each laborer and mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

- c. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

- d. The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

3. The Contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Sponsor, the Federal Aviation Administration, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, Sponsor, applicant, or SPONSOR, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR § 5.12.

D. Apprentices and Trainees.

1. Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
2. Trainees. Except as provided in 29 CFR § 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with

the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination that provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

3. Equal Employment Opportunity. The utilization of apprentices, trainees, and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Orders 11246 and 11375, as amended, and 29 CFR Part 30.

E. Compliance with Copeland Act Requirements.

The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

F. Subcontracts.

The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR §§ 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR § 5.5.

G. Contract Termination: Debarment.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR § 5.12.

H. Compliance with Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

I. Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the

meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

J. Certification of Eligibility.

(i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR § 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR § 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 USC § 1001.

K. Contract Workhours and Safety Standards Act Requirements:

1. Overtime Requirements.

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.

In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of \$29 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration (FAA) or the SPONSOR shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for

unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontractors.

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

Veteran's Preference. In the employment of labor (except in executive, administrative, and supervisory positions), preference must be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Title 49 United States Code, Section 47112. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

Copeland "Anti-Kickback" Act Requirements:

Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 USC 874 and 40 USC 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the SPONSOR, a weekly statement on the wages paid to each employee performing on covered work during the prior week. SPONSOR must report any violations of the Act to the Federal Aviation Administration.

Federal Fair Labor Standards Act (Federal Minimum Wage)

All contracts and subcontracts that result from this solicitation incorporate the following provisions by reference, with the same force and effect as if given in full text. The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that pertain to a referenced requirement directly with the Federal Agency with enforcement responsibilities.

Requirement	Federal Agency with Enforcement Responsibilities
Federal Fair Labor Standards Act (29 USC 201)	U.S. Department of Labor – Wage and Hour

"General Decision Number: GA20240281 01/05/2024

Superseded General Decision Number: GA20230281

State: Georgia

Construction Type: Highway

County: Whitfield County in Georgia.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number
0

Publication Date
01/05/2024

SUGA2014-115 10/03/2016	Rates	Fringes
CARPENTER, Excludes Form Work....	\$ 15.48 **	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 15.60 **	2.09
FORM WORKER.....	\$ 14.86 **	0.00
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine)....	\$ 12.39 **	1.94
INSTALLER - GUARDRAIL.....	\$ 13.10 **	0.00
IRONWORKER, REINFORCING.....	\$ 15.46 **	0.00
IRONWORKER, STRUCTURAL.....	\$ 15.13 **	0.00
LABORER: Grade Checker.....	\$ 11.45 **	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 11.96 **	0.00
LABORER: Pipelayer.....	\$ 12.57 **	0.00
LABORER: Asphalt (Includes Distributor, Raker, Screed, Shoveler, and Spreader).....	\$ 13.23 **	1.26
LABORER: Common or General, Includes Erosion Control.....	\$ 10.77 **	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 16.39 **	1.29
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 12.22 **	0.00
OPERATOR: Broom/Sweeper.....	\$ 14.04 **	1.43
OPERATOR: Bulldozer.....	\$ 15.70 **	1.82
OPERATOR: Compactor.....	\$ 14.04 **	0.00
OPERATOR: Concrete Saw.....	\$ 18.47	0.00
OPERATOR: Crane.....	\$ 21.37	0.00
OPERATOR: Grader/Blade.....	\$ 19.35	0.00

OPERATOR: Hydroseeder.....	\$ 13.93 **	0.00
OPERATOR: Loader.....	\$ 13.82 **	1.88
OPERATOR: Mechanic.....	\$ 21.08	0.00
OPERATOR: Milling Machine.....	\$ 15.57 **	2.10
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.05 **	3.19
OPERATOR: Piledriver.....	\$ 16.70 **	0.00
OPERATOR: Roller.....	\$ 13.62 **	1.60
OPERATOR: Scraper.....	\$ 12.64 **	0.00
OPERATOR: Screed.....	\$ 14.68 **	2.19
PAINTER: Spray.....	\$ 23.30	0.00
TRAFFIC CONTROL: Flagger.....	\$ 13.20 **	0.00
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 12.37 **	0.00
TRAFFIC SIGNALIZATION: Laborer.....	\$ 12.76 **	0.00
TRUCK DRIVER: Dump Truck.....	\$ 13.00 **	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 14.96 **	1.19
TRUCK DRIVER: Hydroseeder Truck.....	\$ 14.92 **	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 17.68	0.00
TRUCK DRIVER: Off the Road Truck.....	\$ 12.38 **	0.00
TRUCK DRIVER: Water Truck.....	\$ 13.42 **	1.86
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 16.13 **	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year.

Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic

violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number,

005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

PART II - EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS**A. Standard Federal Equal Employment Opportunity Construction Contract Specifications (41 CFR 60-4.3).****1. As used in these specifications:**

"Covered area" means the geographical area described in the solicitation from which this contract resulted;

"Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;

"Employer identification number" means the federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;

"Minority" includes:

- (1) Black (all persons having origins in any of the black African racial groups not of Hispanic origin);
- (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin regardless of race);
- (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast, Asia, the Indian Subcontinent, or the Pacific Islands); and
- (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North American and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.**3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the plan area (including goals and timetables) shall be in accordance with that plan for those trades which have unions participating in the plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The**

overall good faith performance by other Contractors or subcontractors toward a goal in an approved plan does not excuse any covered Contractor's or subcontractor's failure to take good faith efforts to achieve the plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 18.7a through 18.7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction Contractors performing construction work in a geographical area where they do not have a federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal Procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period and the Contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to

community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

- c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, a community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor along with whatever additional actions the Contractor may have taken.
- d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or female sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any jobsite. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO

policy with other Contractors and subcontractors with whom the Contractor does or anticipates doing business.

- i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
 - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation, at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractors and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (18.7a through 18.7p). The efforts of a Contractor association, joint Contractor-union, Contractor-community, or other similar groups of which the Contractor is a member and participant, may be

asserted as fulfilling any one or more of its obligations under 18.7a through 18.7p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally,) the Contractor may be in violation of the executive order if a specific minority group of women is underutilized.
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 18.7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records

shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).
- B. Compliance with Nondiscrimination Requirements. During the performance of this contract, the Contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:
1. COMPLIANCE WITH REGULATIONS. The Contractor (hereinafter includes consultants) will comply with the **Title VI List of Pertinent Nondiscrimination Statutes and Authorities**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
 2. NONDISCRIMINATION. The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
 3. SOLICITATIONS FOR SUBCONTRACTS, INCLUDING PROCUREMENTS OF MATERIALS AND EQUIPMENT. In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
 4. INFORMATION AND REPORTS. The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor will so certify to the Sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
 5. SANCTIONS FOR NONCOMPLIANCE. In the event of a Contractor's noncompliance with the Non-discrimination provisions of this contract, the Sponsor will impose such contract

sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

- a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
 - b. Cancelling, terminating, or suspending a contract, in whole or in part.
6. INCORPORATION OF PROVISIONS. The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Sponsor to enter into any litigation to protect the interests of the Sponsor. In addition, the Contractor may request the United States to enter into litigation to protect the interests of the United States.

C. Equal Employment Opportunity Clause. During the performance of this contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
3. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising that said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

5. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
6. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
7. The Contractor will include the portion of the sentence immediately preceding paragraph 1 and the provisions of paragraphs 1 through 7 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the Contractor may request the United States to enter into such litigation to protect the interests of the United States.
8. The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the recipient deems appropriate.
9. Prompt Payment: The prime Contractor agrees to pay each subcontractor under this prime Contract for satisfactory performance of its Contract no later than ten (10) days from the receipt of each payment, the prime contractor received from the Sponsor. The prime Contractor agrees further to return retainage payments to each subcontractor within ten (10) days after the subcontractor's Work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Sponsor. This clause applies to both DBE and non-DBE subcontractors. Failure to comply with the prompt payment provision of the Contract may result in sanctions under the Contract, as listed below.

(1) Refusal to issue proposals

(2) Damages

(3) Suspension of Work on the project

(4) No additional progressive payments may be processed

(5) Suspension of prequalification

D. Notices to be Posted. The "Equal Employment Opportunity is the Law" poster is to be posted by the Contractor in a conspicuous place available to employees and applicants for employment as required by paragraphs (1) and (3) of the EEO clause. Copies of this poster will be furnished to Contractors at the preconstruction conference.

E. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246, As Amended).

1. The Offerer's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

A. Timetables

B. Goals for minority participation for each trade
(Vol. 45 Federal Register pg. 65984 10/3/80)

C. Goals for female participation in each trade - (6.9%)

These goals are applicable to all of the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor is also subject to the goals for both federally funded and non-federally funded construction regardless of the percentage of federal participation in funding.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training shall be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project, for the sole purpose of meeting the Contractor's goals, shall be a violation of the contract, the Executive Order, and the

regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director, Office of Federal Contract Compliance Programs (OFCCP), within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of subcontract; and the geographical area in which the subcontract is to be performed.
4. As used in this notice and in the contract resulting from this solicitation, the "covered area" [insert description of the geographical areas where the contract is to be performed giving the state, county, and city, if any].

F. Required Reports.

1. Monthly Employment Utilization Report. This report is to be prepared on Form CC 257 (Rev. 9-78) and sent to the Area Office, Federal Contract Compliance Program (OFCCP) that serves the geographical area in which this project is located. The report is due by the 10TH day of each month after work has commenced. The Contractor will be advised further regarding this report including the address of the OFCCP Area Office, at the preconstruction conference.
2. Annual EEO-1 Report. Contractors/Subcontractors working on federally assisted airport construction projects are required to file annually, on or before March 31, complete and accurate reports on Standard Form 100 (Employee Information Report, EEO-1). The first such report is required within 30 days after award unless the Contractor/Subcontractor has submitted such a report within 12 months preceding the date of award (the FAA or Department of Labor OFCCP can designate other intervals). This form is normally furnished based on a mailing list, but can be obtained from the Joint Reporting Committee, 1800 G. Street, NW, Washington, DC 20506. This report is required if a Contractor or Subcontractor meets all of the following conditions.
 - a. Nonexempt. Contractors/Subcontractors are not exempt based on 41 CFR 60-1.5, and
 - b. Number of Employees. Has 50 or more employees.
 - c. Contractor/Subcontractor. Is a prime Contractor of first tier subcontractor, and a financial institution which is an issuing and paying agent for US savings bonds and savings notes. Some Subcontractors below the first tier who work at the site are required to file if they meet the requirements of 41 CFR 60-1.7.

3. Records. The FAA or Department of Labor OFCCP may require a Contractor to keep employment or other records and to furnish, in the form requested within reasonable limits, such information as necessary.
- G. Requirement for Certification of Nonsegregated Facilities.
1. NOTICE TO PROSPECTIVE FEDERALLY ASSISTED CONSTRUCTION CONTRACTORS.
 - a. Certification of Nonsegregated Facilities shall be submitted prior to the award of a federally-assisted construction contract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause.
 - b. Contractors receiving federally-assisted construction contract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective Subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause.
 - c. The penalty for making false statements in offers is prescribed in 18 U.S.C. § 1001.
 2. NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR CERTIFICATION OF NONSEGREGATED FACILITIES
 - a. A Certification of Non-segregated Facilities shall be submitted prior to the award of a subcontract exceeding \$10,000, which is not exempt from the provisions of the Equal Opportunity Clause.
 - b. Contractors receiving subcontract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of this notice to prospective Subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause.
 - c. The penalty for making false statements in offers is prescribed in 18 U.S.C. § 1001.

Certification of Nonsegregated Facilities

The federally-assisted construction contractor certifies that she or he does not maintain or provide, for his employees, any segregated facilities at any of his establishments and that she or he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally-assisted construction contractor certifies that she or he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that she or he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The federally-assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally-assisted construction contractor agrees that (except where she or he has obtained identical certifications from proposed subcontractors for specific time periods) she or he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that she or he will retain such certifications in his files.

General Civil Rights Provisions

In all its activities within the scope of its airport program, the Contractor agrees to comply with pertinent statutes, Executive Orders, and such rules as identified in Title VI List of Pertinent Nondiscrimination Acts and Authorities to ensure that no person shall, on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

The above provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract.

Title VI List of Pertinent Nondiscrimination Authorities

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 USC § 2000d *et seq.*, 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination in Federally-Assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 *et seq.*), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance);
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq.*) (prohibits discrimination on the basis of age);

- Airport and Airway Improvement Act of 1982 (49 USC § 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
 - The Civil Rights Restoration Act of 1987 (PL 100-259) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
 - Titles II and III of the Americans with Disabilities Act of 1990 (42 USC § 12101, et seq) (prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
 - The Federal Aviation Administration’s Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
 - Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations);
 - Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs [70 Fed. Reg. 74087 (2005)];
 - Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC § 1681, et seq).
- A. Airport Improvement Program Project. The work in this contract is included in Airport Improvement Program which is being undertaken and accomplished by the SPONSOR in accordance with the terms and conditions of a grant agreement between the SPONSOR and the United States, under the Airport and Airway Improvement Act of 1982 and Part 152 of the Federal Aviation Regulations (14 CFR Part 152), pursuant to which the United States has agreed to pay a certain percentage of the costs of the project that are determined to be allowable project costs under that Act. The United States is not a party to this contract and no reference in this contract to the FAA or any representative thereof, or to any rights granted to the FAA or any representative thereof, or the United States, by the contract, makes the United States a party to this contract.
- B. Consent to Assignment. The Contractor shall obtain the prior written consent of the SPONSOR to any proposed assignment of any interest in or part of this contract.
- C. Veterans Preference. In the employment of labor (except in executive, administrative, and supervisory positions), preference must be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Title 49 United States Code, Section 47112. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

- D. FAA Inspection and Review. The Contractor shall allow any authorized representative of the FAA to inspect and review any work or materials used in the performance of this contract.
- E. Subcontracts. The Contractor shall insert in each of his subcontracts the provisions contained in paragraphs A, C, and D of this section and also a clause requiring the Subcontractors to include these provisions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.
- F. Clean Air and Water Pollution Control. (Reference 2 CFR 200 Appendix II (G)) Contractors and subcontractors agree:
1. That any facility to be used in the performance of the contract or subcontract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;
 2. To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued thereunder;
 3. Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 USC §§ 7401-7671q) and the Federal Water Pollution Control Act as amended (33 USC §§ 1251-1387) and Executive Order 11738. The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.
 4. That, as a condition for award of this contract, the contractor or subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities;
 5. To include or cause to be included in any construction contract or subcontract which exceeds \$100,000 the aforementioned criteria and requirements.
- G. Recovered Materials. Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:
- 1) The contract requires procurement of \$10,000 or more of a designated item during the fiscal year; or

- 2) The contractor has procured \$10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

- a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
- b) Fails to meet reasonable contract performance requirements; or
- c) Is only available at an unreasonable price.

H. Drug Free Workplace Certification: The CONTRACTOR must certify that they are in full compliance with the provisions of Code Sections 50-24-1 through 50-24-6 of the Official Code of Georgia Annotated, relating to the "Drug-free Workplace Act". The undersigned further certifies that:

- a. A drug-free workplace will be provided for the CONTRACTOR'S employees during performance of the contract; and
- b. Each CONTRACTOR who hires a subcontractor to work in a drug-free work place shall secure from that subcontractor the following written certification:
"As part of the subcontracting agreement with (CONTRACTOR's name), (Subcontractor's name) certifies to the CONTRACTOR that a drug-free workplace will be provided for the subcontractor's employees during the performance of this Contract pursuant to Paragraph (7) of Sub-section (b) of Code Section 50-24-3".
- c. The CONTRACTOR further certifies that he will not engage in the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the Contract.
- d. CONTRACTOR may be suspended, terminated, or debarred if it is determined that:
 - (1) The CONTRACTOR has made false certification hereinabove; or
 - (2) The CONTRACTOR has violated such certification by failure to carry out the requirements of the Official Code of Georgia Section 50-24-3.

I. Certificate Regarding Debarment and Suspension (Bidder or Offeror).

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that at the time the bidder or offeror submits its proposal that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

Certification Regarding Debarment and Suspension (Successful Bidder Regarding Lower Tier Participants)

The successful bidder, by administering each lower tier subcontract that exceeds \$25,000 as a “covered transaction”, must verify each lower tier participant of a “covered transaction” under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: <http://www.sam.gov>
2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that a lower tier participant failed to tell a higher tier that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedy, including suspension and debarment.

J. Termination of Contract (Reference 2 CFR 200, Appendix II).

1. The Sponsor may, by written notice, terminate this contract in whole or in part at any time, either for the Sponsor’s convenience or because of failure to fulfill the contract obligations. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:
 - a. Contractor must immediately discontinue work as specified in the written notice.
 - b. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
 - c. Discontinue orders for materials and services except as directed by the written notice.
 - d. Deliver to the Owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work, and as directed in the written notice.
 - e. Complete performance of the work not terminated by the notice.
 - f. Take action as directed by the Owner to protect and preserve property and work related to this contract that Owner will take possession.

Sponsor agrees to pay Contractor for:

- a. Completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;
 - b. Documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;
 - c. Reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and
 - d. Reasonable and substantiated expenses to the Contractor directly attributable to Owner's termination action.
 2. If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price will be made, but no amount will be allowed for anticipated profit on unperformed services or other economic loss arising out of or resulting from the Sponsor's termination action.
 3. If the termination is due to failure to fulfill the Contractor's obligations, the Sponsor may take over the work and prosecute the same to completion by contract or otherwise. In such case, the Contractor is liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.
 4. If, after notice of termination for failure to fulfill contract obligations, it is determined that the Contractor had not so failed, the termination shall be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price will be made as provided in paragraph 2 of this clause.
 5. The rights and remedies of the Sponsor provided in this clause are in addition to any other rights and remedies provided by law or under this contract.
- K. Inspection of Records (Reference 2 CFR 200.326, 200.333). The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Sponsor, the Federal Aviation Administration, and the Comptroller General of the United States or any of the duly authorized representatives' access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made.
- L. Rights to Inventions. All rights to inventions and materials generated under this contract are subject to regulations issued by the FAA and the Sponsor of the Federal grant under which this contract is executed. Information regarding these rights is available from the FAA and the Sponsor.
- M. Breach of Contract Terms. Any violation or breach of terms of this contract on the part of the contractor or its subcontractors may result in the suspension or termination of this contract or

such other action that may be necessary to enforce the rights of the parties of this agreement. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

- N. Lobbying and Influencing Federal Employees. The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
 - (3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

- O. Energy Conservation Requirements. The contractor agrees to comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Public Law 94-163).
- P. Foreign Trade Restrictions (DOT Regulation 49 CFR Part 30). Denial of Public Works Contracts to Suppliers of Goods and Services of Countries that Deny Contracts to Suppliers of Goods and Services of Countries that Deny Procurement Market Access to U. S. Contractors.
- Q. Occupational Safety and Health Act of 1970. All contracts and subcontracts that result from this solicitation incorporate the following provisions by reference, with the same force and effect as if given in full text. The contractor has full responsibility to monitor compliance to the referenced

statute or regulation. The contractor must address any claims or disputes that pertain to a referenced requirement directly with the Federal Agency with enforcement responsibilities.

Requirement	Federal Agency with Enforcement Responsibilities
Occupational Safety and Health Act of 1970 (20 CFR Part 1910)	U.S. Department of Labor – Occupational Safety and Health Administration

R. Trade Restriction Clause. By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

- 1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);
- 2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and
- 3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC § 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR § 30.17, no contract shall be awarded to an Offeror or subcontractor:

- 1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR; or
- 2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list; or
- 3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

END OF SECTION 100

DIVISION 6 – TECHNICAL SPECIFICATIONS**SECTION 00001 - TECHNICAL SPECIFICATIONS**

All materials used shall be in accordance with FAA Specifications, or Georgia Department of Transportation, Standard Specifications Construction of Transportation Systems, 2021 Edition and Supplemental Specifications, 2024 Edition, except for electrical items of work which shall be in accordance with applicable FAA Specifications.

END OF SECTION 00001

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SECTION 01010 - SUMMARY OF WORK

PART 1 GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General Provisions and Supplementary Conditions, Specifications sections in this manual and applicable Advisory Circular 150/5370-10H Standards for Specifying Construction of Airports or State of Georgia, Department of Transportation Standard Specification sections, as specified, apply to work of this section.
- B. Division 1 - General Requirements of the contract specifications is an integral part of the Contract Documents of the Contract.
- C. Related Requirements specified in other sections of the specifications:

Restrictions on use of site, safety requirements and work within Air Operations Areas are specified in Section 01030-Airport Project Procedures (Construction Safety Plan.)

1.02 PROJECT IDENTIFICATION:

- A. Taxiway Pavement Rehabilitation

1.03 WORK COVERED BY CONTRACT DOCUMENTS:

- A. Work covered by the contract documents is located at the **Dalton Municipal Airport, Dalton, Georgia**. The work of this project includes, but is not limited to:

Base Bid:	All labor, materials and supervision to rehabilitate the existing taxiway pavement.
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The tasks required to do this work include but are not limited to the following:

1. Mobilize and install safety measures.
2. Prepare existing taxiway pavement for paving operations.
3. Pave existing taxiway pavement.

4. Install temporary pavement markings
5. Perform shoulder dressing and stabilization (grassing).
6. Install permanent pavement markings.

1.04 SUMMARY BY REFERENCES:

- A. Work of the Contract can be summarized by references to the Contract, General Provisions, Supplementary Conditions, Specification Sections, Drawings, addenda and modifications to the contract documents issued subsequent to the initial printing of this project manual and including but not necessarily limited to printed material referenced by any of these. It is recognized that work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions and other forces outside the contract documents.

END OF SECTION 01010

SECTION 01030 - AIRPORT PROJECT PROCEDURES
(CONSTRUCTION SAFETY PHASING PLAN)

Part 1 GENERAL

1.01 INTRODUCTION:

- A. This project involves Contractor operations within active Airport Operational Areas (A.O.A.). The Airport will conduct normal aircraft operations (subject to certain restrictions which shall be called out in this section) during the course of this project. Therefore, in order to provide for the security and safety of Airport users and the Contractor's forces, as well as to minimize interruptions to aircraft operations, the Contractor shall limit his work within the areas as designated on the plans and conduct his operations as set forth in the specifications.

THE CONTRACTOR AND ALL PERSONNEL SHALL NOT ENTER OR CROSS THE ACTIVE RUNWAYS OR TAXIWAYS WHEN THEY ARE NOT CLOSED OR WITHOUT SPECIFIC APPROVAL OF THE AIRPORT MANAGER. ANY PERSON IN VIOLATION OF A RUNWAY/TAXIWAY INTRUSION OF THE OPERATIONAL RUNWAY AREAS MAY BE CAUSE FOR DISMISSAL FROM THE PROJECT.

1.02 REFERENCED STANDARDS:

- A. U.S. Department of Transportation, Federal Aviation Administration Advisory Circulars AC No. 150/5370-2G and AC No. 150/5340-1M will be used as guidelines to assist in maintaining operational safety during construction activities. These documents also refer to other applicable Advisory Circulars.
- B. Controlling Requirements: The purpose of this Construction Safety Plan is to describe the procedures, rules and requirements to be followed during construction of this project. The material set forth in this section is based upon Department of Transportation, Federal Aviation Administration Advisory Circular 150/5370-2G, Operational Safety on Airports During Construction, dated December 13, 2017, and its references and current changes. The requirements stated in the Advisory Circular, its references and current changes are minimum standards for the project. This section amends the requirements of the referenced standards. In case of a conflict between the referenced standards and this specification the more stringent requirement shall govern.

1.03 CONTRACTOR'S RESPONSIBILITY:

- A. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO ADHERE TO ALL SAFETY REGULATIONS OF THE SPECIFICATION, THE ADVISORY CIRCULAR, ITS REFERENCES AND CHANGES AND

TO ALL OTHER ADVISORY MATERIAL PERTAINING TO OPERATIONAL SAFETY OF AIRPORTS, ESPECIALLY DURING PERIODS ON CONSTRUCTION ACTIVITY. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING AND CONTROLLING ALL CONSTRUCTION ACTIVITIES IN FULL COMPLIANCE WITH THE REQUIREMENTS OF THE REFERENCED FAA ADVISORY CIRCULARS AND THIS SAFETY PLAN.

- B. Contractor shall designate an individual in his organization responsible for all construction safety including implementation of the specific requirements of this safety plan. The individual shall instruct all Contractors' employees in the requirements of this safety plan and of construction safety in general. This individual shall also be responsible for insuring that all subcontractors have an understanding of the safety requirements.

1.04 MODIFICATIONS TO THE PLAN:

- A. Changes to the requirements of the specification will only be allowed if approved by Sponsor.

1.05 UNAUTHORIZED CROSSINGS OF ACTIVE AIRFIELD OPERATION AREAS:

- A. This safety plan requires that Contractor control the operation of his employees, equipment and Subcontractors, and that all work areas within the airfield operations area have a responsible person with a radio in constant radio contact with the airport UNICOM.

1.06 CONSTRUCTION SAFETY REQUIREMENTS:

- A.
 - 1. Protection of Utilities: The Contractor shall be responsible for field marking and protecting all utilities within the construction limits.
 - 2. Storage of Equipment, Vehicles, and Materials: All equipment, vehicles, and materials must be stored in the designated storage or staging area or in areas acceptable to the Engineer.
 - 3. Construction Methods Limitation: No open flames or burning will be allowed on the airport property without prior approval.
 - 4. Safety and Accident Protection: The Contractor shall comply with all applicable federal, state, and local laws, ordinances, and regulations governing safety, health, and sanitation, and shall provide barricades, and shall take any other needed actions, on his own responsibility that are reasonably necessary to protect the life and health of employees on the job and the safety of the airport users, and to protect moving and parked aircraft and other property in connection with the performance of the work covered by the plans and specifications.

1.07 CONTRACTOR USE OF PREMISES :

- A. Use of the Site: Confine operations at the site to the areas designated on the Drawings. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to site rules and regulations affecting the work as stated on this Safety Plan while engaged in project construction.

- B. Keep existing drives, entrances, and air operations areas designated to remain open, clear and available to the Sponsor, his employees and the public at all times. Do not use these areas for parking or storage of materials.
- C. Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas indicated. If additional storage is necessary, obtain Engineer's approval.
- D. Lock automotive types vehicles, such as passenger cars and trucks, and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place.
- E. RESTRICTED AREAS

Due to the necessity to accomplish construction in areas on and adjacent to the taxiways, the construction equipment, vehicles, and men are authorized to operate without interruption within the project limits.

Construction activities within these areas shall only be performed at times when the taxiways are closed to aircraft.

Construction within a restricted area shall be performed in such a manner that, at the end of the closure period, the runway and taxiway areas will be clear of debris.

1.08 MOTORIZED VEHICLES AND EQUIPMENT:

- A. Construction equipment and vehicles not engaged in construction during non-working hours will be parked at the Contractor's staging area indicated on the Contract Drawings.

1.09 OTHER SAFETY AND SECURITY MEASURES:

- A. All areas of construction will be off-limits to personnel not involved in construction work or operations of the Airport.

1.10 COMMUNICATIONS (GENERAL):

- A. All communications relating to the construction work on this project will pass through the Engineer's site representative. Engineer's site representative must be furnished the Contractor's representative's telephone number where he can be contacted on a 24 hour basis. Contractor's representative shall be available on a 24-hour basis.
- B. Radio Communication Requirements:
The foreman of each work crew operating adjacent to or within active aircraft operating areas shall be equipped with a VHF two-way radio capable of communicating with the UNICOM frequency. The Contractor shall furnish the radios. The radio frequency of the airport UNICOM is 122.975.

PART 2 EXECUTION :**2.01 GENERAL OPERATIONAL CONDITIONS AND RESTRICTIONS:**

- A. The contractor cannot work within 75 feet of the runway centerline or within 25 ft of any active taxiways or taxilanes. Airport operations will be impacted by the work of the contractor. Partial taxiways will be closed. Contractor can work next to the apron area as long as the airport operator agrees and that there is adequate clearance between the equipment or materials and any part of an aircraft using the apron. Appropriate NOTAMS shall be issued by airport management prior to the operation.
- B. The contractor must get permission from the Engineer prior to use of construction equipment over 20 feet in height.

2.02 MEASUREMENT AND PAYMENT:

- A. There will be no separate measurement and payment for work specified in this Section.

END OF SECTION 01030

SECTION 01150 - MEASUREMENT AND PAYMENT

1.01 DESCRIPTION:

- A. This section establishes the method of measurement and payment for work performed under this contract.
- B. Payment for work performed shall be made on a unit price basis in accordance with the accepted bid and the method of payment provided in the General Conditions.
- C. Related requirements in other parts of the Specifications:
 - 1. Bid (Proposal)
 - 2. Agreement
 - 3. Conditions of the Contract
- D. Related requirements specified in other sections:
 - 1. Summary of Work - Section 01010
 - 2. Submittals - Section 01300
 - 3. Contract Closeout - Section 01700
- E. No additional payment will be made for items of work for which a separate payment item is not specified herein or contained in the Bid Schedule; such work being deemed incidental to the Project and payment for said work shall be considered as included in the various unit bid prices.

1.02 APPLICATIONS FOR PAYMENT:

- A. Submit Applications for Payment to the Engineer in accordance with the schedule established by Conditions of the Contract and Agreement between Sponsor and Contractor.
- B. Format and Data Required
 - 1. Submit Applications for Partial Payment on the form required by Sponsor with itemized data typed on 8 ½ inch x 11 white paper continuation sheets.
 - 2. Provide itemized data on continuation sheet: Format, schedules, line items and values: Those of the Schedule of Values accepted by the Engineer.
- C. Preparation of Application for each Progress Payment
 - 1. Application Form
 - a. Fill in required information, including that for Change Orders executed prior to the date of submittal of application.

- b. Fill in summary of dollar values to agree with the respective totals indicated on the continuation sheets.
 - c. Execute certification with the signature of a responsible officer of the contract firm.
 2. Continuation Sheets
 - a. Fill in total list of all scheduled component items of work, with item number and the scheduled dollar value for each item.
 - b. Fill in the dollar value in each column for each scheduled line item when work has been performed or products stored. Round off values to the nearest dollar, or as provided in the bid.
 3. List each Change Order executed prior to the date of submission, at the end of the continuation sheets.
 - a. List by Change Order and description, as for an original component item of work.
 4. Submit Applications for Payment to Sponsor at the times stipulated in the Agreement.
 - a. Number: Four copies of each Application.
- D. Substantiating Data
 1. When the Sponsor or Engineer requires substantiating data, Contractor shall submit suitable information with cover letter identifying:
 - a. Project
 - b. Application number and date
 - c. Detailed list of enclosures
 - d. For stored products: Item number and identification as shown on application. Description of specific material.
 2. Submit one copy of data and cover letter for each copy of application.
- E. Preparation of Application for Final Payment
 1. Fill in application form as specified for Progress payments.
 2. Use continuation sheet for presenting the final statement of accounting as specified in Section 01700 - Contract Closeout.

1.03 CHANGE ORDER PROCEDURES:

- A. Format and Data Required
 1. Change Orders shall be prepared/submitted/ processed in accordance with requirements of General Conditions and Funding Agency Requirements.
 2. Engineer will transmit Certificate for Change to Sponsor and Agency for approval.

3. When Sponsor and Agency approval is received, Change Order will be included under next partial Application for Payment.

1.04 MEASURES AND WEIGHTS:

- A. To aid the Sponsor in determining all quantities, the Contractor shall, whenever so requested, provide scales, equipment and assistance for weighing or for measuring any of the materials.
- B. It is understood and agreed that a "ton" shall mean the short ton of two thousand (2,000) pounds.
- C. Weights and measures of quantity for payment will be the actual weight or actual measure, and no special or trade or so-termed customary allowances will be made, nor will any material which is lost or misplaced be included for payment.
- D. For estimating quantities in which computation of areas by geometric methods would be comparatively laborious, it is agreed that the planimeter shall be considered an instrument of precision to the measurement of such areas.
- E. Figured dimensions on drawings shall take precedence over measurement by scale, and detailed working drawings are to take precedence over general drawings and shall be considered as explanatory of them and not as indicating extra work.

END OF SECTION 01150

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SECTION 01300 - SUBMITTALS

1.01 GENERAL:

A. Submittals by Contractor:

1. Construction Progress Schedule: provide Bar Chart.
2. Certifications as specified in the various sections.
3. Shop Drawings: as specified in the various sections.
4. Operation and Maintenance Manual
5. Miscellaneous.

1.02 PRELIMINARY PROGRESS SCHEDULE:

A. Bar-Chart Schedule: Submit a bar-chart type progress schedule 10 working days after the preconstruction conference for Engineer's review. On the schedule, indicate a time bar for each major category or unit of work to be performed at the site, properly sequenced and coordinated with other elements of work. Show completion of the work sufficiently in advance of the date established for substantial completion of the work.

1. Superimpose an S-curve on the schedule to show the "estimated" total dollar-volume of work performed at any date during the Contract Time, with a column of cost figures in the left hand margin ranging from zero to the Contract Sum.
2. Submittal Tabulation: With the bar-chart submittal, submit a tabulation, by date, of the submittals which are required during Construction Time. At the Contractor's option, submittal dates may be shown on the bar-chart schedule, in lieu of being tabulated.

B. Update and distribute copies of schedule monthly.

1.03 SHOP DRAWINGS AND PRODUCT DATA:

A. Submit shop drawings, certifications, and product data for all products to be incorporated in the Work.

B. Shop Drawings will:

1. Be original drawings, prepared by the Contractor, subcontractor, supplier or distributor, which illustrate some portion of the work; showing fabrication, layout, setting, or erection details. The submittal will include contractor stamp and certification that the submittal meets the job specifications. If not, show details and reasons for requested variance.

2. Be prepared by a qualified detailer.
 3. Identify details by reference to sheet and detail numbers shown on Contract Drawings.
- C. Product Data will:
1. Include manufacturer's standard schematic drawings. The Contractor will:
 - a. Modify drawings to delete information, which is not applicable to project.
 - b. Supplement standard information to provide additional information applicable to project.
 2. Include manufacturer's catalog sheets, standard color charts, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data.
- Contractor will:
- a. Clearly mark each copy to identify pertinent materials or products.
 - b. Show dimensions and clearances required.
 - c. Show performance characteristics and capacities.
- D. The Contractor will be responsible for all submittals and will:
1. Review Shop Drawings and Product Data prior to submission.
 2. Verify:
 - a. Field Measurements
 - b. Field Construction criteria
 - c. Catalog numbers and similar data
 3. Coordinate each submittal with the requirements of the work and of the Contract Documents.
 4. PRIOR TO SUBMISSION TO THE ENGINEER, A CONTRACTOR IS TO REVIEW AND APPROVE ALL SHOP DRAWINGS. BY THIS REVIEW AND APPROVAL, THE CONTRACTOR REPRESENTS THAT IT HAS DETERMINED AND VERIFIED ALL FIELD MEASUREMENTS, FIELD CONSTRUCTION CRITERIA, MATERIALS, CATALOGUE NUMBERS AND SIMILAR DATA, AND THAT IT HAS CHECKED AND COORDINATED EACH SHOP DRAWING WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS. THE CONTRACTOR IS TO INDICATE ITS REVIEW AND APPROVAL BY INCLUDING THE DATE AND THE SIGNATURE OF A RESPONSIBLE PERSON ON EACH SHOP DRAWING.
 5. Notify the Engineer, in writing at time of submission, of deviations in submittals from requirements of the Contract Documents.
 6. Begin no work which requires submittals until the return of submittals with the Engineer's stamp and initials or signature indicating review.

7. After the Engineer's review, distribute copies.
- E. Contractor's responsibility for errors and omissions in submittals is not relieved by the Engineer's review of submittals.
- F. CONTRACTOR'S RESPONSIBILITY FOR DEVIATIONS IN SUBMITTALS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS IS NOT RELIEVED BY THE ENGINEER'S REVIEW OF SUBMITTALS, UNLESS THE ENGINEER GIVES WRITTEN ACCEPTANCE OF SPECIFIC DEVIATIONS.
- G. Submission requirements will include:
 1. THE SHOP DRAWINGS SHALL BE SUBMITTED IN SUFFICIENT TIME TO ALLOW DISCUSSION AND CORRECTION PRIOR TO BEGINNING THE WORK. WORK SHALL NOT BE PERFORMED NOR MATERIALS ORDERED PRIOR TO THE REVIEW OF THE DRAWINGS EXCEPT AT THE CONTRACTOR'S RISK.
 2. SUBMIT THREE COPIES OF ALL SHOP DRAWINGS AFTER WHICH ONE COPY WILL BE RETURNED FOR CORRECTION OR MARKED REVIEWED AS NOTED. ANY DRAWINGS RETURNED FOR CORRECTION MUST BE RESUBMITTED IN TRIPLICATE.
 3. ALL SUBMITTALS MUST BE ACCOMPANIED BY A TRANSMITTAL LETTER, IN DUPLICATE, CONTAINING:
 - a. Date
 - b. Project title and number
 - c. Contractor's name and address
 - d. The number of each Shop Drawing and Product Data submitted
 - e. Notification of deviations from Contract Documents
 - f. Other pertinent data
 4. Submittals shall include:
 - a. Data and revision dates
 - b. Project title and number
 - c. The names of:
 - (1) Engineer
 - (2) Contractor
 - (3) Subcontractor
 - (4) Supplier
 - (5) Manufacturer
 - (6) SEPARATE DETAILER WHEN PERTINENT
 - d. Identification of product or material
 - e. Relation to adjacent structure or materials
 - f. Field dimensions, clearly identified as such
 - g. Specification section number
 - h. Applicable standards, such as ASTM number or Federal Specification
 - i. A blank space, 5 in. x 5 in., for the Engineer's stamp

- j. Identification of deviations from the Contract Documents
- k. Contractor's stamp, initialed or signed, certifying Contractor's review of submittal, verification of field measurements, and compliance with Contract Documents.

H. Resubmission requirements shall include:

- 1. Revision of initial drawings as required and resubmittal, as specified, for initial submittal.
- 2. An indication on the drawings of any changes which have been made, other than those requested by the Engineer.
- 3. On Product Data submittals, include new data as required for initial submittal.

After review and approval, the Contractor will distribute copies of Shop Drawings and Product Data which carry the Engineer's stamp to others as may be required.

I. Shop Drawings and Product Data:

Submit notarized certifications consigned by manufacturer/supplier and Contractor for:

- a. Fuel System Products
- b. All other products as required by Engineer.

J. Equipment Manual - Provide two (2) copies of operating and maintenance data in the form of Operation and Maintenance Manuals (O & M Manuals). The manuals shall be in 3-ring binders and developed into suitable sets of manageable size. The manual shall cover the fuel storage and dispensing system and the fuel management system. The manuals should at a minimum Include the following:

- 1. Approved Shop Drawings on each piece of equipment and specialty items furnished.
- 2. Maintenance operation and lubrication instruction, parts lists, and control and wiring diagrams on each piece of equipment furnished.
- 3. Dispenser pump control diagram prepared by the manufacturer
- 4. A "one-line diagram" and troubleshooting guide to help the user to determine what steps must be taken to correct any problem that may exist in the system.
- 5. Brief description of each system and components, starting and stopping procedures and emergency instructions and inspection, reporting and record keeping procedures, and forms.

6. Manufacturer's warranties.

1.04 MISCELLANEOUS:

A. EEO Reports:

1. Contractor shall submit Monthly Employment Utilization Report and Annual EEO-1 Report to the appropriate Federal Labor Area Office in accordance with Section 120 of the General Conditions. Submit copy of submittal to Sponsor for his records.
2. Prime Contractor shall insure that all his first tier subcontractors submit these reports and shall submit a sworn statement to Sponsor monthly certifying that all subcontractor reports have been submitted as required.

END OF SECTION 01300

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SECTION 01510 - TEMPORARY FACILITIES

1.01 DESCRIPTION:

- A. Contractor shall furnish, install and maintain temporary facilities required for construction; remove on completion of Work.
- B. Related requirements specified in other sections: The respective Sections of the Specifications.

1.02 REQUIREMENTS OF REGULATORY AGENCIES:

- A. Comply with national electric code.
- B. Comply with Federal, State, and Local codes and regulations and with utility company requirements.

1.03 MATERIALS - GENERAL:

- A. Materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

1.04 TEMPORARY ELECTRICITY AND LIGHTING:

- A. Provide temporary electrical service required for power, lighting, and field offices, and pay all costs for service and for power used.

1.05 TEMPORARY WATER:

- A. Provide water for construction purposes; pay all costs for installation, maintenance and removal, and service charges for water used.
- B. The site is served by a well owned by the Airport Sponsor. The Contractor shall provide and pay all costs for water required for the performance of the work.

1.06 TEMPORARY SANITARY FACILITIES:

- A. Provide sanitary facilities in compliance with laws and regulations.
- B. SERVICE, CLEAN AND MAINTAIN FACILITIES AND ENCLOSURES.

1.07 TEMPORARY SUPPORT FACILITIES:

- A. General: Provide a reasonably neat and uniform appearance in temporary Support Facilities acceptable to the Engineer and the Sponsor.
- B. Locate field offices, storage and fabrication sheds and other support facilities for easy access to the Work. Position offices so that windows give the best possible view of construction activities.
- C. Maintain field offices, storage and fabrication sheds, temporary sanitary facilities, waste collection and disposal systems, and project identification and temporary signs until near substantial completion. Immediately prior to substantial completion remove these facilities.
- D. Access Roads:
 - 1. Location of access roads will be approved by the Engineer and will be set to minimize conflict with the Airport operations and shall be maintained, be well defined and be confined to the minimum area required.
 - 2. The Contractor shall construct the access roads and shall maintain the roads as required to create no dust. All project traffic must be routed through these areas. The Contractor shall provide all markings required to clearly define the access roads.
 - 3. The Contractor may be required to obtain driveway permits for certain access roads. If access roads cross a utility, the Contractor shall protect the utility as directed by the Sponsor of the utility.

1.08 EXECUTION - GENERAL:

Maintain and operate systems to assure continuous service.

1.09 REMOVAL:

Completely remove temporary materials and equipment when their use is no longer required. Clean and repair damage caused by temporary installations or use of temporary facilities.

2.01 MEASUREMENT AND PAYMENT:

THERE WILL BE NO SEPARATE MEASUREMENT AND PAYMENT FOR WORK SPECIFIED IN THIS SECTION.

END OF SECTION 01510

SECTION 01600 - MATERIAL AND EQUIPMENT

1.01 GENERAL:

- A. All material and equipment (products) incorporated into the work shall:
 - 1. Conform to applicable specifications and standards.
 - 2. Comply with size, make, type and quality specified, or as specifically approved in writing by the Engineer.
 - 3. Do not use material or equipment for any purpose other than that for which it is designed or is specified.
- B. Related requirements in other parts of the project manual:
 - 1. Conditions of the Contract.
- C. Standardization
 - 1. Unless otherwise approved by the Engineer, items of a similar type and function shall be furnished by one manufacturer to standardize on matters and to avoid a division of responsibility among several manufacturers.

1.02 PRODUCT SUBSTITUTIONS AND OPTIONS:

- A. Products List
 - 1. Contractor shall submit a complete list of products to be incorporated into the work (with the name of the installing contractor) at the Preconstruction conference required by these specifications.
- B. Contractor's Options
 - 1. For products specified only by reference standard, select any product meeting that standard.
 - 2. For products specified by naming several products, select any one of the products named, which complies with the specifications.
- C. Product Specifications
 - 1. Contractor shall submit, at the Preconstruction Conference, all requests for product substitutions. No requests for substitutions will be accepted from manufacturers or suppliers.

2. SUBMIT A SEPARATE WRITTEN REQUEST FOR EACH PRODUCT, SUPPORTED WITH COMPLETE DATA, WITH DRAWINGS AND SAMPLES AS APPROPRIATE, INCLUDING:

- a. Comparison of the qualities of the proposed substitution with that specified.
 - b. Changes required in other elements of the work because of the substitution.
 - c. Effect on the construction schedule.
 - d. Cost data comparing the proposed substitution with the product specified.
 - e. Any required license fees or royalties.
3. Engineer shall be the judge of the equality and acceptability of the proposed substitution.
 4. If Engineer determines the proposed substitute product is not "equal" to the specified product, the Contractor must provide the specified product.
 5. No further requests for substitutions will be considered after Preconstruction Conference.

D. Contractor's Representation

1. A request for a substitution constitutes a representation that Contractor;
 - a. Has investigated the proposed product and determined that it is equal to or superior in all respects to that specified.
 - b. Will provide the same warranties for the substitution as for the product specified.
 - c. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.

- E. Engineer will review requests for substitutions with reasonable promptness and notify Contractor, in writing, of the decision to accept or reject the requested substitution.

1.03 MANUFACTURER'S INSTRUCTIONS:

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, Contractor shall obtain and distribute copies of such instructions to parties involved in the installation, including copies to Engineer.

1. Maintain one set of complete instructions at the job site during installation and until completion.

- B. Handle, install, connect, clean, condition, and adjust products in strict accord with such instructions and in conformity with specified requirements.

1. SHOULD JOB CONDITIONS OR SPECIFIED REQUIREMENTS CONFLICT WITH MANUFACTURER'S INSTRUCTION, CONSULT WITH ENGINEER FOR FURTHER INSTRUCTIONS.

2. Do not proceed with work without clear instructions.

- C. Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.04 TRANSPORTATION AND HANDLING:

- A. Contractor shall arrange deliveries of products in accord with construction schedules, coordinate to avoid conflict with work and conditions at the site.
 - 1. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
 - 2. Immediately on delivery, inspect shipments to assure compliance with requirements of contract documents and approved submittals, and that products are properly protected and undamaged.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage of products or packaging.

1.05 STORAGE AND PROTECTION:

- A. Store products in accord with manufacturer's instructions, with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weather tight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
- B. Exterior storage
 - 1. Store fabricated products above the ground, on blocking or skids, prevent soiling or staining. Cover products which are subject to deterioration with impervious sheet coverings, provide adequate ventilation to avoid condensation.
 - 2. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- C. ARRANGE STORAGE IN A MANNER TO PROVIDE EASY ACCESS FOR INSPECTION. MAKE PERIODIC INSPECTIONS OF STORED PRODUCTS TO ASSURE THAT PRODUCTS ARE MAINTAINED UNDER SPECIFIED CONDITIONS, AND FREE FROM DAMAGE OR DETERIORATION
- D. Protection after installation
 - 1. Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

END OF SECTION 01600

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SECTION 01700 - CONTRACT CLOSEOUT

1.01 GENERAL:

- A. Comply with requirements stated in conditions of the contract and in specifications for administrative procedures in closing out the work.
- B. Related requirements in other parts of the Project Manual:
 - 1. Fiscal provisions, legal submittals and additional administrative requirements: Conditions of the contract.
- C. Related Requirements Specified in Other Sections:
 - 1. Closeout submittals required of trades: The respective sections of specifications.

1.02 SUBSTANTIAL COMPLETION:

- A. The conditions and procedures for inspection; and Contractor's, Engineer's and Sponsor's responsibilities pertaining to Substantial Completion are as specified in Section 50 of the General Conditions.

1.03 FINAL INSPECTION:

- A. Shall be in accordance with conditions and procedures outlined in the General Provisions.
- B. When Engineer finds that the work is acceptable under the Contract Documents, he will request required Contractor's Closeout Submittals.

1.04 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ENGINEER:

- A. Evidence of payment and release of liens: To requirements of General and Supplementary Conditions.
- B. Certificates of Insurance for products and completed operations.
- C. Evidence of compliance with requirements of governing authorities:
 - 1. CERTIFICATES OF INSPECTION**

END OF SECTION 01700

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SECTION 01710 - CLEANING AND DISPOSAL

PART 1 GENERAL:

1.01 DESCRIPTION:

- A. Contractor shall execute cleaning during progress of the work and at completion of the work, as required by General Provisions.

1.02 DISPOSAL REQUIREMENTS:

- A. Conduct cleaning and disposal operations to comply with all local, state and federal codes, ordinances, regulations, and anti-pollution laws.
- B. Disposal of waste soil materials may be onsite or off-site at approved locations, at Contractor's option.
- C. Contractor shall be responsible for arranging for and obtaining off-site disposal areas, including payment for all costs associated with such disposal.

PART 2 EXECUTION:

2.01 CLEANING:

- A. Execute periodic cleaning to keep the Work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at approved locations.

END OF SECTION 01710

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SECTION 01720 - PROJECT RECORDS DOCUMENTS

1.01 GENERAL:

- A. Contractor shall maintain at the site as specified herein for the Sponsor one record copy of:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change orders and other modifications.
 - 5. Engineer field orders or written instructions.
 - 6. Approved shop drawings, product data and samples.
 - 7. Field test records.
- B. Related requirements in other parts of the Project Manual:
 - 1. Conditions of the Contract.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES:

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
- B. File documents and samples in accordance with data filing format of the Construction Specifications Institute - MASTERFORMAT.
- C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by Engineer.

1.03 RECORDING:

- A. Stamp or label each document "PROJECT RECORD" in 3/4" letters.
- B. During the daily progress of the Work, the job superintendent for the Contractor shall record information concurrently with construction progress.
 - 1. Do not conceal any work until required information is recorded.
- C. DRAWINGS: LEGIBLY MARK TO RECORD ACTUAL CONSTRUCTION IN THE COLOR CODES DESIGNATED BY THE ENGINEER.
- D. Record Information includes but is not limited to the following:

1. Depths of various elements of foundation in relation to finish reference datum.
 2. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 3. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 4. Field changes of dimension and detail.
 5. Changes made by field order or by change order.
 6. Details not on original Contract Drawings.
- E. Specifications and addenda; legibly mark each section to record:
1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
 2. Changes made by field order or by change order.
- F. All horizontal control dimensions shall be to the nearest tenth of a foot. Elevations shall be to the nearest one-hundredths of a foot.

1.04 SUBMITTAL:

- A. At the close of the job and prior to receipt of final payment, the Contractor shall deliver to Engineer for Sponsor one complete set of Record Documents.
- B. Accompany submittal with transmittal letter containing:
1. Date.
 2. Project title and number.
 3. Contractor's name and address.
 4. Title and number of each record document.
 5. SIGNATURE OF CONTRACTOR OR HIS AUTHORIZED REPRESENTATIVE.

END OF SECTION 01720

SECTION 01740 - WARRANTIES AND BONDS

1.01 GENERAL:

- A. Contractor shall:
1. Compile specified warranties and bonds.
 2. Compile specified service and maintenance contracts.
 3. Co-execute submittals to verify compliance with Contract Documents.
 4. Review submittals to verify compliance with Contract Documents.
 5. Submit to Engineer for review and transmittal to Sponsor.
 6. Related requirements in other parts of the Project Manual:
 - a. Bid Bonds: Instructions to bidders.
 - b. Performance Bond and Payment Bond: conditions of the contract.
 - c. General warranty of construction: conditions of the contract.
- B. Related Requirements Specified in other Sections:
1. Contract closeout: Section 01700
 2. Equipment Manuals: Section 01300
 3. Warranties and Bonds required for specific products: Each respective section of specifications as listed below.

1.02 SUBMITTAL REQUIREMENTS:

- A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.

The contractor shall warrant that all labor and materials furnished and work performed are in accordance with the Contract Documents and authorized modifications thereto, and will be free from defect due to defective materials or workmanship for a period of one year from Date of Substantial Completion.

Should any defect develop during the warranty period due to improper materials, workmanship or arrangement, the defect shall, upon written notice by the Sponsor, be made good by the Contractor at no expense to the Sponsor.

- B. Number of original signed copies required: **Two** each.
- C. TABLE OF CONTENTS: NEATLY TYPED, IN ORDERLY SEQUENCE. PROVIDE COMPLETE INFORMATION FOR EACH ITEM.
1. Product or work item.
 2. Firm, with name of principal, address and telephone number.

3. Scope.
4. Date of beginning of warranty, bond or service and maintenance contract.
5. Duration of warranty, bond or service maintenance contract.
6. Provide information for Sponsor's personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect the validity of warranty or bond.
7. Contractor, name of responsible principal, address and telephone number.

1.03 FORM OF SUBMITTALS:

- A. Prepare in duplicate packets.
- B. Format Size 8 ½ inches x 11 inches, punch sheets for 3-ring binder.
Fold larger sheets to fit into binders.

Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS."
List:
 - a. Project title and number.
 - b. Sponsor's name.
 - c. Contractor's name and address.
- C. Binders: Commercial quality, 3-.ring, with durable and cleanable plastic covers.

1.04 TIME OF SUBMITTALS:

- A. Submittals within **ten** days after date of Substantial Completion, and prior to final request for payment.
- B. For items of work, where acceptance is delayed materially beyond the date of substantial completion, provide updated submittal within **ten** days after acceptance, listing the date of acceptance as the start of the warranty period.

1.05 SUBMITTALS REQUIRED:

- A. Submit warranties, bonds, service and maintenance contracts as specified in the respective sections of specifications.

END OF SECTION 01740

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DIVISION 7 - GDOT – Supplemental Specification

Section 400 Hot Mix Asphaltic Concrete Construction

400.1 General Description

This work includes constructing one or more courses of bituminous plant mixture on the prepared foundation or existing roadway surface. Ensure the mixture conforms with lines, grades, thicknesses, and typical cross sections shown on the plans or established by the Engineer.

This section includes the requirements for all bituminous plant mixtures regardless of the gradation of the aggregates, type and amount of bituminous material, or pavement use.

Acceptance of work is on a lot-to-lot basis according to the requirements of this Section and Section 106.

400.1.01 Definitions

Segregated Mixture: Mixture lacking homogeneity in HMA constituents of such a magnitude there is a reasonable expectation of accelerated pavement distress or performance problems. May be quantified by measurable changes in temperature, gradation, asphalt content, air voids, or surface texture.

Wearing Course: The upper course of asphaltic concrete placed on a roadway, airport or other asphalt pavement.

Surface Course: The upper course of asphaltic concrete placed on a roadway, airport or other asphalt pavement and also includes the dense-graded asphaltic concrete mixture beneath Open Graded Friction Course (OGFC) or Porous European Mixture (PEM).

Intermediate (Binder) Course: The lift(s) of asphaltic concrete above the base course and below the wearing course.

Asphaltic Concrete Base Course: The lower lift(s) of asphaltic concrete generally placed on graded

aggregate base (GAB), soil cement or other stabilized base material.

New Construction: A roadway section more than 0.5 mile (800 m) long that is not longitudinally adjacent to the existing roadway. If one or more lanes are added longitudinally adjacent to the existing lane, the lane(s) shall be tested under the criteria for a resurfacing project. If work is performed on the existing roadway including leveling, grade changes, widening and/or resurfacing then that lane shall be tested under the criteria for a resurfacing project.

Trench Widening: Widening no more than 4 ft. (1.2 m) in width.

Comparison sample: Opposite quarters of material sampled by the Contractor.

Independent Sample (Quality Assurance Sample): A sample taken by the Department to verify an acceptance decision without regard to any other sample that may also have been taken to represent the material in question.

Referee sample: A sample of the material retained during the quartering process which is used for evaluation if a comparison of Contractor and Departmental split sample test results is outside allowable tolerances.

400.1.02 Related References

A. Standard Specifications

Section 106—Control of Materials

Section 109—Measurement and Payment

Section 152—Field Laboratory Building

Section 413—Bituminous Tack Coat

Section 424—Bituminous Surface Treatment

Section 802—Coarse Aggregate for Asphaltic Concrete

Section 828—Hot Mix Asphaltic Concrete Mixtures

B. Referenced Documents

AASHTO T 324

AASHTO T 315

AASHTO T 209

AASHTO T 202

AASHTO T 49

Department of Transportation Standard Operating Procedure (SOP) 15

Department of Transportation Standard Operating Procedure (SOP) 27

Department of Transportation Standard Operating Procedure (SOP) 40

Department of Transportation Standard Operating Procedure (SOP) 46

GDT 38

GDT 39

GDT 42

GDT 59

GDT 73

GDT 78

GDT 83

GDT 119

GDT 125

GDT 126

GDT 134

GSP 15

GSP 21

QPL 1

QPL 2

QPL 7

QPL 26

QPL 30

QPL 39

QPL 41

QPL 45

QPL 65

QPL 67

QPL 70

QPL 77

QPL 88

QPL 91

QPL 92 (A, B, C)

QPL 97

400.1.03 Submittals

A. Invoices

Furnish formal written invoices from a supplier for all materials used in production of HMA when requested by the Department. Show the following on the Bill of Lading:

- Date shipped
- Quantity in tons (megagrams)
- Included with or without additives (for asphalt cement)

Purchase asphaltic cement directly from a supplier listed on Qualified Products List 7 and provide copies of Bill of Lading at the Department's request.

B. Paving Plan

- Proposed starting date
- Location of plant(s)
- Rate of production
- Average haul distance(s)
- Number of haul trucks

- Paver speed feet (meter)/minute for each placement operation
- Mat width for each placement operation
- Number and type of rollers for each placement operation
- Sketch of the typical section showing the paving sequence for each placement operation
- Electric controls used for each placement operation
- Temporary pavement marking plan

If staged construction is designated in the plans or contract, provide a paving plan for each construction stage.

If segregation is detected, submit a written plan of measures and actions to prevent segregation. Work will not continue until the plan is submitted to and approved by the Department.

C. Job Mix Formula

Submit to the Engineer a written job mix formula proposed for each mixture type to be used based on an approved mix design. Furnish the following information for each mix:

- Specific project for which the mixture will be used
- Source and description of the materials to be used
- Mixture I.D. Number
- Proportions of the raw materials to be combined in the paving mixture
- Single percentage of the combined mineral aggregates passing each specified sieve
- Single percentage of asphalt by weight of the total mix to be incorporated in the completed mixture
- Single temperature at which to discharge the mixture from the plant
- Theoretical specific gravity of the mixture at the designated asphalt content
- Name of the person or agency responsible for quality control of the mixture during production

Do the following to have the Job Mix Formulas approved in accordance with SOP 40 *Approval of Contractor Job Mix Formulas* and to ensure their quality:

1. Submit proposed job Mix Formulas for review at least two weeks before

- beginning the mixing operations.
2. Do not start hot mix asphaltic concrete work until the Engineer has approved a job mix formula for the mixture to be used. No mixture will be accepted until the Engineer has given approval.
 3. Provide mix designs for all Superpave and 4.75 mm mixes to be used. The Department will provide mix design results for other mixes to be used.
 4. After a job mix formula has been approved, assume responsibility for the quality control of the mixtures supplied to the Department according to Subsection 106.01, —Source of Supply and Quantity of Materials.

D. Quality Control Program

Submit a Quality Control Plan to the Office of Materials and Testing for approval. The Quality Control Program will be included as part of the certification in the annual plant inspection report.

400.2 Materials

Ensure materials comply with the specifications listed in Table 1.

Table 1—Materials Specifications

Material	Subsection
Asphalt Cement, Grade Specified	820.2
Coarse Aggregates for Asphaltic Concrete	802.2.02
Fine Aggregates for Asphaltic Concrete	802.2.01
Mineral Filler	883.1
Heat Stable Anti-Stripping Additive	831.2.04
Hydrated Lime	882.2.03
Silicone Fluid (When approved by the Office of Materials and Testing)	831.2.05
Bituminous Tack Coat: PG 58-22, PG 64-22, PG 67-22	820.2
Hot Mix Asphaltic Concrete Mixtures	828
Fiber Stabilizing Additives	819

When approved by the Office of Materials and Testing and required in the Contract, provide Uintaite material, hereafter referred to by the common trade name Gilsonite, as a reinforcing agent for bituminous mixtures. Supply a manufacturer's certification that the Gilsonite is a granular solid which meets the following requirements:

Softening Point (AASHTO: T-53)

300-350 °F (150-175 °C)

Specific Gravity, 77 °F (25 °C) (AASHTO: T-228)	1.04 ± 0.02
Flash Point, COC (AASHTO: T-48)	550 °F (290 °C) Min.
Ash Content (AASHTO: T-111)	1.0% Max.
Penetration, 77 °F (25 °C), 100 gm., 5 sec. (AASHTO: T-49)	0

400.2.01 Delivery, Storage, and Handling

Storage of material is allowed in a properly sealed and insulated system for up to 24 hours. Ensure Stone Matrix Asphalt (SMA), Open-Graded Friction Course (OGFC), or Porous European Mix (PEM) mixtures are not stored more than 12 hours. Mixtures other than SMA, OGFC, or PEM may be stored up to 72 hours in a sealed and insulated system, equipped with an auxiliary inert gas system, with the Engineer's approval. Segregation, lumpiness, drain-down, or stiffness of stored mixture is cause for rejection of the mixture. The Engineer will not approve using a storage or surge bin if the mixture segregates, loses excessive heat, or oxidizes during storage.

The Engineer may obtain mixture samples or recover asphalt cement according to GDT 119 or AASHTO T 324, AASHTO T 315, AASHTO T 202, or AASHTO T 49 will be used to perform viscosity and penetration tests to determine how much asphalt hardening has occurred. AASHTO T 324 will be used to perform Hamburg Wheel Tracking Device testing to determine rutting and moisture damage susceptibility.

A. Vehicles for Transporting and Delivering Mixtures

Ensure trucks used for hauling bituminous mixtures have tight, clean, smooth beds.

Follow these guidelines when preparing vehicles to transport bituminous mixtures:

1. Use an approved releasing agent from QPL 39 in the transporting vehicle beds, if necessary, to prevent the mixture from sticking to the bed. Ensure the releasing agent is not detrimental to the mixture. When applying the agent, drain the excess agent from the bed before loading. Remove from the project any transporting vehicles determined to contain unapproved releasing agents.
2. Protect the mixture with a waterproof cover large enough to extend over the sides and ends of the bed. Securely fasten the waterproof cover before the vehicle begins moving.
3. Insulate the front end and sides of each bed with an insulating material with the following specifications:
 - Consists of builders insulating board or equivalent;

- Has a minimum “R” value of 4.0; and
- Can withstand approximately 400 °F (200 °C) temperatures

Install the insulating material so it is protected from loss and contamination. A “Heat Dump Body” may be used in lieu of insulation of the bed. “Heat Dump Body” refers to any approved transport vehicle capable of diverting engine exhaust and transmitting heat evenly throughout the dump body to keep asphalt at required temperature. Mark the “Heat Dump Body” clearly with “OPEN” and “CLOSE” position at the exhaust diverter. Install a padlock and lock it in the “OPEN” position when the “Heat Dump Body” is used to transport bituminous mixtures.

4. Mark each transporting vehicle with a clearly visible identification number.
5. Create a hole in each side of the bed so that the temperature of the loaded mixture can be checked. Ensure the placement of these holes are located to assure the thermometer is being placed in the hot ix asphaltic concrete mixtures.

Ensure the mixture is delivered to the roadway at a temperature within ± 20 °F (± 11 °C) of the temperature on the job mix formula.

If the Engineer determines a truck may be hazardous to the project or adversely affect the quality of the work, remove the truck from the project.

B. Containers for Transporting, Conveying, and Storing Bituminous Material

To transport, convey, and store bituminous material, use containers free of foreign material and equipped with sample valves. Bituminous material will not be accepted from conveying vehicles if material has leaked or spilled from the containers.

400.3 Construction Requirements

400.3.01 Personnel

General Provisions 101 through 150.

400.3.02 Equipment

Hot mix asphaltic concrete plants producing mix for Department use are governed by Quality Assurance for Hot Mix Asphaltic Concrete Plants in Georgia, Laboratory Standard Operating Procedure No. 27.

The Engineer will approve the equipment used to transport and construct hot mix asphaltic concrete. Ensure that the equipment is in satisfactory mechanical condition and can function properly during production and placement operations. Place the following equipment at the plant or project site:

A. Field Laboratory

Provide a field laboratory according to Section 152.

B. Plant Equipment**1. Scales**

Provide scales as follows:

- a. Furnish (at the Contractor's expense) scales to weigh bituminous plant mixtures, regardless of the measurement method for payment.
- b. Ensure the weight measuring devices provide documentation complying with Subsection 109.01 – Measurement and Quantities.
- c. Provide weight devices recording the mixture net weights delivered to the truck when not using platform scales. A net weight system will include, but is not limited to:
 - Hopper or batcher-type weight systems delivering asphaltic mixture directly to the truck
 - Fully automatic batching equipment with a digital recording device
- d. Use a net weight printing system only with automatic batching and mixing systems approved by the Engineer.
- e. Ensure that the net weight scale mechanism or device manufacturer, installation, performance, and operation meets the requirements in Subsection 109.01 – Measurement and Quantities.
- f. Provide information on the Project tickets according to Department of Transportation SOP-15.

2. Tim-Locking Devices

Furnish batch type asphalt plants with automatic time-locking devices that control the mixing time automatically. Construct these devices so that the operator cannot shorten or eliminate any portion of the mixing cycle.

3. Surge-and Storage-Systems

Provide surge and storage bins as follows:

- a. Ensure that bins for mixture storage are insulated and have a working seal, top and bottom, to prevent outside air infiltration and to maintain an inert

atmosphere during storage. Bins not intended as storage bins may be used as surge bins to hold hot mixtures for part of the working day. However, empty these surge bins completely at the end of the working day.

- b. Ensure that surge and storage bins can retain a predetermined minimum level of mixture in the bin when the trucks are loaded.
- c. Ensure that surge and storage systems do not contribute to mix segregation, lumpiness, drain-down, or stiffness.
- d. Ensure the scale mechanism or device manufacture, installation, performance, and operation meets the requirements in Subsection 109.01 Measurement and Quantities.

4. Controls for Dust Collector Fines

Control dust collection as follows:

- a. When collecting airborne aggregate particles and returning them to the mixture, have the return system meter all or part of the collected dust uniformly into the aggregate mixture and waste the excess. The collected dust percentage returned to the mixture is subject to the Engineer's approval.
- b. When the collected dust is returned directly to the hot aggregate flow, interlock the dust feeder with the hot aggregate flow, and meter the flow to maintain a flow that is constant, proportioned, and uniform flow.

5. Mineral Filler Supply System

When mineral filler is required as a mixture ingredient:

- a. Use a separate bin and feed system to store and proportion the required quantity into the mixture with uniform distribution.
- b. Control the feeder system with a proportioning device that meets these specifications:
 - Is accurate to within ± 10 percent of the filler required
 - Has a convenient and accurate means of calibration
 - Interlocks with the aggregate feed or weigh system to maintain the correct proportions for all rates of production and batch sizes
- c. Provide flow indicators or sensing devices for the mineral filler system and interlock them with the plant controls to interrupt the mixture production if mineral filler introduction fails to meet the required target value after no longer than 60 seconds.

- d. Add mineral filler to the mixture as follows, according to the plant type:
- Batch Type Asphalt Plant: add mineral filler to the mixture in the weigh hopper.
 - Continuous Plant Using Pugmill Mixers: feed the mineral filler into the hot aggregate before it is introduced into the mixer to ensure dry mixing is accomplished before the bituminous material is added.
 - Continuous Plans Using the Drier-Drum Mixers: add the mineral filler to ensure dry mixing is accomplished before the bituminous material is added and ensure that the filler does not become entrained into the air stream of the drier.

6. Hydrated Lime Treatment System

When hydrated lime is required as a mixture ingredient:

- a. Use a separate bin and feed system to store and proportion the required quantity into the mixture.
- b. Ensure that the aggregate is uniformly coated with hydrated lime aggregate before adding the bituminous material to the mixture. Ensure the addition of hydrated lime so that it will not become entrained in the exhaust system of the drier or plant.
- c. Control the feeder system with a proportioning device meeting these specifications:
- Is accurate to within ± 10 percent of the amount required
 - Has a convenient and accurate means of calibration
 - Interlocks with the aggregate feed or weigh system to maintain the correct proportions for all rates of production and batch sizes and to ensure that mixture produced is properly treated with lime
- d. Provide flow indicators or sensing devices for the hydrated lime system and interlock them with the plant controls to interrupt mixture production if hydrated lime introduction fails to meet the required target value after no longer than 60 seconds.

7. Net Weight Weighing Mechanisms

Certify the accuracy of the net weight weighing mechanisms by an approved registered scale serviceperson at least once every 6 months. Check the accuracy of net weight weighing mechanisms at the beginning of Project production and

thereafter as directed by the Engineer. Check mechanism accuracy as follows:

- a. Weigh a load on a set of certified commercial truck scales. Ensure the difference between the printed total net weight and weight obtained from the commercial scales is no greater than 4 lbs/1,000 lbs (4kg/Mg) of load.

Check the accuracy of the bitumen scales as follows:

- Use standard test weights.
 - If the checks indicate printed weights are out of tolerance, have a registered scale serviceperson check the batch scales and certify the accuracy of the printer.
 - While the printer system is out of tolerance and before its adjustment, continue production only if using a set of certified truck scales to determine the truck weights.
- b. Have plants using batch scales maintain ten 50 lb (25 kg) standard test weights at the plant site to check batching scale accuracy.
 - c. Ensure that plant scales that are used only to proportion mixture ingredients, and not to determine that pay quantities, are within two percent throughout the range.

8. Fiber Supply System

When stabilizing fiber is required as a mixture ingredient:

- a. Use a separate feed system to store and proportion by weight the required quantity into the mixture with uniform distribution.
- b. Control the feeder system with a proportioning device that meets these Specifications:
 - Is accurate to within ± 10 percent of the amount required. Automatically adjusts the feed rate to maintain the material within this tolerance at all times
 - Has a convenient and accurate means of calibration
 - Provide in-process monitoring, consisting of either a digital display of output or a printout of feed rate, in pounds (kg) per minute, to verify feed rate
 - Interlocks with the aggregate feed or weigh system to maintain the correct proportions for all rates of production and batch sizes
- c. Provide flow indicators or sensing devices for the fiber system and

interlock them with the plant controls to interrupt the mixture production if fiber introduction fails or if the output rate is not within the tolerances given above.

d. Introduce the fiber as follows:

- When a batch type plant is used, add the fiber to the aggregate in the weigh hopper. Increase the batch dry mixing time by 8 to 12 seconds from the time the aggregate is completely emptied into the mixer to ensure the fibers are uniformly distributed prior to the injection of asphalt cement into the mixer.
- When a continuous or drier-drum type plant is used, add the fiber to the aggregate and uniformly disperse prior to the injection of asphalt cement. Ensure the fibers will not become entrained in the exhaust system of the drier or plant.

9. Crumb Rubber Modifier Supply System

When Specified, crumb rubber modifier may be substituted at the Contractor's discretion to produce a PG 76-22 asphaltic cement at the production facility in accordance with Section 820:

- a. Use a separate feed system to store and proportion by weight of the total asphaltic cement, the required percentage of crumb rubber into the mixture.
- b. Control the feeder system with a proportioning device meeting these specifications:
 - Is accurate to within ± 6 percent of the amount required. Automatically adjusts the feed rate to maintain the material within this tolerance at all times.
 - Has a convenient and accurate means of calibration.
 - Provide in-process monitoring, consisting of either a digital display of output or a printout of feed rate, in pounds per minute, to verify feed rate. Ensure the supply system reports the feed in 1 lb. (454 gr.) increments using load cells enabling the user to monitor the depletion of the modifier. Monitoring the system volumetrically will not be allowed.
 - Interlocks with the aggregate weight system and asphaltic cement pump to maintain the correct proportions for all rates of

production and batch sizes.

- c. Provide flow indicator or sensing devices for the system and interlock them with the plant controls to interrupt the mixture production if the crumb rubber introduction output rate is not within the ± 6 percent tolerance given above. This interlock will immediately notify the operator if the targeted rate introduction tolerances. All plant production will cease if the introduction rate is not brought back within tolerance after 30 seconds. When the interlock system interrupts production and the plant has to be restarted, upon restarting operations; ensure the modifier system runs until a uniform feed can be observed on the output display. Ensure all mix produced prior to obtaining a uniform feed is rejected.
- d. Introduce the crumb rubber modifier as follows:
 - When a batch type plant is used, add the rubber to the aggregate in the weigh hopper. Increase the batch dry mixing time by 15 to 20 seconds from the time the aggregate is completely emptied into the mixer to ensure the modifiers are uniformly distributed prior to the injection of asphalt cement into the mixer. Increase the batch wet mix time by 15 to 20 seconds to ensure the crumb rubber modifier is uniformly blended with the asphaltic cement.
 - When a continuous or drier-drum type plant is used, add the rubber to the aggregate and uniformly dispense prior to the injection of asphalt cement. The point of introduction in the drum mixer will be approved by the Engineer prior to production. Ensure the crumb rubber modifier will not become entrained in the exhaust system of the drier or plant and will not be exposed to the drier flame at any point after induction.
- e. No separate measurement and payment will be made if Contractor elects to utilize crumb rubber.

10. Fiber-Reinforcement Supply System

When reinforcement fiber is specified in the contract as a mixture ingredient:

Ensure, that the reinforcement fiber is an approved material and listed on QPL 97 "Georgia's List of Approved Reinforcement Fiber". Use a separate Fiber Metering Device feed system to proportion by weight of the total asphaltic cement, the required percentage of fiber-reinforcement into the mixture.

- a. Control the metering system with a proportioning device meeting these specifications:

- Is accurate to within ± 6 percent of the amount required. Automatically adjusts the feed rate to maintain the material within this tolerance at all times.
 - Has a convenient and accurate means of calibration.
 - Provides in-process monitoring, consisting of either a digital display of output or a printout of feed rate, in pounds, or (kg) per minute, to verify feed rate
 - Interlocks with the aggregate feed or weigh system to maintain the correct proportions for all rates of production and batch sizes.
- b. Provide flow indicators or sensing devices for the fiber system and interlock them with the plant controls to interrupt the mixture production if fiber introduction fails or if the output rate is not within the tolerances given above.
- c. Introduce the fiber as follows:
- When a batch type plant is used, add the fiber dosage to the aggregate in the weigh hopper. This may be done with loose fibers and a Fiber Metering Device or may be done by using pre-measured packages that are specifically designed to disintegrate within the mixing cycle. Increase the batch dry mixing time by 8 to 12 seconds from the time the aggregate is completely emptied into the mixer to ensure the fibers are uniformly distributed prior to the injection of asphalt cement into the mixer.
 - When a continuous or drier-drum type plant is used, add the fiber to the aggregate or RAP material at the beginning of the mixing cycle and uniformly disperse prior to the injection of asphalt cement. The final configuration of the fibers at the point when mixing begins, should closely resemble the fibers as they are packaged. Pre-distributing the fibers into their individual form should be avoided. Ensure the fibers will not become entrained in the exhaust system of the drier or plant. The producer should inspect their plant for any protrusions that may accumulate fibers and create the potential for fiber clumps
 - When a continuous or drier-drum type plant is used for limited production volumes, the addition of the fibers may be done by using pre-measured packages that are specifically designed to disintegrate within the mixing cycle and adding them directly into

the RAP port of the plant. Because this is not an automated process, a written protocol must be supplied by the producer to demonstrate how they will attain the dosage requirement, and documentation must be supplied by the material manufacturer assuring this method will produce the desired random fiber distribution.

C. Equipment at Project Site

1. Cleaning Equipment

Provide sufficient hand tools and power equipment to clean the roadway surface before placing the bituminous tack coat. Use power equipment complying with Subsection 424.3.02.F, *Power Broom and Power Blower*.

2. Pressure Distributor

To apply the bituminous tack coat, use a pressure distributor complying with Subsection 424.3.02.B, *Pressure Distributor*.

3. Bituminous Pavers

To place hot mix asphaltic concrete, use bituminous pavers that can spread and finish courses that are:

- As wide and deep as indicated on the plans
 - True to line, grade, and cross section
 - Smooth
 - Uniform in density and texture
- a. Continuous Line and Grade Reference Control. Furnish, place, and maintain the supports, wires, devices, and materials required to provide continuous line and grade reference control to the automatic paver control system.
 - b. Automatic Screed Control System. Equip the bituminous pavers with an automatic screed control system actuated from sensor-directed mechanisms or devices that will maintain the paver screed at a pre-determined transverse slope and elevation to obtain the required surface.
 - c. Transverse Slope Controller. Use a transverse slope controller capable of maintaining the screed at the desired slope within ± 0.1 percent. Do not use continuous paving set-ups resulting in unbalanced screed widths or off-center breaks in the main screed cross section unless approved by the

Engineer.

- d. Screed Control. Equip the paver to permit the following four modes of screed control. The method used shall be approved by the Engineer.
- Automatic grade sensing and slope control
 - Automatic dual grade sensing
 - Combination automatic and manual control
 - Total manual control

Ensure the controls are referenced with a taut string or wire set to grade, or with a ski-type device or mobile reference at least 30 ft (9 m) long when using a conventional ski. Approved non-contacting laser or sonar-type skis listed on QPL 91 "Georgia's List of Approved Non-contacting Laser and Sonar-type Electronic Grade and Slope Controls" may be used in lieu of conventional 30 ft. (9 m) skis. Under limited conditions, a short ski or shoe may be substituted for a long ski on the second paver operating in tandem, or when the reference plane is a newly placed adjacent lane.

- e. Paver Screed Extension. When the laydown width requires a paver screed extension, use bolt-on screed extensions to extend the screeds, or use an approved mechanical screed extension device. When the screed is extended, add auger extensions to assure a length of no more than 18 in. (0.5 m) from the auger to the end gate of the paver. Auger extensions may be omitted when paving variable widths. Ensure the paver is equipped with tunnel extensions when the screed and augers are extended.

Note: Do not use extendible strike-off devices instead of approved screed extensions.

Only use a strike-off device in areas that would normally be luted in by hand labor.

4. Compaction Equipment

Ensure that the compaction equipment is in good mechanical condition and can compact the mixture to the required density. The compaction equipment number, type, size, operation, and condition is subject to the Engineer's approval

5. Materials Transfer Vehicle (MTV)

- a. Use a Materials Transfer Vehicle (MTV) when placing asphaltic concrete

mixtures on projects on the state route system with the following conditions. If a project fails to meet any one of the following conditions, the MTV's use is not required other than during the placement of SMA PEM and OGFC mixtures. MTVs are required during the placement of SMA, PEM and OGFC mixtures regardless of ADT, project length and mixture tonnage unless waived at the discretion of the Office of Materials and Testing.

1) When to use:

- The ADT is equal to or greater than 6000
- The project length is equal to or greater than 3000 linear feet (915 linear meters)
- The total tonnage (megagrams) of all asphaltic concrete mixtures is greater than 2000 tons (1815 Mg)

2) Where to use:

- Mainline of the traveled way
- Collector/distributor (C/D) lanes on Interstates and limited access roadways
- Leveling courses at the Engineer's discretion

3) Do not use the MTV for the following conditions:

- A resurfacing project that only 9.5 mm mix is required.
- A project with land width that is equal or less than 11 ft. (3.4 m).
- A passing lane only project.
- When noted on the plans.

b. Ensure the MTV and conventional paving equipment meet the following requirements:

1) MTV

- Has a truck unloading system which receives mixture from the hauling equipment and independently deliver mixtures from the hauling equipment to the paving equipment.
- Has mixture remixing capability approved by the Office of

Materials and Testing and is listed on QPL 88 "Georgia's List of Approved Materials Transfer Vehicles".

- Provides to the paver a homogeneous, non-segregated mixture of uniform temperature with no more than 20 °F(18 °C) difference between the highest and lowest temperatures when measured transversely across the width of the mat in a straight line at a distance of one foot to twenty-five feet (0.3 m to 7.6 m) from the screed while the paver is operating. Ensure that the MTV is capable of providing the paver a consistent material flow that is sufficient to prevent the paver from stopping between truck exchanges.

2) Conventional Paving Equipment

- Has a paver hopper insert with a minimum capacity of 14 tons (13 Mg) installed in the hopper of conventional paving equipment when an MTV is used.
- c. If the MTV malfunctions during spreading operations, discontinue placement of hot mix asphaltic concrete after there is sufficient hot mix placed to maintain traffic in a safe manner. However, placement of hot mix asphaltic concrete in a lift not exceeding 2 in. (50 mm) may continue until any additional hot mix in transit at the time of the malfunction has been placed. Cease spreading operations thereafter until the MTV is operational.
- d. Ensure the MTV is empty when crossing a bridge and is moved across without any other Contractor vehicles or equipment on the bridge. Move the MTV across a bridge in a travel lane and not on the shoulder. Ensure the speed of the MTV is no greater than 5 mph (8 kph) without any acceleration or deceleration while crossing a bridge.

403.03 Preparation

A. Prepare Existing Surface

Prepare the existing surface as follows:

1. Clean the Existing Surface. Before applying hot mix asphaltic concrete pavement, clean the existing surface to the Engineer's satisfaction.
2. Patch and Repair Minor Defects

Before placing leveling course:

- a. Correct potholes and broken areas requiring patching in the existing surface and base as directed by the Engineer.
- b. Cut out, trim to vertical sides, and remove loose material from the areas to be patched.
- c. Prime or tack coat the area after it has been cleaned. Compact patches to the Engineer's satisfaction. Material for patches does not require a job mix formula but must meet the gradation range shown in Section 828. The Engineer must approve the asphalt content to be used.

3. Apply Bituminous Tack Coat

Apply the tack coat according to Section 413. The Engineer will determine the application rate, which must be within the limitations Table 2A and 2B.

Table 2A—APPLICATION RATES FOR BITUMINOUS TACK, GAL/YD² (L/M²)

Tack Uses	Minimum	Maximum
Under OGFC and PEM Mixes	0.06 (0.27)	0.08 (0.36)
All Other Mixes	0.04 (0.18)	0.06 (0.27)
Non-Tracking Hot Applied Polymer Modified Track (NTHAPT) (Note 2)	0.06 (0.27)	0.18 (0.81)
Note 1: On thin leveling courses and freshly placed asphaltic concrete mixes, reduce the application rate to 0.02 to 0.04 gal/ yd² (0.09 to 0.18 L/m²).		
Note 2: Use higher application rate (0.12 to 0.18) within the minimum and maximum range under OGFC and PEM Mixes.		

Table 2B—APPLICATION RATES FOR ANIONIC EMULSIFIED ASPHALT OR CATIONIC EMULSIFIED ASPHALT BITUMINOUS TACK, GAL/YD² (L/M²)

Tack Uses	Minimum	Maximum
New Asphaltic Concrete Pavement to New Asphaltic Concrete Pavement or Thin Life Leveling	0.05 (0.23)	0.08 (0.36)
New Asphaltic Concrete Pavement (≤ 25% RAP) to Aged Existing Pavement or Milled Surface	0.06 (0.27)	0.10 (0.45)

New Asphaltic Concrete Pavement (> 25% RAP) to Aged Existing Pavement or Milled Surface	0.08 (0.36)	0.12 (0.54)
Non-tracking Emulsified Asphalt	0.07 (0.32)	0.12 (0.54)
CQS-Special Modified Asphalt Emulsion (Note 1)	0.12 (0.54)	0.28 (1.27)
<ul style="list-style-type: none"> Allow standard anionic emulsified asphalt or cationic emulsified asphalt to break per emulsion manufacturer's recommendation. Proceed with paving only after the anionic emulsified asphalt or cationic emulsified asphalt has cured to the satisfaction of the Engineer. Do not use anionic emulsified asphalt or cationic emulsified asphalt, other than CQS-Special Modified Asphalt Emulsion in conjunction with a spray paver, under OGFC or PEM on interstates or limited access state routes. 		
Note 1: Use higher application rate (0.22 to 0.28) within the minimum and maximum under OGFC and PEM Mixes		

B. Place Patching and Leveling Course

- When the existing surface is irregular, bring the surface area to the proper cross section and grade with a leveling course of hot mix asphaltic concrete materials.
 - Place leveling at the locations and in the amounts directed by the Engineer.
- Use leveling course mixtures meeting the requirements of the job mix formulas defined in:
 - Subsection 400.3.05 A, - Observe Composition of Mixtures
 - Section 828
 - Leveling acceptance schedules in Subsection 400.3.06 A, *Acceptance Plans for Gradation and Asphalt Cement Content*
- If the leveling and patching mix type is undesignated, determine the mix type by the thickness or spread rate according to Table 3, but do not use 4.75 mm mix on interstate projects.
- If patching is required to correct mat deficiencies in the final surface layer, ensure patched extend full lane width and no less than the length of the affected area as determined by the Engineer.

Table 3 – Leveling and Patching Mix Types

Thickness	Rate of Speed	Type of Mix
Up to 0.75 in. (19 mm)	Up to 85 lbs./ yd ² (45 kg/m ²)	4.75 mm Mix or 9.5 mm Superpave Type 1
0.75 to 1.5 in. (19 to 38 mm)	85 to 165 lbs./yd ² (45 to 90 kg/m ²)	9.5 mm Superpave Type 2
1.5 to 2 in. (38 to 50 mm)	165 to 220 lbs./yd ² (90 to 120 kg/m ²)	12.5 mm Superpave *
2 to 3 in. (50 to 75 mm)	220 to 330 lbs./yd ² (120 to 180 kg/m ²)	19 mm Superpave **
Over 3 in. (75 mm)	Over 275 lbs./ yd ² (180 kg/m ²)	25 mm Superpave

* These mixtures may be used for isolated patches no more than 6 in. (150 mm) deep and no more than 4 ft. (1.2 m) in diameter or length.

** This mixture may be used for patching no more than 4 in. (100 mm) deep in limited confined deep mill and patching locations.

400.3.04 Fabrication

General Provisions 101 through 150.

400.3.05 Construction

Provide the Engineer at least one day's notice prior to beginning construction, or prior to resuming production if operations have been temporarily suspended.

A. Observe Composition of Mixtures

1. Calibration of plant equipment

If the material changes, or if a component affecting the ingredient proportions has been repaired, replaced, or adjusted, check and recalibrate the proportions.

Calibrate as follows:

a. Before producing mixture for the Project, calibrate by scale weight the electronic sensors or settings for proportioning mixture ingredients.

b. Calibrate ingredient proportioning for all rates of production.

2. Mixture control

Compose hot mix asphaltic concrete from a uniform mixture of aggregates, bituminous material, and if required, hydrated lime, mineral filler, or other

approved additive.

Ensure the constituents proportional to produce mixtures meeting the requirements in Section 828. The general composition limits prescribed are extreme ranges within which the job mix formula must be established. Base mixtures on a design analysis that meets the requirements of Section 828.

Ensure the field performance of the in-place mixtures meet the requirements of Subsection 828.2B for Permeability, Moisture Susceptibility, Rutting Susceptibility and Fatigue. In-place mix may be evaluated for compliance with Subsection 828.2.B at the discretion of the State Bituminous Construction Engineer under the following conditions:

- Deviates greater than 10 percent on gradation for mixture control sieves from the approved Job Mix Formula based on Acceptance or Independent Samples.
- Deviates greater than 0.7 percent in asphalt cement content from the approved Job Mix Formula based on Acceptance or Independent Samples.
- The calculated mean pavement air voids result in an adjusted pay factor less than 0.80 or any single sub lot result in mean pavement air voids exceeding 10.5 percent.
- Mix produced not using an approved mix design and/or job mix formula.

Remove and replace any material determined to not meet the requirements established in Section 828.2.B at the Contractor's expense.

If control test results show the characteristic tested does not conform to the job mix formula control tolerances given in Section 828, take immediate action to ensure that the quality control methods are effective.

Control the materials to ensure extreme variations do not occur. Maintain the gradation within the composition limits in Section 828.

B. Prepare Bituminous Material

Uniformly heat the bituminous material to the temperature specified in the job mix formula with a tolerance of $\pm 20^{\circ}\text{F}$ ($\pm 10^{\circ}\text{C}$).

C. Prepare the Aggregate

Prepare the aggregate as follows:

1. Heat the aggregate for the mixture and ensure a mix temperature within the limits of the job mix formula.

2. Do not contaminate the aggregate with fuel during heating.
3. Reduce the absorbed moisture in the aggregate until the asphalt does not separate from the aggregate in the prepared mixture. If this problem occurs, the Engineer will establish a maximum limit for moisture content in the aggregates. When this limit is established, maintain the moisture content below this limit.

D. Prepare the Mixture

Proportion the mixture ingredients as necessary to meet the required job mix formula. Mix until a homogenous mixture is produced.

1. Add Mineral Filler

When mineral is used, introduce it in the proper proportions and as specified in Subsection 400.3.02. B.5, *Mineral Filler Supply System*.

2. Add Hydrated Lime

When hydrated lime is included in the mixture, add it at a rate specified in Section 828 and the job mix formula. Use methods and equipment for adding hydrated lime according to Subsection 400.3.02.B.6, *Hydrated Lime Treatment System*.

Add hydrated lime to the aggregate by using Method A or B as follows:

Method A – Dry Form – Add hydrated lime in its dry form to the mixture as follows, according to the type of plant:

- a. Batch Type Asphalt Plant: Add hydrated lime to the mixture in the weigh hopper or as approved and directed by the Engineer.
- b. Continuous Plant Using Pugmill Mixer: Feed hydrated lime into the hot aggregate before it is introduced into the mixer to ensure dry mixing is complete before the bituminous material is added.

Method B —Lime/Water Slurry—Add the required quantity of hydrated lime (based on dry weight) in lime/water slurry form to the aggregate. This solution consists of lime and water in concentrations as directed by the Engineer.

Equip the plant to blend and maintain the hydrated lime in suspension and to mix the hydrated lime with the aggregates uniformly in the proportions specified.

- c. Continuous Plant Using Drier-Drum Mixer: Add hydrated lime so to ensure the lime will not become entrained into the air stream of the drier and to ensure thorough dry mixing will be complete before the bituminous material is added.

3. Add Stabilizing Fiber

When stabilizing fiber is included in the mixture, add stabilizing fiber at a rate specified in Section 819 and the Job Mix Formula. Introduce it as specified in Subsection 400.3.02.B.8, *Fiber Supply System*.

4. Add Gilsonite Modifier

When approved by the Office of Materials and Testing and required by the Contract, add the Gilsonite modifier to the mixture at a rate to ensure eight percent by weight of the asphalt cement is replaced by Gilsonite. Use either PG 64-22 or PG 67-22 asphalt cement as specified in Subsection 820.2.01. Provide suitable means to calibrate and check the rate of Gilsonite being added. Introduce Gilsonite modifier by either of the following methods.

- a. For batch type plants, incorporate Gilsonite into the pugmill at the beginning of the dry mixing cycle. Increase the dry mix cycle by a minimum of 10 seconds after the Gilsonite is added and prior to introduction of the asphalt cement. For this method, supply Gilsonite in plastic bags to protect the material during shipment and handling and store the modifier in a waterproof environment. Ensure the bags are capable of being completely melted and uniformly blended into the combined mixture.

Gilsonite may also be added through a mineral filler supply system as described in Subsection 400.3.02.B.5, *Mineral Filler Supply System*. Ensure the system is capable of injecting the modifier into the weigh hopper near the center of the aggregate batching cycle so the material can be accurately weighed.

- b. For drier-drum plants, add Gilsonite through the recycle ring or through an acceptable means which will introduce the Gilsonite prior to the asphalt cement injection point. The modifier must proportionately feed into the drum mixer at the required rate by a proportioning device which shall be accurate within ± 10 percent of the amount required. Ensure the entry point is away from flames and the Gilsonite will not be caught up in the air stream and exhaust system.

5. Materials from Different Sources

Do not use mixtures prepared from aggregates from different sources intermittently. This will cause the color of the finished pavement to vary.

E. Observe Weather Limitations

Do not mix and place asphaltic concrete if the existing surface is wet or frozen. Do not lay

asphaltic concrete OGFC mix or PEM at air temperatures below 60 °F (16 °C). When using a MTV, OGFC mix or PEM may be placed at 55 °F (13 °C) when approved by the Engineer. For other courses, follow the temperature guidelines in the following table:

Table 4—Lift Thickness Table

Lift Thickness	Minimum Temperature
1 in. (25 mm) or less	55 °F (13 °C)
1.1 to 2 in. (26 mm to 50 mm)	45 °F (8 °C)
2.1 to 3 in. (51 mm to 75 mm)	40 °F (4 °C)
3.1 to 4 in. (76 mm to 100 mm)	35 °F (2 °C)
4.1 to 8 in. (101 mm to 200 mm)	32 °F (0 °C) and rising. Base material must not be frozen.

F. Perform Spreading and Finishing

Spread and finish the course as follows:

Determine the maximum compacted layer thickness by the type mix being used according to Table 5.

Table 5—MIX TYPE MINIMUM, MAXIMUM LAYER AND TOTAL THICKNESS

Mix Type	Minimum Layer Thickness	Maximum Layer Thickness	Maximum Total Thickness
25 mm Superpave	2 1/2 in. (64 mm)	5 in. (125 mm) *	--
19 mm Superpave	1 3/4 in. (44 mm)	3 in. (75 mm) *	--
12.5 mm Superpave	1 3/8 in. (35 mm)	2 1/2 in. (64 mm) **/**	8 in. (200 mm)
9.5 mm Superpave Type 2	1 1/8 in. (29 mm)	1 1/2 in. (38 mm) ***	4 in. (100 mm)
9.5 mm Superpave Type 1	7/8 in. (22 mm)	1 1/4 in. (32 mm)	4 in. (100 mm)
4.75 mm Mix	3/4 in. (19 mm)	1 1/8 in. (29 mm)	2 in. (50 mm)
9.5 mm OGFC	75 lbs./yd ² (41 kg/m ²)	95 lbs./yd ² (51 kg/m ²)	--
12.5 mm OGFC	85 lbs./yd ² (46 kg/m ²)	110 lbs./yd ² (60 kg/m ²)	--
12.5 mm PEM	110 lbs./yd ² (60 kg/m ²)	165 lbs./yd ² (90 kg/m ²)	--
9.5 mm SMA	1 1/8 in. (29 mm)	1 1/2 in. (38 mm)	4 in. (100 mm)

12.5 mm SMA	1 3/8 in. (35 mm)	3 in. (75 mm)	6 in. (150)
19 mm SMA	1 3/4 in. (44 mm)	3 in. (75 mm)	--
* Allow up to 6 in. (150 mm) per lift on trench widening. **Allow up to 4 in. (100 mm) per lift on trench widening of ≤ 2 ft. when no overlay is required. ***Place 9.5 mm Superpave and 12.5 mm Superpave up to 4 in. (100 mm) thick for driveway and side road transition.			

1. Unload the mixture into the paver hopper or into a device designed to receive the mixture from delivery vehicles.
2. Except for leveling courses, spread the mixture to the loose depth for the compacted thickness or the spread rate. Use a mechanical spreader true to the line, grade, and cross section specified.
3. For leveling courses, use a motor grader equipped with a spreader box and smooth tires to spread the material or use a mechanical spreader meeting the requirements in Subsection 400.3.02.C, *Equipment at Project Site*.
4. Obtain the Engineer's approval for the sequence of paving operations, including paving the adjoining lanes. Minimize tracking tack onto surrounding surfaces.
5. Ensure the outside edges of the pavement being laid are aligned and parallel to the roadway center line.
6. For New Construction or Resurfacing Contracts containing multiple lifts or courses, arrange the width of the individual lifts so the longitudinal joints of each successive lift are offset from the previous lift at least 1 ft. (300 mm). This requirement does not apply to the lift immediately over thin lift leveling courses.
7. Ensure that the longitudinal joint(s) in the surface course and the mix immediately underneath asphaltic concrete OGFC or PEM are at the lane line(s).

NOTE: Perform night work with artificial light provided by the Contractor and approved by the Engineer.

8. Where mechanical equipment cannot be used, spread and rake the mixture by hand. Obtain the Engineer's approval of the operation sequence, including compactive methods, in these areas.
9. Keep small hand raking tools clean and free from asphalt build up. Do not use fuel oil or other harmful solvents to clean tools during the work.
10. Do not use mixture with any of these characteristics:

- Segregated
 - Nonconforming temperature
 - Deficient or excessive asphalt cement content
 - Otherwise unsuitable to place on the roadway in the work
11. Remove and replace mixture placed on the roadway that the Engineer determines has unacceptable blemish levels from segregation, raveling, streaking, pulling and tearing, or other characteristics. Replace with acceptable mixture at the Contractor's expense. Do not continually place mixtures with deficiencies.
- Do not place subsequent course lifts over another lift or course while the temperature of the previously placed mix is 140 °F (60 °C) or greater.
12. Obtain the Engineer's approval of the material compaction equipment. Perform the rolling as follows:
- a. Begin the rolling as close behind the spreader as possible without causing excessive distortion of the asphaltic concrete surface.
 - b. Continue rolling until roller marks are no longer visible.
 - c. Use pneumatic-tired rollers with breakdown rollers on all courses except asphaltic concrete OGFC, PEM and SMA or other mixes designated by the Engineer.
13. If applicable, taper or "feather" asphaltic concrete from full depth to a depth no greater than 0.5 in (13 mm) along curbs, gutters, raised pavement edges, and areas where drainage characteristics of the road must be retained. The Engineer will determine the location and extent of tapering.

G. Maintain Continuity of Operations

Coordinate plant production, transportation, and paving operations to maintain a continuous operation. If the spreading operations are interrupted, construct a transverse joint if the mixture immediately behind the paver screed cools to less than 250 °F (120 °C).

H. Construct the Joints

1. Construct Transverse Joints
- a. Construct transverse joints to facilitate full depth exposure of the course before resuming placement of the affected course.
 - b. Properly clean and tack the vertical face of the transverse joint before placing additional material.

NOTE: Never burn or heat the joint by applying fuel oil or other volatile materials.

- c. Straightedge transverse joints immediately after forming the joint.
 - d. Immediately correct any irregularity that exceeds 3/16 in. in 10 ft (5 mm in 3 m).
2. Construct Longitudinal Joints
- Clean and tack the vertical face of the longitudinal joint before placing adjoining material. Construct longitudinal joints so that the joint is smooth, well-sealed, and bonded.
3. Construction Joint Detail for OGFC and PEM Mixtures
- In addition to meeting joint requirements described above, construct joints and transition areas for 12.5 mm OGFC and 12.5 mm PEM mixtures as follows:
- a. For projects which do not have milling included as a pay item:
 - 1) Place OGFC mixture meeting gradation requirements of 9.5 mm OGFC as specified in Section 828 on entrance and exit ramp gore areas and end of project construction joints.
 - Taper mixture from 3/8 in (10 mm) at end of project to full plan depth within maximum distance of spread for one load of mixture
 - Taper mixture placed on gore areas from thickness of the edge of the mainline to 3/8 in (10 mm) at the point of the ramp transverse joint.
 - 2) Construct the ramp transverse joint at the point specified in the plans or as directed by the Engineer.
 - 3) Mixture placed in the transition and gore areas will be paid for at the contract unit price for 12.5 mm OGFC or 12.5 mm PEM, as applicable.
 - b. For projects which have milling included as a pay item:
 - 1) Taper milling for a distance of no less than 50 ft. (15 m) to a depth of 2 1/4 in. (59 mm) at the point of the transverse joint
 - 2) Taper thickness, if needed, of the dense-graded surface mix within the 50 ft (15 m) distance to 1 1/2 in. (40 mm) at the point of the transverse joint
 - 3) Taper thickness of the 12.5 mm OGFC or 12.5 mm PEM to 3/4 in.

(19 mm) to ensure the material ties in at grade level with the existing surface at the point of the transverse joint

I. Protect the Pavement

Protect sections of the newly finished pavement from traffic until the traffic will not mar the surface or alter the surface texture. If directed by the Engineer, use artificial methods to cool the newly finished pavement to open the pavement to traffic more quickly.

J. Modify the Job Mix Formula

If the Engineer determines that undesirable mixture or mat characteristics are being obtained, the job mix formula may require immediate adjustment.

400.3.06 Quality Acceptance

A. Acceptance Plans for Gradation and Asphalt Cement Content

The Contractor will randomly sample and test mixtures for acceptance on a lot basis. The Department will monitor the Contractor testing program and perform comparison and quality assurance testing. The Contractor's Quality Control Technicians shall participate in the Department's Independent Assurance Systems Basis Program.

1. Determine Lot Amount

A lot consists of the tons (megagrams) of asphaltic concrete produced and placed each production day. If this production is less than 500 tons (500 Mg), or its square yard (meter) equivalent, production may be incorporated into the next working day. The Engineer may terminate a lot when a pay adjustment is imminent if a plant or materials adjustment resulting in a probable correction has been made. Terminate all open lots at the end of the month, except for materials produced and placed during the adjustment period. The lot will be terminated as described in Subsection 400.5.01, *Adjustments*.

If the final day's production does not constitute a lot, the production may be included in the lot for the previous day's run; or, the Engineer may treat the production as a separate lot with a corresponding lower number of tests.

2. Determine Lot Acceptance

Determine lot acceptance as found in Subsection 400.5.01, *Adjustments*.

The Department will perform the following task:

Determine the pay factor by using the mean of the deviations from the job mix formula of the tests in each lot and apply it to Table 10 Mixture Acceptance Schedule for Surface Mixes or Table 11 Mixture Acceptance Schedule for Subsurface Mixes, whichever is appropriate. This mean will be determined by

averaging the actual numeric value of the individual deviations from the job mix formula, disregarding whether the deviations are positive or negative amounts. Do not calculate lot acceptance using test results for materials not used in the Work. Determine the pay factor for each lot by multiplying the contract unit price by the appropriate pay factor from the Mixture Acceptance Schedule - Table 10 or Table 11. When two or more pay factors for a specific 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 lot acceptance tests for a control sieve or for asphalt cement content exceeds the tolerances established in the appropriate Mixture Acceptance Schedule, 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 Engineer determines that the material is not acceptable to leave in place, the materials shall be removed and replaced at the Contractor's expense.

3. Provide Quality Control Program

Provide a Quality Control Program as established in SOP 27 which includes:

- Assignment of quality control responsibilities to specifically named individuals who have been certified by the Office of Materials and Research
- Provisions for prompt implementation of control and corrective measures
- Provisions for communication with Project Manager, Bituminous Technical Services Engineer, and Testing Management Operations Supervisor at all times
- Provisions for reporting all test results daily through the Office of Materials and Testing computerized Field Data Collection System, AASHTO Trns*port Site Manager, or approved computerized application; other checks, calibrations and records will be reported on a form developed by the Contractor and will be included as part of the project records
- Notification in writing of any change in quality control personnel

a. Certification Requirements:

- laboratory and testing equipment certified by the Department. (Laboratories which participate in and maintain AASHTO accreditation for testing asphaltic concrete mixtures will be acceptable in lieu of Departmental certification.)

- Provide certified quality control personnel to perform the sampling and testing. A Quality Control Technician (QCT) may be certified at three levels:
 - 1) Temporary Certification – must be a technician trainee who shall be given direct oversight by a certified Level 1 or Level 2 QCT while performing acceptance testing duties during the first 5 days of training. The trainee must complete qualification requirements within 30 Georgia Department of Transportation funded production days after being granted temporary certification. A trainee who does not become qualified within 30 Georgia Department of Transportation funded production days will not be re-eligible for temporary certification. A certified Level 1 or Level 2 QCT shall be at the plant at all times during production and shipment of mixture to monitor work of the temporarily certified technician.
 - 2) Level 1 - must demonstrate they are competent in performing the process control and acceptance tests and procedures related to hot mix asphalt production and successfully pass a written exam.
 - 3) Level 2 – must meet Level 1 requirements and must be capable of and responsible for making process control adjustments, and successfully pass a written exam.
- Technician certification is valid for 3 years from the date on the technician's certificate unless revoked or suspended. Eligible technicians may become certified through special training and testing approved by the Office of Materials and Research. Technicians who lose their certification due to falsification of test data will not be eligible for recertification in the future unless approved by the State Materials and Research Engineer.

b. Quality Control Management

- 1) Designate at least one Level 2 QCT as manager of the quality control operation. Ensure the Quality Control Manager meets the following requirements:
 - Be accountable for actions of other QCT personnel.
 - Ensure all applicable sampling requirements and frequencies, test procedures, and Standard Operating Procedures are followed.
 - Ensure all reports, charts, and other documentation are

completed as required

2) Provide QCT personnel at the plant as follows:

- If daily production for all mix types is to be greater than 250 tons (megagrams), have a QCT person at the plant at all times during production and shipment of mixture until all required acceptance tests have been completed
- If daily production for all mix types will not be greater than 250 tons (megagrams) a QCT may be responsible for conducting tests at up to two plants, subject to random number sample selection
- Have available at the plant or within immediate contact by phone or radio, a Level 2 QCT responsible for making prompt process control adjustments as necessary to correct the mix

3) Sampling, Testing, and Inspection Requirements.

- a. Provide all sample containers, extractants, forms, diaries, and other supplies subject to approval of the Engineer.
- b. Perform daily sampling, testing, and inspection of mixture production that meet the following requirements:
 - 1) Randomly sample mixtures according to GSP 15 and GDT 73 (Method C) and test on a lot basis. In the event less than the specified number of samples are taken, obtain representative 6 in. (150 mm) cores from the roadway at a location where the load not sampled was placed. Take enough cores to ensure minimum sample size requirements are met for each sample needed.
 - 2) Maintain a printed copy of the computer-generated random sampling data as a part of the project records.
 - 3) Perform sampling, testing, and inspection duties of GSP 21.
 - 4) Perform extraction or ignition test (GDT 83 or GDT 125) and extraction analysis (GDT 38). If the ignition oven is used, a printout of sample data including weights becomes a part of the project records. For asphalt cement content only, digital printouts of liquid asphalt cement weights may be substituted in lieu of an extraction test for plants with digital recorders. Calculate the asphalt content from the ticket representing the mixture tested for gradation.

- 5) Save extracted aggregate, opposite quarters, and remaining material (for possible referee testing) of each sample as follows:
 - Store in properly labeled, suitable containers
 - Secure in a protected environment
 - Store for three working days. If not obtained by the Department, within three days they may be discarded in accordance with GSP 21.
- 6) Add the following information on load tickets from which a sample or temperature check is taken:
 - Mixture temperature
 - Signature of the QCT person performing the testing
- 7) Calibrate the lime system when hydrated lime is included in the mixture:
 - Perform a minimum of twice weekly during production
 - Post results at the plant for review.
 - Provide records of materials invoices upon request (including asphalt cement, aggregate, hydrated lime, etc.).
- 8) Take action if acceptance test results are outside Mixture Control Tolerances of Section 828.
 - One sample out of tolerance
 - a. Contact Level 2 – QCT to determine if a plant adjustment is needed.
 - b. Immediately run a process control sample. Make immediate plant adjustments if this sample is also out of tolerance.
 - c. Test additional process control samples as needed to ensure corrective action taken appropriately controls the mixture.
 - Two consecutive acceptance samples of the same mix type out of tolerance regardless of Lot or mix design level, or three consecutive acceptance samples out of tolerance regardless of mix type.

- a. Stop plant production immediately.
- b. Reject any mixture in storage:
 - Deviating more than 10 percent in gradation from the job mix formula based on the acceptance sample.
 - Deviating more than 0.7 percent in asphalt content from the job mix formula based on the acceptance sample.
- c. Make a plant correction to any mix type out of tolerance prior to resuming production.
 - Do not send any mixture to the project before test results of a process control sample meets Mixture Control Tolerances.
 - Reject any mixture produced at initial restarting that does not meet Mixture Control Tolerances.

NOTE: Determine mixture temperature at least once per hour of production of OGFC and PEM mixes.
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4) Comparison Testing and Quality Assurance Program

- a. Periodic comparison testing by the Department will be required of each QCT to monitor consistency of equipment and test procedures. The Department will take independent samples to monitor the Contractor's quality control program.

1) Comparison Sampling and Testing

Retain samples for comparison testing and referee testing if needed as described in Subsection 400.3.06.A.3.b.3. Discard these samples only if the Contractor's acceptance test results meet a 1.00 pay factor and the Department does not procure the samples within three working days.

The Department will test comparison samples on a random basis. Results will be compared to the respective contractor acceptance tests and the maximum difference shall be as follows:

Table 6—ALLOWABLE PERCENT DIFFERENCE BETWEEN DEPARTMENT BETWEEN DEPARTMENT AND CONTRACTOR ACCEPTANCE TESTS

SIEVE SIZE	SURFACE	SUB-SURFACE
½ in. (12.5 mm)		4.0 %
3/8 in. (9.5 mm)	3.5%	4.0 %
No. 4 (4.75 mm)	3.5%	3.5 %
No. 8 (2.36 mm)	2.5%	3.0 %
No. 200 (75 mm)	2.0%	2.0 %
A.C.	0.4%	0.5 %

- 1) If test comparisons are within these tolerances:
 - Continue production
 - Use the Contractor's tests for acceptance of the lot
- 2) If test comparisons are not within these tolerances
 - Another Departmental technician will test the corresponding referee sample.
 - Results of the referee sample will be compared to the respective contractor and Departmental tests using the tolerance for comparison samples given above.
 - a. If referee test results are within the above tolerances when compared to the Contractor acceptance test, use the Contractor's test for acceptance of the effected lot.
 - b. If referee test results are not within the above tolerances when compared to the Contractor acceptance test, the Department will review the Contractor's quality control methods and determine if a thorough investigation is needed.

b. Independent Verification Sampling and Testing

- 1) Randomly take a minimum of two independent samples from the lesser of five days or five lots of production regardless of mix type or number of projects.
- 2) Compare test deviation from job mix formula to Mixture Control Tolerances in Section 828. If results are outside these tolerances, another sample from the respective mix may be taken.

If test results of the additional sample are not within Mixture Control Tolerances, the Department will take the following action:

- Take random samples from throughout the subject lot(s) as established in Subsection 400.3.06.A.3.b.3 and use these test results for acceptance and in calculations for the monthly plant rating. Applicable pay factors will apply and the contractor QCT test results will not be included in pay factor calculations nor in the monthly plant rating.
- Determine if the Contractor's quality control program is satisfactory and require prompt corrective action by the Contractor if specification requirements are not being met.
- Determine if the QCT has not followed Departmental procedures or has provided erroneous information.
- Take samples of any in-place mixture represented by unacceptable QCT tests and use the additional sample results for acceptance and in calculations for the monthly plant rating and apply applicable pay factors. The Contractor QCT tests will not be included in the pay factor calculations nor in the monthly plant rating.

NOTE: For leveling or dense graded surface courses less than 110 lb./ yd² (60 kg/m²) having quality assurance test results outside the Mixture Control Tolerances of Section 828, <C:\Users\Cgayton\AppData\Roaming\Microsoft\specs\ss828.pdf> use the Department's test results only and applicable pay factors will apply.

B. Compaction

Determine the mixture compaction using either GDT 39, GDT 59, or AASHTO T 331. The method of GDT 39 for “Uncoated Specimens, Dense Graded Mixtures Only” shall not apply when the water absorption of a sample exceeds 2.0 percent, as measured according to AASHTO T 166. In this case, either AASHTO T 331 or the paraffin method of GDT 39 shall apply. The compaction is accepted in lots defined in Subsection 400.3.06. A *Acceptance Plans for Gradation and Asphalt Cement Content* and is within the same lot boundaries as the mixture acceptance.

1. Calculate Pavement Mean Air Voids

The Department is responsible for pavement mean air void acceptance testing. The Contractor is responsible for establishing all roller patterns and any quality control testing. Upon written request by the Contractor, the Office of Materials and Testing will provide nuclear gauge testing assistance for compaction related issues.

The Department will calculate the pavement air voids placed within each lot as follows:

- a. One test per sub-lot.
 - Lots > 400 ton (400 Mg) of mix are divided into 5 sub-lots of equal distance.
 - Lots \leq 400 tons (400 Mg) of mix are divided into a sub-lot or sub-lots of equal distance at a rate of one per 100 tons (100 Mg) mix each (Example: 299 tons of mix require 3 sub-lots and 301 and 301 tons of mix require 4 sub-lots). There will be less than 5 sub-lots.
- b. Average the results of all tests run on randomly selected sites in that lot.
- c. Select representative sites randomly using GDT 73.

Density tests are not required for asphaltic concrete placed at 90 lbs./yd² (50 kg/m²) or less, 4.75 mm mix, and asphaltic concrete OGFC, PEM, and mixes placed as variable depth or width leveling. Compact these courses to the Engineer’s satisfaction. Density tests will not be performed on turn-outs and driveways.

The targeted maximum Pavement Mean Air Void content for all Superpave and Stone Matrix Asphalt mixtures is 5.0 percent. Ensure that the maximum Pavement Mean Air Voids for all Superpave and Stone Matrix Asphalt mixtures does not exceed 7.0 percent. The maximum

Pavement Mean Air Voids for 2 ft. shoulder widening is 9.0 percent. The adjustment period for density is four lots or four production days, whichever is less, in order for the contractor to ensure maximum compactive effort has been achieved, which will yield no more than the specified maximum allowed Mean Air Voids. One additional lot or production day of adjustment may be given for a reduction in asphalt cement content on the JMF made by the Office of Materials and Testing for mix designs incorporating the Corrected Optimum Asphalt Content COAC.

If the contractor needs to adjust the mixture to improve density results, a change in the job mix formula may be requested for approval during the adjustment period so long as the following values are not exceeded:

- Coarse pay sieve $\pm 4\%$
- No. 8 (2.36 mm) sieve $\pm 2\%$
- No. 200 (75 mm) sieve $\pm 1\%$
- Asphalt Content $\pm 0.2\%$
- All value changes must still be within specification limits.

If the Office of Materials and Testing is satisfied that the contractor has exerted the maximum compactive effort and is not able to maintain Pavement Mean Air Voids at no more than 7.0%, the Engineer may establish a maximum target for Pavement Mean Air Voids.

Ensure mixture placed during the adjustment period for density meets the requirements for a 0.90 pay factor in Table 13 of Subsection 400.5.01.C, *Calculate Mean Pavement Air Voids*. Mixture not meeting these density requirements is paid for using the applicable pay factor.

If the mean air voids of the pavement placed within a lot exceeds 100% of the maximum target air voids, if established, and 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.

2. Obtain Uniform Compaction

For a lot to receive a pay factor of 1.00 for compaction acceptance, the air void range cannot exceed 5 percent for new construction or resurfacing projects. The range is the difference between the highest and lowest acceptance test results within the affected lot. If the air void range exceeds these tolerances, apply a Pay Factor of 95%.

The 5% reduced pay factor for the compaction range does not apply in these instances.

- The mixture is placed during the adjustment period as defined in Subsection 400.5.01.A, Materials *Produced and Placed During the Adjustment Period*.
- All air void results within a given lot are less than 7.0%.
- A lot containing two sub-lot or less.
- On two foot trench widening.
- For sub-surfaces mixes including 19 mm and 25 mm Superpave mixes if all air void results within a given lot are $>2.5\%$

When lots are re-evaluated for range penalty, as shown in Subsection 106.03, *Samples, Tests, Cited Specifications*, sampling and testing is according to GDT 73. Request for re-evaluation must be made within 5 working days of notification of the lot results. The following procedures apply:

The Department will re-evaluate the lot through additional testing by obtaining and testing three additional cores acquired in representative sites selected randomly throughout each sub-lot representing the high and low in-place air voids as detailed in GDT 73. The additional six cores (three cores from each sub-lot will be averaged) will replace the original five core results for range specified requirements only. The original five cores' results will be reported for Pavement Mean Air Voids for the lot. This will be the final evaluation for compaction range for the lot. Lots will not be re-evaluated for range when the Pavement Mean Air Voids result in a lower than 95% pay factor. Ensure requests for re-evaluation are made within 5 working days of notification of the lot results.

The Department will determine the payment for each lot by multiplying the Contract Price by the adjusted pay factor shown in the Table 7 Average Air Voids Range Acceptance Schedule:

TABLE 7 – AVERAGE AIR VOIDS RANGE FOR ACCEPTANCE SCHEDULE

Pay Factor	Range between High and Low Air Void Original 5 cores	Re-evaluated Range between High and Low Air Void Cores 6 New Cores obtained from High (3 cores) and Low location (3 cores)
100	$\leq 5\%$	$\leq 4.50\%$

0.95	> 5 %	> 4.50 %
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C. Surface Tolerance

In this specification, pavement courses to be overlaid with an OGFC and PEM are considered surface courses. All OGFC or PEM are to be evaluated after the roadway has been opened to traffic for a minimum of 5 days and a maximum of 15 days. Asphaltic Concrete paving is subject to straightedge and visual inspection and irregularity correction as shown below:

1. Visual and Straightedge Inspection

Paving is subject to visual and straightedge inspection during and after construction operations until Final Acceptance. Locate surface irregularities as follows:

- a. Keep a 10 ft. (3 m) straightedge near the paving operation to measure surface irregularities on courses. Provide the straightedge and the labor for its use.
- b. Inspect the base, intermediate, and surface course surfaces with the straightedge to detect irregularities.
- c. Correct irregularities that exceed 3/16 in. in 10 ft. (5 mm in 3 m) for base and intermediate courses and surface courses.

Mixture or operating techniques will be stopped if irregularities such as rippling, tearing, or pulling occur and the Engineer suspects a continuing equipment problem. Stop the paving operation and correct the problem. Correct surface course evaluations on individual Laser Road Profiler test sections, normally 1 mile (1 km) long.

2. Target Surface Profile Smoothness

The Department will use the Laser Road Profiler method to conduct acceptance testing for surface course tolerance according to GDT 126. This testing will be performed only on:

- Surface courses on Projects with mainline traveled way measuring a minimum distance of 1 mile (1600 m)
- Ramps more than 0.5 mile (800 m) long

Combine partial sections measuring less than 0.5 mile (800 m) with the previous full mile for acceptance.

Achieve the smoothest possible ride during construction. Do not exceed the target Laser Road Profiler smoothness index as shown below:

Table 8—PAVEMENT SMOOTHNESS TARGET REQUIREMENTS

Construction Description	Smoothness Index
Asphaltic concrete OGFC and PEM on interstate including resurfacing and new construction. Asphaltic concrete OGFC and PEM placed on state routes as new construction	750
Asphaltic Concrete SMA or dense-graded surface mixtures placed directly beneath the Asphaltic Concrete OGFC or PEM on interstates. Asphaltic Concrete OGFC and PEM placed on state routes as resurfacing. All new construction on state routes with exception of OGFC and PEM as stated above.	825
All other resurfacing on state routes (excluding LARP, PR, airports, etc.)	900
All Urban new construction and resurfacing on state routes within curb and gutter sections located in posted 40 miles per hour (MPH) or less speed zones.	1175

If the target values are not achieved, immediately adjust the operations to meet the target values. Placement operations may be suspended until a remedial plan to comply with target smoothness requirements is submitted and approved by the Engineer if adjustments do not satisfy target smoothness values.

Table 9—PAVEMENT SMOOTHNESS CORRECTIVE WORK REQUIREMENTS

Construction Description	Smoothness Index
All Asphaltic Concrete OGFC and PEM placed on interstate including resurfacing and new construction. Asphaltic Concrete OGFC and PEM placed on state routes as new construction.	825
Asphaltic Concrete SMA or dense-graded surface mixtures placed directly beneath the Asphaltic Concrete OGFC or PEM on interstates. Asphaltic Concrete OGFC and PEM placed on state routes as resurfacing. All new construction on state routes with exception of OGFC and PEM as stated above.	900
All other resurfacing on state routes (excluding LARP, PR, airports, etc.)	1025
All Urban new construction and resurfacing on state routes within curb and gutter sections located in posted 40 miles per hour (MPH) or less speed zones.	1250

If surface tolerance deficiencies need correction, obtain the Engineer's approval

of the methods and type mix used.

3. Bridge Approach Profile Smoothness Quality

The following are subject to a ride quality test of roadway approaching each end of a bridge using the Laser Road Profiler, Rainhart Profiler or Lightweight Profiler

- A state road with 4 lanes or more
- A 2-lane state road with a current traffic count two-way ADT-2,000 vpd or more
- Locations designated on the Plans

All other bridge approaches not meeting the above criteria shall meet the 3/16 in. in 10 ft. (5mm in 3 m) straightedge requirement. When the distance between the ends of two bridges, the end of a bridge and an intersection, or the end of a bridge and a vertical or horizontal curve is less than 540 ft. (165 m) and locations where the testing vehicle cannot maintain minimum testing speed while taking profile measurements will not be tested and will be subject to straightedge requirements.

The bridge approaches will meet the straightedge requirements.

Test ride quality as follows:

For Resurfacing Projects:

- a. The Department will determine a profile smoothness index value using the laser road profiler in accordance with test GDT 126.
- b. The Department will determine the Half Car Simulation (HCS) IRI for each HMA asphalt 1/10" of mile (0.16 km) segments adjacent to each approach slab joint for each lane. The HCS IRI will be reported in 1/20" of mile (0.08 km) segment readings that will be averaged to calculate the final 1/10-mile section, in accordance with GDT 126.
 - Correct individual bumps or depression exceeding 3/16 in. in 10 ft. (3 mm in 3 m) straightedge requirement as directed by the Engineer.
 - Ensure the profile smoothness index shows an improvement over pre-construction profile smoothness or meets a profile smoothness index of ≤ 1025 mm/km (66 inches/mile) for the average 1/10 mile (0.16 km).
- c. Ensure Resurfacing projects meets the profile smoothness index improvement requirement for the specified 1/10th mile (0.16 km)

segment of roadway up to the bridge approach/exit slab joint.

In accordance with Section 106.3.A.3, the Contractor may request reevaluation(s) for Laser Road Profiler Test results on Resurfacing Bridge Projects and straightedge measurement(s) on either that fail to meet specified requirements. Request for reevaluation shall be made to the Engineer within 5 working days of notification of failing results. At the Engineer's approval, reevaluation of failing results using the Lightweight Profiler Test, Laser Road Profiler Test and straightedge measurement(s) shall be conducted in conjunction with representatives from the Office of Materials and Testing in accordance with GDT 126 or GDT 134, whichever is applicable. The Department will perform ride quality testing up to two times on the bridge approaches/exits at no cost to the Contractor. For these reevaluations, evaluation of the bridge exit end may be taken testing towards the bridge against traffic if the contractor provides traffic control, at the contractors' expense, upon request.

For All New Construction Projects:

- a. The Department will determine a profile index value according to test method GDT 78 or GDT 134.
- b. The Department will average the profile index value from the right and left wheelpath for each 100 ft. (30 mm) section for each lane.
 - Keep the profile index value under 30 in./mile (475 mm/km), correct individual bumps or depressions exceeding 0.2 in. (5 mm) from blanking band on the profilograph trace.
- c. Ensure New Construction projects meet the profile index value for the specified 100 ft. (30 m) section of roadway up to the bridge joint.
- d. Schedule the ride quality testing on All New Construction projects 5 days before needed by contacting the Office of Materials and Testing. Clean and clear obstructions from the test area.

Correct the sections that do not meet the ride quality criteria of this specification. After correction, these sections are subject to retesting with the Lightweight Profiler. The Engineer shall direct the type of correction method, which may include:

- Milling
- Grinding
- Removing and replacing the roadway

No additional compensation will be made.

In accordance with Section 106.3.A.3, the Contractor may request reevaluation(s) for Lightweight Profiler Test results on newly construction bridge projects, Laser Road Profiler Test results on resurfacing bridge projects and straightedge measurement(s) on either that fail to meet specified requirements. Request for reevaluation shall be made to the Engineer within 5 working days of notification of failing results. At the Engineer's approval, reevaluation of failing results using the Lightweight Profiler Test, Laser Road Profiler Test and straightedge measurement(s) shall be conducted by representatives from the Office of Materials and Testing in accordance with GDT 134.

The Department will perform ride quality testing up to two times on the bridge approaches at no cost to the Contractor. Additional testing will be charged to the Contractor in accordance with Section 500.5.01.B.

4. Surface Smoothness Acceptance

When recommended by the Office of Materials and Testing, a pay reduction may be accepted in lieu of correction for roadways and bridge approaches that fail to achieve specified smoothness indexes in accordance with SOP 46 "Procedure for Calculating Pay Reduction for Failing Roadway and Bridge Approach Smoothness" Roadway and Bridge Approach Smoothness. The Office of Materials and Testing may recommend a waiver of profile smoothness requirements when improvement over pre-construction smoothness profile exceeds 25 percent for urban roadways, as defined in Table 9.

D. Reevaluation of Lots

When lots are reevaluated as shown in Subsection 106.03, *Samples, Tests, Cited Specifications*, sampling and testing is according to GDT 73. Ensure request for reevaluation are made within 5 working days of notification of the lot results. The following procedures apply:

1. For asphaltic concrete mixtures other than OGFC and PEM mix types, thin lift courses < 110 lbs./yd² and mixture paid for as patching, the Department will take the same number of new tests using cores taken at randomly selected locations in accordance GDT 73. The Department will use only these test results for gradation and AC content obtained using these cores for acceptance. For OGFC and PEM mix types, thin lift courses < 110 lbs./yd² and mixture paid for as patching, the retained opposite quarter shall be used for mixture acceptance reevaluation when requested by the Contractor. The Department will use the absolute average deviations from the job mix formula for these tests to determine acceptance based on the appropriate column in the Asphalt Cement

Content and Aggregate Gradation of Asphalt Concrete Mixture Acceptance

Schedule—Table 10 or 11.

2. Compaction Acceptance

The Department will reevaluate the lot through additional testing by cutting the same number of cores originally obtained and averaging these results with the results from the original density tests. The Department will use the average to determine acceptance according to the Compaction Acceptance Schedule in Subsection 400.5.01.C, *Calculate Pavement Mean Air Voids*.

Table 10—MIXTURE ACCEPTANCE SCHEDULE—SURFACE MIXES

Mixture Characteristics	Pay Factor	Mean of the Deviations from the Job Mix Formula							
		1 Test	2 Tests	3 Tests	4 Tests	5 Tests	6 Tests	7 Tests	8 Tests
Asphalt Cement Content (Extraction, Ignition)	1.00	0.00 - 0.70	0.00 - 0.54	0.00 - 0.46	0.00 - 0.41	0.00 - 0.38	0.00 - 0.35	0.00 - 0.32	0.00 - 0.30
	0.95	0.71 - 0.80	0.55 - 0.61	0.47 - 0.52	0.42 - 0.46	0.39 - 0.43	0.36 - 0.39	0.33 - 0.36	0.31 - 0.34
	0.90	0.81 - 0.90	0.62 - 0.68	0.53 - 0.58	0.47 - 0.51	0.44 - 0.47	0.40 - 0.45	0.37 - 0.40	0.35 - 0.37
	0.80	0.91 - 1.00	0.69 - 0.75	0.59 - 0.64	0.52 - 0.56	0.48 - 0.52	0.44 - 0.47	0.41 - 0.44	0.38 - 0.41
	0.70	1.01 - 1.19	0.76 - 0.82	0.65 - 0.69	0.57 - 0.61	0.53 - 0.56	0.48 - 0.51	0.45 - 0.47	0.42 - 0.44
	0.50	1.20 - 1.40	0.83 - 0.85	0.70 - 0.72	0.62 - 0.64	0.57 - 0.59	0.52 - 0.55	0.48 - 0.51	0.45 - 0.48
3/8 in. (9.5 mm) Sieve (12.5 mm OGFC, 12.5 mm PEM, 12.5 mm Superpave)	1.00	0.00 - 9.0	0.00 - 6.6	0.00 - 5.6	0.00 - 5.0	0.00 - 4.6	0.00 - 4.2	0.00 - 3.9	0.00 - 3.6
	0.98	9.1 - 10.0	6.7 - 7.5	5.7 - 6.3	5.1 - 5.6	4.7 - 5.2	4.3 - 4.7	4.0 - 4.4	3.7 - 4.1
	0.95	10.1 - 11.9	7.6 - 8.4	6.4 - 7.0	5.7 - 6.3	5.3 - 5.8	4.8 - 5.3	4.5 - 5.0	4.2 - 4.6
	0.90	12.0 - 13.0	8.5 - 9.3	7.1 - 7.7	6.4 - 6.9	5.9 - 6.3	5.4 - 5.8	5.1 - 5.4	4.7 - 5.0
	0.85	13.1 - 14.0	9.4 - 10.2	7.8 - 8.6	7.0 - 7.6	6.4 - 6.9	5.9 - 6.3	5.5 - 5.9	5.1 - 5.5
	0.80	14.1 - 14.5	10.3 - 10.5	8.7 - 8.9	7.7 - 8.0	7.0 - 7.5	6.4 - 6.8	6.0 - 6.4	5.6 - 6.0
3/8 in. (9.5 mm) Sieve (12.5 mm SMA)	1.00	0.0 - 6.8	0.00 - 5.0	0.00 - 4.2	0.00 - 3.8	0.00 - 3.4	0.00 - 3.2	0.00 - 2.9	0.00 - 2.7
	0.98	6.9 - 7.5	5.1 - 5.6	4.3 - 4.7	3.9 - 4.2	3.5 - 3.9	3.3 - 3.5	3.0 - 3.3	2.8 - 3.1
	0.95	7.6 - 8.9	5.7 - 6.3	4.8 - 5.2	4.3 - 4.7	4.0 - 4.4	3.6 - 4.0	3.4 - 3.8	3.2 - 3.4
	0.90	9.0 - 9.8	6.4 - 7.0	5.3 - 5.8	4.8 - 5.2	4.5 - 4.8	4.1 - 4.4	3.9 - 4.1	3.5 - 3.8

	0.85	9.9 - 10.5	7.1 - 7.6	5.9 - 6.4	5.3 - 5.7	4.9 - 5.2	4.5 - 4.7	4.2 - 4.4	3.9 - 4.1
	0.80	10.6 - 10.9	7.7 - 7.9	6.5 - 6.7	5.8 - 6.0	5.3 - 5.6	4.8 - 5.1	4.5 - 4.8	4.2 - 4.5
No. 4 (4.75 mm) Sieve (9.5 mm OGFC, 9.5 mm Superpave)	1.00	0.00 - 9.0	0.00 - 6.7	0.00 - 5.7	0.00 - 5.2	0.00 - 4.8	0.00 - 4.4	0.00 - 4.1	0.00 - 3.8
	0.98	9.1 - 10.0	6.8 - 7.6	5.8 - 6.3	5.3 - 5.8	4.9 - 5.4	4.5 - 4.9	4.2 - 4.6	3.9 - 4.3
	0.95	10.1 - 11.9	7.7 - 8.5	6.4 - 6.9	5.9 - 6.4	5.5 - 5.9	5.0 - 5.4	4.7 - 5.0	4.4 - 4.7
	0.90	12.0 - 13.0	8.6 - 9.4	7.0 - 7.5	6.5 - 7.0	6.0 - 6.5	5.5 - 5.9	5.1 - 5.5	4.8 - 5.1
	0.85	13.1 - 14.0	9.5 - 10.2	7.6 - 8.0	7.1 - 7.6	6.6 - 7.0	6.0 - 6.4	5.6 - 5.9	5.2 - 5.5
	0.80	14.1 - 14.5	10.3 - 10.5	8.1 - 8.3	7.7 - 8.0	7.1 - 7.5	6.5 - 6.9	6.0 - 6.4	5.6 - 5.9
No. 4 (4.75 mm) Sieve (9.5 mm SMA)	1.00	0.00 - 6.8	0.00 - 5.0	0.00 - 4.3	0.00 - 3.9	0.00 - 3.6	0.00 - 3.3	0.00 - 3.1	0.00 - 2.8
	0.98	6.9 - 7.5	5.1 - 5.7	4.4 - 4.7	4.0 - 4.4	3.7 - 4.0	3.4 - 3.7	3.2 - 3.4	2.9 - 3.2
	0.95	7.6 - 8.9	5.8 - 6.4	4.8 - 5.2	4.5 - 4.8	4.1 - 4.4	3.8 - 4.0	3.5 - 3.8	3.3 - 3.5
	0.90	9.0 - 9.8	6.5 - 7.0	5.3 - 5.6	4.9 - 5.2	4.5 - 4.9	4.1 - 4.4	3.9 - 4.1	3.6 - 3.8
	0.85	9.9 - 10.5	7.1 - 7.7	5.7 - 6.0	5.3 - 5.7	5.0 - 5.2	4.3 - 4.8	4.2 - 4.4	3.9 - 4.1
	0.80	10.6 - 10.9	7.8 - 7.9	6.1 - 6.2	5.8 - 6.0	5.3 - 5.6	4.9 - 5.2	4.5 - 4.8	4.2 - 4.4
No. 8 (2.36 mm) Sieve (OGFC, PEM, Superpave and 4.75 mm mixes)	1.00	0.00 - 7.0	0.00 - 5.6	0.00 - 4.8	0.00 - 4.3	0.00 - 4.0	0.00 - 3.6	0.00 - 3.4	0.00 - 3.2
	0.98	7.1 - 8.0	5.7 - 6.3	4.9 - 5.4	4.4 - 4.8	4.1 - 4.5	3.7 - 4.1	3.5 - 3.8	3.3 - 3.6
	0.95	8.1 - 9.0	6.4 - 7.0	5.5 - 6.0	4.9 - 5.3	4.6 - 4.9	4.2 - 4.5	3.9 - 4.2	3.7 - 3.9
	0.90	9.1 - 10.9	7.1 - 7.7	6.1 - 6.6	5.4 - 5.8	5.0 - 5.4	4.6 - 4.9	4.3 - 4.6	4.0 - 4.3
	0.85	11.0 - 12.0	7.8 - 8.5	6.7 - 7.2	5.9 - 6.4	5.5 - 5.8	5.0 - 5.3	4.7 - 5.0	4.4 - 4.6
	0.75	12.1 - 12.5	8.6 - 8.8	7.3 - 7.5	6.5 - 6.8	5.9 - 6.3	5.4 - 5.7	5.1 - 5.3	4.7 - 4.9
No. 8 (2.36 mm) Sieve	1.00	0.00 - 5.3	0.00 - 4.2	0.00 - 3.6	0.00 - 3.2	0.00 - 3.0	0.00 - 2.7	0.00 - 2.6	0.00 - 2.4

(12.5 mm SMA, 9.5 mm SMA)	0.98	5.4 - 6.0	4.3 - 4.7	3.7 - 4.0	3.3 - 3.6	3.1 - 3.4	2.8 - 3.1	2.7 - 2.9	2.5 - 2.7
	0.95	6.1 - 6.8	4.8 - 5.3	4.1 - 4.5	3.7 - 4.0	3.5 - 3.7	3.2 - 3.4	3.0 - 3.2	2.8 - 2.9
	0.90	6.9 - 8.2	5.4 - 5.8	4.6 - 5.0	4.1 - 4.5	3.8 - 4.0	3.5 - 3.7	3.3 - 3.5	3.0 - 3.2
	0.85	8.3 - 9.0	5.9 - 6.4	5.1 - 5.4	4.6 - 4.8	4.1 - 4.4	3.8 - 4.0	3.6 - 3.8	3.3 - 3.4
	0.75	9.1 - 9.4	6.5 - 6.6	5.5 - 5.0	4.9 - 5.1	4.5 - 4.7	4.1 - 4.3	3.9 - 4.0	3.5 - 3.7
No. 8 (2.36 mm) Sieve for OGFC and PEM mixes: When the mean of the deviations from the Job Mix Formula for a particular lot exceeds the tolerance for a 1.00 pay factor in the appropriate column, the lot will be paid for at 0.50 of the Contract Price.									

TABLE 11 – MIXTURE ACCEPTANCE SCHEDULE SUBSURFACE MIXES

Mixture Characteristics	Pay Factor	Mean of the Deviations from the Job Mix Formula							
		1 Test	2 Tests	3 Tests	4 Tests	5 Tests	6 Tests	7 Tests	8 Tests
Asphalt Cement Content (Extraction, Ignition)	1.00	0.00 - 0.80	0.00 - 0.61	0.00 - 0.52	0.00 - 0.46	0.00 - 0.43	0.00 - 0.39	0.00 - 0.36	0.00 - 0.34
	0.95	0.81 - 0.90	0.62 - 0.68	0.53 - 0.58	0.47 - 0.51	0.44 - 0.47	0.40 - 0.43	0.37 - 0.40	0.35 - 0.37
	0.90	0.91 - 1.00	0.69 - 0.75	0.59 - 0.64	0.52 - 0.56	0.48 - 0.52	0.44 - 0.47	0.41 - 0.44	0.38 - 0.41
	0.80	1.01 - 1.19	0.76 - 0.82	0.65 - 0.69	0.57 - 0.61	0.53 - 0.56	0.48 - 0.51	0.45 - 0.47	0.42 - 0.44
	0.70	1.20 - 1.40	0.83 - 0.85	0.70 - 0.72	0.62 - 0.64	0.57 - 0.59	0.52 - 0.55	0.48 - 0.51	0.45 - 0.48
	0.50	1.41 - 1.60	0.86 - 0.88	0.73 - 0.75	0.65 - 0.67	0.60 - 0.63	0.56 - 0.60	0.52 - 0.56	0.49 - 0.52
1/2 in. (12.5 mm) Sieve (25 mm Superpave)	1.00	0.00 - 12.9	0.00 - 8.1	0.00 - 6.9	0.00 - 6.1	0.00 - 5.5	0.00 - 5.0	0.00 - 4.7	0.00 - 4.4
	0.98	13.0 - 14.0	8.2 - 9.1	7.0 - 7.7	6.2 - 6.8	5.6 - 6.1	5.1 - 5.6	4.8 - 5.2	4.5 - 4.9
	0.95	14.1 - 15.0	9.2 - 10.1	7.8 - 8.5	6.9 - 7.5	6.2 - 6.7	5.7 - 6.1	5.3 - 5.7	5.0 - 5.4
	0.90	15.1 - 16.0	10.2 - 11.1	8.6 - 9.3	7.6 - 8.2	6.8 - 7.4	6.2 - 6.7	5.8 - 6.3	5.5 - 5.9
	0.85	16.1 - 17.0	11.2 - 11.5	9.4 - 9.6	8.3 - 8.6	7.5 - 7.8	6.8 - 7.0	6.4 - 6.5	6.0 - 6.1
	0.80	17.1 - 18.0	11.6 - 11.9	9.7 - 9.9	8.7 - 9.0	7.9 - 8.1	7.1 - 7.3	6.6 - 6.8	6.2 - 6.4
1/2 in. (12.5 mm) Sieve (19 mm SMA)	1.00	0.00 - 9.7	0.00 - 6.0	0.00 - 5.2	0.00 - 4.6	0.00 - 4.1	0.00 - 3.8	0.00 - 3.5	0.00 - 3.3
	0.98	9.8 - 10.5	6.2 - 6.8	5.3 - 5.8	4.7 - 5.1	4.2 - 4.6	3.9 - 4.2	3.6 - 3.9	3.4 - 3.7
	0.95	10.6 - 11.2	6.9 - 7.8	5.9 - 6.4	5.2 - 5.6	4.7 - 5.0	4.3 - 4.6	4.0 - 4.3	3.8 - 4.0
	0.90	11.3 - 12.0	7.9 - 8.3	6.5 - 7.0	5.7 - 6.1	5.1 - 5.6	4.7 - 5.0	4.4 - 4.7	4.1 - 4.4
	0.85	12.1 - 12.8	8.4 - 8.6	7.1 - 7.2	6.2 - 6.5	5.7 - 5.9	5.1 - 5.3	4.8 - 4.9	4.5 - 5.6
	0.80	12.9 - 13.5	8.7 - 8.9	7.3 - 7.4	6.6 - 6.8	6.0 - 6.1	5.4 - 5.5	5.0 - 5.1	4.7 - 4.8
3/8 in. (9.5 mm) Sieve (19 mm Superpave, 12.5 mm Superpave)	1.00	0.00 - 10.0	0.00 - 7.5	0.00 - 6.3	0.00 - 5.6	0.00 - 5.2	0.00 - 4.7	0.00 - 4.4	0.00 - 4.1
	0.98	10.1 - 11.9	7.6 - 8.4	6.4 - 7.0	5.7 - 6.3	5.3 - 5.8	4.8 - 5.3	4.5 - 5.0	4.2 - 4.6

	0.95	12.0 – 13.0	8.5 – 9.3	7.1 – 7.7	6.4 – 6.9	5.9 – 6.3	5.4 – 5.8	5.1 – 5.4	4.7 – 5.0
	0.90	13.1 – 14.0	9.4 – 10.2	7.8 – 8.6	7.0 – 7.6	6.4 – 6.9	5.9 – 6.3	5.5 – 5.9	5.1 – 5.5
	0.85	14.1 – 14.5	10.3 – 10.5	8.7 – 8.9	7.7 – 8.0	7.0 – 7.5	6.4 – 6.8	6.0 – 6.4	5.6 – 6.0
	0.80	14.6 – 15.0	10.6 – 10.8	9.0 – 9.2	8.1 – 8.4	7.6 – 7.8	6.9 – 7.3	6.5 – 6.8	6.1 – 6.5
No. 4 (4.75 mm) Sieve (9.5 mm Superpave)	1.00	0.00 – 10.0	0.00 – 7.6	0.00 – 6.3	0.00 – 5.8	0.00 – 5.4	0.00 – 4.9	0.00 – 4.6	0.00 – 4.3
	0.98	10.1 – 11.9	7.7 – 8.5	6.4 – 6.9	5.9 – 6.4	5.5 – 5.9	5.0 – 5.4	4.7 – 5.0	4.4 – 4.7
	0.95	12.0 – 13.0	8.6 – 9.4	7.0 – 7.5	6.5 – 7.0	6.0 – 6.5	5.5 – 5.9	5.1 – 5.5	4.8 – 5.1
	0.90	13.1 – 14.0	9.5 – 10.2	7.6 – 8.0	7.1 – 7.6	6.6 – 7.0	6.0 – 6.4	5.6 – 5.9	5.2 – 5.5
	0.85	14.1 – 14.5	10.3 – 10.5	8.1 – 8.3	7.7 – 8.0	7.1 – 7.5	6.5 – 6.9	6.0 – 6.4	5.6 – 5.9
	0.80	14.6 – 15.0	10.6 – 10.8	8.4 – 8.6	8.1 – 8.4	7.6 – 8.0	7.0 – 7.4	6.5 – 6.8	6.0 – 6.3
No. 8 (2.36 mm) Sieve (all mixes except SMA)	1.0	0.00 – 8.0	0.00 – 6.3	0.00 – 5.4	0.00 – 4.8	0.00 – 4.5	0.00 – 4.1	0.00 – 3.8	0.00 – 3.6
	0.98	8.1 – 9.0	6.4 – 7.0	5.5 – 6.0	4.9 – 5.3	4.6 – 4.9	4.2 – 4.5	3.9 – 4.2	3.7 – 3.9
	0.95	9.1 – 10.0	7.1 – 7.7	6.1 – 6.6	5.4 – 5.8	5.0 – 5.4	4.6 – 4.9	4.3 – 4.6	4.0 – 4.3
	0.90	10.1 – 11.9	7.8 – 8.5	6.7 – 7.2	5.9 – 6.4	5.5 – 5.8	5.0 – 5.3	4.7 – 5.0	4.4 – 4.6
	0.85	12.0 – 13.0	8.6 – 8.8	7.3 – 7.5	6.5 – 6.8	5.9 – 6.3	5.4 – 5.7	5.1 – 5.3	4.7 – 4.9
	0.75	13.1 – 14.0	8.9 – 9.1	7.6 – 7.8	6.9 – 7.2	6.4 – 6.6	5.8 – 6.1	5.4 – 5.7	5.0 – 5.3
No. 8 (2.36 mm) Sieve (19 mm SMA)	1.00	0.00 – 6.0	0.00 – 4.7	0.00 – 4.1	0.00 – 3.6	0.00 – 3.4	0.00 – 3.1	0.00 – 2.9	0.00 – 2.4
	0.98	6.1 – 6.8	4.8 – 5.2	4.2 – 4.5	3.7 – 4.0	3.5 – 3.7	3.2 – 3.4	3.0 – 3.2	2.8 – 2.9
	0.95	6.9 – 7.5	5.3 – 5.8	4.6 – 5.0	4.1 – 4.4	3.8 – 4.0	3.5 – 3.7	3.3 – 3.5	3.0 – 3.2
	0.90	7.6 – 8.9	5.9 – 6.4	5.1 – 5.4	4.5 – 4.8	4.1 – 4.4	3.8 – 4.0	3.6 – 3.8	3.3 – 3.5
	0.85	9.0 – 9.8	6.5 – 6.6	5.5 – 5.6	4.9 – 5.1	4.5 – 4.7	4.1 – 4.3	3.9 – 4.0	3.6 – 3.7
	0.75	9.9 – 10.5	6.7 – 6.8	5.7 – 5.9	5.2 – 5.4	4.8 – 5.0	4.4 – 4.6	4.1 – 4.3	3.8 – 4.0

E. Segregated Mixture

Prevent mixture placement yielding a segregated mat by following production, storage, loading, placing, and handling procedures. Ensure needed plant modifications and provide necessary auxiliary equipment. (See Subsection 400.1.01, *Definitions*.)

If the mixture is segregated in the finished mat, the Department will take actions based on the degree of segregation. The actions are described below.

1. Unquestionable Unacceptable Segregation

When the Engineer determines that the segregation in the finished mat is unquestionably unacceptable, follow these measures:

- a. Suspend Work and require the Contractor to take positive correction action. The Department will evaluate the segregated areas to determine the extent of the corrective work to the in-place mat as follows:
 - Perform extraction and gradation analysis by taking 6 in. (150 mm) cores from typical, visually unacceptable segregated areas.
 - Determine the corrective work according to Subsection 400.3.06.E.3.
- b. Require the Contractor to submit a written plan of measures and actions to prevent further segregation. Work will not continue until the plan is submitted to and approved by the Department.
- c. When work resumes, place a test section not to exceed 500 tons (500 Mg) of the affected mixture for the Department to evaluate. If a few loads show that corrective actions were not adequate, follow the measures above beginning with step 1.a. above. If the problem is solved, work may continue.

2. Unacceptable Segregation Suspected

When the Engineer observes segregation in the finished mat and the work may be unacceptable, follow these measures:

- a. Allow work to continue at Contractor's risk.
- b. Require Contractor to immediately and continually adjust operation until the visually apparent segregated areas are eliminated from the finished mat. The Department will immediately investigate to determine the severity of the apparent segregation as follows:
 - Take 6 in. (150 mm) cores from typical areas of suspect segregation.
 - Test the cores for compliance with the mixture control tolerances in

Section 828.

When these tolerances are exceeded, suspend work for corrective action as outlined in Subsection 400.3.06.E.3.

3. Corrective Work

- a. Remove and replace (at the Contractor's expense) any segregated area where the gradation on the control sieves is found to vary 10 percent or more from the approved job mix formula, the asphalt cement varies 1.0% or more from the approved job mix formula, or if in-place air voids exceed 13.5% based on GDT 39. The control sieves for each mix type are shown in Subsection 400.5.01.B *Determine Lot Acceptance*.
- b. Subsurface mixes. For subsurface mixes, limit removal and replacement to the full lane width and no less than 10 ft. (3m) long and as approved by the Engineer.
- c. Surface Mixes. For surface mixes, ensure that removal and replacement is not less than the full width of the affected lane and no less than the length of the affected areas as determined by the engineer.

Surface tolerance requirements apply to the corrected areas for both subsurface and surface mixes.

400.3.07 Contractor Warranty and Maintenance

A. Contractor's Record

Maintain a dated, written record of the most recent plant calibration. Keep this record available for the Engineer's inspection at all times. Maintain records in the form of:

- Graphs
- Tables
- Charts
- Mechanically prepared data

400.4 Measurement

Thickness and spread rate tolerances for the various mixtures are specified in Subsection 400.4.A.2.b, Table 12, Thickness and Spread Rate Tolerance at Any Given Location. These tolerances are applied as outlined below:

A. Hot Mix Asphaltic Concrete Paid for by Weight

1. Plans Designate a Spread Rate

- a. Thickness Determinations. Thickness determinations are not required when the Plans designate a spread rate per square yard (meter).

If the spread rate exceeds the upper limits outlined in the Subsection 400.4.A.2.b, Table 12, *Thickness and Spread Rate Tolerance at Any Given Location*, the mix in excess will not be paid for.

If the spread rate exceeds the upper limits outlined in the Subsection 400.4.A.2.b, Table 12, *Thickness and Spread Rate Tolerance at Any Given Location*, the mix in excess will not be paid for.

If the rate of spread is less than the lower limit, correct the deficient course by overlaying the entire lot.

The mixture used for correcting deficient areas is paid for at the Contract Unit Price of the course being corrected and is subject to the Mixture Acceptance Schedule – Table 10 or 11.

- b. Recalculate the Total Spread Rate. After the deficient hot mix course has been corrected, the total spread rate for that lot is recalculated, and mix in excess of the upper tolerance limit as outlined in the Subsection 400.4.A.2.b, Table 12, *Thickness and Spread Rate Tolerance at Any Given Location* is not paid for.

The quantity of material placed on irregular areas such as driveways, turnouts, intersections, feather edge section, etc., is deducted from the final spread determination for each lot.

2. Plans Designate Thickness

If the average thickness exceeds the tolerances specified in the Subsection 400.4.A.2.b, Table 12, *Thickness and Spread Rate Tolerance at Any Given Location*, the Engineer shall take cores to determine the area of excess thickness. Excess quantity will not be paid for.

If the average thickness is deficient by more than the tolerances specified in the Thickness and Spread Rate Tolerance at Any given Location table below, the Engineer shall take additional cores to determine the area of deficient thickness. Correct areas with thickness deficiencies as follows:

- a. Overlay the deficient area with the same mixture type being corrected or with an approved surface mixture. The overlay shall extend for a minimum of 300 ft. (90 m) for the full width of the course.
- b. Ensure that the corrected surface course complies with Subsection

400.3.06.C.1, *Visual and Straightedge Inspection*. The mixture required to correct a deficient area is paid for at the Contract Unit Price of the course being corrected.

The mixture is subject to the Mixture Acceptance Schedule—Table 10 or 11. The quantity of the additional mixture shall not exceed the required calculated quantity used to increase the average thickness of the overlaid section to the maximum tolerance allowed under the following table.

Table 12—THICKNESS AND SPREAD RATE TOLERANCE AT ANY GIVEN LOCATION

Course	Thickness Specified	Spread Rate Specified
Asphaltic concrete base course	± 0.5 in. (± 13 mm)	± 55 lbs./yd ² (30 kg/m ²)
Intermediate and/or wearing course	± 0.25 in. (± 6 mm)	± 27.5 lbs./yd ² (15 kg/m ²)
Overall of any combination of 1 and 2	± 0.5 in. (± 13 mm)	± 55 lbs./yd ² (30 kg/m ²)

Note: For asphaltic concrete 9.5 mm OGFC and 12.5 mm OGFC, control the spread rate per lot within 7 lbs./yd² (4 kg/m²) of the designated spread rate. For asphaltic concrete 12.5 mm PEM, control the spread rate per lot within 10 lbs./yd² (6 kg/m²) of the designated spread rate.

Note: Thickness and spread rate tolerances are provided to allow normal variations within a given lot. Do not continuously operate at a thickness or spread rate not specified.

When the plans specify a thickness, the Engineer may take as many cores as necessary to determine the average thickness of the intermediate or surface course. The Engineer shall take a minimum of one core per 1,000 ft. (300 m) per two lanes of roadway. Thickness will be determined by average measurements of each core according to GDT 42.

If the average exceeds the tolerances specified in the Subsection 400.4.A.2.b, Table 12, *Thickness and Spread Rate Tolerance at Any Given Location*, additional cores will be taken to determine the area of excess thickness and excess tonnage will not be paid for.

B. Hot Mix Asphaltic Concrete Paid for by Square Yard (Meter)

1. The thickness of the base course or the intermediate or surface course will be

determined by the Department by cutting cores and the thickness will be determined by averaging the measurements of each core.

2. If any measurement is deficient in thickness more than the tolerances given in the table above, additional cores will be taken by the Department to determine the area of thickness deficiency. Correct thickness deficiency areas as follows:
 - a. Overlay the deficient area with the same type mixtures being corrected or with surface mixture. Extend the overlay at least 300 ft. (90 m) for the full width of course.
 - b. Ensure the corrected surface course complies with Subsection 400.3.06.C.1, *Visual and Straightedge Inspection*.
 - c. The mixture is subject to the Mixture Acceptance Schedule—Table 10 or 11.
3. No extra payment is made for mixtures used for correction.
4. No extra payment is made for thickness in excess of that specified.

C. Asphaltic Concrete

Hot mix asphaltic concrete, complete in place and accepted, is measured in tons (megagrams) or square yards (meters) as indicated in the Proposal. If payment is by the ton (megagram), the actual weight is determined by weighing each loaded vehicle on the required motor truck scale as the material is hauled to the roadway, or by using recorded weights if a digital recording device is used.

The weight measured includes all materials. No deductions are made for the weight of the individual ingredients. The actual weight is the pay weight except when the aggregates used have a combined bulk specific gravity greater than 2.75. In this case the pay weight is determined according to the following formula:

$$T1 = T \times \frac{\% AC + \frac{\% \text{Aggregate} \times 2.75}{\text{combined bulk Sp. Gr.}} + \% Y}{100}$$

Where:

T1	Pay weight, tonnage (Mg)
T=	Actual weight
% AC=	Percent asphalt cement by weight of total mixture
% Aggregate =	Percent aggregate by weight of total mixture minus the hydrated lime

Combined Bulk Sp. Gr.=	Calculated combined bulk specific gravity of various mineral aggregates used in the mixture
% Y=	Percent hydrated lime by weight of mineral aggregate

D. Bituminous Material

Bituminous material is not measured for separate payment.

E. Hydrated Lime

When hydrated lime issued as an anti-stripping additive, it is not measured for separate payment.

F. Field Laboratory

The field laboratory required in this Specification is not measured for separate payment

G. Asphaltic Concrete Leveling

Payment of hot mix asphaltic concrete leveling, regardless of the type mix, is full compensation for furnishing materials, bituminous materials, and hydrated lime (when required) for patching and repair of minor defects, surface preparation, cleaning, hauling, mixing, spreading, and rolling.

Mixture for leveling courses is subject to the acceptance schedule as stated in Subsection 400.3.06.A and Subsection 400.3.06.B.

H. Hot mix asphaltic concrete patching, regardless of the type mix, is paid for at the Contract Unit Price per ton (Megagram), complete in place and accepted. Payment is full compensation for:

- Furnishing materials such as bituminous material and hydrated lime (when required)
- Preparing surface to be patched
- Cutting areas to be patched, trimmed, and cleaned
- Hauling, mixing, placing, and compacting the materials

400.4.01 Limits

When the asphaltic concrete is paid for by the square (meter) and multiple lifts are used, the number and thickness of the lifts are subject to the Engineer's approval and are used to prorate the pay factor for the affected roadway section.

400.5 Payment

When materials or construction are not within the tolerances in this specification, the Contract Price will be adjusted according to Subsection 106.03, *Samples, Tests, Cited Specifications* and Subsection 400.3.06, Quality Acceptance.

Hot mix asphaltic concrete of the various types are paid for at the Contract Unit Price per ton (megagram) or per square yard (meter). Payment is full compensation for furnishing and placing materials including asphalt cement, hydrated lime when required, approved additives, and for cleaning and repairing, preparing surfaces, hauling, mixing, spreading, rolling, and performing other operations to complete the Contract Item.

Payment will be made under:

Item No. 400-A	Asphaltic concrete 12.5 mm Type 1 Superpave, group 1, Including polymer modified bituminous materials (PG 76-22) and hydrated lime	Per ton
Item No. 400-B	Asphaltic concrete 19 mm Type 1 Superpave, group 1, Including polymer modified bituminous materials (PG 76-22) and hydrated lime	Per ton

400.5.01 Adjustments

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. Asphaltic Concrete OGFC or PEM shall be granted an adjustment period for the first 500 tons (500 Mg) produced for the Contract. A new 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 10 or 11.

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./yd² (50 kg/m²) or less is also used for the surface mix at a spread rate greater than 90 lbs./yd² (50 kg/m²), 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 10 or 11 for both asphalt content and gradation.
- Meets the minimum requirements for a 0.90 pay factor in Table 13 of Subsection 400.5.01C,.

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 12.5 mm PEM	3/8 in., No. 8 (9.5 mm, 2.36 mm) sieves and asphalt cement
Asphaltic concrete 12.5 mm OGFC	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 9.5 mm OGFC	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

For projects which do not have milling quantities established as a Pay Item, the Department will pay for 12.5 mm OGFC and PEM placed on ramps and end of project transitions under the appropriate mixture pay item, but the mix shall be subject to the

same gradation and control sieve requirements as asphaltic concrete 9.5 mm OGFC. Add polymer-modified bituminous material, hydrated lime, and stabilizing fiber to this mix.

The Department will perform the following tasks:

1. Using the Mixture Acceptance Schedule—Table 10 or 11, 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 10 to determine acceptance of surface mixes and the Mixture Acceptance Schedule—Table 11 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:

1. 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 10 or 11.
2. Minimum requirements for a 0.90 pay factor in Table 13 of Subsection 400.5.01C, *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 13 – 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 recommended by the Office of Materials and Testing, Lots receiving less than 0.5 pay factor shall be removed and replaced at the Contractor's expense.

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. Ensure the payment for this item covers all cost of construction, maintenance and removal of all temporary mix. Ensure hot mix asphaltic concrete placed as temporary mix meets 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 \$1.75/ton (\$2.00/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 \$0.09/yd² (\$0.11/ 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. Ensure hot mix asphalt produced as temporary mix containing no hydrated lime is 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 10 or 11 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 13, 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.

END OF SECTION

Section 413 Bituminous Tack Coat

413.1 General Description

This work includes furnishing and applying a bituminous tack coat on a prepared road surface including cleaning the road surface.

413.1.01 Definitions

General Provisions 101 through 150.

413.1.02 Related References

A. Standard Specifications

Section 109—Measurement and Payment

Section 400—Hot Mix Asphaltic Concrete Construction

Section 424—Bituminous Surface Treatment

Section 427—Emulsified Asphalt Slurry Seal

Section 820—Asphalt Cement

Section 822—Emulsified Asphalt

Section 824—Cationic Asphalt Emulsion

SOP 4

B. Referenced Documents

General Provisions 101 through 150.

413.1.03 Submittals

A. Invoices

Furnish formal written invoices from a supplier for the bituminous materials for sole use of tack coat when requested by the Department. Show the following on the Bill of Lading:

- Date Manufactured for emulsified asphalt materials.
- Date shipped
- Quantity in gallons
- Included with or without additives

413.2 Materials

Ensure materials meet the following specifications:

TABLE 1 – BITUMINOUS MATERIALS

Material	Section
Asphalt cement, performance grade PG 58-22, PG 64-22, or PG-67-22	820.2.01
Approved non-tracking Anionic Emulsified Asphalt	822.2.01
Cationic emulsified asphalt CSS-1h, CRS-1h, CRS-2h, CRS-3, CQS-1h and other approved non-tracking cationic emulsified asphalt products listed on QPL 7	824.2.01

Use any of the materials shown in Table 1 as bituminous tack coat for work performed under Section 400 as directed by the Engineer.

413.2.01 Delivery, Storage, and Handling

General Provisions 101 through 150.

Emulsified Asphalt

Maintain all equipment used for the delivery, storage, and handling of anionic emulsified asphalt or cationic emulsified asphalt to prevent contamination of the emulsion. Transfer anionic emulsified asphalt or cationic emulsified asphalt directly to the pressure distributor from the transport tanker. Emulsified asphalt may be stored in an onsite bituminous storage tank in accordance with Note 1.

Provide and maintain temperature measuring devices to continuously monitor the temperature of anionic emulsified asphalt or cationic emulsified asphalt in storage and in the pressure distributor. Do not allow anionic emulsified asphalt or cationic emulsified asphalt to freeze.

Note 1: Asphalt emulsion that has been stored longer than 30 days from the time of initial manufacture shall be tested and approved for compliance with specified requirements prior to being used as tack coat for work performed under Section 400

413.3 Construction Requirements

413.3.01 Personnel

General Provisions 101 through 150.

413.3.02 Equipment

Provide equipment in good repair, including the following units that meet the requirements of Subsection 424.3.2, *Equipment*.

- Power broom and blower
- Pressure distributor

Provide a properly cleaned distributor to avoid contamination with incompatible materials.

413.3.03 Preparation

General Provisions 101 through 150.

413.3.04 Fabrication

General Provisions 101 through 150.

413.3.05 Construction

A. Seasonal and Weather Limitation

Do not apply tack coat if the existing surface is wet or frozen. Do not place emulsified asphalt if the air temperature in the shade is less than 40 °F (4 °C).

B. Application

Coat the entire areas to be paved with the tack coat unless directed otherwise by the Engineer. Apply tack coat with distributor spray bars instead of hand hoses, except in small areas inaccessible to spray bars.

Table 2 – Application Rates for Anionic Emulsified Asphalt or Cationic Emulsified Asphalt, gal/yd² (L/m²)		
Tack-Uses	Minimum	Maximum
New Asphaltic Concrete Pavement to New Asphaltic Concrete Pavement or Thin Lift Leveling	0.05 (0.23)	0.08 (0.36)
New Asphaltic Concrete Pavement (\leq 25 % RAP) to Aged Existing Pavement or Milled Surface	0.06 (0.27)	0.10 (0.45)
New Asphaltic Concrete Pavement ($>$ 25% RAP) to Aged Existing Pavement or Milled Surface	0.08 (0.36)	0.12 (0.54)
<ul style="list-style-type: none"> • Allow standard anionic emulsified asphalt or cationic emulsified asphalt to break per emulsion manufacturer's recommendation. Proceed with paving only after the anionic emulsified asphalt or cationic emulsified asphalt has cured to the satisfaction 		

of the Engineer.

- Do not use anionic emulsified asphalt or cationic emulsified asphalt under OGFC or PEM on interstates or limited access state routes.

Note: Application rates for PG Binder Asphalt Cement are specified in Section 400.3.03.A.3.C.

C. Temperature of Material

Apply bituminous materials within the temperature ranges specified below.

TABLE 3 – BITUMINOUS MATERIALS AND APPLICATION TEMPERATURES

Bituminous Materials	Temperature of Application °F (°C)
Asphalt cement	350 – 400 (175 – 205)
Approved non-tracking Anionic Emulsified Asphalt	140 – 180 (60 – 80)
Cationic Emulsified Asphalt CSS-1h, CRS- 1h, CRS-2h, CRS-3, CQS-1h and other approved non-tracking cationic emulsified asphalt products listed on QPL 7	140 – 180 (60 – 80)

D. Cleaning

Immediately before applying the tack coat, the entire area free of loose dirt, clay, and other foreign materials.

E. Application Rate

The Engineer will determine the application rate of the bituminous tack coat.

F. Limitations and Areas Coated

Apply only enough tack coat to the prepared road surface that can be covered with the new pavement course the same working day the tack coat is applied.

G. Maintenance and Protection

After applying a standard emulsified asphalt tack coat material, allow it to break per emulsion manufacturer's recommendation. Do not allow construction equipment or traffic on the tack. When directed by the Engineer, provide a revised paving plan when excessive tracking of the tack material by construction related traffic is evident.

413.3.06 Quality Acceptance

General Provisions 101 through 150.

413.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150 shall apply with specific consideration given to General Provision Sections 105.12, 105.14, and 105.16.

413.4 Measurement

Bituminous materials for tack coat applied and accepted are measured as outlined in Subsection 109.02, *Measurement of Bituminous Materials*.

Diluting emulsified tack coat is not ordinarily allowed except when used underneath slurry seal and approved by the Engineer. The composition of diluted emulsified tack coat defined in Subsection 427.3.05, *Construction* is measured by the gallon (liter) of diluted mix.

413.4.01 Limits

General Provisions 101 through 150.

413.5 Payment

The accepted volume of bituminous material will be paid for at the Contract Unit Price per gallon (liter) for bituminous tack coat of the type and grade and approved by the Engineer, complete in place. Payment is full compensation for preparing, cleaning, furnishing, hauling, applying material, and providing incidentals to complete the work.

Payment will be made under:

Item No. 413	Tack coat	Per gallon (liter)
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END OF SECTION 413

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Section 828 Hot Mix Asphaltic Concrete Mixtures

Delete Section 828 and substitute the following:

828.1 General Description

This specification includes the requirements for hot mix asphaltic concrete mixtures, including:

- Open-graded surface mixtures (OGFC and PEM)
- Stone Matrix Asphalt mixtures (SMA)
- Superpave mixtures
- Fine-graded (4.75 mm) mixtures

828.1.01 Definitions

The Nominal Maximum Sieve Size is one standard sieve size larger than the first sieve to retain more than ten percent of the aggregate, per AASHTO R35. Mixture types in this section are identified according to Nominal Maximum Sieve Size.

828.1.02 Related References

A. Standard Specifications

Section 400-Hot Mix Asphaltic Concrete Construction

Section 402-Hot Mix Recycled Asphaltic Concrete

Section 800—Coarse Aggregate

Section 802—Aggregates for Asphaltic Concrete

Section 819—Fiber Stabilizing Additives

Section 820—Asphalt Cement

Section 831—Admixtures

Section 882—Lime

Section 883—Mineral Filler

B. Referenced Documents

AASHTO R30

AASHTO R35

AASHTO TP 108

AASHTO T 112

AASHTO T 209

AASHTO T 245

AASHTO T 305

AASHTO T 312

AASHTO T 321

AASHTO T 324

AASHTO T 331

AASHTO T 340

SOP-2

SOP-36

GDT 1

GDT 56

GDT 63

GDT 66

GDT 114

GDT 115

GDT 123

QPL 1

QPL 2

QPL 7

QPL 26

QPL 41

QPL 77

QPL 81

828.2 Materials

A. Requirements

Use approved hot mix asphalt concrete mixtures that meet the following requirements:

1. Produce each asphalt mixture according to a Department approved Job Mix Formula and Asphalt Mix Design, see Subsection 400.1 for submittal and approval of Job Mix Formulas.
2. Ensure individual acceptance test results meet the Mixture Control Tolerances specified in the appropriate table below, Subsections 828.2.01 through 828.2.04.
3. Ensure the Engineer approves all materials used to prepare and place the mixtures before incorporating them into the Work. Use only the ingredients listed in the approved Asphalt Mix Design and Job Mix Formula. For virgin aggregates use sources meeting the requirements of Section 802 and are listed in QPL 1 or QPL 2; for mixes in which local sand is permitted, use the approved sand source identified in the mix design. For mixtures containing Reclaimed Asphalt Pavement (RAP), use only RAP from the approved stockpile identified in the mix design. Use asphalt cement meeting the requirements of Section 820, from a source listed in QPL 7.
4. Obtain approved Open-Graded Friction Course (OGFC), Porous European Mix (PEM), Stone Matrix Asphalt Mix (SMA), Superpave and 4.75 mm mix designs from a mix design laboratory certified by the Department. Ensure all SMA mix designs are designed in accordance with GDT-123 ("Determining the Design Proportions of Stone Matrix Asphalt Mixtures"). Ensure all OGFC and PEM mix designs are designed in accordance with GDT 114 "Determining Optimum Asphalt Content for Open-graded Bituminous Paving Mixtures and Sub- section 828.2.01. Ensure OGFC, PEM and SMA mix designs are verified and approved by the Department prior to use. Batched materials, and gyrated specimens where applicable, for required mix design verification are to be submitted with the initial mix design approval request. Ensure Superpave and 4.75 mm mix designs are designed in accordance with SOP-2 ("Control of Superpave Bituminous Mixture Designs") and are approved by the Department as provided therein. Ensure all mixes are designed by a laboratory and technician certified in accordance with SOP-36, ("Certification of Laboratories and Personnel for Design of SMA and Superpave Asphalt Mixtures"). Mix Design Technicians certified to design SMA mixtures are approved to design OGFC and PEM mixtures. The Department approves submitted mix designs for compliance with specified requirements and laboratory performance test data. The contractor is responsible for the placement in accordance with Sections 400 and 402 for the GDOT approved mix designs.

Use only mixtures composed of the aggregate groups and blends indicated in the Proposal and Plans by their pay item designations, defined as follows:

TABLE 1 – AGGREGATE GROUPS

Pay Item Designation	Allowable Aggregate Groups
Group I or II	Group I, Group II, or Blend I
Group II only	Group II only
Blend I	Either 100% Group II material or a blend of Group I and Group II. Do not use Group I material for more than 60%, by weight, of the total aggregate nor more than 50%, by weight, of the coarse aggregate fraction.

5. For patching or leveling use Group I, Group II, or Blend I. Mix types for patching and leveling are specified in Subsection 400.3.03.B.
6. Include lime (hydrated lime) from an approved source and meeting the requirements of Section 882 in all paving courses except as otherwise provided in the Contract. For a list of approved sources of lime, see QPL 41.
 - a. Add lime to each mixture at the rate prescribed in the approved mix design.
 - b. Ensure mix designs using only virgin aggregate include lime at a minimum rate of 1.00% of the total dry aggregate weight. Ensure mix designs using RAP include lime at a minimum rate equal to 1.00% of the virgin aggregate fraction plus 0.50% of the aggregate in the RAP fraction.
 - c. Add more lime or add lime plus an approved Heat-Stable Anti-Stripping Additive meeting the requirements of Section 831, if necessary to meet requirements for mixture properties, and pursuant to an approved mix design. However, the Department will not make additional payment for these materials. For a list of sources of Heat-Stable Anti-Stripping Additives, see QPL 26.
 - d. Where specifically allowed in the contract and pay item on local assistance, airport, and parking lot projects, an approved Heat-Stable Anti-Stripping Additive meeting the requirements of Section 831 may be substituted for hydrated lime. Ensure the mix gradation is adjusted to replace the lime with an equivalent volume of fines passing the 0.075 mm sieve. Add Heat-Stable Anti-stripping Additive at a minimum rate of 0.5 percent of the asphalt cement portion.
7. Use performance grade PG 64-22 or PG 67-22 asphalt cement in all mix designs and mixtures except as follows:

- a. The State Materials Engineer will determine the performance grade to be used, based on Table 2 – Binders Selection Guideline for Reclaimed Asphalt Pavement (RAP) Mixtures, AASHTO M323 and laboratory testing results as required in Section 828.2.B for mixtures containing $\geq 25\%$ equivalent binder replacement for RAP/RAS mixtures.
 - b. Use only grade PG 76-22, excluding shoulder construction in the following mixes: all SMA, 12.5 mm PEM, 9.5 mm and 12.5 mm OGFC, 12.5 mm Superpave, on projects with two-way ADT greater than 25,000; and in all mixtures for which polymer-modified asphalt is specified in the pay item.
8. Use of local sand is restricted as follows:
- a. Do not place mixtures containing local sand on the traveled way of the mainline or ramps of the Interstate System. Mixtures with local sand may be used for shoulder construction on these facilities.
 - b. Ensure local sand will not constitute more than 20 % of the total aggregate weight of any mix design or production mix.
 - c. Subject to the above limits, 19 mm, 12.5 mm, and 9.5 mm Superpave mix designs and 4.75 mm mix designs containing local sand may be used on projects with a current ADT not exceeding 4,000 VPD providing that all performance testing meets specified requirements.
 - d. 25 mm Superpave mix designs containing not more than 20 % local sand may be used on all facilities except the main line and ramps of the Interstate System.
 - e. Obtain local sand for use in asphalt mixtures from a source approved by the Department.
 - f. Approval of local sand sources: The Department will sample, test, and approve sources of local sand. Ensure local sand contains no more than 7.0% clay by weight and is free of foreign substances, roots, twigs, and other organic matter. Ensure sand is free of clay lumps, as determined by AASHTO T 112, and has a sand equivalent value exceeding 25%, as determined by GDT 63.

B. Fabrication

1. Design procedures: For all Superpave and 4.75 mm mixes, ensure conformance with the Superpave System for Volumetric Design (AASHTO T 312 and AASHTO R30), as adapted in SOP-2. Ensure Superpave mixes are designed at a design gyration number (N_{des}) of 65 gyrations and initial gyration number (N_{ini}) of 6 gyrations. Ensure 4.75 mm mixes, (N_{des}) are designed at 50 gyrations, and (N_{ini}) at 6 gyrations. Open-graded mix designs will be designed

by the Department in accordance with GDT 114. In all cases, the procedure for measuring Maximum Specific Gravity (G_{mm}) is AASHTO T 209. In addition to gradation and volumetric analysis, ensure mix designs include the following performance tests, as applicable.

2. Performance Test:

- a. Permeability test: Ensure Superpave and Stone Matrix mix designs include testing according to GDT -1 Measurement of Water Permeability of Compacted Asphalt Paving Mixtures. Ensure specimen air voids for this test are $6.0 \pm 1.0\%$. The average permeability of three specimens may not exceed 3.60 ft per day (125×10^{-5} cm per sec).
- b. Moisture Susceptibility test: For all mixtures excluding OGFC and PEM mixtures, fabricate and test specimens in accordance with GDT 66, when required by the Office of Materials and Testing due to visible signs of stripping in laboratory fabricated or plant produced asphaltic concrete mixtures. GDT 66 may also be used to evaluate moisture damage susceptibility for virgin asphaltic concrete 4.75 mm and 9.5 mm Types I and II Superpave surface mixtures failing to meet GDOT specified Hamburg Stripping Inflection Point requirements. These mixtures must comply with Hamburg Wheel Tracking Test rutting requirements. Ensure specimen air voids for this test are $7.0 \pm 1.0\%$ for all mixes excluding Stone Matrix mixes. Ensure specimen air voids for this test are $6.0 \pm 1.0\%$ for Stone Matrix mixes. For all mix types, the minimum tensile splitting ratio is 0.80, except a tensile splitting ratio of no less than 0.70 may be acceptable if all individual strength values exceed 100 psi (690 kPa). Ensure individual splitting strength of the three conditioned and three controlled samples are not less than 60 psi (415 kPa). Ensure retention of coating as determined by GDT 56 is not less than 95%.
- c. Hamburg Wheel-Tracking Test for rutting and moisture susceptibility test: Ensure mix designs of all mix types except Open-graded Surface Mixes (OGFC and PEM), and Open-graded Crack Relief Interlayer (OGI) mix, include testing in accordance with AASHTO T 324. Ensure specimen air voids for this test are $7.0 \pm 1.0\%$ for all mix types, other than SMA mixes and at a testing temperature of 50°C (122°F). Ensure specimen air voids for this test are $6.0 \pm 1.0\%$ for SMA mixtures and at a testing temperature of 50°C (122°F). Use the testing and acceptance criteria established in Table 2.

TABLE 2 – HAMBURG WHEEL TRACKING DEVICE TESTING AND ACCEPTANCE CRITERIA

Binder Performance Grade (PG)	Mix Type	Number of Passes	Maximum Rut Depth	Stripping Inflection Point
PG 64-22 and PG 67-22	4.75 mm, 9.5 mm SP Type I, and 9.5 mm SP Type II	15,000	≤ 12.5 mm	> 15,000
PG 64-22 and PG 67-22	12.5 mm SP, 19 mm SP and 25 mm SP	20,000	≤ 12.5 mm	> 20,000
PG 76-22	All Mix types	20,000	≤ 12.5 mm	> 20,000

Tested specimens shall be inspected for any visible signs of stripping and any mix design's tested specimens that fail to maintain 95% of asphalt cement coating, as described in GDT 56 section D.2.d, will be required to meet specified requirements for GDT 66 as detailed in 828.2.B.2.b.

- d. Fatigue testing: The Department may verify dense-graded mix designs by fatigue testing according to AASHTO T 321 or other procedure approved by the Department.
- e. Abrasion Loss of Asphaltic Mixture testing: The Department will evaluate Open-graded Friction Course, Porous European Mix and SMA Types in accordance with AASHTO TP 108. In accordance with AASHTO T 312, compact OGFC and PEM specimens using the Superpave Gyrator Compactor to a specimen height of 115 ± 5 mm and specimen air void content range specified in Sub-section 828.2.01.A. Specimen air voids for the SMA specimens shall be $6.0\% \pm 1.0\%$ with a specimen height of 115 ± 5 mm. Bulk Specific Gravity of the compacted open-graded mixtures shall be determined using Corelok vacuum-sealing device in accordance with AASHTO T 331. Individual specimen and average of three specimens for OGFC and PEM and SMA shall be reported for mix design acceptance.

C. Acceptance

See Subsection 106.03 and Section 400. Ensure individual test results meet the Mixture Control Tolerances listed in Subsections 828.2, 828.2.01, 828.2.02, 828.2.03, or 828.2.04, whichever applies with the following exception. Ensure field verification results for rutting susceptibility tests performed on laboratory fabricated and/or roadway cores obtained from asphalt plant produced mixtures meet specified requirements for AASHTO T 324 as detailed in Subsection

828.2.B.2.c. All GDOT approved mix designs are required to have full field mix design verifications, using plant produced mixture, sampled by the contractor and submitted to the applicable GDOT laboratory (Central or District) at a minimum of once per two years. Field mix design verification results that fail to comply with performance testing specified in Subsection 828.2.B will require a complete laboratory mix design verification, to be completed by the original mix designer, for continued use of that design. If a mix design has not been produced within two years, a full field mix design verification will be sampled by the contractor and submitted to the applicable GDOT laboratory (Central or District) on the first Lot produced thereafter. Any mix design that fails to meet performance test requirements established in Subsection 828.2.B, using laboratory fabricated specimens due to failing field mix design results, may subject that mix design to invalidation after the field mix design verification results are confirmed with a second field mix design verification. Field mix design verifications as specified in Section 402, Section 400, SOP 2 and GSP 21, are not precluded by the requirements specified herein.

D. Materials Warranty

See General Provisions 101 through 150.

828.2.01 Open-Graded Surface Mixtures

A. Requirements

Produce the mixture according to an approved mix design and Job Mix Formula. Ensure Open-Graded Surface Mixtures meet the following mixture control tolerances and mix design criteria:

Sieve Size	Mixture Control Tolerance, %	Design Gradation Limits, % Passing		
		9.5 mm OGFC	12.5 mm OGFC	12.5 mm PEM
3/4 in. (19 mm) sieve	±0.0		100*	100*
1/2 in. (12.5 mm) sieve	±6.1	100*	85-100	80-100
3/8 in. (9.5 mm) sieve	±5.6	85-100	55-75	35-60
No. 4 (4.75 mm) sieve	±5.7	20-40	15-25	10-25
No. 8 (2.36 mm) sieve	±4.6	8-15	5-15	5-10
No. 200 (75 µm) sieve	±2.0	4 - 6	3-5	2-4
Range for % AC	±0.4	6.25-7.25	6.00-7.25	5.75-7.00
Range for Mix Design Air Voids %		15 - 18	15 - 20	18 - 22
Class of stone (<u>Section 800</u>)		"A" only	"A" only	"A" only

Drain-down (AASHTO T305), %	<0.3	<0.3	<0.3
Abrasion Loss % (AASHTO TP 108)	Report	Report	Report

* Mixture control tolerance is not applicable to this sieve for this mix.

1. In 12.5 mm and 9.5 mm OGFC and 12.5 mm PEM mixes, use only PG 76-22 asphalt cement (specified in Section 820).
2. Ensure all OGFC and PEM mixes include a stabilizing fiber of the type (cellulose or mineral) specified in the mix design and meeting the requirements of Section 819. Ensure the dosage rate is as specified in the mix design and sufficient to prevent drain-down exceeding the above tolerance.

B. Fabrication

See Section 400.

828.2.02 Stone Matrix Asphalt Mixtures

A. Requirements

Produce the mixture according to an approved mix design and Job Mix Formula. Ensure Stone Matrix Asphalt mixtures meet the following mixture control tolerances and mix design criteria:

Sieve Size	Mixture Control Tolerance	Design Gradation Limits, Percent Passing		
		9.5 mm SMA	12.5 mm SMA	19 mm SMA
1 in. (25 mm) sieve	±0.0			100*
3/4 in. (19 mm) sieve	±7.0	100*	100*	90-100
1/2 in. (12.5 mm) sieve	±6.1	98-100**	85-100	44-70
3/8 in. (9.5 mm) sieve	±5.6	70-100	50-75	25-60
No. 4 (4.75 mm) sieve	±5.7	28-50	20-28	20-28
No. 8 (2.36) mm sieve	±4.6	15-30	16-24	15-22
No. 50 (300 µm) sieve	±3.8	10-17	10-20	10-20
No. 200 (75 µm) sieve	±2.0	8-13	8-12	8-12
Range for % AC (Note 1)	±0.4 (Note 2)	6.0-7.5	5.8-7.5	5.5-7.5

Design optimum air voids (%)	3.5 ±0.5	3.5 ±0.5	3.5 ±0.5
% aggregate voids filled with AC (VFA)	70-90	70-90	70-90
Tensile splitting ratio after freeze-thaw cycle GDT-66	≥ 80%	≥ 80%	≥ 80%
Drain-down (AASHTO T305), %	<0.3	<0.3	<0.3
Abrasion Loss % (AASHTO TP 108)	Report	Report	Report

*Mixture control tolerance is not applicable to this sieve for this mix.

**Mixture control tolerance is $\pm 2.0\%$ for this sieve for 9.5 mm SMA mixes placed at spread rates greater than 135 lb./yd². For 9.5 mm SMA mixes placed at spread rates of 135 lb./yd² or less, 100 % passing is required on this sieve.

Note 1: Range for % AC is Original Optimum AC (OOAC) at 35 gyrations (Gyratory compactor) or 50 blows (Marshall compactor) prior to Corrected Optimum AC (COAC) calculation detailed in GDT 123 (Appendix A)

Note 2: Quality Acceptance Test Results for AC content that deviate $> \pm 0.3\%$ from the approved Job Mix Formula (JMF) consistently over three lots may subject the mix to a revised AC content on project JMF at the discretion of the State Materials Engineer based on statistical trend.

1. Ensure SMA mixtures are compacted at 35 gyrations with the Superpave Gyratory compactor or 50 blows with the Marshall compactor.
2. Ensure SMA mixtures contain mineral filler and fiber stabilizing additives and meet the following requirements:
 - a. Asphalt cement grade PG-76-22 (specified in Section 820) is required in all SMA mixtures.
 - b. Aggregates for SMA meet the requirements of Subsection 802.2.02.A.3.
 - c. Use the approved mineral filler specified in the mix design and meeting the requirements of Section 883 Approved sources of mineral filler are listed in QPL 81.

Use the approved Fiber Stabilizing Additive of the type (cellulose or mineral) specified in the mix design and meeting the requirements of Section 819. Approved sources of Fiber Stabilizing Additive are listed in QPL 77. The dosage rate will be as specified in the mix design and sufficient to prevent drain-down exceeding the above tolerance.

B. Fabrication

See Section 400.

828.2.03 Superpave Asphalt Concrete Mixtures

A. Requirements for Superpave Mixtures (except Parking Lot Mixtures)

Produce the mixture according to an approved mix design and Job Mix Formula. Ensure Superpave Asphalt Concrete mixtures meet the following mixture control tolerances and mix design limits:

1. Gradation limits for Superpave mixtures are as follows:

Sieve Size	Mixture Control Tolerance	Design Gradation Limits, Percent Passing				
		9.5 mm Superpave Type I	9.5 mm Superpave Type II	12.5 mm Superpave (Note 1)	19 mm Superpave	25 mm Superpave
1½ in. (37.5 mm)						100*
1 in. (25.0 mm)	± 8.0			100*	100*	90-100
¾ in. (19.0 mm)	±8.0**	100*	100*	98-100****	90-100	55-89**
½ in. (12.5 mm)	±6.0***	98-100****	98-100****	90-100	60-89***	50-70
3/8 in. (9.5 mm)	±5.6	90-100	90-100	70-89	55-75	
No. 4 (4.75 mm)	±5.6	65-85	55-75			
No. 8 (2.36 mm)	±4.6	48-55	42-47	38-46	32-36	30-36
No. 200 (75 µm)	±2.0	5.0-7.0	5.0-7.0	4.5-7.0	4.0-6.0	3.5-6.0
Range for % AC (Note 3)	± 0.4 (Note 2)	5.50-7.25	5.25-7.00	5.00-6.25	4.25-5.50	4.00-5.25

*Mixture control tolerance is not applicable to this sieve for this mix.

**Ensure mixture control tolerance is within ± 10.0% for this sieve for 25 mm Superpave.

***Ensure mixture control tolerance is within ± 8.0% for this sieve for 19 mm Superpave.

****Ensure mixture control tolerance is within ± 2.0% for this sieve for 12.5 mm and 9.5 mm mixes.

Note 1: Use PG 76-22 in 12.5 mm Superpave, excluding shoulder construction, on all projects with ADT greater than 25,000 as detailed in the Contract Pay Item.

Note 2: Quality Acceptance Test Results for AC content deviating > ± 0.3 % from the approved Job Mix Formula (JMF) consistently over three Lots may subject the mix to a revised AC content on the project JMF at the discretion of the State Materials Engineer based on statistical trend.

Note 3: Range for % AC is Original Optimum AC (OOAC) at 65 gyrations prior to the Corrected Optimum

AC (COAC) calculation detailed in SOP 2 (Appendix D).

2. Volumetric limits are as follows:

Design Parameter	Mix Type	Limits
% of Max. Specific Gravity (Gmm) at design gyrations, (Ndes)	All	96%
% Gmm at the initial number of gyrations, Ni	All	91.5% maximum
	9.5 mm Type I	Min. 72; Max. 80
	9.5 Type II and 12.5 mm	Min. 72; Max. 76
% voids filled with asphalt (VFA) at Ndes	19 mm	Min. 71; Max 76
	25 mm	Min. 69; Max 76
Fines to effective asphalt binder ratio (F/Pbe)	9.5 mm Type I	0.6 to 1.4
	All other types	0.8 to 1.6
Minimum Film Thickness (microns)	All	> 7.00
Minimum % Voids in Mineral Aggregate (VMA) Note: VMA shall be calculated using the effective specific gravity of the aggregate (Gse). See SOP-2SP.	25 mm	13.0
	19 mm	14.0
	12.5 mm	15.0
	9.5 Type I	16.0
	9.5 Type II	16.0

B. Requirements for Superpave Parking Lot Mixes (NOT FOR STANDARD HIGHWAY/STREET PAVING)

1. Surface layers for parking facilities:

Sieve Size	Mixture Control Tolerance	Design Gradation Limits, Percent Passing		
		4.75 mm Mix	9.5 mm Superpave Type I	9.5 mm Superpave Type II

1 in. (25.0 mm) sieve	±8.0			
3/4 in. (19.0 mm) sieve	±8.0**		100*	100*
1/2 in. (12.5 mm) sieve	±6.0	100*	98-100****	98-100****
3/8 in. (9.5 mm) sieve	±5.6	90-100	90-100	90-100
No. 4 (4.75 mm) sieve	±5.6	75-95	65-85	55-75
No. 8 (2.36 mm) sieve	±4.6	60-65	48-55	42-47
No. 50 (300 µm) sieve	+3.8	20-50		
No. 200 (75 µm) sieve	±2.0	4-12	5.0-7.0	5.0-7.0
Range for Total AC	+ 0.4	6.00 - 7.50	5.50 - 7.25	5.25 - 7.00

2. Subsurface layers for parking facilities:

Sieve Size	Mixture Control Tolerance	Design Gradation Limits, Percent Passing		
		12.5 mm Superpave	19 mm Superpave	25 mm Superpave
				100*
1 in. (25.0 mm) sieve	±8.0	100*	100*	90-100
3/4 in. (19.0 mm) sieve	±8.0**	98-100****	90-100	55-89**
1/2 in. (12.5 mm) sieve	±6.0***	90-100	60-89***	50-70
3/8 in. (9.5 mm) sieve	±5.6	70-89	55-75	
No. 8 (2.36 mm) sieve	±4.6	38-46	32-36	30-36
No. 200 (75 µm) sieve	±2.0	4.5-7.0	4.0-6.0	3.5-6.0
Range for Total AC	+ 0.4	5.00 - 6.25	4.25 - 5.50	4.00 - 5.25

All * and notes apply to both 828.2.03.B.1 and 828.2.03.B.2.

*Mixture control tolerance is not applicable to this sieve for this mix.

**Ensure mixture control tolerance is within ±10.0% for this sieve for 25 mm Superpave mixes.

*** Ensure mixture control tolerance is within ±8.0% for this sieve for 19 mm Superpave mixes.

****Ensure mixture control tolerance is within $\pm 2.0\%$ for this sieve for 12.5 mm and 9.5 mm Superpave mixes.

Note 1: Quality Acceptance Test Results for AC content deviating $> \pm 0.3\%$ from the approved Job Mix Formula (JMF) consistently over three Lots may subject the mix to a revised AC content on the project JMF at the discretion of the State Materials Engineer based on statistical trend.

Note 2: Range for % AC is Original Optimum AC (OOAC) at 65 gyrations prior to the Corrected Optimum AC (COAC) calculation detailed in SOP 2 (Appendix D).

3. Volumetric limits for parking facilities are as follows:

Design Parameter	Mix Type	Limits
% of Max. Specific Gravity (Gmm) at design gyrations, Ndes)	All	96%
% Gmm at the initial number of gyrations, Ni	All	91.5 % maximum
% voids filled with asphalt (VFA) at Ndes	9.5 mm Type I	Min. 72; Max. 80
	9.5 Type II and 12.5 mm	Min. 72; Max. 78
	19 and 25 mm	Min. 71; Max 76
Fines to effective asphalt binder ration (F/Pbe)	9.5 mm Type I	0.6 to 1.4
	All other types	0.8 to 1.6
Minimum Film Thickness (microns)	4.75 mm	> 6.00
	All other types	> 7.00
Minimum % Voids in Mineral Aggregate (VMA)	25 mm	13.0
	19 mm	14.0
Note: VMA shall be calculated using the effective specific gravity of the aggregate (Gse). See <u>SOP-2</u>	12.5 mm	15.0
	9.5 mm Types I, II	16.0

C. Fabrication

See Section 400.828.2.04 Fine-Graded Mixtures

A. Requirements

Produce the mixture according to an approved mix design and Job Mix Formula. Ensure that fine-graded mixtures meet the following mixture control tolerances and design limits:

ASPHALTIC CONCRETE - 4.75 mm Mix		
Sieve Size	Mixture Control Tolerance	Design Gradation Limits, % passing
1/2 in. (12.5 mm) sieve*	±0.0	100*
3/8 in. (9.5 mm) sieve	±5.6	90-100
No. 4 (4.75 mm) sieve	±5.7	75-95
No. 8 (2.36 mm) sieve	±4.6	60-65
No. 50 (300 μ m) sieve	±3.8	20-50
No. 200 (75 μ m) sieve	±2.0	4-12
Range for % AC	±0.4	6.00 – 7.50
Design optimum air voids (%)		4.0 – 7.0
% Aggregate voids filled with AC		60 - 80
Minimum Film Thickness (microns)		> 6.00

* Mixture control tolerance is not applicable to this sieve for this mix.

Note 1: Quality Acceptance Test Results for AC content deviating $> \pm 0.3$ % from the approved Job Mix Formula (JMF) consistently over three Lots may subject the mix to a revised AC content on the project JMF at the discretion of the State Materials Engineer based on statistical trend.

Note 2: Range for % AC is Original Optimum AC (OOAC) at 50 gyrations prior to the Corrected Optimum AC (COAC) calculation detailed in SOP 2 (Appendix D).

B. Fabrication

See Section 400.

C. Acceptance

See Subsection 106.3 and Section 400. Ensure individual test results meet the Mixture Control Tolerances listed in Subsections 828.2, 828.2.01, 828.2.02, 828.2.03, 828.2.04, whichever applies.

D. Materials Warranty

See General Provisions 101 through 150.

END OF SECTION 828

Section 310 Graded Aggregate Construction

310.1 General Description

This work includes constructing a base, subbase or shoulder course composed of mineral aggregates. Construct according to these Specifications and to the lines, grades, thickness, and typical cross-sections shown on the Plans or established by the Engineer.

The provisions of Section 300 apply to this work.

310.1.01 Definitions

General Provisions 101 through 150.

310.1.02 Related References

A. Standard Specifications

Section 105—Control of Work

Section 300—General Specifications for Base and Subbase Courses

Section 412—Bituminous Prime

Section 815—Graded Aggregate

Section 821—Cutback Asphalt

Section 823—Cutback Asphalt Emulsion

B. Referenced Documents

AASHTO T 180

GDT 21

GDT 59

310.1.03 Submittals

General Provisions 101 through 150.

310.2 Materials

Ensure that materials meet the requirements of the following Specifications:

Material	Section
Graded aggregate	815
Cutback asphalt, RC-30, RC-70, RC-250 or MC-30, MC-70, MC-250	821.2.01
Cutback Asphalt Emulsion, CBAE-2	823.2.01
Blotter material (sand)	412.3.05.G.3

310.2.01 Delivery, Storage, and Handling

General Provisions 101 through 150.

310.3 Construction Requirements

310.3.01 Personnel

General Provisions 101 through 150.

310.3.02 Equipment

Provide equipment in satisfactory condition for proper construction of the base, subbase or shoulder course. Use any applicable equipment specified in Subsection 412.3.02, "Equipment" for Bituminous Prime.

310.3.03 Preparation

Prepare the subgrade or subbase as specified in Subsection 300.3.03.C, "Preparing the Subgrade" or Subsection 300.3.03.D, "Preparing the Subbase." Place graded aggregate materials only on dry, thawed subgrade or subbase.

310.3.04 Fabrication

General Provisions 101 through 150.

310.3.05 Construction

A. Placing Material

Use the central plant mix method unless producing aggregates (from an approved source or deposit) that conform to the requirements of Section 815.

Use the following steps to mix base and spread subbase or shoulder course.

1. Mixing

When blending two sizes of aggregate, proportion the aggregate and water, if needed, into the central plant. Mix until producing a homogeneous and uniform mixture.

• Spreading

To obtain the specified thickness, uniformly spread materials to the proper depth with a mixture spreader. Do not use materials containing frost or frozen particles.

a. One-Course Construction

Lay one course to a maximum thickness of 8 in (200 mm) compacted.

b. Multiple-Course Construction

If the thickness of the base, subbase or shoulder course exceeds 8 in (200 mm), construct it in 2 or more courses of equal thickness.

B. Compacting Material

Use the following steps to compact and finish a base, subbase, or shoulder course.

- Moisture Content

Ensure that the moisture content of materials is uniformly distributed and allows compaction to the specified density.

Unless approved by the Office of Materials, no graded aggregate will be shipped to a project when the moisture content of the material exceeds two percent of optimum moisture.

- Compaction

After shaping the spread material to line, grade, and cross-section, roll to uniformly compact the course. If using Group 1 aggregate, roll to at least 98 percent of maximum dry density. If using Group 2 aggregate, roll to at least 100 percent of the maximum dry density.

If using graded aggregate mixtures composed of either group as base for paved shoulders 6 ft (1.8 m) wide or less, compact to at least 96 percent of the maximum dry density.

Regardless of compaction, ensure that the compacted base is sufficiently stable to support construction equipment without pumping. If the base material is unstable from too much moisture, dry and rework the base material. Dry and rework the underlying subgrade, if necessary.

a. One-Course Construction

- 1) After compaction, shape to the required grade, line, and cross- section.
- 2) Add water as necessary to develop the proper moisture content.
- 3) Roll until the surface is smooth, closely knit, and free of cracks.
- 4) Correct all defects according to Subsection 300.3.06.B, "Repairing Defects."

b. Multiple-Course Construction

- 1) After compacting the first course, shape the surface again to line, grade, and cross section.
- 2) Add water as necessary to develop the proper moisture content.
- 3) Spread and compact the second and any succeeding courses without rolling the first course again.
- 4) Finish the surface according to the procedure specified for one-course construction.

c. Irregular Areas

In places inaccessible to the roller, obtain the required compaction with mechanical tampers approved by the Engineer. Apply the same density requirements as stated above in Subsection 310.3.05.B.

C. Finishing

Finish the surface of the subbase for Portland cement concrete pavement or the base of asphaltic concrete pavement with automatically controlled screed equipment when required by Subsection 300.3.02.H, "Fine Grading Machine" of the Specifications. Furnish, install, and maintain the sensing wires needed to control the finish operation as a part of the Pay Item. When automatically controlled screed equipment is not required, fine grading with motor graders is permitted.

Finish immediately after the placing and compacting operations. After finishing, compact the subbase again, according to Subsection 310.3.05.B, "Compacting Material."

D. Protecting the Base, Subbase or Shoulders

Maintain the course until the Engineer determines that it has cured sufficiently and is ready to prime. Maintain by additional wetting, rolling, and blading as necessary. Repair any defects according to Subsection 300.3.06.B, "Repairing Defects."

These protection measures do not relieve the Contractor of maintaining the Work until final acceptance as specified in Section 105.

E. Priming the Base

Apply bituminous prime according to Section 412 unless using:

Graded aggregate base under Portland cement concrete pavement

Graded aggregate base under asphaltic concrete 5 in (125 mm) or more in total thickness

310.3.06 Quality Acceptance

A. Compaction Tests

1. Determine the maximum dry density from representative samples of compacted material, according to AASHTO T180, Method D.
2. Determine the in-place density of finished courses according to GDT 21 or GDT 59, where applicable.

B. Finished Surface

Check the finished surface of the base, subbase, or shoulder course as follows:

1. Check the longitudinal surface using a 15 ft (4.5 m) straightedge parallel to the centerline.
2. Check the transverse surface by using one of the following tools:
 - A template, cut true to the required cross-section and set with a spirit level on non-superelevated sections A system of ordinates, measured from a stringline
 - A surveyor's level

3. Ensure that ordinates measured from the bottom of the template, stringline, or straightedge, to the surface do not exceed 1/4 in (6 mm) at any point. Rod readings shall not deviate more than 0.02 ft (6 mm) from required readings.
4. Correct any variations from these requirements immediately according to Subsection 300.3.06.B, "Repairing Defects."

C. Thickness Tolerances

1. Thickness Measurements

- a. Thickness requirements apply to shoulder construction where the Plans specify a uniform thickness, or where the shoulders will be surfaced.
- b. Determine the thickness of the base, subbase, or shoulder course, by making as many checks as necessary to determine the average thickness.

2. Deficient Thickness

- a. If any measurement is deficient in thickness more than 1/2 in (13 mm), make additional measurements to determine the deficient area.
- b. Correct any area deficient between 1/2 in (13 mm) and 1 in (25 mm) to the design thickness by using one of the following methods according to these Specifications:

Add additional quantities of the same materials and reconstruct to the required thickness

Leave in place and accept payment for the materials and area at ½ the Contract Unit Price for the deficient area.

- A. Correct any area deficient in thickness by more than 1 inch (25 mm) by adding additional quantities of the same material and reconstructing to the required thickness in accordance with these Specifications.
- B. If payment is made by the ton (megagram), payment for additional material to correct deficiencies will be made at the Contract Unit Price with no additional cost to the Department for scarification, mixing or compaction.
- C. If payment is made by the square yard (meter), no payment will be made for additional material required to correct deficiencies or for reconstructing deficient work.

1. Average Thickness

- a. The average thickness per linear mile (kilometer) is determined from all measurements within the mile (kilometer) increments except the areas deficient by more than 1/2 in (13 mm) and not corrected.
- b. The average thickness shall not exceed the specified thickness by more than 1/2 in (13 mm).

- c. If the basis of payment is per ton (megagram), and the average thickness for any mile (kilometer) increment exceeds the allowable 1/2 in (13 mm) tolerance, the excess quantity in that increment will be deducted from the Contractor's payments.
- d. The excess quantity is calculated by multiplying the average thickness that exceeds the allowable 1/2 in (13 mm) tolerance by the surface area of the base, subbase, or shoulder.
- e. If the basis of payment is per square yard (meter), no deduction will be made for excess thickness.

310.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

310.4 Measurement

A. Graded Aggregate

Where specified for payment by the ton (megagram), graded aggregate base, subbase or shoulder materials are measured in tons (megagrams), mixed and accepted. When hauling material to the roadway, the actual weight of each loaded vehicle is determined with an approved motor truck scale.

Where specified for payment by the square yard (meter) for a certain thickness, the surface length is measured along the centerline, and the width is specified on the Plans. Measure irregular areas, such as turnouts and intersections, by the square yard (meter).

B. Bituminous Prime

Bituminous prime is not measured for separate payment.

310.4.01 Limits

General Provisions 101 through 150.

310.5 Payment

A. Graded Aggregate

Graded aggregate base, subbase, or shoulder course will be paid for at the Contract Unit Price per ton (megagram) or per square yard (meter), complete, in place, and accepted. This payment shall be full compensation for:

- Materials
- Shaping and compacting the existing roadbed Loading, hauling, and unloading
- Crushing and processing Mixing
- Spreading
- Watering
- Compacting and shaping Maintenance

- Priming, when required
- All incidentals necessary to complete The Work

Payment will be made under:

Item No. 310	Graded aggregate base course, 12" — including material	Per square yard (meter)
Item No. 310	GAB 6" (Pavement Repair) incl hauling and install	Per square yard (meter)

310.5.01 Adjustments

General Provisions 101 through 150.

END OF SECTION 310

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Section 412 Bituminous Prime

Replace Section 412 with the following:

412.1 General Description

This work includes preparing and treating an existing surface with bituminous material and blotter material, if required. Treat the surface according to these specifications and conform to the lines shown on the plans or established by the Engineer.

412.1.01 Definitions

General Provisions 101 through 150.

412.1.02 Related References

A. Standard Specifications

Section 424 – Bituminous Surface Treatment

Section 821– Cutback Asphalt

A. Referenced Documents

General Provisions 101 through 150.

412.1.03 Submittals

General Provisions 101 through 150.

412.2 Materials

Unless otherwise specified, select the types of bituminous materials. The Engineer will determine the grade of materials to be used. The specifications for the bituminous materials include:

Material	Section
Cutback Asphalt, RC-30, RC-70, RC-250 or MC-250, MC-30, or MC-70	821.2.01
Emulsified Asphalt *AEP, EAP-1	822.2.01
Cationic Emulsified Asphalt *C-AEP,	824.2.01
Blotter Material (Sand)	412.3.05.G.3

Note: *Approved for use as Prime when used in conjunction with Section 315 – Cement Stabilized Reclaimed Base Construction (CSRB).

412.2.01 Delivery, Storage, and Handling

General Provisions 101 through 150.

412.3 Construction Requirements

This work includes preparing and treating an existing surface with bituminous material and blotter material, if required. Treat the surface according to these specifications and conform to the lines shown on the plans or established by the Engineer.

412.3.01 Personnel

General Provisions 101 through 150.

412.3.02 Equipment

Provide equipment that is in good repair, including at least the following units that meet the requirements of Subsection 424.3.02, *Equipment*.

- Pressure distributor
- Power broom and blower
- Aggregate spreader (if required)
- Pneumatic-tired roller

412.3.03 Preparation

See Subsection 412.3.05.B, *Condition of Surface*.

412.3.04 Fabrication

General Provisions 101 through 150.

412.3.05 Construction

General Provisions 101 through 150.

Prime the following bases and other areas:

- Cement or lime stabilized bases or sub-bases, regardless of pavement thickness
- Soil or aggregate bases or sub-bases on which bituminous surface treatment will be placed
- Soil or aggregate bases or sub-bases on which less than 5 in. (125 mm) total thickness of hot mix asphaltic concrete will be placed

Prime is not required on driveway construction and paved shoulders.

A. Weather Limitations

Do not apply bituminous prime under any of these conditions:

- Surface is wet.
- Air temperature is below 40 °F (4 °C) in the shade.
- Rain is imminent.
- Weather conditions may prevent proper prime coat construction.

B. Condition of Surface

Ensure that the surface to which the prime is to be applied has been finished to the line, grade, and cross-section specified.

Ensure that the surface is uniformly compacted and bonded. Correct surface irregularities according to the specifications for the construction being primed.

C. Cleaning

Remove from the road loose material, dust, caked clay, and other material that may prevent bonding of the prime with the surface. Use power sweepers or blowers the full width of the prime and 2 ft. (600 mm) more on each side. Where necessary, sweep by hand.

D. Moisture

Ensure that the surface is only slightly damp. If the surface is too wet, allow it to dry. If it is too dry, the Engineer may require that it be sprinkled lightly just before priming.

E. Temperature and Surface Texture

The surface texture and condition of the surface determine the bituminous material grades to be used.

The following table shows the bituminous material grades and application temperatures as they are applied to various surface textures.

Base Texture	Tight	Average	Open
Materials and Grade			
Cutback Asphalt	MC-30; RC-30	RC-70 or MC-70	RC-250 or MC-250
Emulsified Asphalt	*AEP, EAP-1	*AEP, EAP-1	*AEP, EAP-1
Cationic Emulsified Asphalt	*C-AEP, *AEP	*C-AEP, *AEP	*C-AEP, *AEP
Application Temperature °F (°C)			
Cutback Asphalt	80-120 (27-49)	105-180 (41-82)	145-220 (63-104)
Emulsified Asphalt	140-180 (60-82)	140-180 (60-82)	140-180 (60-82)
Cationic Emulsified Asphalt	140-180 (60-82)	140-180 (60-82)	140-180 (60-82)

Note: *Approved for use as Prime when used in conjunction with Section 315 – Cement Stabilized Reclaimed Base Construction (CSRB).

The Engineer will determine the temperature for applying bituminous prime within the limits shown above.

Heat and apply bituminous materials as specified in Subsection 424.3.05.D, Heating Bituminous Material and Subsection 424.3.05.E, *Applying Bituminous Material*.

F. Amount and Extent of Prime

The Engineer will determine the exact amount of bituminous material to be used within minimum and maximum rates of 0.15 to 0.30 gal/yd² (0.7 to 1.4 liters/m²). Apply the specified amount as follows:

1. Apply the determined amount uniformly and accurately. Ensure that the amount applied to any 0.5-mile (800 m) section is within 5 percent of the amount specified.
2. Apply the prime the full width of the proposed wearing surface that will be superimposed plus 6 in. (150 mm) more on each side.

G. Protection, Curing, and Maintenance

Do the following after priming the surface:

1. Close to Traffic

Do not allow traffic on the primed surface. Leave the surface undisturbed until the prime thoroughly cures and does not pick up under traffic.

2. Roll

If the surface becomes soft after it is primed, roll the surface longitudinally with a pneumatic-tired roller at no more than 6 mph (10 kph) until the surface is firmly set.

3. Blot

If necessary to prevent the prime from being picked up, spread clean, dry, sharp sand over the surface by hand or mechanically. Apply sand only to places that are tacky and use the least amount needed to prevent pick up. No extra payment for this work or material will be made.

4. Open to Traffic

After rolling and sanding (if required), open the primed surface to ordinary traffic subject to the conditions in Subsection 412.3.05.G.1, Close to Traffic.

5. Curing and Maintenance

6. The primed surface is properly cured when it has penetrated the base sufficiently to not be picked up or displaced by traffic. Temperature and weather conditions may increase curing time. Insure the primed surface has cured to the satisfaction of the Engineer prior to its being covered by other construction.

7. Maintain the prime coat and the primed surface course until it is covered by other construction. Repair potholes, scabs, and soft spots prior to covering with other construction. Remove excess bituminous material.

412.3.06 Quality Acceptance

General Provisions 101 through 150.

412.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

412.4 Measurement

Bituminous material for prime is not measured for separate payment.

412.4.01 Limits

General Provisions 101 through 150.

412.5 Payment

Bituminous material for prime is not paid for separately. The cost to clean the surface, furnish, haul and apply materials including water and sand, roll, and perform repairs and maintenance is included in the Unit Price bid for each individual Base Item.

412.5.01 Adjustments

General Provisions 101 through 150.

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Section 815 Graded Aggregate

815.1 General Description

This section includes the requirements for material to be used for base, subbase, or shoulder course material, and includes graded aggregate, unconsolidated limerock base, and crushed concrete base.

815.1.01 Related References

- A. Standard Specifications
Section 800—Coarse Aggregate
- B. Referenced Documents
AASHTO T 27
ASTM C 295
ASTM D 3042
FL DOT Method FM5-515
SOP-1
GDT 63

815.2 Materials

815.2.01 Graded Aggregate

- A. Requirements
 - 1. Type
Use graded aggregate base, subbase, or shoulder course material of uniform quality.
 - a. Obtain the graded aggregate from an approved source or deposit that will yield a satisfactory mixture meeting all requirements of this Specification.
 - b. Use material that is crushed or processed as a part of the mining operations, or, mix two grades of material so that when combined in the central mix plant, the mixture meets the specifications.
 - 2. Retained on the No. 10 (2 mm) sieve
Ensure that the material retained on the No. 10 (2mm) sieve is Class A or B aggregate that meets the requirements of Section 800.
 - 3. Passing the No. 10 (2 mm) sieve
Ensure that any material passing the No. 10 (2 mm) sieve is relatively free of detrimental substances, such as soil overburden, decomposed rock, and/or swelling silts.
 - 4. Stabilized Mixtures

Ensure that mixtures to be stabilized react satisfactorily when mixed with Portland cement. The Engineer will specify the percentage of Portland cement to use.

5. Gradation

Grade the graded aggregate base, subbase, or shoulder material as follows:

Sieve Size	Percent Passing By Weight
Group I Aggregates	
2 in (50 mm)	100
1-1/2 in (37.5 mm)	97-100
3/4 in (19.0 mm)	60-95
No. 10 (2 mm)	25-50 (Note 1, 2 and 3)
No. 60 (250 µm)	10-35
No. 200 (75 µm)	7-15
Group II Aggregates	
2 in (50 mm)	100
1-1/2 in (37.5 mm)	97-100
3/4 in (19.0 mm)	60-90
No. 10 (2 mm)	25-45 (Note 2 and 4)
No. 60 (250 µm)	5-30
No. 200 (75 µm)	4-11
NOTE 1: Group I aggregates having less than 37% passing the No. 10 (2 mm) sieve, shall have at least 9% passing the No. 200 (75µm) sieve.	
NOTE 2: For graded aggregate stabilized with Portland Cement, 30-50 percent by weight shall pass the No. 10 (2 mm) sieve. All other requirements remain the same.	
NOTE 3: Material passing the No.10 (2mm) sieve shall have a sand equivalent of at least 20 for Group I aggregates.	
NOTE 4: Material passing the No. 10 (2 mm) sieve shall have a sand equivalent of at least 28 for Group II aggregates. Sand Equivalent values as low as 20 will be acceptable provided they are attributed exclusively to rock flour and the percent passing the No. 10 (2 mm) sieve does not exceed 40.	

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Test as follows:

Test	Method
Gradation	AASHTO T 27
Sand Equivalent	GDT 63

D. Materials Warranty

General Provisions 101 through 150.

815.2.02 Unconsolidated Limerock Base

A. Requirements

i. Type

Use limerock base, subbase, or shoulder course material of uniform quality.

- a. To ensure uniform quality, the Department may restrict approved sources to specific mining areas, mining processes at a specific mining site, or both.
- b. Use a limerock base that yields a mixture to meet these Specifications.
- c. Use material that is crushed or processed as a part of the mining operations, or mix two grades of material so that when combined in the central mix plant the mixture meets the specifications.
- d. Use limerock base, subbase, or shoulder material that has the following characteristics:

Limerock Bearing Ratio	At least 100
Deleterious Substances	Do not allow chert or other extremely hard pieces that will not pass the 2 in (50 mm) sieve. Do not allow clay, sand, organics, or other materials in quantities that may damage bonding, finishing, or strength. All material passing the No. 40 (425 µm) sieve shall be non-plastic.
Carbonate content (magnesium or calcium)	At least 90%

ii. Gradation

Grade the limerock base so at least 97 percent by weight passes the 3-1/2 in (90 mm) sieve.

- a. Grade the material uniformly to dust. The fine portion passing the No.10 (2mm) sieve shall all be dust of fracture.
- b. Crush or break the limerock base, if necessary to meet size requirements before placing the material on the road.
- c. Ensure that materials having soundness losses of 20% or less, comply with the following gradation requirements:

Gradation Requirements

Sieve Size	Percent Passing By Weight
2 in (50 mm)	100
1-1/2 in (37.5 mm)	97-100
3/4 in (19.0 mm)	60-95
No. 10 (2 mm)	25-45
No. 60 (250 µm)	10-30
No. 200 (75 µm)	7-20

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Test as follows:

Test	Method
Gradation	AASHTO T 27
Limerock Bearing Ratio	FL DOT Method FM5-515
Petrographic Analysis	ASTM C 295
Total Carbonates (Insoluble Residue)	ASTM D 3042

D. Materials Warranty

General Provisions 101 through 150.

815.2.03 Crushed Concrete Base

A. Requirements

1. Sources

Obtain sources of crushed concrete materials approved by the Office of Materials and Research. The criteria for approval will be as outlined in Standard Operating Procedure No. 1, "Monitoring the Quality of Coarse and Fine Aggregates" except that the raw material will be recyclable concrete as specified herein rather than a geological deposit of aggregate.

2. Type

Use crushed concrete derived exclusively from Portland cement concrete pavement or structural concrete as a base, subbase, or shoulder course.

Ensure that the material does not contain delivery unit washout material.

3. Gradation

Ensure that the finished product meets the quality and gradation requirements of Subsection 815.2.01 for Group II aggregates, except that the aggregate will be recycled concrete.

Ensure that the finished product is free of foreign materials such as asphaltic concrete, steel reinforcement, clay balls, soils, epoxy expansion material, and miscellaneous paving materials.

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Test as follows:

Test	Method
Gradation	AASHTO T 27
Sand Equivalent	GDT 63

D. Materials Warranty

General Provisions 101 through 150.

815.2.04 Inorganic Mineral Ash

A. Requirements

Inorganic mineral ash base, subbase, or shoulder course material is restricted to use on local roads only and shall not be used on Interstates or State Highway System routes.

1. Sources

Obtain inorganic mineral ash from an approved source or deposit that will yield a satisfactory mixture meeting all requirements of this Specification after it has been processed or crushed as a part of the mining operations.

The inorganic mineral ash shall be of uniform quality throughout. To ensure uniformity in quality, approved sources may be restricted to specific mining areas and/or mining processes at a specific mining site.

2. Type

Ensure inorganic mineral ash base, subbase, or shoulder course material conforms to the following types:

- Class C Fly Ash: Class C fly ash is the finely divided residue that results from the combustion of ground or powdered coal and is transported from the boiler by flue gases.
- Circulating Fluidized Bed Combustor Ash (CFBC Ash): CFBC ash is the residue that results from the combustion of petroleum coke with the injection of lime or crushed limestone directly into the boiler for sulfur removal and is transported from the boiler by flue gases.

The CFBC ash shall have a minimum Available Lime Index of 5 percent.

3. Gradation

Use inorganic mineral ash that has at least 97 percent (by weight) of the material passing a 3 ½-inch (90 mm) sieve and is graded uniformly down to dust.

Perform all crushing or breaking up necessary to meet the size requirements before the material is placed on the road.

A grading range on material being shipped to Department Projects may be established as a guide to verify consistency of the product.

Do not use inorganic mineral ash that contains extremely hard pieces of material retained on the 2-inch (50 mm) sieve when they are considered deleterious to the clipping and finishing of the base material when placed on the roadway.

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Test as follows:

Test	Method
Sieve Analysis	AASHTO T 27
Class C Fly Ash	AASHTO M 295
Available Lime Index	ASTM C 25

D. Materials Warranty

General Provisions 101 through 150.

END OF SECTION 815

DIVISION 8 - FAA – General Construction Items

Item C-102 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control

DESCRIPTION

102-1. This item shall consist of temporary control measures as shown on the plans or as ordered by the Resident Project Representative (RPR) during the life of a contract to control pollution of air and water, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

Temporary erosion control shall be in accordance with the approved erosion control plan; the approved Construction Safety and Phasing Plan (CSPP) and AC 150/5370-2, *Operational Safety on Airports During Construction*. The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Temporary control measures shall be designed, installed and maintained to minimize the creation of wildlife attractants that have the potential to attract hazardous wildlife on or near public-use airports.

MATERIALS

102-2.1 Grass. Grass that will not compete with the grasses sown later for permanent cover per Item T-901 shall be a quick-growing species (such as ryegrass, Italian ryegrass, or cereal grasses) suitable to the area providing a temporary cover. Selected grass species shall not create a wildlife attractant.

102-2.2 Mulches. Mulches may be hay, straw, fiber mats, netting, bark, wood chips, or other suitable material reasonably clean and free of noxious weeds and deleterious materials per Item T-908. Mulches shall not create a wildlife attractant.

102-2.3 Fertilizer. Fertilizer shall be a standard commercial grade and shall conform to all federal and state regulations and to the standards of the Association of Official Agricultural Chemists.

102-2.4 Slope drains. Slope drains may be constructed of pipe, fiber mats, rubble, concrete, asphalt, or other materials that will adequately control erosion.

102-2.5 Silt fence. Silt fence shall consist of polymeric filaments which are formed into a stable network such that filaments retain their relative positions. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life. Silt fence shall meet the requirements of ASTM D6461.

102-2.6 Other. All other materials shall meet commercial grade standards and shall be approved by the RPR before being incorporated into the project.

CONSTRUCTION REQUIREMENTS

102-3.1 General. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

The RPR shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

102-3.2 Schedule. Prior to the start of construction, the Contractor shall submit schedules in accordance with the approved Construction Safety and Phasing Plan (CSPP) and the plans for accomplishment of temporary and permanent erosion control work for clearing and grubbing; grading; construction; paving; and structures at watercourses. The Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operation for the applicable construction have been accepted by the RPR.

102-3.3 Construction details. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the plans and approved CSPP. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion may be a problem, schedule and perform clearing and grubbing operations so that grading operations and permanent erosion control features can follow immediately if project conditions permit. Temporary erosion control measures are required if permanent measures cannot immediately follow grading operations. The RPR shall limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current with the accepted schedule. If seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified as directed by the RPR.

The Contractor shall provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment as directed by the RPR. If temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or directed by the RPR, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The RPR may increase or decrease the area of erodible earth material that can be exposed at any time based on an analysis of project conditions.

The erosion control features installed by the Contractor shall be maintained by the Contractor during the construction period.

Provide temporary structures whenever construction equipment must cross watercourses at frequent intervals. Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into any waterways, impoundments or into natural or manmade channels.

102-3.4 Installation, maintenance and removal of silt fence. Silt fences shall extend a minimum of 16 inches (41 cm) and a maximum of 34 inches (86 cm) above the ground surface. Posts shall be set no more than 10 feet (3 m) on center. Filter fabric shall be cut from a continuous roll to the length required minimizing joints where possible. When joints are necessary, the fabric shall be spliced at a support post with a minimum 12-inch (300-mm) overlap and securely sealed. A trench shall be excavated approximately 4 inches (100 mm) deep by 4 inches (100 mm) wide on the upslope side of the silt fence. The trench shall be backfilled and the soil compacted over the silt fence fabric. The Contractor shall remove and dispose of silt that accumulates during construction and prior to establishment of permanent erosion control. The fence shall be maintained in good working condition until permanent erosion control is established. Silt fence shall be removed upon approval of the RPR.

METHOD OF MEASUREMENT

102-4.1 Temporary erosion and pollution control work required will be performed as scheduled or directed by the RPR. Completed and accepted work will be measured as follows:

- a. Temporary Construction Entrance/Exit will be measured for each, including installation, maintenance, and removal.
- b. *NPDES Permits, Fees, Monitoring Implementation, NOI, NOT, etc. will be measured by the lump sum.*
- c. *Temporary seeding and mulching will be measured by the square yard.*
- d. *Installation, maintenance, and removal of silt fence, Type C, will be measured by the linear foot.*
- e. *Installation, maintenance, and removal of inlet sediment trap will be measured per each.*
- f. *Installation, maintenance, and removal of Outlet Protection, Rip Rap (6" Stone) will be measured by the cubic yard.*
- g. *Installation, maintenance, and removal of Haybale Check Dam **will be measured per each.***
- h. *Installation, maintenance, and removal of filter ring, stone, will be measured by the cubic yard.*

102-4.2 Control work performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly but shall be considered as a subsidiary obligation of the Contractor.

BASIS OF PAYMENT

102-5.1 Accepted quantities of temporary water pollution, soil erosion, and siltation control work ordered by the RPR and measured as provided in paragraph 102-4.1 will be paid for under:

Item C-102-5.1a	Temporary Construction Entrance/Exit (Including installation, maintenance, and removal) – <i>per each</i>
Item C-102-5.1b	NPDES Permits, Fees, Monitoring Implementation, NOI, NOT, etc. – <i>per lump sum</i>
Item C-102-5.1c	Temporary Seeding and Mulching – <i>per square yard</i>
Item C-102-5.1d	Silt Fence, Type “C”, including installation, maintenance and removal – <i>per linear feet</i>
Item C-102-5.1e	Inlet Sediment Trap, including installation, maintenance, and removal – <i>per each</i>
Item C-102-5.1f	Outlet Protection, Rip Rap, (6” Stone), including installation, maintenance, and removal – <i>per cubic yard</i>
Item C-102-5.1g	Haybale Check Dam, including installation, maintenance, and removal – <i>per each</i>
Item C-102-5.1h	Filter Ring, Stone, including installation, maintenance, and removal – <i>per cubic yard</i>

Where other directed work falls within the specifications for a work item that has a contract price, the units of work shall be measured and paid for at the contract unit price bid for the various items.

Temporary control features not covered by contract items that are ordered by the RPR will be paid for in accordance with Section 90, paragraph 90-05 *Payment for Extra Work*.

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.

Advisory Circulars (AC)

AC 150/5200-33	<i>Hazardous Wildlife Attractants on or Near Airports</i>
AC 150/5370-2	<i>Operational Safety on Airports During Construction</i>

ASTM International (ASTM)

ASTM D6461	<i>Standard Specification for Silt Fence Materials</i>
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United States Department of Agriculture (USDA)

FAA/USDA Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM C-102

Item C-105 Mobilization

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to 10 percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Sponsor.

105-4 Engineer/RPR field office. An Engineer/RPR field office is not required.

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

- a. With first pay request, 25%.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 40%.
- d. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation*, the final 10%.

BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105	Mobilization	- per Lump Sum
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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.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

DIVISION 9 - FAA – Sitework

Item P-101 Preparation/Removal of Existing Pavements

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of **3 inches**. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlying material that is to remain in place, shall be recompact and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. If the material is to be wasted on the airport site, it shall be broken to a maximum size of **3 inches**.

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

101-3.2 Preparation of joints and cracks prior to overlay/surface treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

Wider cracks (over 1-1/2 inch wide (38 mm)), along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or replaced as stated below.

Cracks and joints may be filled with a mixture of emulsified asphalt and aggregate. The aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.

Gradation

Sieve Size	Percent Passing
No. 4 (4.75 mm)	100
No. 8 (2.36 mm)	90-100
No. 16 (1.18 mm)	65-90
No. 30 (600 µm)	40-60
No. 50 (300 µm)	25-42
No. 100 (150 µm)	15-30
No. 200 (75 µm)	10-20

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the RPR.

The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled to within +0 to -1/8 inches (+0 to -3 mm) of the surface. Any material spilled outside the width of the joint shall be removed from the pavement surface prior to constructing the overlay. Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.

101-3.3 Removal of Foreign Substances/contaminates prior to overlay and remarking. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

High-pressure water may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing

pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.

101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt pavement repair. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed off Airport property, unless directed otherwise by the Engineer. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of 7 feet and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the pavement and load them into a truck. All millings shall be removed and disposed of off the airport, unless directed otherwise by the Engineer.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall

wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property.

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

- a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.
- b. Repair joints and cracks in accordance with paragraph 101-3.2.
- c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.
- d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.
- e. Herbicide and Soil Sterilant Treatment:

The herbicide and soil sterilant shall be a mixture containing one chemical from each of the following groups (except where noted):

GROUP	COMMON NAME	QTY OF ACTIVE INGREDIENT REQUIRED
1	Dalapon Glyphosate	10 lbs. per acre 3 lbs. per acre
2	Bromacil Prometon Hexazinone	6 lbs. per acre 20 lbs. per acre 6 lbs. per acre
3	A non-ionic surfactant containing poloxyethylene ether	2 qts. per 100 gals. sprayable mixture

Listed below are trade names and rates of products, which will provide the quantity of active ingredients, required above. Similar chemicals will be acceptable when approved by the State - DOT Laboratory.

TRADE NAMES			
GROUP	TRADE NAME	RATE PER ACRE	MANUFACTURER
1	Dowpon M.	13.5 lbs.	Dow Chemical Co. Agricultural Prod. Dept. Midland, MI 48650
	Roundup*	3 qts.	Monsanto Co. MAP 800 North Lindbergh St. Louis, MO 63166
2	Hyvar Hyvar X-L	7.5 lbs. 3 gals.	E.I. DuPont DeNemours & Co., Inc. Sales Order Center

	Velpar Velpar L	7 lbs. 3 gals.	Biochemical Dept. Wilmington, Delaware 19898
	Pramitol 24E Pramitol 80% WP Ontract WE-2 Ontract 800	10 gals. 25 lbs. 10 gals. 25 lbs.	Ciba-Geigy Corp. Agricultural Division Sawmill River Road Ardsley, New York 10502
3	Wet Aid	2 qts. per 100 gals. sprayable mixture	Woolfolk Chemical Works, Ltd. P. O. Box 938 Fort Valley, GA 31030
	X-77	2 qts. per 100 gals. sprayable mixture	Chevron Chemical Co. Ortho Division 200 Bush Street San Francisco, CA 94120
	Surfactant WK	2 qts. per 100 gals. sprayable mixture	E.I. DuPont DeNemours & Co., Inc. Sales Order Center Biochemical Dept. Wilmington, Delaware 19898

*When roundup is used the surfactant (Group 3) may be deleted.

The chemicals shall be mixed at the specified rates using a minimum of 40 gallons and maximum of 100 gallons of water per acre unless directed otherwise by the Engineer.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-605, if required.

101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and

other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.

101-3.9.1 Preparation of Crack. Widen crack with router by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 Removal of Existing Crack Sealant. Existing sealants will be removed by routing. Following routing any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

101-3.9.3 Crack Sealant. Crack sealant material and installation will be in accordance with Item P-605, if required.

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. *Remove the types of pipe as indicated on the plans. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled with material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D1557.*

b. Removal of Inlets/Manholes. *Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to 95% of ASTM D1557, when outside of paved areas must be compacted to 95% of ASTM D698.*

METHOD OF MEASUREMENT

101-4.1 Cold milling. The unit of measure for cold milling shall be in inches of milling per square yard. The location and average depth of the cold milling shall be as shown on the plans. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling.

101-4.2 Surface Preparation and Cleaning, including Herbicide and Soil Sterilant. The unit of measurement for surface preparation and cleaning, including herbicide and soil sterilant shall be per square yard of existing paved surface area.

101-4.3 Pavement removal. *The unit of measurement for pavement removal shall be the number of square yards (square meters) removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.*

101-4.4 Removal of Pipe and other Buried Structures. *The unit of measurement for removal of pipe and other buried structures will be made at the contract unit price for each completed and accepted item. This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with paragraph 101-3.9.4.*

101-4.5 Sawed Joints in Existing Asphalt Pavement. The unit of measurement for sawed joints shall be the number of linear foot completed and accepted.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1	Pavement Milling variable depth	– per square yard
Item P 101-5.2	Surface Preparation and Cleaning, including Herbicide and Soil Sterilant	– per square yard
Item P 101-5.3	Full Depth Pavement Removal	– per square yard
<i>Item P 101-5.4</i>	<i>Removal of Existing 15" RCP</i>	<i>– per linear foot</i>
<i>Item P 101-5.5</i>	<i>Removal of Existing Inlet</i>	<i>– per each</i>
<i>Item P 101-5.6</i>	<i>Removal of Existing Flared End Section</i>	<i>– per each</i>
<i>Item P 101-5.7</i>	<i>Removal of Existing Taxiway Edge Light, incl. Concrete Apron, Base Can, and Cabling</i>	<i>– per each</i>
<i>Item P 101-5.8</i>	<i>Removal of Existing Runway Sign, incl. Concrete Foundation, Base Can, and Cabling</i>	<i>– per each</i>
Item P-101-5.9	Sawed Joints in Existing Asphalt Pavement - per linear 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.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.
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ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
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END OF ITEM P-101

Item P-152 Excavation and Embankment

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature *which is not otherwise classified and paid for under one of the following items.*

b. Borrow excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas designated by the Resident Project Representative (RPR) within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.

152-1.3 Unsuitable excavation. Any material containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material, suitable for topsoil may be used on the embankment slope when approved by the Engineer.

CONSTRUCTION METHODS

152-2.1 General. Before beginning excavation, grading, and embankment operations in any area, the area shall be completely cleared and grubbed in accordance with Item P-151.

The suitability of material to be placed in embankments shall be subject to approval by the Engineer. All unsuitable material shall be disposed of in waste areas shown on the plans. All waste areas shall be graded to allow positive drainage of the area and of adjacent areas. The surface elevation of waste areas shall not extend above the surface elevation of adjacent usable areas of the airport, unless specified on the plans or approved by the Engineer.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the Engineer notified per subsection 70-20. At the direction of the Engineer, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Those areas outside of the limits of the pavement areas where the top layer of soil material has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the

Contractor shall notify the Engineer, who shall arrange for their removal if necessary. The Contractor, at his or her expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the Engineer has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the Engineer. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes shown on the plans. All unsuitable material shall be disposed of as shown on the plans.

When the volume of the excavation exceeds that required to construct the embankments to the grades indicated, the excess shall be used to grade the areas of ultimate development or disposed as directed by the Engineer. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

The grade shall be maintained so that the surface is well drained at all times. When necessary, temporary drains and drainage ditches shall be installed to intercept or divert surface water that may affect the work.

a. Selective grading. When selective grading is indicated on the plans, the more suitable material designated by the Engineer shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas so that it can be measured for payment as specified in paragraph 152-3.3.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the Engineer. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard for unclassified excavation. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of the embankment. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans.

c. Overbreak. Overbreak, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the Engineer. All overbreak shall be graded or removed by the Contractor and disposed of as directed by the Engineer. The Engineer shall determine if the displacement of such material was unavoidable and his or her decision shall be final. Payment will not be made for the removal and disposal of overbreak that the Engineer determines as avoidable. Unavoidable overbreak will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by someone other than the Contractor; for example, the utility unless otherwise shown on the plans. All existing foundations shall be excavated at least 2 feet (60 cm)

below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the Engineer. All foundations thus excavated shall be backfilled with suitable material and compacted as specified.

e. Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of **12 in** and to a density of not less than **100** percent of the maximum density as determined by ASTM **D1557**. The material to be compacted shall be within $\pm 2\%$ of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils).

The in-place field density shall be determined in accordance with **ASTM D1556**. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade. The finished grading operations, conforming to the typical cross-section, shall be completed and maintained at least 1,000 feet (300 m) ahead of the paving operations or as directed by the Engineer.

All loose or protruding rocks on the back slopes of cuts shall be pried loose or otherwise removed to the slope finished grade line. All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the Engineer.

Blasting shall not be allowed.

f. Proof rolling. After compaction is completed, the subgrade area shall be proof rolled with a 20-ton Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 80/100/150 psi in the presence of the Engineer. Apply a minimum of 85% coverage, or as specified by the Engineer, to all paved areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications.

152-2.3 Borrow excavation. Borrow areas within the airport property are indicated on the plans. Borrow excavation shall be made only at these designated locations and within the horizontal and vertical limits as staked or as directed by the Engineer.

When borrow sources are outside the boundaries of the airport property, it shall be the Contractor's responsibility to locate and obtain the borrow sources, subject to the approval of the Engineer. The Contractor shall notify the Engineer at least 15 days prior to beginning the excavation so necessary measurements and tests can be made. All borrow pits shall be opened up to expose the various strata of acceptable material to allow obtaining a uniform product. All unsuitable material shall be disposed of by the Contractor. Borrow pits shall be excavated to regular lines to permit accurate measurements, and they shall be drained and left in a neat, presentable condition with all slopes dressed uniformly.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating for drainage ditches such as intercepting; inlet or outlet ditches; for temporary levee construction; or for any other type as designed or as shown on the plans. The work shall be performed in sequence with the other construction. Intercepting ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the Engineer. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project

to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of embankment area. Where an embankment is to be constructed to a height of 4 feet (1.2 m) or less, all sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted as indicated in paragraph 152-2.6. When the height of fill is greater than 4 feet (1.2 m), sod not required to be removed shall be thoroughly disked and recompactd to the density of the surrounding ground before construction of embankment.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.6 Formation of embankments. Embankments shall be formed in successive horizontal layers of not more than 8 inches (200 mm) in loose depth for the full width of the cross-section, unless otherwise approved by the Engineer.

The layers shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the Engineer. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained because of rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each layer shall be within $\pm 2\%$ of optimum moisture content before rolling to obtain the prescribed compaction. To achieve a uniform moisture content throughout the layer, the material shall be moistened or aerated as necessary. Samples of all embankment materials for testing, both before and after placement and compaction, will be taken for each 1,000 square yards of material placed per layer. Based on these tests, the Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

Rolling operations shall be continued until the embankment is compacted to not less than 95% of maximum density for noncohesive soils, and 90% of maximum density for cohesive soils as determined by ASTM D1557. Under all areas to be paved, the embankments shall be compacted to a depth of **12"** and to a density of not less than **100** percent of the maximum density as determined by ASTM **D1557**.

On all areas outside of the pavement areas, no compaction will be required on the top 4 inches (100 mm).

The in-place field density shall be determined in accordance with ASTM D1556. The Contractor's laboratory shall perform all density tests in the Engineer's presence and provide the test results upon completion to the Engineer for acceptance.

Compaction areas shall be kept separate, and no layer shall be covered by another layer until the proper density is obtained.

During construction of the embankment, the Contractor shall route all construction equipment evenly over the entire width of the embankment as each layer is placed. Layer placement shall begin in the deepest portion of the embankment fill. As placement progresses, the layers shall be constructed approximately parallel to the finished pavement grade line.

When rock and other embankment material are excavated at approximately the same time, the rock shall be incorporated into the outer portion of the embankment and the other material shall be incorporated under the future paved areas. Stones or fragmentary rock larger than 4 inches (100 mm) in their greatest dimensions will not be allowed in the top 6 inches (150 mm) of the subgrade. Rockfill shall be brought up in layers as specified or as directed by the Engineer and the finer material shall be used to fill the voids with forming a dense, compact mass. Rock or boulders shall not be disposed of outside the excavation or embankment areas, except at places and in the manner designated on the plans or by the Engineer.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in layers of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in layers not exceeding 2 feet (60 cm) in thickness. Each layer shall be leveled and smoothed with suitable equipment by distribution of spalls and finer fragments of rock. The layer shall not be constructed above an elevation 4 feet (1.2 m) below the finished subgrade.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in layers, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items.

152-2.7 Finishing and protection of subgrade. After the subgrade is substantially complete, the Contractor shall remove any soft or other unstable material over the full width of the subgrade that will not compact properly. All low areas, holes or depressions in the subgrade shall be brought to grade with suitable select material. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans.

Grading of the subgrade shall be performed so that it will drain readily. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes. All ruts or rough places that develop in the completed subgrade shall be graded and recompact.

No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been approved by the Engineer.

152-2.8 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

152-2.9 Tolerances. In those areas upon which a subbase or base course is to be placed, the top of the subgrade shall be of such smoothness that, when tested with a 12-foot (3.7-m) straightedge applied parallel and at right angles to the centerline, it shall not show any deviation in excess of 1/2 inch (12 mm), or shall not be more than 0.05 feet (15 mm) from true grade as established by grade hubs. Any deviation in excess of these amounts shall be corrected by loosening, adding, or removing materials; reshaping; and recompact.

On safety areas, intermediate and other designated areas, the surface shall be of such smoothness that it will not vary more than 0.10 feet (3 mm) from true grade as established by grade hubs. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

152-2.10 Topsoil. When topsoil is specified or required as shown on the plans or under Item T-905, it shall be salvaged from stripping or other grading operations. The topsoil shall meet the requirements of Item T-905. If, at the time of excavation or stripping, the topsoil cannot be placed in its final section of finished construction, the material shall be stockpiled at approved locations. Stockpiles shall not be placed within **200** feet of runway pavement or **200** feet of taxiway pavement and shall not be placed on areas that subsequently will require any excavation or embankment fill. If, in the judgment of the Engineer, it is practical to place the salvaged topsoil at the time of excavation or stripping, the material shall be placed in its final position without stockpiling or further rehandling.

Upon completion of grading operations, stockpiled topsoil shall be handled and placed as directed, or as required in Item T-905.

No direct payment will be made for topsoil under Item P-152. The quantity removed and placed directly or stockpiled shall be paid for at the contract unit price per cubic yard (cubic meter) for "Unclassified Excavation."

When stockpiling of topsoil and later rehandling of such material is directed by the Engineer, the material so rehandled shall be paid for at the contract unit price per cubic yard (cubic meter) for "topsoiling," as provided in Item T-905.

METHOD OF MEASUREMENT

152-3.1 The quantity of excavation to be paid for shall be the number of cubic yards measured in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed.

152-3.2 Borrow material shall be paid for on the basis of the number of cubic yards measured in its original position at the borrow pit.

152-3.3 Stockpiled material shall be paid for on the basis of the number of cubic yards (cubic meters) measured in the stockpiled position.

152-3.4 For payment specified by the cubic yard (cubic meter), measurement for all excavation shall be computed by the average end area method. The end area is that bound by the original ground line established by field cross-sections and the final theoretical pay line established by excavation cross-sections shown on the plans, subject to verification by the Engineer. After completion of all excavation operations and prior to the placing of base or subbase material, the final excavation shall be verified by the Engineer by means of field cross-sections taken randomly at intervals not exceeding 500 linear feet (150 m).

152-3.5 The quantity of embankment in place shall be the number of cubic yards (cubic meters) measured in its final position.

BASIS OF PAYMENT

152-4.1 "Unclassified excavation" payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

152-4.2 "Unclassified hauling" payment shall be made at the contract unit price per mile. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item. This item is for any material(s) requested by the owner to be hauled for which there is not already a pay item established. For example, if the owner wishes to retain any material such as millings, and wants it stockpiled to a specified location, this will compensate for the transport and delivery of such material(s).

152-4.2 For embankment in place, payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-152-4.1	Muck Excavation (including hauling) - per cubic yard
Item P-152-4.2	Structural Fill Material for Pavement Repair Backfill (Off-Site) including hauling and install (Embankment) - per cubic yard
<i>Item P-152-4.3</i>	<i>Embankment in place – per cubic yard</i>
Item P-152-4.4	Unclassified Excavation - per cubic yard

TESTING REQUIREMENTS

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2700 kN-m/m ³))
ASTM D2167	Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

END OF ITEM P-152

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DIVISION 16 - FAA – Miscellaneous

Item P-605 Joint Sealants for Pavements

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of **ASTM D6690**.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be $25\% \pm 5\%$ larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, [] days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

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. Sandblasting is not allowed.

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.

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** 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.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/8 inch \pm 1/16 inch below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 Joint sealing material shall be measured by the linear foot of sealant in place, completed, and accepted.

BASIS OF PAYMENT

605-5.1 Payment for joint sealing material shall be made at the contract unit price per linear foot. The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-605-5.1	Joint Sealing Filler, per linear foot
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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 D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt
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Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids
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END ITEM P-605

Item P-620 Runway and Taxiway Marking

DESCRIPTION

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR). The terms “paint” and “marking material” as well as “painting” and “application of markings” are interchangeable throughout this specification.

MATERIALS

620-2.1 Materials acceptance. The Contractor shall furnish manufacturer’s certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer’s surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by the Resident Project Representative (RPR) prior to the initial application of markings. The reports can be used for material acceptance or the RPR may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the RPR upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by the RPR.

620-2.2 Marking materials.

Table 1. Marking Materials

	Paint ¹				Glass Beads ²	
	Type	Color	Fed Std. 595 Number	Application Rate Maximum	Type	Application Rate Minimum
Permanent Marking	III	Yellow	33538 or 33655	90 ft ² /gal	III	10 lb/gal
Temporary Marking	III	Yellow	33538 or 33655	180 ft ² /gal	N/A	N/A

¹ See paragraph 620-2.2a

² See paragraph 620-2.2b

a. Paint. Paint shall be waterborne in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595. **Yellow (33538 or 33655).**

Waterborne. Paint shall meet the requirements of Federal Specification TT-P-1952F, Type III. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis. The acrylic resin used for Type III shall be 100% cross linking acrylic as evidenced by infrared peaks at wavelengths 1568, 1624, and 1672 cm-l with intensities equal to those produced by an acrylic resin known to be 100% cross linking.

b. Reflective media. Glass beads for white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D, Type III.

Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black and green paint.

Type III glass beads shall not be used in red and pink paint.

620-2.3 Microbicide: All Waterborne paint shall contain a microbicide that provides microbial efficacy for a period of no less than 3 years. The microbicide shall be blended homogeneously with the paint under high speed dispersion during production by the supplier/manufacturer. The final homogenous blend of microbicide treated paint shall conform to the same viscosity stability standards as specified in TT-P-1962 F.

- A. Dow (Formerly Rohm and Hass) Rocima 63 microbicide (or other approved equivalent) shall be added at a rate of 10 pounds per 100 gallons of paint.
- B. Other products may be available that meet or exceed these specifications.

620-2.4 Stain Resistant Paint: If P-401 aggregates contain ferrous sulfides, such as pyrite, or any other iron oxides, modifications to the TT-P-1952 paint formulation will be required to provide a stain resistant paint.

CONSTRUCTION METHODS

620-3.1 Weather limitations. Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

620-3.2 Equipment. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without over spray. The marking equipment for both paint and beads shall be calibrated daily.

620-3.3 Preparation of surfaces. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminants that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the RPR. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

a. Preparation of new pavement surfaces. The area to be painted shall be cleaned by broom, blower, water blasting, or by other methods approved by the RPR to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.

b. Preparation of pavement to remove existing markings. Existing pavement markings shall be removed by rotary grinding, water blasting, or by other methods approved by the RPR minimizing damage to the pavement surface. The removal area may need to be larger than the area of the markings to eliminate ghost markings. After removal of markings on asphalt pavements, apply a fog seal or seal coat to 'block out' the removal area to eliminate 'ghost' markings.

c. Preparation of pavement markings prior to remarking. Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by the RPR. After removal, the surface shall be cleaned of all residue or debris.

Prior to the application of markings, the Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the pavement or existing markings. This certification along with a copy of the paint manufacturer's application and surface preparation requirements must be submitted to the RPR prior to the initial application of markings.

620-3.4 Layout of markings. The proposed markings shall be laid out in advance of the paint application.

620-3.5 Application. A period of **3** days shall elapse between placement of surface course or seal coat and application of the temporary paint markings. A period of **30** days shall elapse between application of the temporary paint markings and application of the permanent paint markings. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the RPR.

The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m), and marking dimensions and spacing shall be within the following tolerances:

Marking Dimensions and Spacing Tolerance

Dimension and Spacing	Tolerance
36 inch (910 mm) or less	±1/2 inch (12 mm)
greater than 36 inch to 6 feet (910 mm to 1.85 m)	±1 inch (25 mm)
greater than 6 feet to 60 feet (1.85 m to 18.3 m)	±2 inch (50 mm)
greater than 60 feet (18.3 m)	±3 inch (76 mm)

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted.

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

620-3.6 Application--preformed thermoplastic airport pavement markings.

Preformed thermoplastic pavement markings not used.

620-3.7 Control strip. Prior to the full application of airfield markings, the Contractor shall prepare a control strip in the presence of the RPR. The Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness to ensure a uniform appearance.

620-3.8 Retro-reflectance. Reflectance shall be measured with a portable retro-reflectometer meeting ASTM E1710 (or equivalent). A total of 6 reading shall be taken over a 6 square foot area with 3 readings taken from each direction. The average shall be equal to or above the minimum levels of all readings which are within 30% of each other.

Minimum Retro-Reflectance Values

Material	Retro-reflectance mcd/m ² /lux		
	White	Yellow	Red
Initial Type I	300	175	35
Initial Type III	600	300	35
Initial Thermoplastic	225	100	35
All materials, remark when less than ¹	100	75	10

¹ Prior to remarking determine if removal of contaminants on markings will restore retro-reflectance

620-3.9 Protection and cleanup. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the RPR. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations.

METHOD OF MEASUREMENT

620-4.1 The quantity of markings shall be paid for shall be measured by the number of square feet (square meters) of painting.

BASIS OF PAYMENT

620-5.1 This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item complete in place and accepted by the RPR in accordance with these specifications.

Payment will be made under:

Item P-620-5.1	Temporary Taxiway Marking, Type III, (Yellow), including Microbicide	- per square foot
Item P-620-5.2	Permanent Taxiway Marking, Type III, (Yellow), including Reflective Material (Type III) and Microbicide	- 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

Federal Specifications (FED SPEC)

FED SPEC TT-B-1325D Beads (Glass Spheres) Retro-Reflective

FED SPEC TT-P-1952F Paint, Traffic and Airfield Marking, Waterborne

FED STD 595 Colors used in Government Procurement

Commercial Item Description

A-A-2886B Paint, Traffic, Solvent Based

Advisory Circulars (AC)

AC 150/5340-1 Standards for Airport Markings

AC 150/5320-12 Measurement, Construction, and Maintenance of Skid Resistant Airport
Pavement Surfaces**END OF ITEM P-620**

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FAA DRAINAGE

Item D-701 Pipe for Storm Drains and Culverts

DESCRIPTION

701-1.1 This item shall consist of the construction of pipe culverts and storm drains in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans.

MATERIALS

701-2.1 Materials shall meet the requirements shown on the plans and specified below. Underground piping and components used in drainage systems for terminal and aircraft fueling ramp drainage shall be noncombustible and inert to fuel in accordance with National Fire Protection Association (NFPA) 415.

701-2.2 Pipe. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements:

AASHTO R73	Standard Practice for Evaluation of Precast Concrete Drainage Productions
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C1479	Standard Practice for Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations
ASTM C1840	Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe

701-2.3 Concrete. Concrete for pipe cradles shall have a minimum compressive strength of 2000 psi (13.8 MPa) at 28 days and conform to the requirements of ASTM C94.

701-2.4 Rubber gaskets. Not used.

701-2.5 Joint mortar. Pipe joint mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

701-2.6 Joint fillers. Poured filler for joints shall conform to the requirements of ASTM D6690.

701-2.7 Plastic gaskets. Not used.

701-2.8. Controlled low-strength material (CLSM). Controlled low-strength material shall conform to the requirements of Item P-153. When CLSM is used, all joints shall have gaskets.

701-2.9 Precast box culverts. Manufactured in accordance with and conforming to ASTM C1433.

701-2.10 Precast concrete pipe. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or American Concrete Pipe Association QCast Plant Certification program.

CONSTRUCTION METHODS

701-3.1 Excavation. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but it shall not be less than the external diameter of the pipe plus 12 inches (300 mm) on each side. The trench walls shall be approximately vertical.

The Contractor shall comply with all current federal, state and local rules and regulations governing the safety of men and materials during the excavation, installation and backfilling operations. Specifically, the Contractor shall observe that all requirements of the Occupational Safety and Health Administration (OSHA) relating to excavations, trenching and shoring are strictly adhered to. The width of the trench shall be sufficient to permit satisfactorily jointing of the pipe and thorough compaction of the bedding material under the pipe and backfill material around the pipe, but it shall not be greater than the widths shown on the plans trench detail.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 8 inch (200 mm) or 1/2 inch (12 mm) for each foot of fill over the top of the pipe (whichever is greater) but for no more than three-quarters of the nominal diameter of the pipe. The excavation below grade should be filled with granular material to form a uniform foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

The excavation for pipes placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the plans.

701-3.2 Bedding. The bedding surface for the pipe shall provide a foundation of uniform density to support the pipe throughout its entire length.

a. Rigid pipe. The pipe bedding shall be constructed uniformly for the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 in when the bedding thickness is less than 6 inches, and 1-1/2 in when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed uncompacted material under the middle third of the pipe prior to placement of the pipe.

b. Flexible pipe. For flexible pipe, the bed shall be roughly shaped to fit the pipe, and a bedding blanket of sand or fine granular material shall be provided as follows:

Flexible Pipe Bedding

Pipe Corrugation Depth		Minimum Bedding Depth	
inch	mm	inch	mm
1/2	12	1	25
1	25	2	50
2	50	3	75
2-1/2	60	3-1/2	90

c. Other pipe materials. For PVC, polyethylene, polypropylene, or fiberglass pipe, the bedding material shall consist of coarse sands and gravels with a maximum particle size of 3/4 inches (19 mm). For pipes installed under paved areas, no more than 12% of the material shall pass the No. 200 (0.075 mm) sieve. For all other areas, no more than 50% of the material shall pass the No. 200 (0.075 mm) sieve. The bedding shall have a thickness of at least 6 inches (150 mm) below the bottom of the pipe and extend up around the pipe for a depth of not less than 50% of the pipe's vertical outside diameter.

701-3.3 Laying pipe. The pipe laying shall begin at the lowest point of the trench and proceed upgrade. The lower segment of the pipe shall be in contact with the bedding throughout its full length. Bell or groove ends of rigid pipes and outside circumferential laps of flexible pipes shall be placed facing upgrade.

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line.

Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer's reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

701-3.4 Joining pipe. Joints shall be made with (1) cement mortar, (2) cement grout, (3) rubber gaskets, (4) plastic gaskets, or (5) coupling bands.

Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

a. Concrete pipe. Concrete pipe may be either bell and spigot or tongue and groove. Pipe sections at joints shall be fully seated and the inner surfaces flush and even. Concrete pipe joints shall be sealed with butyl mastic meeting ASTM C990 or mortar when soil tight joints are required. Joints shall be thoroughly wetted before applying mortar or grout.

b. Metal pipe. Metal pipe shall be firmly joined by form-fitting bands conforming to the requirements of ASTM A760 for steel pipe and AASHTO M196 for aluminum pipe.

c. PVC, Polyethylene, or Polypropylene pipe. Joints for PVC, Polyethylene, or Polypropylene pipe shall conform to the requirements of ASTM D3212 when leak resistant joints are required. Joints for PVC and Polyethylene pipe shall conform to the requirements of AASHTO M304 when soil tight joints are required. Fittings for polyethylene pipe shall conform to the requirements of AASHTO M252 or ASTM M294. Fittings for polypropylene pipe shall conform to ASTM F2881, ASTM F2736, or ASTM F2764.

d. Fiberglass pipe. Joints and fittings shall be as detailed on the plans and in accordance with the manufacturers recommendations. Joints shall meet the requirements of ASTM D4161 for flexible elastomeric seals.

701-3.5 Embedment and Overfill. Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense.

701-3.5-1 Embedment Material Requirements

a. Concrete Pipe. Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Types 1, 2, 3, or 4) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.

b. Plastic and fiberglass Pipe. Embedment material shall meet the requirements of ASTM D3282, A-1, A-2-4, A-2-5, or A-3. Embedment material shall be free of organic material, stones larger than 1.5 inches in the greatest dimension, or frozen lumps. Embedment material shall extend to 12 inches above the top of the pipe.

c. Metal Pipe. Embedment material shall be granular as specified in the contract document and specifications, and shall be free of organic material, rock fragments larger than 1.5 inches in the greatest dimension and frozen lumps. As a minimum, backfill materials shall meet the requirements of ASTM D3282, A-1, A-2, or A-3. Embedment material shall extend to 12 inches above the top of the pipe.

701-3.5-2 Placement of Embedment Material

The embedment material shall be compacted in layers not exceeding 6 inches (150 mm) on each side of the pipe and shall be brought up one foot (30 cm) above the top of the pipe or to natural ground level, whichever is greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches (150 mm) and shall be brought up evenly on each side of the pipe to one foot (30 cm) above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

Concrete cradles and flowable fills, such as controlled low strength material (CLSM) or controlled density fill (CDF), may be used for embedment provided adequate flotation resistance can be achieved by restraints, weighing, or placement technique.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

701-3.6 Overfill

Pipes shall be inspected before any overfill is in place. Any pipes found to be out of alignment, unduly settled, or damaged shall be removed and relaid or replaced at the Contractor's expense. Evaluation of any damage to RCP shall be evaluated based on AASHTO R73.

Overfill material shall be placed and compacted in layers as required to achieve compaction to at least 95 percent standard proctor per [ASTM D698] [ASTM D1557]. The soil shall contain no debris, organic matter, frozen material, or stones with a diameter greater than one half the thickness of the compacted layers being placed.

701-3.7 Inspection Requirements

An initial post installation inspection shall be performed by the RPR no sooner than 30 days after completion of installation and final backfill. Clean or flush all lines prior to inspection.

Incorporate specific inspection requirements for the various types of pipes beneath the general inspection requirements.

Reinforced concrete pipe shall be inspected, evaluated, and reported on in accordance with ASTM C1840, "Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe." Any issues reported shall include still photo and video documentation. The zoom ratio shall be provided for all still or video images that document any issues of concern by the inspection firm.

METHOD OF MEASUREMENT

701-4.1 The length of pipe shall be measured in linear feet (m) of pipe in place, completed, and accepted. It shall be measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. 18" RCP, Class III shall be measured separately. All fittings shall be included in the footage as typical pipe sections in the pipe being measured.

701-4.2. Not used.

701-4.3 Not used.

701-4.4 Not used.

BASIS OF PAYMENT

701-5.0 These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, and installation of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

701-5.1 Payment will be made at the contract unit price per linear foot (meter) for 15" RCP, Class V.

Payment will be made under:

Item 701-5.1 Reinforced Concrete Pipe, 15 inch, Class V per linear foot (meter)

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.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M167 Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches

AASHTO M190 Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches

AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter
ASTM International (ASTM)	
ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Steel Structural Plate, Zinc Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM A849	Standard Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C94	Standard Specification for Ready Mixed Concrete
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe

ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe
ASTM C990	Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM D1056	Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM D3212	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes
ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F667	Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drain Pipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe

ASTM F2764 Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications

ASTM F2881 Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications

National Fire Protection Association (NFPA)

NFPA 415 Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

END ITEM D-701

Item D-751 Manholes, Catch Basins, Inlets and Inspection Holes

DESCRIPTION

751-1.1 This item shall consist of construction of manholes, catch basins, inlets, and inspection holes, in accordance with these specifications, at the specified locations and conforming to the lines, grades, and dimensions shown on the plans or required by the RPR.

MATERIALS

751-2.1 Brick. The brick shall conform to the requirements of ASTM C32, Grade MS.

751-2.2 Mortar. Mortar shall consist of one part Portland cement and two parts sand. The cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

751-2.3 Concrete. Plain and reinforced concrete used in structures, connections of pipes with structures, and the support of structures or frames shall conform to the requirements of Item P-610.

751-2.4 Precast concrete pipe manhole rings. Precast concrete pipe manhole rings shall conform to the requirements of ASTM C478. Unless otherwise specified, the risers and offset cone sections shall have an inside diameter of not less than 36 inches (90 cm) nor more than 48 inches (120 cm). There shall be a gasket between individual sections and sections cemented together with mortar on the inside of the manhole. Gaskets shall conform to the requirements of ASTM C443.

751-2.5 Corrugated metal. Corrugated metal shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M36.

751-2.6 Frames, covers, and grates. The castings shall conform to one of the following requirements:

- a. ASTM A48, Class 35B: Gray iron castings
- b. ASTM A47: Malleable iron castings
- c. ASTM A27: Steel castings
- d. ASTM A283, Grade D: Structural steel for grates and frames
- e. ASTM A536, Grade 65-45-12: Ductile iron castings
- f. ASTM A897: Austempered ductile iron castings

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings, aircraft gear configuration and/or direct loading, specified.

Each frame and cover or grate unit shall be provided with fastening members to prevent it from being dislodged by traffic but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

751-2.7 Steps. The steps or ladder bars shall be gray or malleable cast iron or galvanized steel. The steps shall be the size, length, and shape shown on the plans and those steps that are not galvanized shall be given a coat of asphalt paint, when directed.

751-2.8 Precast inlet structures. Manufactured in accordance with and conforming to ASTM C913.

CONSTRUCTION METHODS

751-3.1 Unclassified excavation.

a. The Contractor shall excavate for structures and footings to the lines and grades or elevations, shown on the plans, or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown. The elevations of the bottoms of footings, as shown on the plans, shall be considered as approximately only; and the RPR may direct, in writing, changes in dimensions or elevations of footings necessary for a satisfactory foundation.

b. Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the RPR. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. Where concrete will rest on a surface other than rock, the bottom of the excavation shall not be disturbed and excavation to final grade shall not be made until immediately before the concrete or reinforcing is placed.

c. The Contractor shall do all bracing, sheathing, or shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be included in the unit price bid for the structure.

d. All bracing, sheathing, or shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall not disturb or damage finished masonry. The cost of removal shall be included in the unit price bid for the structure.

e. After excavation is completed for each structure, the Contractor shall notify the RPR. No concrete or reinforcing steel shall be placed until the RPR has approved the depth of the excavation and the character of the foundation material.

751-3.2 Brick structures.

a. Foundations. A prepared foundation shall be placed for all brick structures after the foundation excavation is completed and accepted. Unless otherwise specified, the base shall consist of reinforced concrete mixed, prepared, and placed in accordance with the requirements of Item P-610.

b. Laying brick. All brick shall be clean and thoroughly wet before laying so that they will not absorb any appreciable amount of additional water at the time they are laid. All brick shall be laid in freshly made mortar. Mortar not used within 45 minutes after water has been added shall be discarded. Retempering of mortar shall not be permitted. An ample layer of mortar shall be spread on the beds and a shallow furrow shall be made in it that can be readily closed by the laying of the brick. All bed and head joints shall be filled solid with mortar. End joints of stretchers and side or cross joints of headers shall be fully buttered with mortar and a shoved joint made to squeeze out mortar at the top of the joint. Any bricks that may be loosened after the mortar has taken its set, shall be removed, cleaned, and re-laid with fresh mortar. No broken or chipped brick shall be used in the face, and no spalls or bats shall be used except where necessary to shape around irregular openings or edges; in which case, full bricks shall be placed at ends or corners where possible, and the bats shall be used in the interior of the

course. In making closures, no piece of brick shorter than the width of a whole brick shall be used; and wherever practicable, whole brick shall be used and laid as headers.

c. Joints. All joints shall be filled with mortar at every course. Exterior faces shall be laid up in advance of backing. Exterior faces shall be plastered or parged with a coat of mortar not less than 3/8 inch (9 mm) thick before the backing is laid up. Prior to parging, all joints on the back of face courses shall be cut flush. Unless otherwise noted, joints shall be not less than 1/4 inch (6 mm) nor more than 1/2 inch (12 mm) wide and the selected joint width shall be maintained uniform throughout the work.

d. Pointing. Face joints shall be neatly struck, using the weather-struck joint. All joints shall be finished properly as the laying of the brick progresses. When nails or line pins are used, the holes shall be immediately plugged with mortar and pointed when the nail or pin is removed.

e. Cleaning. Upon completion of the work all exterior surfaces shall be thoroughly cleaned by scrubbing and washing with water. If necessary to produce satisfactory results, cleaning shall be done with a 5% solution of muriatic acid which shall then be rinsed off with liberal quantities of water.

f. Curing and cold weather protection. The brick masonry shall be protected and kept moist for at least 48 hours after laying the brick. Brick masonry work or pointing shall not be done when there is frost on the brick or when the air temperature is below 50°F (10°C) unless the Contractor has, on the project ready to use, suitable covering and artificial heating devices necessary to keep the atmosphere surrounding the masonry at a temperature of not less than 60°F (16°C) for the duration of the curing period.

751-3.3 Concrete structures. Concrete structures which are to be cast-in-place within the project boundaries shall be built on prepared foundations, conforming to the dimensions and shape indicated on the plans. The construction shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

All invert channels shall be constructed and shaped accurately to be smooth, uniform, and cause minimum resistance to flowing water. The interior bottom shall be sloped to the outlet.

751-3.4 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program.

Precast concrete structures shall conform to ASTM C478. Precast concrete structures shall be constructed on prepared or previously placed slab foundations conforming to the dimensions and locations shown on the plans. All precast concrete sections necessary to build a completed structure shall be furnished. The different sections shall fit together readily. Joints between precast concrete risers and tops shall be full-bedded in cement mortar and shall: (1) be smoothed to a uniform surface on both interior and exterior of the structure or (2) utilize a rubber gasket per ASTM C443. The top of the upper precast concrete section shall be suitably formed and dimensioned to receive the metal frame and cover or grate, or other cap, as required. Provision shall be made for any connections for lateral pipe, including drops and leads that may be installed in the structure. The flow lines shall be smooth, uniform, and cause minimum resistance to flow. The metal or metal encapsulated steps that are embedded or built into the side walls shall be aligned and placed in accordance to ASTM C478. When a metal ladder replaces the steps, it shall be securely fastened into position.

751-3.5 Corrugated metal structures. Corrugated metal structures shall be prefabricated. All standard or special fittings shall be furnished to provide pipe connections or branches with the correct dimensions and of sufficient length to accommodate connecting bands. The fittings shall be welded in

place to the metal structures. The top of the metal structure shall be designed so that either a concrete slab or metal collar may be attached to allow the fastening of a standard metal frame and grate or cover. Steps or ladders shall be furnished as shown on the plans. Corrugated metal structures shall be constructed on prepared foundations, conforming to the dimensions and locations as shown on the plans. When indicated, the structures shall be placed on a reinforced concrete base.

751-3.6 Inlet and outlet pipes. Inlet and outlet pipes shall extend through the walls of the structures a sufficient distance beyond the outside surface to allow for connections. They shall be cut off flush with the wall on the inside surface of the structure, unless otherwise directed. For concrete or brick structures, mortar shall be placed around these pipes to form a tight, neat connection.

751-3.7 Placement and treatment of castings, frames, and fittings. All castings, frames, and fittings shall be placed in the positions indicated on the plans or as directed by the RPR, and shall be set true to line and elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

When frames or fittings are placed on previously constructed masonry, the bearing surface of the masonry shall be brought true to line and grade and shall present an even bearing surface so the entire face or back of the unit will come in contact with the masonry. The unit shall be set in mortar beds and anchored to the masonry as indicated on the plans or as directed by the RPR. All units shall set firm and secure.

After the frames or fittings have been set in final position, the concrete or mortar shall be allowed to harden for seven (7) days before the grates or covers are placed and fastened down.

751-3.8 Installation of steps. The steps shall be installed as indicated on the plans or as directed by the RPR. When the steps are to be set in concrete, they shall be placed and secured in position before the concrete is placed. When the steps are installed in brick masonry, they shall be placed as the masonry is being built. The steps shall not be disturbed or used until the concrete or mortar has hardened for at least seven (7) days. After seven (7) days, the steps shall be cleaned and painted, unless they have been galvanized.

When steps are required with precast concrete structures they shall meet the requirements of ASTM C478. The steps shall be cast into the side of the sections at the time the sections are manufactured or set in place after the structure is erected by drilling holes in the concrete and cementing the steps in place.

When steps are required with corrugated metal structures, they shall be welded into aligned position at a vertical spacing of 12 inches (300 mm).

Instead of steps, prefabricated ladders may be installed. For brick or concrete structures, the ladder shall be held in place by grouting the supports in drilled holes. For metal structures, the ladder shall be secured by welding the top support to the structure and grouting the bottom support into drilled holes in the foundation or as directed by the RPR.

751-3.9 Backfilling.

a. After a structure has been completed, the area around it shall be backfilled with approved material, in horizontal layers not to exceed 8 inches (200 mm) in loose depth, and compacted to the density required in Item P-152. Each layer shall be deposited evenly around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

b. Backfill shall not be placed against any structure until approved by the RPR. For concrete structures, approval shall not be given until the concrete has been in place seven (7) days, or until tests establish that the concrete has attained sufficient strength to withstand any pressure created by the backfill and placing methods.

c. Backfill shall not be measured for direct payment. Performance of this work shall be considered an obligation of the Contractor covered under the contract unit price for the structure involved.

751-3.10 Cleaning and restoration of site. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt, and rubbish from the site. Surplus dirt may be deposited in embankments, shoulders, or as approved by the RPR. The Contractor shall restore all disturbed areas to their original condition. The Contractor shall remove all tools and equipment, leaving the entire site free, clear, and in good condition.

METHOD OF MEASUREMENT

751-4.1 Manholes, catch basins, inlets, and inspection holes shall be measured by the unit.

BASIS OF PAYMENT

751-5.1 The accepted quantities of manholes, catch basins, inlets, and inspection holes will be paid for at the contract unit price per each in place when completed. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials; furnishing and installation of such specials and connections to pipes and other structures as may be required to complete the item as shown on the plans; and for all labor equipment, tools and incidentals necessary to complete the structure.

Payment will be made under:

Item D-751-5.1	Pre-Cast Drop Inlet for 15" RCP (GDOT 1019A, Type A) - per each
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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 A27	Standard Specification for Steel Castings, Carbon, for General Application
ASTM A47	Standard Specification for Ferritic Malleable Iron Castings
ASTM A48	Standard Specification for Gray Iron Castings
ASTM A123	Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A283	Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
ASTM A536	Standard Specification for Ductile Iron Castings
ASTM A897	Standard Specification for Austempered Ductile Iron Castings

ASTM C32	Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale)
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
ASTM C478	Standard Specification for Precast Reinforced Concrete Manhole Sections
ASTM C913	Standard Specification for Precast Concrete Water and Wastewater Structures.
American Association of State Highway and Transportation Officials (AASHTO)	
AASHTO M36	Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains

END OF ITEM D-751

Item D-752 Concrete Culverts, Headwalls, and Miscellaneous Drainage Structures

DESCRIPTION

752-1.1 This item shall consist of reinforced concrete culverts, headwalls, and miscellaneous drainage structures constructed in accordance with these specifications, at the specified locations and conforming to the lines, grades, and dimensions shown on the plans or required by the RPR.

MATERIALS

752-2.1 Concrete. Reinforced concrete shall meet the requirements of Item P-610.

CONSTRUCTION METHODS

752-3.1 Unclassified excavation.

a. Trenches and foundation pits for structures or structure footings shall be excavated to the lines and grades and elevations shown on the plans. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown. The elevations of the bottoms of footings, as shown on the plans, shall be considered as approximate only; and the RPR may approve, in writing, changes in dimensions or elevations of footings necessary to secure a satisfactory foundation.

b. Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the RPR. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. When concrete will rest on a surface other than rock, the bottom of the excavation shall not be disturbed and excavation to final grade shall not be made until immediately before the concrete or reinforcing steel is placed.

c. The Contractor shall do all bracing, sheathing, or shoring necessary to perform and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be included in the unit price bid for excavation.

d. All bracing, sheathing, or shoring shall be removed by the Contractor after the completion of the structure. Removal shall not disturb or damage the finished concrete. The cost of removal shall be included in the unit price bid for excavation.

e. After each excavation is completed, the Contractor shall notify the RPR. No concrete or reinforcing steel shall be placed until the RPR has approved the depth of the excavation and the character of the foundation material.

752-3.2 Backfilling.

a. After a structure has been completed, backfilling with approved material shall be accomplished by applying the fill in horizontal layers not to exceed 8 inches (200 mm) in loose depth, and compacted. The

field density of the compacted material shall be at least 90% of the maximum density for cohesive soils and 95% of the maximum density for noncohesive soils. The maximum density shall be determined in accordance with ASTM D698. The field density shall be determined in accordance with ASTM D1556.

b. No backfilling shall be placed against any structure until approved by the RPR. For concrete, approval shall not be given until the concrete has been in place seven (7) days, or until tests establish that the concrete has attained sufficient strength to withstand any pressure created by the backfill or the placement methods.

c. Fill placed around concrete culverts shall be deposited on each side at the same time and to approximately the same elevation. All slopes bounding or within the areas to be backfilled shall be stepped or serrated to prevent wedge action against the structure.

d. Backfill will not be measured for direct payment. Performance of this work shall be considered as a subsidiary obligation of the Contractor, covered under the contract unit price for "unclassified excavation for structures."

752-3.3 Weep holes. Weep holes shall be constructed as shown on the plans.

752-3.4 Cleaning and restoration of site. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt, and rubbish from the site. Surplus dirt may be deposited in embankment, shoulders, or as approved by the RPR. The Contractor shall restore all disturbed areas to their original condition. The Contractor shall remove all tools and equipment, leaving the entire site free, clear, and in good condition.

METHOD OF MEASUREMENT

752-4.1 Headwalls, flared end sections, and pipe collars shall be measured by the unit.

BASIS OF PAYMENT

752-5.1 The accepted quantities of headwalls, flared end sections, and pipe collars will be paid for at the contract unit price per each in place when completed. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials; furnishing and installation of such specials and connections to pipes and other structures as may be required to complete the item as shown on the plans; and for all labor equipment, tools and incidentals necessary to complete the structure.

These prices shall be full compensation for furnishing all materials and for all preparation, excavation, and placing the materials, and for all labor, equipment, tools, and incidentals necessary to complete the structure.

Payment will be made under:

Item D-752-5.1	Pre-cast Reinforced Concrete Headwall for 15" RCP (GDOT Std. 1001-B) - per each
Item D-752-5.2	Flared End Section for 15" RCP - per each
Item D-752-5.3	Concrete Pipe Collar for 15" RCP (GDOT Standard 9031U) - per each

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 D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft ³ (600 kN-m/m ³))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

END OF ITEM D-752

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DIVISION 19 - FAA – Turfing

Item T-901 Seeding

DESCRIPTION

901-1.1 This item shall consist of soil preparation, fertilizing, liming, and seeding per the Special Provision all areas shown on the plans or as directed by the RPR in accordance with these specifications.

MATERIALS

901-2.1 Seed. The species and application rates of grass, legume, and cover-crop seed furnished shall be those stipulated herein. Seed shall conform to the requirements of Federal Specification JJJ-S-181, Federal Specification, Seeds, Agricultural.

Seed shall be furnished separately or in mixtures in standard containers labeled in conformance with the Agricultural Marketing Service (AMS) Seed Act and applicable state seed laws with the seed name, lot number, net weight, percentages of purity and of germination and hard seed, and percentage of maximum weed seed content clearly marked for each kind of seed. The Contractor shall furnish the RPR duplicate signed copies of a statement by the vendor certifying that each lot of seed has been tested by a recognized laboratory for seed testing within six (6) months of date of delivery. This statement shall include: name and address of laboratory, date of test, lot number for each kind of seed, and the results of tests as to name, percentages of purity and of germination, and percentage of weed content for each kind of seed furnished, and, in case of a mixture, the proportions of each kind of seed. Wet, moldy, or otherwise damaged seed will be rejected.

Seeds shall be applied as follows:

NON-NATIVE GRASS SEEDING TABLE 1

(Temporary and Permanent Seed Types for Shoulders, Medians and Slopes 3:1 or Flatter)

Common Name	Botanical Name	Class/Type	Rate/Acre	Planting Zone	Planting Dates
Common Bermuda Grass (Hulled)	<i>Cynodon dactylon</i>	Required Permanent Grass	10 (11)	1	April 16 – August 31
Common Bermuda Grass (Unhulled)			10 (11)		
Common Bermuda Grass (Hulled)	<i>Cynodon dactylon</i>	Required Permanent Grass	10 (11)	2,3,4	April 1 – October 15
Common Bermuda Grass (Unhulled)			10 (11)		
Bahia Grass	<i>Paspalum notatum</i>		10 (11)		
Rye Grass, Millet, Cereal Grass (Oats)	<i>Lolium penne spsp. Multiflorum, Echinochloa cursgalli, Avena sativa</i>	Temporary Grass	50 (56)	1	September 1- April 15
Rye Grass, Millet, Cereal Grass (Oats)	<i>Lolium penne spsp. Multiflorum, Echinochloa cursgalli, Avena sativa</i>	Temporary Grass	50 (56)	2,3,4	October 16- March 31

NON-NATIVE GRASS SEEDING TABLE 2

(Temporary and Permanent Seed Types for back slopes, fill slopes and areas which will not be subject to frequent mowing, slopes steeper than 3:1)

Common Name	Botanical Name	Class/Type	Rate/Acre	Planting Zone	Planting Dates
Interstate Lespedeza	<i>Lespedeza sericea</i>	Permanent Grass	50(56)	1,2	March 1 – August 31
Weeping Lovegrass	<i>Eragrostis curvula</i>	Temporary Grass	10(11)		
Interstate Lespedeza	<i>Lespedeza sericea</i>	Permanent Grass	75(84)	1,2	September 1- February 28
Tall Fescue	<i>Festuca arundinacea</i>	Temporary Grass	50(56)		
Interstate Lespedeza	<i>Lespedeza sericea</i>	Permanent Grass	50(56)	3,4	April 1 – October 31
Weeping Love Grass	<i>Eragrostis curvula</i>	Temporary Grass	10(11)		
Interstate Lespedeza	<i>Lespedeza sericea</i>	Permanent Grass	50(56)	3,4	November 1 – March 31
Weeping Love Grass	<i>Eragrostis curvula</i>	Temporary Grass	10(11)		

NATIVE GRASS SEEDING TABLE 3**For Non-Mowable Slopes or Areas Designated as Permanent Native Grass Plots**

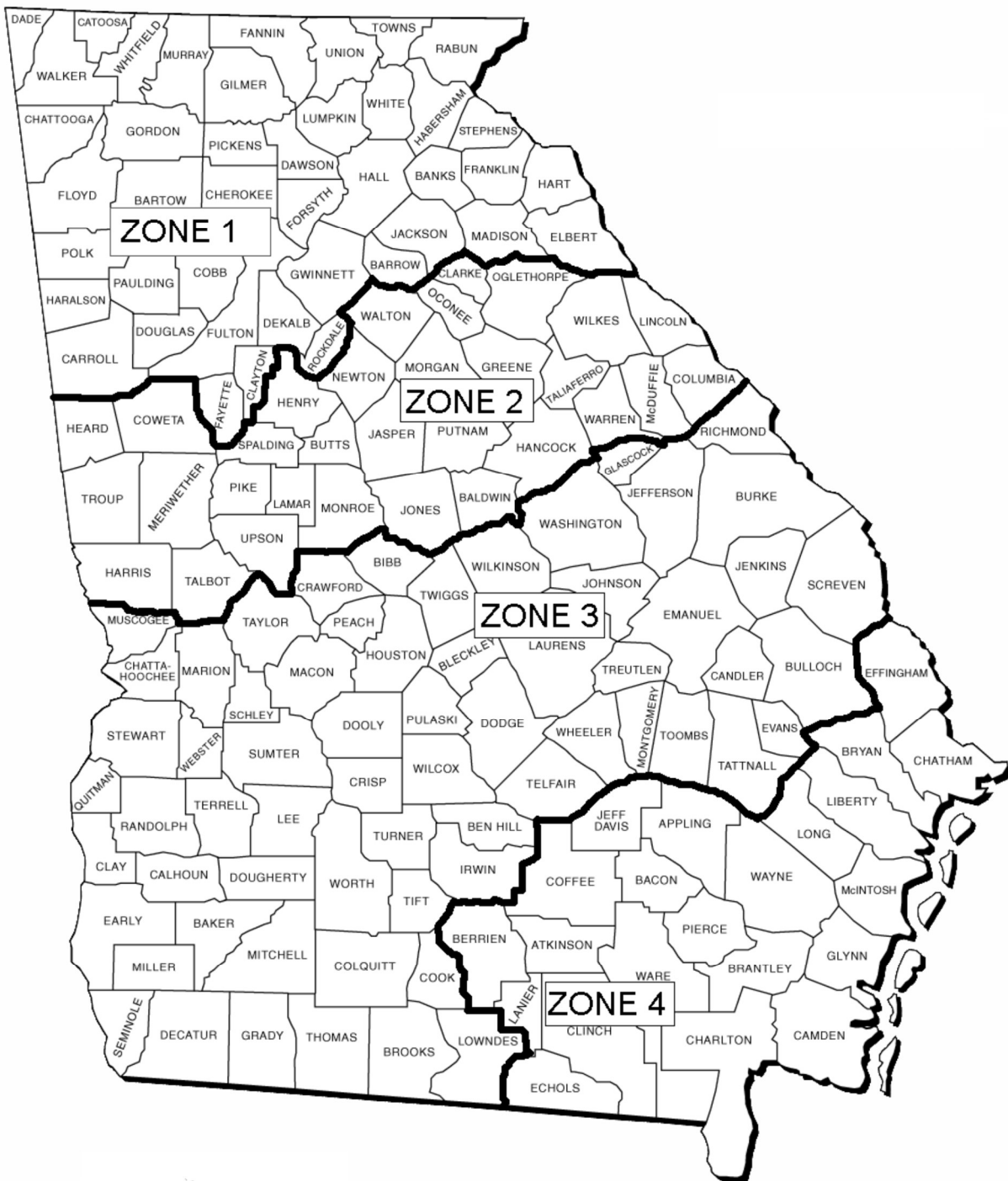
(Plant native seed mixes on back slopes, fill slopes and areas which will not be subject to frequent mowing – slopes steeper than 3:1)

Common Name	Botanical Name	Class/Type	Rate/Acre	Planting Zone	Planting Dates
Canada Wild Rye	<i>Elymus canadensis</i>	Cool Season	Minimum 2 (2)	1,2,3,4	October 31 - March 31
Virginia Wild Rye	<i>Elymus virginicus</i>	Cool Season	Minimum 2 (2)	1,2,3,4	October 31 - March 31
Bottle-brush Grass	<i>Hystrix patula</i>	Cool Season	Minimum 2 (2)	1,2,3,4	October 31 - March 31
Little Bluestem	<i>Schizachyrium scoparium</i> (<i>Andropogon scoparius</i>)	Warm Season	Minimum 2 (2)	1,2,3,4	March 31 - August 31
Indiangrass	<i>Sorghastrum nutans</i>	Warm Season	Minimum 2 (2)	1,2,3,4	March 31 - August 31
Eastern Gama Grass	<i>Tripsacum dactyloides</i>	Warm Season	Minimum 2 (2)	1,2,3,4,1,2,3,4	March 31 - August 31
Rice Cut Grass	<i>Leersia oryzoides</i>	Warm Season	Minimum 2 (2)	1,2,3,4	March 31 - August 31
Deertongue	<i>Panicum clandestinum</i>	Warm Season	Minimum 2 (2)	1,2,3,4	March 31 - August 31
Switchgrass	<i>Panicum virgatum</i>	Warm Season	Minimum 2 (2)	1,2,3,4	March 31 - August 31
Woolgrass	<i>Scirpus cyperinus</i>	Cool Season	Minimum 2 (2)	1,2,3,4	October 31 - March 31
River Oats	<i>Chasmanthium latifolium</i>	Cool Season	Minimum 2 (2)	1,2,3,4	October 31 - March 31
Purple Top	<i>Tridens flavus</i>	Warm Season	Minimum 2 (2)	1,2,3,4	March 31 - August 31

TEMPORARY GRASS SEEDING TABLE 4

Species	Rates per 1000 sq. ft.	Rates per Acre	Planting Date By Zone		
			1 & 2	2	3 & 4
Rye (Grain)	3.9 lbs	168 lbs	8/1 - 11/30	8/15 - 12/1	9/1 - 2/28
Ryegrass	0.9 lbs	40 lbs	8/1 - 11/30	9/1 - 12/15	9/15 - 1/1
Rye & Annual Lespedeza	0.6 lbs 0.6 lbs	28 lbs 24 lbs	3/1 - 4/1	2/1 - 3/1	2/1 - 3/1
Weeping Lovegrass	0.1 lbs	4 lbs	3/15 - 6/15	3/15 - 7/15	3/15 - 7/15
Sudangrass	1.0 lbs	60 lbs	4/1 - 8/31	4/1 - 8/31	3/15 - 8/1
Browntop Millet	1.1 lbs	50 lbs	4/1 - 6/30	4/1 - 7/15	4/1 - 7/15
Wheat	3.9 lbs	168 lbs	9/1 - 12/31	9/1 - 12/31	9/15 - 1/31

PLANTING ZONE MAP



Seed Properties and Rate of Application

Seed	Minimum Seed Purity (Percent)	Minimum Germination (Percent)	Rate of Application lb/acre (or lb/1,000 S.F.)
Common Bermuda	98%	85%	10 lbs/ac hulled and/or unhulled
*	*	*	*

Seeding shall be performed as approved by the RPR.

901-2.2 Lime. Lime shall be ground limestone containing not less than 85% of total carbonates, and shall be ground to such fineness that 90% will pass through a No. 20 (850 µm) mesh sieve and 50% will pass through a No. 100 (150 µm) mesh sieve. Coarser material will be acceptable, providing the rates of application are increased to provide not less than the minimum quantities and depth specified in the special provisions on the basis of the two sieve requirements above. Dolomitic lime or a high magnesium lime shall contain at least 10% of magnesium oxide. Lime shall be applied at the rate of **2,000 lbs/ac**. All liming materials shall conform to the requirements of ASTM C602.

901-2.3 Fertilizer. Fertilizer shall be standard commercial fertilizers supplied separately or in mixtures containing the percentages of total nitrogen, available phosphoric acid, and water-soluble potash. They shall be applied at the rate and to the depth specified, and shall meet the requirements of applicable state laws. They shall be furnished in standard containers with name, weight, and guaranteed analysis of contents clearly marked thereon. No cyanamide compounds or hydrated lime shall be permitted in mixed fertilizers.

The fertilizers may be supplied in one of the following forms:

- a. A dry, free-flowing fertilizer suitable for application by a common fertilizer spreader;
- b. A finely-ground fertilizer soluble in water, suitable for application by power sprayers; or
- c. A granular or pellet form suitable for application by blower equipment.

Fertilizers shall be 6-12-12 commercial fertilizer and shall be spread at the rate of 1200 lbs/ac. A second application of 10-10-10 fertilizer at 500 lbs/ac to be applied 90 days after grass is up, or as directed by the RPR.

901-2.4 Soil for repairs. The soil for fill and topsoiling of areas to be repaired shall be at least of equal quality to that which exists in areas adjacent to the area to be repaired. The soil shall be relatively free from large stones, roots, stumps, or other materials that will interfere with subsequent sowing of seed, compacting, and establishing turf, and shall be approved by the RPR before being placed.

CONSTRUCTION METHODS

901-3.1 Advance preparation and cleanup. After grading of areas has been completed and before applying fertilizer and ground limestone, areas to be seeded shall be raked or otherwise cleared of stones larger than 2 inches (50 mm) in any diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes has occurred after the completion of grading and before beginning the application of fertilizer and ground limestone, the Contractor shall repair such damage include filling gullies, smoothing irregularities, and repairing other incidental damage.

An area to be seeded shall be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches (125 mm) as a result of grading operations and, if immediately prior to seeding, the top 3 inches (75 mm) of soil is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter, and if shaped to the required grade.

When the area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, any grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches (125 mm). Clods shall be broken and the top 3 inches (75 mm) of soil shall be worked into a satisfactory seedbed by discing, or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

901-3.2 Dry application method.

a. Liming. Lime shall be applied separately and prior to the application of any fertilizer or seed and only on seedbeds that have previously been prepared as described above. The lime shall then be worked into the top 3 inches (75 mm) of soil after which the seedbed shall again be properly graded and dressed to a smooth finish.

b. Fertilizing. Following advance preparations and cleanup fertilizer shall be uniformly spread at the rate that will provide not less than the minimum quantity stated in paragraph 901-2.3. Initial application shall be worked into the top 3" of soil about with lime application. Final application shall be uniformly spread.

c. Seeding. Grass seed shall be sown at the rate specified in paragraph 901-2.1 immediately after fertilizing. The fertilizer and seed shall be raked within the depth range stated in the special provisions. Seeds of legumes, either alone or in mixtures, shall be inoculated before mixing or sowing, in accordance with the instructions of the manufacturer of the inoculant. When seeding is required at other than the seasons shown on the plans or in the special provisions, a cover crop shall be sown by the same methods required for grass and legume seeding.

d. Rolling. After the seed has been properly covered, the seedbed shall be immediately compacted by means of an approved lawn roller, weighing 40 to 65 pounds per foot (60 to 97 kg per meter) of width for clay soil (or any soil having a tendency to pack), and weighing 150 to 200 pounds per foot (223 to 298 kg per meter) of width for sandy or light soils.

901-3.3 Wet application method.

a. General. The Contractor may elect to apply seed and fertilizer (and lime, if required) by spraying them on the previously prepared seedbed in the form of an aqueous mixture and by using the methods and equipment described herein. The rates of application shall be as specified in the special provisions.

b. Spraying equipment. The spraying equipment shall have a container or water tank equipped with a liquid level gauge calibrated to read in increments not larger than 50 gallons (190 liters) over the entire range of the tank capacity, mounted so as to be visible to the nozzle operator. The container or tank shall also be equipped with a mechanical power-driven agitator capable of keeping all the solids in the mixture in complete suspension at all times until used.

The unit shall also be equipped with a pressure pump capable of delivering 100 gallons (380 liters) per minute at a pressure of 100 lb / sq inches (690 kPa). The pump shall be mounted in a line that will recirculate the mixture through the tank whenever it is not being sprayed from the nozzle. All pump passages and pipe lines shall be capable of providing clearance for 5/8 inch (16 mm) solids. The power

unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. There shall be an indicating pressure gauge connected and mounted immediately at the back of the nozzle.

The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-acting, three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operator can control and regulate the amount of flow of mixture delivered to the nozzle. At least three different types of nozzles shall be supplied so that mixtures may be properly sprayed over distance varying from 20 to 100 feet (6 to 30 m). One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet nozzle. For ease of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings.

In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet (15 m) in length shall be provided to which the nozzles may be connected.

c. Mixtures. Lime, if required, shall be applied separately, in the quantity specified, prior to the fertilizing and seeding operations. Not more than 220 pounds (100 kg) of lime shall be added to and mixed with each 100 gallons (380 liters) of water. Seed and fertilizer shall be mixed together in the relative proportions specified, but not more than a total of 220 pounds (100 kg) of these combined solids shall be added to and mixed with each 100 gallons (380 liters) of water.

All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. The Contractor shall identify to the RPR all sources of water at least two (2) weeks prior to use. The RPR may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for chemical and saline content. The Contractor shall not use any water from any source that is disapproved by the RPR following such tests.

All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. All such mixtures shall be used within two (2) hours from the time they were mixed or they shall be wasted and disposed of at approved locations.

d. Spraying. Lime, if required, shall be sprayed only upon previously prepared seedbeds. After the applied lime mixture has dried, the lime shall be worked into the top 3 inches (75 mm), after which the seedbed shall again be properly graded and dressed to a smooth finish.

Mixtures of seed and fertilizer shall only be sprayed upon previously prepared seedbeds on which the lime, if required, shall already have been worked in. The mixtures shall be applied by means of a high-pressure spray that shall always be directed upward into the air so that the mixtures will fall to the ground like rain in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner as might produce erosion or runoff.

Particular care shall be exercised to ensure that the application is made uniformly and at the prescribed rate and to guard against misses and overlapped areas. Proper predetermined quantities of the mixture in accordance with specifications shall be used to cover specified sections of known area.

Checks on the rate and uniformity of application may be made by observing the degree of wetting of the ground or by distributing test sheets of paper or pans over the area at intervals and observing the quantity of material deposited thereon.

On surfaces that are to be mulched as indicated by the plans or designated by the RPR, seed and fertilizer applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has dried.

901-3.4 Maintenance of seeded areas. The Contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the RPR. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work.

When either the dry or wet application method outlined above is used for work done out of season, it will be required that the Contractor establish a good stand of grass of uniform color and density to the satisfaction of the RPR. A grass stand shall be considered adequate when bare spots are one square foot (0.01 sq m) or less, randomly dispersed, and do not exceed 3% of the area seeded.

METHOD OF MEASUREMENT

901-4.1 The quantity of seeding to be paid for shall be the number of units acre measured on the ground surface, completed and accepted.

BASIS OF PAYMENT

901-5.1 Payment shall be made at the contract unit price per acre or fraction thereof, which price and payment shall be full compensation for furnishing and placing all material and for all labor, equipment, tools, and incidentals necessary to complete the work prescribed in this item.

Payment will be made under:

Item 901-5.1	Permanent Seeding, including Mulch, Seed, Fertilizer, Lime, Topsoil, Tackifiers, and Minor Shoulder Grading	- per acre
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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 C602	Standard Specification for Agricultural Liming Materials
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Federal Specifications (FED SPEC)

FED SPEC	JJJ-S-181, Federal Specification, Seeds, Agricultural
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Advisory Circulars (AC)

AC 150/5200-33	Hazardous Wildlife Attractants on or Near Airports
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FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-901

Item T-905 Topsoil

DESCRIPTION

905-1.1 This item shall consist of preparing the ground surface for topsoil application, removing topsoil from designated stockpiles or areas to be stripped on the site or from approved sources off the site, and placing and spreading the topsoil on prepared areas in accordance with this specification at the locations shown on the plans or as directed by the RPR.

MATERIALS

905-2.1 Topsoil. Topsoil shall be the surface layer of soil with no admixture of refuse or any material toxic to plant growth, and it shall be reasonably free from subsoil and stumps, roots, brush, stones (2 inches (50 mm) or more in diameter), and clay lumps or similar objects. Brush and other vegetation that will not be incorporated with the soil during handling operations shall be cut and removed. Ordinary sod and herbaceous growth such as grass and weeds are not to be removed, but shall be thoroughly broken up and intermixed with the soil during handling operations. Heavy sod or other cover, which cannot be incorporated into the topsoil by discing or other means, shall be removed. The topsoil or soil mixture, unless otherwise specified or approved, shall have a pH range of approximately 5.5 pH to 7.6 pH, when tested in accordance with the methods of testing of the Association of Official Agricultural Chemists in effect on the date of invitation of bids. The organic content shall be not less than 3% nor more than 20% as determined by the wet-combustion method (chromic acid reduction). There shall be not less than 20% nor more than 80% of the material passing the 200 mesh (75 µm) sieve as determined by the wash test in accordance with ASTM C117.

Natural topsoil may be amended by the Contractor with approved materials and methods to meet the above specifications.

905-2.2 Inspection and tests. Within 10 days following acceptance of the bid, the RPR shall be notified of the source of topsoil to be furnished by the Contractor. The topsoil shall be inspected to determine if the selected soil meets the requirements specified and to determine the depth to which stripping will be permitted. At this time, the Contractor may be required to take representative soil samples from several locations within the area under consideration and to the proposed stripping depths, for testing purposes as specified in paragraph 905-2.1.

CONSTRUCTION METHODS

905-3.1 General. Areas to be topsoiled shall be shown on the plans. If topsoil is available on the site, the location of the stockpiles or areas to be stripped of topsoil and the stripping depths shall be shown on the plans.

Suitable equipment necessary for proper preparation and treatment of the ground surface, stripping of topsoil, and for the handling and placing of all required materials shall be on hand, in good condition, and approved by the RPR before the various operations are started.

905-3.2 Preparing the ground surface. Immediately prior to dumping and spreading the topsoil on any area, the surface shall be loosened by discs or spike-tooth harrows, or by other means approved by the RPR, to a minimum depth of 2 inches (50 mm) to facilitate bonding of the topsoil to the covered subgrade soil. The surface of the area to be topsoiled shall be cleared of all stones larger than 2 inches (50 mm) in any diameter and all litter or other material which may be detrimental to proper bonding, the rise of capillary moisture, or the proper growth of the desired planting. Limited areas, as shown on the plans, which are too compact to respond to these operations shall receive special scarification.

Grades on the area to be topsoiled, which have been established by others as shown on the plans, shall be maintained in a true and even condition. Where grades have not been established, the areas shall be smooth-graded and the surface left at the prescribed grades in an even and compacted condition to prevent the formation of low places or pockets where water will stand.

905-3.3 Obtaining topsoil. Prior to the stripping of topsoil from designated areas, any vegetation, briars, stumps and large roots, rubbish or stones found on such areas, which may interfere with subsequent operations, shall be removed using methods approved by the RPR. Heavy sod or other cover, which cannot be incorporated into the topsoil by discing or other means shall be removed.

When suitable topsoil is available on the site, the Contractor shall remove this material from the designated areas and to the depth as directed by the RPR. The topsoil shall be spread on areas already tilled and smooth-graded, or stockpiled in areas approved by the RPR. Any topsoil stockpiled by the Contractor shall be rehandled and placed without additional compensation. Any topsoil that has been stockpiled on the site by others, and is required for topsoil purposes, shall be removed and placed by the Contractor. The sites of all stockpiles and areas adjacent thereto which have been disturbed by the Contractor shall be graded if required and put into a condition acceptable for seeding.

When suitable topsoil is secured off the airport site, the Contractor shall locate and obtain the supply, subject to the approval of the RPR. The Contractor shall notify the RPR sufficiently in advance of operations in order that necessary measurements and tests can be made. The Contractor shall remove the topsoil from approved areas and to the depth as directed. The topsoil shall be hauled to the site of the work and placed for spreading, or spread as required. Any topsoil hauled to the site of the work and stockpiled shall be rehandled and placed without additional compensation.

905-3.4 Placing topsoil. The topsoil shall be evenly spread on the prepared areas to a uniform depth of 2 inches (50 mm) after compaction, unless otherwise shown on the plans or stated in the special provisions. Spreading shall not be done when the ground or topsoil is frozen, excessively wet, or otherwise in a condition detrimental to the work. Spreading shall be carried on so that turfing operations can proceed with a minimum of soil preparation or tilling.

After spreading, any large, stiff clods and hard lumps shall be broken with a pulverizer or by other effective means, and all stones or rocks (2 inches (50 mm) or more in diameter), roots, litter, or any foreign matter shall be raked up and disposed of by the Contractor. After spreading is completed, the topsoil shall be satisfactorily compacted by rolling with a cultipacker or by other means approved by the RPR. The compacted topsoil surface shall conform to the required lines, grades, and cross-sections. Any topsoil or other dirt falling upon pavements as a result of hauling or handling of topsoil shall be promptly removed.

METHOD OF MEASUREMENT

905-4.1 Topsoil obtained on the site shall be measured by the number of cubic yards (cubic meters) of topsoil measured in its original position and stripped or excavated. Topsoil stockpiled by others and removed for topsoil by the Contractor shall be measured by the number of cubic yards (cubic meters) of topsoil measured in the stockpile. Topsoil shall be measured by volume in cubic yards (cubic meters) computed by the method of end areas.

905-4.2 Topsoil obtained off the site shall be measured by the number of cubic yards (cubic meters) of topsoil measured in its original position and stripped or excavated. Topsoil shall be measured by volume in cubic yards (meters) computed by the method of end areas.

BASIS OF PAYMENT

905-5.1 Payment will be made at the contract unit price per cubic yard (cubic meter) for topsoil (obtained on the site). This price shall be full compensation for furnishing all materials and for all preparation, placing, and spreading of the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

905-5.2 Payment will be made at the contract unit price per cubic yard (cubic meter) for topsoil (obtained off the site). This price shall be full compensation for furnishing all materials and for all preparation, placing, and spreading of the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item T-905-5.1	Topsoil (Furnished from Off the Site) - per cubic yard
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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 C117	Materials Finer than 75 μ m (No. 200) Sieve in Mineral Aggregates by Washing
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Advisory Circulars (AC)

AC 150/5200-33	Hazardous Wildlife Attractants on or Near Airports
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FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-905

Item T-908 Mulching

DESCRIPTION

908-1.1 This item shall consist of furnishing, hauling, placing, and securing mulch on surfaces indicated on the plans or designated by the RPR.

MATERIALS

908-2.1 Mulch material. Acceptable mulch shall be the materials listed below or any approved locally available material that is similar to those specified. Mulch shall be free from noxious weeds, mold, and other deleterious materials. Mulch materials, which contain matured seed of species that would volunteer and be detrimental to the proposed overseeding, or to surrounding farm land, will not be acceptable. Straw or other mulch material which is fresh and/or excessively brittle, or which is in such an advanced stage of decomposition as to smother or retard the planted grass, will not be acceptable.

a. Hay. Hay shall be native hay in an air-dry condition and of proper consistency for placing with commercial mulch blowing equipment. Hay shall be sterile, containing no fertile seed.

b. Straw. Straw shall be the stalks from threshed plant residue of oats, wheat, barley, rye, or rice from which grain has been removed. Furnish in air-dry condition and of proper consistency for placing with commercial mulch blowing equipment. Straw shall contain no fertile seed.

c. Hay mulch containing seed. Hay mulch shall be mature hay containing viable seed of native grasses or other desirable species stated in the special provisions or as approved by the RPR. The hay shall be cut and handled so as to preserve the maximum quantity of viable seed. Hay mulch that cannot be hauled and spread immediately after cutting shall be placed in weather-resistant stacks or baled and stored in a dry location until used.

908-2.2 Inspection. The RPR shall be notified of sources and quantities of mulch materials available and the Contractor shall furnish him with representative samples of the materials to be used 30 days before delivery to the project. These samples may be used as standards with the approval of the RPR and any materials brought on the site that do not meet these standards shall be rejected.

CONSTRUCTION METHODS

908-3.1 Mulching. Before spreading mulch, all large clods, stumps, stones, brush, roots, and other foreign material shall be removed from the area to be mulched. Mulch shall be applied immediately after seeding. The spreading of the mulch may be by hand methods, blower, or other mechanical methods, provided a uniform covering is obtained.

Mulch material shall be furnished, hauled, and evenly applied on the area shown on the plans or designated by the RPR. Straw or hay shall be spread over the surface to a uniform thickness at the rate of 2 to 3 tons per acre (1800 - 2700 kg per acre) to provide a loose depth of not less than 1-1/2 inches (38 cm) nor more than 3 inches (75 mm). Other organic material shall be spread at the rate directed by the RPR. Mulch may be blown on the slopes and the use of cutters in the equipment for this purpose will be permitted to the extent that at least 95% of the mulch in place on the slope shall be 6 inches (150

mm) or more in length. When mulches applied by the blowing method are cut, the loose depth in place shall be not less than one inch (25 mm) nor more than 2 inches (50 mm).

908-3.2 Securing mulch. The mulch shall be held in place by light discing, a very thin covering of topsoil, pins, stakes, wire mesh, asphalt binder, or other adhesive material approved by the RPR. Where mulches have been secured by either of the asphalt binder methods, it will not be permissible to walk on the slopes after the binder has been applied. When an application of asphalt binder material is used to secure the mulch, the Contractor must take every precaution to guard against damaging or disfiguring structures or property on or adjacent to the areas worked and will be held responsible for any such damage resulting from the operation.

If the “peg and string” method is used, the mulch shall be secured by the use of stakes or wire pins driven into the ground on 5-foot (1.5-m) centers or less. Binder twine shall be strung between adjacent stakes in straight lines and crisscrossed diagonally over the mulch, after which the stakes shall be firmly driven nearly flush to the ground to draw the twine down tight onto the mulch.

908-3.3 Care and repair.

a. The Contractor shall care for the mulched areas until final acceptance of the project. Care shall consist of providing protection against traffic or other use by placing warning signs, as approved by the RPR, and erecting any barricades that may be shown on the plans before or immediately after mulching has been completed on the designated areas.

b. The Contractor shall be required to repair or replace any mulch that is defective or becomes damaged until the project is finally accepted. When, in the judgment of the RPR, such defects or damages are the result of poor workmanship or failure to meet the requirements of the specifications, the cost of the necessary repairs or replacement shall be borne by the Contractor.

c. If the “asphalt spray” method is used, all mulched surfaces shall be sprayed with asphalt binder material so that the surface has a uniform appearance. The binder shall be uniformly applied to the mulch at the rate of approximately 8 gallons (32 liters) per 1,000 square feet (100 sq m), or as directed by the RPR, with a minimum of 6 gallons (24 liters) and a maximum of 10 gallons (40 liters) per 1,000 square feet (100 sq m) depending on the type of mulch and the effectiveness of the binder securing it. Asphalt binder material may be sprayed on the mulched slope areas from either the top or the bottom of the slope. An approved spray nozzle shall be used. The nozzle shall be operated at a distance of not less than 4 feet (1.2 m) from the surface of the mulch and uniform distribution of the asphalt material shall be required. A pump or an air compressor of adequate capacity shall be used to ensure uniform distribution of the asphalt material.

d. If the “asphalt mix” method is used, the mulch shall be applied by blowing, and the asphalt binder material shall be sprayed into the mulch as it leaves the blower. The binder shall be uniformly applied to the mulch at the rate of approximately 8 gallons (32 liters) per 1,000 square feet (100 sq m) or as directed by the RPR, with a minimum of 6 gallons (24 liters) and a maximum of 10 gallons (40 liters) per 1,000 square feet (100 sq m) depending on the type of mulch and the effectiveness of the binder securing it.

METHOD OF MEASUREMENT

908-4.1 Mulching shall be measured in square yards (square meters) on the basis of the actual surface area acceptably mulched.

BASIS OF PAYMENT

908-5.1 Payment will be made at the contract unit price per square yard (square meter) for mulching. The price shall be full compensation for furnishing all materials and for placing and anchoring the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item T-908-5.1 Mulching - per acre

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 D977 Standard Specification for Emulsified Asphalt

Advisory Circulars (AC)

AC 150/5200-33 Hazardous Wildlife Attractants on or Near Airports

FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-908

Item L-108 Underground Power Cable for Airports

DESCRIPTION

108-1.1 This item shall consist of furnishing and installing power cables that are direct buried and furnishing and/or installing power cables within conduit or duct banks per these specifications at the locations shown on the plans. It includes excavation and backfill of trench for direct-buried cables only. Also included are the installation of counterpoise wires, ground wires, ground rods and connections, cable splicing, cable marking, cable testing, and all incidentals necessary to place the cable in operating condition as a completed unit to the satisfaction of the RPR. This item shall not include the installation of duct banks or conduit, trenching and backfilling for duct banks or conduit, or furnishing or installation of cable for FAA owned/operated facilities.

EQUIPMENT AND MATERIALS

108-2.1 General.

a. Airport lighting equipment and materials covered by advisory circulars (AC) shall be approved under the Airport Lighting Equipment Certification Program per AC 150/5345-53, current version.

b. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification, when requested by the RPR.

c. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor's cost.

d. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

e. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format. The RPR reserves the right to reject any and all equipment, materials, or procedures that do not meet the system design and the standards and codes, specified in this document.

f. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for at least twelve (12) months from the date of final acceptance

by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner. The Contractor shall maintain a minimum insulation resistance in accordance with paragraph 108-3.10e with isolation transformers connected in new circuits and new segments of existing circuits through the end of the contract warranty period when tested in accordance with AC 150/5340-26, Maintenance Airport Visual Aid Facilities, paragraph 5.1.3.1, Insulation Resistance Test.

108-2.2 Cable. Underground cable for airfield lighting facilities (runway and taxiway lights and signs) shall conform to the requirements of AC 150/5345-7, Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits latest edition. Conductors for use on 6.6 ampere primary airfield lighting series circuits shall be single conductor, seven strand, #8 American wire gauge (AWG), L-824 Type C, 5,000 volts, non-shielded, with cross-linked polyethylene insulation. Conductors for use on 20 ampere primary airfield lighting series circuits shall be single conductor, seven strand, #6 AWG, L-824 Type C, 5,000 volts, non-shielded, with cross-linked polyethylene insulation. L-824 conductors for use on the L-830 secondary of airfield lighting series circuits shall be sized in accordance with the manufacturer's recommendations. All other conductors shall comply with FAA and National Electric Code (NEC) requirements. Conductor sizes noted above shall not apply to leads furnished by manufacturers on airfield lighting transformers and fixtures.

Wire for electrical circuits up to 600 volts shall comply with Specification L-824 and/or Commercial Item Description A-A-59544A and shall be type THWN-2, 75°C for installation in conduit and RHW-2, 75°C for direct burial installations. Conductors for parallel (voltage) circuits shall be type and size and installed in accordance with NFPA-70, National Electrical Code.

Unless noted otherwise, all 600-volt and less non-airfield lighting conductor sizes are based on a 75°C, THWN-2, 600-volt insulation, copper conductors, not more than three single insulated conductors, in raceway, in free air. The conduit/duct sizes are based on the use of THWN-2, 600-volt insulated conductors. The Contractor shall make the necessary increase in conduit/duct sizes for other types of wire insulation. In no case shall the conduit/duct size be reduced. The minimum power circuit wire size shall be #12 AWG.

Conductor sizes may have been adjusted due to voltage drop or other engineering considerations. Equipment provided by the Contractor shall be capable of accepting the quantity and sizes of conductors shown in the Contract Documents. All conductors, pigtails, cable step-down adapters, cable step-up adapters, terminal blocks and splicing materials necessary to complete the cable termination/splice shall be considered incidental to the respective pay items provided.

Cable type, size, number of conductors, strand and service voltage shall be as specified in the Contract Document.

108-2.3 Bare copper wire (counterpoise, bare copper wire ground and ground rods). Wire for counterpoise or ground installations for airfield lighting systems shall be No. 6 AWG bare solid copper wire for counterpoise and/or No. 6 AWG insulated stranded for grounding bond wire per ASTM B3 and ASTM B8, and shall be bare copper wire. For voltage powered circuits, the equipment grounding conductor shall comply with NEC Article 250.

Ground rods shall be copper or copper-clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case be less than 8 feet (2.4 m) long and 5/8 inch (16 mm) in diameter.

108-2.4 Cable connections. In-line connections or splices of underground primary cables shall be of the type called for on the plans, and shall be one of the types listed below. No separate payment will be made for cable connections.

a. The cast splice. A cast splice, employing a plastic mold and using epoxy resin equivalent to that manufactured by 3M™ Company, "Scotchcast" Kit No. 82-B, or an approved equivalent, used for potting the splice is acceptable.

b. The field-attached plug-in splice. Field attached plug-in splices shall be installed as shown on the plans. The Contractor shall determine the outside diameter of the cable to be spliced and furnish appropriately sized connector kits and/or adapters. Tape or heat shrink tubing with integral sealant shall be in accordance with the manufacturer's requirements. Primary Connector Kits manufactured by Amerace, "Super Kit", Integro "Complete Kit", or approved equal is acceptable.

c. The factory-molded plug-in splice. Specification for L-823 Connectors, Factory-Molded to Individual Conductors, is acceptable.

d. The taped or heat-shrink splice. Taped splices employing field-applied rubber, or synthetic rubber tape covered with plastic tape is acceptable. The rubber tape should meet the requirements of ASTM D4388 and the plastic tape should comply with Military Specification MIL-I-24391 or Commercial Item Description A-A-55809. Heat shrinkable tubing shall be heavy-wall, self-sealing tubing rated for the voltage of the wire being spliced and suitable for direct-buried installations. The tubing shall be factory coated with a thermoplastic adhesive-sealant that will adhere to the insulation of the wire being spliced forming a moisture- and dirt-proof seal. Additionally, heat shrinkable tubing for multi-conductor cables, shielded cables, and armored cables shall be factory kits that are designed for the application. Heat shrinkable tubing and tubing kits shall be manufactured by Tyco Electronics/ Raychem Corporation, Energy Division, or approved equivalent.

In all the above cases, connections of cable conductors shall be made using crimp connectors using a crimping tool designed to make a complete crimp before the tool can be removed. All L-823/L-824 splices and terminations shall be made per the manufacturer's recommendations and listings.

All connections of counterpoise, grounding conductors and ground rods shall be made by the exothermic process or approved equivalent, except that a light base ground clamp connector shall be used for attachment to the light base. All exothermic connections shall be made per the manufacturer's recommendations and listings.

108-2.5 Splicer qualifications. Every airfield lighting cable splicer shall be qualified in making airport cable splices and terminations on cables rated at or above 5,000 volts AC. The Contractor shall submit to the RPR proof of the qualifications of each proposed cable splicer for the airport cable type and voltage level to be worked on. Cable splicing/terminating personnel shall have a minimum of three (3) years continuous experience in terminating/splicing medium voltage cable.

108-2.6 Concrete. Concrete shall be proportioned, placed, and cured per state department of transportation structural concrete with minimum 25% Type F fly ash, and a minimum allowable compressive strength of 4,000 psi (28 MPa).

108-2.7 Flowable backfill. Flowable material used to backfill trenches for power cable trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

108-2.8 Cable identification tags. Cable identification tags shall be made from a non-corrosive material with the circuit identification stamped or etched onto the tag. The tags shall be of the type as detailed on the plans.

108-2.9 Tape. Electrical tapes shall be Scotch™ Electrical Tapes –Scotch™ 88 (1-1/2 inch (38 mm) wide) and Scotch™ 130C® linerless rubber splicing tape (2-inch (50 mm) wide), as manufactured by the Minnesota Mining and Manufacturing Company (3M™), or an approved equivalent.

108-2.10 Electrical coating. Electrical coating shall be Scotchkote™ as manufactured by 3M™, or an approved equivalent.

108-2.11 Existing circuits. Whenever the scope of work requires connection to an existing circuit, the existing circuit's insulation resistance shall be tested, in the presence of the RPR. The test shall be performed per this item and prior to any activity that will affect the respective circuit. The Contractor shall record the results on forms acceptable to the RPR. When the work affecting the circuit is complete, the circuit's insulation resistance shall be checked again, in the presence of the RPR. The Contractor shall record the results on forms acceptable to the RPR. The second reading shall be equal to or greater than the first reading or the Contractor shall make the necessary repairs to the existing circuit to bring the second reading above the first reading. All repair costs including a complete replacement of the L-823 connectors, L-830 transformers and L-824 cable, if necessary, shall be borne by the Contractor. All test results shall be submitted in the Operation and Maintenance (O&M) Manual.

108-2.12 Detectable warning tape. Plastic, detectable, American Public Works Association (APWA) Red (electrical power lines, cables, conduit and lighting cable) with continuous legend tape shall be polyethylene film with a metalized foil core and shall be 3-6 inches (75-150 mm) wide. Detectable tape is incidental to the respective bid item. Detectable warning tape for communication cables shall be orange. Detectable warning tape color code shall comply with the APWA Uniform Color Code.

CONSTRUCTION METHODS

108-3.1 General. The Contractor shall install the specified cable at the approximate locations indicated on the plans. Unless otherwise shown on the plans, all cable required to cross under pavements expected to carry aircraft loads shall be installed in concrete encased duct banks. Cable shall be run without splices, from fixture to fixture.

Cable connections between lights will be permitted only at the light locations for connecting the underground cable to the primary leads of the individual isolation transformers. The Contractor shall be responsible for providing cable in continuous lengths for home runs or other long cable runs without connections unless otherwise authorized in writing by the RPR or shown on the plans.

In addition to connectors being installed at individual isolation transformers, L-823 cable connectors for maintenance and test points shall be installed at locations shown on the plans. Cable circuit identification markers shall be installed on both sides of the L-823 connectors installed and on both sides of slack loops where a future connector would be installed.

Provide not less than 3 feet (1 m) of cable slack on each side of all connections, isolation transformers, light units, and at points where cable is connected to field equipment. Where provisions must be made for testing or for future above grade connections, provide enough slack to allow the cable to be extended at least one foot (30 cm) vertically above the top of the access structure. This requirement also applies where primary cable passes through empty light bases, junction boxes, and access structures to allow for future connections, or as designated by the RPR.

Primary airfield lighting cables installed shall have cable circuit identification markers attached on both sides of each L-823 connector and on each airport lighting cable entering or leaving cable access points, such as manholes, hand holes, pull boxes, junction boxes, etc. Markers shall be of sufficient length for imprinting the cable circuit identification legend on one line, using letters not less than 1/4 inch (6 mm) in size. The cable circuit identification shall match the circuits noted on the construction plans.

108-3.2 Installation in duct banks or conduits. This item includes the installation of the cable in duct banks or conduit per the following paragraphs. The maximum number and voltage ratings of cables installed in each single duct or conduit, and the current-carrying capacity of each cable shall be per the latest version of the National Electric Code, or the code of the local agency or authority having jurisdiction.

The Contractor shall make no connections or splices of any kind in cables installed in conduits or duct banks.

Unless otherwise designated in the plans, where ducts are in tiers, use the lowest ducts to receive the cable first, with spare ducts left in the upper levels. Check duct routes prior to construction to obtain assurance that the shortest routes are selected and that any potential interference is avoided.

Duct banks or conduits shall be installed as a separate item per Item L-110, Airport Underground Electrical Duct Banks and Conduit. The Contractor shall run a mandrel through duct banks or conduit prior to installation of cable to ensure that the duct bank or conduit is open, continuous and clear of debris. The mandrel size shall be compatible with the conduit size. The Contractor shall swab out all conduits/ducts and clean light bases, manholes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed, the light bases and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, light bases, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be re-cleaned at the Contractor's expense. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

The cable shall be installed in a manner that prevents harmful stretching of the conductor, damage to the insulation, or damage to the outer protective covering. The ends of all cables shall be sealed with moisture-seal tape providing moisture-tight mechanical protection with minimum bulk, or alternately, heat shrinkable tubing before pulling into the conduit and it shall be left sealed until connections are made. Where more than one cable is to be installed in a conduit, all cable shall be pulled in the conduit at the same time. The pulling of a cable through duct banks or conduits may be accomplished by hand winch or power winch with the use of cable grips or pulling eyes. Maximum pulling tensions shall not exceed the cable manufacturer's recommendations. A non-hardening cable-pulling lubricant recommended for the type of cable being installed shall be used where required.

The Contractor shall submit the recommended pulling tension values to the RPR prior to any cable installation. If required by the RPR, pulling tension values for cable pulls shall be monitored by a dynamometer in the presence of the RPR. Cable pull tensions shall be recorded by the Contractor and reviewed by the RPR. Cables exceeding the maximum allowable pulling tension values shall be removed and replaced by the Contractor at the Contractor's expense.

The manufacturer's minimum bend radius or NEC requirements (whichever is more restrictive) shall apply. Cable installation, handling and storage shall be per manufacturer's recommendations. During cold weather, particular attention shall be paid to the manufacturer's minimum installation temperature. Cable shall not be installed when the temperature is at or below the manufacturer's minimum installation temperature. At the Contractor's option, the Contractor may submit a plan, for review by the RPR, for heated storage of the cable and maintenance of an acceptable cable temperature during installation when temperatures are below the manufacturer's minimum cable installation temperature.

Cable shall not be dragged across base can or manhole edges, pavement or earth. When cable must be coiled, lay cable out on a canvas tarp or use other appropriate means to prevent abrasion to the cable jacket.

108-3.3 Installation of direct-buried cable in trenches. Unless otherwise specified, the Contractor shall not use a cable plow for installing the cable. Cable shall be unreeled uniformly in place alongside or in the trench and shall be carefully placed along the bottom of the trench. The cable shall not be unreeled and pulled into the trench from one end. Slack cable sufficient to provide strain relief shall be placed in the trench in a series of S curves. Sharp bends or kinks in the cable shall not be permitted.

Where cables must cross over each other, a minimum of 3 inches (75 mm) vertical displacement shall be provided with the topmost cable depth at or below the minimum required depth below finished grade.

a. Trenching. Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored. Trenches for cables may be excavated manually or with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of surface is disturbed. Graders shall not be used to excavate the trench with their blades. The bottom surface of trenches shall be essentially smooth and free from coarse aggregate. Unless otherwise specified, cable trenches shall be excavated to a minimum depth of 18 inches (0.5 m) below finished grade per NEC Table 300.5, except as follows:

- When off the airport or crossing under a roadway or driveway, the minimum depth shall be 36 inches (91 cm) unless otherwise specified.
- Minimum cable depth when crossing under a railroad track, shall be 42 inches (1 m) unless otherwise specified.

The Contractor shall excavate all cable trenches to a width not less than 6 inches (150 mm). Unless otherwise specified on the plans, all cables in the same location and running in the same general direction shall be installed in the same trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches (75 mm) below the required cable depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch (6.3 mm) sieve. Flowable backfill material may alternatively be used.

Duct bank or conduit markers temporarily removed for trench excavations shall be replaced as required.

It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

(1) Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred.

(2) Trenching, etc., in cable areas shall then proceed, with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair or replacement.

b. Backfilling. After the cable has been installed, the trench shall be backfilled. The first layer of backfill in the trench shall encompass all cables ; be 3 inches (75 mm) deep, loose measurement; and shall be either earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch (6.3 mm) sieve. This layer shall not be compacted. The second layer shall be 5 inches (125 mm) deep, loose measurement, and shall contain no particles that would be retained on a one inch (25.0 mm) sieve. The remaining third and subsequent layers of backfill shall not exceed 8 inches (20 cm) of loose measurement and be excavated or imported material and shall not contain stone or aggregate larger than 4 inches (100 mm) maximum diameter.

The second and subsequent layers shall be thoroughly tamped and compacted to at least the density of the adjacent material. If the cable is to be installed in locations or areas where other compaction requirements are specified (under pavements, embankments, etc.) the backfill compaction shall be to a minimum of 100 percent of ASTM D1557.

Trenches shall not contain pools of water during backfilling operations. The trench shall be completely backfilled and tamped level with the adjacent surface, except that when turf is to be established over the trench, the backfilling shall be stopped at an appropriate depth consistent with the type of turfing operation to be accommodated. A proper allowance for settlement shall also be provided. Any excess excavated material shall be removed and disposed of per the plans and specifications.

Underground electrical warning (caution) tape shall be installed in the trench above all direct-buried cable. Contractor shall submit a sample of the proposed warning tape for acceptance by the RPR. If not shown on the plans, the warning tape shall be located 6 inches (150 mm) above the direct-buried cable or the counterpoise wire if present. A 3-6 inch (75 - 150 mm) wide polyethylene film detectable tape, with a metalized foil core, shall be installed above all direct buried cable or counterpoise. The tape shall be of the color and have a continuous legend as indicated on the plans. The tape shall be installed 8 inches (200 mm) minimum below finished grade.

c. Restoration. Following restoration of all trenching near airport movement surfaces, the Contractor shall visually inspect the area for foreign object debris (FOD) and remove any that is found. Where soil and sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by work shall be restored to its original condition. The restoration shall include the sodding, fertilizing, liming, seeding, and/or mulching as shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. When trenching is through paved areas, restoration shall be equal to existing conditions. If the cable is to be installed in locations or areas where other compaction requirements are specified (under pavements, embankments, etc.) the backfill compaction shall be backfilled with controlled low strength material (CLSM) in accordance with P-153. Restoration shall be considered incidental to the pay item of which it is a component part.

108-3.4 Cable markers for direct-buried cable. The location of direct buried circuits shall be marked by a concrete slab marker, 2 feet (60 cm) square and 4-6 inch (10 - 15 cm) thick, extending approximately one inch (25 mm) above the surface. Each cable run from a line of lights and signs to the equipment vault shall be marked at approximately every 200 feet (61 m) along the cable run, with an additional marker at each change of direction of cable run. All other direct-buried cable shall be marked in the same manner. Cable markers shall be installed directly above the cable. The Contractor shall impress the word "CABLE" and directional arrows on each cable marking slab. The letters shall be approximately 4 inches (100 mm) high and 3 inches (75 mm) wide, with width of stroke 1/2 inch (12 mm) and 1/4 inch (6 mm) deep. Stencils shall be used for cable marker lettering; no hand lettering shall be permitted.

At the location of each underground cable connection/splice, except at lighting units, or isolation transformers, a concrete marker slab shall be installed to mark the location of the connection/splice. The Contractor shall impress the word "SPLICE" on each slab. The Contractor also shall impress additional circuit identification symbols on each slab as directed by the RPR. All cable markers and splice markers shall be painted international orange. Paint shall be specifically manufactured for uncured exterior concrete. After placement, all cable or splice markers shall be given one coat of high-visibility aviation orange paint as approved by the RPR. Furnishing and installation of cable markers is incidental to the respective cable pay item.

108-3.5 Splicing. Connections of the type shown on the plans shall be made by experienced personnel regularly engaged in this type of work and shall be made as follows:

a. Cast splices. These shall be made by using crimp connectors for jointing conductors. Molds shall be assembled, and the compound shall be mixed and poured per the manufacturer's instructions and to the satisfaction of the RPR.

b. Field-attached plug-in splices. These shall be assembled per the manufacturer's instructions. These splices shall be made by plugging directly into mating connectors. The joint where the connectors come together shall be finished by one of the following methods: (1) wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1-1/2 inches (38 mm) on each side of the joint (2) Covered with heat shrinkable tubing with integral sealant extending at least 1-1/2 inches (38 mm) on each side of the joint or (3) On connector kits equipped with water seal flap; roll-over water seal flap to sealing position on mating connector.

c. Factory-molded plug-in splices. These shall be made by plugging directly into mating connectors. The joint where the connectors come together shall be finished by one of the following methods: (1) Wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1-1/2 inches (38 mm) on each side of the joint. (2) Covered with heat shrinkable tubing with integral sealant extending at least 1-1/2 inches (38 mm) on each side of the joint. or (3) On connector kits so equipped with water seal flap; roll-over water seal flap to sealing position on mating connector.

d. Taped or heat-shrink splices. A taped splice shall be made in the following manner:

Bring the cables to their final position and cut so that the conductors will butt. Remove insulation and jacket allowing for bare conductor of proper length to fit compression sleeve connector with 1/4 inch (6 mm) of bare conductor on each side of the connector. Prior to splicing, the two ends of the cable insulation shall be penciled using a tool designed specifically for this purpose and for cable size and type. Do not use emery paper on splicing operation since it contains metallic particles. The copper conductors shall be thoroughly cleaned. Join the conductors by inserting them equidistant into the compression connection sleeve. Crimp conductors firmly in place with crimping tool that requires a complete crimp before tool can be removed. Test the crimped connection by pulling on the cable. Scrape the insulation to assure that the entire surface over which the tape will be applied (plus 3 inches (75 mm) on each end) is clean. After scraping, wipe the entire area with a clean lint-free cloth. Do not use solvents.

Apply high-voltage rubber tape one-half lapped over bare conductor. This tape should be tensioned as recommended by the manufacturer. Voids in the connector area may be eliminated by highly elongating the tape, stretching it just short of its breaking point. The manufacturer's recommendation for stretching tape during splicing shall be followed. Always attempt to exactly half-lap to produce a uniform buildup. Continue buildup to 1-1/2 times cable diameter over the body of the splice with ends tapered a distance of approximately one inch (25 mm) over the original jacket. Cover rubber tape with

two layers of vinyl pressure-sensitive tape one-half lapped. Do not use glyptol or lacquer over vinyl tape as they react as solvents to the tape. No further cable covering or splice boxes are required.

Heat shrinkable tubing shall be installed following manufacturer's instructions. Direct flame heating shall not be permitted unless recommended by the manufacturer. Cable surfaces within the limits of the heat-shrink application shall be clean and free of contaminants prior to application.

e. Assembly. Surfaces of equipment or conductors being terminated or connected shall be prepared in accordance with industry standard practice and manufacturer's recommendations. All surfaces to be connected shall be thoroughly cleaned to remove all dirt, grease, oxides, nonconductive films, or other foreign material. Paints and other nonconductive coatings shall be removed to expose base metal. Clean all surfaces at least 1/4 inch (6.4 mm) beyond all sides of the larger bonded area on all mating surfaces. Use a joint compound suitable for the materials used in the connection. Repair painted/coated surface to original condition after completing the connection.

108-3.6 Bare counterpoise wire installation for lightning protection and grounding. If shown on the plans or included in the job specifications, bare solid #6 AWG copper counterpoise wire shall be installed for lightning protection of the underground cables. The RPR shall select one of two methods of lightning protection for the airfield lighting circuit based upon sound engineering practice and lightning strike density.

a. Equipotential. [The counterpoise size is as shown on the plans. The equipotential method is applicable to all airfield lighting systems; i.e. runway, taxiway, apron – touchdown zone, centerline, edge, threshold and approach lighting systems. The equipotential method is also successfully applied to provide lightning protection for power, signal and communication systems. The light bases, counterpoise, etc – all components - are bonded together and bonded to the vault power system ground loop/electrode.

Counterpoise wire shall be installed in the same trench for the entire length of buried cable, conduits and duct banks that are installed to contain airfield cables. The counterpoise is centered over the cable/conduit/duct to be protected.

The counterpoise conductor shall be installed no less than 8 inches (200 mm) minimum or 12 inches (300 mm) maximum above the raceway or cable to be protected, except as permitted below:

(1) The minimum counterpoise conductor height above the raceway or cable to be protected shall be permitted to be adjusted subject to coordination with the airfield lighting and pavement designs.

(2) The counterpoise conductor height above the protected raceway(s) or cable(s) shall be calculated to ensure that the raceway or cable is within a 45-degree area of protection, (45 degrees on each side of vertical creating a 90 degree angle).

The counterpoise conductor shall be bonded to each metallic light base, mounting stake, and metallic airfield lighting component.

All metallic airfield lighting components in the field circuit on the output side of the constant current regulator (CCR) or other power source shall be bonded to the airfield lighting counterpoise system.

All components rise and fall at the same potential; with no potential difference, no damaging arcing and no damaging current flow.

See AC 150/5340-30, Design and Installation Details for Airport Visual Aids and NFPA 780, Standard for the Installation of Lightning Protection Systems, Chapter 11, for a detailed description of the Equipotential Method of lightning protection.

Reference FAA STD-019E, Lightning and Surge Protection, Grounding Bonding and Shielding Requirements for Facilities and Electronic Equipment, Part 4.1.1.7.][not used]

b. Isolation. Counterpoise size is as shown on the plans. The isolation method is an alternate method for use only with edge lights installed in turf and stabilized soils and raceways installed parallel to and adjacent to the edge of the pavement. NFPA 780 uses 15 feet to define "adjacent to".

The counterpoise conductor shall be installed halfway between the pavement edge and the light base, mounting stake, raceway, or cable being protected.

The counterpoise conductor shall be installed 8 inches (203 mm) minimum below grade. The counterpoise is not connected to the light base or mounting stake. An additional grounding electrode is required at each light base or mounting stake. The grounding electrode is bonded to the light base or mounting stake with a 6 AWG solid copper conductor.

See AC 150/5340-30, Design and Installation Details for Airport Visual Aids and NFPA 780, Standard for the Installation of Lightning Protection Systems, Chapter 11, for a detailed description of the Isolation Method of lightning protection.

c. Common Installation requirements. When a metallic light base is used, the grounding electrode shall be bonded to the metallic light base or mounting stake with a No. 6 AWG bare, annealed or soft drawn, solid copper conductor.

When a nonmetallic light base is used, the grounding electrode shall be bonded to the metallic light fixture or metallic base plate with a No. 6 AWG bare, annealed or soft drawn, solid copper conductor.

Grounding electrodes may be rods, ground dissipation plates, radials, or other electrodes listed in the NFPA 70 (NEC) or NFPA 780.

Where raceway is installed by the directional bore, jack and bore, or other drilling method, the counterpoise conductor shall be permitted to be installed concurrently with the directional bore, jack and bore, or other drilling method raceway, external to the raceway or sleeve.

The counterpoise wire shall also be exothermically welded to ground rods installed as shown on the plans but not more than 500 feet (150 m) apart around the entire circuit. The counterpoise system shall be continuous and terminate at the transformer vault or at the power source. It shall be securely attached to the vault or equipment external ground ring or other made electrode-grounding system. The connections shall be made as shown on the plans and in the specifications.

Where an existing airfield lighting system is being extended or modified, the new counterpoise conductors shall be interconnected to existing counterpoise conductors at each intersection of the new and existing airfield lighting counterpoise systems.

d. Parallel Voltage Systems. Provide grounding and bonding in accordance with NFPA 70, National Electrical Code.

108-3.7 Counterpoise installation above multiple conduits and duct banks. Counterpoise wires shall be installed above multiple conduits/duct banks for airfield lighting cables, with the intent being to provide a complete area of protection over the airfield lighting cables. When multiple conduits and/or duct banks for airfield cable are installed in the same trench, the number and location of counterpoise wires above the conduits shall be adequate to provide a complete area of protection measured 45 degrees each side of vertical.

Where duct banks pass under pavement to be constructed in the project, the counterpoise shall be placed above the duct bank. Reference details on the construction plans.

108-3.8 Counterpoise installation at existing duct banks. When airfield lighting cables are indicated on the plans to be routed through existing duct banks, the new counterpoise wiring shall be terminated at ground rods at each end of the existing duct bank where the cables being protected enter and exit the duct bank. The new counterpoise conductor shall be bonded to the existing counterpoise system.

108-3.9 Exothermic bonding. Bonding of counterpoise wire shall be by the exothermic welding process or equivalent method accepted by the RPR. Only personnel experienced in and regularly engaged in this type of work shall make these connections.

Contractor shall demonstrate to the satisfaction of the RPR, the welding kits, materials and procedures to be used for welded connections prior to any installations in the field. The installations shall comply with the manufacturer's recommendations and the following:

- a. All slag shall be removed from welds.
- b. Using an exothermic weld to bond the counterpoise to a lug on a galvanized light base is not recommended unless the base has been specially modified. Consult the manufacturer's installation directions for proper methods of bonding copper wire to the light base. See AC 150/5340-30 for galvanized light base exception.
- c. If called for in the plans, all buried copper and weld material at weld connections shall be thoroughly coated with 6 mm of 3M™ Scotchkote™, or approved equivalent, or coated with coal tar Bitumastic® material to prevent surface exposure to corrosive soil or moisture.

108-3.10 Testing. The Contractor shall furnish all necessary equipment and appliances for testing the airport electrical systems and underground cable circuits before and after installation. The Contractor shall perform all tests in the presence of the RPR. The Contractor shall demonstrate the electrical characteristics to the satisfaction of the RPR. All costs for testing are incidental to the respective item being tested. For phased projects, the tests must be completed by phase. The Contractor must maintain the test results throughout the entire project as well as during the warranty period that meet the following:

- a. Earth resistance testing methods shall be submitted to the RPR for approval. Earth resistance testing results shall be recorded on an approved form and testing shall be performed in the presence of the RPR. All such testing shall be at the sole expense of the Contractor.
- b. Should the counterpoise or ground grid conductors be damaged or suspected of being damaged by construction activities the Contractor shall test the conductors for continuity with a low resistance ohmmeter. The conductors shall be isolated such that no parallel path exists and tested for continuity. The RPR shall approve of the test method selected. All such testing shall be at the sole expense of the Contractor.

After installation, the Contractor shall test and demonstrate to the satisfaction of the RPR the following:

- c. That all affected lighting power and control circuits (existing and new) are continuous and free from short circuits.
- d. That all affected circuits (existing and new) are free from unspecified grounds.
- e. That the insulation resistance to ground of all new non-grounded high voltage series circuits or cable segments is not less than 50 megohms. Verify continuity of all series airfield lighting circuits prior to energization.

f. That the insulation resistance to ground of all new non-grounded conductors of new multiple circuits or circuit segments is not less than 100 megohms.

g. That all affected circuits (existing and new) are properly connected per applicable wiring diagrams.

h. That all affected circuits (existing and new) are operable. Tests shall be conducted that include operating each control not less than 10 times and the continuous operation of each lighting and power circuit for not less than 1/2 hour.

i. That the impedance to ground of each ground rod does not exceed 25 ohms prior to establishing connections to other ground electrodes. The fall-of-potential ground impedance test shall be used, as described by American National Standards Institute/Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81, to verify this requirement. As an alternate, clamp-on style ground impedance test meters may be used to satisfy the impedance testing requirement. Test equipment and its calibration sheets shall be submitted for review and approval by the RPR prior to performing the testing.

Two copies of tabulated results of all cable tests performed shall be supplied by the Contractor to the RPR. Where connecting new cable to existing cable, insulation resistance tests shall be performed on the new cable prior to connection to the existing circuit.

There are no approved "repair" procedures for items that have failed testing other than complete replacement.

METHOD OF MEASUREMENT

108-4.1 Trenching shall be measured by the linear feet (meters) of trench, including the excavation, backfill, and restoration, completed, measured as excavated, and accepted as satisfactory. When specified, separate measurement shall be made for trenches of various specified widths.

The cost of all excavation, backfill, dewatering and restoration regardless of the type of material encountered shall be included in the unit price bid for the work.

108-4.2 Cable or counterpoise wire installed in trench, duct bank or conduit shall be measured by the number of linear feet (meters) installed and grounding connectors, and trench marking tape ready for operation, and accepted as satisfactory. Separate measurement shall be made for each cable or counterpoise wire installed in trench, duct bank or conduit. The measurement for this item shall not include additional quantities required for slack. Cable and counterpoise slack is considered incidental to this item and is included in the Contractor's unit price. No separate measurement or payment will be made for cable or counterpoise slack. Permanent and temporary circuit connections shall be considered incidental to installation of cable and no separate payment shall be made.

108-4.3 No separate payment will be made for ground rods.

BASIS OF PAYMENT

108-5.1 Payment will be made at the contract unit price for trenching, cable and bare counterpoise wire installed in trench (direct-buried), or cable and equipment ground installed in duct bank or conduit, in place by the Contractor and accepted by the RPR. This price shall be full compensation for furnishing all materials and for all preparation and installation of these materials, and for all labor, equipment, tools, and incidentals, including ground rods and ground connectors and trench marking tape, necessary to complete this item.

Payment will be made under:

- Item L-108-5.1 Trenching for direct-buried cable, 18-inch minimum depth - per linear foot
- Item L-108-5.2 Trenching for Duct Bank, 30" minimum depth - per linear foot
- Item L-108-5.3 No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit - per liner foot
- Item L-108-5.4 No. 6 AWG, Solid, Bare Copper Counterpoise Wire, Installed in Trench or Above the Duct Bank or Conduit, Including Connections/Terminations - per linear 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.

Advisory Circulars (AC)

- AC 150/5340-26 Maintenance of Airport Visual Aid Facilities
- AC 150/5340-30 Design and Installation Details for Airport Visual Aids
- AC 150/5345-7 Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
- AC 150/5345-26 Specification for L-823 Plug and Receptacle, Cable Connectors
- AC 150/5345-53 Airport Lighting Equipment Certification Program

Commercial Item Description

- A-A-59544A Cable and Wire, Electrical (Power, Fixed Installation)
- A-A-55809 Insulation Tape, Electrical, Pressure-Sensitive Adhesive, Plastic

ASTM International (ASTM)

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes
- ASTM D4388 Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes

Mil Spec

- MIL-PRF-23586F Performance Specification: Sealing Compound (with Accelerator), Silicone Rubber, Electrical
- MIL-I-24391 Insulation Tape, Electrical, Plastic, Pressure Sensitive

National Fire Protection Association (NFPA)

- NFPA-70 National Electrical Code (NEC)
- NFPA-780 Standard for the Installation of Lightning Protection Systems

American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE)

ANSI/IEEE STD 81	IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System
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Federal Aviation Administration Standard

FAA STD-019E	Lightning and Surge Protection, Grounding Bonding and Shielding Requirements for Facilities and Electronic Equipment
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END OF ITEM L-108

Item L-110 Airport Underground Electrical Duct Banks and Conduits

DESCRIPTION

110-1.1 This item shall consist of underground electrical conduits and duct banks (single or multiple conduits encased in concrete or buried in sand) installed per this specification at the locations and per the dimensions, designs, and details shown on the plans. This item shall include furnishing and installing of all underground electrical duct banks and individual and multiple underground conduits and removal of existing duct banks. It shall also include all turbing trenching, backfilling, removal, and restoration of any paved or turfed areas; concrete encasement, mandrelling, pulling lines, duct markers, plugging of conduits, and the testing of the installation as a completed system ready for installation of cables per the plans and specifications. This item shall also include furnishing and installing conduits and all incidentals for providing positive drainage of the system. Verification of existing ducts is incidental to the pay items provided in this specification.

EQUIPMENT AND MATERIALS

110-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the RPR.

b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, that comply with these specifications, at the Contractor's cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in project that accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance

by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

110-2.2 Steel conduit. Rigid galvanized steel (RGS) conduit and fittings shall be hot dipped galvanized inside and out and conform to the requirements of Underwriters Laboratories Standards 6, 514B, and 1242. All RGS conduits or RGS elbows installed below grade, in concrete, permanently wet locations or other similar environments shall be painted with a 10-mil thick coat of asphaltum sealer or shall have a factory-bonded polyvinyl chloride (PVC) cover. Any exposed galvanizing or steel shall be coated with 10 mils of asphaltum sealer. When using PVC coated RGS conduit, care shall be exercised not to damage the factory PVC coating. Damaged PVC coating shall be repaired per the manufacturer's written instructions. In lieu of PVC coated RGS, corrosion wrap tape shall be permitted to be used where RGS is in contact with direct earth."

110-2.3 Plastic conduit. Plastic conduit and fittings shall conform to the following requirements:

- UL 514B covers W-C-1094-Conduit fittings all types, classes 1 thru 3 and 6 thru 10. ^[1]_[SEP]
- UL 514C covers W-C-1094- all types, Class 5 junction box and cover in plastic (PVC).
- UL 651 covers W-C-1094-Rigid PVC Conduit, types I and II, Class 4.
- UL 651A covers W-C-1094-Rigid PVC Conduit and high-density polyethylene (HDPE) Conduit type III and Class 4.

Underwriters Laboratories Standards UL-651 and Article 352 of the current National Electrical Code shall be one of the following, as shown on the plans:

- a. Type I–Schedule 40 and Schedule 80 PVC suitable for underground use either direct-buried or encased in concrete.
- b. Type II–Schedule 40 PVC suitable for either above ground or underground use.
- c. Type III – Schedule 80 PVC suitable for either above ground or underground use either direct-buried or encased in concrete.
- d. Type III –HDPE pipe, minimum standard dimensional ratio (SDR) 11, suitable for placement with directional boring under pavement.

The type of solvent cement shall be as recommended by the conduit/fitting manufacturer.

110-2.4 Split conduit. Split conduit shall be pre-manufactured for the intended purpose and shall be made of steel or plastic.

110-2.5 Conduit spacers. Conduit spacers shall be prefabricated interlocking units manufactured for the intended purpose. They shall be of double wall construction made of high grade, high density polyethylene complete with interlocking cap and base pads. They shall be designed to accept No. 4 reinforcing bars installed vertically.

110-2.6 Concrete. Concrete shall be proportioned, placed, and cured per state department of transportation structural concrete with minimum 25% Type F fly ash, and a minimum allowable compressive strength of 4,000 psi (28 MPa).

110-2.7 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program. Precast concrete structures shall conform to ASTM C478.

110-2.8 Flowable backfill. Flowable material used to back fill conduit and duct bank trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

110-2.9 Detectable warning tape. Plastic, detectable, American Public Works Association (APWA) red (electrical power lines, cables, conduit and lighting cable), orange (telephone/fiber optic cabling) with continuous legend magnetic tape shall be polyethylene film with a metallized foil core and shall be 3-6 inches (75-150 mm) wide. Detectable tape is incidental to the respective bid item.

CONSTRUCTION METHODS

110-3.1 General. The Contractor shall install underground duct banks and conduits at the approximate locations indicated on the plans. The RPR shall indicate specific locations as the work progresses, if required to differ from the plans. Duct banks and conduits shall be of the size, material, and type indicated on the plans or specifications. Where no size is indicated on the plans or in the specifications, conduits shall be not less than 2 inches (50 mm) inside diameter or comply with the National Electrical Code based on cable to be installed, whichever is larger. All duct bank and conduit lines shall be laid so as to grade toward access points and duct or conduit ends for drainage. Unless shown otherwise on the plans, grades shall be at least 3 inches (75 mm) per 100 feet (30 m). On runs where it is not practicable to maintain the grade all one way, the duct bank and conduit lines shall be graded from the center in both directions toward access points or conduit ends, with a drain into the storm drainage system. Pockets or traps where moisture may accumulate shall be avoided. Under pavement, the top of the duct bank shall not be less than 18 inches (0.5 m) below the subgrade; in other locations, the top of the duct bank or underground conduit shall be not less than 18 inches (0.5 m) below finished grade.

The Contractor shall mandrel each individual conduit whether the conduit is direct-buried or part of a duct bank. An iron-shod mandrel, not more than 1/4 inch (6 mm) smaller than the bore of the conduit shall be pulled or pushed through each conduit. The mandrel shall have a leather or rubber gasket slightly larger than the conduit hole.

The Contractor shall swab out all conduits/ducts and clean base can, manhole, pull boxes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed the light bases, manholes, pull boxes, etc., and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, base cans, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be recleaned at the Contractor's expense. All accessible points shall be kept closed when not installing cable. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

For pulling the permanent wiring, each individual conduit, whether the conduit is direct-buried or part of a duct bank, shall be provided with a 200-pound (90 kg) test polypropylene pull rope. The ends shall be secured and sufficient length shall be left in access points to prevent it from slipping back into the conduit. Where spare conduits are installed, as indicated on the plans, the open ends shall be plugged with removable tapered plugs, designed for this purpose.

All conduits shall be securely fastened in place during construction and shall be plugged to prevent contaminants from entering the conduits. Any conduit section having a defective joint shall not be installed. Ducts shall be supported and spaced apart using approved spacers at intervals not to exceed 5 feet (1.5 m).

Unless otherwise shown on the plans, concrete encased duct banks shall be used when crossing under pavements expected to carry aircraft loads, such as runways, taxiways, taxilanes, ramps and aprons.

When under paved shoulders and other paved areas, conduit and duct banks shall be encased using flowable fill for protection.

All conduits within concrete encasement of the duct banks shall terminate with female ends for ease in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored.

Trenches for conduits and duct banks may be excavated manually or with mechanical trenching equipment unless in pavement, in which case they shall be excavated with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of shoulder surface is disturbed. Blades of graders shall not be used to excavate the trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches (75 mm) below the required conduit or duct bank depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch (6.3 mm) sieve. Flowable backfill may alternatively be used

Underground electrical warning (Caution) tape shall be installed in the trench above all underground duct banks and conduits in unpaved areas. Contractor shall submit a sample of the proposed warning tape for approval by the RPR. If not shown on the plans, the warning tape shall be located 6 inches above the duct/conduit or the counterpoise wire if present.

Joints in plastic conduit shall be prepared per the manufacturer's recommendations for the particular type of conduit. Plastic conduit shall be prepared by application of a plastic cleaner and brushing a plastic solvent on the outside of the conduit ends and on the inside of the couplings. The conduit fitting shall then be slipped together with a quick one-quarter turn twist to set the joint tightly. Where more than one conduit is placed in a single trench, or in duct banks, joints in the conduit shall be staggered a minimum of 2 feet (60 cm).

Changes in direction of runs exceeding 10 degrees, either vertical or horizontal, shall be accomplished using manufactured sweep bends.

Whether or not specifically indicated on the drawings, where the soil encountered at established duct bank grade is an unsuitable material, as determined by the RPR, the unsuitable material shall be removed per Item P-152 and replaced with suitable material. Additional duct bank supports shall be installed, as approved by the RPR.

All excavation shall be unclassified and shall be considered incidental to Item L-110. Dewatering necessary for duct installation, and erosion per federal, state, and local requirements is incidental to Item L-110.

Unless otherwise specified, excavated materials that are deemed by the RPR to be unsuitable for use in backfill or embankments shall be removed and disposed of offsite.

Any excess excavation shall be filled with suitable material approved by the RPR and compacted per Item P-152.

It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing

cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

a. Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred

b. Trenching, etc., in cable areas shall then proceed with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair.

110-3.2 Duct banks. Unless otherwise shown in the plans, duct banks shall be installed so that the top of the concrete envelope is not less than 18 inches (0.5 m) below the bottom of the base or stabilized base course layers where installed under runways, taxiways, aprons, or other paved areas, and not less than 18 inches (0.5 m) below finished grade where installed in unpaved areas.

Unless otherwise shown on the plans, duct banks under paved areas shall extend at least 3 feet (1 m) beyond the edges of the pavement or 3 feet (1 m) beyond any under drains that may be installed alongside the paved area. Trenches for duct banks shall be opened the complete length before concrete is placed so that if any obstructions are encountered, provisions can be made to avoid them. Unless otherwise shown on the plans, all duct banks shall be placed on a layer of concrete not less than 3 inches (75 mm) thick prior to its initial set. The Contractor shall space the conduits not less than 3 inches (75 mm) apart (measured from outside wall to outside wall). All such multiple conduits shall be placed using conduit spacers applicable to the type of conduit. As the conduit laying progresses, concrete shall be placed around and on top of the conduits not less than 3 inches (75 mm) thick unless otherwise shown on the plans. All conduits shall terminate with female ends for ease of access in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Conduits forming the duct bank shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches (150 mm) to anchor the assembly into the earth prior to placing the concrete encasement. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot (1.5-m) intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

When specified, the Contractor shall reinforce the bottom side and top of encasements with steel reinforcing mesh or fabric or other approved metal reinforcement. When directed, the Contractor shall supply additional supports where the ground is soft and boggy, where ducts cross under roadways, or where shown on the plans. Under such conditions, the complete duct structure shall be supported on reinforced concrete footings, piers, or piles located at approximately 5-foot (1.5-m) intervals.

All pavement surfaces that are to have ducts installed therein shall be neatly saw cut to form a vertical face. All excavation shall be included in the contract with price for the duct.

Install a plastic, detectable, color as noted, 3 to 6 inches (75 to 150 mm) wide tape, 8 inches (200 mm) minimum below grade above all underground conduit or duct lines not installed under pavement. Utilize the 3-inch (75-mm) wide tape only for single conduit runs. Utilize the 6-inch (150-mm) wide tape for multiple conduits and duct banks. For duct banks equal to or greater than 24 inches (600 mm) in width, utilize more than one tape for sufficient coverage and identification of the duct bank as required.

When existing cables are to be placed in split duct, encased in concrete, the cable shall be carefully located and exposed by hand tools. Prior to being placed in duct, the RPR shall be notified so that he

may inspect the cable and determine that it is in good condition. Where required, split duct shall be installed as shown on the drawings or as required by the RPR.

110-3.3 Conduits without concrete encasement. Trenches for single-conduit lines shall be not less than 6 inches (150 mm) nor more than 12 inches (300 mm) wide. The trench for 2 or more conduits installed at the same level shall be proportionately wider. Trench bottoms for conduits without concrete encasement shall be made to conform accurately to grade so as to provide uniform support for the conduit along its entire length.

Unless otherwise shown on the plans, a layer of fine earth material, at least 4 inches (100 mm) thick (loose measurement) shall be placed in the bottom of the trench as bedding for the conduit. The bedding material shall consist of soft dirt, sand or other fine fill, and it shall contain no particles that would be retained on a 1/4-inch (6.3 mm) sieve. The bedding material shall be tamped until firm. Flowable backfill may alternatively be used.

Unless otherwise shown on plans, conduits shall be installed so that the tops of all conduits within the Airport's secured area where trespassing is prohibited are at least 18 inches (0.5 m) below the finished grade. Conduits outside the Airport's secured area shall be installed so that the tops of the conduits are at least 24 inches (60 cm) below the finished grade per National Electric Code (NEC), Table 300.5.

When two or more individual conduits intended to carry conductors of equivalent voltage insulation rating are installed in the same trench without concrete encasement, they shall be spaced not less than 3 inches (75 mm) apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches (150 mm) apart in a vertical direction. Where two or more individual conduits intended to carry conductors of differing voltage insulation rating are installed in the same trench without concrete encasement, they shall be placed not less than 3 inches (75 mm) apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches (150 mm) apart in a vertical direction.

Trenches shall be opened the complete length between normal termination points before conduit is installed so that if any unforeseen obstructions are encountered, proper provisions can be made to avoid them.

Conduits shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches (150 mm) to anchor the assembly into the earth while backfilling. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot (1.5-m) intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

110-3.4 Markers. The location of each end and of each change of direction of conduits and duct banks shall be marked by a concrete slab marker 2 feet (60 cm) square and 4 - 6 inches (100 - 150 mm) thick extending approximately one inch (25 mm) above the surface. The markers shall also be located directly above the ends of all conduits or duct banks, except where they terminate in a junction/access structure or building. Each cable or duct run from a line of lights and signs to the equipment vault must be marked at approximately every 200 feet (61 m) along the cable or duct run, with an additional marker at each change of direction of cable or duct run.

The Contractor shall impress the word "DUCT" or "CONDUIT" on each marker slab. Impression of letters shall be done in a manner, approved by the RPR, for a neat, professional appearance. All letters and words must be neatly stenciled. After placement, all markers shall be given one coat of high-visibility orange paint, as approved by the RPR. The Contractor shall also impress on the slab the number and size of conduits beneath the marker along with all other necessary information as determined by the RPR.

The letters shall be 4 inches (100 mm) high and 3 inches (75 mm) wide with width of stroke 1/2 inch (12 mm) and 1/4 inch (6 mm) deep or as large as the available space permits. Furnishing and installation of duct markers is incidental to the respective duct pay item.

110-3.5 Backfilling for conduits. For conduits, 8 inches (200 mm) of sand, soft earth, or other fine fill (loose measurement) shall be placed around the conduits ducts and carefully tamped around and over them with hand tampers. The remaining trench shall then be backfilled and compacted per Item P-152 except that material used for back fill shall be select material not larger than 4 inches (100 mm) in diameter.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during back filling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.6 Backfilling for duct banks. After the concrete has cured, the remaining trench shall be backfilled and compacted per Item P-152 "Excavation and Embankment" except that the material used for backfill shall be select material not larger than 4 inches (100 mm) in diameter. In addition to the requirements of Item P-152, where duct banks are installed under pavement, one moisture/density test per lift shall be made for each 250 linear feet (76 m) of duct bank or one work period's construction, whichever is less.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during backfilling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.7 Restoration. Where sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by the work shall be restored to its original condition. The restoration shall include fertilizing, liming, seeding, and mulching shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. All restoration shall be considered incidental to the respective L-110 pay item. Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD) and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

110-3.8 Ownership of removed cable. Contractor shall dispose of cables off airport property

METHOD OF MEASUREMENT

110-4.1 Underground conduits and duct banks shall be measured by the linear feet (meter) of conduits and duct banks installed, including encasement, locator tape, trenching and backfill with designated material, and restoration, and for drain lines, the termination at the drainage structure, all measured in place, completed, and accepted. Separate measurement shall be made for the various types and sizes.

BASIS OF PAYMENT

110-5.1 Payment will be made at the contract unit price per linear foot for each type and size of conduit and duct bank completed and accepted, including trench and backfill with the designated material, and, for drain lines, the termination at the drainage structure. This price shall be full compensation for removal and disposal of existing duct banks and conduits as shown on the plans, furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item per the provisions and intent of the plans and specifications.

Payment will be made under:

Item L-110-5.1	Concrete Encased, Electrical Duct Bank, 2-way 4-inch C, 24-inch Minimum Cover - per linear foot
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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.

Advisory Circular (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-53	Airport Lighting Equipment Certification Program

ASTM International (ASTM)

ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
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National Fire Protection Association (NFPA)

NFPA-70	National Electrical Code (NEC)
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Underwriters Laboratories (UL)

UL Standard 6	Electrical Rigid Metal Conduit - Steel
UL Standard 514B	Conduit, Tubing, and Cable Fittings
UL Standard 514C	Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers
UL Standard 1242	Electrical Intermediate Metal Conduit Steel
UL Standard 651	Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings
UL Standard 651A	Type EB and A Rigid PVC Conduit and HDPE Conduit

END OF ITEM L-110

Item L-115 Electrical Manholes and Junction Structures

DESCRIPTION

115-1.1 This item shall consist of electrical manholes and junction structures (hand holes, pull boxes, junction cans, etc.) installed per this specification, at the indicated locations and conforming to the lines, grades and dimensions shown on the plans or as required by the RPR. This item shall include the installation of each electrical manhole and/or junction structures with all associated excavation, backfilling, sheeting and bracing, concrete, reinforcing steel, ladders, appurtenances, testing, dewatering and restoration of surfaces to the satisfaction of the RPR including removal of existing manholes and junction structures as shown on the plans.

EQUIPMENT AND MATERIALS

115-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when so requested by the RPR.

b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor's cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

115-2.2 Concrete structures. Concrete shall be proportioned, placed, and cured per state department of transportation structural concrete with minimum 25% Type F fly ash, and a minimum allowable compressive strength of 4,000 psi (28 MPa). Cast-in-place concrete structures shall be as shown on the plans.

115-2.3 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another engineer approved third party certification program. Provide precast concrete structures where shown on the plans.

Precast concrete structures shall be an approved standard design of the manufacturer. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. The structure shall be designed to withstand 60,000 lb aircraft loads, unless otherwise shown on the plans. Openings or knockouts shall be provided in the structure as detailed on the plans.

Threaded inserts and pulling eyes shall be cast in as shown on the plans.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings, design calculations, and other information requested by the RPR shall be submitted by the Contractor to allow for a full evaluation by the RPR. The RPR shall review per the process defined in the General Provisions.

115-2.4 Junction boxes. Junction boxes shall be L-867 Class 1 (non-load bearing) or L-868 Class 1 (load bearing) airport light bases that are encased in concrete. The light bases shall have a L-894 blank cover, gasket, and stainless steel hardware. All bolts, studs, nuts, lock washers, and other similar fasteners used for the light fixture assemblies must be fabricated from 316L (equivalent to EN 1.4404), 18-8, 410, or 416 stainless steel. If 18-8, 410, or 416 stainless steel is utilized it shall be passivated and be free from any discoloration. Covers shall be 3/8-inch (9-mm) thickness for L-867 and 3/4-inch (19-mm) thickness for L-868. All junction boxes shall be provided with both internal and external ground lugs.

115-2.5 Mortar. The mortar shall be composed of one part of cement and two parts of mortar sand, by volume. The cement shall be per the requirements in ASTM C150, Type I. The sand shall be per the requirements in ASTM C144. Hydrated lime may be added to the mixture of sand and cement in an amount not to exceed 15% of the weight of cement used. The hydrated lime shall meet the requirements of ASTM C206. Water shall be potable, reasonably clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product.

115-2.6 Concrete. Concrete shall be proportioned, placed, and cured per state department of transportation structural concrete with minimum 25% Type F fly ash, and a minimum allowable compressive strength of 4,000 psi (28 MPa).

115-2.7 Frames and covers. The frames shall conform to one of the following requirements:

- | | |
|-----------------------|--|
| a. ASTM A48 | Gray iron castings |
| b. ASTM A47 | Malleable iron castings |
| c. ASTM A27 | Steel castings |
| d. ASTM A283, Grade D | Structural steel for grates and frames |
| e. ASTM A536 | Ductile iron castings |
| f. ASTM A897 | Austempered ductile iron castings |

All castings specified shall withstand a maximum tire pressure of 150 psi and maximum load of 60,000 lbs.

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings specified.

Each frame and cover unit shall be provided with fastening members to prevent it from being dislodged by traffic, but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

Each cover shall have the word "ELECTRIC" or other approved designation cast on it. Each frame and cover shall be as shown on the plans or approved equivalent. No cable notches are required.

Each manhole shall be provided with a "DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" safety warning sign as detailed in the Contract Documents and in accordance with OSHA 1910.146 (c)(2).

115-2.8 Ladders. Ladders, if specified, shall be galvanized steel or as shown on the plans.

115-2.9 Reinforcing steel. All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A615, Grade 60.

115-2.10 Bedding/special backfill. Bedding or special backfill shall be as shown on the plans.

115-2.11 Flowable backfill. Flowable material used to backfill shall conform to the requirements of Item P-153, Controlled Low Strength Material.

115-2.12 Cable trays. Cable trays shall be of galvanized steel. Cable trays shall be located as shown on the plans.

115-2.13 Plastic conduit. Plastic conduit shall comply with Item L-110, Airport Underground Electrical Duct Banks and Conduits.

115-2.14 Conduit terminators. Conduit terminators shall be pre-manufactured for the specific purpose and sized as required or as shown on the plans.

115-2.15 Pulling-in irons. Pulling-in irons shall be manufactured with 7/8-inch (22 mm) diameter hot-dipped galvanized steel or stress-relieved carbon steel roping designed for concrete applications (7 strand, 1/2-inch (12 mm) diameter with an ultimate strength of 270,000 psi (1862 MPa)). Where stress-relieved carbon steel roping is used, a rustproof sleeve shall be installed at the hooking point and all exposed surfaces shall be encapsulated with a polyester coating to prevent corrosion.

115-2.16 Ground rods. Ground rods shall be one piece, copper or copper clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case shall they be less than 8 feet (2.4 m) long nor less than 5/8 inch (16 mm) in diameter.

CONSTRUCTION METHODS

115-3.1 Unclassified excavation. It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Damage to utility lines, through lack of care in excavating, shall be repaired or replaced to the satisfaction of the RPR without additional expense to the Owner.

The Contractor shall perform excavation for structures and structure footings to the lines and grades or elevations shown on the plans or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown.

All excavation shall be unclassified and shall be considered incidental to Item L-115. Dewatering necessary for structure installation and erosion per federal, state, and local requirements is incidental to Item L-115.

Boulders, logs and all other objectionable material encountered in excavation shall be removed. All rock and other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped or serrated, as directed by the RPR. All seams, crevices, disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation. Excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

The Contractor shall provide all bracing, sheeting and shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting and shoring shall be included in the unit price bid for the structure.

Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner that will not disturb or mar finished masonry. The cost of removal shall be included in the unit price bid for the structure.

After each excavation is completed, the Contractor shall notify the RPR. Structures shall be placed after the RPR has approved the depth of the excavation and the suitability of the foundation material.

Prior to installation the Contractor shall provide a minimum of 6 inches (150 mm) of sand or a material approved by the RPR as a suitable base to receive the structure. The base material shall be compacted and graded level and at proper elevation to receive the structure in proper relation to the conduit grade or ground cover requirements, as indicated on the plans.

115-3.2 Concrete structures. Concrete structures shall be built on prepared foundations conforming to the dimensions and form indicated on the plans. The concrete shall be proportioned, placed, and cured per state department of transportation structural concrete with minimum 25% Type F fly ash, and a minimum allowable compressive strength of 4,000 psi (28 MPa). Construction methods shall conform to state department of transportation structural concrete specifications. Concrete Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

115-3.3 Precast unit installations. Precast units shall be installed plumb and true. Joints shall be made watertight by use of sealant at each tongue-and-groove joint and at roof of manhole. Excess sealant shall be removed and severe surface projections on exterior of neck shall be removed.

115-3.4 Placement and treatment of castings, frames and fittings. All castings, frames and fittings shall be placed in the positions indicated on the Plans or as directed by the RPR and shall be set true to line and to correct elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

Field connections shall be made with bolts, unless indicated otherwise. Welding will not be permitted unless shown otherwise on the approved shop drawings and written approval is granted by the casting manufacturer. Erection equipment shall be suitable and safe for the workman. Errors in shop fabrication

or deformation resulting from handling and transportation that prevent the proper assembly and fitting of parts shall be reported immediately to the RPR and approval of the method of correction shall be obtained. Approved corrections shall be made at Contractor's expense.

Anchor bolts and anchors shall be properly located and built into connection work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

Pulling-in irons shall be located opposite all conduit entrances into structures to provide a strong, convenient attachment for pulling-in blocks when installing cables. Pulling-in irons shall be set directly into the concrete walls of the structure.

115-3.5 Installation of ladders. Ladders shall be installed such that they may be removed if necessary. Mounting brackets shall be supplied top and bottom and shall be cast in place during fabrication of the structure or drilled and grouted in place after erection of the structure.

115-3.6 Removal of sheeting and bracing. In general, all sheeting and bracing used to support the sides of trenches or other open excavations shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a structure shall be withdrawn, unless otherwise directed, before more than 6 inches (150 mm) of material is placed above the top of the structure and before any bracing is removed. Voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.

The RPR may direct the Contractor to delay the removal of sheeting and bracing if, in his judgment, the installed work has not attained the necessary strength to permit placing of backfill.

115-3.7 Backfilling. After a structure has been completed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches (150 mm) in thickness measured after compaction to the density requirements in Item P-152. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

Backfill shall not be placed against any structure until approval is given by the RPR. In the case of concrete, such approval shall not be given until tests made by the laboratory under supervision of the RPR establish that the concrete has attained sufficient strength to provide a factor of safety against damage or strain in withstanding any pressure created by the backfill or the methods used in placing it.

Where required, the RPR may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

115-3.8 Connection of duct banks. To relieve stress of joint between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and shall be formed and tied into duct bank reinforcement at the time the duct bank is installed.

115-3.9 Grounding. A ground rod shall be installed in the floor of all concrete structures so that the top of rod extends 6 inches (150 mm) above the floor. The ground rod shall be installed within one foot (30 cm) of a corner of the concrete structure. Ground rods shall be installed prior to casting the bottom slab. Where the soil condition does not permit driving the ground rod into the earth without damage to the ground rod, the Contractor shall drill a 4-inch (100 mm) diameter hole into the earth to receive the ground rod. The hole around the ground rod shall be filled throughout its length, below slab, with

Portland cement grout. Ground rods shall be installed in precast bottom slab of structures by drilling a hole through bottom slab and installing the ground rod. Bottom slab penetration shall be sealed watertight with Portland cement grout around the ground rod.

A grounding bus of 4/0 bare stranded copper shall be exothermically bonded to the ground rod and loop the concrete structure walls. The ground bus shall be a minimum of one foot (30 cm) above the floor of the structure and separate from other cables. No. 2 American wire gauge (AWG) bare copper pigtailed shall bond the grounding bus to all cable trays and other metal hardware within the concrete structure. Connections to the grounding bus shall be exothermic. If an exothermic weld is not possible, connections to the grounding bus shall be made by using connectors approved for direct burial in soil or concrete per UL 467. Hardware connections may be mechanical, using a lug designed for that purpose.

115-3.10 Cleanup and repair. After erection of all galvanized items, damaged areas shall be repaired by applying a liquid cold-galvanizing compound per MIL-P-21035. Surfaces shall be prepared and compound applied per the manufacturer's recommendations.

Prior to acceptance, the entire structure shall be cleaned of all dirt and debris.

115-3.11 Restoration. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. The Contractor shall restore all disturbed areas equivalent to or better than their original condition. All sodding, grading and restoration shall be considered incidental to the respective Item L-115 pay item.

The Contractor shall grade around structures as required to provide positive drainage away from the structure.

Areas with special surface treatment, such as roads, sidewalks, or other paved areas shall have backfill compacted to match surrounding areas, and surfaces shall be repaired using materials comparable to original materials.

Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

After all work is completed, the Contractor shall remove all tools and other equipment, leaving the entire site free, clear and in good condition.

115-3.12 Inspection. Prior to final approval, the electrical structures shall be thoroughly inspected for conformance with the plans and this specification. Any indication of defects in materials or workmanship shall be further investigated and corrected. The earth resistance to ground of each ground rod shall not exceed 25 ohms. Each ground rod shall be tested using the fall-of-potential ground impedance test per American National Standards Institute / Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81. This test shall be performed prior to establishing connections to other ground electrodes.

115-3.13 Manhole elevation adjustments. The Contractor shall adjust the tops of existing manholes in areas designated in the Contract Documents to the new elevations shown. The Contractor shall be responsible for determining the exact height adjustment required to raise or lower the top of each manhole to the new elevations. The existing top elevation of each manhole to be adjusted shall be determined in the field and subtracted/added from the proposed top elevation.

The Contractor shall remove/extend the existing top section or ring and cover on the manhole structure or manhole access. The Contractor shall install precast concrete sections or grade rings of the required

dimensions to adjust the manhole top to the new proposed elevation or shall cut the existing manhole walls to shorten the existing structure, as required by final grades. The Contractor shall reinstall the manhole top section or ring and cover on top and check the new top elevation.

The Contractor shall construct a concrete slab around the top of adjusted structures located in graded areas that are not to be paved. The concrete slab shall conform to the dimensions shown on the plans.

115-3.14 Duct extension to existing ducts. Where existing concrete encased ducts are to be extended, the duct extension shall be concrete encased plastic conduit. The fittings to connect the ducts together shall be standard manufactured connectors designed and approved for the purpose. The duct extensions shall be installed according to the concrete encased duct detail and as shown on the plans.

METHOD OF MEASUREMENT

115-4.1 Electrical manholes and junction structures shall be measured by each unit completed in place and accepted. The following items shall be included in the price of each unit: All required excavation and dewatering;; sheeting and bracing; all required backfilling with on-site materials; restoration of all surfaces and finished grading and turfing; all required connections; temporary cables and connections; and ground rod testing

115-4.2 Manhole elevation adjustments shall be measured by the completed unit installed, in place, completed, and accepted. Separate measurement shall not be made for the various types and sizes.

BASIS OF PAYMENT

115-5.1 The accepted quantity of electrical manholes and junction structures will be paid for at the Contract unit price per each, complete and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials, furnishing and installation of appurtenances and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete the structure.

115-5.2 Payment shall be made at the contract unit price for manhole elevation adjustments. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary, including but not limited to, spacers, concrete, rebar, dewatering, excavating, backfill, topsoil, sodding and pavement restoration, where required, to complete this item as shown in the plans and to the satisfaction of the RPR.

Payment will be made under:

Item L-115-5.1 L-867 Electrical Junction Box, Class 1A, Size B (12") – Per Each

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.

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

ANSI/IEEE STD 81	IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System
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Advisory Circular (AC)

AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26	Specification for L-823 Plug and Receptacle, Cable Connectors
AC 150/5345-42	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories
AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-53	Airport Lighting Equipment Certification Program

Commercial Item Description (CID)

A-A 59544	Cable and Wire, Electrical (Power, Fixed Installation)
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ASTM International (ASTM)

ASTM A27	Standard Specification for Steel Castings, Carbon, for General Application
ASTM A47	Standard Specification for Ferritic Malleable Iron Castings
ASTM A48	Standard Specification for Gray Iron Castings
ASTM A123	Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products
ASTM A283	Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
ASTM A536	Standard Specification for Ductile Iron Castings
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A897	Standard Specification for Austempered Ductile Iron Castings
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C206	Standard Specification for Finishing Hydrated Lime

FAA Engineering Brief (EB)

EB #83	In Pavement Light Fixture Bolts
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Mil Spec

MIL-P-21035	Paint High Zinc Dust Content, Galvanizing Repair
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National Fire Protection Association (NFPA)

NFPA-70	National Electrical Code (NEC)
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END OF ITEM L-115

Item L-125 Installation of Airport Lighting Systems

DESCRIPTION

125-1.1 This item shall consist of airport lighting systems furnished and installed in accordance with this specification, the referenced specifications, and the applicable advisory circulars (ACs). The systems shall be installed at the locations and in accordance with the dimensions, design, and details shown in the plans. This item shall include the furnishing of all equipment, materials, services, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS

125-2.1 General.

a. Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be certified under the Airport Lighting Equipment Certification Program in accordance with AC 150/5345-53, current version. FAA certified airfield lighting shall be compatible with each other to perform in compliance with FAA criteria and the intended operation. If the Contractor provides equipment that does not perform as intended because of incompatibility with the system, the Contractor assumes all costs to correct the system for to operate properly.

b. Manufacturer's certifications shall not relieve the Contractor of their responsibility to provide materials in accordance with these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

c. All materials and equipment used shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Clearly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be clearly made with arrows or circles (highlighting is not acceptable). The Contractor shall be responsible for delays in the project accruing directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be submitted in a neatly bound, properly sized 3-ring binder, tabbed by specification section and electronic PDF format, tabbed by specification section. The RPR reserves the right to reject any or all equipment, materials or procedures, which, in the RPR's opinion, does not meet the system design and the standards and codes, specified herein.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

EQUIPMENT AND MATERIALS

125-2.2 Conduit/Duct. Conduit shall conform to Specification Item L-110 Airport Underground Electrical Duct Banks and Conduits.

125-2.3 Cable and Counterpoise. Cable and Counterpoise shall conform to Item L-108 Underground Power Cable for Airports.

125-2.4 Tape. Rubber and plastic electrical tapes shall be Scotch Electrical Tape Numbers 23 and 88 respectively, as manufactured by 3M Company or an approved equal.

125-2.5 Cable Connections. Cable Connections shall conform to Item L-108 Installation of Underground Cable for Airports.

125-2.6 Retroreflective Markers. Retroreflective markers shall be type L-853 and shall conform to the requirements of AC 150/5345-39.

125-2.7 Runway and Taxiway Lights. Runway and taxiway lights shall conform to the requirements of AC 150/5345-46. Lamps shall be of size and type indicated, or as required by fixture manufacturer for each lighting fixture required under this contract. Filters shall be of colors conforming to the specification for the light concerned or to the standard referenced.

Lights

Type	Class	Mode	Style	Option	Base	Filter	Transformer	Notes
L-853	N/A	N/A	N/A	N/A	Stake	Blue	N/A	14"

125-2.8 Runway and Taxiway Signs. Runway and Taxiway Guidance Signs should conform to the requirements of AC 150/5345-44.

Signs

Type	Size	Style	Class	Mode	Notes
N/A	N/A	N/A	N/A	N/A	N/A

125-2.9 Runway End Identifier Light (REIL). Not required.

125-2.10 Precision Approach Path Indicator (PAPI). Not required.

125-2.11 Circuit Selector Cabinet. The circuit selector cabinet shall meet the requirements of AC 150/5345-5, Type L-847, circuit control as indicated, Class A, indoor, Rating 1, for 6.6 amperes.

125-2.12 Light Base and Transformer Housings. Light Base and Transformer Housings should conform to the requirements of AC 150/5345-42. Light bases shall be Type L-867, Class 1A, Size B shall be provided as indicated or as required to accommodate the fixture or device installed thereon. Base plates, cover plates, and adapter plates shall be provided to accommodate various sizes of fixtures.

125-2.13 Isolation Transformers. Isolation Transformers shall be Type L-830, size as required for each installation. Transformer shall conform to AC 150/5345-47.

INSTALLATION

125-3.1 Installation. The Contractor shall furnish, install, connect and test all equipment, accessories, conduit, cables, wires, buses, grounds and support items necessary to ensure a complete and operable airport lighting system as specified here and shown in the plans.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and state and local code agencies having jurisdiction.

The Contractor shall install the specified equipment in accordance with the applicable advisory circulars and the details shown on the plans.

General Installation Requirements:

1. The electrical installation, at a minimum, must meet the NEC and local regulations.
2. The contractor must ascertain that all lighting system components furnished (including FAA approved equipment) are compatible in all respects with each other and the remainder of the new/existing system. Any non-compatible components furnished by the contractor must be replaced at no additional cost to the airport sponsor with a similar unit that is approved by the engineer and compatible with the remainder of the airport lighting system.
3. In case the contractor elects to furnish and install airport lighting equipment requiring additional wiring, transformers, adapters, mountings, etc., to those shown on the drawings and/or listed in the specifications, any cost for these items must be incidental to the equipment cost.
4. The contractor-installed equipment (including FAA approved) must not generate any EMI in the existing and/or new communications, weather, air navigation, and ATC equipment. Any equipment generating such interference must be replaced by the contractor at no additional cost with equipment meeting the applicable specifications.
5. When a specific type, style, class, etc., of FAA approved equipment is specified only that type, style, class, etc., will be acceptable, though equipment of other types, style, class, etc., may be FAA approved.
6. Any and all instructions from the engineer to the contractor regarding changes in, or deviations from, the plans and specifications must be in writing with copies sent to the airport sponsor and the FAA field office (Airports District Office (ADO)/Airports Field Office (AFO)). The contractor must not accept any verbal instructions from the engineer regarding any changes from the plans and specifications.
7. A minimum of three copies of instruction books must be supplied with each type of equipment. For more sophisticated types of equipment, such as regulators, PAPI, REIL, etc., the instruction book must contain the following:
 - a. A detailed description of the overall equipment and its individual components.
 - b. Theory of operation including the function of each component.
 - c. Installation instructions.
 - d. Start-up instructions.

- e. Preventative maintenance requirements.
- f. Chart for troubleshooting.
- g. Complete power and control detailed wiring diagram(s), showing each conductor/connection/component; "black" boxes are not acceptable. The diagram or the narrative must show voltages/currents/wave shapes at strategic locations to be used when checking and/or troubleshooting the equipment.

When the equipment has several brightness steps, these parameters must be indicated for all the different modes.

- h. Parts list will include all major and minor components, such as resistors, diodes, etc. It must include a complete nomenclature of each component and, if applicable, the name of its manufacturer and the catalog number.
- i. Safety instructions.

Power and Control Installation Requirements:

1. Stencil all electrical equipment to identify function, circuit voltage and phase. Where the equipment contains fuses, also stencil the fuse or fuse link ampere rating. Where the equipment does not have sufficient stenciling area, the stenciling must be done on the wall next to the unit. The letters must be one inch (25 mm) high and painted in white or black paint to provide the highest contrast with the background. Engraved plastic nameplates may also be used with one inch (25 mm) white (black background) or black (white background) characters. All markings must be of sufficient durability to withstand the environment.
2. Color code all phase wiring by the use of colored wire insulation and/or colored tape. Where tape is used, the wire insulation must be black. Black and red must be used for single-phase, three wire systems and black, red and blue must be used for three-phase systems. Neutral conductors, size No. 6 AWG or smaller, must be identified by a continuous white or natural outer finish. Conductors larger than No. 6 AWG must be identified either by a continuous white or natural gray outer finish along its entire length or by the use of white tape at its terminations and inside accessible wireways.
3. All branch circuit conductors connected to a particular phase must be identified with the same color. The color coding must extend to the point of utilization.
4. In control wiring, the same color must be used throughout the system for the same function, such as 10%, 30%, 100% brightness control, etc.
5. All power and control circuit conductors must be copper; aluminum must not be accepted. This includes wire, cable, busses, terminals, switch/panel components, etc.
6. Low voltage (600 V) and high voltage (5000 V) conductors must be installed in separate wireways.
7. Neatly lace wiring in distribution panels, wireways, switches and pull/junction boxes.
8. The minimum size of pull/junction boxes, regardless of the quantity and the size of the conductors shown, must be as follows:
 - a. In straight pulls, the length of the box must not be less than eight times the trade diameter of the larger conduit. The total area (including the conduit cross-sectional

- area) of a box end must be at least three times greater than the total trade cross-sectional area of the conduits terminating at the end.
- b. In angle or u-pulls, the distance between each conduit entry inside the box and the opposite wall of the box must not be less than six times the trade diameter of the largest conduit. This distance must be increased for additional entries by the amount of the sum of the diameters of all other conduit entries on the same wall of the box. The distance between conduit entries enclosing the same conductor must of not be less than six times the trade diameter of the largest conduit.
9. A run of conduit between terminations at equipment enclosures, square ducts and pull/junction boxes, must not contain more than the equivalent of four quarter bends (360 degrees total), including bends located immediately at the terminations. Cast, conduit type outlets must not be treated as pull/junction boxes.
 10. Equipment cabinets must not be used as pull/junction boxes. Only wiring terminating at the equipment must be brought into these enclosures.
 11. Splices and junction points must be permitted only in junction boxes, ducts equipped with removable covers, and at easily accessible locations.
 12. Circuit breakers in power distribution panel(s) must be thermal-magnetic, molded case, permanent trip with 100-ampere, minimum, frame.
 13. Dual lugs must be used where two wires, size No. 6 or larger, are to be connected to the same terminal.
 14. All wall mounted equipment enclosures must be mounted on wooden mounting boards.
 15. Wooden equipment mounting boards must be plywood, exterior type, 3/4 inch (19 mm) minimum thickness, both sides painted with one coat of primer and two coats of gray, oil-based paint.
 16. Rigid steel conduit must be used throughout the installation unless otherwise specified. The minimum trade size must be 3/4 inch (19 mm).
 17. All rigid conduit must be terminated at CCRs with a section (10 inch (254 mm) minimum) of flexible conduit.
 18. Unless otherwise shown all exposed conduits must be run parallel to, or at right angles with, the lines of the structure.
 19. All steel conduits, fittings, nuts, bolts, etc., must be galvanized.
 20. Use conduit bushings at each conduit termination. Where No. 4 AWG or larger ungrounded wire is installed, use insulated bushings.
 21. Use double lock nuts at each conduit termination. Use weather tight hubs in damp and wet locations. Sealing locknuts must not be used.
 22. Wrap all primary and secondary power transformer connections with sufficient layers of insulating tape and cover with insulating varnish for full value of cable insulation voltage.
 23. Unless otherwise noted, all indoor single conductor control wiring must be No. 12 AWG.

24. Both ends of each control conductor must be terminated at a terminal block. The terminal block must be of proper rating and size for the function intended and must be located in equipment enclosures or special terminal cabinets.
25. All control conductor terminators must be of the open-eye connector/screw type. Soldered, closed-eyed terminators, or terminators without connectors are not acceptable.
26. In terminal block cabinets, the minimum spacing between parallel terminal blocks must be 6 inches (152 mm). The minimum spacing between terminal block sides/ends and cabinet sides/bottom/top must be 5 inches (127 mm). The minimum spacing will be increased as required by the number of conductors. Additional spacing must be provided at conductor entrances.
27. Both ends of all control conductors must be identified as to the circuit, terminal, block, and terminal number. Only stick-on labels must be used.
28. A separate and continuous neutral conductor must be installed and connected for each breaker circuit in the power panel(s) from the neutral bar to each power/control circuit.
29. The following must apply to relay/contactors panel/enclosures:
 - a. All components must be mounted in dust proof enclosures with vertically hinged covers.
 - b. The enclosures must have ample space for the circuit components, terminal blocks, and incoming internal wiring.
 - c. All incoming/outgoing wiring must be terminated at terminal blocks.
 - d. Each terminal on terminal blocks and on circuit components must be clearly identified.
 - e. All control conductor terminations must be of the open-eye connector/screw type. Soldered, closed-eye connectors, or terminations without connectors are not acceptable.
 - f. When the enclosure cover is opened, all circuit components, wiring, and terminals must be exposed and accessible without any removal of any panels, covers, etc., except those covering high voltage components.
 - g. Access to, or removal of, a circuit component or terminal block will not require the removal of any other circuit component or terminal block.
 - h. Each circuit component must be clearly identified indicating its corresponding number shown on the drawing and its function.
 - i. A complete wiring diagram (not a block or schematic diagram) must be mounted on the inside of the cover. The diagram must represent each conductor by a separate line.
 - j. The diagram must identify each circuit component and the number and color of each internal conductor and terminal.
 - k. All wiring must be neatly trained and laced.
 - l. Minimum wire size must be No. 12 AWG.

Field Lighting Installation Requirements:

1. Unless otherwise stated, all underground field power multiple and series circuit conductors (whether direct earth burial (DEB) or in duct/conduit) must be FAA approved Type L-824. Insulation voltage and size must be as specified.
2. No components of the primary circuit such as cable, connectors and transformers must be brought above ground at edge lights, signs, REIL, etc.
3. There must be no exposed power/control cables between the point where they leave the underground (DEB or L-867 bases) and where they enter the equipment (such as taxiway signs, PAPI, REIL, etc.). Enclosures. These cables must be enclosed in rigid conduit or in flexible water-tight conduit with frangible coupling(s) at the grade or the housing cover, as shown in applicable details.
4. The joints of the L-823 primary connectors must be wrapped with one layer of rubber or synthetic rubber tape and one layer of plastic tape, one half lapped, extending at least 1-1/2 inches (38 mm) on each side of the joint, as shown in Figure E-9.
5. The cable entrance into the field attached L-823 connectors must be enclosed by heat-shrinkable tubing with continuous internal adhesive as shown in Figure E-9.
6. The ID of the primary L-823 field attached connectors must match the cable OD to provide a watertight cable entrance. The entrance must be encapsulated in heat shrinkable tubing with continuous factory applied internal adhesive, as shown in Figure E-9.
7. L-823 type 11, two-conductor secondary connector must be class "A" (factory molded).
8. There must be no splices in the secondary cable(s) within the stems of a runway/taxiway edge/threshold lighting fixtures and the wireways leading to taxiway signs and PAPI/REIL equipment.
9. Electrical insulating grease must be applied within the L-823, secondary, two conductor connectors to prevent water entrance. The connectors must not be taped.
10. DEB isolation transformers must be buried at a depth of 10 inches (254 mm) on a line crossing the light and perpendicular to the runway/taxiway centerline at a location 12 inches (305 mm) from the light opposite from the runway/taxiway.
11. DEB primary connectors must be buried at a depth of 10 inches (254 mm) near the isolation transformer. They must be orientated parallel with the runway/taxiway centerline. There must be no bends in the primary cable 6 inches (152 mm), minimum, from the entrance into the field-attached primary connection.
12. A slack of 3 ft (0.9 m), minimum, must be provided in the primary cable at each transformer/connector termination. At stake-mounted lights, the slack must be loosely coiled immediately below the isolation transformer.
13. Direction of primary cables must be identified by color coding as follows when facing light with back facing pavement: cable to the left is coded red and cable to the right is coded blue, this applies to the stake-mounted lights and base-mounted lights where the base has only one entrance.
14. L-867 bases must be size B, 24" (610 mm) deep Class 1 unless otherwise noted.

15. Base-mounted frangible couplings must not have weep holes to the outside. Plugged holes are not acceptable. The coupling must have a 1/4" (6 mm) diameter minimum or equivalent opening for drainage from the space around the secondary connector into the L-867 base.
16. The elevation of the frangible coupling groove must not exceed 1-1/2" (38 mm) above the edge of the cover for base-mounted couplings or the top of the stake for stake-mounted couplings.
17. Where the frangible coupling is not an integral part of the light fixture stem or mounting leg, a bead of silicone rubber seal must be applied completely around the light stem or wireway at the frangible coupling to provide a watertight seal.
18. Tops of the stakes supporting light fixtures must be flush with the surrounding grade.
19. Plastic lighting fixture components, such as lamp heads, stems, frangible couplings, base covers, brackets, stakes, are not acceptable. L-867 plastic transformer housings are acceptable. A metal threaded fitting must be set in flange during casting process. Base cover bolts must be fabricated from 18-8 stainless steel.
20. The tolerance for the height of runway/taxiway edge lights must be ± 1 inch (25 mm). For stake-mounted lights, the specified lighting fixture height must be measured between the top of the stake and the top of the lens. For base-mounted lights, the specified lighting fixture height must be measured between the top of the base flange and the top of the lens, and includes the base cover, the frangible coupling, the stem, the lamp housing and the lens.
21. The tolerance for the lateral spacing (light lane to runway/taxiway centerline) of runway/taxiway edge lights must be ± 1 inch (25.4 mm). This also applies at intersections to lateral spacing between lights of a runway/taxiway and the intersecting runway/taxiway.
22. L-867 bases may be precast. Entrances into L-867 bases must be plugged from the inside with duct seal.
23. Galvanized/painted equipment/component surfaces must not be damaged by drilling, filing, etc. – this includes drain holes in metal transformer housings.
24. Edge light numbering tags must be facing the pavement.
25. Cable/splice/duct markers must be pre-cast concrete of the size shown. Letters/numbers/arrows for the legend to be impressed into the tops of the markers must be pre-assembled and secured in the mold before the concrete is poured. Legends inscribed by hand in wet concrete are not acceptable.
26. All underground cable runs must be identified by cable markers at 200 ft (61 m) maximum spacing with an additional marker at each change of direction of the cable run. Cable markers must be installed above the cable.
27. Locations of all DEB underground cable splice/connections, except those at isolation transformers, must be identified by splice markers. Splice markers must be placed above the splice/connections.
28. The cable and splice markers must identify the circuits to which the cables belong. For example: RWY 4-22, PAPI-4, PAPI-22.
29. Locations of ends of all underground ducts must be identified by duct markers.
30. The preferred mounting method of runway and taxiway signs is by the use of single row of legs. However, two rows will be acceptable.

31. Reference Figure E-13 and Figure E-14 for an example of a lighted sign installation.
 - a. Power to the sign must be provided through breakaway cable connectors installed within the frangible point portion of the sign's mounting legs.
 - b. There must be no above ground electrical connection between signs in a sign array.
32. Stencil horizontal and vertical aiming angles on each REIL flash head or equipment enclosure. The numerals must be black and one inch (25 mm) minimum height.
33. Stencil vertical aiming angles on the outside of each PAPI lamp housing. The numerals must be black and one inch (25 mm) minimum height.
34. All power and control cables in man/hand holes must be tagged. Use embossed stainless steel strips or tags attached at both ends to the cable by the use of UV resistant plastic straps. A minimum of two tags must be provided on each cable in a man/hand hole - one at the cable entrance, and one at the cable exit.
35. Apply a corrosion inhibiting, anti-seize compound to all screws, nuts and frangible coupling threads. If coated bolts are used per EB #83, do not apply anti-seize compound.
36. There must be no splices between the isolation transformers. L-823 connectors are allowed at transformer connections only, unless shown otherwise.
37. DEB splices in home runs must be of the cast type, unless shown otherwise.
38. Where a parallel, constant voltage PAPI system is provided, the "T" splices must be of the cast type.
39. Concrete used for slabs, footing, backfill around transformer housings, markers, etc., must be 3000 PSI, min., air-entrained.

Equipment Grounding Installation Requirements:

1. Ground all non-current-carrying metal parts of electrical equipment by using conductors sized and routed per NEC Handbook, Article 250.
2. All ground connections to ground rods, busses, panels, etc., must be made with pressure type solderless lugs and ground clamps. Soldered or bolt and washer type connections are not acceptable. Clean all metal surfaces before making ground connections. Exothermic welds are the preferred method of connection to a ground rod.
3. Tops of ground rods must be 6 inches (152 mm) below grade.
4. The resistance to ground of the vault grounding system with the commercial power line neutral disconnected must not exceed 10 ohms.
5. The resistance to ground of the counterpoise system, or at isolation locations, such as airport beacon must not exceed 10 ohms.

125-3.2 Testing. All lights shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance. The test shall include operating the constant current regulator in each step not less than 10 times at the beginning and end of the 24-hour test. The fixtures shall illuminate properly during each portion of the test.

125-3.3 Shipping and Storage. Equipment shall be shipped in suitable packing material to prevent damage during shipping. Store and maintain equipment and materials in areas protected from weather and physical damage. Any equipment and materials, in the opinion of the RPR, damaged during

construction or storage shall be replaced by the Contractor at no additional cost to the owner. Painted or galvanized surfaces that are damaged shall be repaired in accordance with the manufacturer's recommendations.

125-3.4 Elevated and In-pavement Lights. Water, debris, and other foreign substances shall be removed prior to installing fixture base and light.

A jig or holding device shall be used when installing each light fixture to ensure positioning to the proper elevation, alignment, level control, and azimuth control. Light fixtures shall be oriented with the light beams parallel to the runway or taxiway centerline and facing in the required direction. The outermost edge of fixture shall be level with the surrounding pavement. Surplus sealant or flexible embedding material shall be removed. The holding device shall remain in place until sealant has reached its initial set.

METHOD OF MEASUREMENT

125-4.1 Reflective markers will be measured by the number installed as completed units in place, ready for operation, and accepted by the RPR. Runway and taxiway lights will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR. Guidance signs will be measured by the number of each type and size installed as completed units, in place, ready for operation, and accepted by the RPR. Runway End Identifier Lights shall be measured by each system installed as a completed unit in place, ready for operation, and accepted by the RPR.

Precision Approach Path Indicator shall be measured by each system installed as a completed unit, in place, ready for operation, and accepted by the RPR. Abbreviated Precision Approach Path Indicator shall be measured by each system installed as a completed unit, in place, ready for operation, and accepted by the RPR.

BASIS OF PAYMENT

125-5.1 Payment will be made at the Contract unit price for each complete runway or taxiway light, guidance sign, reflective marker, runway end identification light, precision approach path indicator, or abbreviated precision approach path indicator installed by the Contractor and accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

L-125-5.1	L-853 Elevated Taxiway Retroreflective Marker, Blue, 14" – per each
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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.

Advisory Circulars (AC)

AC 150/5340-18	Standards for Airport Sign Systems
AC 150/5340-26	Maintenance of Airport Visual Aid Facilities

AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-5	Circuit Selector Switch
AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26	Specification for L-823 Plug and Receptacle, Cable Connectors
AC 150/5345-28	Precision Approach Path Indicator (PAPI) Systems
AC 150/5345-39	Specification for L-853, Runway and Taxiway Retroreflective Markers
AC 150/5345-42	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories
AC 150/5345-44	Specification for Runway and Taxiway Signs
AC 150/5345-46	Specification for Runway and Taxiway Light Fixtures
AC 150/5345-47	Specification for Series to Series Isolation Transformers for Airport Lighting Systems
AC 150/5345-51	Specification for Discharge-Type Flashing Light Equipment
AC 150/5345-53	Airport Lighting Equipment Certification Program
Engineering Brief (EB)	
EB No. 67	Light Sources Other than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures

END OF ITEM L-125

APPENDIX A: Supplemental Contract Forms**CONSENT OF SURETY TO FINAL PAYMENT**

Project Name: _____

Location: _____

Project #: _____

TO SPONSOR (Name and Address): _____

Contractor: _____ Contract Date: _____

In accordance with the provisions of the Contract between the Sponsor and the Contractor as indicated above, the

(Insert name and address of Surety) _____, Surety,

on bond of

(Insert name and address of Contractor) _____, Contractor,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety of any of its obligations to

(Insert name and address of Sponsor) _____, Sponsor,

as set forth in the said Surety's bond.

IN WITNESS WHEREOF,

The Surety has hereunto set its hand on this _____ day of _____, _____

Surety_____
Signature of Authorized Representative

Attest: _____

(Seal)

Printed Name and Title

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CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS

PROJECT:	SPONSORS' PROJECT NUMBER:	SPONSOR: <input type="checkbox"/>
		ARCHITECT: <input type="checkbox"/>
	CONTRACT FOR: General Construction	CONTRACTOR: <input type="checkbox"/>
TO SPONSOR:	CONTRACT DATED:	SURETY: <input type="checkbox"/>
		OTHER: <input type="checkbox"/>

STATE OF: GEORGIA

COUNTY OF:

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Sponsor or Sponsor's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Consent of Surety to Final Payment.
Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose.

Indicate Attachment: ☐ Yes ☐ No

The following supporting documents should be attached hereto if required by the Sponsor:

1. Contractor Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Sponsor, accompanied by a list thereof.
3. Contractor's Affidavit of Release of Liens (AIA Document G706A).

CONTRACTOR:

BY: _____
(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:
My Commission Expires:

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CONTRACTOR'S FINAL RELEASE AND WAIVER OF LIENProject / SponsorContractor

Project: _____

Name: _____

Address: _____

Address: _____

City State Zip Code_____
City State Zip Code

Sponsor: _____ Contract Date: _____

TO ALL WHOM IT MAY CONCERN:

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the undersigned Contractor hereby waives, discharges, and releases any and all liens, claims, and rights to liens against the above-mentioned project, and any and all other property owned by or the title to which is in the name of the above-referenced Sponsor and against any and all funds of the Sponsor appropriated or available for the construction of said project, and any and all warrants drawn upon or issued against any such funds or monies, which the undersigned Contractor may have or may hereafter acquire or possess as a result of the furnishing of labor, materials, and/or equipment, and the performance of Work by the Contractor on or in connection with said project, whether under and pursuant to the above-mentioned contract between the Contractor and the Sponsor pertaining to said project or otherwise, and which said liens, claims or rights of lien may arise and exist.

The undersigned further hereby acknowledges that the sum of:

Dollars (\$ _____) constitutes the entire unpaid balance due the undersigned in connection with said project whether under said contract or otherwise and that the payment of said sum to the Contractor will constitute payment in full and will fully satisfy any and all liens, claims, and demands which the Contractor may have or assert against the Sponsor in connection with said contract or project.

Notary Public:
My Commission Expires:

Dated this ____ day of _____, 20 ____

BY: _____
(Signature of authorized representative)

(Printed name and title)

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APPENDIX B: Erosion and Sediment Control Forms**Daily Rainfall Log****Project Name:**

Project Location:

-**Month:**

-**Year:**

Type of Device Used to Measure Rainfall:

Device Location:

Daily Rainfall Monitoring Data

Date	Rainfall Amount, Inches	Time	Reported By

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B.M.P Inspection Report

Project: _____ Inspection Date: _____

Time: _____

Type of Inspection: Routine _____ Re-Inspection _____

Stage of Construction: BMP Installation/Clearing Grading Curb/Gutter Building Other

Weather/Soil Condition: Raining/Wet Light Rain/Medium Clear/Dry

Erosion Device Inspected	Status		
Bf: Buffer Zone	Passed	Failed	Comment
Ds1: Soil Stabilization: mulch only 6" to 10"	Passed	Failed	Comment
Ds2: Soil Stabilization: (temp. seeding)	Passed	Failed	Comment
Ds3: Soil Stabilization: (permanent vegetation)	Passed	Failed	Comment
Ds4: Soil Stabilization: (soding)	Passed	Failed	Comment
Ga: Gablon	Passed	Failed	Comment
Du: Dust Control	Passed	Failed	Comment
Cd: Check Dams: rock/other	Passed	Failed	Comment
Cb: Channel Stabilization: (rip rap or vegetation)	Passed	Failed	Comment
Co: Construction Exit Pad	Passed	Failed	Comment
Mb: Geotextiles (matting Blanket)	Passed	Failed	Comment
Rd: Rock Filter Dam	Passed	Failed	Comment
Rt: Retrofit: Detention/Sediment Pond	Passed	Failed	Comment
Sd1: Sediment Barrier	Passed	Failed	Comment
Sd2: Inlet Sediment Trap	Passed	Failed	Comment
Sd3: Temporary Sediment Basin	Passed	Failed	Comment
Sr: Temporary Stream Crossing	Passed	Failed	Comment
St: Storm Drain Outlet Protection	Passed	Failed	Comment
Dn1: Temporary Down Drain Structure	Passed	Failed	Comment
Sb: Stream Bank Stabilization	Passed	Failed	Comment
Sd1-C: Silt Fence	Passed	Failed	Comment
Wt: Veg. Waterway or St/Water Conv. Channel	Passed	Failed	Comment
Tree Preservation Fencing	Passed	Failed	Comment
Trash	Passed	Failed	Comment

1. What action(s) was taken for any failed activities listed above? Verbal

Notification: _____

Written Notification: _____ Stop Work Order: _____ Citation

#: _____

2. What time frame was given to comply with the above violation: Days:____
Other:_____

3. Have any complaints or violations been issued on this project previously? Yes:_____
No:_____

4. If yes, explain
violations/fines:_____

5. Are there state waters present? Yes:____ No:_____

6. Were all permits posted? Yes:____ No:_____

7. Is an approved E&S plan on site? Yes:____ No:_____
Comments:

Inspected By:_____

Site Inspection Report

Erosion and Sedimentation Inspection Report

Maintain Reports on-site

Site:	Date:	Time:
Inspector:	Accompanied By:	
Stage of Construction:		
Site:		
Observation:		
Recommendations:		
Contractors's Corrective Action (and Date):		
Site:		
Observation:		
Recommendations:		
Contractors's Corrective Action (and Date):		

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Inspection Summary

Site: _____ LDA No. _____

Map Site	Violation	First Date	Date Corrected

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Daily Inspection Report

Inspection performed by certified personnel each day construction activity occurs on-site

Project Information	
Date:	Project Name:
Project Location:	
Inspection Observations	
Rainfall within past 24 hours (inches):	Is rainfall greater than 0.5"? Inspection Required <input type="checkbox"/>
Inspection Observations	
<p>Petroleum Product Storage Areas:</p> <p>Are all of the temporary and permanent controls contained in Plan in place? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If no, describe the location(s) of deficiencies and corrective actions that must be taken.</p>	
<p>Vehicle Entrances and Exits:</p> <p>Is there tracking of sediment from locations where vehicles enter and leave the project? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, describe the location(s) and the corrective actions that must be taken.</p>	
Other Observations	
Is an Erosion, Sedimentation and Pollution Control Plan revision required? <input type="checkbox"/> Yes <input type="checkbox"/> No Date of revision:	
Corrective Actions and Date:	

Signature of Certified Personnel

Printed Name of Certified Personnel

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Weekly Inspection Report

Inspection performed by certified personnel at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater

Project Information

Date:	Project Name:
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Project Location:

Name of Inspector:

Inspection Event

Regular weekly inspection: <input type="checkbox"/>	Inspection within 24 hours of 0.5" storm event <input type="checkbox"/>
---	---

Inspection Observations

Disturbed areas that have not undergone final stabilization:

Are all of the temporary and permanent controls contained in Plan in place and properly maintained? ☐ Yes ☐ No
If no, describe the location(s) of deficiencies and corrective actions that must be taken.

Corrective Action Taken and Date:

Material storage areas exposed to precipitation:

Are all of the temporary and permanent controls contained in Plan in place and properly maintained? ☐ Yes ☐ No
If no, describe the location(s) of deficiencies and corrective actions that must be taken.

Corrective Action Taken and Date:

Discharge locations or points.

Are erosion control measures preventing impacts to receiving waters? ☐ Yes ☐ No
If no, describe observations:

Structural control measures:

Are all of the temporary and permanent controls contained in Plan in place and properly maintained? ☐ Yes ☐ No

If no, describe the location(s) of deficiencies and corrective actions that must be taken.

Control Measures	Location	Deficiency	Date Corrected

Other Observations:

Is an Erosion, Sedimentation and

Pollution Control Plan revision required?

☐ Yes ☐ No

Date of revision:

Signature of Certified Personnel

Printed Name of Certified Personnel

Monthly Inspection Report

Inspection performed by certified personnel at least once per month

Project Information	
Date:	Project Name:
Project Location:	
Inspection Observations	
Rainfall within past 24 hours (inches):	Is rainfall greater than 0.5"? Inspection Required <input type="checkbox"/>
Inspection Observations	
<p>Areas that have undergone final stabilization:</p> <p>Are all permanent stabilization controls contained in Plan in place? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If no, describe the location(s) of deficiencies and corrective actions that must be taken.</p>	
<p>Other observations:</p> <p>Are pollutants entering the drainage system or receiving waters? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, describe the location(s) and the corrective actions that must be taken.</p> <p>Are all erosion and sediment control measures operating properly? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If no, describe the location(s) and the corrective actions that must be taken.</p>	
Other Observations	
<p>Is an Erosion, Sedimentation and Pollution Control Plan revision required? <input type="checkbox"/> Yes <input type="checkbox"/> No Date of revision:</p>	
Corrective Actions and Date:	

Signature of Certified Personnel

Printed Name of Certified Personnel

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Stormwater Monitoring Records

Month: _____ Year: _____

Sheet ____ of ____

Submit to EPD by 15th of Following Month

Project Name: _____ Project Location: _____

Date Sampled	Rainfall Amount, Inches	Exact Location of Samples	Time Sampled	Sampling Technique Manual or Automatic Grab	Sampled By	Date of Analysis	Time of Analysis	Analyzed By	Analytical Method	Results (NTU)

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Storm Water Discharge Data

Site: _____ LDA No. _____

Date	Rainfall (in.)	Location	Reading (NTU)	Comments

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