

ADDENDUM NO. 1
TOWN OF ELIZABETHTOWN
MULTI-UNIT HANGAR DEVELOPMENT, PHASE 1

CURTIS L. BROWN, JR. FIELD (EYF)
ELIZABETHTOWN, NC

March 21, 2025

From: Town of Elizabethtown
466 Airport Road
Elizabethtown, NC 28337

To: **All Prequalified Bidders and Plan Holders**

This Addendum is hereby made a part of the contract documents and specifications of the above-referenced project. All other requirements of the original specifications and drawings shall remain in effect in their respective order. Acknowledge receipt of this Addendum by inserting its number and date in the proposal form B-3.

PRE-BID MEETING DOCUMENTATION

1. The agenda and presentation from the Pre-Bid Meeting held on Wednesday, March 19, 2025, are attached to this Addendum.
2. Contractor questions submitted between the bid posting and the Pre-Bid Meeting are documented in this Addendum.
3. Contractor questions discussed at the Pre-Bid Meeting are documented in this Addendum.
4. **REMINDER:** Last day for questions to be submitted is **Wednesday, March 26, 2025, at 12:00 PM**. Please submit any questions in writing to Ayden Chung, PE (achung@wkdickson.com) or Jamie Peck, PE (jpeck@wkdickson.com).

QUESTIONS/CLARIFICATIONS

1. **Q:** Where can bidding documents be obtained? Is there a cost?
A: Bidding documents are available through the WK Dickson, an Ardurra Company PlanRoom (<https://www.wkdicksonplanroom.com/>). There is a cost for both digital downloads and hardcopy versions.
2. **Q:** The project description is somewhat confusing regarding the pricing options. Since "Phase I" is in the project name, it suggests that both buildings might be included in the overall scope. Should the Contractor provide two (2) pricing options for the Owner to select from? What does Phase II encompass?
A: Yes, the Contractor shall provide complete pricing for both hangar building options, Bid Schedule 1 and Bid Schedule 2, with the Owner selecting one (1) of the Bid Schedules. The successful Contractor will be selected based on the lowest bid for Bid Schedule 1. There is no Phase II associated with this project; it consists of a single phase and ultimately one (1) hangar building. The term "Phase I" refers to potential future hangar development in this location of the airfield.

3. **Q:** There appears to be an error in Specification 13122 Pre-Engineered Hangar Buildings, Part 1, where it mentions (3) hangar buildings located in Johnston County.
A: Thank you for pointing that out. The specification has been corrected to reflect the two (2) correct Bid Schedules (1 and 2) within Bladen County. The corrected specification is included with Addendum No. 1.
4. **Q:** Is the concrete slab and P-209 under the building included in the hangar building price?
A: Yes, the hangar building price includes the foundation, which consists of the concrete slab (P-610) and aggregate base course (P-209), as specified under the work item "Hangar Building, Complete."
5. **Q:** How will the hangar building roof drains tie in?
A: The hangar building roof drainage will discharge above ground (daylight). There is no proposed underground stormwater infrastructure.
6. **Q:** Do the material testing requirements for the FAA P-401 technical specification have to be dated this year?
A: Yes, please follow the requirements of the P-401 technical specification for all material testing requirements.
7. **Q:** For the FAA P-401 asphalt pavement installation, can we assume there will be a first lift, second lift, mat and joint cores with PWLs?
A: Yes. Please refer to technical specifications C-110 and P-401 for details on quality assurance (QA) material acceptance tests and percentage of material within specification limits (PWLs).
8. **Q:** For P-610, will the Contractor have to provide a job mix formula (JMF) design and include ASR testing, etc.?
A: Yes. Please refer to the FAA P-610 technical specification for the required materials testing requirements.
9. **Q:** Will there be testing required by Contractor for water service connection?
A: Yes, the Contractor is responsible for all required testing in accordance with building codes for internal hangar utilities. Additionally, the Contractor shall conduct disinfection and pressure testing when connecting to the public water service line.
10. **Q:** Will there be permitting required for utility connections (i.e. water meter)?
A: The Contractor is responsible for obtaining all necessary utility permits for the interior utility work required for hangar building construction. For site utilities and connections to public utilities, the Owner (Town of Elizabethtown) will handle the necessary permitting, including the water meter connection.
11. **Q:** Can the Contractor assume that the Town of Elizabethtown will provide site utilities installation from 5-feet outside the building?
A: Yes. The site utilities will be installed by the Owner (Town of Elizabethtown) from 5-feet outside the building.
12. **Q:** Was there a core done for existing Taxiway A3 asphalt pavement tie-in?
A: Yes, there was a core done on the existing Taxiway A3 asphalt pavement near the location of the proposed apron tie-in. Please refer to Appendix C of the Contract Documents for the ECS geotechnical report and borings information.

13. **Q:** Is electrical circuit clear of construction?
A: Yes, according to the design survey by Stewart (dated 12/19/2024), all electrical circuits are clear of the proposed construction limits. However, a reminder that the selected Contractor is still responsible for locating and protecting existing utilities and infrastructure. Any damage incurred must be repaired by the Contractor at their expense to restore pre-construction conditions.
14. **Q:** Will there be an allowance provided for the building permitting costs?
A: No, a separate allowance will not be provided. The Contractor must include all permitting costs within the “Hangar Building, Complete” work item. All required permits and associated costs are considered incidental to this work.
15. **Q:** What percentage of retainage will be held during construction?
A: A 10% retainage will be held for the duration of construction.
16. **Q:** Will there be a Business and Occupation (B&O) tax associated with this project?
A: There is no B&O tax associated with this project.
17. **Q:** Do stockpiled materials need to be removed daily from site and placed on the existing Town of Elizabethtown materials stockpile? Or can stockpiled materials remain on site?
A: Materials to be stockpiled can remain on site since the proposed construction site is outside the RSA, ROFA, TSA, and TOFA limits. Please refer to stockpile detail (Detail 4/CG103).
18. **Q:** Who is the Owner/Engineer using for quality assurance (QA) testing?
A: The Owner/Engineer plans to use S&ME for QA testing.
19. **Q:** It is noted in the bidding documents that bids are to be held for 120 days. What happens if the contract award/construction start date is past this 120 days and original bid prices increase? Will the Contractor be held to the original bid prices?
A: Contract execution is dependent upon federal grant administration. It is anticipated to award the contract at the end of July 2025 and for construction to start at the beginning of August 2025. If there are deviations from this plan and the bids need to be held longer than 120 days, the Owner, Engineer, selected Contractor, and NCDOA will convene to determine whether this may be extended.
20. **Q:** How will long lead times for manufactured hangar building materials be managed within the 180- or 130-day contract period?
A: A “Stop Work Order” would be issued to the selected Contractor at an appropriate stage to pause work while awaiting the arrival of building materials, during which contract time would be suspended. Once the materials arrive, a “Resume Work Order” would be issued, and the contract time would resume accordingly.
21. **Q:** Is a bid bond required for one or both schedules?
A: The bid bond is required for one (1) bid schedule and should be for 5% of the bid schedule with the higher cost.
22. **Q:** Can you provide the estimated construction cost?
A: No, the construction estimate is not publicly available.

BID FORM REVISIONS

There are no revisions to the Bid Schedules with this Addendum No. 1.

PLAN SET REVISIONS/CLARIFICATIONS

1. Sheet CG103, “EROSION AND SEDIMENT CONTROL DETAILS”: Detail 4 has been added to this sheet for the typical stockpile detail.

CONTRACT DOCUMENTS/TECHNICAL SPECIFICATIONS

1. SPECIAL PROVISIONS, SP-7, Section 7. Testing and Surveying, Paragraph 7.1: “Owner” changed to “Contractor” for incurrence of costs associated with surveys.
2. TECHNICAL SPECIFICATIONS:
 - a. Section 13122 Pre-Engineered Hangar Buildings: Revisions as noted in PART 1 – GENERAL.

ATTACHMENTS

1. Pre-Bid Meeting Sign-In Sheet and Agenda
2. Pre-Bid Meeting Presentation
3. Revised Plan Sheets: CG103
4. Revised Contract Documents/Technical Specifications:
 - a. SP-7, Section 7
 - b. Section 13122 Pre-Engineered Hangar Buildings

Receipt of this Addendum must be acknowledged on Page B-3 in the Contract Documents.

END OF ADDENDUM NO. 1

Pre-Bid Meeting Agenda

Wednesday, March 19, 2025 @ 11:00 AM

EYF Terminal Building Conference Room

A. Introductions – Project Design Team & Owner Representatives

B. Project Overview

- Bid Schedule 1 – 160' x 60' Hangar Building
- Bid Schedule 2 – 80' x 80' Hangar Building
- Construction items for above work include, but are not limited to the following:
 - Erosion and control measures installation and seeding
 - Existing pavements removal (asphalt milling and section removal)
 - Earthwork/grading
 - Minor perimeter fencing removal and gate installation
 - FAA P-209 aggregate base course work
 - FAA P-401 asphalt paving
 - Temporary and permanent pavement markings
 - Hangar building slab construction
 - All interior and exterior components of the hangar building, including restroom, roof drains, and concrete threshold connection to asphalt apron

C. Contract Time

- Bid Schedule 1 – 180 Consecutive Calendar Days
- Bid Schedule 2 – 130 Consecutive Calendar Days
- It is not anticipated to close the runway/airfield as all construction work is outside the RSA
- It is anticipated to have limited closure of Taxiway A3 during within construction limits
- No nighttime work unless otherwise agreed upon by the Owner and Engineer
- Liquidated Damages for Contract Time are \$1,000 per calendar day overrun

D. State (NCDOA) Contract Requirements

- Contractors shall familiarize themselves with the contract provisions contained in the specifications (pages I-7 to I-36)
- Trade Restrictions and Buy American Preferences (page B-22 to B-23)

E. NCDOT - Prequalification

- Contractors MUST be prequalified with the NCDOT prior to submitting a bid.
- All subcontractors must be prequalified with the NCDOT prior to performing any work on this project
- <https://connect.ncdot.gov/business/Prequal/Pages/default.aspx>
- For questions concerning prequalification, contact Mickey Biedell at 919-707-4803 or mbiedell@ncdot.gov.

F. DBE/WBE/MBE Goals

- DBE (Disadvantaged Business Enterprise) goal of 4% for this project.
- There is no WBE (Women Business Enterprise) and MBE (Minority Business Enterprise) requirements for this project.
- Bid Conditions - SP1G61 (pages I-37 to I-50)
- Directory of Transportation Firms accessible at the following website:
<https://www.ebs.nc.gov/VendorDirectory/default.html>
- Contractors failing to meet the DBE goal must produce evidence of a good faith effort that meets the requirements (page I-41). Good faith effort must be approved by NCDOT Office of Civil Rights.
- If you have a need to replace a DBE sub, you must complete and submit DBE Replacement Request Form, AV-512.
- For questions concerning DBE certification, contact Benny Sloan at 984-236-1260 or bfsloan@ncdot.gov.
- DBE forms required for this project can be found at the following website:
<https://connect.ncdot.gov/municipalities/State-Airport-Aid/Pages/default.aspx>. Scroll to the bottom of the page to the “DBE Requirements” section.

G. Submitting Complete and Accurate Proposals

- **Bid Opening: Wednesday, April 2, 2025, at 2:00 PM in the Airport Conference Room, 466 Airport Road, Elizabethtown, NC 28337**
- Proposal forms to be submitted include pages B-1 to B-13. Missing pages will constitute an inaccurate and non-responsive bid.
- Unit Prices in words and figures for all pay items and all schedules of work.
- 5% Bid Bond is required (page B-12 to B-13).
- Letter of Intent to Perform as a Subcontractor (page B-18) – Does NOT have to be filled out when the bid is submitted
 - To be submitted by apparent low bidder
 - Required for each proposed DBE subcontractor
- Only registered plan holders may bid as a General Contractor.
 - Plans are available for purchase by going to WK Dickson Plan Room at <https://www.wkdicksonplanroom.com/>.
 - One (1) printed hard copy IFB plan set will be available for viewing at the airport.

H. Overview of Project Administration Issues

- The Owner/Engineer will obtain the following permits for the project:
 - FAA 7460 for work on an airport,
 - NCDOT Driveway Permit,
 - NCDEQ Erosion & Sediment Control Permit, and
 - Town of Elizabethtown Land Use and Stormwater Permits.
- The Contractor is responsible for obtaining all additional required permits that may be required.
- Insurance Requirements (page SP-2 to SP-3)

- Contractor Responsibilities (page SP-3 to SP-7)
- Contractor Pay Applications
 - Each pay application must be submitted with the following documentation:
 - Sales Tax Form (page SP-15)
 - Certified Payroll
 - DBE Vendor Payment Forms – AV-509/AV-510
- Requests for extension of time caused by inclement weather shall be supported with National Weather Bureau data showing the actual amount of inclement weather exceeded what could normally be expected during the contract period (page GP-35).

Table 1 Historic Monthly Weather Days for EYF Multi-Unit Hangar Dev., Ph. 1

Month	Number of Days	Month	Number of Days
January	7	July	8
February	6	August	8
March	6	September	6
April	5	October	5
May	6	November	5
June	7	December	6

I. Overview of Construction Safety / Phasing Requirements

- No staging of equipment or materials is allowed in the existing terminal building parking lot or on airfield pavement.
- No contractor employee parking is allowed in the existing terminal building parking lot.
- All closures must be coordinated with the Owner, through the Resident Project Representative and Engineer, at least 48 hours in advance.
- All construction vehicles must be provided with a 3' x 3' orange and white checkered flag on staff and a flashing amber light mounted on the uppermost part of the vehicle.
- Continuous debris removal will be required from the project site. Airfield pavement must be swept clean.
- Contractor personnel and equipment MUST ALWAYS yield right of way to aircraft.
- Contractor must provide lighted barricades as shown on Sheet G101 Construction Safety and Phasing Plan (CSPP). Barricades shall be placed as shown on Sheet G101.

J. Questions by Prospective Bidders

- All questions after pre-bid meeting must be submitted to WK Dickson, an Ardurra Company in writing via e-mail (achung@wkdickson.com and jpeck@wkdickson.com).
- Answers will be distributed to all plan holders.

K. Site Tour

Pre-Bid Meeting Attendance List

Project: Multi-Unit Hangar Development, Phase 1 – Curtis L. Brown, Jr. Field (EYF)
Project No.: WK Dickson Project No. 20240744.00.WK
Meeting Date: Wednesday, March 19, 2025, at 11:00 AM
Location: Terminal Building Conference Room

	Name	Company	Telephone #	E-mail Address
1	Jamie Peck	WK Dickson, an Ardurra Co.	540-750-4452	jpeck@ardurra.com
2	Ayden Chung	WK Dickson, an Ardurra Co.	910-762-4200	achung@ardurra.com
3	Chris May	Daniels and Daniels Construction	919-920-5860	estimating@danddccc.com
4	TRAVIS HAYES	HAYCO CONSTRUCTION	336- 444 -4443	accounts@HAYCO-CONSTRUCTION.COM
5	Benjamin Reynolds	J.F. Allen	304-439-6429	Reynolds@JFAllenCo.com
6	Wes Walter	Carolina Bay Construction	919 423-4448	wes@carolinabayconstruction.com
7	KEVIN JACOBS	KKJGC	910-827-2310	info@kkjgc.com
8	Chad Faircloth	DeVane Builders	910 862 7198	cfaircloth@devanebuilders.net
9	CHAD DEVANE	DeVane Builders	910 862 7193	CHAD@DEVANEBUILDERS.NET
10	Brian Settle	Diamond Contracting	919-661-1401	Brian.Settle@DiamondContracting.com
11	Troy Taylor	Achuti, LLC	910-237-0102	ttaylor@achuti.com
12	Lance Bullard	Burnhill Contracting	910-880-4736	lbullard@burnhillcontracting.com

	Name	Company	Telephone #	E-mail Address
13	Craig Schneider	Whiting-Turner	472-213-7753	Craig.Schneider@whiting-turner.com
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Curtis L. Brown, Jr. Field (EYF)

Multi-Unit Hangar
Development, Phase 1
Pre-bid Meeting

March 19, 2025

Agenda

- Introductions
 - Project Overview
 - Contract Requirements
 - Bidding Procedures
 - Overview of Project Administration Items
 - Questions/Closing
-

Introductions

Town of Elizabethtown (Owner)

Dane Rideout, Town Manager

Rusty Worley, Town Planner

Sovereign Aerospace (FBO)

Ken Hadaway

WK Dickson, an Ardurra Company (Civil Engineer)

Jamie Peck, Project Manager

Ayden Chung, Project Engineer



Project Overview

This project includes work items such as:

- Erosion and control measures installation and seeding
- Existing pavements removal (asphalt milling and section removal)
- Earthwork/grading
- Minor perimeter fencing removal and gate installation
- FAA P-209 aggregate base course work
- FAA P-401 asphalt paving
- Temporary and permanent pavement markings
- Hangar building slab construction
- All interior and exterior components of the hangar building, including restroom, roof drains, and concrete threshold connection to asphalt apron



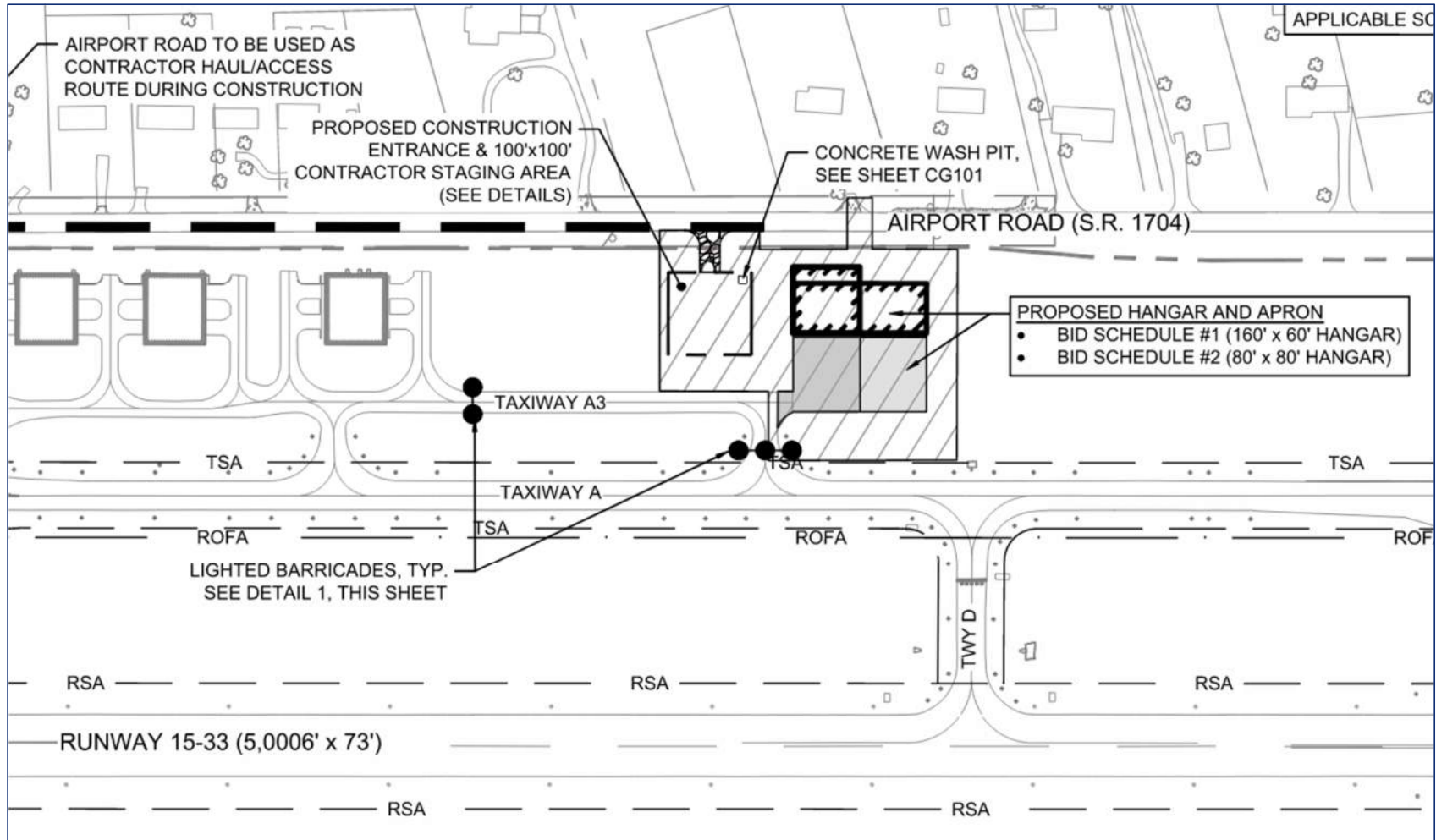
Project Overview

Project Location

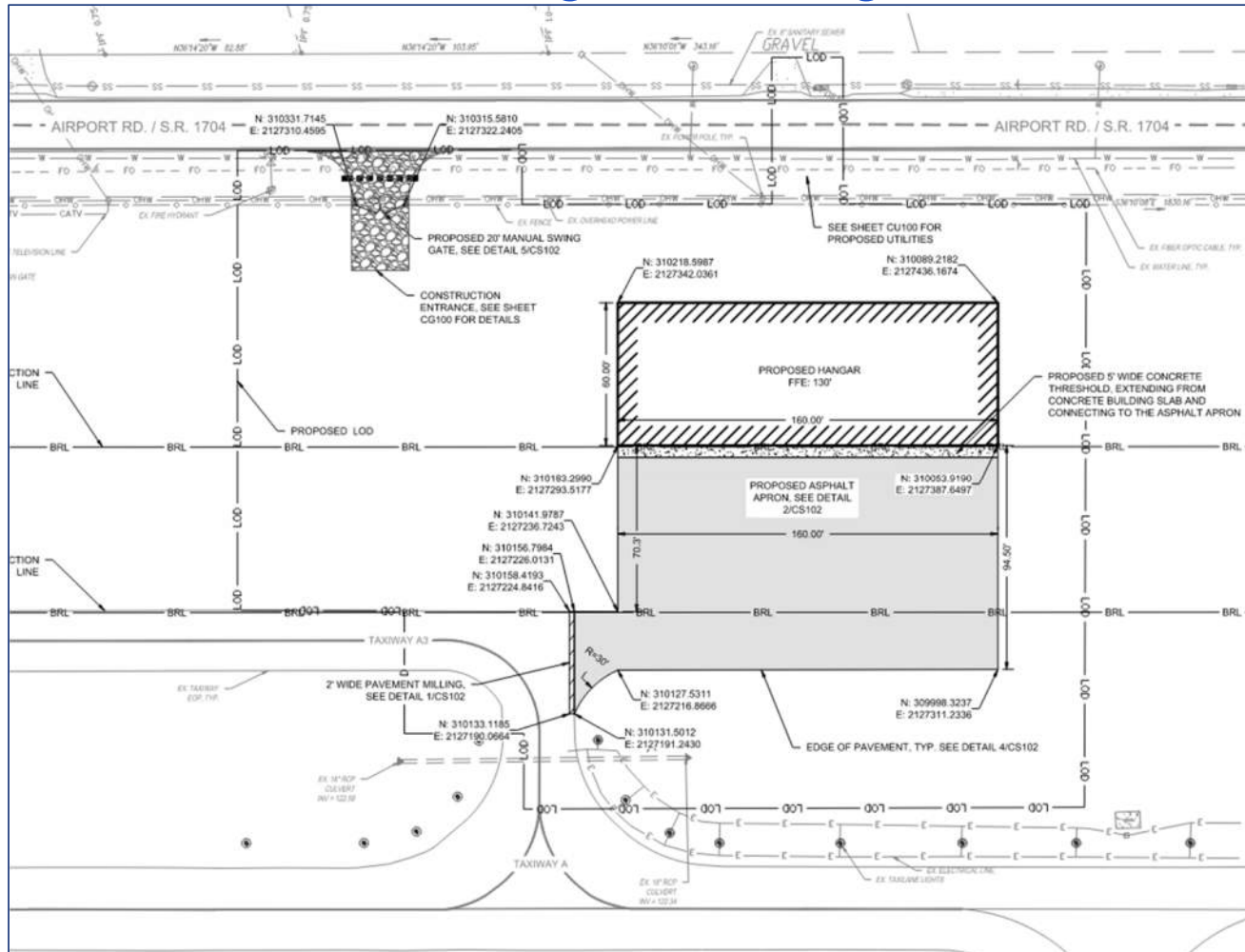
EYF Multi-Unit Hangar
Development, Phase 1



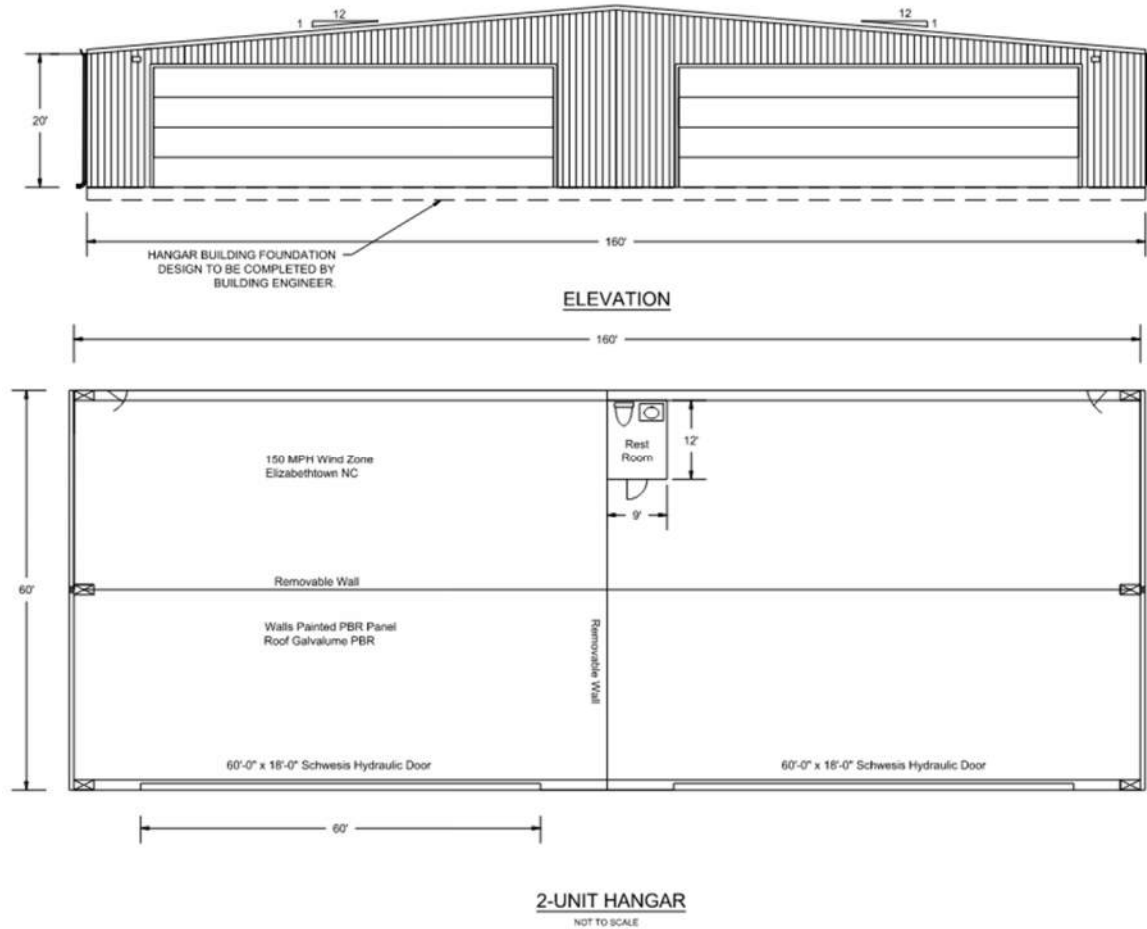
Project Overview: Bid Schedules



Bid Schedule 1: 160' x 60' Hangar Building + Civil Site Work



Bid Schedule 1: 160' x 60' Hangar Building + Civil Site Work



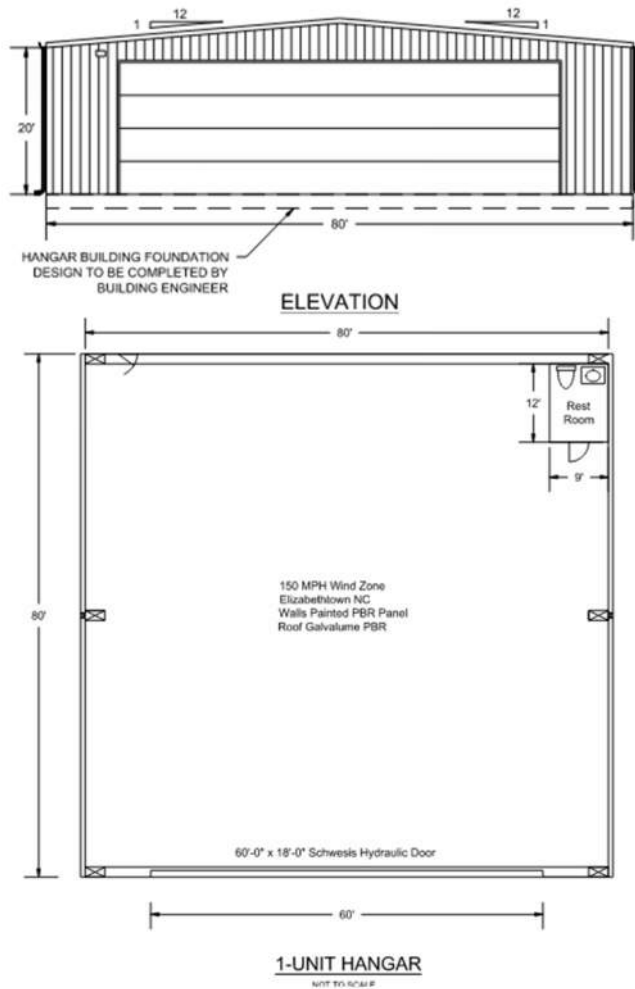
- See Sheet CH100 for hangar building details and notes

Site plan showing the proposed hangar and apron area. The plan includes the following details:

- Proposed Hangar:** 80.00' x 130', FFE: 130'.
- Proposed Asphalt Apron:** 70.3' x 130', SEE DETAIL 2/CS102.
- Proposed 5' Wide Concrete Threshold:** Extending from concrete building slab and connecting to the asphalt apron.
- 2' Wide Pavement Milling:** SEE DETAIL 1/CS102.
- Proposed LOO:** (Line of Observation).
- Existing Structures:** EXISTING CONCRETE BUILDING.
- Utility Lines:** FO, CHW, CATV, EX FIBRE, EX OVERHEAD POWER LINE, EX ELECTRICAL, EX TAILLINE.
- Taxiway A, Taxiway A3, and Taxiway EOP TYP.**
- Intersection:** AIRPORT RD. / S.R. 1704.

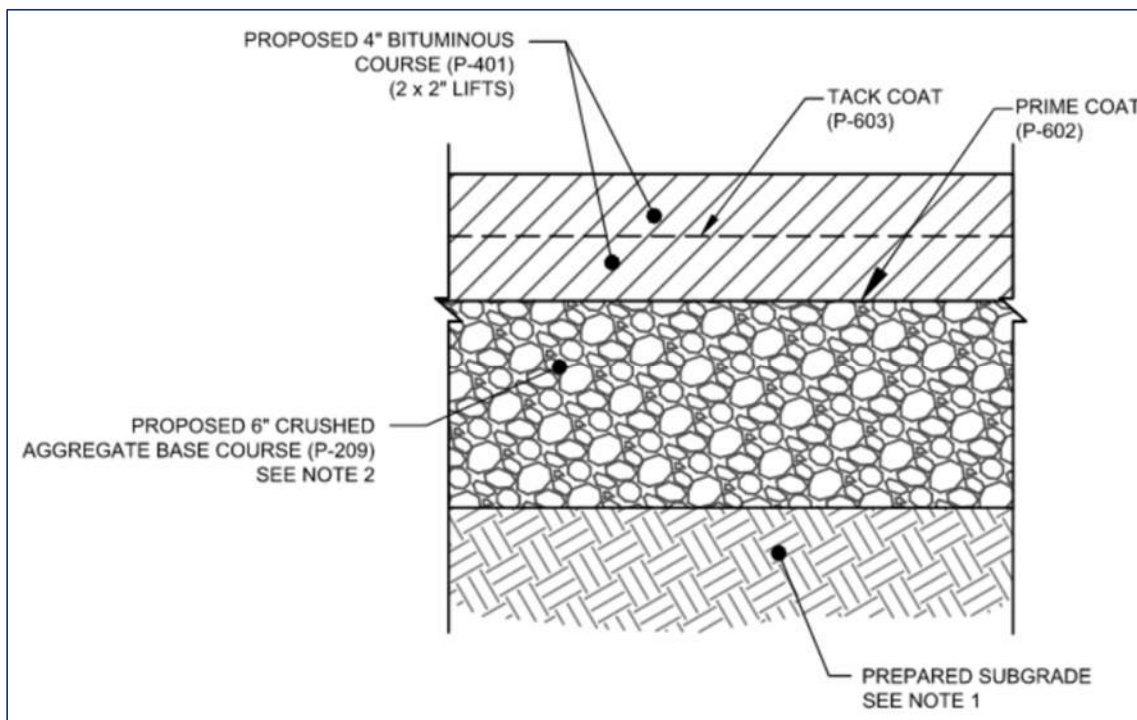
Key coordinates and dimensions are provided for the proposed structures and existing features.

Bid Schedule 2: 80' x 80' Hangar Building + Civil Site Work



- See Sheet CH101 for hangar building details and notes

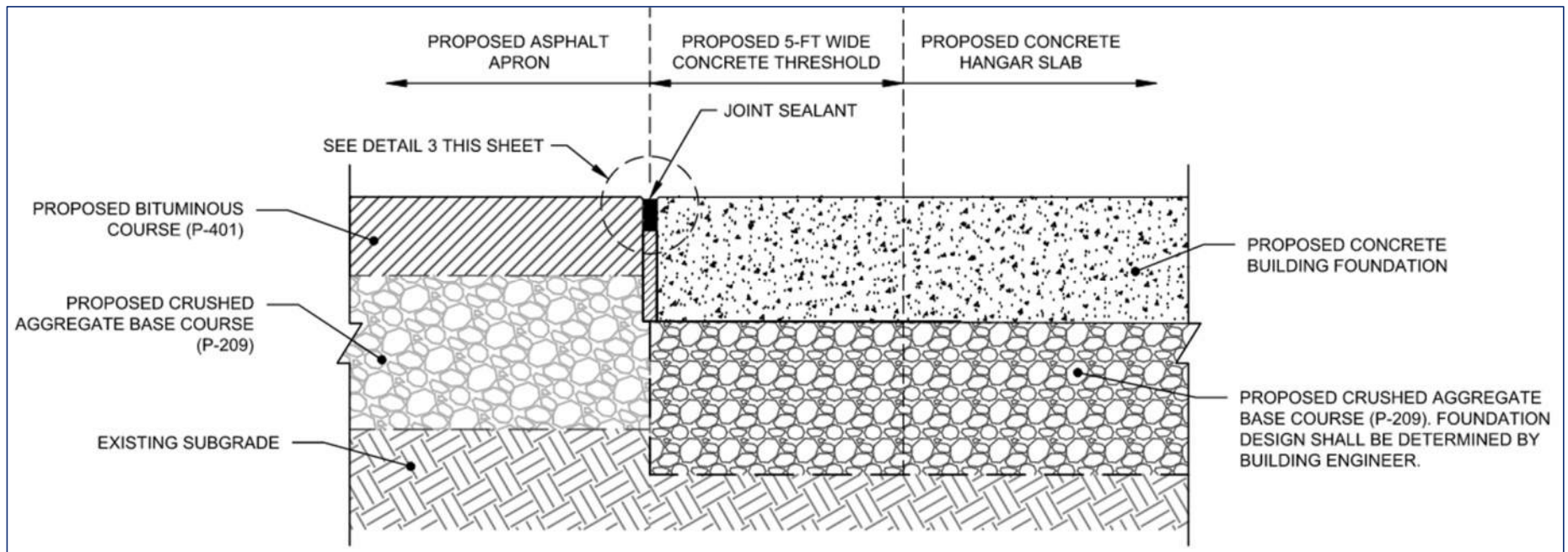
Bid Schedules 1 & 2: Proposed Apron Pavement Section



- FAA P-209 aggregate base course and P-401 asphalt
- See Sheet CS102 for airfield pavement details

Bid Schedules 1 & 2: Hangar Foundation & Concrete

- FAA P-209 aggregate base course and P-610 concrete (4,500 psi) for hangar foundation and concrete threshold
- Hangar foundation design TBD by Building Engineer
- See Sheet CH100 and CH101 for hangar details and notes



Site Utilities: CU100 to CU102



- The site utilities will be completed by the Owner
- The Contractor is responsible for the interior utilities associated with the hangar building and up to 5-ft outside building for connection to site utilities

Project Overview / Scope

Reference Documents

- Included as appendices to the Contract Documents

A

Construction Safety &
Phasing Plan (CSPP)

Report in Appendix A.
The CSPP also included
within the plan set.

B

Construction Management
Program (CMP)

Placeholder for now; will
be completed upon
bidding completion

C

Geotechnical Reports

Completed by ECS



Contract Requirements

Contract Requirements

General & Schedule

General

- All bidders must be familiar with ALL contract documents prior to submittal of bid proposals
- Project is funded with public (federal) dollars – contract must be followed
- Bid Forms and Schedule of Work
- State Provisions Apply
- General Provisions
- Special Provisions
- Technical Specifications and Pay Item Definition
- Testing Requirements
- Plan Sheets

Contractor Schedule

- Submitted 10 days after Notice of Award (prior to NTP)
- Must demonstrate all elements of work, sequence/logic, durations, etc.
- Work must follow the schedule
- Owner may stop work if schedule is not followed
- Schedule is incidental to mobilization pay item



Contract Requirements

Contractor Quality Control Plan

- This is required for the project and will be a separate submittal that shall be submitted to WK Dickson for review and approval prior to construction start
- Reference FAA technical specification Item C-100

ITEM C-100

CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)

DESCRIPTION

100-1 General. Quality is more than test results. Quality is the combination of proper materials, testing, workmanship, equipment, inspection, and documentation of the project. Establishing and maintaining a culture of quality is key to achieving a quality project. The Contractor shall establish, provide, and maintain an effective Contractor Quality Control Program (CQCP) that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The Contractor shall establish a CQCP that will:

- a. Provide qualified personnel to develop and implement the CQCP.
- b. Provide for the production of acceptable quality materials.
- c. Provide sufficient information to assure both the Contractor and the Engineer that the specification requirements can be met.
- d. Document the CQCP process.

The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the CQCP has been reviewed and approved by the Engineer. No partial payment will be made for materials subject to specific quality control (QC) requirements until the CQCP has been reviewed and approved.

The QC requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the quality assurance (QA) testing requirements. QA testing requirements are the responsibility of the Contractor as specified in the specifications.

A Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Resident Project Representative (RPR), Contractor, subcontractors, testing laboratories, and Owner's representative must be held prior to start of construction. The QC/QA workshop will be facilitated by the Contractor. The Contractor shall coordinate with the Airport and the Engineer on time and location of the QC/QA workshop. Items to be addressed, at a minimum, will include:

- a. Review of the CQCP including submittals, QC Testing, Action & Suspension Limits for Production, Corrective Action Plans, Distribution of QC reports, and Control Charts.

Contract Requirements

Testing & Submittal Requirements

- The Contractor shall be familiar with all testing and submittal requirements as described in the technical specifications and contract documents
- In Appendix B within the Construction Management Program (CMP), there is reference material that lists testing and submittal requirements

ITEM P-209 CRUSHED AGGREGATE BASE COURSE	
DESCRIPTION	
209-1.1 This item consists of a base course composed of crushed aggregate base constructed on a prepared course in accordance with these specifications and in conformity to the dimensions and typical cross-sections shown on the plans.	
MATERIALS	
209-2.1 Crushed aggregate base. Crushed aggregate shall consist of clean, sound, durable particles of crushed stone and crushed gravel, and shall be free from coatings of clay, silt, organic material, clay lumps or balls or other deleterious materials or coatings. The method used to produce the crushed gravel shall result in the fractured particles in the finished product as consistent and uniform as practicable. Fine aggregate portion, defined as the portion passing the aggregate crushing operation. The fine aggregate shall meet the coarse aggregate requirements for wear and soundness in the following table.	
Crushed Aggregate Base	
Material Test	Coarse
Resistance to Degradation	Loss: 12% maximum
Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	Loss: 18% maximum
Percentage of Fractured	Minimum 90%

ITEM P-401 ASPHALT MIX PAVEMENT	
DESCRIPTION	
401-1.1 This item shall consist of pavement courses composed of mineral aggregate and asphalt binder mixed in a central mixing plant and placed on a prepared base or stabilized course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross-sections shown on the plans. Each course shall be constructed to the depth, typical section, and elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.	
MATERIALS	
401-2.1 Aggregate. Aggregates shall consist of crushed stone, crushed gravel, crushed slag, screenings, natural sand, and mineral filler, as required. The aggregates should have no known history of detrimental materials. Coarse aggregate is the material retained on the No. 4 sieve.	
Aggregate shall consist of sound, tough, durable particles, free from films of oil, and free from organic material requirements are given in the table	
Material Requirements	
Requirement	Standard
Loss: 40% maximum	ASTM C131
Loss after 5 cycles: using Sodium sulfate - or - using magnesium sulfate	ASTM C88
1.0 % maximum	ASTM C142

ITEM P-610 CONCRETE FOR MISCELLANEOUS STRUCTURES	
DESCRIPTION	
610-1.1 This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications, at the locations and of the form and dimensions shown on the plans. This specification shall be used for all concrete, including signage bases, other than airfield pavement which are cast-in-place.	
MATERIALS	
610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Engineer before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.	
The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.	
a. Reactivity. Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the Engineer. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of	

Contract Requirements

Survey Requirements

- The Contractor shall be familiar with all testing and survey requirements as described in the contract documents and plans
- There will be as-built surveys required to be submitted to the Engineer for review and approval prior to paving start
- Section 7.1, Second Sentence: "The Owner" shall be corrected to "The Contractor". This changed will be captured in Addendum No. 1.

7. TESTING AND SURVEYING

- 7.1. Field surveys shall be made by the Contractor to determine compliance of construction with the Plans and Specifications and for quantity measurements. The ~~Owner~~ will incur the costs of routine compliance and measurement surveys performed during the ordinary course of construction. However, the Contractor shall pay for all costs of additional field surveys required due to inconsistent or inaccurate construction techniques, or performance of unacceptable or unauthorized work, or any other reason determined by the Engineer to be principally the cause of the Contractor. Said additional surveys are not considered to be routine. Work found to be unacceptable or unauthorized shall not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense.
- 7.2. The Contractor will be provided horizontal and vertical control points by the Engineer. The Contractor must furnish, at his expense, all additional stakes and materials for layout and construction of the work.

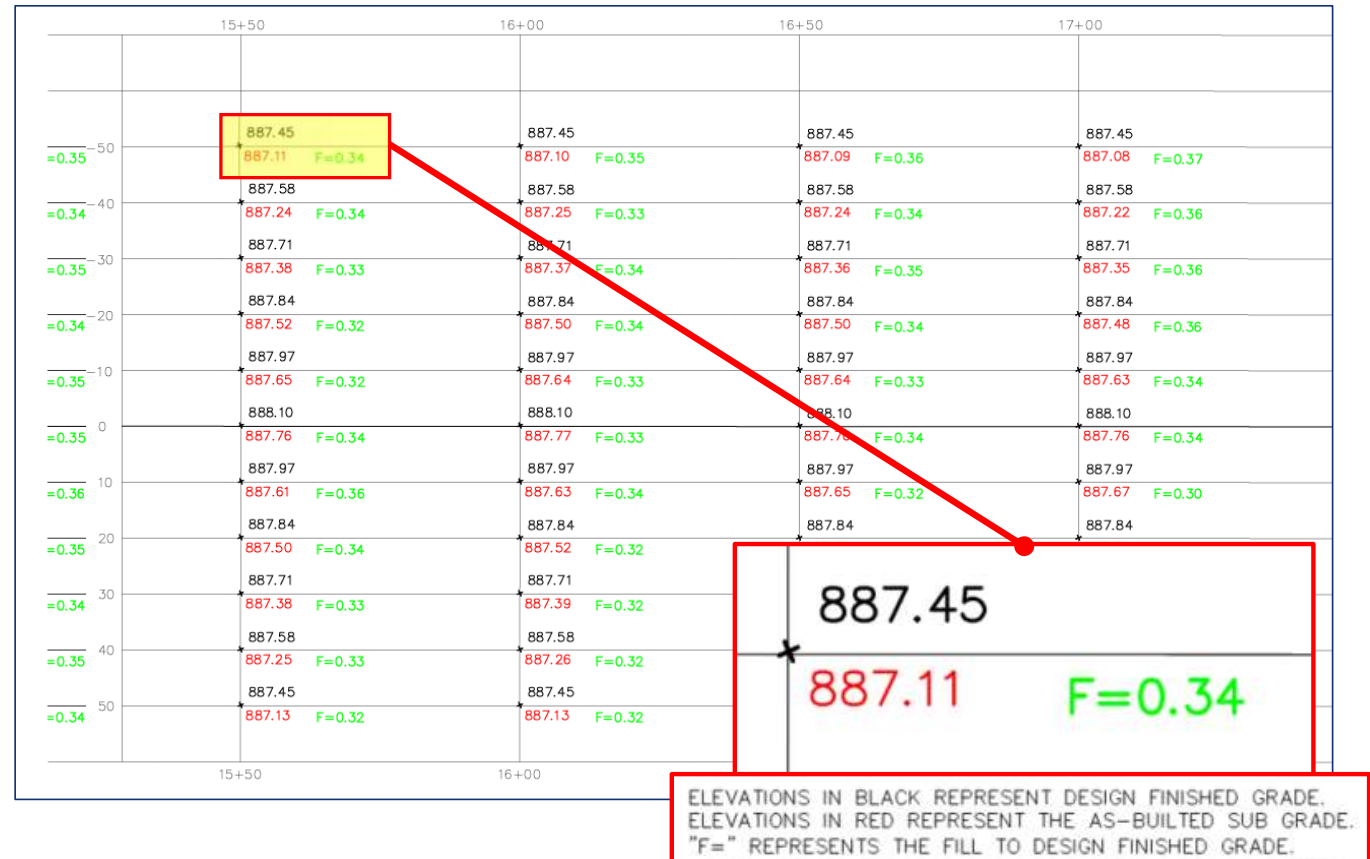
SP-7

Curtis L. Brown, Jr. Field (EYF)
Multi-Unit Hangar Development, Ph. 1
NCDOT-DOA Project No. 36237.4.19.1
WK Dickson Project No. 20240744.00.WK
Updated: February 2021

Contract Requirements

Survey Requirements

- The Contractor shall be familiar with all testing and survey requirements as described in the contract documents and plans
- Example as-built survey of prepared surfaces, signed and sealed by PLS – required to be submitted to the Engineer for review and approval prior to paving start. Required survey submittals include, but are not limited to:
 - Prepared subgrade surface
 - Prepared P-209 surface
 - First and second P-401 lifts



Contract Requirements

DBE/WME/MBE

DBE	WBE	MBE
• DBE requirements for this project • 4% for project	• Women Business Enterprise • Not required	• Minority Business Enterprise • Not required

- Required forms B-15 through B-20 A0
- If the goal is not met, evidence of a good faith effort required with bid (page I-41)

Slide 21

A0 Check these page references
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Contract Requirements

Buy American Certification

- **REQUIRED FOR THIS PROJECT**
- https://www.faa.gov/airports/aip/buy_american
(updated on FAA website as of 07/31/2024)

BUY AMERICAN CERTIFICATION

The contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP-funded projects are produced in the United States, unless the FAA 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.

A bidder or offeror must submit the appropriate Buy America certification (below) with all bids or offers on AIP funded projects. Bids or offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive.

Certificate of Buy American Compliance for Total Facility (Buildings such as Terminal, SRE, ARFF, etc.)

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 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 by:

- Only installing steel and manufactured products produced in the United States; or
- Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
- 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:

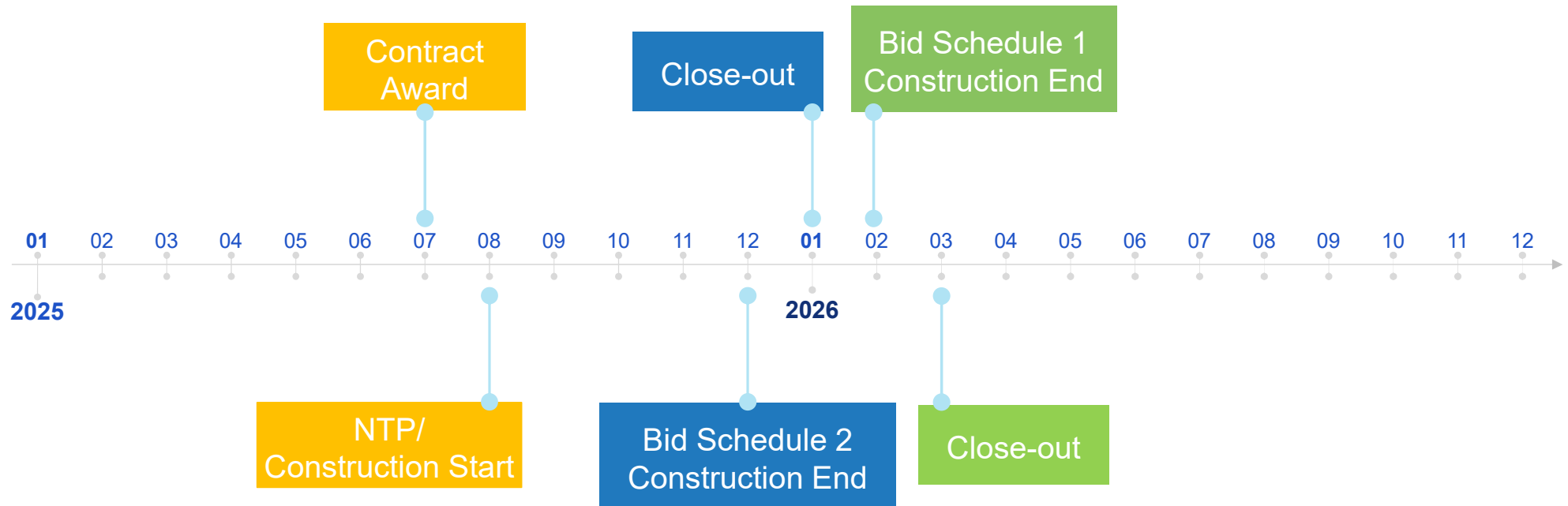
- To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
- To faithfully comply with providing US domestic products
- To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☐ The bidder or offeror hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either 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:

- To submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that support the type of waiver being requested.
- That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
- To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.

Contract & Construction Timeline

Anticipated Schedule



Slide 23

A0 Need to review and edit this slide to show milestone construction dates
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Contract Days

BID SCHEDULE	DURATION (CALENDAR DAYS)
Bid Schedule 1: 160' x 60' Hangar Building	180
Bid Schedule 2: 80' x 80' Hangar Building	130

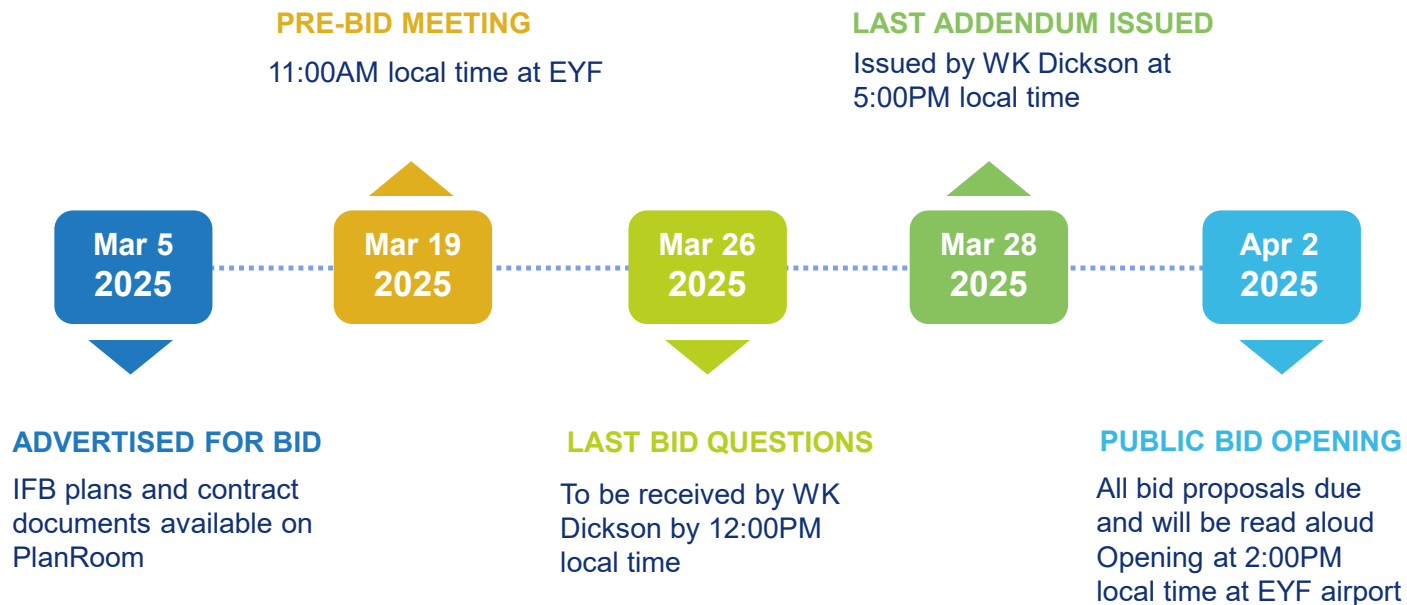
- Contract Time: TBD Calendar Days, dependent upon bid selection
- Liquidated Damages for Contract Time Overrun: \$1,000/Calendar Day



Bidding Procedures

Bidding Timeline

Anticipated Schedule



Submit all questions to Jamie Peck (jpeck@wkdickson.com) and Ayden Chung (achung@wkdickson.com)

Bidding Procedures

Proposals delivered to:

Town of Elizabethtown
Dane Rideout, Town Manager
466 Airport Rd.
Elizabethtown, NC 28337

Bidding Procedures

- Bid proposal must include Bid Forms B1-B30 and required attachments. Missing pages may constitute an inaccurate and non-responsive bid.
 - Be sure to acknowledge addenda in the Bid Proposal Package
 - 5% Bid Bond is required
 - All bidders must be registered plan holders, a Licensed General Contractor, and pre-qualified with NCDOT
- 



Overview of Project Administration Items

Permitting

Owner Provides:

- FAA 7460 for work on an airport
- NCDOT Driveway Permit
- NCDEQ Erosion & Sediment Control Permit
- Town of Elizabethtown Land Use and Stormwater Permits

Contractor Provides: Any additional required permits (i.e., building-related)

Note: All necessary permit approvals must be obtained before the commencement of work. However, in some cases, certain preliminary construction activities may proceed while waiting for final approvals. i.e., material ordering

Project Execution

1. Notice of Award
 2. Submittal and acceptance of Contractors schedule
 - a) Contractor shall submit 10 days after Notice of Award. Schedule must be approved by Owner prior to NTP.
 3. Pre-Construction/Project Kickoff Meeting
 4. Routine Progress Meetings (bi-weekly)
 5. Partial Payment request
 6. Final Inspection
-

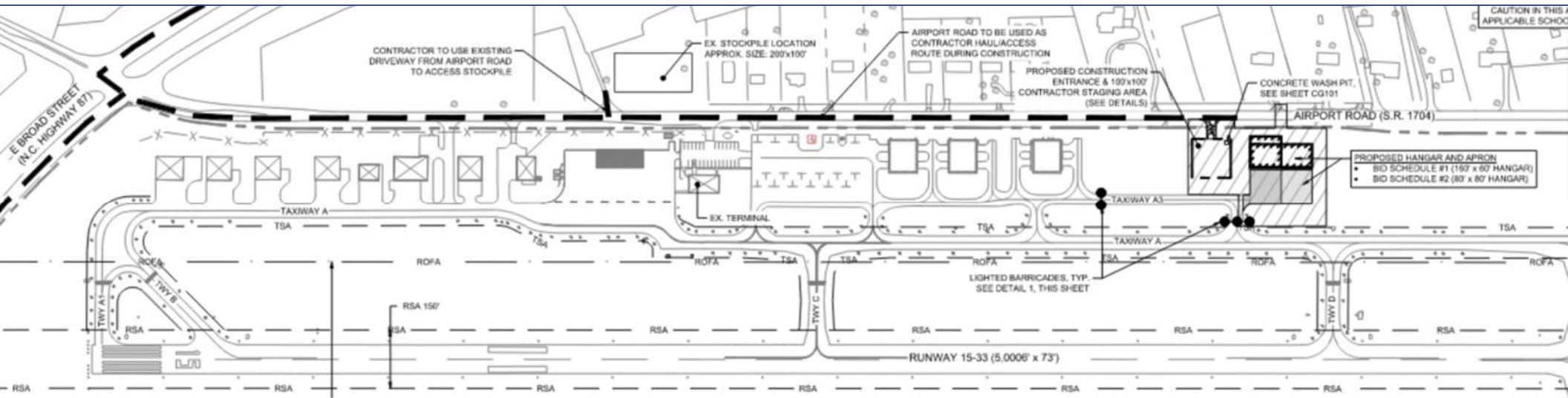
Project Execution

Schedule Extension for Weather Impacts

- Based on historical averages of rainy days
- Documentation: Requests for extension may be made for weather impact days that exceed these averages.

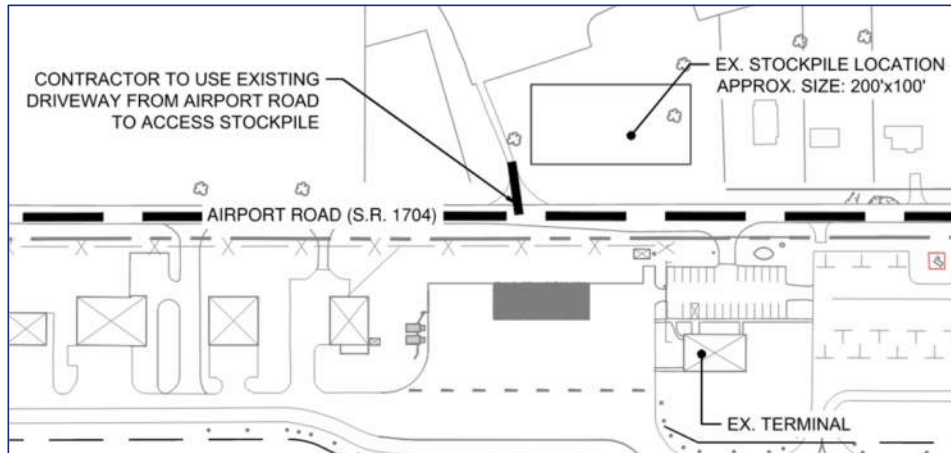
Month	Number of Days	Month	Number of Days
January	7	July	8
February	6	August	8
March	6	September	6
April	5	October	5
May	6	November	5
June	7	December	6

See Sheet G101



Phasing Plan & Stockpile Location

See Sheet G101 CSPP



PHASING PLAN		
- INSTALL EROSION CONTROL MEASURES, CONSTRUCTION ENTRANCES, CONTRACTOR STAGING AREA, HAUL ROUTES, NEW VEHICLE GATE, AND LIGHTED BARRICADES - PERFORM WORK GENERALLY AS OUTLINED BELOW - UPON COMPLETION OF PROJECT, REMOVE BARRICADES. EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL STABILIZATION HAS BEEN ACHIEVED. - A PORTION OF EXISTING TAXIWAY A3, AS SHOWN ON THIS CSPP, WILL BE CLOSED FOR THE DURATION OF THE PROJECT		
	WORK DESCRIPTION	PHASE NOTES
PHASE 1	- ISSUE NOTAM FOR CONSTRUCTION WORK ON AIRFIELD - EARTHWORK/GRADING - SUBGRADE PROOF ROLLING AND PREPARATION (APRON AND BUILDING AREAS), COMPLETE TESTING AND TOPOGRAPHIC SURVEY - FINE GRADE BUILDING PAD AREA FOR STONE AND FOUNDATION CONSTRUCTION - BUILDING CONSTRUCTION - INSTALL 6" OF P-209 BASE COURSE (APRON), COMPLETE TESTING AND TOPOGRAPHIC SURVEY - MILL EXISTING TAXIWAY A3 PAVEMENT AS NOTED ON PLANS FOR TIE-IN - INSTALL 2 x 2" LIFT OF P-401 ASPHALT SURFACE COURSE (APRON), COMPLETE TESTING AND TOPOGRAPHIC SURVEY - FINE GRADING AND STABILIZATION OF SITE - INSTALL TEMPORARY PAVEMENT MARKINGS PER PLANS - REMOVE LIGHTED BARRICADES, OPEN APRON AND CLOSED PORTION OF TAXIWAY A3	DAYTIME WORK NO NIGHT TIME WORK UNLESS APPROVED BY ENGINEER AND OWNER
PHASE 2	<u>PAVEMENT MARKINGS (PERMANENT)</u> - ISSUE NOTAM AND INSTALL LIGHTED BARRICADES - INSTALL PERMANENT PAVEMENT MARKINGS 30-DAYS AFTER COMPLETION OF PAVEMENT INSTALL - REMOVE LIGHTED BARRICADES, OPEN APRON AND CLOSED PORTION OF TAXIWAY A3	DAYTIME WORK

Questions?

Submit to:



Jamie Peck

Project Manager

jpeck@wkdickson.com



Ayden Chung

Project Engineer

achung@wkdickson.com

Reminders:

- Last Questions: Wednesday, March 26th, 2025, at 12:00PM local
- Final Addendum: Friday, March 28th, 2025, at 5:00PM local
- **Public Bid Opening: Wednesday, April 2nd, 2025, at 2:00PM local**



Thank You

 Jamie Peck, PE – Project Manager

 540.250.6892

 jpeck@wkdickson.com

 www.wkdickson.com

- 5.19. Use of the terminal buildings and facilities located in and around said terminal area by employees of the Contractor and his Subcontractors and material and equipment suppliers shall be prohibited, except upon written permission from the Engineer.
- 5.20. 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 constriction shall be limited as directed by the Engineer. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor shall be responsible for all damage done by his hauling equipment on or off the airport and shall correct such damage at his own expense.

6. OWNER

- 6.1. The Owner will issue all communications to the Contractor through the Engineer.
- 6.2. In case of termination of the employment of the Engineer, the Owner will appoint another Engineer who will have and assume all rights and duties held by the original Engineer named herein.
- 6.3. The Owner shall have the right to take possession of and use any portion of the work notwithstanding the fact that the time for completion of such portion of the work may not have expired but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents. Should the Owner take possession of and use any portion of the work for which the time for completion has not yet expired and should the Contractor believe that such prior use increases the cost or delays in the work, he may make a claim for an increase in the Contract price and/or for an extension of time as provided the General Provisions.
- 6.4. A waiver on the part of the Owner for any breach of any part of the Contract shall not be held to be a waiver of any other or subsequent breach.

7. TESTING AND SURVEYING

- 7.1. Field surveys shall be made by the Contractor to determine compliance of construction with the Plans and Specifications and for quantity measurements. ~~The CONTRACTOR Owner will incur the costs of routine compliance and measurement surveys performed during the ordinary course of construction.~~ However, the Contractor shall pay for all costs of additional field surveys required due to inconsistent or inaccurate construction techniques, or performance of unacceptable or unauthorized work, or any other reason determined by the Engineer to be principally the cause of the Contractor. Said additional surveys are not considered to be routine. Work found to be unacceptable or unauthorized shall not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense.
- 7.2. The Contractor will be provided horizontal and vertical control points by the Engineer. The Contractor must furnish, at his expense, all additional stakes and materials for layout and construction of the work.

SECTION 13122 PRE-ENGINEERED HANGAR BUILDINGS

PART 1- GENERAL

The Contractor shall provide all labor and materials for the construction/erection of **ONE (1) ~~three~~** pre-engineered metal Storage Hangar buildings with one-piece hydraulic operated doors. The buildings nominal dimensions are to be **160' x 60' (Bid Schedule 1) and 80' x 80' (Bid Schedule 2) ~~60'x60' (Hangar 5), 60'x60' (Hangar 4) and 80'x 80 (Hangar 12)~~**, as shown on the plans. **The Contractor shall submit complete bids for both Bid Schedule 1 and Bid Schedule 2, with only one (1) Bid Schedule being selected for construction, resulting in a single hangar building.** The building shall be designed and constructed in accordance with the North Carolina Building Code-Latest Edition, NFPA 409, NFPA 101, and all other applicable codes. The Contractor shall be responsible for completion of all associated work necessary and as indicated on the plans and outlined in the specifications for delivery to the owner of a finished product with occupancy approval. The Contractor will be required to submit detailed building plans for review and issuing of permits from the **BLADEN ~~Johnston~~ County Building Inspections Department**. The Contractor shall be responsible for payment of all required permits. The building plans shall be sealed by an Architect or Engineer as applicable which is licensed to perform work in the state of North Carolina.

All products and work are intended to be complete in all aspects, including accessories required for a turn-key product for hangar building construction, to include interior space up fitting where indicated.

Concrete and Soil Compaction Testing. The Owner will employ and pay for testing of concrete prior to being installed and soil compaction testing. The Contractor shall be responsible for scheduling the testing company.

Sanitary Facilities. The General Contractor shall provide and maintain chemical type toilet facilities for the use of his employees.

The General Contractor shall make all arrangements and pay all charges for a temporary water, lighting system, construction power, and temporary heating for construction in compliance with state and local requirements.

The Contractors may use a designated area, as indicated on drawings, for construction staging, construction trailers and storage of materials. It is the Contractor's responsibility to provide a temporary fence enclosing his designated staging/laydown area if desired other than what is provided by the Owner. Contractor shall restore staging area back to its original condition.

1.1 SUMMARY

- A. Scope: These specifications cover the materials and fabrication of metal buildings designed, fabricated and readily erected to be weather tight. These specifications are an outline of performance to insure the basis for design, manufacture and application of all the manufacturer's metal building systems.
- B. Building Description: A rigid frame, modular span, tapered column, double slope roof, engineered steel building, see drawing for roof slopes. See drawing for eave heights and dimensions.
- C. Building Nomenclature:
 - 1. Width shall be as measured from outside of wall to outside of wall.

2. Length shall be as measured from outside of wall to outside of wall.
3. Eave height shall be measured from the top of the eave purlin or door truss to the bottom of perimeter column base plate.
4. Hydraulic door size shall be the clear opening. All dimensions are nominal.

All structural and non-structural components of the hangar building, excluding the concrete slabs and foundations, are supplied by the pre-engineered hangar manufacturer. Supplier is to warranty all components of building.

Hangar building shall be supplied by a manufacturer who is regularly engaged in the manufacture of aircraft hangar buildings. Contractor shall ensure that all aspects of the hangar building construction and hangar door are compatible and result in a weather tight seal. The hangar manufacturer shall have been engaged in the manufacture for a minimum of five years and upon request from Owner provide a list of completed hangar projects.

D. Drawings and Certifications:

Drawings: Manufacturer shall furnish complete erection drawings for the proper identification and assembly of all building components. These drawings will show anchor bolt settings, transverse cross sections, sidewall, endwall. Roof framing, flashing, sheeting and accessory installation details.

Certifications: Standard drawings and design analysis shall bear the seal of a registered professional engineer licensed in the state of North Carolina. Design analysis shall be furnished to the Owner. The Manufacturer shall furnish a sealed letter of certification stating that the building design and fabrication will meet all design specifications and loads as required by applicable codes. This letter must be furnished prior to delivery of building.

2. STRUCTURAL STEEL DESIGN

- A. General: The building manufacturer shall use standards, specification, recommendations, findings, and/or interpretations of professionally recognized groups (AISC, AISI, AAMA, AWS, ASTM, MBMA). Federal Specifications and unpublished research by MBMA as the basis for stabling design, drafting, fabrication and quality criteria, practices and tolerances. For convenience, one or more sources may be referenced in a portion of these specifications.
- B. In all instances, however, the manufacturer's design, drafting, fabrication, quality criteria, practices and tolerances shall govern, unless specifically countermanded by the Contract Documents. Structural mill sections or welded up plate sections will be designed in accordance with AISC's "Specification of the Design, Fabrication, and Erection of Structural Steel for Buildings" (latest edition).

Cold-formed steel structural members will be designed in accordance with AISI's "Specification for the Design of Cold-formed Steel Structural members" (latest edition)

Design Loads: Design loads will include dead load, roof live loads, wind load, seismic loads, collateral loads, auxiliary equipment loads, and/or other applied or specified loads.

Dead Loads: The actual weight of the building system supported by a member.

Roof Live Loads: Loads produced by maintenance activities, rain, erection activities and other movable or moving loads, but not including wind, snow, seismic, crane, or dead loads.

Roof Snow Loads: Gravity load induced by weight of snow or ice on the roof, assume to act on horizontal projection of the roof.

Winds Loads: The loads on a structure induced by the forces of wind blowing from any horizontal direction.

Collateral Loads: The weight of any non-moving equipment or material, such as ceilings, electrical or mechanical equipment, sprinkler systems or plumbing.

Seismic Loads: Horizontal loads acting in any direction on a structural system due to action of an earthquake.

Floor Live Loads: Loads induced on a floor system by occupants of a building and their furniture, equipment, etc.

(Shall be in accordance with the latest international building code with North Carolina amendments).

- C. Basic Material Specifications. Primary Framing Steel: Steel for hot rolled shapes conform to the requirements of ASTM Specification A-36, with minimum yield of 36,42 or 50 psi.

Steel for built up sections shall conform to the physical requirements of ASTM D570, ASTM 572 or ASTM A36 as applicable, with minimum yield of 42,000, 50,000 psi as indicated by the design requirements. Steel for endwall "C" sections shall conform to the physical requirements of Republic Steel's P-55 or equivalent and have a minimum yield of 55,000 psi.

Secondary Framing Steel: Steel used to form purlins, girts, eave struts and "C" sections shall be Republic Steel's P-55 or equivalent of ASTM A607 Grade 55. Minimum yield shall be 55,000 psi.

3 STRUCTURAL FRAMING

General: All framing members shall be shop fabricated for field bolted assembly. The surfaces of the bolted connections shall be smooth and free from burrs or distortions.

- A. Primary Framing:

Rigid Frame: All rigid frames shall be connected to webs by means of a continuous fillet weld on one side.

Endwall Frame: All endwall roof beams and endwall columns shall be cold-formed "C" sections, mill rolled sections or built up "I" sections depending on design requirements.

Plate, Stiffeners, etc.: All base plates, splice and flanges shall be shop fabricated to include bolt connections holes. Webs shall be shop fabricated to include bracing holes.

Connections for secondary structural (purlins and girts) shall be by means of welded clips.

- B. Secondary Framing:

Purlins and Girts: Purlins and girts shall be cold-formed "Z" sections with stiffened flanges. They shall be pre-punched at the factory to provide for field bolting to the rigid frames. They shall be simple or continuous span as required by design. Connection bolts will install through the webs, not flanges.

Eave Struts: Eave struts shall be unequal flange cold-formed "C" sections.

- C. Bracing:

Provide wind bracing, rafter bracing, sheeting angles where required.

Diagonal Bracing: Diagonal bracing in the roof shall be used to remove longitudinal loads from the structure. This bracing will be furnished to length and equipped with bevel washers and nuts at each end. It may consist of rods threaded each end or galvanized cable with suitable threaded end anchors. If load requirements so dictate bracing may be of structural angle and/or pipe, bolted in place.

Flange Braces: The compression flange of all primary framing shall be braced laterally with angles connecting to the webs of purlins or girts so that the flange compressive stress is within allowable limits for any combination of loading.

4. MISCELLANEOUS MATERIAL SPECIFICATIONS

- A. Roof: Panel shall be 24 gauge. GALVALUME panels shall have a factory applied mastic in the female lag. Panel, finish shall be smooth. All panels shall be sealed at the eave. System shall be installed with fixed clips 3" fiberglass insulation and 1" thermal spaces. Screws at end laps shall be stainless steel. All attachments methods shall be recommended by manufacturer.

Wall Panels: Panel shall be 26 gauge painted with standard factory paint finish and installed according to manufacturer's requirements. Color shall be selected from manufacturer's standard color chart. All wall panels shall be furnished full height.

- B. Sealants and Closures:

Caulk: All gutter and downspout joints, rake flashing laps, ridge flashing laps, shall be sealed with pigmented caulk of butyl rubber base to match the color.

Factory applied sealant used tin panel sidelaps shall be a hot melt, foamable mastic.

Field applied sealant used at the endlaps, ridge assembly, and gable flashings shall be 100% solids, butyl-based elastomeric tape sealer, furnished in roll form or pre-cut to length. Sealant used to the eave shall be pre-compressed expanding foam sealant tape.

Inside closures shall be 18-gauge metal.

Gutter, Flashing, And Downspouts:

Gutters and Flashing: All standard exterior gutters, rake flashing and downspouts are 26-gauge galvalume steel, with painted finish to match.

Flashing and Trim: Flashing at the rake (parallel to roof panels) and high eave shall not compromise the integrity of the roof system by constricting movement due to thermal expansion and contraction. The panel manufacturer shall supply the flexible membranes if applicable.

Installation: Erection of the roof system shall be in complete accordance with the manufacturer's erection manual.

5. PAINTING

Structural Painting: All uncoated structural steel shall be cleaned of all foreign matter and loose scales in accordance and given a one mil coat of red oxide primer. Primer shall be applied by the use of airless handguns. Primer meets or exceeds the performance requirements of Federal Specification TT-P0636D. Light gauge steel members shall be shot blasted and precoated with one coat of red oxide primer. Some hand sprayed shop touch up may be employed. Primer shall be furnished to touch up all abrasions caused by handling, all members (if required) shall be touched up prior to field assembly.

Painted Steel Panels: (Work this paragraph shall be compatible with finish coating)

Base metal shall be 26-gauge galvalume steel.

Prime Coat: The base metal shall be pre-treated and then primed with an epoxy type primer for superior adhesion and superior resistance to corrosion.

6. ACCESSORIES

Insulation: Roof = 4 inches and walls = 3 inches with scrim reinforced white vinyl. Office and Bathroom finished areas shall be minimum R-19.

7. HANGAR DOORS

Doors shall be flush mounted hydraulic type, Schweiss Doors or approved.

- A. The hangar doors shall be compatible with the building structural system and shall result in a completely weather-proof system.
- B. The door framing shall be designed to carry its own dead load and resist horizontal wind pressure as specified by code.
- C. Exterior door paneling and trim shall match the building wall panels.
- D. Door insulation shall be the same as wall panel insulation.
- E. All door framing shall be shop primed the same as the structural framing members.

8. ERECTION AND INSTALLATION. The erection of the metal building and the installation of accessories shall be performed in accordance with erection drawings by a qualified erector using proper tools and equipment. In addition, erection practices shall conform to Section 5, MBMA "Code of Standard Practice". There shall be no field modifications to primary structural members except as authorized and specified by the manufacturer.

ALL OSHA SAFETY REQUIREMENTS SHALL BE ADHERED TO INCLUDING 100% FALL PROTECTION WHEN ABOVE 6'-0" WORKING HEIGHT SPECIFICALLY INCLUDING ROOF INSTALLATION.

9. BUILDING ANCHORAGE AND FOUNDATIONS. The building anchor bolts shall be designed to resist maximum column reactions resulting from the specified combinations of loadings. These designs and sizes shall be specified by the building manufacturer.

Contractor shall be responsible for the complete design of the building foundations and floor slabs. Floor slabs shall meet the minimum requirements detailed in the project plans. The plans shall be sealed by an Architect or Engineer as applicable which is licensed to perform work in the state of North Carolina.

10. THERMAL AND MOISTURE PROTECTION

Vinyl faced insulation shall be provided for roof, walls, and doors of pre-engineered steel building.

11. VAPOR BARRIER

Vapor barrier beneath hangar floor slab shall meet the following requirements:

Plastic Vapor Retarder: ASTM E 1745, Class C, or polyethylene sheet, ASTM D 4397, not less than 6 mils 6 thick. Include manufacturer's recommended adhesive or pressure-sensitive joint tape.

Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

- a. Fortifiber Building Systems Group; Moistop Ultra A.
- b. Raven Industries Inc.; Vapor Block 10.
- c. Reef Industries, Inc.; Griffolyn [Type-85].
- d. Stego Industries, LLC; Stego Wrap, 10 mil Class C.

Place, protect, and repair sheet vapor barrier according to ASTM E 1643 and manufacturer's written instructions. Lap joints 6 inches and seal with manufacturer's recommended tape.

12. DOORS AND WINDOWS

Exterior Steel Doors: Shall be furnished by the pre-engineered building manufacturer.

13. METHOD OF MEASUREMENT/BASIS OF PAYMENT

All work in this section shall be included in and paid for under "Hangar Building" item of work. Payment will be on a lump sum basis and shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment, tools and incidentals necessary to complete the item.

END OF SECTION 13122