

## **AV-200 Work Authorization Outline**

Each of the items included in this outline are to be included in Work Authorizations (WA) to be reviewed by the NC Division of Aviation (DOA). The outline is a revision of the 10/2014 guidance and should be used in conjunction with the AV-202 Work Authorization Checklist; the outline provides additional clarifying details that are not on the Checklist. Use of the WA Outline and Checklist will assist in expediting the WA review process.

**1. Header-** Include the following information:

- Consultancy
- Project Name
- Airport Name
- WBS Number (if known)- Also include the STI AV number if applicable.
- Funding Source- Indicate whether the project is being funded using State Aid, NPE, Apportionment, Discretionary, etc. Also include the funding ratio.
- Partner Connect Project Request Number
- Master Agreement Expiration Date- If work is being performed outside of a Master Agreement (i.e. NCDOT On-Call), that should be notated.
- Date of Current Version
- Example:

**Planning/Engineering Consulting Services By: XYZ Engineering**

**For: Design of Runway 00/00 Rehabilitation**

**At: XYZ Jetport**

**Referencing:**

**W.B.S. Number 55555.20.18.1**

**Funding Source: State Aid at 90% State & 10% Local**

**Partner Connect Project Request Number: 1234**

**Master Agreement Expiration Date: February 15, 2020**

**June XX, 2020**

**2. Project Summary**

- Description of the intended improvements to be made- This should be in layman's terms so that someone without any background knowledge of the airport could understand the project. Include a bulleted list of general tasks to be completed during the project.
- Description of the project limits.
- Any circumstances that make the project unique/difficult.
- Provide justification for the project. Indicate what problem is being solved with this project and explain how this project will solve it. Be sure to indicate if the project is on the most recent, approved ALP (if applicable). Examples of items to reference are the most recent PCI Report, System Plan Goals, safety issues and approach certifications.

- Indicate if the project is part of an overall development program and if so, indicate which phase.
- Reference to the Master Agreement, if applicable- Note any major deviations from the contract. The referenced Master Agreement should not have expired. If referencing the Master Agreement, include an excerpt of the applicable section in the Appendix.

**3. Scope of Work-** Ensure that all tasks included in the man hour estimate are defined in the Scope of Work. Create sub-sections for each phase of the project. Each sub-section should include a summary of work to be completed in that phase. The outline below does not include an exhaustive list of all phases, but the phases outlined below **must** be included. If a sub-consultant is being used for services in a phase, the services, names of sub-consultants and fees should be mentioned in the description and the consultant should ensure that the sub-consultants are NCDOT pre-qualified and should monitor their pre-qualification status throughout the project. Any specific tasks that are not included in the Scope of Work shall be mentioned in this section. A project schedule shall be provided for all phases of work and an updated schedule should be provided with each reimbursement request if the schedule has changed by more than 30 days.

**a. Project Development-** Include details about the following items:

- Scope Development- Include details about what is required to develop the scope. A scoping meeting, including the Sponsor and DOA, is to be completed for each project unless DOA deems that it is not necessary based on the type of project.
- Meetings- Identify how many meetings will be needed and why the meetings are needed. Also indicate who will be involved in the meetings.
- Project Coordination- Describe coordination needs between the Sponsor, Subconsultants and DOA.
- Grant Administration- Include a statement that says that Grant Administration tasks will be in accordance with the most current Aviation Checklists on the DOA website.
- Additional tasks as applicable
- Provide a bulleted list of deliverables to be provided to DOA **and** the Sponsor. Indicate that the deliverables will be developed in accordance with the latest Aviation Checklists. Deliverables will be provided in an electronic format. Scoping meeting minutes should be included as a deliverable for this phase of work.

**b. Pre-Design-** Include details about the following items:

- Survey
- Geotechnical Investigation and Analysis
- Environmental - Determination of anticipated environmental documentation should be coordinated with DOA/FAA prior to the development of the Work Authorization. Environmental documentation could include a Simple Written Record, a Documented Categorical Exclusion (CatEx), or an Environmental

Assessment (EA). Environmental documentation may also include studies, reports or permit applications necessary to complete the NEPA process, and the anticipated need for these documents should be addressed in the Work Authorization, to the maximum extent feasible given the project scope.

- iv. Permitting- List the permits that are needed.
- v. Additional tasks as applicable
- vi. Provide a bulleted list of deliverables to be provided to DOA **and** the Sponsor. Indicate that the deliverables will be developed in accordance with the latest Aviation Checklists. Deliverables will be provided in an electronic format. If desired, these documents can be provided as part of the Engineers Design Report, so long as there are no alternatives that need to be reviewed by DOA to determine the preferred alternative. If applicable, deliverables should include, but are not limited to, the following:
  - Survey files- in CADD format
  - Geotechnical report
  - Environmental documentation/approval
  - Permit applications/approval

**c. Design-** Include details about the following items:

- i. Permitting- Include any permitting not included in the Planning/Pre-Design phase of the project.
- ii. Design Plans- Note that the DOA's review and comments do not in any way relieve the Engineer of Record of his or her professional duty to ensure the safety, constructability, functionality, and/or performance requirements of the plans and specifications.
- iii. Technical Specifications- Provided to DOA for review along with plans. Include statement in WA that "Technical Specifications will be in accordance with the most recent FAA Advisory Circular 10/5370-10x or current NCDOT Specifications" as applicable to the project.
- iv. FAA SOPs- Include a statement that says that all FAA SOPs will be followed, if applicable. SOPs can be found on the [FAA website](#).
- v. Construction Safety and Phasing Plan (CSPP) and checklist- The checklist from Appendix C of AC 150/5370-2X must be used. The checklist must be complete upon submission of 90% Design Plans. Design Plans will not be reviewed without the completed CSPP checklist. The CSPP, DOA CSPP comments, and statement of funding type should be uploaded to OE/AAA, as required, after DOA review.
- vi. Include a statement that says that the 7460 will be submitted and approved prior to construction. Also indicate that a copy of the FAA approval will be provided to DOA. To prevent delays, provide the NRA number to DOA upon the 7460 submittal.

- vii. [MBE/WBE/DBE goal](#)- See guidance. Coordinate with DOA to obtain the project goal upon completion of the detailed cost estimate.
- viii. Engineer's Design Report- Include a statement that indicates that the report will follow the DOA guidance provided.
- ix. Additional tasks as applicable
- x. Provide a bulleted list of deliverables to be provided to DOA **and** the Sponsor. Indicate that the deliverables will be developed in accordance with the latest Aviation Checklists. Deliverables will be provided in an electronic format. If applicable deliverables should include, but are not limited to, the following:
  - Permit applications/approval, if applicable
  - 30/60/90% Design Plan submissions will be made to the APM (or fewer as specified by the APM). All necessary plan sheets needed for construction of the project should be included in the 90% submittal.
  - Technical Specifications- Submitted with 90% Design Plans.
  - Detailed cost estimate for construction.
  - CSPP checklist
  - FAA 7460 approval
  - Sealed Engineer's Design Report- Must be provided after the bid opening if bidding is included in the scope of work. All addendums should be included.

**d. Bidding-** Include details about the following items:

- i. Informal bidding (if applicable)- Note that all items in this section may not apply if informally bidding the project.
- ii. Advertisement to bid- Include a statement that says that the airport will advertise according to FAA/State laws.
- iii. Pre-bid meeting- Indicate that a pre-bid meeting will occur prior to bidding period. DOA staff is to be invited with a minimum of five business days notice.
- iv. Bid Opening- Include a statement that says that the consultant will provide guidance to ensure that all bidding will be in accordance with state bidding laws per NC General Statute 143-129. Verify that all bidders are NCDOT pre-qualified or provide Evidence of Competency per FAA guidelines (Federal projects only).
- v. Minority Participation- Include a statement that says that DBE/MBE/WBE commitments or Good Faith Effort will be provided after bidding and prior to determination of the lowest bidder.
- vi. Certified Bid Tabs- Bid tabs will be certified by the Consultant.
- vii. Additional tasks as applicable
- viii. Provide a bulleted list of deliverables to be provided to DOA **and** the Sponsor. Indicate that the deliverables will be developed in accordance with the latest Aviation Checklists. Deliverables will be provided in an electronic format. If applicable deliverables should include, but are not limited to, the following:

- Prior to Bid Opening
    - All items in Section 2 of the AV-101 checklist
    - Pre-Bid meeting minutes and attendance list
  - Prior to executing construction contract
    - Certified Bid Tabs
    - Low Bidders Itemized Estimate- Provide documentation that confirms if the low bidder has met the required minority goal. If the minority goal is not met, Good Faith Effort documentation shall be provided. All documentation must be approved by the APM prior to notifying the low bidder of award.
    - Sponsor Concurrence- Sponsor to provide to DOA and consultant. Concurrence can be a letter or the NTP that includes a statement saying that their governing body, if applicable, has approved the decision to move forward with the execution of the construction contract to the chosen bidder. Concurrence can also be a copy of the governing body's meeting minutes indicating approval of the project.
    - Non-collusion affidavit
    - List of all sub-contractors specifying which ones are MBE/WBE/DBE's. The list should include a statement that indicates that the contractor and all sub-contractors are NCDOT pre-qualified and that their pre-qualification status will be monitored throughout the project. Include the pre-qualification expiration date for the contractor and each sub-contractor.
- e. Construction-** Include details about the following items:
- i. Pre-Construction meeting- Indicate that a pre-con meeting will occur prior to NTP. DOA staff is to be invited with a minimum of five business days' notice.
  - ii. Pre-Qualification- Indicate that the sub-contractors will be pre-qualified prior to beginning construction and that they will remain pre-qualified throughout the project.
  - iii. Progress Meetings (Weekly/Monthly)- Include details about pre-paving meetings or other large tasks, if applicable. Meetings should occur on a normal schedule.
  - iv. Change orders- Specify that change orders shall be coordinated with the APM and sponsor prior to execution. If a change order is increasing the number of line items (scope change), the minority goal will need to be reassessed.
  - v. RPR Services- Specify who will be providing and the extent to which they will be involved (part time vs. full time, day work vs. night work, commuting vs. local lodging). State that the DOA RPR form, or it's equivalent, will be used to track expenses associated with these services.

- vi. Quality Assurance Testing- Specify who will be providing and the extent to which they will be involved. Indicate that all failing tests and follow-up passing tests will be relayed to the APM at the time of testing.
- vii. One year warranty and warranty inspection- Should be included in contract documents. Specify that results of the inspection will be provided to both the sponsor and DOA. Note that the project grant will not remain open while waiting for the one year warranty inspection to occur and that this task is not reimbursable and is considered part of the cost of doing business.
- viii. Additional tasks as applicable
- ix. Provide a bulleted list of deliverables to be provided to DOA **and** the Sponsor. Indicate that the deliverables will be developed in accordance with the latest Aviation Checklists. Deliverables will be provided in an electronic format. If applicable deliverables should include, but are not limited to, the following:
  - Pre-Construction
    - While a NTP for the grant may be issued by DOA prior to the following documents being provided, they will be required prior to first reimbursement.
    - All items in Section 3 of the AV-103 checklist
    - Signed NTP for construction from Sponsor to contractor- This can be drafted by the consultant, but must be signed by the Sponsor and contractor.
    - Construction Plans and Specifications/Released for Construction
    - Letter Of Intent (LOI) to subcontract (if applicable)
    - Letter of Determination for FAA forms 7460 and 7480
  - Construction
    - Progress Meetings minutes & attendance list as they occur
    - RPR inspection reports/diary as requested by the APM
    - Provide a document informing the APM of failing QA tests including a plan to resolve and/or passing retest. This document should be provided as the work occurs and should not be held until the end of construction.
    - Partial Waiver of Liens required for retainage reduction.
    - Copies of change orders for review and concurrence- These are required regardless of if the amount of funding needed changes.
  - Post-Construction
    - All items in Section 4 of the AV-103 checklist
    - Record Drawings
    - ALP pen and ink update- In most cases, attaching the 7460 to the ALP is sufficient for the ALP update. Coordinate with APM to determine if a pen and ink update will be required.

- Certify that data has been updated in Airport IQ 5010 / NFDC /NFDD- submit confirmation form (if applicable)
- Submit sketch for NIFTI via the NFDC Portal on the FAA website- certify that it has been complete.
- Warranty Inspection Letter- Provided to the sponsor 1 month prior to the end of the warranty period.

#### 4. Cost of Services/Compensation

- Provide a summary of costs for each category of tasks and sub-consultant services (grant administration, environmental, design/bidding, survey, geotech, etc.).
- Provide the total cost of all services, including sub-consultant fees.
- Describe the method of payment for each service (lump sum, cost plus, etc.).
- Per NCDOT policy, management of sub-consultants must be accommodated through hours and not via a fixed fee or percent.

#### 5. Fee Estimates

- Hourly Rate Schedule- Provide a fee schedule showing the raw hourly rate for each classification, along with hours, audited overhead, profit and cost of capital. Total hours for each phase should also be included.
- Provide an additional fee schedule that indicates the loaded hourly rate for each employee classification if work being completed is cost plus.
- Manhour estimate- Include hours estimated for each task for each specific employee. Include sufficient number of tasks to fully describe the proposed work.
  - i. Overhead and Cost of Capital rates should be per the rates approved by the Office of Inspector General (OIG).
  - ii. The hourly rate for each specific employee is to be provided. Blended rates for employees with the same classification may be used, but an explanation of how this rate was calculated must be provided. For cost-plus projects if an employees working on the project change notify your APM to verify that correct hourly rates are being used.
  - iii. Management of sub-consultants must be accommodated for and included in the manhour estimates.
  - iv. The standard fee (profit margin) for aviation professional services contracts is 11%. Requests for profit exceeding 11% must be given prior approval from the APM. Profit exceeding 11% will require a fee negotiation form.
- Direct expenses breakout-
  - i. Each expense should be broken out using the appropriate unit of measure and should be per the NCDOT Maximum Non-Salary Direct Cost guidance.
  - ii. Cost Plus tasks- Receipts are required for lodging. Seasonal lodging rates can be approved via a memo from DOA, if requested prior to booking.

- iii. Mileage- The distance between the consultant office, project site and meeting locations should be provided.
- iv. Flights- Must provide documentation from a travel website to substantiate the fee being requested.
- v. CEI Contract Vehicles- Can only be considered reimbursable if the consultant is qualified by NCDOT as a CEI firm.
- Sponsor incurred fees- Include any fees to be incurred by the sponsor including advertising, permitting, etc.
- Overtime (OT) is not an eligible reimbursable expense unless previously approved by the APM through review of the work authorization. OT is reimbursable only when an hourly employee works on the project in excess of 40 hours in one week; not when the employee has worked greater than 8 hours in a given day. In addition, the OT rate is to be calculated using the raw hourly salary rate and should not include overhead and fee.

## 6. Appendix

- These items should be provided with all WA's submitted.
  - Vicinity map and project area sketch.
  - Sub-consultant Proposals-
    - If the proposed work exceeds 20% of the total cost of the WA, the proposal should include: raw hourly rates, overhead and man hours for each specific employee, profit and direct expenses that are in accordance with the NC Maximum Non-Salary Direct Costs.
    - Fees for each task should be notated.
    - Amendments- Overhead and raw hourly rates, man hours, profit and direct expenses will not be reviewed unless the total amount of work being completed by the subconsultant is greater than or equal to \$10k or 20% of the total Work Authorization amendment, whichever is greater.
  - Fee Negotiation Form if profit is in excess of 11%.
- These items should be provided after the APM has completed the review of the WA, all review comments have been addressed and the APM has no further comments.
  - Project Schedule from Microsoft Project- Ensure deliverables outlined in the WA are included in the schedule along with other pertinent milestones as outlined in the [Sample Project Schedule](#).
  - Project Budget- With A-Codes broken out and funding sources defined. If the funding source is unknown at this time it should be indicated on the budget.
  - Redacted manhour estimate and redacted scope- Provide if DOA will be performing the IFE.