

KYTC ALTERNATE TECHNICAL CONCEPT WORK PLAN

- The Kentucky Transportation Cabinet (KYTC) will follow traditional design-bid-build procurement, award and execution procedures per the current edition of KY's Standard Specifications for Road and Bridge Construction.
- Prior to advertisement of the contract, Project Plans will be made available and all potential bidders interested in submitting an ATC will be invited to a mandatory Informational Meeting where KYTC will explain how the ATC process works and define the project's overall scope. Bidders not participating in the ATC process are not required to attend the informational meeting. This will normally be 6 months in advance of the official 21 day (minimum) advertisement period but may be reduced or extended depending on the complexity of the project.
- Consultants that assisted in development of the Project Plans and/or contract documents will not be permitted to participate with Contractors on ATC(s).
- After the ATC informational meeting and ahead of the project advertisement, prequalified bidders that participated in the informational meeting may request confidential meetings with the Technical Review Committee (TRC) to discuss potential ATCs at a concept level. The TRC will seek further development of the ATC by the contractor if the concept is deemed to add value and meets or exceeds the intent of the Project Plans. Seeking further development is not approval of the ATC.
- After receiving additional details on an ATC, the TRC will review and inform the contractor, confidentially, if the ATC is approved or rejected for bidding purposes.
- ATC(s) that impact additional right of way or the environment may be considered. On those rare occasions of approval, KYTC would take responsibility for updating the environmental document and purchasing the right of way that are needed for the ATC.
- For approved ATCs, the contractor may bid the alternate line item "ATC" to replace applicable bid item(s) in the Project Plans. This may be all bid items, depending on the complexity of the ATC. With the ATC alternate bid, the contractor will be required to submit a "Schedule of Values" to support the total cost of that alternate bid item that can be used for progress payments and materials testing of the ATC. Depending on the applicable items being replaced in the Project Plans, the Contractor may become the Engineer of Record. KYTC will advise the contractor upon approval of the ATC on whether they will become the Engineer of Record.
- Contractors that have approved ATC(s) but are unsuccessful in the bid process will be eligible for a Stipend. KYTC will pay up to 0.1% of the contract value or up to 1% of the difference in the project estimate and the approved ATC depending on the complexity of the project. The purpose of the Stipend is for KYTC to obtain rights to the ATC for the project.
- For Contractors not participating in the ATC process or choosing not to bid an approved ATC, they will be required to bid the Project Plans.
- If the awarded contractor utilized an ATC in their bid, they shall provide additional details as needed before being released for construction for that item of work. Additional details may include but are not limited to:
 - Shop drawings
 - Detailed quantities
 - Structural details
 - Erection details

- As SEP 14 is an experimental process, KYTC will monitor the effectiveness of the ATC process on Design-Bid-Build projects. The following project evaluations will be performed and corresponding reports prepared:
 - **Interim Evaluations – on a yearly basis.** KYTC will evaluate the success of this process based on the factors listed below. The interim evaluation will provide the following information on the projects underway or completed to date.
 - 1) Industry Reaction: KYTC will record and track the response from the contracting industry including an assessment of improvements to the process that may be proposed by industry.
 - 2) ATCs Proposed: KYTC will assess the number of ATC concepts proposed, the number of concepts approved for further development, and the number of concepts proposed at the time of bidding.
 - 3) Time and Cost Savings: KYTC will compare the cost of the Engineer’s Estimate of the MOT concepts considered during design to the cost of the selected contractor’s MOT plan. KYTC will also evaluate any time savings from proposed MOT plans.
 - 4) Lessons Learned: KYTC will provide a summary of any lessons learned throughout the project and will include any items that may be improved for future projects that propose to utilize the technique.
 - **Final Evaluation Report – within 6 months of the completion of the final DBB ATC project.** The final evaluation report should be a summary report that discusses the findings from paragraphs 1), 2), 3), and 4) above, as well as any other factors that KYTC deems relevant

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Guidelines and Procedures for *{Project Specific Information}*, Alternative Technical Concept Process

Description

This project will give prequalified Contractors the opportunity to include pricing for a pre-approved Alternative Technical Concept (ATC) in their bid proposal — one that differs from the base design in the Kentucky Transportation Cabinet’s (KYTC) contract documents. ATCs enable innovation, reduce project delivery time, and provide cost savings. The resulting project meets or exceeds project goals and stands as a product equal to or better than what would have been produced by the concept it replaces.

For this project, the Contractor may submit a bid for KYTC’s base design proposal or a bid that includes pricing for a pre-approved ATC. The anticipated letting date for this project is ***{give the project specific letting date, normally 6 months after the informational meeting but may be reduced or extended depending on project complexity. Once the ATC is approved the process that follows would be normal letting procedure. For KYTC that is usually three weeks but has been longer for more complex projects.}***

General Conditions

All potential bidders interested in submitting an ATC will be invited to a mandatory Informational Meeting where the Cabinet will explain how the ATC process works and define the project’s overall scope. Bidders not participating in the ATC process are not required to attend the Information Meeting. KYTC will share draft project plans giving industry Contractors an opportunity to evaluate the project and identify areas in which they can contribute technical expertise and innovation.

The bid items included in the contract documents for this project contain all proposed “base design” work. Contractors may propose an ATC as an alternative to the established bid items. ATCs may address items, such as project specifications, materials, products, design standards, design solutions, staging, or traffic control. ATCs must not impair the project’s essential functions and characteristics, including but not limited to service life, reliability, economy of operation, ease of maintenance, standardized features, safety, satisfaction of customer needs, desired ability, and special design requirements. The minimum requirements for the finished project are listed below. ATCs are required to meet all design and Cabinet policies, environmental requirements, and project commitments.

If KYTC pre-approves an ATC, the Contractor has the option of submitting an alternative bid (lump sum) based on the pre-approved ATC in lieu of the KYTC bid items. The Cabinet requires that Contractors submit a schedule of values for the alternative bid to support the lump sum price. Multiple ATCs may be presented and approved but the Contractor shall only submit one lump sum price to cover all ATCs. In addition, the Contractor shall only submit one bid for this

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project, either for the base design or one with approved ATC(s). If KYTC approves the Contractor's ATC(s) but does not award them the contract, the Contractor is eligible for a Stipend.

For approved ATC(s), the Contractor or their Sub-Consultant Professional Engineer is responsible for completing all engineering plans and will become the Engineer of Record for the project.

Step 1: Proposed Alternative Technical Concepts

The Contractor interested in pursuing an ATC must request a one-on-one confidential meeting with KYTC's Technical Review Committee (TRC) to discuss the proposed ATC. The confidential meeting will provide the Contractor with an opportunity to present their concept ideas to the TRC before investing significant time and resources in developing details of the potential change. The Contractor will bring to the meeting review documentation of its proposed ATC. The documentation should contain enough information to clearly define the work involved and the benefits that will be realized from using the ATC. Copies of the documentation should be provided by the Contractor to each member of the TRC.

The TRC consists of individuals prepared to judge the proposed ATC's viability as well as the Contractor's entire application. TRC members have been selected based this project's features and their respective qualifications. The TRC retains the right to seek opinions from outside subject-matter experts if it is unable to proficiently judge the ATC's technical merits. All parties that take part in the ATC evaluation process will sign a confidentiality agreement:

◇ ***Listing of Individual TRC Members***

KYTC will review the conceptual information and provide a response as soon as possible. Total review time should not exceed 5 business days. However, the Cabinet reserves the right to spend more time on the review if resources and evaluation needs for the specific concept warrant doing so. KYTC will notify the Contractor at the end of the 5-day period if additional review time is necessary.

The minimum basis of acceptance for a concept must adhere to the project-specific minimum requirements, general requirements, and submission requirements. KYTC will reject and return to the Contractor any concept that does not meet the project's minimum requirements.

If the TRC judges the ATC favorably, it will notify the Contractor in writing. However, this notification only indicates that engineering and plan development may continue so that the formal ATC may be submitted. This notification does not authorize the ATC to be bid. If the Contractor moves forward with development of the formal ATC, the TRC may reject the ATC if its expected benefits are not realized once the formal proposal is complete. KYTC and the TRC reserve the right not to consider any ATC.

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Step 2: Formal Alternative Technical Concepts

If KYTC appraises the proposed concept favorably, the Contractor may continue engineering and plan development on the ATC and submit formal ATC documentation for TRC review. The Contractor will submit an electronic PDF copy and twelve paper copies of the formal ATC documentation to KYTC's Director of Construction Procurement.

After formal ATC documentation is received, the TRC will determine whether to accept or reject the ATC. The Cabinet will notify the Contractor in writing of its decision. Contractors may submit an approved ATC as a bid.

At a minimum the Contractor must submit the following information with each ATC:

- 1) Description
 - A detailed description of the proposed ATC, including specifications and preliminary drawings
- 2) Usage
 - A detailed description of where and how the proposed ATC would be used on the project
- 3) Deviations
 - References to all requirements in KYTC's contract documents inconsistent with the proposed ATC, an explanation of why the contract documents deviate from these requirements, approvals given from other state departments of transportation (if applicable), and details of impacts to other non-contract related items (if applicable)
- 4) Justification
 - Analysis that justifies the proposed ATC and demonstrates why modifying or revising the KYTC contract documents requirements should be allowed; include information on how the proposed ATC meets project goals.
- 5) Cost Differences
 - A detailed statement of anticipated cost differences associated with implementing the proposed ATC
- 6) Schedule Impact
 - A discussion of how the proposed ATC will affect contract completion time, including design, construction, right of way, utility relocation and/or permitting issues
- 7) Utilities
 - A discussion of utility impacts and potential added costs
- 8) Permits
 - A discussion of permit changes, additional permits, and/or agency approvals the proposed ATC may require. This discussion needs to include any changes to existing railroad agreements.
- 9) Right-of-Way:
 - A discussion of the proposed ATC's right-of-way impacts (both temporary and permanent)

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10) Traffic and Safety Impacts

- A discussion of the proposed ATC's impacts on maintenance of traffic during construction.

11) Environmental Impacts

- A discussion that compares the proposed ATC's environmental effects to those discussed in the Environmental Document, including impacts to environmental commitments and community impacts.

12) Maintenance

- A discussion of the maintenance impacts over the project's design life

13) History

- A detailed account of other projects the proposed ATC has been used on, including contact information (name, title, phone number, address and email) for project owners that can confirm ATC implementation.

14) Inspection

- A discussion on any additional testing and construction inspection requirements

15) Risks

- A discussion of risks KYTC and other parties associated with implementing the ATC will incur.

Formal ATC documentation submissions must provide sufficient engineering details to facilitate the Cabinet's deliberations. These include but are not limited to geometrics, hydraulic calculations, profiles, typical sections, and traffic control concepts. For structures these include type, size and location, superstructure information, substructure information, and any other significant information. With written authorization to proceed with the concept, the TRC reserves the right to request specific information for each ATC to supplement the information listed above.

The TRC will evaluate an ATC based on whether it complies with the requirements of the base design and the areas of concern described above. The TRC will reject and return to the Contractor any concept that fails to include the information required for submission. That concept will not be approved for bid. The TRC has sole authority for determining if the ATC complies with these requirements.

General Design Specifications – Minimum Requirements

- ***Listing of Project Specific Design Requirements***

The TRC will evaluate ATCs using the following criteria. If an ATC fails to meet any of the following criteria it will not be approved for bid:

- a.) The ATC meets or exceeds the minimum requirements of the contract documents.
- b.) The ATC does not adversely affect the long-term maintenance of the project.
- c.) The ATC is consistent with the overall project goals
- d.) The ATC is equal to or better than the original design proposal.

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KYTC intends to evaluate and render judgement on ATCs within 20 business days of their submission depending on the complexity of the ATC. The Cabinet will notify the Contractor of the decision in writing. Irrespective of an ATC's promise or innovative nature, submissions that do not include all necessary information will be rejected. KYTC will describe the reason(s) for rejection in a written notification. Contractors have the option of addressing the Cabinet's concerns and resubmitting an updated ATC before the deadline. All discussions pertaining to an ATC must be written or conducted in-person. During face-to-face meetings, the Contractor will record the minutes, which KYTC will then approve. KYTC and the TRC are the sole judges of an ATC's merits and acceptability. KYTC reserves the right to reject an ATC request for any reason.

Once the TRC has rendered judgment on an ATC's merits, the Cabinet will issue one of the following responses via a written notification:

- A. The ATC is approved and may be included in the Contractor's bid.
- B. The ATC is not approved in its present form but may be resubmitted for reconsideration. The Contractor submitting a reconsideration request must address all the TRC's comments, questions, and concerns. Reconsideration requests must comply with ATC submission and content requirements.
- C. The ATC is not approved. Including the ATC in the Contractor's bid will render it non-responsive.

KYTC may also request additional information from the Contractor. If additional information is requested the evaluation can be extended.

The TRC is responsible for approving ATCs. Contractors who have approved ATCs but are not awarded the contract will be eligible for a Stipend (described below).

For approved ATC's, the written notification will outline the post award plan development and inspection requirements that are needed prior to development of the "Release for Construction Plans". The Contractor will also be advised by this notification if the ATC requires them to become the Engineer of Record for the entire project or a portion of the project that the ATC replaces.

An approved ATC may be submitted as a bid by the Contractor. A schedule of values will be required for this alternative bid submission to support the lump sum price. An approved ATC that consists of multiple elements must be bid as a whole. Selective implementation of less than all the elements will result in the bid's rejection.

Compared to the base design, the ATC may introduce extra costs, work, or risk. The ATC lump sum bid must incorporate the additional costs required to complete supplemental work. For example, if the ATC requires additional utility relocation, the Contractor is obligated to pay for it. The Contractor also takes on any additional risk associated with the ATC; submitted bids must price in the cost of this risk. If KYTC will incur additional costs due to ATC, the Contractor must include them in their bid to ensure a fair comparison and award process. The Contractor

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is responsible for paying excess actual costs over and above the estimate of KYTC's additional costs.

An approved ATC that is not submitted with the bid will not be considered a pre-approved value engineering change proposal (VECP).

Confidentiality

The ATC process will only be successful if confidentiality is maintained throughout. All TRC members must sign a confidentiality agreement before reviewing any ATC submissions. All submissions are treated as confidential and will not be shared with other bidders.

Bidding Requirements

If the Contractor abandons a pre-approved ATC or fails to construct it for any reason, they are obligated to complete the project using the original design, at the awarded cost.

Basis of Payment

If KYTC pre-approves the ATC, the Contractor may submit a lump sum alternative bid based on the ATC's design. A schedule of values must be developed and submitted for the ATC work. The schedule of values must show bid items, quantities, and costs to support the lump sum price. The schedule of values will be used to support progress payments and materials acceptance; it is not to be used for quantity or unit price adjustments as the ATC is a lump sum bid.

In order to develop a schedule of values, a design should be completed in enough detail to enable the establishment of accurate item quantities. The quantities are administered in accordance with the processes laid out in the current edition of KYTC's *Standard Specifications for Road and Bridge Construction*. A supplemental agreement may be developed due to variations in site conditions or other aspects of work, as mutually agreed upon between Contractor and KYTC.

Contractors that decline to participate in the ATC process must bid the base set of plans supplied by KYTC.

If the awarded Contractor abandons the pre-approved ATC or fails to construct it for any reason, KYTC will process a no-cost change order to readjust the bid items to reflect the original design quantities. The Contractor is obligated to complete the project using the original design at the awarded cost.

KYTC will not make direct payments to cover Contractor initiated changes on the project.

KYTC will not make direct payments if the use of an ATC triggers schedule delays, irrespective of the reason for the delay (e.g., delays stemming from the design, review, implementation or construction of an ATC).

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Payment and Conditions of Stipend

KYTC will pay a Stipend to Contractors that have approved ATCs but are not awarded the contract. By paying the Stipend, KYTC can use any ideas, concepts, or information contained in the ATC in the contract awarded for the project.

The Cabinet does not intend for the Stipend to cover ATC development costs in their entirety — its purpose is to offset a portion of the costs. The Stipend for approved ATCs on the US 460 Russell Fork Bridge Project, Item #12-263.67, will be \$50,000 per Contractor.

When a Contractor submits an ATC for the project, it establishes with KYTC a contractual agreement for its alternative technical proposal and conceptual design. By submitting an ATC the Contractor acknowledges that it is eligible for payment if it is not the successful bidder. KYTC will pay the Stipend to unsuccessful Contractors after a contract is finalized with the successful Contractor. Unsuccessful Contractors reserve the right to waive payment (see below).

KYTC will pay a Stipend to all Contractors with approved ATCs if it does not award the contract. Contractors have the right to waive this payment. If the Cabinet withdraws the contract before the ATC is approved, it is not obligated to make a payment. An unsuccessful Contractor that otherwise qualifies for the payment may elect to waive the payment within 10 days of KYTC's Awards decision. In doing so, the Contractor retains its rights to the ATC. The Contractor that accepts the Stipend payment agrees to waive all claims and causes of action against KYTC and FHWA.

Post Award Requirements

The Contractor, upon Award of the Contract, is responsible for producing the ATC's plan requirements as identified in the KYTC's written notification of approval. This responsibility includes the professional quality and technical accuracy of all submissions. All documents must be preserved to offer evidence that work has been completed. The Contractor shall establish and maintain documented procedures for identification, collection, indexing, access, filing, storage, maintenance, and disposition of records. Records must be adequately identified, filed, and stored.

Working drawings and calculations must be signed by and bear the seal of a Licensed Professional Engineer in the State of Kentucky who is prequalified with KYTC in the applicable subject matter areas. All working drawings and design calculations must include the contract number, the Contractor/fabricator's name, and contact person.

The Contractor must furnish working drawings for commercially available patented devices that appear on approved lists published by the relevant state agency. Drawings must be signed by and bear the seal of a licensed professional engineer. The professional engineer who signs and stamps the drawings for patented devices may be licensed in any state. Manufacturer's installation manuals must be provided with the working drawings and shall remain the property of the relevant state agency.

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The Contractor shall be responsible for any costs associated with the following:

- The ATC's third party engineering and development costs
- Project delays that stem from the design and production of plans and specifications that are needed to implement the ATC
- Additional construction costs not foreseen prior before the ATC design was completed

Released for Construction Review

The ATC plans, as required and identified in KYTC's written notification of approval for bidding the ATC, shall be complete before any construction activities related to the ATC may proceed. *Released for Construction* (RFC) plans shall be prepared after the appropriate inspections have occurred per the procedures identified in this written notification. The Contractor will schedule and conduct an RFC review with the Department when the RFC plans are complete and all Department comments have been addressed from prior inspections.

After completing the RFC plan review, KYTC will issue a written authorization (including the date of authorization) to the Contractor stating they are "Released for Construction." The Contractor shall use the plan set KYTC identifies as "Released for Construction".

Construction

Once the ATC has been released for construction, it is administered in accordance with the current edition of *KYTC's Standard Specifications for Road and Bridge Construction*. A supplemental agreement may be developed due to variations in site conditions or other aspects of work, as mutually agreed upon between Contractor and KYTC.

All inquiries regarding ATCs for this project must be directed to the contact as listed below:

Division of Construction Procurement
Kentucky Transportation Cabinet
200 Mero Street
Frankfort, KY 40622
Phone: (502) 564-3500 Fax: (502) 564-7299
Email: KYTC.projectquestions@ky.gov

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Project Specific ATC Process Schedule

Date	Milestone
<i>Date *</i>	Information Meeting about ATC Process
<i>Date *</i>	Start date for Confidential Meetings
<i>Date *</i>	ATCs approved or rejected for bidding
<i>Date *</i>	Project Advertisement for Bids
<i>Date *</i>	Bids Due

**Dates subject to change depending on the number and complexity of ATC design.*