

Attachment 1

Armstrong Mill Shared Use Path Project – Scope of Services

The basic services outlined in this Scope of Services document include the preliminary and final design for the Armstrong Mill Shared Use Path Project.

PROJECT INFORMATION

Project Manager – Jake Stephens, P.E.

Location – Armstrong Mill Road from Appian Way to Caulder Road, River Park Drive to Man O' War Boulevard, and Man O' War Boulevard to Squires Hill Lane

Funding – Coronavirus Response and Relief Supplemental Appropriations Act 2021 (CRRSAA) – Federal Funds

Facility – Approximately 1.25 miles of shared used path improvements.

BACKGROUND

The approximately 1.5 mile section of Armstrong Mill Rd. between Tates Creek Road and Man O' War Boulevard has residences, churches, and small businesses along the route. The section considered currently has a lack in continuity of paved shared-use path that enables safe pedestrian and bicycle traffic passage to the residences and facilities. This project will make the shared use path continuous on the North side of Armstrong Mill Road between Tates Creek Road and Man O' War Boulevard.

DESCRIPTION

Essential features of the *Armstrong Mill Shared Use Path* include:

- Design a 12 ft. wide shared use path to connect the existing paved shared use path along Armstrong Mill Road within the existing right-of-way. The design should follow the guidelines set forth in the AASHTO Guide for the Development of Bicycle Facilities, current edition.
 - Design approximately 1,000 feet of shared-use path between Appian Way and Caulder Road.
 - Design approximately 1,700 feet of shared-use path between River Park Drive and Man O' War Boulevard.
 - Design approximately 4,300 feet of shared use path between Man O' War Boulevard and Squires Hill Lane.

- On the north side of Armstrong Mill Road between River Park Drive and Man O' War Boulevard, there is a drainage ditch with detention properties. Preliminary design should consider the hydraulic properties of this area to ensure this project does not increase runoff.
- There is a retaining wall located at 2261 Armstrong Mill Road. The shared use path will require design considerations at this retaining wall. The consultant/consulting team will need to develop options and present the pros and cons for these options with regard to feasibility, construction costs, ROW, etc.
- There are challenges with ROW and adjacent grade between the church entrance and Kenesaw Drive. The consultant/consulting team will need to develop options and provide pros and cons with regard to feasibility, construction costs, ROW, etc.
- The flood mapping limit of study for the tributary of East Hickman Creek that runs along Armstrong Mill Rd ends on the west side of Kenesaw Drive. Additional environmental work may be required in this area to determine the effects, if any, on the potential adjacent flood zone.
- A Development Plan has been submitted to LFUCG Planning for 3550 Kenesaw Drive, on which this trail will be constructed. The consulting team will need to review the DP and possibly work with Planning and/or the engineer of record to ensure the SUP design conforms to the DP.

SCOPE OF SERVICES

1. Pre-Design Conference and Review of Existing Information

- 1.1. Meet with the LFUCG Division of Engineering and other concerned divisions, to discuss the project requirements and proposed Scope of Work. The meeting shall include a project site visit.
- 1.2. Review all project related information as provided by the Division of Engineering. Obtain available LFUCG GIS data for the area, mapping including parcel lines, aerial photography, and existing infrastructure. The most recent aerial photography for the project area licensed by LFUCG will be made available to the Consultant.

2. Field Survey and Related Research

- 2.1. Research all deeds, plats and other property records to identify property lines, right-of-ways and easements.
- 2.2. Perform a field survey that is sufficient to be confident in the design and at a minimum includes the following:

- Topography
- Existing sidewalks, edge of roadway, entrances, turn lane configurations, etc.
- Location and depth of underground utilities, storm and sanitary sewers, and related structures including service lines, laterals, and valves
- Location of overhead utilities including pole ownership information, ownership identification/position of each cable, and low wire elevations
- Significant site improvements, such as fences, retaining walls, flag poles, yard lights, mailboxes, commercial signage, structures, etc.
- Location and identification of significant trees and vegetation
- Cross sections taken at 50-foot intervals, at driveways, steps, retaining walls, wherever regrading will be anticipated and as otherwise needed
- Location of existing corner monuments and R/W markers
- Temporary benchmarks for use during construction, set outside of construction limits (minimum of 4)
- Location of all existing permanent easements in the project area
- Staking necessary to establish centerlines prior to bidding for construction.

It is the responsibility of the consultant to obtain all permits and permissions necessary to perform the work, including those required for digging and/or hydroexcavating.

All surveyed data will conform to the LFUCG's Policy for Digital Submission using State Planes coordinates and NAD-83 KY N 1601 and NAVD1988.

Prior to conducting the survey, the Consultant shall conduct a thorough site reconnaissance to determine if, after exhausting all possible surveying methods, they conclude dense foliage or other obstructions exist that shall prevent an accurate survey. Any difficult areas shall be brought to the attention of LFUCG, who will determine how to respond.

3. Preliminary Design

3.1. Develop a set of Preliminary Plans to fully convey the intent of the construction. The plans may include, but are not limited to the following items:

- Plan and profile depicting existing and proposed conditions, and limits of disturbance (all features identified in the survey shall be shown on the plans)
- Plan sheet layout drawing
- Typical roadway/sidewalk/trail sections depicting existing and proposed conditions
- Supplemental drainage plans and profiles as needed
- Alignments and grades for approach roads and turn lanes as needed

- Existing and proposed topography
- Location of property lines with all owners/lessees and street addresses shown
- Existing and proposed right-of-way lines and easements
- Sanitary and storm sewer plan and profile as needed if the project will impact these features
- An Erosion and Sediment Control Plan
- General Summary (to be consistent with the bid schedule)
- A Traffic Management Plan consistent with KYTC guidelines
- Plans for lighting, signalization, striping and signage

During the preliminary design phase, the Consultant shall coordinate with the State Historic Preservation Office (SHPO) and the LFUCG Division of Historic Preservation to ensure plans are consistent with applicable Section 106 National Historic Preservation Act requirements.

Upon completion of the Preliminary Plans, the Consultant shall submit up to five (5) full size paper copies (total TBD) to the LFUCG Division of Engineering. Plans shall also be made available in electronic format: PDF and/or AutoCAD.

3.2. In conjunction with the preliminary plans, submit a Preliminary Design Memorandum addressing the following:

- Summary reports of utility impacts, property impacts, and permitting as outlined in their respective sections
- Summary report of impacts to on-street parking
- Inventory of trees impacted by construction (location, species and caliper). List the trees to be removed and trees potentially impacted (trunk outside of the disturbed area, drip line within it)
- List of any products, materials or methods that may require special consideration by the KYTC or FHWA.
- List of apparent encroachments onto public right-of-way. (Determination of land rights shall be limited to recorded easements and right-of-way, prescriptive easements will not be considered.)
- Detailed Opinion of Construction Costs. Line items for construction costs shall be consistent with the General Summary and the Bid Schedule.

3.3. Meet with LFUCG to present and discuss the plans and Preliminary Design Memorandum. Consultant shall be responsible for meeting agendas, handouts, and meeting summaries. Subsequent meeting(s) with KYTC may be required as well.

4. Final Plans, Specifications, and Bid Documents

- 4.1. Upon completion of the Preliminary Plans, the Consultant shall incorporate all significant comments into a revised (Final) plan set and furnish up to five (5) paper copies (total TBD) to the LFUCG Division of Engineering, one (1) paper copy to each of the local utility companies, and one (1) copy to the Kentucky Transportation Cabinet. Plans shall also be made available in electronic format: PDF and/or AutoCAD.

Final Plans shall build upon the completed and approved information in the Preliminary Plans. In addition to the components of the Preliminary Plans, Final Plans shall also include but not be limited to:

- Cross sections at 50-foot stationing, all driveways, all step locations, and all retaining walls. Cross sections shall generally extend 30 feet from proposed curb face or to the front of the house, whichever is closer; however, longer coverage may be needed in some locations depending upon the disturbed limits.
- Right-of-Way strip maps and summary sheets
- Coordinate Control Plan
- Site-specific Detail Sheets as needed

All preliminary and final plans, and accompanying documents are subject to review by multiple parties. Furthermore, plans may be reviewed, at the Owners expense, by a third party peer hired to perform a QA/QC and constructability review. The Consultant shall be responsible for addressing their comments and revising plans and documents as deemed appropriate.

- 4.2. In conjunction with the final plans, the consultant shall submit the following:

- Updated versions of all preliminary plan submittals
- An Excel Bid Schedule consistent with the General Summary sheet
- Section I of the KYTC LPA Project Development Checklist and all accompanying paperwork
- Technical Specifications. LFUCG will provide generic technical specifications to be modified and supplemented by the consultant as needed
- Materials Testing Plan. Review each bid item and determine KYTC's testing procedure. Sort the materials test into the categories listed below, and create the relevant supporting documents:
 - Materials that can be sampled and tested per KYTC guidelines by LFUCG inspectors. For these items, prepare a summary document listing the relevant requirements to be used by the inspector.
 - Materials that can be sampled and tested per KYTC guidelines by a testing consultant. For these items, prepare a scope of work for a materials testing consultant.

- And Materials that cannot be sampled and tested per KYTC guidelines. For these items, prepare an alternate method or a justification as to why testing is not warranted.
- Master Utility Plan. Display the following in plan format:
 - All existing utilities and proposed relocations, as furnished by the utility companies
 - All utility information required by the survey and utility coordination sections of this Scope
 - All existing and new storm and sanitary facilities
 - All utility conflict points shall be called out. Buried conflicts shall identify the existing depth of each utility at conflict points.

Periodically update and distribute this plan to all concerned parties as design progresses. At the time of construction letting, this plan shall be current to within six (6) months.

5. Design Criteria

Drawing Scales, Units, and Unit Conversion

All quantities measured, calculated, and specified shall be in English units (e.g., feet, pounds). All drawings and sheets shall conform to the follow scales:

- | | |
|--------------------------|---|
| a. Plan Sheets | 1" = 20' |
| b. Profile sheets | 1" = 20' horizontal
1" = 2' vertical |
| c. Cross sections sheets | 1" = 5' horizontal
1" = 5' vertical |

Note: Combined Plan/Profile sheets (as applicable) are preferred, but not mandated.

Full-size Plans shall be 22 x 34 to facilitate scalable half-size 11 x 17 Plans.

All designs and plans must be approved by the LFUCG Division of Engineering. The following shall apply:

- Prepare drawing files with or convert them to AutoCAD format prior to transmitting them to LFUCG. The formatting specifics shall be determined during the contract negotiation process.
- Utilize LFUCG 2017 Standard Drawings (or most recent revision), and Kentucky Department of Highways 2020 Standard Drawings (or most recent revision) in that order of preference.

- Proposed improvements are to be ADA compliant. Design shall comply with the applicable AASHTO standards and the Manual of Uniform Traffic Control Devices.

6. Utility Coordination

The Consultant shall take the lead on utility coordination. At a minimum, this shall include:

- Sending preliminary and final design plans to the appropriate utility companies for review and comment.
- Obtaining and tracking review comments from all impacted utilities.
- Verifying the horizontal and vertical location of existing utilities at potential conflict points using hydro-excavating or other approved method. (Itemized cost to be determined during Engineering Services Agreement negotiation and incorporated as an allowance.)
- Compiling and maintaining a list of all utility conflicts.
- Creating a schedule and budget for all required utility relocations.
- Obtaining Utility Impact Notes from the utility companies.

Submit a summary of the above information with the Preliminary Design Plans. An updated summary should be submitted with the Final Design Plans.

Note: The discovery of utility conflicts during construction can potentially slow or halt work, lead to delay claims and frustrate the public. It is essential to identify and resolve utility conflicts prior to construction. Poorly executed plans leading to significant utility conflicts may impact the Consultant's standing with the Division of Engineering and their ability to secure work in the future.

7. Easement and Right-of-Way Acquisition

The need to acquire private property should be avoided to the extent possible. If acquisition of easements or right-of-way is required the consultant will be responsible for the following:

- Right-of-way plans including strip maps and summary sheets if right-of-way or permanent easement acquisition is required
- Legal descriptions and exhibits for all temporary and permanent easement acquisitions
- Legal descriptions and plats for all right-of-way acquisitions
- Setting corner pins (or offsets) as necessary to define the physical limits of all properties which must be acquired
- Opinion of cost for property acquisitions

All documents shall meet the applicable requirements from LFUCG and KYTC.

Submit a summary of the property impacts with the Preliminary Design Plans. An updated summary should be submitted with the Final Design Plans.

Itemized cost for legal descriptions, plats, and property staking to be determined during Engineering Services Agreement negotiation.

LFUCG may acquire right-of-way in-house, or utilize the services of the Consultant. Such decision will be made prior to Right-of-Way funds being authorized. If Consultant services are used, they shall meet the requirements of the KYTC LPA Guide, Chapter VI.

8. Permitting

The Consultant shall take the lead on project permitting. At a minimum, this shall include:

- Identifying all applicable permits required for each phase of the project.
- Preparing and submitting applications and/or supporting paperwork for all required permits.
- Creating and maintaining a schedule for the required permits.
- Obtaining and tracking all project requirements resulting from the permitting process.

Submit a summary of the above information with the Preliminary Design Plans. An updated summary should be submitted with the Final Design Plans.

Permits that may be required for this project include, but are not limited to the following:

- NEPA Environmental Clearance (Assisted by KYTC)
- KYTC Encroachment Permit
- USACE 404 Permit and KY 401 Water Quality Certification
- FEMA CLOMR/LOMR
- LFUCG No-Rise Certification
- KDOW Stream Construction Permit
- LFUCG Special Floodplain Permit
- LFUCG Land Disturbance Permit (Contractor Responsibility)
- KDOW KYR10 Permit (Contractor Responsibility)

Any environmental consultants, if required, will be subcontracted through the Consultant via a contract modification.

9. Public Interface

The consultant shall assist with public interface. At a minimum, this shall include:

- Attending meetings with various project stakeholders, preparing minutes for those meetings, and leading them if requested to do so.
- Preparing concept maps, exhibits, and narratives to aid in communication with the public.

10. Bid Phase

The Consultant shall assist with Bid Administration. At a minimum, this shall include:

- Responding to technical questions during the bid period
- Preparing responses for addenda
- Reviewing and approving alternates
- Attending the pre-bid meeting if one is held
- Evaluating bids received
- Checking bidder references
- Submitting a recommendation of award
- Preparing Section II of the KYTC LPA Project Development Checklist and all accompanying paperwork

Distribution of plans and documents to bidders and plan rooms, tracking of bidders, responding to bid-phase questions and submission of addenda is managed by the Division of Central Purchasing, through IonWave electronic bidding software.

The Owner shall prepare and certify a tabulation of bid prices.

11. Construction Phase

The LFUCG Division of Engineering will take the lead on construction project management. The Consultant shall provide the following services during the construction phase of the project:

- Reviewing and approving shop drawings
- Responding to questions about the intent of the plans/specifications
- Conducting site visits as requested
- Evaluating changes proposed by the contractor
- Making minor changes to the plans due to unforeseen conditions
- Performing redesign work due to consultant error

- Assisting the Division of Engineering in performing a final walkthrough inspection and preparing a punch list
- Preparation of as-built drawings, if requested

LFUCG may provide construction inspection in-house, or utilize the inspection services of the Consultant. Such decision will be made prior to bid letting. If consultant inspection services are used, they shall meet the requirements of the KYTC LPA Guide, Chapter IX.

Within three months prior to the start of construction, the Consultant shall create a photographic record of pre-construction conditions of all property to be disturbed by construction activities. Sufficient photos shall be taken to document the condition of each yard; all improvements such as driveways, sidewalks, retaining walls, gardens, etc.; and all significant foliage. Each photograph shall be logged identifying its respective address.

If the Engineer of Record is not available on a given day, the Consultant shall have a back-up contact available to address urgent construction issues.

12. SCHEDULE AND COMPLETION

The Consultant shall meet deadlines as provided in the following schedule. Calendar days are counted from the date that a written Notice to Proceed is issued to the Consultant. Exact times of meetings shall be arranged by the Consultant; locations of meetings shall be at the site of proposed improvements, the DOE office or the KYTC D7 office, as deemed appropriate.

Meet to review design intent	20 days
Submit preliminary plans to LFUCG and utility companies	270 days
Meet with LFUCG et al., to review preliminary plans	280 days
Hold public meeting - open house format	300 days
Submit final plans	360 days
Meet with LFUCG et al., to review final plans	380 days
Submission of completed final plans	420 days
Preparation of ROW/easement plats and descriptions	440 days

13. APPENDIX

The following exhibits have been included for reference:

- Exhibit A – Armstrong Mill Shared Use Path – Location Map
- Exhibit B – Armstrong Mill Shared Use Path – Segment 1 w Sewers
- Exhibit C – Armstrong Mill Shared Use Path – Segment 2 w Sewers
- Exhibit D – Armstrong Mill Shared Use Path – Segment 3 w Sewers