

EXHIBIT A
SCOPE OF SERVICES
JOB NO. J1S3393

The general scope of the project is to design sidewalk and curb ramps in compliance with the American with Disabilities Act (ADA) guidelines at the following locations as depicted in project location sketch:

- Ludlow (Livingston County): Intersection of MO DD & MO D within city limits.
- Chula (Livingston County): MO K within city limits.
- Wheeling (Livingston County): MO B within city limits.

This scope of services is intended to be an accurate description of the items and tasks required for completion of the design of this project. However, each project is unique and may require more or less effort in an individual task to complete design. The following information will explain and define in general terms the major design items of importance relating to this project. All the elements of work that are necessary to satisfactorily complete the design of this project may or may not be listed. The lack of a specific listing of an element or item in the scope of services does not in itself constitute the basis for additional services, supplemental agreements, and/or adjustment in compensation.

A more detailed description of the process and requirements used by MoDOT for completion of the design may be found in the MoDOT Engineering Policy Guide (EPG). The consultant is encouraged to review the appropriate sections of this guide as a means to supplement the information contained in the scope of services and provide additional guidance in the requirements and expectations of MoDOT for completion of the design services.

Preparation of a supplemental agreement is necessary prior to performance of any work, which is considered as additional services, not included in the original scope of services. The consultant will not be compensated for additional services performed prior to execution of a supplemental agreement. Only additional services, which are required due to changed or unforeseen conditions or are due to a change in the specified end product, will be considered for inclusion in a supplemental agreement.

The CONSULTANT will provide the professional, technical, and other personnel resources, equipment, materials and all other things necessary to prepare the design memorandum, preliminary plans, historical preservation services, right of way plans, right of way acquisition services, and final plans for construction including surveying services and data required for development of this specific project. The survey data shall be based on the Missouri State plane coordinate system, central zone, and modified by a factor provided by the CONSULTANT. All elevations and vertical control shall be based on NAVD 88. All field survey work, including benchmarks, alignment reference ties, ground surveying topographic mapping, digital terrain models, private and public utilities (above ground and below ground), and boundary information (right of way, property lines, section lines, land corners, and easements). Public and private utilities shall be picked up using Dig-rite marked utilities and utility owner as-built plans.

The CONSULTANT shall exercise professional judgment to correlate data from different sources, and to resolve conflicting information.

The CONSULTANT shall prepare all plans through use of a Computer Aided Drafting (CAD) program Microstation v8i and Geopak SS4 or Bentley OpenRoads Designer. The CONSULTANT shall conform to the Missouri Department of Transportation Specifications for Computer Deliverable Contract Plans as referenced in the MoDOT EPG.

The CONSULTANT will be required to produce and update the construction cost estimate for this project at the completion of each major milestone or at a minimum of every 2 months. The major milestones for this project are defined as the preliminary design, right of way design, final design, right of way clearance.

The CONSULTANT shall review "as built" plans, aerial photographs, manuscripts, etc. and other information to be provided by the Commission and make the necessary field investigations to assure that there have been no significant changes since the information was recorded or obtained.

The CONSULTANT shall prepare a design criteria memorandum for this entire project and submit it to the COMMISSION for review and approval prior to starting the right of way design phase. Any deviations from Commission established procedures for design; construction or materials shall be approved through the MoDOT project manager and documented by the CONSULTANT. This documentation shall include a brief justification for the deviation and the signature of the CONSULTANT project manager.

The CONSULTANT shall perform the following services, all in accordance with the standard practice of the Commission and AASHTO LRFD Design methods:

GENERAL

1. Sidewalks will be evaluated on routes listed below where there are existing sidewalks present or shown as depicted in project location sketch.
 - a. Ludlow (Livingston County): Intersection of MO DD & MO D within city limits.
 - b. Chula (Livingston County): MO K within city limits.
 - c. Wheeling (Livingston County): MO B within city limits.
2. Design of sidewalk improvements should try to stay within existing right of way. Temporary easements and permanent right of way can be used if needed but should be as minimal as possible.
3. Utility relocations should be as minimal as possible.
4. Design of sidewalks and ramps shall conform to current ADA guidelines to a maximum extent possible within existing right of way or easements.

5. MoDOT/City signs shall be relocated within existing right of way to meet the vertical and horizontal requirements.

PRELIMINARY DESIGN PHASE

The CONSULTANT'S attention is directed to Section 200 of the MoDOT EPG for general guidelines and requirements for preliminary design. Other chapters may be applicable for preliminary design preparation.

1. Upon approval of the design criteria memorandum by COMMISSION, the CONSULTANT shall undertake the following to develop the preliminary design phase:

- a. Perform survey required for design of sidewalk and ramps
 - 1) Horizontal and Vertical Control.
 - 2) Topo shall be picked up from edge of pavement out to approximately 40' or past the right of way line along the entire length of the project or the minimum required to design the project.
 - 3) Create base-map
- b. Establish sidewalk guidelines – create a Design Memorandum following the ADA Standards for Accessible Design.
- c. Perform a field check on existing sidewalk, ADA ramps, curb, curb replacement, and potential retaining wall requirements.
- d. Evaluate the existing sidewalks, ADA ramps, curb, and curb and gutter for compliance with ADA standards.
- e. Evaluate existing potential sidewalk obstructions but not limited to – fire hydrants, signs, light poles, manholes, water meters, valves, trees, power poles, guy wires, awnings, and planters.
- f. Evaluate the existing driveways, streets and alleys to achieve 1% (2% Max) ADA cross slope through the entrances or streets.
- g. Evaluate, document and provide locations for non-ADA requirements. Discuss most feasible solution.
- h. Create preliminary cross sections sufficiently to make a comparison between using retaining walls versus acquiring additional right of way for all wall locations.
- i. Prepare on an aerial showing the preliminary layout of sidewalks and ADA ramps.
- j. Prepare a preliminary cost estimate. The CONSULTANT shall prepare the estimate based on the requirements furnished by the COMMISSION.
- k. The preliminary plans shall include the tentative additional easement and right of way limits, property lines and ownerships, section lines, township and ranges, any U.S. Surveys, city limits, and a general outline of the construction staging, critical design items, and other items as outlined in MoDOT EPG.
- l. The preliminary plans shall be submitted to the COMMISSION for review and approval.
- m. Evaluate culvert extensions for sidewalk placement
- n. Attend coordination meeting (approximately one).
- o. Prepare and Submit a Request for Environmental Services for the noted phase.

2. The COMMISSION shall furnish the CONSULTANT traffic and accident information for the construction and design years to be used for preliminary and final design plans.

3. A Preliminary Field Check will be arranged with the COMMISSION to discuss design features in the project area.

4. A public online outreach and meeting will be held during the approval of the preliminary plans. The CONSULTANT shall provide exhibits and handouts as requested by the COMMISSION. The MoDOT project manager will be responsible for all other documents necessary for public outreach.

RIGHT OF WAY DESIGN PHASE (If necessary)

1. The CONSULTANT shall prepare right of way plans, which may be separate drawings from those used for design and construction details. The right of way plans shall show alignment, geometric design, removal of improvements, drainage facilities, property lines and ownership, other land survey information, street lines and existing right of way and easements. The CONSULTANT should also include any plan details, which will require additional right of way or easements during the construction phase of the project such as bypasses, temporary erosion control, etc. Right of way plans include title sheet, typical sections, profile sheets, and cross sections of the roadway, entrances, and side roads. Areas of new right of way, permanent easements and/or temporary easements required from each individual property owner may be shown in tabular form on the respective sheets.

- a. The CONSULTANT shall finalize any previous review of the roadway cross sections sufficiently to determine the feasibility of constructing retaining walls versus obtaining additional right of way. This final review shall consist of construction estimates versus right of way estimates.
- b. The CONSULTANT shall prepare a RW cost estimate. The CONSULTANT shall prepare the estimate based on the requirements furnished by the COMMISSION.
- c. Upon completion of the estimates by the CONSULTANT, the CONSULTANT shall recommend to the COMMISSION a choice at the various locations which warrant consideration of the alternate retaining wall versus right of way solutions. The COMMISSION shall make the final determination of purchasing right of way or constructing retaining walls.

2. Preliminary right of way plans shall be submitted to the COMMISSION for review and approval. The right of way plans shall be at the same scale as the construction plans. The right of way plans shall include any design details that will control the width of right of way and necessary easements.

- a. New right of way lines and all easements shall be dimensioned from the centerline, or crossroad centerlines, if necessary. Bearings and distances on the right of way lines may be required.
- b. The following minimum design features shall be included on the right of way

plans:

- 1) Title sheet with the appropriate project limits, access note and traffic data completed.
- 2) Typical sections
- 3) Cross sections at “non-typical” areas where proposed sidewalk varies from existing to warrant them to establish grading limits including additional sections at each entrance with new and existing entrance grades.
- 4) Construction limits (slope lines); drainage facilities; entrances and their reference location, width and type; property owners, with areas of new right of way, easements and remaining property; centerline bearing, ties to legal land corners from centerline stations with notation for corner witness by a registered land surveyor; existing utility locations and easements, including replacement utility easements; horizontal curvature information; and proper right of way symbolization for new right of way (access control) and easements, including areas which may be required to accommodate temporary erosion control.
- 5) Township, Range, Section and/or U.S. Survey information on each plan sheet near the title block or appropriate survey/section line.

3. The CONSULTANT shall perform a land survey of the R/W corridor for the project compliant with the Missouri Minimum Standards for Property Boundary Surveys. This will include the development of a survey plan that will serve as a recordable survey plot in the event the event of permanent right of way or easement requirements.

The survey plan will include a land description of the highway R/W corridor. This description shall (1) be based on the location survey, (2) be concise, (3) contain title identity, (4) contain a centerline description along with measured dimensions and highway stationing in ground units, (5) contain measurement data that describes the geometric area of the corridor and closes mathematically, (6) contains information that does not lend to alternate interpretations, and (7) be written to facilitate the relocation of the corridor by a professional land surveyor.

4. The CONSULTANT shall perform the layout of the R/W corridor with the placement of monuments at the locations of line breaks in the R/W. Monumentation in compliance with the standards for permanent monuments including a cap stamped with the department’s name and the highway station and offset for that location shall be placed.

5. The CONSULTANT shall comply with the most recent and applicable State and Federal Laws. Survey procedures and criteria shall be determined in accordance with the Missouri Standards for Property Boundary Surveys and any applicable portions of the MoDOT EPG, particularly Section 236.

6. Any source data provided to the CONSULTANT by the COMMISSION shall be returned in the same manner and condition as when it was provided. The data should be returned at the point when it is no longer needed by the CONSULTANT to perform the services required by this agreement or at the conclusion of the contract, whichever occurs first.

7. The COMMISSION shall arrange for a design field check to review right of way plans with the CONSULTANT and right of way personnel prior to completion of the right of way plans. The CONSULTANT shall make any necessary revisions to the right of way plans as determined by this design field check.

8. The COMMISSION shall review, approve, and certify the right of way plans as completed by the CONSULTANT. The CONSULTANT shall provide one (1) electronic set of fully signed and sealed right of way plans, for the COMMISSION'S further use.

9. The CONSULTANT shall provide a set of plans with the utilities colored for the utility coordination/relocation.

10. The CONSULTANT shall obtain property cards and last deeds to determine ownership in areas where additional right of way will need to be purchased. These documents are to be provided to the COMMISSION for their use.

11. The CONSULTANT shall provide exhibits and handouts as requested by the COMMISSION for property owner negotiations.

12. The CONSULTANT shall be responsible for staking and re-staking tentative right of way on individual properties, as required during the right of way negotiation and acquisition phase of the project.

13. The CONSULTANT shall be responsible for making all revisions to the right of way and construction plans due to negotiations with the property owners in an effort to acquire the right of way.

14. The CONSULTANT shall write deed descriptions and centerline descriptions for all right of way acquisitions, complete MoDOT's Professional Land Survey Description Review form for this project and provide signed legal descriptions for each property on a template provided by the COMMISSION.

15. The CONSULTANT shall prepare and Submit a Request for Environmental Services for the noted phase.

HISTORICAL PRESERVATION SERVICES (SECTION 106 COMPLIANCE)

1. The Section 106 work will be carried out by, or under the direction of, an individual who meets the Secretary of the Interior's Professional Qualification Standards.
2. The CONSULTANT will consult with the MoDOT Historic Preservation Section (HP) to establish the area of potential effects (APE) for the archaeological and architectural surveys prior to the initiation of any work.
3. MoDOT HP will prepare Tribal Notification for Federal Highway Administration to submit to interested Tribes.

4. The CONSULTANT shall then develop a concise historic context to guide the investigations to identify and evaluate historic properties (or explain their absence) in the APE and submit a written Research Design to MoDOT HP, staff before conducting archaeological and architectural surveys.
5. The CONSULTANT will conduct an architectural survey that follow the MoDOT *Built Environment Resources Methods* and will identify and document all architectural resources (i.e., buildings, structures, objects, sites, and districts/landscapes) and all bridge resources (i.e., highway, railroad and pedestrian bridges, viaducts and culverts, excluding metal, plastic and reinforced concrete pipes) that are forty or more years of age located within the APE. The CONSULTANT shall contact MoDOT HP regarding National Register of Historic Places (NRHP) eligibility recommendations for all bridges.
6. The CONSULTANT will complete the archaeological investigation within the APE to identify prehistoric and historical sites following MO SHPO's *Guidelines for Phase I Archaeological Surveys and Reports*. For archaeology, this current scope of services covers only consultant services through the Phase I survey and the subsequent Phase I survey report. This can include preliminary eligibility assessments or recommendations for additional (i.e. Phase II) work. Sites form, for new and revisited sites, shall be completed; after consulting with MoDOT HP, the forms can be submitted directly to MO State Historic Preservation Office (SHPO).
7. The results of the built environment (e.g., buildings, bridges, etc.) and archaeological investigations including effects on resources eligible for listing on the NRHP, should be presented by the CONSULTANT in a single draft report to MoDOT HP, unless the reasons for separate documents has already been approved by MoDOT HP. Once the report is finalized, MoDOT HP will submit it to SHPO. Recovered artifacts, archaeological field notes and lab forms, either originals or copies, shall be submitted to MoDOT HP upon acceptance of the final report
8. MODOT will coordinate with the SHPO regarding potential cultural, historical, and archeological issues.

RIGHT OF WAY ACQUISITION

The CONSULTANT/OFFEROR agrees to perform specific services within the above stated scope of work to include, but not be limited to the following:

1. Public Involvement.
 - a) The selected CONSULTANT, with the assistance and guidance of MoDOT, may be required to provide all necessary handouts/graphics and attend or participate in informational presentations regarding ROW procedures provided by MoDOT, at formal public hearings, or at one (or more) separate public

meetings or virtual meetings.

2. Pre-Acquisition Meeting and Progress Report Meetings

- a) The selected CONSULTANT and their sub consultants may be required to participate in a pre-acquisition meeting prior to the start of a project. This meeting will be with MoDOT District Project Manager, District ROW Manager and may include other MoDOT Support Staff. This meeting will be to discuss project timelines, project milestones and review the scope of work responsibilities.
- b) Selected CONSULTANT will be required to participate in weekly or bi-weekly progress report meetings with the MoDOT Project Manager and MoDOT ROW Manager and staff during the duration of right of way acquisition activities.

3. Appraisal Services:

- a) Visit and review the project site and ROW plans with the ROW Manager or designee.
- b) Identify the valuation problems, determine the number and type of appraisal reports needed for each parcel, identify items pertinent to the valuation of each parcel, and note any specific or unusual appraisal problems. (e.g., the need for septic and well relocations, irrigation systems, parking studies, special engineering reports, architects' reports, unity of use situations).
- c) Prepare or have prepared any necessary studies and special reports that are not appraisals, which are usually incorporated into the final appraisal to provide a complete valuation of the property. Examples of these include, but are not limited to Furniture, Fixture and Equipment (FF&E) reports, cost to cure studies, planning studies, architects' reports, septic system replacements.
- d) Review the cost estimate and appraisal recommendation prepared by the MoDOT Appraiser addressing all parcels to be acquired and the scope of work on the assigned project. May be required to prepare a supplemental cost estimate if requested by MoDOT.
- e) Utilize qualified appraisers and specialists from the MoDOT's roster of approved fee appraisers to complete appraisals or valuation estimate assignments.
- f) Prepare a comprehensive appraisal plan detailing the fee appraisers to be contracted. This plan must be approved by the ROW Manager.
- g) Any appraisal indicating Just Compensation in excess of \$10,000 must be completed on a Standard or Value Finding format.
- h) If Just Compensation is below \$10,000, prepare a payment estimate or waiver valuation. MoDOT will sign such forms to authorize the Waiver as an offer for Just Compensation.
- i) The acceptance and approval of payment estimates, appraisal waiver valuations, appraisal and review reports, and the determination of MoDOT's estimate of just compensation shall only be made by MoDOT after consideration of the review analysis and reviewer's recommendation or the information set forth in the payment estimate or appraisal waiver valuation.
- j) The format of each appraisal must be approved by the ROW Manager. It is the responsibility of each appraiser to ensure that they are in compliance with all USPAP requirements.

- k) All appraisal reports will be reviewed by a pre-qualified review appraiser, independent of the individual who issued the report. The Consultant will be required to provide the appraisal review or hire an outside fee appraiser for this service on all Value Finding and Standard Format.
- l) All completed appraisal and valuation estimate reports will be transmitted to MoDOT in PDF format.

4. Negotiations

- a) The CONSULTANT will provide title insurance information for parcels where new right of way and permanent easements are being acquired. CONSULTANT will obtain the last deed of record from county records to determine ownership of all parcels where only temporary easements are being acquired. Any ownership deeds, easements deeds, subdivision plats, etc. needed or used in the development of existing property lines and easement boundaries for the right of way plans will be furnished by the CONSULTANT
- b) The CONSULTANT will secure the necessary right of way and easements by negotiation or condemnation, if necessary, for construction of this project.
- c) The selected CONSULTANT may conduct preliminary acquisition interviews with affected property owners prior to the initiation of negotiations. Such preliminary contacts may be made on an individual basis or in a public meeting with property owners.
- d) The CONSULTANT shall negotiate all acquisitions in accordance with MoDOT's Engineering Policy Guide (EPG), the laws of the State of Missouri, and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended and the implementing regulations (49 CFR Part 24). This may include but is not limited to the following: Describing the acquisition, referencing plans or plats, explaining right of way and construction plans, project schedule and other project details. Clearly explain details related to the appraisal or value determination and how the offer was developed, as well as answering other necessary valuation questions.
- e) The CONSULTANT shall prepare all necessary documents for review and signature by the ROW Manager. The only offer allowed to be made is that which has been approved by MoDOT. The CONSULTANT may not present any counteroffer or agree to any engineering plans revisions or changes without express permission by MoDOT. The CONSULTANT is to relay all concerns, counter offers, or issues to the ROW Manager or designee for review and consideration.
- f) When negotiations result in an agreement for approved just compensation or a MoDOT approved administrative settlement, the CONSULTANT shall prepare the necessary documents and secure notarized signatures from the owner or their representatives as well as any tenants to submit for payment.
- g) At a minimum, the CONSULTANT'S agent(s) must take the following acquisition actions on each ROW parcel being acquired on the project: Deliver each owner's notice of intended acquisition letter (60-day notice letter), acquisition brochures, copy of appraisal, plans, offer letters, and unsigned documents and agreements by means of personal contact or certified mail. Maintain a detailed written negotiator's log of contacts with each property owner to document negotiations, efforts to achieve amicable settlements,

responsiveness to owners' counter proposals, and suggestions for changes in plans.

- h) Utilize the MoDOT approved forms, letters and agreements.
- i) MoDOT forms in negotiation packets shall include but not limited to the following documents:
 - o Notice of Intended Acquisition Letter
 - o Offer letter
 - o Appraisal or waiver valuation
 - o Pathways for Progress brochure
 - o Conveyance documents (Deed or Easement Documents)
 - o Escrow Agreement, if applicable
 - o Pro Rata Real Estate Tax Claim form
 - o Plan sheet, portion of plan sheet or plat illustrating the acquisition and the remainder
 - o When applicable and appropriate, provide Request for Allocation of Gross Proceeds, (Form 7-7.3).
 - o MoDOT Public Participation Survey (Title VI Survey).
- j) Complete negotiations on all parcels on the project to settlement stage or condemnation prior to the scheduled project ROW clearance date, as determined by the ROW Manager and Project Manager.
- k) CONSULTANT will complete all documents necessary to facilitate the payment of settlements to property owners. Some payments may be handled through a local title company. This will be determined during the initial pre-acquisition meeting.
- l) MoDOT forms utilized in the payrolling process shall include but are not limited to:
 - o Negotiator Report and Notes
 - o A419 form
 - o Vendor Input form
- m) MoDOT will be responsible to pay for fees associated with the final processing of payments to property owners and title insurance.
- n) When negotiations result in condemnation, the consultant shall submit all necessary completed files and documents to the ROW Manager.
Condemnation forms to be completed are as follows:
 - o Condemnation Information Sheet
- o) See additional documents to be completed in Section 7. Condemnation / Legal Processing

5. Relocation Services

- a) The CONSULTANT will provide relocation assistance to eligible displaced individuals and businesses, which will include the temporary or permanent relocation of personal property due to the acquisition right of way or easements. All relocation services must be performed in accordance with MoDOT's Engineering Policy Guide (EPG), the laws of the State of Missouri, and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended and the implementing regulations (49 CFR Part 24).
- b) Conduct personal interviews with all occupants to be relocated and prepare a Relocation Plan in accordance with the EPG. Identify specific relocation needs

- and suggest solutions.
- c) Evaluate and make eligibility determination for relocation claims, including replacement housing supplemental payments, down payment and/or supplemental rent payments, moving payments, last resort housing plans, business relocation benefits, business reestablishment evaluations, and loss of tangible personal property evaluations. Prepare the necessary documents and secure signatures for processing of all payments of relocation claims. Submit claimants' requests for appeal of a determination of ineligibility for all or a portion of relocation assistance payment to the ROW Manager.
 - d) Inspect replacement housing and assure that it meets applicable decent, safe and sanitary standards. Minimize hardship to the displaced occupants by providing counseling, information as to other sources of assistance, methods of claiming relocation benefits, and such other help as may be appropriate. Coordinate the settlement on replacement dwellings, as necessary, with claimants and their attorney or representative.
 - e) Issue Notice to Vacate to displaced according to the needs of the project. The initial 90 day notice should be given at the time the offer of the State's determination of just compensation has been made to the owner and the displaced has received a written statement of benefits, or offer of replacement housing.
 - f) Current and detailed contact reports shall be maintained in each relocation file, documenting all actions relating to the relocation including dates, places, and names. Contact reports will be typed when package is submitted for payment.
 - g) Secure moving cost estimates from reputable Missouri licensed moving companies. This includes the payment, by the consultant, of any estimating fees that may be required by moving companies (reimbursed by MoDOT).

6. Mediation

- a) The CONSULTANT shall cooperate and assist in offering Mediation to property owners when necessary with the District Right of Way Manager and Regional Counsels Office of MoDOT to assist in the processing of all parcel files not yet acquired. The CONSULTANT will make available staff and information as may be required by MoDOT representatives.
- b) CONSULTANT will complete all documents necessary to facilitate Mediation with property owners. MoDOT forms utilized in the mediation process shall include the following but are not limited to:
 - o Mediators Letter to Property Owner
 - o Mediation Checklist and Worksheet

7. Condemnation / Legal Processing

- a) The CONSULTANT shall cooperate and assist when necessary with the Missouri Highways and Transportation Commission's Chief Counsels Office or other legal representatives of MoDOT to assist in the processing of all cases for condemnation or other legal action. The CONSULTANT will make available staff and information as may be required by MoDOT legal representatives.
- b) Forms to be completed for condemnation include the following but are not limited to:
 - o Condemnation Information Sheet

- Notice of Intended Acquisition (confirmation of delivery)
- Offer Letter (confirmation of delivery)
- Negotiator Notes
- Updated Title Commitment
- Legal Description (in word format)

FINAL DESIGN PHASE

1. Upon approval of the preliminary plans or else approved by COMMISSION, the CONSULTANT shall undertake the following to develop the final design phase:

- a. Design ADA ramps at street intersections.
 - 1) Provide ADA ramp details as required for construction.
 - 2) Provide standard details for ADA ramps.
 - 3) Provide special details, as needed, for ADA ramps.
- b. Design sidewalk through driveways.
 - 1) Provide standard driveway detail for sidewalk transitions.
 - 2) Provide special details, as needed, for sidewalk transitions.
 - 3) Provide design of sidewalks to maintain 1% (2% max) cross slope where feasible across pedestrian corridor.
- c. Design retaining walls as required.
 - 1) Geotechnical information is anticipated not to be required for this project. Retaining walls will be kept at or below the three-foot height and will be designed as an L-type retaining wall (integral with the sidewalk).
- d. Provide striping plans
- e. Provide signing plans
- f. Provide work zone management plan utilizing standard traffic control lane closure details conforming to the requirements of the MUTCD and the MoDOT EPG. Include pedestrian detours and sidewalk closures as needed.
- g. Provide erosion control plan
- h. Provide drainage plan including possible culvert extensions.
- i. Attend design meetings (assumes 3 meetings)
- j. Prepare quantities and quantity sheets
- k. Prepare plans, bid documents, and job special provisions and submit to MoDOT or distribution.
- l. Prepare and Submit a Request for Environmental Services for the noted phase.

2. The COMMISSION shall coordinate utility company activities for any adjustments required to be included in the final design plans.

3. The COMMISSION will secure execution of municipal agreements with the cities and/or county agreements if needed. A copy of the executed agreements will be furnished to the CONSULTANT for their information. The CONSULTANT shall conform to all design provisions of these agreements.

4. A final design field check will be held with the CONSULTANT and COMMISSION

representatives prior to completing final design plan quantities. The CONSULTANT shall make any necessary revisions to the final plans as determined by this design field check.

Final Design – Retaining Wall (if required)

1. The COMMISSION will share standard details for an integral sidewalk retaining wall with a maximum of 5-foot height.
2. The CONSULTANT will be responsible for structural design if a retaining wall is required.

PLANS, SPECIFICATIONS AND ESTIMATE

1. The following list shall be considered as the minimum requirements for a completed set of Final Design Plans:
 - a. Title Sheet
 - b. Typical Sections
 - c. “2-B” Sheets
 - d. Plan Sheets at 1” = 50’ horizontal (or different scale as determined by MoDOT Project Manager for clarity)
 - e. Special Profile Sheets at 1” = 50’ horizontal and 1” = 10’ vertical
 - f. Special Sheets for geometrics, reference points, grading plan, traffic control plan, temporary erosion control plan and any other sheets for special design features
 - g. Highway Signing Sheets, including quantity sheets **(if required)**
 - h. Retaining Wall plans complete for each structure **(if required)**
 - i. Culvert Sections at 1” = 10’ (1:100), horizontal and vertical
 - j. Earthwork Quantities, Cross Sections at 50’ intervals, 1” = 10’ (1:100), horizontal and vertical, including entrance sections with existing and proposed grades
 - k. Tabulation of Quantities Sheets
 - l. Job Special Provisions in a format readable in COMMISSION’S current word processor, and a computer file with the bid items and quantities as generated by Oman’s Bidtabs Professional for Missouri program.
 - m. Construction workday study

Additional plans and information may be required to complete the Final Design Plans. With the submittal of the Final Design the CONSULTANT shall also provide the COMMISSION a statement that an internal quality control check has been conducted and to the best of the CONSULTANT’S knowledge the final design plans are free of gross errors, misleading or confusing typos, and includes adequate information to construct the project.

BIDDING AND CONSTRUCTION PHASE

After the Final Design Phase of the project is completed the CONSULTANT shall be available to the COMMISSION to discuss and interpret the plans and specifications

during the bidding and construction phase of the project as determined necessary by the ENGINEER. During this phase of the project the CONSULTANT will also be required to attend the pre-bid conference, pre-construction meeting, and post-construction meeting. If a partnering meeting is held between the construction contractor and MoDOT personnel, the CONSULTANT will be required to attend.

PERMANENT RIGHT OF WAY MONUMENTATION (if required)

After the construction contractor has graded the back slopes and utility adjustments are complete, the CONSULTANT shall set permanent monuments at right of way breaks and permanent easements. Monumentation shall be in compliance with MoDOT EPG Section 238.2 Land Surveying.

DRAWING AND DOCUMENT DELIVERABLES

The CONSULTANT shall prepare all plans through use of a Computer Aided Drafting (CAD) program Microstation v8i and Geopak SS4 or Bentley OpenRoads Designer. The CONSULTANT shall conform to the Missouri Department of Transportation Specifications for Computer Deliverable Contract Plans as referenced in the MoDOT EPG. Unless otherwise specified all plan sheets and CAD plots shall be provided to the COMMISSION shall conform to the Specifications for Computer Deliverable Contract Plans.

The Consultant shall furnish the Commission the following completed sheets and documents, as applicable, for each separate construction project included in this contract, as follows:

DELIVERABLES - ROADWAY

1. All mapping, sketches, cross sections and all other engineering documents necessary to secure a permit from the administrator of the FEMA Flood Insurance Program if required.
2. One (1) electronic set of prints of preliminary plans showing profile grades, geometric data, alignment data, etc.
3. One (1) electronic copy of the (hearing/ meeting) transcript. One (1) electronic copy of the location sketch for Commission Approval submitted in electronic format.
4. All information necessary for the Section 404 Corps of Engineers Permit application as indicated elsewhere in the scope of services.
5. One (1) electronic set of prints of the right of way plans, including cross sections for review and comment. After any corrections, one (1) electronic set of fully signed and sealed right of way plans shall be submitted for the COMMISSION'S further use.
6. One (1) electronic set of prints of the preliminary pedestrian traffic signal plans for initial review and comments, if needed. After any corrections one (1) electronic set of prints will be required.
7. One (1) electronic set of location survey plans including corridor description.
8. One (1) electronic set of prints of the preliminary highway signing layouts for initial review and comments. After any corrections another electronic set of prints will be required.
9. One (1) electronic set of plans for utility review, including culvert sections and cross sections.

10. One (1) electronic set of prints of the traffic control plan for review and comments. After any corrections another electronic set of prints will be required.

11. One (1) electronic draft copy of the job special provisions for review. After corrections, the job special provisions shall be furnished in electronic format utilizing the COMMISSION'S latest word processing program. (Currently Microsoft Word 2010)

12. One (1) electronic complete set of the fully checked, original drawings of the final design plans, including "2-B" sheets with all quantities tabulated and subtotaled by construction stage. One (1) electronic legible copy of all drainage computations.

13. One (1) electronic legible copy of engineering calculations and analysis.

14. One (1) electronic copy of a completed summary of quantities and estimate of the construction costs. The estimate shall be prepared using the latest version of Oman's Bidtabs Professional for Missouri program.

15. One (1) electronic copy of a workday study showing the estimated number of workdays required to construct each project.

16. One (1) electronic copy of all documents for each parcel and the signed & notarized original deeds.

STANDARDS

The CONSULTANT shall use the latest version of the following publications to determine the design criteria and procedures which will be followed for development of the project: "Federal Emergency Management Administration Flood Insurance Guidelines and Specifications," MoDOT "Engineering Policy Guide," AASHTO's "Manual on Uniform Traffic Control Devices" (MUTCD), AASHTO's "A Policy on Geometric Design of Highways and Streets", "Missouri Standard Specifications for Highway Construction", "Missouri Standard Plans", and "Missouri Department of Transportation Specifications for Computer Deliverable Contract Plans", or any other publications which the ENGINEER directs the CONSULTANT to use.

SERVICES PROVIDED BY THE COMMISSION

The COMMISSION will provide available information of record to the CONSULTANT. In addition, the following specific items will be furnished or performed by the COMMISSION:

1. All geotechnical work, including a soil survey and any necessary foundation investigation for embankments or for any structures if required.
2. An electronic copy of prior improvement "as-builts" of state routes.
3. The approved pavement type design and shoulder design.
4. All standard sheets and forms required. Electronic copies of all necessary special sheets and standard format sheets should be provided to the consultant in DGN format.
5. Conduct necessary public meeting. The CONSULTANT will record and prepare the hearing transcript and location sketch. MoDOT will be responsible for all other documents necessary to obtain Commission Approval.
6. Handle arrangements for any "scoping" meetings and the public hearing and other meetings, which may be held or requested by local agencies. The CONSULTANT shall provide materials for displays or exhibits as may be required for such meetings.
7. Conduct environmental studies and handle utility relocations. The CONSULTANT shall identify any known environmental issues in the RES submittal.
8. Submit clearances, payroll and other documents prepared by CONSULTANT for processing.
9. Attend meetings with interested officials of the Federal Highway Administration, and local communities.
10. Apply for Section 404 permits. The CONSULTANT will be required to furnish the information outlined elsewhere in the scope of services.

SCHEDULE

The phases of work will be completed in accordance with the following schedule:

1. **PRELIMINARY DESIGN** submitted by August 19, 2022. This time includes a total of 14 calendar days for COMMISSION review(s) and then to allow for CONSULTANT to address comments.
2. **APPROVED RIGHT OF WAY DESIGN** submitted by September 30, 2022. This time includes a total of 14 calendar days for COMMISSION review(s) and then to allow for CONSULTANT to address comments.
3. **SECTION 106 CLEARANCE** shall be received by October 14, 2022.
4. **100% UNSIGNED AND UNSEALED FINAL ROADWAY DESIGN PLANS FOR REVIEW** submitted by January 13, 2023. This time will be necessary for COMMISSION review of the Final Plans.
5. **100% SIGNED AND SEALED FINAL ROADWAY DESIGN PLANS FOR Review** submitted by February 10, 2023. This time will be necessary for COMMISSION review of the Final Plans within Bid Services in central office.
6. **RIGHT OF WAY CLEARANCE** cleared by March 17, 2023.
7. **PERMANENT MONUMENTATION AS REQUIRED** within 60 calendar days after all utilities have been adjusted and the grading contractor has completed grading of the back slopes, subject to the maximum period of time allowed by statute.
8. **OTHER DELIVERABLES** that have not been previously submitted such as design calculations, quantity calculations, and MicroStation DGN files shall be submitted to the Commission within one month of the final plans submittal.

The COMMISSION will grant time extensions for unavoidable delays beyond the control of the CONSULTANT. Requests for extensions of time shall be in writing by the CONSULTANT, before plans are due, stating fully the reasons for the request.

The total period of service, including construction services, is expected to be completed by December 1, 2024. If construction of the project is not completed at this time, then the period of service will extend to completion of the project.