**SCOPE OF SERVICES**

# Project Description

MoDOT Job Number J8S3156 has been developed to replace Bridge No. A0441 on County Road 127 (Melville Road) that crosses Interstate 44 in Greene County, Missouri.

**The CONSULTANT shall provide the professional, technical and other personnel resources, equipment, materials and all other things necessary to prepare the bridge memo, conceptual report, preliminary roadway and bridge plans, Right of Way plans and construction roadway and bridge plans and documents and utility coordination for J8S3156.**

The CONSULTANT shall perform the following services, all in accordance with the standard practice of the Commission as outlined in the MoDOT Engineering Policy Guide (EPG) and using AASHTO Green Book and other resources as listed in the EPG.

A more detailed description of the process and requirements used by MoDOT for completion of the design may be found in the EPG. The consultant is encouraged to review the appropriate sections of the manual 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.

Services rendered by the CONSULTANT, which are considered additional services, will be addressed per paragraph (3), Additional Services of the Project Design Consultant Agreement. The provisions of the Design Consultant Agreement outlining the responsibilities of the CONSULTANT regarding the quality and accuracy of the deliverables and products shall apply to any decisions regarding determinations of additional 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 shall prepare all plans through use of a Computer Aided Drafting (CAD) program. The CONSULTANT shall conform to the Missouri Department of Transportation Specifications for Computer Deliverable Contract Plans as referenced in the MoDOT EPG. The CONSULTANT shall use Microstation and PowerGeopak SS10.

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 comprehensive design criteria memorandum for this entire project and submit it to the COMMISSION for review and approval. 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.

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 the 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 will be listed.

# Project Management and Coordination Tasks

The CONSULTANT shall perform the following Administration/Project Management and Coordination tasks:

1. Coordinate with MoDOT Project Manager to schedule and plan the kick-off core team meeting.
2. Participate in the kick-off core team meeting, inviting any sub consultants that need to attend. It is assumed that this will be a virtual style meeting.
3. Schedule, plan and participate in virtual core team meetings with MoDOT. A total of five (5) virtual core team meetings is anticipated.
4. Prepare minutes for all meetings and provide to core team.
5. Prepare monthly progress reports that include the following:
   1. Past month’s activities/accomplishments
   2. Pending issues and decisions
   3. Problem areas and recommended corrective actions
   4. Schedule summary status (chart showing baseline schedule vs. actual schedule)
   5. Next month’s planned activities/goals
   6. Summary of coordination efforts (including correspondence summaries)
6. All of the above shall include/address sub-consultant tasks.
7. Public Involvement

The COMMISSION will be the main point of contact for receiving calls from the public. The CONSULTANT will interact with external agencies and the public as required to accomplish the scope of services of this contract.

1. The CONSULTANT will be required to attend meetings with regulatory agencies, organizations, county officials, local municipalities, property owners and other entities as required. It is anticipated that one meeting will be required.
2. The CONSULTANT will be required to attend public meetings/hearings. It is anticipated that one design virtual public meeting/hearing will be required.
3. The CONSULTANT shall participate in planning meetings with MoDOT personnel before meetings and public meetings/hearings.
4. The CONSULTANT shall provide exhibits for the virtual public meeting/hearing based on conceptual/preliminary drawings as requested by the COMMISSION.
5. The CONSULTANT shall provide the COMMISSION a database containing all property owners contiguous to the project, or within a reasonable distance of the project. The database shall be of similar format and contain the same information as the example database provided by the COMMISSION to the Consultant. The database shall also designate whether the individual is someone the Commission will need to obtain right of way and/or easements from.
6. The COMMISSION shall advertise for meetings, obtain the meeting location and room, produce copies of handouts and perform mass mailings of notices of meetings or hearings, and newsletters.
7. The COMMISSION shall record and prepare the meeting minutes of the public meeting and shall prepare the transcript, if applicable.

# Environmental Services

1. The conceptual stage Request for Environmental Services (RES) has been submitted for this project. The CONSULTANT shall review the comments provided within the RES, and provide required information and responses to the MoDOT Environmental Staff.
2. The CONSULTANT shall submit the preliminary stage RES upon approval of the conceptual report and upon determination of proposed scope for each project.
   1. The CONSULTANT shall note any known right of way and/or easement acquisition needs in this submittal.
   2. The CONSULTANT shall discuss the anticipated needed A-date with MoDOT’s Project Manager, and ensure the date is entered with the submittal.
3. The CONSULTANT shall submit the Right of Way stage RES upon approval of the preliminary plans.
4. The CONSULTANT shall submit the final stage RES at least 90 days prior to the PS&E deadline.
5. The CONSULTANT shall review the comments provided by MoDOT’s Environmental Staff with each RES submittal. The CONSULTANT shall provide any requested information to MoDOT’s Environmental Staff, the MoDOT Project Manager and Transportation Project Designer. Items that may need to be addressed include historical buildings, bridges and sites, archeological sites, conversion of farmland, endangered species, wetlands and parklands.
6. If more than twelve (12) months lapse between required RES submittals, the CONSULTANT shall submit a new RES.

# Survey

1. MoDOT will provide the available survey data for J8S3156.
2. MoDOT will provide any additional survey work needed for the design of this project.
   1. The CONSULTANT shall submit a Survey Request to MoDOT’s Transportation Project Manager that includes detailed information on the survey work needed.
   2. The CONSULTANT shall provide an exhibit (pdf, map or kmz file) that shows the outline and/or location of the requested survey.

# Conceptual Report

The CONSULTANT’s attention is directed to Section 128 of MoDOT’s Engineering Policy Guide (EPG) for general guidelines and requirements for the conceptual study. Building on the outcomes recommended in the Traffic Operational and Safety Study the CONSULTANT will develop conceptual drawings for the approved improvements.

1. The CONSULTANT shall review “as built” plans, aerial photographs, manuscripts, etc. and other information to be provided by the COMMISSION before visiting each project site location. The CONSULANT shall perform a field investigation to assure that there have been no significant changes since the information was recorded or obtained. The CONSULTANT shall incorporate any significant changes found during the field investigation as part of this contract The CONSULTANT shall document the extent of improvements, location of improvements (side of road, intersection quadrant, etc.), project exceptions and overall intent of the improvements.
2. The CONSULTANT shall summarize the determinations made during the scoping process in a Conceptual Study Report.
   1. The CONSULTANT shall evaluate right of way impacts of the proposed improvements and the need for additional right of way, permanent easements, and temporary easements.
   2. The CONSULTANT will evaluate the location of the proposed improvements for existing utility conflicts and will develop and document the need for relocation and coordinate with the MoDOT District Utility Engineer to develop a conceptual cost for relocation to be included in the conceptual cost estimate.
3. The CONSULTANT shall prepare a separate opinion of cost.

* 1. Estimates shall include construction cost, right of way costs, and potential for any utility adjustments.
  2. The consultant shall prepare an estimate using BidTabPro format, utilizing district, county, and statewide averages for item costs.
  3. If needed, square foot right of way cost estimates and utility relocation cost shall be provided by MoDOT.

1. The CONSULTANT shall develop conceptual drawings to be included in the Conceptual Study Report, and to the quality and detail that they can be included in any public involvement efforts.

# Preliminary Bridge Design

1. Perform the geometric analysis at the proposed bridge site necessary to develop type, size and location drawings consisting of a general plan and elevation plan of the structures, typical roadway sections and roadway profiles. This includes preparation of the Bridge Memorandum & Layout (including the itemized preliminary bridge estimate).
2. The structure and/or box culvert type and size (if applicable) shall be based on roadway alignments, geometric analysis, hydraulic analysis, spill slope requirements, roadway grades and/or clear zone requirements.
3. The superstructure type shall be dependent upon site constraints and a detailed cost analysis comparison.
4. All requirements outlined in the MoDOT Engineering Policy Guide (EPG) shall be met. The CONSULTANT shall follow MoDOT’s “practical design” philosophy and submit any design exceptions as necessary.

# Preliminary Roadway Plans

The CONSULTANT’s attention is directed to Section 235 of MoDOT’s Engineering Policy Guide (EPG) for general guidelines and requirements for preliminary design.

1. The COMMISSION shall furnish the Consultant the pavement design recommendation and general special provisions to be used in the preliminary plans.
2. At a minimum, the following shall be submitted for the Preliminary Plans:
   1. Preliminary Plan Title Sheet
   2. Typical Sections
   3. Plan Sheets at 1” = 20’ horizontal (or different scale as determined by MoDOT Project Manager for clarity) and extend to 100 feet beyond the project limits.
   4. Special Sheets for geometrics and special design features.
   5. Temporary Traffic Control Plans. The temporary traffic control plan should be summarized in the Preliminary Plans Letter of Transmittal.
   6. Preliminary drainage sheets (or information provided in plan sheets)
   7. Preliminary signing sheets
   8. Tentative Easement and Right of Way limits with property lines and ownership information, if applicable.
   9. Preliminary Cross Section Sheets at 100’ intervals, 1”=10’ (1:100), horizontal and vertical, including entrance sections with existing and proposed grades
3. As applicable, the CONSULTANT shall use the Southwest District ADA Streamlining processes.
4. The CONSULTANT shall participate in Temporary Traffic Control meetings with MoDOT staff to determine, design and review the Traffic Control Plan for this project. It is anticipated that there will be three (3) virtual meetings for Temporary Traffic Control.
5. The CONSULTANT shall prepare the preliminary plan construction cost estimate.
   1. The COMMISSION will prepare the right of way cost estimate based on the right of way requirements furnished by the CONSULTANT, if needed.
   2. The CONSULTANT shall prepare the cost estimate for any utility impacts. The CONSULTANT shall include utility impacts in the plans and construction cost estimate for those utility impacts that are determined to be included in the construction contract.
   3. The CONSULTANT shall provide detailed estimates for each anticipated bid item. Lump sum quantities shall not be used for the preliminary plan estimates.
6. The CONSULTANT shall prepare the letter of transmittal for the preliminary plans. The COMMISSION will provide the template upon request.
7. The CONSULTANT shall complete the preliminary plan checklist. The COMMISSION will furnish the checklist upon request.
8. The CONSULTANT shall provide one (1) electronic copy of the preliminary plans, construction cost estimate, preliminary plan checklist and letter of transmittal to the Commission electronically for review and approval, as scheduled below.

# Utility Coordination

The CONSULTANT shall lead the effort on utility coordination. Phase 1 efforts will identify utility type for the conceptual report. Phase 2 assignments will include working with the professional land surveyors for the following project documentation and plan details

1. Review completed topographic surveys to develop preliminary plans, right-of-way plans and final roadway plans, including any necessary improvements and existing topography within the limits of the project. Topographic surveys shall consist of pertinent topographic features, but not limited to:
2. Existing drainage and sanitary structures (pipes, types, flowlines, sizes) where pipe improvements were identified during the concept and preliminary phases
3. All identifiable utility locations and equipment at signalized intersections and longitudinal areas in between intersections that are adversely impacted
4. Existing signal, lighting and any ITS equipment inside slope limits
5. Sign posts, size, identification and photo log
6. Field locate visible above ground evidence of utilities located within the project area. “Missouri One Call” and MoDOT will be contacted and a formal request will be submitted for marking the locations of member utilities. In the event that “Missouri One Call” fails to respond, in whole or in part, to the formal request, underground facilities, structures, and utilities will be plotted from surveys and/or available records. The locations of all utilities are to be considered approximate. There may be other utilities, whose existence may not be known at the time of the survey.
7. Consult with MoDOT’s Utility Engineer to coordinate with surveyors on underground utility locates.
8. Coordinate to obtain One-Call tickets to have utilities located in identified areas of proposed project. An estimate of 1 MO One Call ticket for every 400 linear feet of sidewalk is reasonable for preliminary design. Additional MO One Call tickets after preliminary design is complete will be required where additional items were added to the final design plans compared to the concept design plans.
9. Coordinate with surveyor to complete utilities survey and verify completeness and accuracy of utility topographical survey. Service connections shall be included as part of the utility survey.
10. Coordinate with utility companies on the development of the plan of adjustment and obtain cost estimates for reimbursable utilities for the District Utility Engineer’s approval.
11. Show the existing utility facilities and plan of adjustments for proposed utilities facilities in the contract plans (plans sheets, cross sections, culvert sections).
12. Work with the various utility owners to determine if any needs for renewals within the project limits.
13. Coordinate relocation of each impacted utility on the project during design and construction.
14. Prepare special utility sheets as necessary (including utility profile and exhibits).
15. Assist District Utility Engineer and/or Coordinator in the preparation of agreements.
16. Identify locations for power service needs, prepare service request for submittal and coordinate with the power company to obtain estimated costs.
17. Coordinate with MoDOT District Utility Engineer regarding the need for test holes and initiating the potholing with the applicable utility owner. Provide test hole information at critical utility locations to the District Utility Engineer.
18. Prepare utility job special provision and information for the preparation of the Utility Status Letter for District Utility Engineer.
19. Provide assistance and answer utility related questions during the construction phase for MoDOT staff and the roadway contractor.
20. Review MoDOT excavation permits in project area for conflicts with design and construction phase. This includes new utility installation, modifications to existing facilities, and any developer driven improvement within the project limits.

# Right of Way Plans

1. The COMMISSION will provide title insurance information for parcels where new right of way is being acquired, prepare right of way appraisals and secure the necessary right of way by negotiation or condemnation, if necessary, for construction of this project. Any ownership deeds, easements deeds, subdivision plats, etc. needed or used in the development of existing property lines for the right of way plans will be furnished by the CONSULTANT.
2. The CONSULTANT shall be responsible for staking and re-staking tentative right of way on individual properties, as required by MoDOT staff, during the right of way negotiation and acquisition phase of the project.
3. 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, ¼ ¼ section lines, subdivision lot lines, other land survey information, street lines and existing right of way and easements.
4. The CONSULTANT shall 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. Areas of new right of way, permanent easements and/or temporary easements required from each individual property owner must be denoted underneath the Parcel Number and Name on each individual tract.
5. Right of way plans shall be submitted to the COMMISSION for review and approval as scheduled in Exhibit IV. 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 control the width of right of way and necessary easements.
6. The following minimum design features shall be included on the right of way plans:
   1. Title sheet with appropriate project limits, access note and traffic data completed.
   2. Typical Sections
   3. Plan and Profile Sheets – CONSULTANT shall finalize and detail the horizontal and vertical improvements. CONSULTANT shall clearly describe important design notes and features on all plan sheets in standard MoDOT format.
      1. New right of way lines and all easements shall be dimensioned from the centerline, or cross road centerlines, if necessary. Bearings and distances on the right of way lines will be required on the final location survey.
      2. Construction limits (slope lines); drainage facilities; entrances and their reference location along with existing and proposed entrance grades, width and type; property owners, with areas of new right of way, easements and remaining property size; 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.
      3. Section, Township, Range, and/or U.S. Survey information on each plan sheet near the title block or appropriate survey/section line. The section line information will be provided to the ¼ ¼ section lines.
   4. Driveway Profiles – CONSULTANT shall develop and layout horizontal and vertical alignments for all driveways within the project limits.
   5. Special Sheets
   6. Culvert Sections/Storm Drainage – CONSULTANT shall finalize size and length of any culverts and place description on plan sheets.
   7. Cross sections – CONSULTANT shall develop cross sections for the purpose of determining right of way impacts/takes and quantities.
7. If needed, the CONSULTANT shall schedule a meeting and/or field check with the COMMISSION to review right of way plans prior to the completion of the right of way plans. The CONSULTANT shall make any necessary revisions to the right of way plans as determined by this meeting and field check.
8. The CONSULTANT shall provide an updated construction cost estimate for the Right of Way design stage.
9. The CONSULTANT shall submit the Right of Way plans and construction cost estimate with a letter of transmittal. The letter of transmittal shall be provided as a word document.
10. The CONSULTANT shall submit the Right of Way Plan checklist. The COMMISSION shall provide the checklist to the Consultant upon request.
11. 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 right of way.
12. The CONSULTANT shall provide one (1) electronic set of fully signed and sealed right of way plans for the Commission’s use.
13. The CONSULTANT shall provide one (1) electronic set of approved Right of Way plans and cross sections to be used by MoDOT’s Utilities Department. The known utilities shall be color-coded on the plans.
14. The COMMISSION shall review, approve and certify the right of way plans as completed by the CONSULTANT.
15. The COMMISSION will prepare right of way appraisals and secure the necessary right of way by negotiation or condemnation, if necessary, for construction of this project.

# Final Bridge Design

Furnish to the COMMISSION fully checked design plans, job special provisions, design computations, quantity computations, final cost estimate, and a construction work day study for the structure(s). The CONSULTANT is expected to make the COMMISSION aware of more economical design alternatives that may become apparent during the preparation of the final design.

1. The plans shall be complete and shall cover all parts of the structure they represent. The degree of detail shall be comparable to that furnished on typical plans prepared by the COMMISSION. High resolution final signed and sealed plans, will be submitted in Adobe Acrobat Reader format version 7 or higher. Final signed and sealed plans shall be in pdf full size (34” x 22”) format. These deliverables shall use the file naming convention and be in accordance with the “Specifications of Computer Deliverable Contract Plans” requirement outlined in the Commission’s Engineering Policy Guide, Section 237.13.3. The electronic plans in Microstation format cannot be signed and sealed. The electronic submittals shall be made in a method suitable to MoDOT.
2. All construction changes made to the plans during construction of the project shall also be submitted electronically in Adobe Acrobat and Microstation format.
3. The job special provisions shall be complete and describe all design features, construction procedures, or material requirements in the plans that are deviations from the latest edition of the Missouri Standard Plans for Highway Construction. Typical job special provisions that have been developed by MoDOT for previous jobs are posted on MoDOT’s website and are available for use and modification as needed. The job special provisions shall include a table of contents sheet that is signed and sealed by a professional engineer registered in Missouri. The signed and sealed job special provisions shall also be submitted in Adobe Acrobat Reader format, version 7 or higher. Job Special Provisions shall also be submitted in Microstation Word format. The submittal letter shall explain the need for each provision.
4. The design computations and plans shall be acceptable to, and will become the property of the Commission. The CONSULTANT shall submit design computations in Adobe Acrobat Reader version 7.0 format or greater. The files shall be transferred in a manner acceptable to MoDOT. The design computations shall contain an index file, with electronic links to the files contained within. Submittals shall include a minimum of set of design computations for each project. The design computations shall not be combined with the Microstation or the Adobe Acrobat Reader submittals.
5. The final estimate submitted by the CONSULTANT shall include backup material that supports the estimates made for non-standard or lump sum pay items.
6. The CONSULTANT shall submit the hours and cost summarizing the design effort for each bridge. The summary shall include separate amounts for: Number of Hours for Bridge Preliminary Design, Cost of Bridge Preliminary Design, Number of Hours for Bridge Final Design, Cost of Bridge Final Design. Generally, the above amounts should include all hours and costs invoiced that are attributable to bridge design and plans preparation up to the point of turning in the signed and sealed plans. It should not include hours attributable to preparing the bridge survey, final construction cost estimate, or workday study.

# Final Roadway Design

1. The COMMISSION will secure execution of agreements with the cities and/or county agreements. A copy of the executed agreements will be furnished to the CONSULTANT for information purposes, upon request. The CONSULTANT shall conform to all design provisions of these agreements.
2. If determined necessary, a field check shall be held with CONSULTANT and MoDOT staff 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.
3. The CONSULTANT shall utilize MoDOT’s Southwest District ADA Streamlining typical sections and methods of design and quantity calculations, as applicable.
4. The CONSULTANT shall prepare detailed temporary erosion control plans for review and approval before inclusion in the final design plans.
5. The CONSULTANT shall prepare computations for all design plan quantities. All plan quantities shall be shown on the Quantity Sheets, and by construction stage, if applicable. The format for these sheets shall be furnished by the COMMISSION. Specialty items may have separate sheets for quantity tabulations.
6. The COMMISSION shall prepare all General Job Special Provisions, which are to supersede the Missouri Standard Specification for Highway Construction. A brief reason for the deviation from the standard plans and specifications should also be provided. The CONSULTANT shall prepare only Job Special Provisions (JSPs) related to design elements shown in the plans. The COMMISSION shall provide any JSPs that are required as a result of right of way acquisition, utility impacts and environmental issues.
7. The CONSULTANT shall prepare for review and approval any design exceptions required for construction of the project.
8. At a minimum, the final design plans shall include:
   1. Title Sheet
   2. Typical Sections
   3. Quantity Sheets – the latest version of the temporary traffic control summary sheet
   4. Plan Sheets at 1”=20’ horizontal (or different scale as determined by MoDOT Project Manager for clarity). Plan sheets shall include all necessary adjustments to signing and proposed pavement marking.
   5. Profile Sheets at 1”=20’ horizontal and 1”=10’ vertical
   6. Reference Points
   7. Coordinate Points
   8. Culvert Sections at 1”=10’, if needed
   9. Special Sheets for geometrics
   10. Temporary Traffic Control Plan Sheets
   11. Erosion Control Sheets
   12. Lighting Plan Sheets, if needed
   13. Signal Plan Sheets, if needed
   14. Signing Plan Sheets, if needed
   15. Pavement Marking Plan Sheets
   16. Earthwork Quantities, Cross Sections at 100’ intervals, 1”=10’ (1:100), horizontal and vertical, including entrance sections with existing and proposed grades
   17. Tabulation of Quantity Sheets
   18. Job Special Provisions in electronic format readable in COMMISSION’s current word processor
   19. File with the bid items and quantities as generated by COMMISSION’s Estimate Program
   20. Equipment and Materials List D-15 – generated from the COMMISSION’s Estimate Program, if applicable
   21. Construction Workday Study
   22. Workzone Impact Analysis Spreadsheet
   23. Traffic Management Plan
   24. Electronic Deliverables as per the EPG
9. 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.

# Construction Support

1. The CONSULTANT shall be available to the COMMISSION to discuss and interpret plans and specifications during the bidding and construction phase of the project as determined necessary by the Engineer.
2. If issues arise during construction, there will be a direct line of communication established between the MoDOT Construction Office and the CONSULTANT. The CONSULTANT will immediately inform the MoDOT Bridge Division of any recommendations or clarifications made to the Construction Office.

# Drawings and Documents

The CONSULTANT shall furnish the COMMISSION with the following completed sheets and documents, as applicable, for the construction project included in this contract, as follows:

1. All mapping, sketches, cross sections and all other engineering documents necessary to secure permits from the administrator of the FEMA Flood Insurance Program (if required) and Section 401 and 404 permits as administered by the United States Army Corps of Engineers (if required).
2. Bridge Deliverables
   1. One (1) legible copy of the final design computations, coordinate geometry data and quantity computations in electronic format (pdf).
   2. 100% complete unsigned and unsealed final bridge design plans in pdf format.
   3. Final bridge design plans. Electronic plans in MicroStation format and signed and sealed plans in pdf format will be submitted electronically.
   4. Electronic plans (in MicroStation format) will be submitted after construction and include all bridge construction changes made to the plans during construction of the project.
   5. Written job special provisions – bridge, as necessary to supplement the latest edition of the Missouri Standard Specifications for Highway Construction.
3. Roadway Deliverables
   1. One (1) electronic copy of the Conceptual Study Report, including exhibits and cost estimate for review and approval. After any corrections, one (1) updated copy of the Conceptual Report, exhibits and cost estimate.
   2. One (1) electronic copy of the preliminary roadway plans, including any signing plans, temporary traffic control plans and preliminary cost estimate for review and approval. The COMMISSION shall prepare the sign details. After any corrections, one (1) updated set of preliminary plans.
   3. One (1) electronic copy of the Right of Way plans, including cross sections and driveway profiles and updated cost estimate for review and approval. After any corrections, one (1) updated set with a sealed title sheet.
   4. One (1) electronic copy of drainage and engineering calculations and analyses.
   5. One (1) electronic copy of the traffic control plans for review and comments. After any corrections, one (1) updated set will be required.
   6. One (1) electronic draft copy of the job special provisions - roadway for review. After corrections, one (1) final sealed copy of the job special provisions shall be furnished. The PS&E submittal will be in word format.
   7. One (1) electronic copy of the unsigned and unsealed roadway plans for initial review and comments. After corrections, one (1) fully checked, signed and sealed, original drawings of the final design plans shall be furnished.
   8. One (1) electronic copy of the estimate of construction costs for the PS&E submittal. The estimate shall be prepared using the latest version of the Commission’s cost estimating software.
   9. One (1) electronic copy of the workday study showing the estimated number of workdays required to construct the project.
   10. One (1) electronic copy of the Transportation Management Plan.
   11. One (1) electronic copy of the D15 Equipment and Materials List (if applicable).
   12. One (1) electronic copy of the D12 District Final Design Plans Checklist.
   13. One (1) electronic copy of the Workzone Impact Analysis Spreadsheet.
   14. One (1) electronic copy of approved Design Exceptions (if applicable).
   15. Floodplain Development Permit (if applicable).

# 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.

1. Federal Emergency Management Administration Flood Insurance Guidelines and Specifications.
2. MoDOT Engineering Policy Guide (EPG)
3. Manual on Uniform Traffic Control Devices (MUTCD)
4. A Policy on Geometric Design of Highways and Streets
5. AASHTO LRFD Bridge Design Specifications
6. Missouri Standard Specifications for Highway Construction
7. Missouri Standard Plans
8. MoDOT Bridge Manual
9. Missouri Department of Transportation for Computer Deliverable Contract Plans
10. Any other publications which the ENGINEER directs the CONSULTANT to use.