



Federal Highway Bridge Program Guidelines for Local Governments



Maryland Department of Transportation
State Highway Administration

FEDERAL HIGHWAY BRIDGE
GUIDELINES FOR LOCAL GOVERNMENTS

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INTRODUCTION

The purpose of this document and associated links and attachments is to provide guidance for the Local Governments (LG) in the development of bridge projects utilizing Federal-Aid funds. This document covers project development from initiation of design through concurrence in award of a construction project. For additional guidance please refer to the following documents:

- Guidance for Local Public Agencies and Sub-Recipients of Federal Funds – this document provides general guidance on utilizing federal funds for transportation projects and details pertinent federal regulations that must be adhered to. [Web Link](#)
- Environmental Documentation for Local Government Projects – this document provides guidance on complying with all environmental regulations. [Web Link](#)

The primary contacts for the LG bridge projects are:

Jeffrey Robert, Office of Structures (OOS), who is responsible for overall coordination of the program and for technical reviews of the contract documents,

Jesse Creel, Office of Structures (OOS), who handles the biennial bridge inspection program,

Jeremy Mondock, Office of Structures (OOS), who handles hydraulic and scour reviews for Allegany, Caroline, Carroll, Cecil, Dorchester, Frederick and Montgomery Counties,

Pawel Mizgalewicz, Office of Structures (OOS), who handles hydraulic and scour reviews for Baltimore City, Baltimore County, Calvert, Charles Prince George's, St. Mary's Talbot and Worcester Counties,

Yibeltal Alene, Office of Structures (OOS), who handles hydraulic and scour reviews for Anne Arundel, Garrett, Harford, Kent, Somerset, Queen Anne's, Washington and Wicomico Counties,

Conan Andrzejewski, Federal Aid Programming Section (FAPS), who handles Programming and Administrative Preliminaries for the projects, and reviews and approves the Plans, Specifications & Estimates (PS&E) packages,

Joseph Kresslein, Environmental Planning Division (EPLD), who handles reviews and approvals of Environmental Documentation,

Lynn Block, Office of Real Estate (ORE), who handles the Certification of Right-of-Way,

Jada Wright, Office of Procurement and Contracts (OPC), who handles the reviews and approvals of the agreements between the local governments and the consultant chosen to perform preliminary engineering for design.

The locations, email addresses, and telephone numbers for these primary contacts are listed on Pages 2-3. On occasion, it may be necessary for the LG to contact District personnel. A link is provided to obtain MDOT SHA's District Offices contact information on Page 3.

The Federal Highway Administration (FHWA), under the Department of Transportation (DOT), is responsible for overseeing the federal-aid highway program. To carry out this role, FHWA reviews and approves the transportation plans and environmental impact assessments, reviews and approves states' property acquisition activities; and enforces a variety of other requirements, such as civil rights laws, by which an LG's accept as a condition of receiving federal-aid funds.

FHWA also oversees the design and construction of federally funded projects. The level of federal oversight for a given project will be determined by FHWA. Projects or portions of project that will be reviewed by FHWA are classified as Projects of Division Interest (PoDI). Projects of Division Interest (PoDIs) are those projects that have an elevated risk, contain elements of higher risk, or present a meaningful opportunity for FHWA involvement to enhance meeting program or project objectives. Annually, FHWA Division Office will identify those projects and will share the PoDI list with SHA and others. Project selection will be risk-based, and stewardship and oversight activities will be directed toward addressing identified risks. This may include retaining certain project approvals or directing stewardship or oversight activities to a specific phase or element of the project.

Most LG projects will be classified under the exempt classification. For exempt projects, FHWA has delegated responsibility for administering the Local Government Bridge Program to MDOT SHA. In that regard, MDOT SHA is responsible for ensuring that Local Government Bridges are inspected on time and Federal dollars are spent appropriately. Regardless of the classification, exempt or PoDI, all contact with the FHWA shall be through MDOT SHA.

STATE HIGHWAY ADMINISTRATION CONTACTS

MDOT SHA Headquarters

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DISTRICT CONTACT INFORMATION

ACRONYMS

ADE-ASSISTANT DISTRICT ENGINEER

ADT-AVERAGE DAILY TRAFFIC

AFALE-ASSISTANT FEDERAL AID LIAISON ENGINEER

BSR – BRIDGE SUFFICIENCY RATING

CE-CATEGORICAL EXCLUSION

CFR – CODE OF FEDERAL REGULATIONS

CID-CONSTRUCTION INSPECTION DIVISION

DE-DISTRICT ENGINEER

DBE-DISADVANTAGED BUSINESS ENTERPRISES

DTE-DISTRICT TRAFFIC ENGINEER

EPLD-ENVIRONMENTAL PLANNING DIVISION

FAPS-FEDERAL AID PROGRAMMING SECTION

FD-FINAL DESIGN (INCLUDES SEMI-FINAL, FINAL, AND PS&E)

FHWA-FEDERAL HIGHWAY ADMINISTRATION

FMIS-FISCAL MANAGEMENT INVENTORY SYSTEM

OHD-OFFICE OF HIGHWAY DEVELOPMENT

IFB-INVITATION FOR BIDS

LG-LOCAL GOVERNMENT(S)

LPA – LOCAL PUBLIC AGENCY

MAP-21 – MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY ACT

NBI – NATIONAL BRIDGE INVENTORY

NBIS – NATIONAL BRIDGE INSPECTION STANDARDS

NHPP-NATIONAL HIGHWAY PERFORMANCE PROGRAM

NHS-NATIONAL HIGHWAY SYSTEM

OOS-OFFICE OF STRUCTURES

OPCM-OFFICE OF PROCUREMENT AND CONTRACT MANAGEMENT

ORE-OFFICE OF REAL ESTATE

PD-PRELIMINARY DESIGN (INCLUDES PI)

PE-PRELIMINARY ENGINEERING (INCLUDES PD & FD)

PI-PRELIMINARY FIELD INVESTIGATION

PCE-PROGRAMMATIC CATEGORICAL EXCLUSION

PS&E-PLANS, SPECIFICATIONS and ESTIMATES

ROW-RIGHT OF WAY (also R/W)

MDOT SHA-STATE HIGHWAY ADMINISTRATION

SIA – STRUCTURAL INVENTORY AND APPRAISAL

SOW-SCOPE OF WORK

SP-SPECIAL PROVISIONS

SPI-SPECIAL PROVISIONS INSERT

STIP-STATE TRANSPORTATION IMPLEMENTATION PROGRAM

SMP-STRUCTURE MANAGEMENT PLAN

STP-SURFACE TRANSPORTATION PROGRAM

TCP-TRAFFIC CONTROL PLAN

TS&L-TYPE, SIZE and LOCATION

FUNDING ELIGIBILITY / STRUCTURE MANAGEMENT PLAN
(NON-NHS BRIDGES)

Since there is a significant shortfall in the federal, state, and local funding available to replace deficient bridges, the use of funding must be focused in order to accomplish the replacement or rehabilitation of the most critical bridges in the most efficient manner possible.

The main factor determining eligibility for funding is the bridge's physical condition. Therefore, it is necessary to have an understanding of how a numerical rating is applied to a bridge in order to understand how funding priority is established.

FHWA requires all public bridge owners (state, city, and county) to inspect their bridges at least on a biennial basis and report information including bridge condition ratings as part of their requirements in the National Bridge Inventory Standards (NBIS).

FHWA Notice of Proposed Rule Making for bridge and pavement performance measurement establishes a bridge rating criterion with three classifications: Good, Fair, and Poor. The classifications are determined as follows.

(1) Good: When the lowest rating of any of the 3 NBI items for a bridge (Items 58—Deck, 59—Superstructure, 60—Substructure) is 7, 8 or 9, the bridge will be classified as Good. When the rating of NBI item for a culvert (Item 62—Culverts) is 7, 8, or 9, the culvert will be classified as Good.

(2) Fair: When the lowest rating of any of the 3 NBI items (Items 58, 59 & 60) for a bridge is 5 or 6, the bridge will be classified as Fair. When the rating of NBI item for a culvert is 5 or 6, the culvert will be classified as Fair.

(3) Poor: When the lowest rating of any of the 3 NBI items (Items 58, 59 & 60) for a bridge is 4, 3, 2, 1, or 0, the bridge will be classified as Poor. When the rating of NBI item for a culvert is 4, 3, 2, 1, or 0, the culvert will be classified as Poor.

Each LG will establish a structure management plan (SMP) that addresses every structure in their inventory with a poor rating (see Attachment A). ~~See Section I-2 for details on completing the SMP. The SMP will include estimated design and replacement / rehabilitation costs per fiscal year, condition rating of the bridge, daily traffic volumes on the bridge, square foot deck area of bridge. The SMP may include structures that are not rated in poor condition, but address maintenance needs that will prolong the life of existing structures and prevent them from becoming classified as poor structures in the foreseeable future. These projects for fair rated bridges will be considered for funding provided the LG's SMP demonstrates from an asset management perspective, they are spending the money on the right project. The planned work for any given State fiscal year and the associated requested federal funds must stay within the LG's yearly federal allotment plus any carryover balance an LG may have.~~

The SMP shall be submitted ~~every~~ by June 15 for review and approval by MDOT SHA for the next fiscal year, which starts every July 1. No project will be programmed for federal funding unless it is on the approved SMP except for emergency situations.

~~If an LG's SMP for a given fiscal year exceeds their allotted balance, the LG may request for additional funding from MDOT SHA. MDOT SHA will consider this type of request when funding allows.~~

MANUAL UPDATES

The Local Government Guidelines may be updated as necessary in order to conform to changes regarding Federal-Aid funding programs and eligibility requirements. **Local agencies are required to comply with all applicable rules, laws, and regulations that may not be up to date in this manual.**

Comments regarding this manual may be sent to Jeffrey Robert at jrobert@sha.state.md.us.

Manual updated on 10/05/2021.

Preliminary section – Update to page number references for Section III, updated Office of Structures Hydraulic Division Contacts, updated acronym list to include AFALE.

Section III – Updated hydraulics section to clarify what is needed for submissions.

Manual updated on 08/17/2022. These changes are shown in red except hyperlink updates.

Preliminary section – Updated page numbers, contacts, and Structural Management Plan requirements.

Section I – Updated entity receiving preliminary paperwork for new project startup. Updated Structural Management requirements.

Section III – Hyperlinks updated. Updated PI and TS&L steps. Updated requirements from physical paper copies to electronic submissions.

Section VI – Hyperlink updated. Forms that have been added or revised have been highlighted in red.

SECTION I – SECTION PROJECT INITIATION

ADMINISTRATIVE PRELIMINARIES

Administrative Preliminaries are the forms and other paperwork that are required to initiate a project under this program. It is requested that all forms be typed. ~~However, for the final administrative preliminaries package to be in order, please e-mail a draft of the paperwork to the FALE first so a review of the form, content and costs can be performed.~~ The following is a list of all the **electronic** paperwork that will need to be submitted:

FOR THE PRELIMINARY ENGINEERING PHASE OF A PROJECT

TO THE OFFICE OF STRUCTURES

- Structure Management Plan (if revisions are necessary)
- Final 25C and location map
- Supplemental Letter to the Master Agreement
- Federal Aid Project Questionnaire
- Form 32L

~~TO THE FEDERAL AID PROGRAMMING SECTION~~

- ~~• Final 25C and location map (electronic copy)~~
- ~~• Supplemental Letter to the Master Agreement (2 originals)~~
- ~~• Federal Aid Project Questionnaire (electronic copy)~~

FOR THE CONSTRUCTION PHASE OF A PROJECT

TO THE OFFICE OF STRUCTURES

- Structure Management Plan (if revisions are necessary)

TO THE FEDERAL AID PROGRAMMING SECTION

- Final 25C and location maps (electronic copy)
- Supplemental Letter to the Master Agreement (2 originals, if not completed for PE phase)
- Federal Aid Project Questionnaire (electronic copy)
- Federal Aid Right of Way Questionnaire (1 original and 1 copy)

STRUCTURE MANAGEMENT PLAN

A Structure Management Plan (see Attachment A) is a complete listing of bridges with a rating of poor. The SMP must be submitted to OOS and approved before any bridge project(s) will be funded. The following phases qualify for these funds:

- Preliminary Engineering
- Right of Way
- Utilities once prior rights have been established
- Construction
- Bridge Inspection Program
- Scour Evaluation and Countermeasure Program
- Painting*
- Bridge Joint Repairs*
- Bridge Deck Overlays*

* These projects may be considered for funding provided there are fewer than 15% of the County bridges rated poor (bridge painting projects are excluded from this restriction).

~~The SMP should be completed using the best known projected start/advertising date and estimated total project costs, broken down to the 80/20 split for Federal funds and LG funds, respectively. The Description should show the bridge number, location and type of project (replacement or rehabilitation). The SMP will be forwarded electronically directly to the OOS for review and approval at a minimum yearly. This yearly submission shall be made in June 15th prior to the start of SHA's fiscal year.~~

~~The SMP will include estimated design and replacement / rehabilitation costs per fiscal year, condition rating of the bridge, daily traffic volumes on the bridge, square foot deck area of bridge. The SMP may include structures that are not rated in poor condition, but address maintenance needs that will prolong the life of existing structures and prevent them from becoming classified as poor structures in the foreseeable future. These projects for fair rated bridges will be considered for funding provided the LG's SMP demonstrates from an asset management perspective, they are spending the money on the right project.~~

~~Federal funding available for both design and construction will continue to be available at an 80 percent federal / 20 percent LG participation split. Based on historical data and anticipated program increases, MDOT SHA is confident in our ability to fund all local government projects. MDOT SHA will also continue to provide A/E contracts to support local government design efforts when requested. New to the program, as part of the Federal Infrastructure Investment and Jobs Act (IIJA), is available funds that are 100 percent federal funds. This funding source is extremely limited and can only fund a few projects each year. Priority for these funds will be given to projects ready for construction. If more projects exist each year than the 100% funding allows, priority will be given to local governments who haven't received these funds in the past and based on the criticality of the bridge to the highway network.~~

~~LG's should identify one bridge that they would like considered for the 100% federal funding in a given fiscal year. The submitted SMP may have multiple projects identified, if the funding requested for the identified structures are in different fiscal years. For the bridges identified,~~

supplemental information should be submitted along with the SMP that provides background about the project(s) and why it should be chosen over other competing projects. Including information about the condition of the bridge, amount of traffic carried and criticality to the roadway network should be discussed.

The SMP shall be submitted by June 15 for review and approval by MDOT SHA for the next fiscal year, which starts every July 1. No project will be programmed for federal funding unless it is on the approved SMP except for emergency situations. Should the LG wish to add a candidate project(s) not presently included on the SMP, or withdraw a project(s), the LG will submit a revised SMP showing those updates plus any revised project costs and ad dates for already established projects.

NOTE: When an electronic copy of the Federal-aid Project Agreement (the obligation of Federal funds for a particular phase of work), is received by the LG, that phase of work shall be deleted from the next submitted SMP. A SMP does not have to be submitted each time a phase of work is deleted.

TRANSPORTATION ASSET MANAGEMENT PLAN (TAMP)

Each State is required to develop a risk-based asset management plan for the National Highway System (NHS) to improve or preserve the condition of the assets and the performance of the system. (23 U.S.C. 119(e)(1), MAP-21 § 1106). Asset management is a strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on engineering and economic analysis based upon quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair (SOGR) over the lifecycle of the assets at minimum practicable cost (23 U.S.C. 101(a)(2)).

The following local governments own and maintain bridges that are on the National Highway System (NHS): Baltimore County, Baltimore City, Montgomery County, Prince George's County and Washington County. MDOT SHA actively works with these counties in the TAMP development. MDOT SHA also monitors the submission of the Counties SMP's to ascertain that poor rated NHS bridges are being addressed.

FORM 32L

The Form 32L (Cost Sharing Agreement) documents that the LG agrees to pay for the costs of services provided by the SHA. These services may include SHA administration and review of projects during preliminary engineering (which includes preliminary and final design); surveys; right-of-way plat preparation and acquisition activities, etc., all at the request of the LG. See Attachment B and the following instructions.

INSTRUCTIONS FOR SHA FORM 32L

1. If a LG wishes to initiate a project, a Form 32L will be required. The LG will submit a request to the OOS describing the requested services (plan review, use of a design consultant, etc.).
2. The request should describe the project including the bridge number, location, etc., provide the name, title, and billing address of the authorized LG representative, typically the director or similar official, and give a detailed description of the requested services.
3. OOS will prepare the Form 32L, including an estimate of the cost of the services, and forward it to the LG for signature by the authorized representative. The LG will return the signed form to OOS for processing.

FORM 25C

The Form 25C (see Attachment C) is used to program federal funds for a project. It will be completed by the LG based upon the most recent and best available information known about the project. Sufficient information shall be provided so that the project can be evaluated for eligibility for federal funds. This will be forwarded, along with a location map, to the FAPS. Should the need for a Design Exception be known, a letter requesting such from the OOS describing the area that falls below SHA approved standards shall accompany the 25C. When received in the FAPS, this package will be forwarded to the OOS and EPLD for review and processing.

FAPS will request EPLD to obtain and update NEPA approval for the Preliminary Engineering (PE) portion of projects in which Federal-Aid for PE will be requested. No environmental approval for the PE phase is required where the PE phase is not to be federally funded. No action is required of the LG, other than notification of the intent to use Federal-aid funds for Construction.

FOR THE PE – PRELIMINARY DESIGN PHASE OF A PROJECT:

When Federal Funds are requested for preliminary engineering work, the LG should fill out the Form 25C and check FINAL in the upper left-hand corner (A Preliminary 25C is not required for the Preliminary Design phase). The requested funds should be preliminary design work only in order to secure NEPA approval for the project. Submit an electronic copy including location map to the FAPS. (Note: State and Federal Contract numbers are set up prior to authorization of Federal Funds). The LG does not have to fill out the Design Data (Section J) on page 2 of the Form 25C.

Once approved by SHA and design funds are authorized by FHWA, the FAPS will forward an electronic copy of the Federal-aid Project Agreement to the LG. State and federal-aid project numbers will be transmitted to the LG at this time.

It must be emphasized that authorized funds are for preliminary design work only. Preliminary design defines the general project location and design concepts. It includes, but is not limited to, preliminary engineering and other activities and analysis, such as environmental assessments, topographic surveys, metes and bounds surveys, geotechnical investigations, hydrologic analysis, hydraulic analysis, utility engineering, traffic studies, financial plans, revenue estimates, hazardous materials assessments, general estimates of the types and quantities of materials, and other work needed to establish parameters for the final design. Prior to completion of the NEPA review process, any such preliminary engineering and other activities and analysis must not materially affect the objective consideration of alternatives in the NEPA review process.

FOR THE PE – FINAL DESIGN PHASE OF A PROJECT:

Once the NEPA document has been approved, the LG will request in writing to the FAPS and OOS that additional design funds be authorized to complete final design. The request should include the amount of additional funding needed and an estimated advertisement date for the project.

Final design means any design activities following preliminary design and expressly includes the preparation of final construction plans and detailed specifications for the performance of construction work.

The FAPS will coordinate with FHWA to authorize the additional funds. Once authorized, the LG will be notified and the Form 32L may be updated as necessary.

FOR THE CONSTRUCTION PHASE OF A PROJECT:

When federal funds are requested for construction, eight weeks prior to advertisement, the LG should fill out and submit the following to the FAPS electronically:

- Form 25C with FINAL checked in the upper left-hand corner.
- Design Data Form (Section J)
- Location Map

When received in the FAPS, the information will be forwarded to the OOS and other pertinent offices for review and comments. The LG will be provided the comments and will be requested to revise the documents and resubmit.

Once approved by SHA and construction funds are authorized by FHWA, the FAPS will forward an electronic copy of the Federal-aid Project Agreement to the LG.

SUPPLEMENTAL LETTER TO THE MASTER AGREEMENT

Each local government entity is a signatory to the Master State/Local Agreement which sets forth the conditions under which the LG would carry out a bridge related project utilizing federal funds. See Attachment D for the list of Master Agreement dates. The Supplemental Letter provides additional data about a specific project. The data to be described in the letter are:

- location of the project,
- the type of improvements to be made, and
- the need for right of way activity.

One of the clauses within the Master Agreement stipulates that the project would be performed in accordance with the regulations, policies, and procedures of the FHWA.

The SHA's Office of Counsel requires that all Supplemental Letters comply with Section 2(a) of the Master Agreement. Supplemental Letters must contain a statement on Right-of-Way which includes the appropriate language pursuant to Section 2(a)(1), 2(a)(2), or 2(a)(3), of the Master Agreement. Sections 2(a)(1), 2(a)(2), and 2(a)(3), shall be edited to reference the FAPG. If Section 2(a)(1) is used, the reference on page 3, line 3 of the Master Agreement is to be edited to read "Federal Aid Policy Guide, Part 710, Sec. 710.205". Every project is required to have ~~two~~ ~~(2)~~ ~~an~~ original Supplemental Letters signed by the Director of Public Works or position of equal authority (see Attachment E set up in generic fashion). The LG shall submit the letters to the FAPS as part of the Administrative Preliminaries package.

Federal Aid Project Questionnaire

Attached to each original Supplemental Letter will be a copy of the Federal Aid Project Questionnaire with the respective sections marked with an X (see Attachment F). As with the 25C, this should be completed in full, based upon the most recent and best available information.

The Supplemental Letter package will be forwarded to the FAPS. When approved, an original is returned to the LG for the project file.

Should the LG request that Federal Funds be used to purchase Right of Way in conjunction with a Construction project, then the LG will contact the ORE at SHA Headquarters and the District ORE for assistance necessary to get the acquisition process under way.

Federal Aid Right-of-Way Questionnaire

To complete the list of required forms is the Federal Aid ROW Questionnaire (see blank copy). As with the other forms, it will be completed using the best and latest information available and signed by the Director of Public Works or position of equal authority (see Attachment G).

SECTION II – RIGHT-OF-WAY

A detailed explanation of the Federal acquisition requirements is beyond the scope of this book. The major points of the Federal policies to be followed for right-of-way acquisitions can be summarized as follows:

Right of Way

When Federal funds are used in any phase of a project, any property acquired for that project must be acquired following the Federal policies for right-of-way acquisition as authorized under the Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and as codified in 49 CFR, Part 24 and 23 CFR Part 710.

The right-of-way can be more than just the property over which the project is constructed. Land used for water drainage, land entered upon to adjust the terrain slopes, land used during the construction period to store equipment or supplies, even restrictions placed on nearby properties due to project requirements can all be a part of the right-of-way for a project.

Property acquisitions can be in a form other than fee simple acquisitions. Property acquisitions can include perpetual easements, revertible easements and temporary easements. All of the above are acquisitions of less than the complete fee simple rights.

In addition, property acquisition can include limitations placed on a property, such as denial of vehicular access to enter the road, either over certain areas or along the entire property.

Any property or property rights not owned at the start of the project by the agency advertising the project will be part of the right-of-way needed for the project. Any property or property rights acquired for the project after first requesting federal funding assistance for the project will also be included as right-of-way acquired for the project.

Acquisition Procedures

A. Activities when Federal funds are used to acquire right-of-way

In most cases Federal funds are used to construct the project but are not used to acquire the right-of-way. If Federal funds **are** used to acquire right-of-way there are several additional preliminary and ending steps, as follows (if federal funds are used in any part of the project, then the MDOT SHA, Office of Real Estate, Operational Guidelines Manual must be followed):

- 1) Pre-acquisition steps – Before beginning activity to acquire any property or property rights the acquiring Local Government (LG) must supply a cost estimate for the right-of-way acquisition and must work with the Maryland State Highway Administration (SHA) to complete the documents required to satisfy the National Environmental Policy Act (NEPA). With that information, the SHA's Office of Real Estate (ORE) can then prepare

the documents to request Federal Highway Administration (FHWA) approval to begin the acquisition process. Until Federal approval is received, no acquisition activities may take place.

- 2) Post-acquisition steps – Upon completion of the acquisition process and prior to the LG requesting reimbursement from the FHWA for the eligible acquisition costs the ORE will make a detailed review of the LG's acquisition activities and payments to ensure they have followed Federal procedures.

B. Conditions for start of Acquisitions

When Federal funds are not used to acquire right-of-way, or when they are and the preliminary steps in Section A above have been completed, the acquisition process can be initiated.

While the Federal acquisition regulations require the NEPA study be completed before acquisition activities can be started, the Maryland Division of FHWA has determined that if no Federal funds are used in the property acquisition, a Local Government (LG), may acquire property before the NEPA study, provided they understand these two caveats:

- 1) The LG may never go back to the FHWA to request Federal funding participation in any property acquisition for this project.
- 2) The LG is acquiring the properties at their own risk. Should any appeal or legal action result from the LG's acquisition process the LG will not be eligible for any FHWA support or resources to conclude the issue.
- 3) Any property acquired must be done in accordance with the MDOT SHA Office of Real Estate, Operational Guidelines Manual.

C. Acquisition Activities for any Federally funded project

Before any offer to acquire property may be made an appraisal of the land to be acquired must be completed, by a qualified appraiser. Additionally, a second appraiser or a qualified LG employee must review the appraisal. It is this review of the appraisal that determines just compensation. In addition, the appraiser must offer the property owners the chance to accompany him when he inspects the property.

It is important that the appraiser and the reviewing appraiser be separate and independent of each other, and that the acquisition officer also be independent of the appraisers. The review appraiser should establish the fair market value to be offered the property owner.

After the appraisal is reviewed, and accepted by the LG, an offer to acquire the property may be made. This offer may be made in person, by telephone or by mail. However, the offer is made, a written letter of offer, a copy of the plan or plat showing the acquisition needed, a written summary of the various components of the offer, and the deed, option contract, deed of easement or other document required to finalize the property acquisition must all be presented to the property owner.

Federal procedures require that the offer be made in the full amount of the approved appraisal.

After the first offer the acquiring LG must keep in communication with the property owner, attempting to resolve any concerns or issues the property owner may have. It is a goal of the Federal regulations to support efforts to reach an amicable settlement with the property owner, and the LG must make all reasonable efforts to negotiate a settlement with the property owner.

Upon reaching an agreement with the owners, the LG shall have the property owner sign the appropriate document of transfer, and the LG must also approve the document. This document must give the constructing LG the right to build, use and maintain the improvement. The subject property may not be used for construction until the property owners have been compensated for the acquisition. A right of entry is not considered to be adequate rights for the construction, operation and maintenance of a project.

D. Record Keeping

Acquiring LGs are required to keep complete and accurate records of their acquisition activities. In addition to maintaining all letters and documents sent and received concerning the acquisition, the LG is required to keep a log of the pertinent acquisitions contacts, referred to as the Negotiator's Record. This should list all pertinent contacts, the date of the contact, who the other party is, the format of the contact (letter, phone call, etc.) and any key points of the negotiating process that were discussed.

Included with the Negotiator's Record should be a Negotiators Certificate, signed by both the negotiator and his supervisor. The Negotiator's Certificate should be very close to the following:

- 1) The written agreement embodies all of the considerations agreed upon between the negotiator, acting on behalf of the (your agency) and the property owner(s).
- 2) The agreement was reached without coercion, promises other than those shown in the agreement, or threats of any kind whatsoever by or to either party. And that the findings, notations, and recommendations represent my best judgment.
- 3) The parcel(s) herein agreed to be conveyed are being secured for use in connection with a Federal-Aid project.
- 4) I have no direct or indirect present or contemplated future personal interest in the parcel(s) or in any benefit from the acquisition of such property.
- 5) I did not make an appraisal of this property, and I was not a Reviewing Appraiser of same.

All records must be maintained for at least three years after the closing of the project.

Certification

Upon completion of the acquisition process a representative of the ORE must review the acquiring LG's acquisition activities and records to determine that Federal procedures have been complied with.

Upon completion of a successful review of the acquisition process the ORE will prepare a letter certifying that the right-of-way is cleared, allowing the LG to bid and award the contract to construct the project.

Conditional Certification

It is possible for the LG to advertise for bids to construct the project before all right-of-way has been acquired. To do this the LG must have made offers to acquire all properties, and the ORE must review the acquisition process up to that point.

In addition, the ORE must be satisfied that the negotiations have reached a point that a successful conclusion is imminent.

When the above has been resolved to the satisfaction of the SHA, the ORE will issue a limited certification letter, allowing the LG to advertise for bids to construct the project, but NOT to issue a Notice to Proceed.

Before the winning bid can be awarded the LG must complete the right-of-way process and the ORE must review the completed right-of-way process and prepare the letter certifying that the right-of-way is cleared and that a Notice to Proceed may be issued.

Federal certification procedures for right-of-way can be found in 23 CFR 635.309(c).

Donations of Needed Properties

It is permissible for the LG to request that the property owners donate the rights-of-way required to complete the project. In these cases, the property owners MUST be informed that they have the right to be compensated for any use of their property, and by donating their property they are waiving their right to compensation for this project. This process is clarified in 49 CFR 24.105 and 23 CFR 710.505.

As it is the goal of the Federal acquisition procedures to assure that all property owners are treated fairly and equally, LGs should be very cautious about asking property owners to donate their property. Donations should also follow the requirements in 23 CFR 710.501 if applicable.

Appraisal Waiver and Other Exceptions

There are two exceptions to the above procedures that may be allowed if the acquiring LG demonstrates the ability to do so.

- 1) If the value of the acquisition is under \$25,000.00 and the appraisal process is simple, a full appraisal may not be required. A less complicated determination, an appraisal waiver,

may be used. This requires that the acquiring LG have available a person to do the appraisal waiver who is qualified to appraise and who has a clear understanding of property values in the project area.

- 2) Again, if the value of the acquisition is under \$25,000.00 and the appraisal process is simple it may be possible for the appraiser to also negotiate the acquisition. This splitting of responsibilities is considered necessary because the appraiser is charged with creating as accurate a property value as possible and defending that value, changing it only when facts determine the value is no longer accurate, while the negotiator is charged with protecting the rights and interests of both the citizens of his jurisdiction and the individual property owners.

This exception to the Federal procedures may be allowed only if the acquiring LG can prove the potential appraiser/negotiator has the appraisal experience needed to value the property, the negotiating expertise to handle complex negotiations and a clear understanding of the responsibilities of each position. When this process is used, the MDOT SHA, Office of Real Estate, Operational Guidelines Manual, must be followed.

Relocation Assistance

If, as a result of the project, a property owner is displaced from his home, business or farm, or his ability to use and enjoy his home, business or farm is restricted, it may be necessary to relocate the property owner to a new home, business or farm, or move personal property from the site. In this case it is necessary for the acquiring LG to assist the owner in locating and moving to the new location, and to compensate the owner for the cost of the relocation.

This Relocation Assistance process is more complex than can be summarized in this document. If your LG is required to supply Relocation Assistance, or if there is any question as to the need for Relocation Assistance, please contact the State Highway Administration at the number below. The LG should not attempt to handle a Relocation Assistance situation without seeking guidance from the SHA, Office of Real Estate. The complexities of 49 CFR Part 24 should only be performed by experienced staff.

For more information on any aspect of right of way or property acquisition contact the Maryland State Highway Administrations, Office of Real Estate, Local Government coordinator at (410-545-0353) or toll-free 1-888-204-4245.

SECTION III – CONTRACT DOCUMENT DEVELOPMENT

The contract document development portion of a project is broken into several distinct phases. The LG should not start any phase until the preceding phase has been approved. The three (3) phases are: **Preliminary Design**, which is generally defined as the level of design necessary to establish the TS&L for the bridge, determine environmental impacts and minimization or mitigation of impacts, and to complete the environmental document required for the Final Design, Right of Way or Construction Phase; **Final Design**, which includes the PS&E review; and **Construction** which includes advertising, bid opening and concurrence in award.

In addition to the general guidance provide in this document, please refer to the [Environmental Documentation for Local Government Projects](#) and the [Accessibility Policy & Guidelines for Pedestrian Facilities along State Highways](#) for additional guidance to see in more detail what is required before proceeding to each phase. These documents can be found at the following location.

PE - PRELIMINARY DESIGN PHASE

Preliminary design defines the general project location and design concepts. It includes, but is not limited to, preliminary engineering and other activities and analyses, such as environmental assessments, topographic surveys, metes and bounds surveys, geotechnical investigations, hydrologic analysis, hydraulic analysis, TS&L (for bridge projects), utility engineering, traffic studies, financial plans, revenue estimates, hazardous materials assessments, general estimates of the types and quantities of materials, and other work needed to establish parameters for the final design. Prior to completion of the NEPA review process, any such preliminary engineering and other activities and analyses must not materially affect the objective consideration of alternatives in the NEPA review process. All alternatives will be fairly considered in the NEPA process. For additional details, please refer to [FHWA Order 6640.1A](#).

The preliminary design phase is complete once the NEPA document is approved with a selected alternative. Please note that federal funds will be jeopardized if final design work starts prior to receiving the proper federal authorizations.

Preliminary Investigation

The complexity of the bridge project will govern whether a Preliminary Field Investigation (PI) will be necessary **and whether it should take place before or after the TS&L review**. The need for a PI **and when it will take place** should be discussed with the OOS Project ~~Engineer~~ liaison. If the PI is necessary, the LG will determine when they have sufficient information to hold the meeting at the project site. When the Plans are approximately 20-40 percent complete, the LG will contact the OOS to establish a date and time for the meeting. The OOS will also provide the LG with the names and addresses of the SHA people who should be invited to the meeting. The LG can then prepare a notice (see Attachment H) which shall include the date, time, and location of the PI and a copy of the following:

- a. Title sheet with location map, design speed and traffic data
- b. Roadway plan and profile sheets
- c. Typical roadway section
- d. Preliminary bridge plans
- e. Proposed traffic control plan

All parties involved with the project will receive a copy of the notice and the Plans **electronically from the LG**. Other attendees may be invited as appropriate. ~~If the LG so desires, copies of the notice and plans can be provided to the OOS for distribution to SHA personnel.~~

Following the PI, the LG will prepare the PI Report (see Attachment I). The report shall consist of the comments and suggestions provided by the attendees and the decisions agreed to. The report should include the following basic information:

- a. Date, time and location of PI
- b. Names of attendees and agency they represent
- c. Any agency not present offering comments

- d. Project description
- e. Constructability Issues
- f. Permit and Environmental information
- g. Right of Way
- h. Traffic control concepts and approved scheme
- i. Utilities
- j. Bridge widths-lane widths
- k. Structural, geometric and/or design elements that will fall below SHA approved standards

As no two projects are alike, the guidelines for the report may be modified to suit individual projects. At the end of the report, a representative of the LG shall sign the report indicating concurrence.

Bridge Type, Size and Location (TS&L) Review

~~Following SHA approval of the PI Report (if required), it is then necessary for~~ The LG is required to submit the Type, Size and Location (TS&L) plan review to SHA's Office of Structures for the candidate bridge when the plans are at least 20% developed. This submission will include all comments and revisions resulting from the PI (if held) and the plans will contain the following basic information in addition to that submitted with the PI:

Design Data

- Present and Future ADT
- Design Speed
- All Design Standards

Maintenance of Traffic

- Detour Plan or
- Bridge Stages of Construction

Approach Roadway

- Existing and Proposed Typical Sections
- Roadway Plan

Bridge General Plan and Elevation

- Existing and Proposed Structures
- Existing Utilities and their Disposition
- Stream Invert and Normal Water Surface Elevations at Structure
- Water Surface Elevations for 10-year storm, 25-year storm, design year storm, etc.
- Existing and Proposed Clearances
- Span Lengths

Bridge Typical Section

- Lane, shoulder, sidewalk, barrier, etc. widths
- Proposed fencing or railing
- Type of superstructure, span lengths, and spacing of elements

- Type of Crash Tested Barrier

Bridge Substructure

- Typical Sections of Abutment and Pier

The LG will forward one ~~full size and 5 half size sets~~ **electronic set** of the TS&L plans to their OOS liaison along with a cover letter requesting that a TS&L review meeting be set up. The OOS liaison will establish a meeting time for the OOS senior leadership team to perform the TS&L review. The LG representative is expected to attend the meeting and present a brief background of the project and the proposed work. The discussion should include alternates that were investigated. The LG may elect to have the design consultant present for the meeting and make the presentation on behalf of the LG. If there is extensive approach roadway work within the project, the OOS will invite SHA's Highway Design Division (HDD) to attend the meeting. For typical projects, the LG will leave the meeting with an approved TS&L review. Following the review meeting, the LG will send minutes of the meeting to the OOS documenting all the comments made at the meeting along with the LG's planned resolution to the comments. The letter should state the agreed upon bridge type, size (length and width) and location. Lastly, there should be a signature block for approval by the Director, OOS.

Bridge Scour and Foundation Review

Following OOS's approval of the TS&L, it is then necessary for the LG to prepare a Scour and Foundation Review submittal for the candidate project. SHA policy requires that a scour evaluation be performed for any bridge over a waterway that will be rehabilitated or replaced with Federal or State funds. Box culverts and other structures with paved bottoms do not require a scour evaluation. The review will contain the following basic information in addition to that submitted for the TS&L:

Boring and Drive Tests

- Boring Location Plan
- Boring(s) at each foundation element and in the channel
- Borings plotted with the following information:
 1. Elevation of ground surface
 2. Bottom of Footing Elevations or
 3. Pile Tip Elevations
 4. Datum Elevation

Foundation/Scour Report

- Recommended foundation type
- Type of pile, if applicable
- Allowable bearing pressure or
- Pile capacity
- Depth of scour
- Specialized construction methods (if applicable)
- Proposed dewatering method (if applicable)

Chapter 11 of the OOS Manual of Hydrologic and Hydraulic Design provides detailed policies and procedures regarding the scour evaluation process and the design of scour countermeasures. The Manual is available online at <http://www.gishydro.eng.umd.edu/>. The LG is to use the latest version of the Manual and associated computer programs in the conduct of the scour evaluation. Studies in support of the scour evaluation include:

- Hydrology Report – the report must include the analyses of peak flows for both existing and ultimate land uses. The higher of the two is to be used for scour analysis.
- Geomorphology Study – The study must determine the long-term bed degradation (or aggradation, if applicable) rate for the bridge downstream reach.
- Hydraulics Study Report – submitted with a digital copy of the HEC-RAS model and a digital copy of the ABSCOUR analysis.

The scope and content of these studies as well as the scour evaluation study itself should be comparable to the studies prepared by the OOS. For certain types of projects, such as rehabilitation projects, or for particular bridge crossing conditions, a scour assessment as compared to a scour evaluation may be appropriate (See Chapter 11 of the OOS Manual of Hydrologic and Hydraulic Design). The LG is encouraged to meet with OOS personnel prior to commencement of detailed studies to discuss formation of an interdisciplinary team and to define the scope of studies necessary for the scour assessment or evaluation.

The LG will forward ~~two~~ (2) an electronic set of the Scour and Foundation Review submittal along with a cover letter to the OOS requesting review and comments. After completing the review, the OOS will send a letter to the LG noting that the OOS reviewed and provided comments/approval of the Scour and Foundation submittal. The OOS may also note at this time that the LG may proceed with the Structural Review provided that the Scour and Foundation Review comments are addressed. Under no circumstances should the LG proceed to Structural Review, prior to receiving Foundation/Scour approval.

Design Exception

All Federal-aid bridge projects are to be designed and constructed in a manner that meets American Association of State Highway Transportation Officials (AASHTO) criteria and approved State standards. However, Design Exceptions will be considered on a case-by-case basis. A list of the design elements requiring design exceptions is below. As early in the PE process as possible, the LG shall make a formal submission to OOS supporting their request for a design exception. The request must include the following information:

Description of Existing Bridge

- Owner
- Route Name
- Crossing
- Type of Structure/Age/Length
- Horizontal/Vertical Clearance (On and Under)
- Condition/Weight Limit

- Who is served by the bridge?
- Is the bridge historic?

Proposed Project

- Description of Purpose and Need
- Description of Proposed Improvements
- Public Input (including emergency services, schools, etc.)
- Increase in Load Capacity if Bridge Remains Posted (Will school buses, emergency vehicles, small trucks, etc. be able to use the bridge?)
- Proposed Bridge Railing (Crash-Tested?)
- Proposed Retrofit of Fracture Critical Elements
- A Description of the Exception
 - The design element(s) that does not meet the standard
 - The minimum applicable standard for that feature
 - The proposed value of the substandard feature
 - The exact location of the substandard feature
 - The approximate cost of providing full standards
 - Compatibility with adjacent sections of roadway
- Safety Information
 - Traffic Data (Present and future)
 - Three years' accident data
 - The statewide accident rates for that class of highway, if available
 - A narrative containing an analysis of the accident data
 - Approach roadway geometrics
 - Detour route length
- A description of the extenuating circumstances that led to the conclusion that the substandard feature is acceptable. This description should address the following items:
 - The reason(s) the standard is not being met
 - Any future improvements that are planned for the route
 - The environmental impact(s) of providing full standards
 - The ROW impact(s) of providing full standards if any
 - The effect that substandard feature contributed to the accident history
 - Any social impact(s) of providing full standards
 - The additional cost of providing full standards.
 - The anticipated effect that the substandard feature will have on the safety and operation of the facility
 - The amount that the existing substandard feature is being improved.
 - Support of or opposition to the substandard feature by the community, emergency service providers, etc.
- A description of the mitigating measures that were incorporated into the project plans to compensate for the substandard feature.

ITEMS THAT REQUIRE A DESIGN EXCEPTION IF THE APPLICABLE CONTROLLING CRITERIA IS NOT MET

For design speeds \geq 50 mph on the NHS.

1. Design Speed
2. Lane Width
3. Shoulder Width
4. Structural Capacity
5. Horizontal Curve Radius
6. Grades - Maximum
7. Stopping Sight Distance
8. Cross Slope
9. Super-elevation Rate
10. Vertical Clearance

For design speeds < 50 mph on the NHS.

1. Design Speed
2. Structural Capacity

All design deficiencies of the above criteria must be addressed, and the design revised to meet the minimum design criteria or receive design exception or waiver approval from an approving authority. Design exceptions are subject to approval by FHWA, or on behalf of FHWA if a State transportation agency has assumed the responsibility through a Stewardship and Oversight agreement, for projects on the NHS. Design exception approval is not delegated to local governments. Local Government should submit a design exception request to MDOT SHA's Office of Highway Development based on MDOT SHA's design criteria for approval.

All design deficiencies cited for non-controlling criteria should be addressed to meet minimum design criteria, but do not require a formal design exception. If the design cannot be revised to meet minimum design criteria, the non-controlling criteria must be addressed and documented in accordance with the LPA's/State's procedures.

Value Engineering

In accordance with MAP-21 legislation, the following *projects* that are or will be using Federal-aid highway funding (as listed at <https://www.fhwa.dot.gov/federalaid/projects.cfm>) for one or more of the environment (planning/preliminary design pre-NEPA), design (final design post-NEPA), right of way, utilities or construction phases will require a Value Engineering (VE) analysis:

- a. Projects on the NHS with estimated *total project cost* is \$50 million or more;
- b. Bridge projects (includes any project where the primary purpose is to construct, reconstruct, rehabilitate, resurface or restore a bridge) on the NHS where the *total project cost* is \$40 million or more;
- c. *Major Projects* located on or off the NHS;
- d. Any project for which a VE analysis has not been conducted and a change is made to the project's scope or design between the final design and construction letting (bid opening) which results in an increase in the *total project cost* exceeding the aforementioned thresholds; and
- e. Any other project that FHWA determines to be appropriate that utilizes Federal-aid highway program funding.

Project means any undertaking eligible for assistance under Title 23, United States Code. The limits of a project are defined as the logical termini in the environmental document and may consist of several contracts, or phases of a project or contract, which may be implemented over several years.

Total project cost is the estimated cost of all work to be conducted on a project including environment (planning/preliminary design), design, right-of-way, utilities and construction phases.

Major Project means any *project* with an estimated *total cost* of \$500,000,000 or more as defined in 23 U.S.C. 106(h).

An additional VE analysis is not required if, after conducting the required VE analysis, the project is subsequently split into smaller projects in the design phase or if the project is programmed to be completed by the letting of multiple construction projects. The requirement to perform a VE analysis on a larger project; whose *total project cost* meets the thresholds above, may *not* be avoided by dividing it into smaller projects.

If Federal-aid highway funding is anticipated to be used on any of the phases in the future, it is recommended that a VE analysis be conducted if the *total project cost* is likely to meet the aforementioned thresholds.

For additional information on Value Engineering, please refer to the frequently asked questions on FHWA website: [FAQ](#). For qualifying projects, please see your SHA representative for additional guidance.

Accelerated Bridge Construction (ABC)

The Federal Highway Administration (FHWA) as part of their Every Day Counts Initiative has been actively promoting the advantages of ABC. Proven benefits include minimized traffic disruption, improved work zone safety, and reduced on-site environmental impacts. Local governments are encouraged to explore ABC alternatives as part of their bridge projects. Some of the major ABC technologies with widespread use are listed below. For more information on the Every Day Counts Initiative, refer to www.fhwa.dot.gov/everydaycounts.

Prefabricated Bridge Elements

Prefabricated bridge elements are a commonly used ABC method and can be incorporated into most bridge projects as a form of accelerated construction. Concrete bridge elements are prefabricated, transported to the construction site, placed in the final location, and tied into the structure. An entire bridge can be composed of prefabricated elements, or single bridge elements can be prefabricated as the need arises. Prefabricated bridge elements can also be used in combination with other accelerated bridge construction methods.

Prefabricated bridge elements are used to mitigate the on-site time required for concrete forming, rebar tying and concrete curing, saving weeks to months of construction time. Deck beam elements eliminate conventional onsite deck forming activities. To reduce onsite deck forming operations, deck beam elements are typically placed in an abutting manner. Prefabricated elements are often of higher quality than conventional field-constructed elements, because the concrete is cast and cured in a controlled environment. The elements are often connected using high strength grout, and post-tensioning or pretensioning.

Geosynthetic Reinforced Soil-Integrated Bridge Systems (GRS-IBS)

Geosynthetic Reinforced Soil-Integrated Bridge Systems (GRS-IBS) are composed of two main components: Geosynthetic Reinforced Soil (GRS) and Integrated Bridge Systems (IBS). GRS is an engineered fill of closely spaced alternating layers of compacted fill and geosynthetic reinforcement that eliminates the need for traditional concrete abutments. IBS is a quickly built, potentially cost-effective method of bridge support that blends the roadway into the superstructure using GRS technology. This integration system creates a transition area that allows for uniform settlement between the bridge substructure and the roadway approach, alleviating the “bump at the bridge” problem caused from uneven settlement. The result of this system is a smoother bridge approach.

Bridge Slides (Slide-in Bridge Construction)

Bridge placement using lateral sliding is another type of ABC where the entire superstructure is constructed in a temporary location and is moved into place over a night or weekend. This method is typically used for a bridge superstructure replacement of a primary roadway where the new superstructure is constructed on temporary supports adjacent and parallel to the bridge being replaced. Once the superstructure is fully constructed, the existing bridge superstructure is demolished, and the new bridge superstructure is moved transversely into place. In some instances, a more complicated method known as a bridge launch has been used, which involves longitudinally moving a bridge into place.

Self-Propelled Modular Transporters (SPMT’s)

SPMTs are remote-controlled, self-leveling (each axle has its own hydraulic cylinder), multi-axle platform vehicles capable of transporting several thousand tons of weight. SPMTs have the ability to move laterally, rotate 360° with carousel steering, and typically have a jack stroke of 18 to 24 inches. They have traditionally been used to move heavy equipment that is too large for standard trucks to carry. SPMT allow a bridge or portions of a bridge such as the superstructure to be built away from the site at a nearby location such as roadway median without disruption of traffic. Once complete, the old bridge can be removed, and the new bridge installed over night with a short full closure of the roadway.

PE- FINAL DESIGN PHASE

Note: The NEPA process must be completed prior to proceeding to final design (if federal funds are being used to pay for any design phase of the project).

Structural Review

Final design means any design activities following preliminary design and expressly includes the preparation of final construction plans and detailed specifications for the performance of construction work.

After MDOT SHA approval of the Scour and Foundation Review submittal and with the Environmental NEPA document approved, the LG shall submit the Structural Review for the project. The Structural Review will have plans (roadway and structure) developed to at least 80%.

The LG will forward ~~two (2)~~ **an electronic set** of the Structural Review submittal along with a cover letter to the OOS requesting review and comments. After completing the review, the OOS will send a letter and marked-up set of plans to the LG noting that the OOS reviewed the Structural Review plans which are approved subject to the attached comments.

At this review stage, the LG needs only to submit a list of the OOS Structural Details which are to be used on this project. If requested by the LG (or consultant), the OOS will provide the Structural Detail Plates on a reproducible sheet with the LG's border, title block, etc.

To expedite the review process, a combined Structural/Final Review may be requested.

Final Review

After the approval of the TS&L, Scour, Foundation and Structural Review submittals (with the Plans 90 percent complete), it will then be necessary for the LG to hold the required Final Review Meeting. The LG will arrange the Final Review Meeting with the OOS in the same manner as the PI. The LG will prepare a notice (see Attachment J) to include the date, time and location for the Final Review Meeting. All parties involved with the project should receive a copy of the notice and the Final Review Package consisting of a complete **electronic** set of the Final Review Plans, Special Provisions and Cost Estimates.

A list of SHA standard Special Provisions (SP's) and Special Provisions Inserts (SPI's) may be substituted for the actual provisions as long as no modifications are required. Please note the following FHWA special requirements (for more detailed information please refer to the Code of Federal Regulations, section 635, Subpart D).

- **Buy America** is a requirement applied to all contracts eligible for assistance under the scope of NEPA if Federal-aid funds were obligated after October 1, 2012 for any project (by contract or agreement) under the approved NEPA document. Projects located on highways classified as local roads and rural minor collectors; transportation enhancement projects; and non-highway construction are also covered by these requirements. The regulations require a domestic manufacturing process for all steel or iron products that are permanently incorporated in funded Federal-aid highway construction project. Please refer to MDOT SHA's federal proposal form packet (to be included with the project specifications) for more details.

Proprietary or patented products is defined as a product, specification, or process that has a premium or royalty cost associated with its value or use. By requiring a sole source or exclusively using a trade name product within the specifications, product competition is eliminated. FHWA no longer prohibits the use of proprietary projects. MDOT SHA's Office of Structures practice is to limit the use of proprietary or patented products when necessary for synchronization with existing facilities or there is no equally suitable alternative that can provide the aesthetics, function or logistics for the project. MDOT SHA encourages the local governments to adopt a similar practice.

All aspects of the project will be discussed at the final review meeting including, but not limited to, Maintenance of Traffic, Utilities, Constructability, ROW, Design Exceptions (if any), Permits, Environmental issues, Liquidated Damages, Working Days/Calendar Date, etc.

This Final Review meeting will ultimately assist the LG in preparing the PS&E for the project as the PS&E review is the final submission prior to FHWA's authorization of funds (Federal-aid Project Agreement). About this time, the Final 25C shall be submitted.

Following the Final Review Meeting, the LG will prepare the Final Review Report (see Attachment K). The report shall include the date, time and location of the meeting, those in attendance and whom they represent and a list of comments and recommendations from same. The report shall also include comments from the parties not in attendance at the Final Review. At the end of the report, a representative of the LG shall sign the report or provide a cover letter indicating that the LG concurs with the information and decisions in the report. There should be a signature block for approval by Director, OOS. The report will be forwarded to the OOS for review and approval. The OOS will return an approved copy of the report to the LG. All attendees and all those who provided comments outside the SHA should be provided a copy of the approved report by the LG.

As part of the PS&E package, the LG must submit a request for a Disadvantaged/Minority Business Enterprises (DBE/MBE) goal. It is recommended that at Final Review time, the LG submit the latest Engineer's Estimate to the FAPS who will forward same to MDOT SHA's MBE Administrator, Office of Construction, for a recommendation of the DBE/MBE goal as determined by the Procurement Review Group.

Plans, Specifications and Estimates (PS&E) Review

The PS&E is the final submission of the design phase. The PS&E documents must be 100 percent complete. The Invitation for Bids (IFB) must contain all the necessary information and documentation for MDOT SHA to perform a full review. Estimates shall be checked by the LG to avoid possible typographical errors and to assure that the Schedule of Prices pages are correct in relation to Item Numbers, Quantities and the Description of Items.

When the above conditions have been met, the LG will submit ~~three (3)~~ **one electronic sets** of the PS&E, and a copy of the Certification of Environmental Permits (see Attachment L), the Traffic Control Plan approval letter from the District Traffic Engineer, the Utilities Statement (see sample, Attachment M1) and Utility Certification (see sample, ATTACHMENT M2), along with a cover letter from the LG project engineer to the FAPS.

The SHA will withhold permission to advertise the LG's project until the FAPS has received a right-of-way certification from the SHA's ORE. Also, the SHA will not allow the opening of the bids unless all the environmental permits and agreements are in hand.

The AFALE will ~~retain a set and~~ forward ~~the remaining two (2)~~ **a set s** to the OOS (and HDD, if necessary) along with a cover letter requesting review and comments. The AFALE will then perform a thorough review of the PS&E and prepare a list of those areas and items that require revisions or corrections. Also, to keep track of the documentation being generated by all parties,

the AFALE uses a PS&E checklist. This checklist (see Attachment N) provides the AFALE the minimum amount of areas to be reviewed. In the interim, the OOS and HDD are preparing their own lists of areas that require corrections. When all reviews are complete, the AFALE will consolidate all comments. This list will be mailed to the LG and/or Consultant.

All minor comments will be corrected by the AFALE. If the comments are of a substantial nature, the PS&E will be returned to the LG for revision. Once the revisions are made, the LG will contact the AFALE for arrangements to submit the revised PS&E. If the resubmittal is made within a reasonable time frame, and, if additional minor changes become necessary, the AFALE will make those corrections. When the PS&E package is approved by the AFALE, the AFALE will prepare a letter of authorization request for Federal funds, together with a Fiscal Management Inventory System (FMIS) Report and forward same to the FHWA for approval of funds. The Federal-aid Project Agreement which authorizes Federal funds is then issued.

Quality Assurance Review

Local Governments shall develop a policy for a quality assurance (QA) review of all contract documents. A good QA program is a deliberate and systematic approach to reduce the risk of introducing errors and omissions into a design. A useful resource for developing a QA program is AASHTO's Guide to Quality in Preconstruction Engineering.

The level and complexity of a quality review by the local government to a given bridge should be tempered by the size, complexity, and degree of redundancy in the Structural system involved. For major projects involving unusual, complex, and innovative features, an independent design consultant review may be desirable to raise the level of confidence in the quality of design and construction. An LG may use consultants presently under open-end contracts with SHA in order to perform this review.

At the very least, the LG shall have an established contract document checklist to perform an independent review of the contract documents. SHA's Office of Structures has developed plan review checklist available for use in performing these reviews, which will be provided upon request.

Federal-Aid Project Agreement

The Federal-Aid Project Agreement (see example, Attachment O) is the official FHWA document granting authorization to proceed. When ready, the FHWA will forward the Federal-aid Project Agreement to the FAPS. The AFALE will then contact the LG and give permission to advertise the project. The LG will then proceed to advertise the project. Any actions affecting the PS&E after approval but before bid opening shall be by approved addendum. Please contact the AFALE for instructions.

CONSTRUCTION PHASE

Advertising

Advertising guidelines can be found on the eMaryland Marketplace website at www.eMarylandMarketplace.com.

Bid Opening

Following the LG's permission to advertise, the LG will notify the FAPS and the District Office in writing (email is acceptable), of the date, time and location of the bid opening (see Attachment P).

Concurrence in Award

After following SHA procedures on advertising for bids and, after receiving bids, the LG shall submit a formal request for concurrence in award to FAPS for SHA approval. The LG will submit the following information:

- a. A complete copy of the successful bidder's proposal (one copy)
- b. A complete Tabulation of Bids and totals for all bidders. The Tabulation of Bids (see example, Attachment Q) must be signed and dated, verified and certified true and correct by the LG [six (6) copies]. Should there be more than three (3) bidders to any bid the bid tab should show only the three lowest bidders with their respective bids. The names and addresses of those remaining bidders and their accepted bids will be included on the last page of the bid tab or on an attached sheet.
- c. Contractor's signed non-collusion affidavit [three (3) copies] (if not signed by the president of the company, then submit a copy of the company's by-laws as to whom can sign the document)
- d. Experience and Equipment form [one (1) copy]
- e. Clear ROW Certification [three (3) copies]
- f. Disadvantaged Business Enterprises (DBE) Affirmative Action Plan approved by the LG, and DBE Forms OOC44 and OOC45 (OOC46 if necessary) (see blank copies) completed by the Contractor (All must be original signatures)
- g. Copies of advertisements of bid opening
- h. Bid Analysis must be signed, verified and certified true and correct by the LG [six (6) copies] (see example, Attachment R).

Should the contractor's bid be more than ten (10) percent over or fifteen (15) percent under the final approved engineer's estimate, then a letter of justification will be needed (see Attachment S set up in generic fashion). The letter will be written by the LG to the SHA's Chief, Contracts Award Team, Office of Construction and, along with that letter, forward the entire Concurrence in Award package to the FAPS. In addition, the LG must verify the contractor is not debarred from

award of federal-aid contracts, the wage determination is still valid, and all environmental permits were obtained.

A memorandum requesting concurrence will be prepared from the Director, Office of Construction, to the Deputy Administrator/Chief Engineer for Operations. When signed, a copy is forwarded to the FAPS who then contacts the LG Project Manager noting concurrence and that the official Notice to Proceed (NTP) has been given. The FAPS would then fax the concurrence letter (see sample letter, Attachment T) to the LG and the DE. The LG will then contact the DE noting that concurrence has been given by the SHA.

Construction

The District Office will be responsible for monitoring the work for compliance with the contract specifications and advise the LG that all requests for subcontractor approvals, as well as any change or deviation from the approved Minority / Disadvantage Business Enterprise plan must be approved by the MDOT SHA District Office.

For additional information, please use the following website:

<https://www.roads.maryland.gov/mdotsha/pages/index.aspx?PageId=855>

SECTION IV – BRIDGE INSPECTIONS

The National Bridge Inspection Standards (NBIS) are published in the Code of Federal Regulations, 23 CFR 650, Subpart C. The NBIS set the national standard for the proper safety inspection and evaluation of bridges and apply to all structures defined as highway bridges located on all public roads. Maryland SHA inspects bridges on the state system for compliance with the NBIS standards. LG's that own bridges not on the state system are responsible for inspections of those structures. The inspections must be completed at least every two years, either by the local jurisdiction staff or by private consultants.

The principal objective of the program (NBIS) is to ensure public safety. Not only are structural deficiencies to be identified during the course of the inspection process, but if the bridge is not capable of safely supporting legal load vehicles, the owner is responsible for advising the traveling public of any weight restrictions in a timely manner (bridge posting). It is vital that weight restriction signs be properly maintained and promptly replaced if they are damaged or removed.

Local government agencies that perform their own bridge inspections shall submit quarterly progress reports and annual electronic National Bridge Inventory records complying with FHWA reporting guidelines to the SHA Bridge Inspection Program Manager.

SECTION V – CONSULTANT SELECTION

The following section provides guidelines and procedures for an LG to select a consultant utilizing federal funds.

OPEN-END CONSULTANTS PROCURED BY SHA:

An LG may use consultants presently under open-end contracts with SHA in order to obtain services more quickly while still using federal funds. These consultants may be utilized for the following:

- Preliminary Engineering (includes Preliminary & Final Design)
- Construction Inspection
- Biennial Bridge Inspection
- Scour Evaluation
- Environmental Documentation

For the **PRELIMINARY ENGINEERING** phase of a project, the process is as follows (see Attachment W for a flow chart):

1. LG will submit a request to OOS to use a consultant that SHA has a contract with to provide engineering services. The request should include a Scope of Work (SOW) and an estimate of the consultant man-hours. (OOS can provide assistance in the development if requested)
2. OOS will review these items and advise the LG which consultant is the most highly qualified based on the SOW by using MDOT SHA's 2nd QBS Process for Task Orders that has evaluation factors established for task assignments.
3. OOS will set up a meeting with the LG and the selected consultant to discuss the project and request a technical proposal.
4. OOS and LG will review the technical proposal. Once it is acceptable, OOS will request a price proposal.
5. OOS and LG will review the proposal and negotiate a price.
6. After the LG provides OOS with written approval of the Technical and Price Proposal, OOS will issue the NTP to the consultant.
7. Project would proceed similar to other LG projects, except OOS would pay the consultant invoice only after the LG has approved it. SHA would invoice the LG, in accordance with Item 6 of Form 32L. Typically, the LG requests that SHA deduct 80% of the total price from the LG's federal bridge allocation and invoice the LG for the remaining 20%.
8. All of the ordinary Administrative Preliminaries (Form 32L, Form 25C, etc.) are still required.

For the **CONSTRUCTION INSPECTION**, the process is as follows:

1. At the Final Review stage, the LG will determine the project's inspection needs during construction and by whom the inspection will be performed. Possible inspection sources include the LG's in-house forces, a consultant hired from a contract with the

- LG (contract must have followed Federal procurement requirements), and/or a consultant working on the SHA's District Construction Inspection contracts. If the LG intends to use a consultant working on SHA's District Construction Inspection contract, then the following procedure must take place. The LG must submit a request at the Final Review stage to SHA's District Office for SHA to perform Construction Management and Inspection Services. See Attachment U The request should include: anticipated construction NTP date, number of working days or calendar days, and estimated construction cost for the requested services.
2. The DE, along with the Construction Inspection Division (CID), will determine if SHA personnel or a SHA open-end consultant will perform the services.
 3. The DE will notify the LG as to who will provide the construction management services.
 4. Project would proceed similar to other LG construction projects.

For more guidance on the federal aid process during construction, please refer to the Maryland State Highway Administration Office of Construction (OOC) Sub-recipient Construction Manual. [Web Link](#)

CONSULTANTS CONTRACTED BY THE LG:

When the LG elects to utilize Federal Funds for a consultant to perform PE and/or Construction Inspection, it is *highly recommended* that the LG employ the SHA Open-End Consultants. This is due to the fact that there is a considerable amount of paperwork that the LG must be involved with if the LG wishes to hire a consultant using federal funds (refer to process below). In addition, the LG should allow at least a year to complete the selection process.

Should the LG elect to procure a consultant utilizing federal funds, then the LG must either:

1. Adopt written policies and procedures prescribed by MDOT SHA for the procurement, management, and administration of engineering and design related consultant services in accordance with applicable Federal and State laws and regulations (approved by FHWA), or
2. Prepare and maintain your own written policies and procedures in accordance with 23 CFR 172.5 (c)(approved by MDOT SHA), or
3. Submit documentation associated with each procurement and subsequent contract to MDOT SHA for review to assess compliance with applicable Federal and State laws and regulations (approved by MDOT SHA). Refer to Attachment V - Local Jurisdiction FHWA Compliance Evaluation Criteria.

If 1, the LG adopts MDOT SHA A/E Policies & Procedures, FAPS must have documentation of LG's request and SHA's acceptance of the LG adoption of MDOT SHA A/E Policies & Procedures. If 2, the LG prepares their own A/E Policies & Procedures, FAPS must have documentation of OPCM's review of the proposed Policies & Procedures and SHA's approval of the LG's A/E Policies & Procedures. If 3, the LG submits documentation related to one project A/E procurement, FAPS must have documentation of OPCM's review and approval of the proposed procurement. For 1, 2, and 3, the LG will submit a completed LPA – Federal-aid Project Compliance Checklist for A&E Services to FAPS for each project A/E procurement. The LG would be notified of approval by the FAPS, once FAPS has received the appropriate

documentation. Once that is accomplished, the package of Administrative Preliminaries, along with the SOW for the proposed project, may be forwarded to the FAPS.

The LG, having made adjustments to the SOW (if any), will forward three (3) copies of the Technical and Price Proposal to the FAPS. Upon receiving the copies, the FAPS will then forward two (2) copies of the Technical and Price Proposals to the SHA's OPCM for review of form and content. The other copy will be forwarded to the SHA's Audit Section for pre-contract audit. Should there be any minor questionable areas with the audit review, the Audit Section will contact the Consultant directly and resolve those areas and/or request additional information to make the report complete.

Upon completion of review for form and content, OPCM will forward a list of comments (if any) to the FAPS. Should these comments be of a minor nature, a statement will be made noting that the technical proposal is acceptable to the SHA provided those comments are addressed. The FAPS will then forward a copy of the audit report and the comments of OPCM to the LG who shall, in turn, make all necessary corrections to the Technical Proposal. When the corrections to the Technical Proposal have been made, the LG will forward to the FAPS two (2) copies of the unexecuted agreement between the Consultant and the LG for which the work will be performed. The unexecuted agreement shall include the specifications, the Consultant's Technical and Price Proposal (revisions, if any, included), the audit report and the detailed selection process. The copies will be forwarded to the FAPS where a copy will be forwarded to OPCM for final comments. If there are no corrections to the unexecuted agreement, the LG will proceed with the execution of agreement between the LG and the Consultant and then forward three (3) copies of the executed agreement to the FAPS.

The FAPS will prepare a request for authorization of funds for a Consultant to perform PE (includes PD & FD) on this project. By receipt of the FHWA Project Agreement, the FAPS will notify the LG that the Consultant may proceed with the work for the PD phase, once PD has been completed and the environmental document has been approved and submitted to FAPS, FAPS will notify the LG that the Consultant can proceed with FD.

Or the FAPS will prepare a request for authorization of funds for a Consultant to perform PD on this project. By receipt of the FHWA Project Agreement, the FAPS will notify the LG that the Consultant may proceed with the work for the PD phase, once PD has been completed and the environmental document has been approved and submitted to FAPS, an amended authorization can be prepared for FD, once completed, FAPS will notify the LG that the Consultant can proceed with FD.

Reimbursement for the expenditure of funds will take place from the effective date of the project agreement. There will be no retroactive payment for work completed *before* the effective date.

SECTION VI – ATTACHMENTS

The following attachments are examples/samples of documentation for a bridge replacement/rehabilitation project. As you read through this section, keep in mind that no two projects are alike and that not all the memos, letters, etc. will be necessary for all projects. The attachments can be found on SHA internet page at the following location: [Web Link](#)

- A **Structure Management Plan (SMP)****
- B Form 32L**
- C Form 25C**
- D Master State/Local Agreement Dates**
- E **Supplemental Letter to Master Agreement****
- F Federal Aid Project Questionnaire**
- G Federal Aid Right-of-Way Questionnaire**
- H Set Up Preliminary Field Investigation Meeting**
- I Preliminary Field Investigation Report**
- J Set Up Final Review Meeting**
- K Final Review Report**
- L Certification of Environmental Permits**
- M-1 Utilities Statement**
- M-2 Utilities Certification**
- N PS&E Checklist**
- O FHWA Project Agreement**
- P Bid Opening**
- Q Bid Summary (Tabulation)**
- R Bid Analysis**
- S Bid Justification**
- T Concurrence in Award Memo**
- U Construction Inspection Services**
- V LPA Federal-Aid Projects Compliance Checklist for A&E Services for
Projects within the Highway ROW**
- W Project Startup Flow Chart**
- X **LG Bridge IIJA Program Project Submission Template****