



Development Guide

For Local Public Agencies and Other Subrecipients of Federal Funds

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Prepared by State Highway Administration
Local Public Agency Council

707 North Calvert Street, Baltimore, MD 21202

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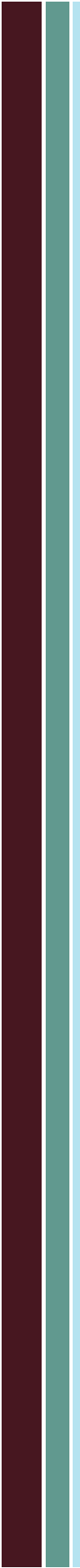


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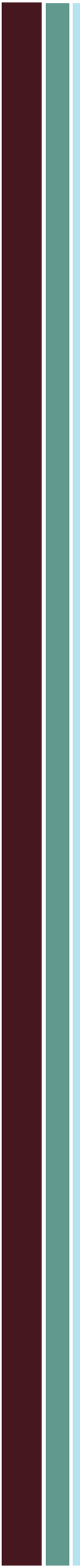
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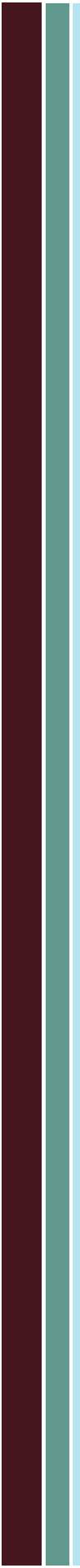
LIST OF ABBREVIATIONS

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ABC	Accelerated Bridge Construction
ADA	Americans with Disabilities Act
ADAAG	ADA Accessibility Guidelines for Buildings and Facilities
ADE-C	Assistant District Engineer of Construction
ADE-T	Assistant District Engineer of Traffic
A/E firm	Architecture/Engineering firm
AME	Area Material Engineer
APE	Area of Potential Effect
ARD	Appraisal Review Division
BABA	Build America, Buy America
BFP	Bridge Formula Program
BIL	Bipartisan Infrastructure Law
BPO	Blanket Purchase Order
BRTB	Baltimore Regional Transportation Board
CAD	Computer-aided Design
CE/CATEX	Categorical Exclusion
CFR	Code of Federal Regulations
CIA	Concurrence in Award
CO	Change Order
CO	Carbon Monoxide



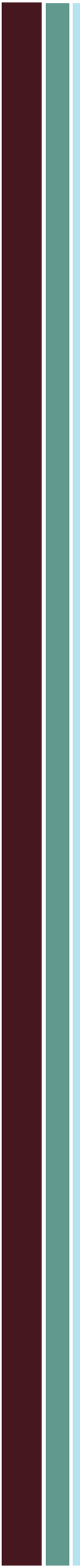
LIST OF ABBREVIATIONS

CO2	Carbon Dioxide
CLOMR	Conditional Letter of Map Revision
COMAR	Code of Maryland Regulations
CPM	Critical Path Method
CRF	Crash Reduction Factor
CSA	Cost Sharing Agreement
CTP	Consolidated Transportation Program
CUF	Commercially Useful Function
CWA	Clean Water Act
DBE	Disadvantaged Business Enterprise
DBH	Diameter at Breast Height
DE	District Engineer
DEEO	District Equal Employment Opportunity Officer
DNR	Department of Natural Resources
DOL	Department of Labor
DTSD	Design Technical Services Division
EA	Environmental Assessment
EIS	Environmental Impact Statement
EM	Environmental Manager
eMCMS	electronic Maryland Construction Management System
eMMA	eMaryland Marketplace Advantage
EPA	Environmental Protection Agency



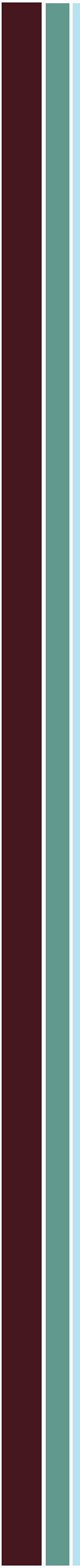
LIST OF ABBREVIATIONS

EPLD	Environmental Planning Division
ESC	Erosion Sediment Control
ESCM	Erosion and Sediment Control Manager
EWO	Extra Work Order
F&SI	Fatalities and Serious Injuries
FAP	Federal Aid Participation
FAR	Federal Acquisition Regulation
FAST Act	Fixing America's Surface Transportation Act
FCA	Forest Conservation Act
FD	Final Design
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration
FMIS	Fiscal Management Information System
FMV	Fair Market Value
FONSI	Finding of No Significant Impact
FY	Fiscal Year
GARVEE	Grant Anticipation Revenue Vehicle
GHG	Greenhouse Gas
GIS	Geographic Information Systems
GPL	Grant Program Liaison
GPMD	Grants and Programs Management Division
GPM	Grants and Program Manager



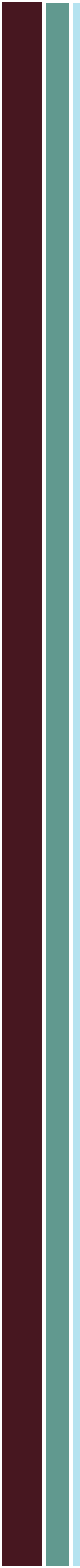
LIST OF ABBREVIATIONS

GPM	Guidelines and Procedures Memorandum
GTL	Grant Team Leader
HEMPO	Hagerstown-Eastern Panhandle MPO
HOT	High-occupancy Toll
HOV	High-occupancy Vehicle
IDIQ	Indefinite Delivery, Indefinite Quantity
IDR	Inspector Daily Report
IFB	Invitation for Bids
IIJA	Infrastructure Investment and Jobs Act
ITS	Intelligent Transportation Systems
kg	Kilogram
KMZ	Keyhole Markup Language
LG	Local Government
LOD	Limits of Disturbance
LOTS	Locally Operated Transit Systems
LPA	Local Public Agencies
MAA	Maryland Aviation Administration
MAP-21	Moving Ahead for Progress in the 21st Century Act
MARTCP	Mid-Atlantic Region Technician Certification Program
MDE	Maryland Department of Environment
MDOT	Maryland Department of Transportation
MDMUTCD	Maryland Manual on Uniform Traffic Control Device



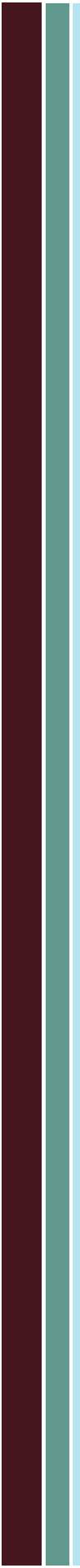
LIST OF ABBREVIATIONS

MdQI	Maryland Quality Initiative
MDTA	Maryland Transit Authority
MHT	Maryland Historic Trust
MMS	Materials Management System
MTBMA	Maryland Transportation Builders and Materials Association
MOT	Maintenance of Traffic
MOU	Memorandum of Understanding
MPA	Maryland Port Administration
mpg	Miles Per Gallon
MPO	Metropolitan Planning Organization
MPR	Monthly Progress Report
MS4	Multiple Separate Storm Sewer System
MSTM	Maryland State Transportation Model
MTA	Maryland Transit Administration
MTP	Maryland Transportation Plan
MVA	Motor Vehicle Administration
NBI	National Bridge Inventory
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act
NHS	National Highway System
NOA	Notice of Award
NOx	Nitrogen Oxide



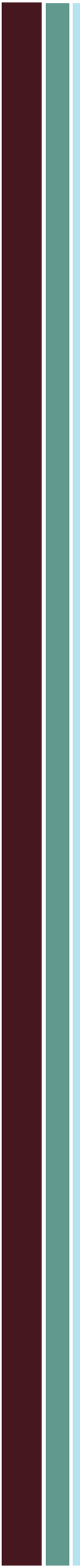
LIST OF ABBREVIATIONS

NOI	Notice of Intent
Non-SOV	Non-single Occupancy Vehicle
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NTP	Notice to Proceed
OED	Office of Environmental Design
OHD	Office of Highway Development
OJT	On the Job Training
OMT	Office of Materials Technology
OOC	Office of Construction
OOF	Office of Finance
OOS	Office of Structures
OPCM	Office of Procurement and Contract Management
OPPE	Office of Planning and Preliminary Engineering
ORE	Office of Real Estate
ORIF	Office of Rail and Intermodal Freight
PAM	Property Assets Management Division
PCE	Programmatic Categorical Exclusion
PD	Preliminary Design
PE	Professional Engineer
PED	Project End Date
PM-2.5	Particulate Matter 2.5



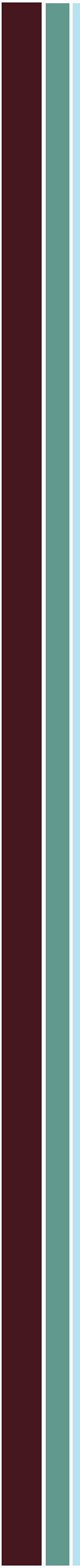
LIST OF ABBREVIATIONS

PoDI	Projects of Division Interest
PRD	Plan Review Division
PRD	Property Review and Compliance Division
PS	Project Sponsor
PS&E	Plans, Specifications Book, and Engineer's Estimate
QA	Quality Assurance
QBS	Qualifications-Base Selection
QC	Quality Control
QPL	Qualified Product List
RC	Responsible Charge
RFI	Request for Information
RFP	Request for Proposal(s)
RIPD	Regional and Intermodal Planning Division
ROW	Right of Way
R&R	Records and Research Division
RTE	Rare, threatened, or endangered
RTP	Recreational Trails Program
SAFTEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act
SC	Subrecipient Coordinator
SCR	Score-Cost Ratio
SGR	State of Good Repair
SHA	State Highway Administration



LIST OF ABBREVIATIONS

SHPO	State Historic Preservation Office
SME	Subject Matter Expert
SMP	Structure Management Plan
SMZs	Statewide Model Zones
SNBI	Specifications for National Bridge Inventory
SOx	Sulfur Dioxide
SOA	Stewardship Oversight Agreement
SOP	Standard Operating Procedure
SOS	Source of Supply
SOVs	Single Occupancy Vehicles
SRTS	Safe Routes to School
STBG	Surface Transportation Block Grant
STIP	Statewide Transportation Improvement Program
SWA	Storm Water Management
TA	Transportation Alternatives
TAP	Transportation Alternatives Program
TCM	Traffic Control Manager
TCP	Traffic Control Plan
TDM	Transportation Demand Management
TEPMS	Transportation Enhancement Program Management System
TIP	Transportation Improvement Plan
TPB	National Capital Region Transportation Planning Board



LIST OF ABBREVIATIONS

TRAIN	Maryland Transportation Revenue and Investment Needs
TS&L	Type, Size & Location
TSO	The Secretary's Office
TTF	Maryland Transportation Trust Fund
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
VE	Value Engineering
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
WILMAPCO	Wilmington Area Planning Council
WMATA	Washington Metropolitan Area Transit Authority

CHAPTER 1

INTRODUCTION

The Maryland Department of Transportation State Highway Administration (SHA) is the agency responsible for planning, constructing, maintaining, and operating Maryland's State, U.S. Route, and interstate highway system. SHA is accountable to the Federal Highway Administration (FHWA) to ensure all project elements comply with federal law and regulations.

The FHWA provides funds to SHA, which acts as the pass-through entity and can then subaward funds to a subrecipient, such as a state agency, city, municipality, county, or nonprofit organization to manage a federal aid highway project.

Title 23 and 2 Code of Federal Regulations (CFR) outline the responsibilities for subrecipients including requirements for cost eligibility, record retention and compliance with federal laws and regulations. SHA is required to administer the federal transportation funds provided by the U.S. Department of Transportation, through its various divisions, according to all federal and state laws, and as defined by the FHWA/SHA Stewardship and Oversight Agreement (SOA) dated August 2024 ([Available Here](#)). SHA ensures that local projects using federal funds made available by SHA are appropriately used in a timely manner and in compliance with all federal and state regulations.

In accordance with the SOA, SHA is responsible for oversight of all project activities. Some activities can be delegated to subrecipients at SHA's discretion; the following program elements **cannot** be delegated:

- Approval of NEPA document
- Approval of sole source procurement
- Approval of force accounts
- Approval of design exception
- Approval of right of way certification
- Approval of engineering plans
- Approval of DBE goals
- Approval and audit of labor compliance
- Final inspection
- Project acceptance



Cross County Connector Trail
Queen Anne's County
Commissioners

INTENDED AUDIENCE

This manual is designed to assist subrecipients in the administration of projects using federal aid funds. It will also assist SHA in its oversight capacity and provide guidance to SHA staff responsible for supporting these projects.

What is a Responsible Charge?

It is important for the subrecipients to be adequately staffed and have a working knowledge of federal aid project requirements. In 23 CFR, Responsible Charge (RC) refers to a full-time public employee who has direct oversight of federal aid highway projects, whether for construction (23 CFR 635.105) or consultant services (23 CFR 172.9(d)(1)).

FUNDING TYPES AND PROGRAMS

SHA has oversight of multiple funding programs, including Transportation Alternatives, Recreational Trails, Safe Routes to School, Local Government Bridge, Appalachian Regional Commission, Earmarks, Highway Safety Improvement, and any other current or future applicable programs.

COMPLETE STREETS

Projects that are within Maryland Department of Transportation (MDOT) right of way are subject to the MDOT Complete Streets Policy. Complete Streets focuses on creating a safe environment for all users, including those who employ human-powered means of travel, which includes walking and bicycling with or without the use of mobility aids and may also include using other human-scaled or micromobility devices such as e-bikes and e-scooters.

Projects that are subject to the MDOT Complete Streets Policy shall establish a Complete Streets Objective Statement that addresses safe access for all users. This Objective Statement will articulate the transportation problem being addressed and what is needed to solve that problem. These statements will prioritize multimodal options, improved accessibility, and the application of Complete Streets design features.

HOW TO USE THE MANUAL

This manual describes the processes, procedures, documents, authorizations, and approvals that are required to receive federal aid funding for applicable projects. Information was compiled from various sources with the intention of providing an overview of subrecipient activities. This manual is not a substitute for federal and state laws, statutes, and regulations for project administration activities using federal funds and should not be used as such.

This document is intended to foster the lawful, accountable, and expedited delivery of a subrecipient project. While every effort has been made to incorporate accurate information and sufficient detail, it may be necessary to contact SHA program or project managers with specific questions.

CHAPTER 2

FEDERAL AID BASICS

To have a successful federal aid project, it is crucial that the subrecipient officials working on the project understand and comply with these basic requirements of the federal aid process.

TITLE VI

Compliance with Title VI of the Civil Rights Act of 1964 and associated statutes is mandatory for all subrecipients. By accepting federal financial assistance, the subrecipient assumes a legal obligation not to practice or permit discrimination within any of its programs, services, or activities. Any finding of discriminatory practices will lead to potential loss of all federal financial support.

PROJECT PROGRAMMING

All federal aid projects must be included, or programmed, in the State Transportation Improvement Program (STIP). When a project is located within a Metropolitan Planning Organization (MPO) area, it must also be included in the regional Transportation Improvement Program (TIP).

Maryland's six MPOs charged with developing a TIP are:

- Baltimore Regional Transportation Board (BRTB)
- Calvert-St. Mary's MPO (C-SMMPO)
- Hagerstown-Eastern Panhandle MPO (HEMPO)
- National Capitol Region Transportation Planning Board (TPB)
- Salisbury/Wicomico Area MPO
- Wilmington Metropolitan Planning Council (WILMAPCO)

The subrecipient is responsible for working with the applicable MPO to ensure that their project is included in the TIP and STIP and is programmed with an adequate amount of funds for the correct Federal Fiscal Year (FFY).

Funds should be programmed in the FFY(s) in which the FHWA Authorization will need to occur, not based on when actual expenditures will occur.



Pirates Wharf
Wicomico County

The TIP is the regionally agreed-upon list of priority transportation projects, as required by federal law. The TIP document must list all projects that intend to use federal funds, along with all non-federally funded projects that are regionally significant. The projects are multimodal, including bicycle, pedestrian, ITS, safety, and freight-related projects, as well as the more traditional highway and public transit projects. The federal requirement is to update TIPs every four years; however, in Maryland, some MPOs update their TIPs annually to ensure that the cost and project information is as current as possible and fiscally constrained.

If the project is not within an MPO, the project would only be listed in the STIP. The STIP-related transportation planning, programming, and decision-making for non-metropolitan areas is undertaken by MDOT through its rural consultation process. More information on this may be found [here](#).

MEMORANDUM OF UNDERSTANDING

Another important initial step in the federal aid process is the execution of a Memorandum of Understanding (MOU). If a Federal Aid Project Guidelines and Working Master Agreement is already executed, a Supplemental Agreement between SHA and the subrecipient may be used in lieu of an MOU. As soon as a project is selected for funding, the subrecipient shall submit, at a minimum, the name and title of the subrecipient's responsible charge, a project description that identifies the limits and basic character of the proposed work, and a preliminary cost estimate of each project phase (Preliminary Design, Final Design, ROW and/or Construction), as applicable, and expected source(s) of funding.

Upon receipt of this information, SHA will prepare an MOU and send an unsigned copy to the subrecipient for signature. By signing the MOU, the subrecipient agrees to follow all applicable federal and state laws, regulations, and policies pertaining to the specific type(s) of federal funds involved. No project development activities should proceed until an MOU has been executed.

In general, the MOU and Master/Supplemental Agreement spell out the responsibilities of both the subrecipient and SHA. The details of the MOU will vary, depending on the type of federal funds involved. The subrecipient officials responsible for the project should thoroughly review the MOU prior to bringing it to their governing body for action. Any questions or concerns should be directed to the Program Manager.

FHWA AUTHORIZATION

FHWA Authorization is the most important step in the federal aid process. SHA and FHWA enter into a project agreement, which defines the project's scope, schedule, and budget. This agreement is executed through a Fiscal Management Information System (FMIS) authorization request. FMIS is the system FHWA uses to approve federal aid funding. It is essential that the subrecipient provides accurate and complete information for the request, as any errors or omissions can delay authorization and may jeopardize the project's eligibility for federal aid funds. Once federal authorization is received, the subrecipient will receive a Subaward Notification Letter and a copy of the document.

When is FHWA Authorization Needed?

FHWA Authorization must be obtained before beginning any project activity (Planning, Preliminary Engineering, Right of Way, Final Design, and Construction) for which federal aid reimbursement will be requested. By executing project agreements in phases, subrecipients help ensure compliance with environmental requirements, as final design, right of way acquisition, and construction cannot begin until the environmental review process is fully completed. In accordance with 23 CFR 1.9(a), the cost of project expenses occurring prior to FHWA Authorization will not be reimbursed with federal funds. If there is any doubt about whether FHWA Authorization has been obtained, contact SHA for assistance.

The types of project activities eligible for federal aid reimbursement will depend on both the source of federal funds and the provisions of the project agreement. Eligible activities may include environmental studies, design, right of way acquisition, utility relocations, railroad work, construction, construction inspection, and others. For example, if funds are requested for construction only, the design process must have followed Title 23 requirements even if federal funds were not used during the design phase. Refer to the project agreement and/or the MOU to confirm which activities are eligible for federal reimbursement.

How is FHWA Authorization Obtained?

The following is a summary of the FHWA Authorization process. This process has been generalized for the sake of clarity. The actual authorization process will vary depending on the specific type of project activity that is being authorized.

Step 1: The subrecipient submits the appropriate documentation for the type of work being requested. (Plans, Specifications Book, and Engineer's Estimates [PS&E] package, approved price proposal, Administrative Preliminary documents, etc.)

Step 2: SHA reviews the subrecipient's request and verifies that the applicable prerequisite requirements are satisfied. This is in line with 23 CFR 630.106. Some examples include:

- Documented cost estimate
- Planning and Environmental approvals
- Funding eligibility requirements

Step 3: If acceptable, SHA verifies the availability of federal funds and prepares the Federal Authorization or modification in FMIS.

Step 4: SHA sends the electronically signed document to FHWA for review and approval.

Step 5: FHWA reviews the electronic document and, if acceptable, electronically signs the document. If the request is not acceptable, FHWA contacts SHA to resolve any questions or issues.

Step 6: After FHWA has signed the electronic document, SHA notifies the subrecipient that the FHWA Authorization has been obtained, and the requested work may begin.



REIMBURSEMENT

All of the federal aid highway programs administered by SHA operate on a reimbursement basis. That is, the subrecipient, after completing the necessary steps and receiving the appropriate approvals, is responsible for paying project expenses up front. In turn, the subrecipient submits a request for reimbursement to SHA. The request shall be made using the form or format provided by SHA.

Requests for reimbursement shall be made on a periodic basis, as defined in the agreement, after costs have been incurred. This could include bi-weekly, monthly, or quarterly, depending on the project duration and scope. SHA will notify its subrecipients that project obligations may be withdrawn if the subrecipient does not demonstrate meaningful progress within a specified and mutually agreed-upon timeframe. After SHA reviews and approves the submitted documentation, the subrecipient will be reimbursed by SHA at the agreed-upon federal share for actual, reasonable, and allowable costs incurred and paid.

To prevent the project obligation from becoming inactive as per 23 CFR 630.106(a)(5), reimbursement shall be requested at least annually but not more than bi-weekly. An inactive project is a project for which no expenditure has been charged against federal funds within the past 12 months or more. If the project becomes inactive, SHA will notify the subrecipient that the unspent balance of federal funds will be de-obligated if the subrecipient cannot provide documentation within 30 days to support the remaining balance. Documentation shall include a revised cost estimate and a date by which a reimbursement request for the remaining federal funds will be submitted.

When an individual phase, as requested in FMIS, is completed, the subrecipient must submit a **final request for reimbursement** for that particular phase, named the final voucher. The final voucher results in a withdrawal of any residual funds and a project's phase closeout. Using the residual for work outside the project scope or rolling the residual to another phase is not allowed unless the FHWA project agreement and the MOU agreement are updated. If the project is not completed within certain time frames, the subrecipient must return all federal funds. After project closeout, subrecipients remain responsible for archiving accounting records and supporting financial audits.

General Match Requirements

Most federal aid highway programs require some type of cost-sharing or match to the federal funds. In many cases, a minimum of 20% non-federal match is required, unless a different share is specified by statute. Usually, the non-federal match is provided as cash contributions, that is, eligible project costs paid for by entities other than the federal government.

Acceptable non-federal sources may include state/local funds, donations of funds made by a third party, and other allowable non-federal aid sources of funds. However, if the total upfront cash received for the project exceeds the required non-federal share, the federal share shall be reduced, or the excess cash must be returned. In other words, a subrecipient may not make money on a federal aid project.

Additional notes:

- An eligible match must come from non-federal sources. Staff salaries and benefits funded by federal sources would not be an eligible match.
- For volunteer services, the rates must be consistent with the rates normally paid for similar work within the organization.
- If an employee from another organization conducts services free of charge, the services should be valued at that employee's regular rate of pay, in addition to their fringe benefits and allowable indirect costs.

In-Kind Contributions

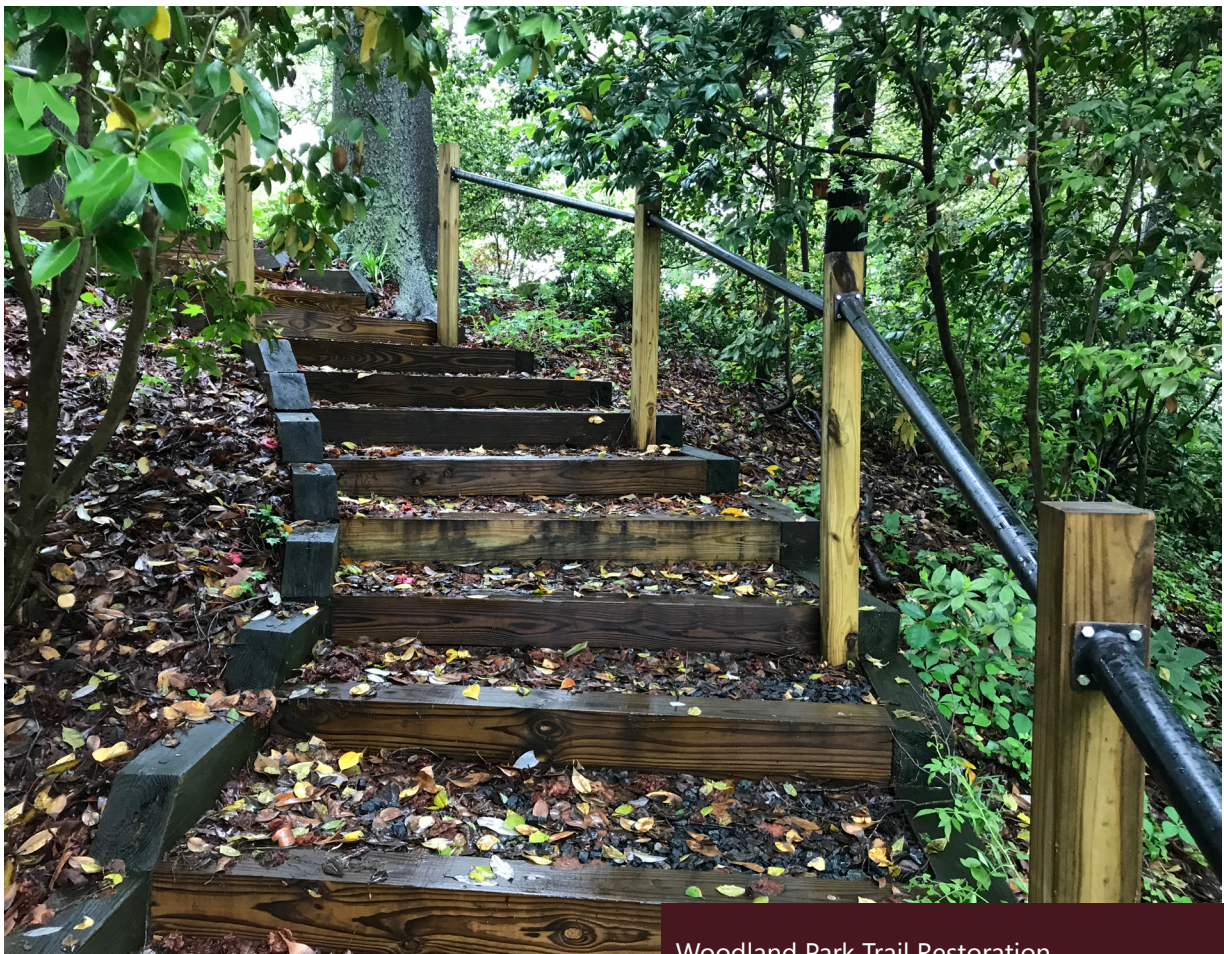
In some programs, certain non-cash contributions may be counted towards the required non-federal aid match. These non-cash contributions are referred to as an in-kind contribution. The allowability of in-kind contributions varies depending on the timing of the contribution and the federal program requirements associated with the funds being matched. For details, see chapter 15.

The subrecipient is advised to contact the program manager regarding specific eligibility and documentation requirements. To be allowable:

- The in-kind contribution must be necessary, reasonable, and directly related to the approved project.
- The same contribution may not be counted toward more than one federal award or used multiple times as a match.
- The contribution must be provided during the approved period of performance unless a specific federal program (e.g., RTP) authorizes otherwise.
- The contribution must meet all cost allowability criteria under 2 CFR 200 Subpart E, including being adequately documented and not included as contributions for any other federal program.

The valuation of donations of real property, services, supplies, equipment, and use of facilities must be established at fair market value (FMV) as of the time of the donation and must follow 2 CFR 200.434 and 2 CFR 200.306(d)-(j). The fair market value of third-party in-kind contributions must be documented and, to the extent feasible, supported by the same methods used internally by the recipient or subrecipient.

The costs or value of donations used to satisfy the non-federal match requirement must be verifiable from the subrecipient's records and supported by adequate documentation. The subrecipient is responsible for ensuring proper oversight of services donated by third parties, which includes proper supervision of volunteer labor and records that accurately track hours, rates, and FMV.



Woodland Park Trail Restoration
Londontown Foundation

CHAPTER 3

PROCUREMENT

Architectural and Engineering (A&E) Related Services

BACKGROUND

When federal aid funds are used to hire a consultant to provide engineering and design-related services, subrecipients must follow certain federal and Maryland state requirements. These requirements address how to procure a contract, hire the consultant and how to manage and administer the contract per 23 CFR 172 and Maryland State Finance and Procurement Code Annotated (SFP) and COMAR.

23 CFR 172 defines engineering and design related services as:

- (a) "program management, construction management, feasibility studies, preliminary engineering, design engineering, surveying, mapping, or architectural related services with respect to a highway construction project; and
- (b) professional services of an architectural or engineering nature, as defined by State law, which are required to or may logically be performed or approved by a person licensed, registered, or certified to provide the services with respect to a highway construction project."

SFP (11-101) and COMAR (21.01.02.01) defines architectural services as professional or creative work that: (i) is performed in connection with the design and supervision of construction or landscaping; and (ii) requires architectural education, training, and experience. Architectural services include consultation, research, investigation, evaluation, planning, architectural design, preparation of related documents, and coordination of services that structural, civil, mechanical, and electrical engineers and other consultants. Engineering services means professional or creative work that: (i) is performed in connection with utilities, structures, buildings, machines, equipment, or processes, including structural, mechanical, plumbing, electrical, geotechnical, and environmental engineering; and (ii) requires engineering education, training, and experience in the application of special knowledge of the mathematical, physical, and engineering sciences. Engineering services include consultation, investigation, evaluation, planning, design, and inspection of construction for the purpose of interpreting and assuring compliance with specifications and design within the scope of inspection services.



Frederick Watershed
Mid-Atlantic Off-Road
Enthusiasts (MORE)

SFP and COMAR notes the following: architectural services do not include construction inspection services, services provided in connection with an energy performance contract, or structural, mechanical, plumbing, or electrical engineering. Engineering services do not include: (i) the inspection of construction not requiring engineering training; and (ii) services provided in connection with an energy performance contract.

Subrecipients must understand that while Maryland SFP 21.01.02.01 provides an expanded definition of what constitutes A&E services, 23 CFR 172 serves as the prevailing procedural mandate. Consequently, any service identified under the broader Maryland definition must be treated as a professional A&E service and procured via the federal Qualifications-Based Selection (QBS) process.

Subrecipients may not utilize state procurement methods for these expanded categories; rather, the SFP defines the scope of applicable services, while 23 CFR 172 governs the method of selection, negotiation, and contract administration. Where requirements overlap or appear in conflict, the more stringent standard shall prevail to ensure full federal compliance.

BROOKS ACT and 23 CFR 172

The **Brooks Act** (passed 1972) is a federal law that requires federal agencies to select engineering and architecture (A&E) firms based on competency, qualifications, and experience rather than low price. It mandates a qualifications-based selection (QBS) process, where price is negotiated only after the most qualified firm is chosen.

23 CFR 172 explicitly extends these requirements to State DOTs, and any subrecipient using federal aid highway funds, even if their local or state laws allow for "low-bid" or "best value" procurement. Under 23 CFR 172, subrecipients must:

- **Publicly Advertise** [23 CFR 172.7(a)(1)(i)]: Announce all requirements for architectural and engineering (A&E) services.
- **Select by Merit** [23 CFR 172.7(a)(1)(iv)]: Evaluate and rank firms based on demonstrated competence and qualifications, without consideration of price during the initial ranking.
- **Negotiate Fairly** [23 CFR 172.7(a)(1)(v)]: Negotiate compensation with the highest-ranked firm at a price that is "fair and reasonable".

The policy of the federal government is to publicly announce all requirements for architectural and engineering services and to negotiate contracts for architectural and engineering services on the basis of demonstrated competence and qualification for the type of professional services required and at fair and reasonable prices (40 USC 1101-1104).

SHA has available checklists for procurements vetted through the Office of Procurement and Contract Management (OPCM) and Federal Highway Administration (FHWA). Here is a link to that checklist: [Local Public Agency Checklists](#).

- For projects outside a highway ROW.
- For projects within a highway ROW.
- [IDIQ/On-Call] For projects within a highway ROW.

Each checklist is a guide to properly completing the LPA RFP in accordance with the specific requirements of the subsequent project. Parts 1-3 should be completed, signed off by the LPA and forwarded to the SHA Grants Program Management Division (GPMD) for their signature on Part 3. The applicable checklist should accompany the RFP template and be submitted to OPCM by GPMD with the required additional supporting documentation prior to advertisement.

PROCUREMENT METHODS (23 CFR 172.7)

Depending on the complexity and scope of the project, engineering and design-related services may be procured via one of the following methods:

(1) Competitive Negotiation (Qualifications Based Selection – QBS): In accordance with 23 CFR 172.7(a)(1), this is the primary method for procuring engineering and design-related services. This method requires a QBS process where price is not an evaluation factor for the ranking of proposals.

- Scope of Services: This method applies to all engineering and design-related services, including construction inspection (due to COMAR's definition of engineering and architectural services).
- Selection & Negotiation: Consultants are evaluated and ranked based on demonstrated competence and relevant experience. The subrecipient must first negotiate in good faith with the most highly qualified firm to reach agreement on a fair and reasonable compensation.
- Failure of Negotiations: If a mutual agreement cannot be reached, the subrecipient must formally (in writing) terminate negotiations with that firm and may then initiate negotiations with the next most highly qualified firm.
- Subrecipients will make awards only to responsible consultant/contractors possessing the ability to perform successfully under the terms and conditions of the proposed procurement. Per 2 CFR 200.318(h), consideration must be given to contractor integrity, compliance with public policy, past performance, and financial and technical resources. Verification of eligibility must include a check of the System for Award Management (SAM.gov) to ensure the contractor is not debarred or suspended.
- Subrecipients will maintain sufficient records to detail the significant history of the procurement per 2 CFR 200.334 and 23 CFR 172.9(c).
- Subrecipients must maintain written protest procedures to handle and resolve disputes relating to the procurement per 2 CFR 200.318(k).

Subrecipients will conduct all procurement transactions in a manner that provides unrestricted competition which prohibits the following, per 2 CFR 200.319(c): placing unreasonable requirements on firms for them to qualify to do business; requiring unnecessary experience or excessive bonding; having non-competitive pricing practices between firms or affiliated companies; providing non-competitive awards to consultants who are on retainer contracts or have organizational conflicts of interest; specifying only a "brand-name" product instead of allowing "an equal" product describing relevant performance requirements; and arbitrary action in the procurement process.

- Subrecipients will conduct procurements in a manner that prohibits using statutorily or administratively imposed in-state or local geographical preferences in the evaluation of bids or proposals, federal statutes expressly mandate or encourage geographical preference. 23 CFR 172.7(a)(1)(iv)(C) explicitly states: "In-State or local preference shall not be used as a factor in the evaluation, ranking, and selection phase."
- Subrecipients must maintain written selection procedures for procurement transactions as required by 2 CFR 200.319(d). These procedures must incorporate a clear and accurate description of the technical requirements for the material, product, or service, including requirements which providers must fulfill and the criteria used in evaluating bids or proposals.

(2) Small Purchases: In accordance with 23 CFR 172.7(a)(2) and COMAR, this procurement method is permitted with OPCM approval for contracts with a total value, including the local sponsor's share, below \$200,000. Any contract change that increases the total contract value beyond \$200,000, whether occurring before or after award, may result in FHWA withdrawing federal aid funding for the entire contract.

- While a full QBS is not required, subrecipients should take steps to ensure an adequate number of qualified consultant firms are considered. FHWA considers three qualified sources as the minimum number to ensure adequate competition (23 CFR 172.7(a)(2)(ii)).
- The scope of work, project phases, and contract requirements shall not be broken down into smaller components merely to permit the use of small purchase procedures (23 CFR 172.7(a)(2)(i)).
- The full amount of any contract change that would cause the total contract amount to exceed \$200,000, would be ineligible for federal aid funding (23 CFR 172.7(a)(2)(iv)).

FHWA may withdraw all federal aid funding from a contract if it is modified or amended above the applicable established threshold.

- Contract costs may be negotiated in accordance with State small purchase procedures; however, the allowability of costs shall be determined in accordance with the federal cost principles (23 CFR 172.(a)(2)(iii)).

SHA requires subrecipients to adhere to SHA's written policies and procedures for procurement, management, and administration of engineering and design-related consultant services. Otherwise, a subrecipient must prepare and maintain its own written policies and approval by OPCM. In addition, a subrecipient must submit documentation associated with each procurement to OPCM for review to ensure compliance with all applicable Federal and State laws, and regulations per 23 CFR 172.5(b).

If a subrecipient intends to use a consultant to work on any phase of the planning, design and/or construction management and inspection, SHA's open-end consultants may be used, if available.

FEDERAL ACQUISITION REGULATION (FAR) COMPLIANCE

FAR cost principles establish the rules that govern the allowability of costs on engineering and design-related contracts. Subrecipients are required to ensure that consultant services contracts are negotiated and administered using these federal cost principles. Total contract costs consists of direct salary or wage rates, other direct expenses, fixed fee, and an indirect cost rate. Per 23 CFR 172.11, indirect cost rates must be updated annually and include consultant's overhead costs and general/administrative expenses. Indirect cost rates must be evaluated and approved for use by the SHA Office of Audits or another cognizant government agency.

Consultant services funded in whole, or in part, with federal aid highway program funds shall be procured and administered in accordance with the requirements of the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR 200). [govinfo.gov/content/pkg/CFR-2016-title2-vol1/xml/CFR-2016-title2-vol1-part200.xml](https://www.govinfo.gov/content/pkg/CFR-2016-title2-vol1/xml/CFR-2016-title2-vol1-part200.xml)

Once approved, the consultant's indirect cost rate must be used for the purposes of estimating, negotiating, and making payment on the contract. Contracting agencies are prohibited from using administrative or de facto ceilings (caps) to limit the indirect cost rate.

CONFLICTS OF INTEREST

In accordance with 23 CFR 172.7(b)(4)(ii) and 2 CFR 200.318(c)(1), a conflict of interest occurs when an employee, officer, or agent, including any member of their immediate family, their partner, or an organization which employs or is about to employ any of these parties, has a financial or other interest in, or a tangible personal benefit from, a firm considered for a contract.

Federal regulations require the contracting agency to maintain written standards of conduct to address actual, potential, or apparent conflicts of interest or bias. Per 23 CFR 172.7(b)(4), three primary sources of conflict that must be mitigated are:

- The independence of personnel associated with the procurement, management, and administration of consultants or vendors.
- The independence of consultants or subconsultants providing engineering or other professional services to ensure no bias in work products.
- The independence of personnel involved in matters related to the appraisal and acquisition of real property to prevent undue influence or a conflict of interest in the valuation and acquisition process.

Subrecipients will maintain a written code of conduct governing the performance of their employees engaged in the award and administering contracts with regard to conflicts of interest and accepting gifts, gratuities, or favors.

- Consultant Conflict of Interest (example available at roads.maryland.gov)
- A/E Contract references SHA General Conditions, in regards to conflict of interest, please see [MDOT SHA Request for Proposal \(RFP\)](#) Section XI.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM

Per 23 CFR 172.7(b)(2), when using federal funds, subrecipients are required to give adequate consideration to DBE consultant firms in the procurement of engineering and design-related services. Subrecipients are not required to have their own independent DBE Program. Subrecipients must adopt SHAs approved DBE Program.

A/E Contract references SHA General Conditions, in regards to DBE, please see [MDOT SHA Request for Proposal \(RFP\)](#) Section XI.

CONTRACT ADMINISTRATION

Subrecipients must maintain adequate and readily accessible project performance and financial records, supporting documents, and other records pertinent to the agreement as required by 2 CFR 200.334 and 23 CFR 172.9. These records shall be maintained for a minimum of three years from the date of submission of the final financial report. Records to be retained include, but are not limited to:

- Rationale for the method of procurement (Competitive, Small Purchase or Non-competitive).
- Contract type (e.g., project-specific, multiphase, etc.).
- Payment method (e.g., cost plus fixed fee, lump sum, etc.).
- Solicitation, advertisement, and announcement for A/E services including the full scope of work, requirements and evaluation criteria for selection.
- Documents supporting the evaluation, discussion, ranking, and final selection of the consultant firm, including independent cost estimates prepared prior to receipt of proposals.
- Documentation supporting the cost analysis, negotiation, and agreement on fair and reasonable compensation, ensuring fixed fee is negotiated as a separate element of contract price.
- Documentation of the consultant's indirect cost rate (overhead) audit.
- Contract monitoring activities and maintaining supporting contract records, per 2 CFR 200.333.

Per 23 CFR 172.9(c), SHA has either referenced or physically incorporated the A/E contract provisions into various documents: SHA EOI template, RFP template, contract template, and SHA General Conditions. See [MDOT SHA Request for Proposal \(RFP\)](#) Section XI.

CONSULTANT MANAGEMENT SUPPORT ROLE

Per 23 CFR 172.7(b)(5), subrecipients shall receive written approval from FHWA, or SHA as appropriate, before utilizing a consultant to act in a management support role for the contracting agency (e.g., providing oversight of other consultant contracts or performing agency functions).

The subrecipient must ensure the consultant in a management support role does not have a real or apparent conflict of interest. The subrecipient remains responsible for the final work product and must designate a full-time employee of the agency to be in "responsible charge" of the project at all times, per 23 CFR 172.9(d).

OTHER PROCUREMENTS TYPES

In addition to hiring a consultant to provide engineering and design-related services in connection with a federal aid project, subrecipients may also need to procure other goods and services. For guidance on small procurement, see chapter 15.

Micro-purchases may be awarded without soliciting competitive price or rate quotations if the subrecipient considers the price to be reasonable based on research, experience, purchase history or other information and documents it files accordingly. The micro-purchase threshold used by the subrecipient must be authorized or not prohibited under state, local, or tribal laws or regulations.

While federal regulations allow for Time and Materials contracts in limited circumstances, SHA's policy prohibits their use [without prior written authorization from the SHA]. Subrecipients must demonstrate that no other contract type is suitable and must establish a strict ceiling price.

Subrecipients may use their own procurement procedures which reflect applicable state and local laws and regulations, provided the procurement procedures are in accordance with applicable federal requirements.

- Subrecipients must take all necessary affirmative action steps to ensure that minority firms, women's business enterprises, and labor surplus area firms are used. In accordance with 2 CFR 200.321 and 49 CFR 26, subrecipients shall perform 'Good Faith Efforts' to solicit these firms, including placing them on solicitation lists and dividing total requirements into smaller tasks to permit maximum participation.
- Subrecipients must perform a cost or price analysis in connection with every procurement action, including contract modifications and task orders, to determine reasonableness of the proposed contract price (2 CFR 200.324(a) and 23 CFR 172.7(a)(1)(v)(C)).
- Subrecipient shall only allow costs or prices based on independent cost estimate to the extent costs incurred or cost estimates included in negotiated prices are allowable, allocable, and reasonable consistent with federal cost principles.
- Subrecipients are strictly prohibited from using cost plus a percentage of cost and percentage of construction cost methods of contracting per 23 CFR 172.9(b)(2). Subrecipients must make available, upon request of SHA, technical specifications, pre-award procurement documentation, such as requests for proposals or invitations for bids and independent cost estimates on proposed procurements (23 CFR 172.9(b)(2)).
- Subrecipients must include specific language in their contract provisions to allow for required changes, remedies, changed conditions, access to records and record

retention, and suspension of work. All contracts must include the mandatory provisions required by 2 CFR 200, Appendix II and 23 CFR 172.9.

- Subrecipients must maintain procurement documents for a minimum of three years from the date of submission of the final financial report.

ADDITIONAL RESOURCES

For more information about consultant services for use by a federal aid project, refer to FHWA's Federal Aid Essentials for Local Public Agencies video series. Topics covered include the following modules:

- Consultant Services Overview
- Hiring a Consultant Using Competitive Negotiation Procedures
- Organizational and Consultant Conflicts of Interest

For guidance that supplements federal laws and regulations relating to procurement, management, and administration of engineering and design-related services using Federal aid funds, refer to [FHWA's Procurement, Management, and Administration of Engineering and Design-Related Services – Questions and Answers document](#) and [23 CFR 172 Procurement, Management, and Administration of Engineering and Design Related Services](#).

COMAR Title 21 - regs.maryland.gov/us/md/exec/comar/21

23 CFR 172 - ecfr.gov/current/title-23/chapter-I/subchapter-B/part-172

2 CFR 200 - ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200?toc=1

40 USC 11 - uscode.house.gov/view.xhtml?path=/prelim@title40/subtitle1/chapter11&edition=prelim



Cowhide Branch Stream Restoration
Anne Arundel County

CHAPTER 4

THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

NEPA is a procedural law that requires federal agencies to assess potential environmental effects of proposed federal agency actions and provides opportunities for public input. It takes into consideration natural, community, and cultural resource impacts within the project location vicinity.

NEPA requires an evaluation of impacts using a systematic, interdisciplinary approach. This process requires coordination with various state and federal agencies to obtain information on resources within the project area, documentation of any impacts upon those resources and consideration of ways to avoid or minimize impacts.

The effort required by a subrecipient may be as minimal as completing a few forms, or it may include preparing environmental documentation and facilitating public involvement. NEPA coordination must occur on any project where federal funds are used. Mitigation may be required for impacts to resources that cannot be avoided.

Under NEPA, all subrecipients using federal funds must comply with the requirements of federal and state laws to ensure that the environment is protected. The subrecipient must provide evidence of compliance with these laws and regulations before federal funds will be authorized for a project. The major laws that must be complied with are:

- **Section 106 of the National Historic Preservation Act** requires federal agencies to take into account the effects of their undertakings on historic properties, including historic structures and archaeological resources, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment.



Wye Island Soft Launch
Maryland Department of
Natural Resources

- **Section 4(f) of the Department of Transportation Act** stipulates that federal transportation agencies cannot approve the use of resources such as publicly-owned public parks, recreation areas, wildlife and waterfowl refuges, or significant historic sites for transportation purposes unless there are no prudent and feasible alternatives, and the action includes all possible planning to minimize harm to the protected resource.
- **Section 404 of the Clean Water Act** prohibits the discharge of dredged or fill material into wetlands and waterways unless it is proven that steps were taken to avoid and minimize wetland impacts where practicable, and unavoidable impacts are compensated through activities provided to restore or create wetlands.
- **Section 7 of the Endangered Species Act** stipulates that federally assisted actions should not jeopardize the continued existence of any rare, threatened, or endangered (RTE) species or adversely modify their habitat. Section 7, as it is commonly referred to, calls for interagency consultation when a federal action may jeopardize a protected species and outlines the documentation necessary to obtain a Biological Opinion.
- **Section 6(f) of the Land and Water Conservation Fund Act (LWCFA)** requires that federally assisted actions that propose impacts, or the permanent conversion, of outdoor recreation property that was acquired or developed with LWCFA grant assistance, be approved by the Department of the Interior's National Park Service. Impacts to Section 6(f) lands must be mitigated through replacement lands of equal value, location, and usefulness.
- **Chesapeake Bay Critical Area and Atlantic Coastal Bays Critical Area Protection Program** established the Critical Area Commission to oversee the development and implementation of local land use programs directed towards the Critical Area that met the following goals:
 - Minimize adverse impacts on water quality that result from pollutants that are discharged from structures or conveyances or that have run off from surrounding lands;
 - Conserve fish, wildlife, and plant habitat in the Critical Area; and
 - Establish land use policies for development in the Critical Area that accommodate growth and also address the fact that, even if pollution is controlled, the number, movement, and activities of persons in the Critical Area can create adverse environmental impacts.
- **Title VI of the Civil Rights Act:** No person in the United States shall, on the ground of race, color or national origin, be excluded from participation in, be denied the benefits of or be subjected to discrimination under any program or activity receiving federal financial assistance. Title VI requires agencies to identify and address, as appropriate, any disproportionately high and adverse human health or environmental effects of the project on minority populations and low-income populations.

PROCESS FOR NEPA APPROVAL

SHA is responsible for reviewing the environmental impacts of all subrecipient federal aid transportation projects and assisting the subrecipient in complying with the NEPA requirements. This review is coordinated and ultimately approved by FHWA, based on the established policies and procedures.

1. The Program Manager will connect the subrecipient with the appropriate SHA Environmental Manager (EM) in the NEPA Compliance Section of the Environmental Planning Division (EPLD).
 - The EM's responsibilities are to maintain a database of all subrecipient projects that are using federal funds and provide guidance regarding the NEPA process. SHA's EM is also responsible for the review of the NEPA document the subrecipient has drafted (the EM may assist in drafting) and submittal to FHWA for approval.
2. The EM will coordinate with SHA's cultural resources staff to conduct Section 106 assessments. In order to facilitate an expeditious Section 106 review, subrecipients should provide, at a minimum, a Geographic Information Systems (GIS) shapefile of the project area (including staging, stockpiling, access, stormwater management, etc. areas) a project location map, project information including the location and scope of work, and design plans showing the limits of disturbance (LOD) (if available).

SHA cultural resources staff will determine whether any cultural resources studies/coordination needs to be carried out in advance of project construction and can provide guidance to subrecipients on this process as necessary. SHA cultural resources staff will also make a determination of effect for the project (no properties affected, no adverse effect, or adverse effect) on any historic properties eligible for or listed in the National Register of Historic Places (NRHP).

If SHA determines that the project will have an adverse effect on historic properties, SHA will work with the subrecipient on ways to avoid, minimize, or mitigate these effects and to develop a Memorandum of Agreement (MOA) with the Maryland Historical Trust (MHT) and FHWA.

3. Coordinate with the EM regarding information needed for review requests to the United States Fish and Wildlife Service (USFWS) and Maryland Department of Natural Resources (DNR) – Wildlife and Heritage Service and Integrated Policy Review Unit.
 - Provide EM GIS shapefiles of the project area (including staging, stockpiling, access, stormwater management, etc. areas), a project location map and project information, including the location and scope of work.
 - Complete the online project review process for Information for Planning and Consultation (IPaC) through the USFWS's [Chesapeake Bay Field Office](#). This online tool provides a step-by-step process for identifying whether federally listed threatened or endangered species are within the project area. If the outcome of

the process determines that no species are within the project area, the EM will use this documentation for the NEPA document. However, if the project may affect species, further coordination with USFWS will be necessary.

- Coordinate with the EM regarding information needed for review requests to DNR–Wildlife and Heritage Service and Integrated Policy Review Unit to request review and comment on the project.
- Provide GIS shapefiles of the project area (including staging, stockpiling, access, stormwater management, etc.).
- Include a project location map.
- Provide the project information, including the location and scope of work.
- Request information regarding the presence of the following:
 - Rare, threatened, or endangered species or habitat
 - Anadromous finfish species
 - Time of year restrictions for in-stream work in the project area

If any resource agencies request a survey, the results of the survey must be addressed as evidence of compliance.

- Provide any comments and survey reports to the EM to include in the NEPA document as evidence of compliance.
4. Determine if any wetlands, waterways, or floodplains are present and if they will be impacted. If impacts are anticipated, coordinate with the Maryland Department of the Environment and the U.S. Army Corps of Engineers to:
- Confirm field delineations
 - Avoid or minimize impacts
 - Obtain appropriate permits
 - Prepare mitigation plans, if necessary

See chapter 15 for additional information.

5. Determine if the project is within the Chesapeake Bay Critical Area and coordinate with the Critical Area Commission.
- If the project impacts any area within the Critical Area Boundary, coordinate with your local planning and zoning agency as appropriate to obtain necessary approvals. To check if your project is located within the Critical Area, use DNR's website, [Maryland Merlin](#).
 - Copies of letters to and approvals from the local planning and zoning agency or a consistency report (for local government projects) must be provided to the EM as evidence of compliance and included in the NEPA document.

- Mitigation may be required for impacts within the Critical Area. Some projects, including those requiring mitigation, may require an approval letter from Critical Area Commission staff.
 - For projects involving impacts to public parks located within the Chesapeake Bay Critical Area that would require Critical Area Commission approval, that approval would need to be obtained before FHWA approves the required Section 4(f) evaluation.
6. Determine a plan for [public involvement](#) and consult with the EM for approval.
- Consult with the EM early in the concept development stage to determine what is appropriate and reasonable for the project. The EM must approve the public involvement/outreach concept.
 - The requirements for public involvement and outreach are dependent on the project scope and potential for community impacts.
 - Complete public involvement activities and outreach to provide an opportunity for the public to comment on projects. There may also be a need to hold a community meeting when roadway detours are planned during construction.
 - Address any public concerns.
 - Public involvement activities must be documented in the environmental document.
 - Copies of items, such as meeting minutes, flyers, newspaper advertisements, etc., must be provided to the EM as evidence of compliance.

Some examples of public involvement activities and outreach include, but are not limited to, informal community meetings, flyers, website postings/announcements and newspaper advertisements. Factors that will affect the requirements of the public involvement and outreach include, but are not limited to, project location, average daily traffic, length of the detour, type and extent of community impacts, and duration of the detour.

The goal of involving the public is to allow the public to review/comment on the proposed action, assuring no surprises to the public when construction begins.

7. Determine the need to coordinate with Emergency Services or Public Transit Agencies.
- If a detour is required for the project, notify the appropriate emergency service and public transit agencies, such as:
 - Fire and rescue (ambulatory) departments
 - Police departments
 - Public schools
 - If the emergency service, school bus or public bus provider determines that the detour would adversely impact their response time or routes, work to address their issues.

- If the project is on a public bus route, notify the appropriate state or local agency (MTA, WMATA, Ride On, etc.).
 - Copies of letters to and responses from the emergency service agencies must be provided as evidence of compliance.
8. Determine if a Section 4(f) resource is impacted.
- Coordinate with the EM to help determine which Section 4(f) compliance/evaluation method, if any, is appropriate for the project.
 - If a Section 4(f) resource will be impacted, a 4(f) evaluation will need to be completed. Impacts to Section 4(f) resources are considered a Section 4(f) use.
 - Prepare a document to demonstrate that there are no prudent and feasible alternatives to avoid impacting the Section 4(f) resource.
 - If an avoidance alternative is determined to be feasible and prudent, it must be selected.
 - An alternative could be determined not feasible and prudent for the following reasons:
 - Does not meet the purpose and needs of the project.
 - Introduces severe operational or safety problems.
 - Requires additional environmental impacts.
 - Results in serious community disruption.
 - Adds extraordinary costs to the project.
 - If impacts are unavoidable, the impacts must be minimized to the greatest extent possible, and mitigation must be developed to offset the effects of the impacts.
 - All section 4(f) evaluations and determinations must be approved by FHWA, and are normally approved concurrently with the NEPA document, unless separate draft/final documents are required.
9. Determine if there are impacts to publicly owned public parks, recreational areas, wildlife or waterfowl refugees, or any publicly or privately owned historic property listed or eligible for listing on the National Register of Historic Places.
- If yes, determine if the impacted resource area received [Land and Water Conservation Fund Act of 1965 \(LWFCF\)](#) funding for acquisition or development.
 - If yes, the impacts to the resource are also subject to separate requirements under Section 6(f).
 - Section 6(f) coordination requires approval from the Department of the Interior's (DOI) National Park Service (NPS) acting through the DNR. Generally, impacts to Section 6(f) lands must be replaced with land of equal value, location, and usefulness, and a written agreement with DNR outlining the mitigation must be included as proof of compliance.

Similar requirements are also applicable if the affected resource was purchased or developed with State (DNR) Program Open Space money. Based on the project scope, coordination with additional agencies may be necessary for scope activities such as tree removal, hazardous waste removal, the non- applicability of Section 4(f), or the need for a U.S. Coast Guard permit. Contact the EM for information regarding additional coordination requirements specific to the project.

10. Prepare Environmental (NEPA) Document

- Contact SHA EM to discuss the level of environmental/ NEPA documentation needed.
- The NEPA document should discuss any environmental project scope, impacts, or lack thereof, mitigation and also summarize the results of the coordination with the environmental agencies. The following topic areas should be covered:
 - Right of way requirements (by type: residential, commercial, individual, etc.) and the number of displacements
 - Discussion of public involvement
 - Impacts to historic sites or archaeological resources
 - Impacts to rare, threatened, or endangered species
 - Impacts to wetlands, waterways, or floodplains
 - Impacts to the Critical Area
 - Removal of existing trees
 - Removal of hazardous waste
 - Conformance with air quality and noise standards
 - Conformance with TIP/STIP
 - Impacts to publicly owned public parks, historical sites, recreation areas, or wildlife or waterfowl refuges
 - Conformance with Maryland's Sustainable Growth Planning Principles (2025)
 - Reasonably foreseeable impacts
 - Effects on minority or low-income populations
 - Conformance with local and/or regional plans

If you have concerns that your project may have an issue with hazardous waste, impact noise standards, impact conformance with air quality, or consistency with sustainable growth planning principles, please contact the EM for guidance.

- **Attachments to Environmental (NEPA) Document**
 - In order to provide evidence of compliance and to present a better overview of the project, the items listed below should be included as attachments to the Categorical Exclusion (CE) or Programmatic Categorical Exclusion (PCE), or other NEPA documentation.

For more information on CEs, PCEs, and other environmental documentation, refer to the SHA publication Documentation for Local Government Projects.

- Location map
- Project plans
- Detour map (if required)
- Responses from the emergency service agencies (if required)
- Coordination with the MD Department of Planning for consistency of planning principles
- Proof of public involvement (meeting minutes, flyers, newspaper ads, etc.)
- Response from the USFWS
- Response from the DNR-Wildlife and Heritage Service
- Response from the DNR-Integrated Policy Review Unit
- Maryland Department of the Environment (MDE) permit application and/or the issued permit (if required)
- Approvals from the local planning and zoning agency regarding Critical Area impacts (if required)

11. Navigate the Approval Process

- Submit draft documents and attachments to the SHA EM for review.
- Depending on the scope of work or level of impacts to natural or historic resources, SHA may be able to approve the NEPA document.
 - If a Categorical Exclusion document ([Section II of Environmental Document](#)) or a more detailed document is required, the EM will submit the NEPA document to FHWA for approval.

NEPA APPROVAL TIMING

The timing at which NEPA approval is obtained for a project is driven by multiple factors, including the complexity of environmental issues, the need for an alternatives analysis, and the involvement of federal Preliminary Engineering (PE) funding. For all projects utilizing federal PE funds, FHWA authorizes those funds in two stages (Preliminary Design (PD) and Final Design (FD)), and NEPA approval is required to enter into each stage.

To begin the PD stage, SHA must submit to FHWA a request for federal PD funds, which includes an initial NEPA approval in the form of an Appendix A Programmatic Categorical Exclusion (Appendix A PCE) for Preliminary Design. The Appendix A PCE for Preliminary design is not developed by the subrecipients but is instead issued by the SHA EM. This initial NEPA approval does not authorize any construction activities. It only allows for the establishment of a federal aid project agreement for the completion of PD activities. Once FHWA authorizes the PD funds, subrecipients may begin project design.



The PD stage should include enough project design detail to enable subrecipients to assess the project's environmental impacts and, with guidance from the SHA EM, complete the NEPA document for project implementation. The NEPA document for project implementation allows the project to transition from the PD stage to the FD stage and eventually allows for project construction.

For most projects, approval of the NEPA document for project implementation should be sought when the project's design is between 30 percent and 65 percent complete, but may occur slightly earlier or later, depending on the specific needs of each individual project. NEPA approval may be required earlier in the PD stage if an alternatives analysis is required, so that multiple alternatives are not being developed beyond 30 percent design. Conversely, NEPA approval may occur later in the PD stage if there are complex environmental issues that require additional design detail or agency coordination to resolve.

Once completed, the approved NEPA document must then accompany SHA's request for authorization of federal FD funds by FHWA. Following FHWA's authorization, FD activities may begin and the project's design can be advanced towards completion. When the project's design reaches approximately 90% completion, subrecipients should reassess the project's scope of work and environmental impacts and, in coordination with the SHA EM, determine if a NEPA reevaluation is needed.

CHAPTER 5

ENVIRONMENTAL PERMITTING AND MITIGATION

Environmental permits and mitigation are needed when a project impacts natural resources such as established trees, forested areas, wetlands, and waterways. Erosion Sediment Control (ESC) and/or Stormwater Management (SWM) approvals and permits may be required for the disturbance or development of land. Any agency developing land must provide SWM measures under certain thresholds that control or manage runoff from such development. Early coordination is critical as environmental permitting delays could have a negative impact on the project schedule.

Attention should be given to avoid, minimize, and mitigate impacts to sensitive natural resources in order to obtain all necessary state and federal wetlands and waterways permits and promote environmentally sensitive project designs. Additional responsibilities for the permit may include wetland delineation, functional assessment services, wetland mitigation, stream restoration monitoring, and environmental monitoring of construction projects.

The subrecipient is the permittee. The permittee is responsible for the preparation, submittal, and approval of all permits to the local approving authority or Maryland Department of the Environment (MDE). If applicable, mitigation strategies should be developed to satisfy regulatory requirements, including ensuring the success of any stream and/or wetland mitigation. If the project is within SHA right of way, an access permit may be required, and coordination with the SHA District Offices will be necessary.

SHA Office of Highway Development-Highway Hydraulics Division (OHD-HHD), Office of Environmental Design (OED) and other applicable offices cooperate with state, federal, and local agencies to ensure compliance with applicable laws. SHA District Offices (Access Permit and Utility Permits) perform the review and may need to coordinate with OHD-HHD. The Design Technical Division (DTSD) is the owner of the Drainage and SWM assets inventory database.



Meadow Platform
Adkins Arboretum

OHD-DTSD is responsible for inspections and remediation of these facilities. OHD-HHD only performs technical reviews on submissions upon requests from the District Offices when a developer proposes modification/retrofit of a SWM facility, non-standard drainage structures, alternative designs during construction, and other design exception requests. The principal responsibility of OED during the review of plans submitted for a District Permit is to evaluate potential wetland and waterways impacts and proposed mitigation upon SHA property and easements, and to ensure SHA resources are protected.

Once all permits are obtained, submit the Environmental Permit Form [Available Here](#) with the project PS&E package. This form summarizes permits needed for the project with expiration dates. Maintain all records for at least three years after project closing.

TYPES OF PERMITS

The following is a general listing of the permits that a subrecipient may need before the project begins. In addition, if the project is within SHA right of way, the subrecipient will need to follow the process detailed in the next section.

WETLANDS AND WATERWAYS			
Necessitating Impacts/Issue	Permit/Approval/Law	Agencies Involved	SHA Role
Impacts to wetlands, waters, floodplains, and wetland buffers (Both non-tidal and tidal)	Wetland and waterway permits (e.g., Tidal License, Letter of Authorization, Authorization to Proceed, GWCP, Corps NWP, MDSPGP or Individual Permit)	Maryland Department of Environment (MDE)/ Army Corps of Engineers (USACE)	N/A– Responsibility of LPA for obtaining required permits and notifying SHA OPPE for NEPA
Changes to restrictions and guidelines established in the Coast Guard permit or have additional impacts on navigable waters	United States Coast Guard – Bridge Permit	US Coast Guard	
STORMWATER MANAGEMENT (SWM) AND EROSION AND SEDIMENT CONTROL (E/S)			
Necessitating Impacts/Issue	Permit/Approval/Law	Agencies Involved	SHA Role
Disturbing more than 5,000 Square Feet or 100 Cubic Yards of excavation	Erosion and Sediment Control and Stormwater Management	MDE	N/A– Responsibility of LPA for obtaining required permits and notifying SHA OPPE for NEPA
Disturbing more than one acre of earth	NPDES Construction NOI	MDE	
Outfalls in areas of 100,000 population or more	Municipal NPDES	MDE	
Changes to the 100-year Floodplain elevation	Federal Emergency Management Agency (FEMA)	MDE	
Modifications or restoration of man-made dams across streams or man-made dams at stormwater management facilities	Dam Safety MD Code 378	MDE	

IMPACTS TO TREES AND FORESTS			
Necessitating Impacts/Issue	Permit/Approval/Law	Agencies Involved	SHA Role
Pruning or felling individual trees in the right of way and/or forested areas less than 1.0 acre	Roadside Tree Permit	Maryland Department of Natural Resources (DNR) Forest Service	N/A– Responsibility of LPA for obtaining required permits and notifying SHA OPPE for NEPA
Impacting 1.0 acre or more of forest in a near highway project in or outside SHA right of way	Maryland Reforestation Law Approval	DNR Forest Service	
Grading activity of 40,000 SF or more in a non-linear facility project, such as building construction	Forest Conservation Act Approval	DNR Forest Service	
Growth of prohibited noxious weeds	Maryland Noxious Weed Law	Maryland Department of Agriculture	
Pesticide storage, mixing, and application	Pesticide Applicators Law	Maryland Department of Agriculture	
Fertilizer application to State land	Nutrient Management Plan	Maryland Department of Agriculture	
NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) & ASSOCIATED REGULATIONS			
Necessitating Impacts/Issue	Permit/Approval/Law	Agencies Involved	SHA Role
Impacts to historic properties (historic districts, standing structures, and archaeological sites)	Section 106 of the National Historic Preservation Act/ Section 4(f) of the US DOT Act/23 CFR 774/Official with Jurisdiction (OWJ)	Maryland Historical Trust (MHT)/SHA/ Federal Highway Administration (FHWA)	SHA OPPE completes <u>all</u> required Section 106 and Section 4(f) Coordination
Impacts to state and federally listed rare, threatened (RTE), and/ or endangered species	Section 7 of the Endangered Species Act, Magnuson-Stevens Fishery Conservation and Management Act (MSA), Section 305(b)	DNR/USFWS/NMFS	SHA OPPE completes <u>all</u> required RTE Coordination
Projects requiring additional right of way	NEPA/Uniform Relocation Assistance Act	LPA	N/A– Responsibility of LPA to inform SHA OPPE of project impacts for NEPA
Disturbance within the Chesapeake Bay Critical Area (1,000 ft landward from tidal waters, including 100 ft buffer)	Critical Area Commission for Chesapeake and Atlantic Coastal Bays	Critical Area Commission for Chesapeake and Atlantic Coastal Bays	N/A– Responsibility of LPA for Critical Area Compliance

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) & ASSOCIATED REGULATIONS (CONT.)			
Necessitating Impacts/Issue	Permit/Approval/Law	Agencies Involved	SHA Role
Impacts on parks and recreational facilities	Section 4(f) of the US DOT Act/23 CFR 774/OWJ	FHWA	SHA OPPE completes <u>all</u> required Section 106 and Section 4(f) Coordination
Parks and recreational facilities: other applicable regulations	Depending on location and impacted resources, additional regulatory compliance may be required as part of the NEPA process, including Section 6(f) of the Land and Water Conservation Fund (LWCF) Program Open Space (POS), and the Capper Crampton Act	DNR, Department of Interior (DOI), National Capital Planning Commission (NCPC)	LPA completes <u>all</u> required coordination for other applicable regulations and informs SHA of NEPA
Air quality issues	Air Quality Conformity/Clean Air Act	MDE and EPA	SHA OPPE
HAZARDOUS MATERIALS			
Necessitating Impacts/Issue	Permit/Approval/Law	Agencies Involved	SHA Role
Encounter or expose any abnormal conditions (hazardous/toxic material or spill)	MOE Approval	MDE/EPA	N/A

*The PRD Stormwater Management and Erosion and Sediment Control Permit Process has three phases of submittals and reviews: Concept, Site Development, and Final. All submissions go to the Plan Review Section or local review section with delegated authority, if applicable, to ensure compliance with the Annotated Code of Maryland, Environmental Article, Title 4, Subtitle 1, Sediment Control; and Subtitle 2, Stormwater Management; The 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control and the 2000 Maryland Stormwater Design Manual Vol I and II. Note that new regulations and the SWM Design Manual are scheduled to be issued in the Fall of 2026. Check to determine which version is applicable.

PROCESS FOR PROJECTS WITHIN SHA RIGHT OF WAY

Wetlands and Waterways Permit and Mitigation Plans: Office of Environmental Design (EOD), Environmental Programs Division.

- Avoid and minimize construction impacts to wetlands and waterways on SHA property and easements, and restore affected areas to their preconstruction condition.
 - Impacts to Critical Area and Mitigation Plan
 - Provide information about proposed impacts and mitigation activities within the Critical Area and Critical Area Buffer.

Landscaping: Office of Environmental Design, Landscape Operations Division:

The **SHA Landscape Design Guide** provides information about Critical Areas, regulated impacts to areas within the Critical Area and Critical Area Buffer, and mitigation for impacts to soil and vegetation within 1,000 ft. of tidal waters.

- Impacts to Stormwater Management Facilities Plan: Many of these SWM facilities are located in areas of the SHA right of way that may be directly or indirectly damaged by construction activities.
 - Develop plans that document existing conditions and plans to restore or mitigate changes to existing SWM facilities impacted by construction.
 - Examples of SWM facilities may include sand filters, pen vegetated channels, bioretention areas, filter strips, and submerged gravel filters.

Coordination with [local SHA district office](#) for an access permit:

- Determine the type of access permit needed.
- Use the **SHA Environmental Guide for Access and District Permit Applicants** are to develop plans to protect environmental resources.
 - Plans should avoid and minimize construction impacts regarding tree, wetland and waterway, Critical Area and Critical Area Buffer, and current TMDL facilities within SHA right of way to ensure that SHA resources are protected and to restore affected areas to their preconstruction condition.
 - Roadside Tree Permit (RTP) and Mitigation Plan: Tree removals, tree installation, and impacts to tree branches or tree roots within SHA right of way require a RTP issued by the Maryland Department of Natural Resources Forest Service (DNR), unless an RTP is waived by DNR when an approved Forest Conservation Plan (FCP) in conformance with the Maryland Forest Conservation Act (FCA) includes work within SHA right of way.
 - Document the species, sizes, and locations of trees to be removed, impacted, or installed, as well as the nature of any impacts to existing trees, and the proposed mitigation for tree removals on plans.
 - Mitigate the removal of all trees within SHA right of way with trunk size two inches in diameter at breast height (DBH) or greater. The DBH is measured at 4.5 feet above the ground. SHA may request mitigation for the loss of brush, shrubs, or other ornamental plantings and may request other landscaping or extended maintenance to restore and establish native vegetation in natural areas. Such mitigation is not required by Maryland law, but may be required as a condition for an Access Permit by SHA.
 - Typically, SHA requests 1:1 mitigation for trees and large shrubs, although additional mitigation may be required for significant or specimen trees.
 - Construction of new facilities may also be required to offset the impacts of additional impervious surface, etc.

- Submit all materials for a permit application to the SHA District Office for evaluation.
- Once the request is received, the District Office will coordinate with OED to evaluate construction plans and ensure compliance with environmental laws and SHA landscape design standards.
- The OED divisions will provide a coordinated response of recommendations in a memo sent directly to the District Office.
- Apply and acquire the necessary agency permits for the proposed construction and associated impacts.

RECYCLED MATERIALS

See chapter 11.

ADDITIONAL RESOURCES

- Environmental Guidelines for Construction – additional permit information and details.
- SHA [Landscape Design Guide](#) – extensive information about the Maryland Roadside Tree Law, the Maryland Forest Conservation Act, and other environmental laws.
- Maryland Stormwater Management and Erosion and Sediment Control Guidelines for state and federal projects.
- Submitting a District Permit request, see chapter 10.

CHAPTER 6

RIGHT OF WAY (ROW)

This chapter will establish guidance criteria and procedures that govern the subrecipient's project requiring Right of Way (ROW) acquisitions, disposal of real property interests, and ROW Use Agreements. The subrecipient shall comply with the Uniform Act, ORE Operational Guidelines, and ORE Directives which are approved by FHWA and ensure compliance.

BACKGROUND

It may be necessary for subrecipients to acquire some type of property rights to construct the project. The FHWA requires subrecipients to certify that requirements related to ROW have been fulfilled before authorizing a project for construction.

ROW coordination should begin as soon as it is determined it will be required, and before construction begins. In some cases, the ROW coordination and certification requirements can become very complex. Acquiring ROW can take 6-9 months to conduct appraisals, negotiations, and reach an agreement with those affected by a project. Subrecipients can help prevent unnecessary delays or costs during construction by early and complete coordination of ROW with SHA. For detailed, step-by-step guidance, subrecipients should review: [ORE Operational Guidelines](#).

Uniform Act

The primary law governing ROW acquisition and relocation activities on federal aid projects is referred to as the Uniform Act, short for Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. The Uniform Act and other federal ROW requirements are in place to protect and treat fairly those who are affected by a federal aid project, so that they will not suffer disproportionate injuries.

When subrecipients need to acquire property, or certain rights or interests to property in order to build the project, they must comply with the Uniform Act. The Uniform Act requirements apply when federal aid is used for any portion or phase of a project. For example, if local funds are used for ROW acquisition and federal aid funds are planned to be used for the construction, subrecipients must still comply with the Uniform Act to receive any federal funds.



South Shore Trail Phase I
Anne Arundel County

The Office of Real Estate (ORE) will certify that ROW is needed by the subrecipient to construct the project and is in its legal and/or physical possession and utility relocation and railroad work has been completed or arrangements have been made to coordinate the efforts with the construction of the project before any federally funded transportation project can be authorized by SHA for advertisement.

Prior to commencing ROW activities, the subrecipient must complete the following:

1. An executed MOU or Master/supplemental agreement with SHA
2. An approved Environmental (NEPA) document for the project
3. Notification from SHA to begin ROW activities

Property Review and Compliance Division (PRD) is responsible for the overall ROW practices and oversight of SHA's subrecipient program. The Real Property Specialist (RPS) will act as the Subrecipient Coordinator (SC) and be the liaison between SHA and the subrecipient. The SC shall be responsible for coordinating with the subrecipient on their ROW activities by assessing and reporting on ROW acquisition progress and providing input and assistance to resolve any ROW issue that may arise.

The SC is responsible for providing oversight on all subrecipient ROW activities and construction projects that require ROW. The subrecipient shall use ORE's Operational Guidelines and ORE Directives as guidance for their ROW activities. The SC shall provide the subrecipient current copies of the guidelines and directives.

Project oversight provided by the SC includes, but is not limited to the following:

1. Ensuring all rights of way and legal rights of entry have been acquired
2. Ensuring that there are no encroachments
3. Providing support to subrecipients as needed

Property Assets Management Division (PAM) will provide support to PRD's oversight of disposal actions and ROW Use Agreements by subrecipients. The disposal actions oversight includes but are not limited to the following:

1. Ensuring that all disposal actions are in accordance with the federal regulations governing such activities
2. Ensuring that the subrecipient receives Fair Market Value (FMV) for real property interests being disposed of or obtains a FMV waiver, if warranted
3. Aids the subrecipient in such technical matters as needed to comply with the federal requirements

PROJECTS WITHOUT ROW ACQUISITIONS

Projects Within SHA's ROW

When a subrecipient project is proposed within SHA's ROW, the SC shall request ROW verification from Records and Research Division (R&R). Once the verification is received, the SC shall share the results with the subrecipient.

The subrecipient is responsible for confirming that all proposed construction activities remain within the verified ROW limits. The subrecipient shall also notify the SC of any potential impacts to existing improvements within the ROW that are covered by SHA-issued permits.

The ROW limits shall be clearly shown on all construction plans. If any portion of the proposed work is expected to extend beyond SHA's ROW, the subrecipient shall notify the SC so the issue can be addressed, which may require the acquisition of additional real property interests.

Projects Within Subrecipient's ROW

For projects located within the subrecipient's ROW, the subrecipient shall provide documentation to the SC identifying the existing ROW limits. Acceptable documentation includes acquisition deeds, plat maps of dedication showing acceptance by the subrecipient, records of survey showing acceptance by the subrecipient, or an adopted town plat.

Assessor's maps are not acceptable.

R&R shall review the submitted documentation to confirm that it adequately demonstrates the subrecipient's ownership of or legal right to occupy the ROW. The subrecipient shall clearly show the verified ROW limits on all construction plans.



Harriet Tubman Underground Railroad Visitor Center
Maryland Department of Natural Resources

PROJECTS REQUIRING ROW ACQUISITION

Some projects cannot be built entirely within the existing ROW owned by the subrecipient or SHA. When this occurs, additional ROW must be acquired to construct the project. Americans with Disabilities Act (ADA) guidelines must be considered when determining ROW needs. All costs associated with ROW acquisition are considered as project-related costs.

The subrecipient shall provide SHA with the following information:

1. The name of the subrecipient official responsible for establishing just compensation. The subrecipient must also submit appraisals, appraisal review reports, negotiation records, relocation assistance documentation, and property management information, if applicable.
2. A description of any ROW procedures proposed as an alternative to SHA's acquisition process.
3. A description of the ROW needs for the project, including:
 - ROW plats or maps
 - Number of parcels required, categorized by land use (*e.g., residential, commercial, industrial, etc.*)
 - Type of ROW acquisition required such as fee simple, permanent easements, or temporary easements, etc.

The subrecipient shall coordinate with the SC to ensure compliance with all applicable federal and state laws. All ROW acquisitions, regardless of who performs them, must comply with the Uniform Act and ORE Operational Guidelines.

INITIAL ROW NEEDS MEETING

After the NEPA process is complete and the subrecipient has identified the ROW needs, SHA will schedule an initial ROW needs meeting. The purpose of this meeting is to review the ROW required based on the project design and to identify any additional ROW needs for construction. Utility impacts and potential resolutions should also be discussed.

At the conclusion of the initial ROW needs meeting, it will be determined whether additional meetings are required. If there are no changes or only minor changes to the ROW needs, the initial meeting may serve as the final meeting. Additional meetings may be held if needed to finalize ROW requirements.

ROW SETTING MEMORANDUM

Once the ROW needs are finalized, the SC, with input from the subrecipient, shall prepare a ROW Setting Memorandum documenting the decisions made during the ROW needs meeting(s).

AUTHORIZATION OF ROW ACQUISITION

After the ROW Setting Memorandum is approved, SHA will complete any required scope/budget, and programming/STIP revisions requests for FHWA authorization for ROW acquisition, relocation assistance, and utility relocation or adjustment. These requests are based on cost estimates provided by the subrecipient and verified by SHA.

Once FHWA authorization is received, the ROW phase may begin. If the subrecipient is authorized to acquire ROW for the project, the SC will issue Notice To Proceed (NTP) for ROW engineering, appraisal, and appraisal review activities. Just compensation must be established by the subrecipient before offers are made to property owners.

ROW ACQUISITION ACTIVITIES

Subrecipient Appraisals

Appraisals of ROW must be completed by state-licensed appraisers under contract with the subrecipient and listed on SHA's Approved Appraiser List maintained by Appraisal Review Division (ARD). Appraisals must comply with Uniform Standards of Professional Appraisal Practice (USPAP) and ORE standards as outlined in the ORE's Operational Guidelines, ORE Appraisal Guidelines, and ORE Directives. When differences occur between these documents/standards, ORE Appraisal Guidelines shall take precedent.

For uncomplicated acquisitions valued under \$10,000, waiver valuations may be used in accordance with ORE Operational Guidelines. Per the Uniform Act (49 CFR 24.102), the property owner should be given the opportunity to accompany the appraiser on their field inspection of the ROW.

Appraisals must be reviewed by SHA-approved appraisers and may be reviewed by ARD, and just compensation must be set before the subrecipient makes any offers to property owners.

Subrecipient ROW Acquisition

When a subrecipient is responsible for acquiring ROW for a project, the subrecipient shall comply with the Uniform Act, ORE Operational Guidelines, and ORE Directives which are approved by FHWA and ensure compliance. The SC shall work with the subrecipient throughout the acquisition process. All ROW plans or plats must meet SHA standards. Appraisal reports must be prepared by an SHA approved independent appraiser. The appraisal report must be reviewed by an SHA approved independent appraiser or by ARD, and just compensation must be established before the subrecipient may make offers to property owners.

The subrecipient shall obtain the approved appraiser list from ARD. PRD shall review the subrecipient's property acquisition negotiations for property settlements.



DEDICATIONS AND DONATIONS

The subrecipient may accept land that a developer has dedicated, or proposes to dedicate, as part of a federal aid project. A dedication is the reservation of land for public use and typically occurs through the subdivision or zoning approval process. The subrecipient may also accept land dedicated through the local planning process or offered by a property owner in exchange for land use concessions, provided the dedication complies with all local, federal, and environmental regulations.

Real property interests obtained through standard zoning or subdivision requirements and procedures, where dedication of strips land is required as part of the local government's normal exercise of police power, are not considered a constitutional taking. Therefore, payment of just compensation and compliance with the Uniform Act are not required. Property acquired in this manner may be included in a federally assisted project without affecting federal participation in other project costs. Dedications made to avoid federal requirements are not permitted.

Property owners may also donate land or all or part of the compensation for land needed for a project. Owners must be informed of their right to receive just compensation and to have an appraisal prepared. Owners may choose to waive their rights to an appraisal and compensation, but the waiver must be provided in writing and must comply with ORE Operational Guidelines. The donation process is governed by the Uniform Act (49 CFR 24.108).

ROW CERTIFICATION

The ORE Director is responsible for certifying to FHWA that the subrecipient has complied with all applicable federal and state laws and regulations, has acquired or legally obtained all real property interests required for the project, and has completed relocation assistance for displaced persons, when applicable. The subrecipient shall submit all required documentation to the SC at least 45 days before the project advertisement date or NTP. This allows sufficient time for the SC to complete the required review before ROW certification is issued.

CHAPTER 7

RAILROADS

BACKGROUND

This chapter establishes guidance for federal aid projects involving railroad facilities. Under 23 USC 130 and 23 CFR 646 Subpart B, the policies and procedures for advancing federal aid projects that involve railroad facilities, including projects focused on the elimination of hazards at railroad-highway crossings, projects utilizing railroad property, and projects requiring adjustments to railroad facilities or facilities jointly owned or used by railroad and utility companies as a result of highway construction, are discussed and outlined.

Additionally, 23 CFR 140, 23 CFR 635, and 23 CFR 646 establish railroad coordination requirements for all federal aid construction authorizations via a coordination railroad statement. The purpose of these requirements is to ensure that SHA and all subrecipients evaluate and document potential railroad impacts associated with federal aid highway projects.

All federal aid highway construction projects require a Railroad Statement confirming that the appropriate railroad coordination has taken place, even if railroads are not affected by the project. Early coordination is critical as railroad delays can have a negative impact on the project's cost and schedule.

IMPROVEMENT DETERMINATION

If a highway-rail crossing is located within the project limits or near the project terminus, which SHA defines as within 500 feet outside the project limits, subrecipients may be required to improve an at-grade railroad crossing if the existing traffic control or warning devices do not meet current or minimum standards pursuant to 23 CFR 109 Part E. To determine if any highway-rail crossing safety improvements are necessary, subrecipients should coordinate with the applicable railroad and the Rail Safety Program Manager within the Office of Rail and Intermodal Freight (ORIF) at The Secretary's Office (TSO). Contact information and more railroad resources can be found here: [Rail and Intermodal Freight – MDOT](#).

If a crossing is within the project limits or within 500 feet outside of the project limits, a diagnostic review meeting shall occur with the applicable stakeholders, including, at a minimum, but not limited to:



Easton Rail Trail
Maryland Department of
Natural Resources

subrecipient, roadway owner, MDOT Rail Safety Program Manager, and railroad personnel. The diagnostic team will review existing conditions and proposed project improvements, analyze crash data, determine requirements and scope of work, and more.

Railroads generally own the right of way on which they operate. In most cases, the railroad will insist that their own forces or their contractors perform any work that will directly impact their tracks or equipment. A highway contractor or subcontractor may be allowed to perform work on railroad right of way that does not impact the railroad's facilities. In these cases, a right-of-entry permit issued by the railroad is required and potentially, railroad worker safety training. In addition, an agreement between SHA, the subrecipient and/or railroad is required when a federal aid project requires the use of railroad properties or necessitates adjustments to railroad facilities, such as in rail-highway grade crossing improvements. This agreement is essential for defining the project's construction scope of work, costs, maintenance, and cost-sharing responsibilities.

Through the Maryland Transit Administration (MTA), the State of Maryland owns and maintains railroad corridors across the state to secure or promote economic development and sustainability goals, and to preserve railroad corridors for future interim or non-railroad use. These state-owned corridors will have specific coordination, design, and construction specifications.

FUNDING

Improvements to railroad facilities, as required in connection with a federal aid highway project, must be included in the overall cost of the project, including those costs to comply with the provisions of a railroad right-of-entry permit. Funds must be authorized by FHWA prior to starting work on any project phase for federal funds to be eligible. These costs may include railroad flagging, right of way acquisition, insurance, maintenance, and engineering in accordance with 23 CFR Part 140 Subpart I. Such costs shall be identified as part of the agreement between SHA, the subrecipient and the railroad. The agreement must be reviewed and approved by SHA prior to being executed by the subrecipient and the railroad.

If the work to be performed by the railroad falls under Section 130 Railway-Highway Crossings Program of the Highway Safety Improvement Program, SHA may pay for the work directly and seek reimbursement from FHWA, rather than requiring the subrecipient to do so. Section 130 was established to reduce the number and severity of highway-related crashes at highway-rail grade crossings. Program funds may be used for the elimination of hazards, installation of protective devices at railway-highway crossings, replacement of functionally obsolete warning devices, and projects aimed at reducing pedestrian fatalities and injuries caused by trespassing at grade crossings. To determine whether a project qualifies under Section 130, subrecipients should contact the Rail Safety Program Manager within TSO's ORIF.

RAILROAD CERTIFICATION

For federal aid projects, SHA is providing the following statement of coordination (check one):

- ☐ **No railroad coordination required** (no RR facilities are affected). Check this box when there is no railroad facility within or near the terminus of the project limits.
- ☐ **All railroad work has been completed prior to the project.** Check this box if traffic control devices within or near the terminus of the federal aid project limits comply with the current edition of the Manual on Uniform Traffic Control Devices.
- ☐ **The necessary arrangements have been made for all railroad work to be undertaken and completed as required for proper coordination with physical construction schedules.** Appropriate notification shall be provided in the PS&E for railroad coordination concurrent with the project construction.
- ☐ **For AREAWIDE Contracts,** SHA will provide a Statement of Coordination when the Modification to the 25C is submitted, prior to NTP. Check this box for all AREAWIDE Projects.
- ☐ **This is a DESIGN-BUILD Contract.** The Design-Builder shall notify SHA of any anticipated work near a railroad. SHA will then coordinate any work with the affected railroad.

If railroad work is to be undertaken during construction, subrecipients must indicate as part of the certification that appropriate notification will be included in the bid proposal advising all prospective bidders of any railroad work that will occur concurrently with the project construction. In addition, the Plans, Specifications, and Estimates (PS&E) package must include notification to the contractor if supplemental contractor's liability insurance is required, as well as proof of insurance documentation for the same.

PROCESS

To ensure that railroad coordination is integrated early in the preliminary engineering phase, subrecipients must:

1. Coordinate early with stakeholders and identify any railroad facilities inside the project limits, or within 500 ft outside the limits of the project.
2. Determine if construction activities will affect the railroad crossing. Consideration should also be given to the means and methods of construction and the traffic control plan. For those railroad-highway grade crossings located outside the project limits, the subrecipient should evaluate and determine the adequacy of warning devices. To determine the adequacy of warning devices, the following conditions must be met:
 - The traffic control devices for the rail crossing are in compliance with the current edition of the Manual on Uniform Traffic Control Devices; and
 - SHA will determine if the crossing does not require active warnings to be installed in accordance with the requirements of 23 CFR 646.214(b).

3. Contact the Rail Safety Program Manager if railroad facilities will be affected to determine next steps regarding coordination efforts and the scope of work.
4. If railroad coordination is needed, a diagnostic meeting shall be scheduled with appropriate stakeholders.
5. Determine how the railroad work will be funded for design, if applicable, per 23 CFR 646.216(b). Contact the Rail Safety Program Manager for information on various funding opportunities.
 - Per 23 CFR 646.216(b)(2), federal aid funds can participate in the costs of engineering services, provided the fees are not based on a percentage of the construction cost.
6. Initiate the drafting of a formal railroad statement for all affected railroads where federal aid reimbursement is applicable, ensuring the document explicitly defines the scope of work, cost-sharing obligations (per 23 CFR 646.210), maintenance responsibilities, etc. Send to SHA for review and approval prior to submitting to the railroad company for signature.
 - Design railroad-maintained facilities to railroad standards. Ensure all signals/signage meet MUTCD requirements (23 CFR 646.214).
 - If the work will be performed by the railroad and funded by a source outside of SHA, send correspondence showing the proposed work to the railroad and request their concurrence, along with plans and an estimate of their work. Mark the project plans with WORK TO BE DONE BY OTHERS.
 - If the work will be performed by the subrecipient or its contractor, contact the railroad to determine the requirements for obtaining a right-of-entry permit and construction and/or maintenance agreement.
7. If railroad work is required as part of the project, special provisions must be developed within the project contract to clearly define the contractor's responsibilities related to railroad coordination. These provisions must address operational constraints, access requirements, and coordination procedures established in the executed railroad written statement.

Per 23 CFR 646.216(d), any federal aid project involving the use of railroad property or adjustments to railroad facilities must be governed by a written agreement between SHA, the subrecipient, and the railroad. The subrecipient is responsible for ensuring that the contract's Special Provisions are consistent with the executed agreement to avoid conflicting requirements related to site access, flagging operations, scheduling, safety, and liability.

Railroad Special Provisions should address, at a minimum, the following:

- Parties responsible for performing the work.
 - Parties responsible for the payment of the work.
 - Liability insurance requirements.
 - Flagger requirements.
 - Construction and/or maintenance agreement requirements.
 - Railroad Worker Safety Training requirements.
 - Railroad monitoring requirements during construction and final inspection.
 - Coordination of railroad activities with the project design and construction schedule to avoid adverse impacts to the overall project timeline.
 - Notification within the bid proposal identifying railroad work that will occur concurrently with highway construction activities.
8. Work with SHA to establish a railroad certification to confirm appropriate coordination has taken place, even if railroads aren't affected by the project.
 9. Include the railroad certification in the bid proposal.
 10. Maintain all records for a period of three years from the date final payment has been received by the railroad company.

REIMBURSEMENTS

For work that is completed by the railroad on a federal aid highway construction project administered by the subrecipient, as established in the executed railroad statement with the railroad, the subrecipient must ensure the railroad submits periodic and/or final reimbursement requests for actual costs incurred in accordance with the executed agreement.

The subrecipient must verify that these reimbursement requests are for costs incurred by the railroad in connection with the federal aid highway project and comply with 23 CFR Part 140 Subpart I before submitting them to the SHA for review, approval, and reimbursement.

ADDITIONAL RESOURCES

For more information about railroad coordination and certification requirements for use by a federal aid project, refer to FHWA's [Federal Aid Essentials for Local Public Agencies video series](#). Topics covered under Project Development include the following modules:

- Railroad Coordination and Certification Requirements
- 23 CFR 140 Subpart I, Reimbursement for Railroad Work
- 23 CFR 635 Subpart C, Physical Construction Authorization
- 23 CFR 646 Subpart A, Railroad – Highway Insurance Protection

- 23 CFR 646 Subpart B, Railroad – Highway Projects
- FHWA Memo on Railroad Coordination on Federal Aid Highway Projects dated 7-31-15

For further information on MDOT's Office of Rail and Intermodal Freight, refer to this website: [Rail and Intermodal Freight – MDOT](#). This webpage gives information on priority projects, rail plans and studies, rail resources, state rail corridors, rail safety, rail-trail project partnerships, all railroads operating in Maryland and the ORIF team contact information.

CHAPTER 8

UTILITIES AND DOMESTIC MATERIALS PROCUREMENT PREFERENCE (Buy America and BABA)

BACKGROUND

Subrecipients are required to coordinate projects with utility owners. Early coordination is critical as utility delays can have a negative impact on the project's cost and schedule.

A utility is defined as a privately, publicly, or cooperatively owned line, facility or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, stormwater not connected with highway drainage, or any other similar commodity, including any fire or police signal system or street lighting system, which directly or indirectly serves the public.

If utilities are present, involvement by utility owners can range from simply marking utility locations within the project area to relocation of utilities due to conflicts with the scope of the project.

FUNDING

Utility relocation costs are only eligible for federal funding reimbursement when allowed under Maryland state law. The common law in Maryland states that where utilities are located permissibly in the public right of way, the utilities are responsible for the cost of relocation where such relocation is required by public necessity/public project.

The utility is not responsible for those relocation costs only if:

1. The utility has a documented property right; or
2. There is a statutory provision or subrecipient policy that shifts the cost responsibility to the subrecipient; or
3. An agreement with the utility that expressly requires the subrecipient to pay the relocation costs.



Little Blackwater Soft Launch
Maryland Department of
Natural Resources

Utility relocation costs include the direct costs of moving utilities as required within the scope of the project. In addition, costs may also include design and, in some cases, the acquisition of a replacement easement, and/or tree cutting and trimming. These costs shall be identified as part of the agreement between the subrecipient and the utility company, and the agreement must be reviewed and approved by the SHA's Utilities Team prior to being executed.

A utility agreement is required for all utilities requiring relocation on a federal aid project, regardless of who pays for the relocation. The Buy America and Build America, Buy America (BABA) provisions apply to eligible utility relocations within the NEPA project scope if any federal funds are used for any phase of the project, regardless of the relocation's funding source. Subrecipients must include specific Buy America/BABA language in the utility agreement to ensure that manufacturer certifications are approved by the SHA Office of Materials Technology (OMT) before any materials are installed. When reimbursement for utility PE relocation is being requested, federal authorization must be received prior to the work being performed. To request this authorization, a UC-4 and UC-5 form should be submitted to the Federal Aid Programming Division in addition to the materials required in chapter 10.

BABA applies when federal aid is used for any portion or phase of a project. If one contract within the scope of a NEPA document is awarded using federal aid funding, BABA provisions apply to all contracts within the scope of the NEPA document, regardless of the source of funding. For example, if local funds are used for utility relocation and federal aid funds are planned to be used for the construction, subrecipients must still comply with BABA to receive any federal funds. Federally ineligible work is not subject to the BABA requirements.

DOMESTIC MATERIALS PROCUREMENT PREFERENCE (BUY AMERICA AND BABA)

The Buy America and BABA requirements should be addressed in the following areas:

- Final Design (PS&E): Incorporate relevant requirements early in project development.
- Contracting Language: Include and reference SHA's Contract Provisions related to Buy America and BABA.
- Construction Administration: Clearly establish responsibilities and procedures for subrecipient and SHA regarding material certification, material clearance, documentation, inspection, and compliance monitoring.
- Utilities Contracts/Agreements: All federally eligible utility work must meet Buy America requirements regardless of funding source, if the NEPA project has at least one federal aid highway program funded for construction or a preliminary engineering contract authorized.
- Railroad Agreements/Contracts: Address Buy America and BABA requirements in contracts or agreements with railroads as appropriate.

Current FHWA domestic material procurement preferences under Buy America, pursuant to 23 U.S.C. § 313 and 23 CFR 635.410, are now complemented by the Infrastructure Investment and Jobs Act (IIJA) BABA 2 CFR Part 184 requirements. Together, these regulations establish domestic preference requirements for all infrastructure projects funded with federal aid highway program funds. Under this framework, iron and steel products, as well as certain manufactured products, remain subject to both Buy America (for iron or steel products and manufactured products) and the BABA Act (for construction materials).

If a project has any federal funding authorized for any phase (e.g., Preliminary Engineering or Construction), all permanent materials within the project scope must comply with these requirements. This applies even to projects not generally considered infrastructure, such as the purchase of vehicles or equipment under certain federal aid highway programs.

An exception exists under 23 CFR 635.410(c)(2) for precast concrete and Intelligent Transportation Systems (ITS) or other electronic hardware systems. While these are classified as Manufactured Products, any components within them consisting wholly or predominantly of iron or steel (such as reinforcing steel in precast or the cabinets and other enclosures for electronic systems) must meet the requirements of iron or steel products.

Every item brought to the work site must be classified into one of the following four categories. Classification is based on the status of the item when it arrives at the project site.

- Iron and Steel Products: All manufacturing processes, from the initial melting stage through the application of coatings, must occur in the U.S.
- Manufactured Products: Items processed into a specific form or combined with other materials. Must meet Final Assembly and the 55% Domestic Component Cost threshold.
- Construction Materials: Includes non-ferrous metals, plastic and polymer-based products (including PVC), glass, fiber optic cable, optical fiber, lumber and drywall. All manufacturing processes must occur in the U.S.
- Other materials/Section 70917(c) materials (Exempt): Includes cement and cementitious materials; aggregates such as stone, sand, or gravel; and aggregate binding agents or additives.

SHA expects all materials permanently incorporated into federally funded projects to comply with Domestic Preferences. If a subrecipient determines during the design phase that these requirements cannot be met, the following relief provisions may be explored: minimal use, alternative bids, and a waiver of the requirements for products that are not domestically available in sufficient quantity or quality to fulfill the project requirements. As these provisions are infrequently used in subrecipient projects, they will not be covered in detail in this manual.

WAIVERS

USDOT public interest [Waiver for De Minimis Costs and Small Grants](#) applicable to awards obligated on or after August 16, 2023.

The public interest waiver applies to projects funded under DOT-administered financial assistance programs for iron, steel, manufactured products, and construction materials under a single financial assistance award for which:

1. The total value of the non-compliant products is no more than the lesser of \$1,000,000 or 5% of the **total applicable costs** for the project;* or
*Does not apply to iron or steel. The de minimis threshold in 23 CFR 635.410(b)(4) continues to apply for steel and iron.
2. The total amount of federal financial assistance applied to the project, through awards or subawards, is below \$500,000.

If a subrecipient wants to invoke a Small Grants Waiver, the requirement must be formalized in a Project Special Provision at the time of advertisement. This provision must explicitly identify the project-specific waiver and detail all applicable conditions to provide clear guidance to bidders.

Further, the subrecipient must implement a Tracking and Reporting Mechanism to document all materials incorporated under the waiver. This ensures that non-compliant materials are accurately monitored against.

Minimal Use

- Subject to (23 CFR 635.410(b)(4)), foreign steel or iron products may be used, provided the cost of such products as they are delivered to the project does not exceed 0.1 percent of the total contract amount, or \$2,500, whichever is greater.
- Per [FHWA Q&A #31](#), the total contract amount is not fixed at the time of award. It represents the final contract cost, including any modifications due to change orders. Subrecipient must actively monitor their minimal use log against the current contract value. If a project's total cost decreases or the cost of foreign steel increases, the project may fall out of compliance. If the threshold is exceeded at any point, the subrecipient must request a waiver for all non-compliant iron or steel products permanently incorporated or remove the material.
 - A log of foreign source items should be kept by the subrecipient to ensure that the minimal use threshold is not exceeded during the life of the project. This log must reflect the delivered cost (not the unit price) of the foreign iron or steel products to the project site. This includes the invoice price and transportation costs (as evidenced by delivery receipts or bills of lading) but excludes on-site labor and equipment costs for installation. The log must also be updated concurrently with every change order that affects the total contract value, rather than just during the life of the contract.

- The subrecipients must address domestic preference requirements during Final Design (PS&E), ensure inclusion in contracting Language, and maintain rigorous Construction Administration documentation.
- Domestic Materials Procurement Preference (Buy America/BABA) requires that all suppliers (including subcontractors) demonstrate compliance by verifying that manufactured products and construction materials used on the project were produced in the U.S. The certification requirements apply to all materials within the project scope. The subrecipient is responsible for collecting and verifying documentation from all contractors and third parties.
- **The subrecipient is responsible for ensuring that all materials used on a project are compliant before they are permanently installed.**
 - **Contractor/Supplier Responsibilities:** The contractor must provide the subrecipient with signed manufacturer certifications for all iron, steel, manufactured products and construction materials. These documents must explicitly confirm that all manufacturing processes occurred in the U.S.
 - **Subrecipient Responsibilities:** The subrecipient must verify that these certifications are complete, accurate, and project-specific.
 - **SHA Responsibilities:** The subrecipient must forward verified certifications to the SHA Office of Materials Technology (OMT) for final approval as part of the SHA Material Clearance Process (see chapter 11).
 - No material may be permanently incorporated into the project until the certification has been reviewed and approved by SHA OMT. Materials installed without this clearance are at risk of being deemed non-participating for use of federal funds.

UTILITY CERTIFICATION

A utility coordination certification statement is a standard requirement that applies to all federal aid projects, even if utilities aren't affected by the project.

The utility coordination certification should be submitted as part of the PSE package to SHA for the construction authorization. This document certifies that the subrecipient has completed identifying utilities, coordinated with impacted utilities, determined any utilities requiring relocation, determined if eligible for reimbursement, scheduled and determined the cost of utilities.

Subrecipients are responsible for working with SHA to establish a utility certification to include one of the following statements:

CERTIFICATION LANGUAGE	CONDITION
No utility facilities will be affected by the project.	The project has no effect on any utility facilities.
All utility work will be completed prior to the start of construction.	Utility work is necessary, and work will be completed prior to the start of construction.
Arrangements are made to have utility work undertaken during construction.	Utility work is necessary, but it will not be completed prior to the start of construction.

This utility certification should be included in the IFB and inform bidders of utilities in the area, utility names, contact information, relocation description, and schedule, where provided, for all utilities found to be within the limits of this right of way.

The subrecipient is responsible for ensuring the utility certification includes compliance verification of (Buy America/BABA) by the utility providers and all contractors documenting that the manufacturer of all iron and steel products, manufactured products and construction materials used for the project have been manufactured in the United States.

- **Subrecipients must forward copies of the certifications to SHA's OMT for review and approval prior to such items being incorporated into the permanent work.**

If utility work is to be completed during construction, subrecipients must indicate as part of the certification that appropriate notification will be included in the bid proposal advising all prospective bidders of any utility work that will occur concurrently with the project construction.

PROCESS

The general process for utility coordination subrecipients must follow to construct a project is outlined below:

1. Identify each utility company that potentially has utilities within the project area. For underground utilities, contact **Miss Utility** at 800-257-7777.
2. Notify each utility company affected by the project, requesting a response with a description of their utilities within the project area or a response that they have no utilities within the project area.
3. Prepare project plans to include underground and above-ground utilities within the project area identified by each utility company, Miss Utility, and/or the subrecipient.
4. Send project plans to each utility company, requesting a verification that their utilities are shown correctly on the plans or requesting that they provide detailed plan corrections.
5. Update project plans to include corrections to utilities if necessary.
6. Prepare and send project plans to each affected utility company, identifying areas of change such as right of way, cut and fill, slope conditions, or any structure change for use in determining required utility revisions.

7. Coordinate with each affected utility company to fully define who is conducting the work and who is paying for the work (based on prior rights determination).
8. Request relocation plans and schedules from each utility company whose lines are affected by the project.
9. Ensure the relocation plans and schedules are compatible with roadway design and construction sequencing, and that all plans will not affect the project schedule.
10. Develop utility statement special provisions by determining the following:
 - Parties responsible for payment of relocation work (based on prior rights)
 - Mitigation is necessary for each utility company.
 - Betterment requests, if any.
 - Preliminary estimate of costs for utility relocation, including identification of all iron, steel and construction materials subject to Buy America/BABA requirements.
 - Utility schedules based on the overall construction schedule.
11. Send draft utility statement special provisions to SHA for comment, review and approval to include the following:
 - List of relevant utility companies and contact information.
 - Description of any utility conflicts.
 - Details regarding any work required due to utility conflicts.
 - Domestic Materials Procurement (Buy America and BABA) requirements.
 - Utility schedules (relocations completed prior to or concurrent with the highway construction).
12. Prepare utility reimbursement agreements for any utilities that have reimbursable rights (based on prior rights) and send to SHA for review and approval prior to submitting to each affected utility company for signature.
13. Work with SHA to establish a utility coordination certification to confirm appropriate and adequate coordination has taken place, even if utilities aren't affected by the project.
14. Include the utility coordination certification with the project plans, specifications, and estimates package (PS&E).
15. Maintain all records for at least three years after the closing of the project.

ADDITIONAL RESOURCES

For more information about utility coordination and certification requirements or the Buy America requirements for use in a federal aid project, refer to [FHWA's Federal Aid Essentials for Local Public Agencies video series](#). Topics covered under Project Development include the following modules:

- Utility Coordination and Certification Requirements
- Buy America Contract Requirements
- 23 CFR 645 Subpart A, Utility Relocations, Adjustments, and Reimbursements
- 23 CFR 645 Subpart B, Accommodations
- 23 CFR 635.410, Buy America

[FHWA Memo on Application of Buy America to non-FHWA-funded Utility Relocations dated 07/11/13](#)

[FHWA's Buy America Q and A for Federal Aid Program](#)

CHAPTER 9

PROJECT DESIGN

INTRODUCTION

The design of all subrecipient projects with a construction phase will follow two design phases: Preliminary Design (PD) and Final Design (FD). PD is the level of design necessary to determine environmental impacts, minimization or mitigation of impacts, and to then complete the required environmental document. FD is the preparation of construction plans, detailed specifications and the engineer's cost estimate referred to as the Plans, Specifications and Estimates (PS&E) for the construction work.

This chapter provides guidance on the methods, standards, guidelines, policies and requirements of the project development process that must be followed for a construction project utilizing federal aid funding.

In accordance with 23 U.S.C. 109(0), projects that are not on the National Highway System (non-NHS projects) must follow the design and construction standards required by their state, including all applicable state laws, regulations, directives, and safety and design standards.

However, a local jurisdiction is allowed to use a different roadway design guide than the one used by the state, **as long as**:

- The design guide is recognized by the Federal Highway Administration (FHWA);
- The local jurisdiction has formally adopted that guide;
- The project is on a roadway owned by the local jurisdiction;
- The local jurisdiction is the project sponsor; and
- The project still complies with all other applicable Federal laws.



Happy Trails
Adkins Arboretum

Note: Smaller-scale projects may be eligible for streamlined design reviews, thereby avoiding the lengthier oversight typically required for larger federal aid projects. The subrecipient may submit a request with justification to the Program Manager for approval.

PROJECT DELIVERY METHODS

The project delivery method is the process by which a construction project is designed, procured, and constructed. The most common project delivery method utilized to deliver subrecipient projects is Design-Bid-Build (DBB). While the focus of this manual is DBB, other project delivery methods (Design-Build and Construction Management at Risk) may be used to develop and deliver a project with the prior approval of SHA.

DBB is the traditional project delivery method in which the subrecipient designs using in-house or consultant resources, then advertises and awards a separate construction contract based on the 100% complete construction documents. The subrecipient is ultimately responsible for the cost of any design errors or omissions encountered in construction.

For information related to other project delivery methods, the subrecipient should contact the appropriate SHA Program Manager to coordinate with the SHA Office of Program and Alternative Delivery.

STANDARDS, GUIDELINES, POLICIES, AND REQUIREMENTS

The design of subrecipient projects must conform to applicable standards and guidelines as follows:

- All subrecipient projects along SHA roadways must conform to SHA-approved standards, specifications, and guidelines.
- Projects off the SHA roadway system and on the NHS must be designed to meet FHWA-approved standards.
- Projects on or along local roadways that are off the SHA roadway system and off the NHS may be designed to local standards. In the event local standards do not exist, subrecipients shall utilize either SHA or FHWA standards and guidelines.

If the subrecipient elects to use **alternative or locally developed design standards or specifications**, they must notify SHA in advance and provide documentation demonstrating how these standards differ from SHA's. When using local standards, the subrecipient must verify that **all local standards and specifications** used for the project **do not conflict** with federal or State requirements.

The subrecipient must submit all plans and supporting materials in the required SHA formats and ensure the **accuracy and adequacy** of design documentation. The subrecipient remains **fully responsible and liable** for the quality and completeness of all project designs.

FHWA Standards and Guidelines

(A complete list of standards, policies and standard specifications is provided in 23 CFR 625.4 & 49 CFR 37.9)

- A Policy on Geometric Design of Highways and Streets by American Association of State Highway and Transportation Officials (AASHTO)
- Roadside Design Guide (AASHTO)
- A Policy on Design Standards – Interstate System (AASHTO)
- Guide for the Development of Bicycle Facilities (AASHTO)
- Load and Resistance Factor Design (LRFD) Bridge Design Specifications (AASHTO)
- Americans with Disabilities Act Accessibility Guidelines (U.S. Access Board)
- U.S. Access Board's Guidelines for Outdoor Developed Area
- Forest Service Trail Accessibility Guidelines

SHA Standards and Guidelines

- Environmental Documentation for Local Government Projects
- Maryland Manual on Uniform Traffic Control Devices (MDMUTCD)
- Traffic Control Devices Design Manual
- Bicycle Policy and Design Guidelines
- Accessibility Policy and Guidelines for Pedestrian Facilities along State Highways
- Book of Standards for Highway & Incidental Structures
- Standard Specifications for Construction and Materials
- Supplemental Specifications and Provisions
- Highway Drainage Manual
- Guidelines for Traffic Barrier Placement & End Treatment Design
- Pavement & Geotechnical Design Guide
- Environmental Guide for District, Access and Utility Permits
- Landscaping Estimating Manual
- Utility Manual
- Design-Build Manual

Note: The subrecipient should use the latest adopted version of the above Standards and Guideline documents.

Americans with Disabilities Act Policy

Any subrecipient that receives federal aid funds through SHA must comply with SHA's Americans with Disabilities Act Subrecipient Policy. For Recreational Trails Program projects, see chapter 15.

PRACTICAL DESIGN, DESIGN EXCEPTION, AND WAIVER REQUIREMENTS

Practical Design

Practical Design is a focus on scoping projects to achieve the purpose and need, while considering the surroundings of each project. To implement Practical Design solutions, existing design standards and criteria may not be relevant or feasible. This approach requires implementing a design that is appropriate within the context of the surroundings without compromising safety. In the event the accepted criteria cannot be met, a Design Exception may be required to document the engineering decision. For additional information, visit [FHWA's Performance-Based Practical Design webpage](#).

Design Exception

A Design Exception is a documented decision to design a project element to a criterion that does not meet the applicable threshold (i.e., minimum or maximum) values or ranges established in the governing design guidelines. It is required to document design exceptions in accordance with Title 23 Part 625.3 (f).

There is a broad range of reasons why design exceptions may be considered and found to be necessary. Some of these include:

- Lack of prior crash history or absence of operational issues
- Impacts on the natural environment
- Social or right of way impacts
- Preservation of historic and cultural resources
- Sensitivity to context
- Sensitivity to community values
- Construction or right of way costs



Herring Run

Baltimore City Department of Recreation and Parks

Even though there may be a valid reason(s) for design exceptions, designers should approach values outside of accepted thresholds carefully. Since the basis of the criteria is related to highway performance, it is reasonable to assume that any given design exception may adversely affect safety and traffic operations, may not complement an adjacent roadway segment, or may counter driver expectancy. Therefore, a location where a design exception is being considered should be analyzed, and the potential consequences understood before committing to the design exception.

When the decision is made to go forward with a design exception, the extent and nature of its potential effects on the safety and operation of the highway should be determined. The level of analysis should be commensurate with the complexity of the project. Mitigation measures should be evaluated and, where appropriate, implemented to minimize the resultant adverse effects. If a design exception is associated with a new access point on the NHS, then it is considered a Federal Action, and the NEPA process must also be completed.

CONTROLLING CRITERIA

The AASHTO Green Book covers a wide range of geometric elements and design dimensions. Ten criteria commonly referred to as the controlling criteria have been identified by FHWA as having substantial importance to the operational and safety performance of any highway, such that special attention should be paid to them during design.

The FHWA requires a formal written design exception only if any of the controlling criteria on the NHS are not met for new construction and reconstruction projects.

Higher speed NHS roadways are defined as Interstate highways, other freeways, and any roadways with a design speed of 50 mph or greater. For higher speed NHS and non-NHS roadways, the criteria are as follows:

CONTROLLING CRITERIA	SHA APPROVAL BY
1. Design speed 2. Lane width 3. Shoulder width 4. Horizontal curve radius 5. Superelevation rate 6. Maximum grade 7. Stopping sight distance 8. Cross slope 9. Vertical clearance	Director, Office of Highway Development
10. Design loading structural capacity	Director, Office of Structures

On lower-speed NHS and non-NHS roadways, only the following two controlling criteria apply:

CONTROLLING CRITERIA	SHA APPROVAL BY
Design speed	Director, Office of Highway Development
Design loading structural capacity	Director, Office of Structures

Waiver requests for subrecipient projects subject to the requirements of these guidelines shall be prepared by the subrecipient and approved by the Director identified in the above tables, except where a separate approving authority is defined in program-specific guidance. The documentation, at a minimum, should describe the type of design variance, its extent of non-conformance, length of roadway affected, reasons why the variance is unavoidable, and the resulting impact on mobility and safety. For subrecipient projects, the design exceptions for controlling criteria and the Geometric Data Sheets will need to be reviewed by SHA.

Design Waivers

Design waivers will also be required for projects along SHA roadways for design features that do not meet SHA guidelines, including the [Bicycle Policy and Design Guidelines](#), the [Accessibility Policy and Guidelines for Pedestrian Facilities along State Highways](#), and the [Complete Streets Policy](#). Please refer to the specific guidelines for the process of requesting a design waiver.

Work Zone Safety and Mobility Rule

Large projects that have long-lasting traffic impacts are considered significant projects. A project is considered significant when it alone, or in combination with other nearby concurrent projects, is anticipated to cause sustained work zone impacts that are greater than what is considered tolerable based on SHA policy and/or engineering judgment. Projects that are [considered significant](#) must comply with the FHWA Work Zone Safety and Mobility Rule (23 CFR 630 Subpart J).

For additional information on the rule and its provisions, please refer to the following websites:

- [SHA's Processes and Guidelines for Compliance with Final Rule on Work Zone Safety and Mobility](#)
- [FHWA - Work Zone Management Program](#)



DESIGN

The next two sections provide requirements for designing a typical subrecipient project related to transportation facilities such as roadways, shared-use paths, and sidewalks.

Note: This chapter details the design phase process for a typical construction project. While these procedures apply to most standard projects, certain programs follow specific guidelines.

For any program exceptions, subrecipients should refer to the appropriate chapters listed below:

- Chapter 13: Transportation Alternatives
- Chapter 14: Local Bridge
- Chapter 15: Recreational Trails

A. PRELIMINARY DESIGN (PD)

PD for typical construction projects occurs before environmental approval and must not limit alternatives.

Typical PD Activities

- Environmental studies
- Surveys and geotechnical work
- Traffic and utility analysis
- Concept design and layouts
- Cost estimates
- Public and agency coordination

Subrecipient Responsibilities for PD

The subrecipient must:

- Define scope, schedule, and budget
- Complete or manage all design work
- Ensure plans are prepared/approved by licensed professionals

Key Design Elements in PD

Roadway Design

- Establish design speed
- Develop horizontal/vertical alignment and cross sections

Structures (Bridges, etc.)

- Submit Type, Size, & Location (TS&L) for SHA review
- Obtain the required approvals before advancing the design

Pavement Design

- Develop preliminary pavement sections

30% Design Submission

At approximately 30% completion of PD:

- The subrecipient should submit plans and a cost estimate for review by SHA
- SHA reviews of plans will take 4–6 weeks per milestone submittal
- The subrecipient should respond to all comments in a point-by-point letter in the next submission

A **Preliminary Investigation (PI)** meeting may be required.

Bicycle & Pedestrian Facilities

- Follow SHA or FHWA/AASHTO guidance

Drainage & Stormwater

- Design drainage systems (pipes, culverts, etc.)
- Develop stormwater concept and obtain approval before FD

Maintenance of Traffic (MOT)

- Prepare initial traffic control concepts



Catoctin Iron Trail

Catoctin Furnace Historical Society

B. FINAL DESIGN (FD)

Requirements to Begin FD

- FHWA authorization
- Approved environmental document (NEPA)
- Defined scope and cost estimate
- Approved design exceptions (if needed)

Key Design Elements in FD

Roadway Design

- Final alignments and cross sections
- Complete construction details

Drainage & Stormwater

- Final designs and approvals
- Erosion and sediment control plans

Structures

- Complete structural design
- Book of Standards for Highway & Incidental Structures
- Design submitted for SHA structural review

Signing, Lighting & Signals

- Must follow applicable traffic control standards
- Design submitted for SHA signing, lighting, signal plans review

Pavement & Geotechnical

- Final pavement design and soil data

Maintenance of Traffic

- Final staging and traffic control plans
- Must be approved by SHA or local authority

Landscape and Environmental Plans

Landscape plans are required for projects on SHA property when work includes:

- Tree trimming or removal
- Planting trees or landscaping
- Removing pavement for landscape restoration
- Soil disturbance or grading
- Environmental mitigation plantings

These plans must follow:

- SHA Environmental Guide for District, Access and Utility Permits
- SHA Landscape Estimating Manual

Final Review (90% Design)

At the 90% stage, the following should be completed by the subrecipient:

- Final plan set
- Invitation for Bids (IFB) package
- Cost estimate

The IFB package must include:

- Required federal contract [provisions](#)
- Standard specifications
- Any project-specific special provisions

If standard specifications do not cover certain work, the subrecipient must create and include special provisions.

A final review meeting may be held to go over the plans, IFB package, and cost estimate. A report may be required after the meeting.

Plans, Specifications and Estimates

Upon completion of all final design activities, the PS&E package will be assembled. See chapter 10.



Gunpowder Falls Tributaries, Stream Stabilization
State Highway Administration (SHA)

CHAPTER 10

ADVERTISE, BID AND CONCURRENCE IN AWARD

BACKGROUND

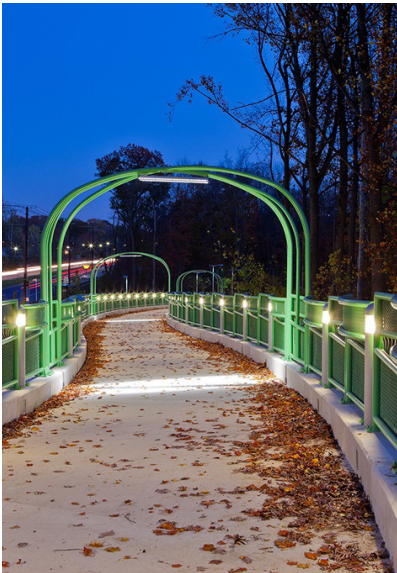
This chapter provides subrecipients with a roadmap for navigating the transition from project development to construction, as governed by 23 CFR 630 (Preconstruction Procedures) and 23 CFR 635 (Construction and Maintenance). Entering this phase requires a strategic shift toward full and open competition, a federal requirement ensuring that projects are publicly advertised and awarded to the lowest responsive, responsible bidder.

This section centers on the Plans, Specifications, and Estimate (PS&E) package. Subrecipients must secure formal PS&E approval from SHA before any project can be advertised for bids. To maintain compliance and protect federal funding, subrecipients must strictly adhere to the advertising and award provisions in 23 CFR 635 Subpart A, which includes a minimum three-week (21-day) solicitation period.

The subrecipient is required to submit a written request for SHA's approval to advertise, i.e., to solicit vendors for bids to provide materials and/or services needed for a project. The contractors responding to the advertisement are required to submit sealed bids in competition with other contractors to win the right to construct the project. The subrecipient may proceed with the award after receiving the Concurrence-in-Award (CIA) letter from SHA.

For projects involving construction, a ready-to-advertise PS&E or Bid Package must accompany the request for approval to advertise. When sending the PS&E package for approval to advertise, please include the PS&E Checklist (see PS&E Checklist or Column A for Appalachian Regional Commission Projects).

*2 CFR 200.317 may apply to small projects under \$100,000 and not on SHA ROW. Recreational Trail Program projects may fit this category.



Rock Creek Hiker Biker
Bridge

*Maryland Department of
Natural Resources*

PS&E SUBMITTAL

The PS&E package should be sent by the subrecipient's Project Manager to the corresponding Program Manager at SHA, who reviews and then forwards it to the Chief, Federal Aid Programming, Office of Finance.

The PS&E package should contain:

- 100% Final Plans and Invitation for Bids book that provides all details necessary to bid on and construct the proposed project;
- Engineer's estimate itemizing all construction items and estimated costs;
- SP Notice to Contractor for Federal Contracts – Required Environmental Permits, Approvals and Authorizations;
- Approved final review report reflecting edits and comments presented at the final review meeting, as applicable;
- Executed Memorandum of Understanding (MOU) or Supplemental Agreement to Master Agreement;
- Traffic Control Plan and SHA District Office concurrence, if applicable;
- Utilities Certification (see chapter 8);
- Utility Statement including who is responsible for utilities modifications and proposed schedule (see chapter 8);
- Buy America contract requirements (see chapter 8);
- FHWA-approved Environmental Document (CE, EA, or EIS);
- SHA-approved Programmatic Categorical Exclusion (PCE) certification;
- Environmental commitments and mitigation measures are incorporated into the plans and specifications;
- Approved Right of Way Certification Letter;
- Railroad Statement included within the Special Provisions Notice to Contractor for Federal Contracts; and
- Design Exception approvals for projects on the National Highway System (NHS).

Check for Contract Provisions:

1. DBE for federal aid contracts
2. Training Provisions (OJT)
3. Applicable Wage Determination from the USDOL can be found at sam.gov/content/wage-determinations (if a revised wage determination is issued at least 10 calendar days before bid opening, an addendum to the solicitation is required).

As part of the PS&E approval process, SHA obtains FHWA Authorization for the costs of the proposed construction contract. FHWA Authorization will be requested based on the plans, specifications, and estimates submitted by the subrecipient. SHA requires that the subrecipient budget sufficient funds and be prepared to award a contract for bids that are up to 110% of the subrecipient's estimate.

The estimate must reflect the Total Project Cost required to complete the work as defined in the PS&E.

This is separated into two categories:

- A. Participating Costs: All work is eligible for federal aid reimbursement. This includes the federal share and the required State/Local matching funds.
- B. Non-Participating Costs: Work included in the contract that is ineligible for federal funding. These costs are the 100% responsibility of the subrecipient agency.

Common Examples of Non-Participating Costs:

- Utility Betterments: Upgrading a 6-inch water line to a 12-inch line when the project only requires a relocation of the existing size.
- Excessive Aesthetics: Landscaping or decorative features that exceed the State's or FHWA's reasonableness thresholds.
- Unrelated Work: Moving a waterline or utility that is not physically required to construct the road project.

SHA will provide written approval by email to the subrecipient to advertise the project after reviewing the PS&E package and FHWA's authorization. The subrecipient shall not advertise the project prior to obtaining written approval of federal funds.

ADVERTISEMENT

Federal aid construction contracts must be awarded to the lowest responsive and responsible bidder under traditional competitive bidding, or in strict accordance with the specific solicitation documents for alternative delivery methods like Design-Build, CM/GC, and ID/IQ. Any deviation from competitive bidding requires a formal Public Interest Finding by the state DOT, justifying that the subrecipient is adequately staffed and equipped to deliver the work cost-effectively.

Subrecipients must adequately publicize the advertisements or calls for bids to ensure free and open competition. In most cases, the subrecipients are required to use the eMaryland Marketplace Advantage website for advertising. Projects must be advertised for a minimum of 21 calendar days.

Any modifications to the contract after advertisement must be approved by SHA prior to issuing the modification as an addendum. After receiving approval, the subrecipient must then post the approved addendum and include it as part of the contract document.

ACCESS PERMIT

An access permit will be required when a subrecipient project is within the SHA right of way. Concurrently with the project advertisement, the subrecipient will submit an access permit request to the appropriate SHA district office. The request will include a copy of SHA's approval to advertise the project. This approval serves as SHA's approval of the PS&E package, and no further reviews will be required for issuance of the permit. The access permit must be issued to the subrecipient prior to issuing notice to proceed for any work within SHA's right of way.

BID OPENING/ANALYSIS

In accordance with 23 CFR 635.113(a), all bids submitted in response to the advertisement must be publicly opened and announced, either by individual bid item or by the total bid amount. If any bid received is not read aloud, the name of the bidder and the reason for not reading the bid aloud shall be publicly announced at the letting. Negotiation with contractors, during the period following the opening of bids and before the award of the contract, shall not be permitted.

It is the subrecipient's responsibility to review and evaluate all bid documents to determine the lowest responsive and responsible bid in accordance with 23 CFR 635.114. A responsive bid is one that conforms to all the requirements of the Invitation for Bids book and design plans, while a responsible bidder is one who possesses the capability, integrity, and reliability to perform the contract. The subrecipient must conduct a bid analysis. The documented bid analysis must confirm mathematical accuracy, absence of materially unbalanced bidding, suspension and debarment verification of the bidder via SAM.gov, and provide a formal bid justification if the proposal significantly deviates from the engineer's estimate by more than $\pm 10\%$.

Ensure the following items in the Contract Provisions/Federal Packet are acceptable:

- The Bid/Proposal Affidavit is filled out, and the Acknowledgment is signed
- Comprehensive Signature page is filled out
- MDOT Forms A and B (if applicable) are signed
- Computed total Disadvantaged Business Enterprise (DBE) percentages submitted with the bid to ensure the contractor(s) have met the goal
- If bid security is required, check the bid bonds

If the subrecipient rejects all bids, the project may be re-advertised. Prior to re-advertisement, subrecipients must submit a written request to SHA demonstrating that the rejection of all bids is in the public best interest (23 CFR 635.114). SHA must concur with the subrecipient's decision to reject and re-advertise to ensure the project remains eligible for federal participation. The subrecipient should modify the PS&E package, following SHA's approval, to address the factors that led to the initial rejection to ensure compliant competitive bidding.

CONCURRENCE IN AWARD

Concurrence in Award (CIA) is SHA's written verification that the bid analysis and contract selection process comply with federal aid requirements. Per 23 CFR 635.114, the subrecipient must request and receive CIA after the public opening and evaluation of bids, but prior to awarding the contract or issuing the Notice to Proceed (NTP). The subrecipient shall submit a comprehensive CIA request packet for SHA approval. SHA's review typically takes a minimum of four weeks. No contract award shall be made until SHA has provided written concurrence. The subrecipient should submit the following items for SHA review:

- Cover letter
- Complete copy of the successful bidders
- Tabulation of bids
 - Must be verified and certified true and correct by the subrecipient.
 - Should there be more than three bidders to any bid, the bid tab needs to 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.
- Bid analysis must be verified and certified true and correct by the subrecipient.
- Contractor's signed non-collusion affidavit
 - If not signed by the president of the company, then submit a copy of the company's bylaws indicating the appropriate signing authority.
- Experience and Equipment form
- Right of Way (ROW) certification (For those ROW Cert #3 at PS&E, ensure all conditions are met, and there is an updated cert (1 or #2) on file.)
- DBE Affirmative Action Plan approved by the subrecipient, and DBE Form C and Form D
- Copies of advertisements for the bid opening.
- Should the Lowest Responsive and Responsible Contractor's Bid be more than 10% over, or 15% under the final approved engineer's estimate, a Letter of Justification will be needed.
 - The letter will be written by the subrecipient to the SHA's Chief, Office of Construction Contract Award Division and included in the CIA package, and forwarded to SHA's Office of Finance, Federal Aid Programming Section.

If acceptable, SHA will prepare the CIA letter and distribute to the subrecipient by email with a copy going to the District Construction Office.

The subrecipient is required to contact the applicable SHA District office, noting that the CIA has been issued. The District office will be the point of contact for all subsequent phases of the project.

CHAPTER 11

CONSTRUCTION MANAGEMENT

BACKGROUND

This chapter details the processes following the bidding process, starting at the point of contract award and continuing through project execution.

The SHA's Office of Construction (OOC) has assigned the construction oversight responsibilities to the individual SHA District offices that administer and manage SHA construction in Maryland's 23 counties. The OOC will maintain oversight of projects in Baltimore City. The Grants and Programs Management Division (GPMD) will maintain oversight of projects in the Recreational Trails Program (RTP). The SHA will oversee and audit all subrecipients' construction projects with federal aid funding.

The anticipated oversight costs are covered by a separate **Cost Sharing Agreement (CSA)**. Unlike the executed MOU or project agreement, this agreement is only applicable to the required SHA oversight charges. The subrecipient will only be responsible for the required 20% local contribution. This amount will be billed directly to the sponsor by SHA in accordance with the CSA.

The most common CSA is developed for SHA construction oversight. This generally includes district construction oversight, OMT testing and materials clearance, as well as program-specific administrative costs. The subrecipient must submit a CSA request letter which identifies the services needed and request a cost estimate for these services. Once all the SHA cost estimates have been received, the Program Manager will draft the CSA and forward to subrecipient for review and signature. Once executed by SHA the subrecipient will be sent a copy.

Roles and responsibilities of SHA, the subrecipient, and FHWA are briefly described below:

SHA: As the agency responsible for the project reimbursements, SHA is charged with the oversight of subrecipient administered construction projects. SHA's primary function is to verify that local agencies adhere to federal requirements and to evaluate the work performed by subrecipients. Prior to the construction stage,



Burkholder ORV Trail
DNR Forestry

the subrecipient must coordinate regularly with the SHA Program Manager, Federal Aid Office, and others while finalizing the design and development of the bid package. Upon transitioning to construction, the SHA District Engineer (DE) and Assistant District Engineer of Construction (ADE-C) serve as the primary points of contact for the subrecipients to establish the oversight expectations for each project located within their District.

The ADE-C will assign various Field Managers who will be authorized as SHA Construction Compliance Reviewers. These individuals will support subrecipients with compliance reviews, technical advice, and other inquiries during the course of the project. Additional key personnel include:

- Area Materials Engineer (AME): For quality assurance and materials certification.
- District Equal Employment Opportunity Officer (DEEO): For labor and civil rights compliance.
- District's Contract Finals Personnel: For project closeout and final auditing.

SUBRECIPIENT: The subrecipients shall provide SHA with a project-specific chart and organizational/hierarchical chain of command. This must identify a person in "responsible charge" (RC) of the administration and construction inspection for the project. This person must be a full-time employee of the subrecipient's agency who is accountable for the project per [FHWA Memorandum dated August 4, 2011](#).

A consultant cannot be designated as the RC. If a consultant is hired to oversee the project, the RC must be available to respond to any issues on the project and be aware of the day-to-day activities. The RC must have the knowledge commensurate to the complexity of the contract to ensure that project construction and administration follows all requirements as described in the contract documents, this manual, and standard construction practices.

The RC serves as the primary contact for SHA regarding all contract administration matters. The RC is ultimately responsible for ensuring that federal aid requirements are met and documented.

FHWA: The FHWA establishes the policy framework and regulatory oversight required to ensure all federal aid program funds are used in compliance with the federal laws and national standards. The FHWA Division Office staff may conduct independent reviews of the project at any time. SHA can assist the subrecipient in preparing for these FHWA reviews.

To maintain SHA's oversight responsibilities, SHA offices would typically be the intermediary between FHWA and the subrecipient. If applicable, SHA shall be copied on any direct correspondence between FHWA and the subrecipient.

NOTICE OF AWARD (NOA)

After receiving the Concurrence in Award (CIA) Letter from SHA, the subrecipient may issue the Notice of Award (NOA) letter for the project. A sample NOA letter is [Available Here](#).

- **Subrecipient:** Issue the NOA letter to the contractor. Provide copy to SHA District Office.
- **SHA:** District Office will track award progress and add project to the District's SHA Assignment List.

NOTICE TO PROCEED (NTP)

After receiving all necessary insurance, traffic control plan acceptance, and/or any other information from the contractor that the subrecipient may require, the subrecipient may issue the Notice to Proceed (NTP) letter for the project. A sample NTP letter is [Available Here](#).

- **Subrecipient:** Issue the NTP letter to the contractor. Provide copy to SHA District Office.
- **SHA:** District Office will track progress towards starting construction and update project information on the District's SHA Assignment List.

PRE-CONSTRUCTION MEETING

After a contract is awarded, the subrecipient shall arrange a pre-construction conference in conjunction with the contractor. The subrecipient shall notify the SHA ADE-C of the time and place of the conference and invite the SHA ADE-C, Contract Finals Personnel, AME, DEEO, the appropriate Program Manager; as well as other typical groups with project involvement to include the subrecipient's applicable representatives.

On large, complex projects, a Pre-Construction conference should be held before each construction phase. A sample SHA pre-construction conference agenda template is [Available Here](#).

The meeting should be documented and copies of the minutes transmitted to all invitees and other attendees.

- **Subrecipient:** Schedule Pre-Construction conference. Invite applicable parties noted above. Record and distribute minutes.
- **SHA:** Attend and participate in the Pre-Construction conference.

CONSTRUCTION SCHEDULE

The contractor is required to submit and maintain an approved construction schedule. The subrecipient is responsible to review and approve the schedule. SHA can provide guidance if requested and may also review the schedules. There are two types of schedules:

1. Critical Path Method Project Schedule (CPM) – Maryland SHA Standard Specifications for Construction and Materials, Section 109 Type B&C. (This type is used on complex jobs with multiple phases.)
2. Activities or Bar Chart Project Schedule – Maryland SHA Standard Specifications for Construction and Materials Section 109 Type A. (This type is used on most standard projects.)

The contractor **SHALL NOT begin work** without an approved construction schedule in hand. The contractor shall update the schedule monthly. A copy of the most recently approved schedule will be posted and maintained in the Field Office and/or in the project files when there is no field office. Schedule reviews must be a topic of discussion at monthly Progress/ Partnering meetings.

Every day from the Notice to Proceed through stopping time, charges must be accounted for by project staff as time charges will be reviewed in project closeout. This can be tracked as SHA does by using the electronic Maryland Construction Management System (eMCMS) software.

Note: The subrecipient may use any accounting software to develop the estimate to submit to SHA. SHA uses the eMCMS software to track quantities, time, and then develop estimates. SHA highly recommends subrecipients use eMCMS as it significantly helps standardize SHA and FHWA audits for these projects. eMCMS is an SHA product and is free for subrecipients to use. SHA is also able to train sub recipients on the use of eMCMS.

Time can also be accounted for by something as simple as a tracking spreadsheet like the OOC78 form, Monthly Summary of Construction Time Charges [Available Here](#).

- **Subrecipient:** Ensure contractor does not begin work without an approved schedule. Review and approve or reject all schedule submittals. Provide SHA with copies of approved schedules and correspondence. Track all time charges accordingly.
- **SHA:** District Office will track schedule reviews to ensure monthly updates are being submitted and reviewed by the subrecipient. Available for technical support or guidance.

FIELD OFFICE

If required for the project, the Field Office (or Engineer's Office), which is set up at an approved location within the immediate vicinity of the project, must be established, clean, furnished, and fully functional (power, internet, phones, supplies, etc.). Section 103 of SHA's Standard Specifications note that the Field Office must be separate from any contractor's office and/or storage space and for the exclusive use of the subrecipient's engineers and inspectors. The contractor **SHALL NOT begin work** until the Field Office is ready.

- **Subrecipient:** Ensure contractor does not begin work until the Field Office is established and fully functional. Notify SHA and provide Field Office information on the Field Office and General Information Form. A copy of the form is [Available Here](#).
- **SHA:** District Office will track notification of Field Office establishment and publish applicable addresses, phone numbers, etc. on the District Assignment List.

SUBCONTRACTOR REQUESTS

All subcontractors must be approved by the subrecipient and forwarded to SHA OOC for concurrence. Subcontractors **SHALL NOT begin work** until approved by the subrecipient.

The request form (SHA Form OOC42 and OOC43 for lower tier subs) is completed by the contractor for each subcontractor. One hardcopy with original signatures is required for the file as well as copies of the subcontract agreement. After the subrecipient approves the subcontractor, the documents are forwarded for concurrence to:

Contracts Award Division (CAD)
Office of Construction, Building 4
7450 Traffic Drive, Hanover, MD 21076
Phone #: 443-572-5214

- **Subrecipient:** Ensure subcontractor does not begin work until request is submitted along with a copy of the subcontractor agreement. Review and approve subcontractor request forms (SHA Form OOC42 and OOC43 for lower tier subs). Forward to SHA OOC Contracts Award Team for concurrence with a carbon copy to the SHA District Office. A copy of the approved subcontractor request with copy of the subcontract shall also be kept in the Field Office. Refer to the [Local Public Agency \(LPA\) Program](#) website for copies of the applicable forms as well as some general guidance for approving subcontractor requests.
- **SHA:** OOC will review and concur if acceptable. District Office will track submittals and is available for technical support or guidance.

COMPLIANCE REQUIREMENTS

All project work shall comply with terms and conditions in the contract documents. The subrecipient RC and project inspection staff shall ensure that project is in compliance with all Local, State, and Federal permits listed in these documents.

- **Subrecipient:** Ensure and document compliance.
- **SHA:** Various offices are available for technical support or guidance. (Typically start with District and/or Program Manager.) Reviews compliance documentation.

RIGHT OF WAY (ROW)

Following NTP, the subrecipient shall provide the contractor with all relevant copies of Right of Way (ROW) Plats, Easements, and Right of Entry agreements needed to build the project.

- **Subrecipient:** Ensure these documents are readily available in project files/field office to prevent unauthorized work.
- **SHA:** District Construction Office, Program Manager, and/or the Office of Real Estate are available for technical support or guidance. Reviews compliance documentation.

PERMITS

The subrecipient must ensure all necessary permits listed in the contract (e.g., utility, environmental, railroad, etc.) are obtained, active and shared with the contractor prior to the commencement of work to ensure all work remains within authorized limits. A copy of all the permits shall be kept on site in the project files and could also be displayed on the wall of the Field Office and/or the contractor's Bulletin Board providing inspectors and the contractor immediate access to the legal conditions and constraints of the project.

- **Subrecipient:** Ensure permits are active and available on site and ensure compliance with permit terms and conditions. It is the subrecipient's responsibility to monitor the contractor's adherence to permit conditions.
- **SHA:** District Construction Office and the Program Manager are available for technical support or guidance. Reviews compliance documentation.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

The DBE Program is a federal mandate with strict requirements that are listed below:

Schedule of Participation: The Disadvantaged Business Enterprise (DBE) schedule of participation is the prime contractor's submittal stating what DBEs they intend to use to meet the DBE goal for the federally funded project. The DBE schedule of participation Construction Directive 07220.100.19 and the associated forms are [Available Here](#).

Field Meeting: The Invitation for Bids Proposal requires that a DBE Field Meeting be held within 2 weeks of starting the project work. The Project Engineer will coordinate the meeting. It is a requirement for all DBEs listed in the Schedule of Participation as well as the prime contractor to attend this meeting.

Posting Chart: The subrecipient must post a DBE chart in the field office. The chart shall be prominently displayed in the Field Office for all to see and for inspectors to use. The name of the DBE contractor and the work item number of the work performed by the contractor will be entered in the chart as each contractor begins work on the project. The posting chart is [Available Here](#).

Inspector's Daily Report (IDR): Information needs to be listed on every IDR when a DBE is performing work on a subrecipient project. The IDR will include the following information:

- Name of superintendent/foreman responsible for the DBE
- Equipment – Owned (O) rented (R),
- Active and idle
- DBE number from DBE posted chart

On the first and last IDR, indicate when work began and when work was completed respectively. Make an extra copy of all DBE IDR's and keep in separate file. This will assist SHA with compliance reviews, revisions, and potential claims or legal action.

Subcontractor Request (OOC42): A signed copy of the subcontractor request form must be kept with the project records. A copy of the agreement between the prime contractor and any subcontractors, services and suppliers must be made available upon request.

Trucking Activities: Documentation is also required for the trucking activities for the DBE contractors, which should include:

- A weekly report must be submitted by the contractor when three or more trucks are on site or whenever requested by SHA
- Keep in a separate file for compliance reviews
- At least one truck on site must be owned by the DBE
- Copies are sent to DEEO

A sample of the DBE trucking activities report form is [Available Here](#).

Suppliers: The Prime contractor must provide a copy of the original delivery ticket as well as a copy of the invoice for the materials/ supplies provided by the DBE firm. This documentation must be maintained at the project level.

Commercially Useful Function (CUF): A CUF form (ooc39) must be completed on all DBE firms listed on the schedule of participation. It is a requirement to include pictures of the DBE firm actually performing the work and equipment utilized as per Construction Directive 072220.100.19. Submit the completed CUF to the DEEO for review/approval. A copy of the approved CUF must be retained at the project site. A copy of the CUF form (OOC39) and Construction Directive 072220.100.19 are [Available Here](#).

Monthly Subcontractor/DBE Subcontractor Payment Report: Monthly reports must be completed by the prime contractor, and subcontractors, then submitted to the subrecipient. The subrecipient will then complete the J02 Form and submit all documents to the DEEO by the 10th of the following month by email. Blank template are [Available Here](#).

- **Subrecipient:** Ensure all required forms are completed/submitted when due and the overall DBE program is properly documented.
- **SHA:** The DEEO has a very active role in this process after the contract is awarded. They attend the Pre- Construction Meeting, conduct the DBE Field Meeting within 2 weeks of construction, process the CUF's, investigate Certified Payroll and DBE Prompt Payment issues, monitor payment compliance and goal achievement, and assist in preparing for FHWA Audits if the contract is selected. The DEEO will monitor the contract from Award to Closeout.

LABOR/PREVAILING WAGE RATES

Prevailing wage requirements under the Federal Highway Administration (FHWA) apply to all federal aid construction projects exceeding \$2,000, including those managed by subrecipients (such as local public agencies). Under 23 U.S.C. 113 and the Davis-Bacon Act, all laborers and mechanics employed on these projects must be paid no less than the locally prevailing wages and fringe benefits determined by the Department of Labor (DOL) See FHWA 1273 and 29 CFR Part 5.54.



Carroll Creek Park
City of Frederick

project on a local road or rural minor collector, or for work done outside federal aid highway right of way. However, if the project is linked to or required by a federal aid construction project on a federal aid route (through NEPA or other contract requirements), prevailing wage rates will apply to the off-system project. Examples would be the separate construction of a required wetland mitigation site, or construction of a required bicycle path.

When applicable, the Labor/Wage Rate Program is a federal mandate with strict requirements that are listed below.

Contractor and Subcontractor Payrolls: Prevailing wage instructions for the contractor are stated in the contract provisions. The Prime Contractor and each Subcontractor shall submit one copy of the certified payroll to the Project Engineer within seven calendar days after the end of each payroll period. The subrecipient must be aware of this requirement and ensure that the documents are submitted and kept in the project files. The following are requirements of this section and the Project Engineer and/or subrecipient's designee must review for compliance:

- Each payroll shall be numbered beginning with number 1 and consecutively numbered through the end of the contract.
- Each payroll must include a signed/dated statement of compliance.
- Contract and Federal Aid Participation (FAP) numbers shall be shown on all payrolls.
- All payrolls shall include the employee's name, classification and employee identification number (Not Social Security Number).
- All payrolls shall show the employee's basic hourly wage rate, overtime rate and the number of hours worked (tabulated both daily and weekly).
- All payrolls shall identify and include any fringe benefit funds and /or programs.
- All payrolls shall show the employee's net pay and itemized deductions.

Additional Classifications: Any necessary classification not listed in the contract wage rate decision shall be requested on Standard Form 1444 (including a copy of the contract's wage rate decision with the submittal package). A copy of the form is [Available Here](#). This request form shall be submitted by the contractor, through the subrecipient, to the SHA Wage and Hour Team. Copy the SHA District and DEEO.

Wage and Hour Team
Office of Construction, Building 4
7450 Traffic Drive, Hanover, MD 21076
Phone #: 443-572-5215

Requests will be forwarded from the Wage and Hour Team to the United States Department of Labor (U.S. DoL) for processing. The requested wage rate will be paid until the decision is received. The decision will be transmitted to all parties as soon as it is received from the U.S. DoL.

Project Bulletin Board: The Contract Provisions require that the contractor place a 4' x 8' waterproof bulletin board displayed visibly on project and where employees gather that is publically accessible. The required information is given to the contractor at the Pre-Construction Meeting and/or at the DBE meeting with the DEEO. The wage rates shall also be posted on the bulletin board.

Payroll Compliance Requirements: The subrecipient is responsible for ensuring that the Prime and Subcontractor(s) payroll documentation is complete and maintained in the project files. The District or other designated representative will have the authority to inspect the documentation for compliance during any visit or audit. The subrecipient is responsible to ensure that the following items or actions are completed during the project:

- Employee payroll compliance interviews are conducted as described in the paragraph below, documented on SHA Form OOC52, and checked against Contractor Payrolls.
- Additional classification requests are made and replies from the U.S. DoL are complied with.
- Any discrepancies are addressed with appropriate Contractor while informing the SHA DEEO and District Office.
- Payrolls are checked and a copy is stored in the project files.

Payroll Compliance Directive 07220.100.18 details the administrative requirements for Payroll Compliance. This directive is [Available Here](#).

In the field, an inspector shall perform a payroll compliance interview for every contractor employee (except supervisory) as soon as possible after they begin work. Every three months, a follow up interview shall be performed. Use the SHA Form OOC52, Payroll Compliance Check, and have it signed by each respective employee. The subrecipient should verify that the OOC52 has been completed and the form should be used to compare to the contractor's certified payroll when received. The SHA Form OOC52, Payroll Compliance Check, is [Available Here](#).

SHA Form OOC53 Payroll Compliance Report must be used as a checklist when verifying certified payrolls. In addition, Form OOC54 Payroll Summary Report must be used to keep record of each payroll received, when checked/verified and discrepancies found. These forms are [Available Here](#).

A statement of compliance should be attached to each payroll. The subrecipient is also responsible to ensure that the following requirements are followed:

- Ensure that the prevailing wage rate is paid.
- Verify that the proper classification listed is approved for contract.
- Ensure that payrolls are received in a timely manner.

Any non-compliant issues should be referred back to the contractor for corrections and notify OEO when necessary.

- **Subrecipient:** Ensure the overall Wage/Labor Rates and program requirements are followed, all required forms are completed/submitted when due, and proper documentation is kept in an organized filing system.
- **SHA:** SHA OEO Compliance Officer and other SHA offices are available for technical support or guidance.

ON THE JOB TRAINING (OJT) REQUIREMENTS

OJT goals are established to meet federally required goals on applicable projects. These goals are determined for each project based on FHWA criteria and apply whether the project is administrated by SHA or by a subrecipient.

- **Subrecipient:** If OJT goal is included, work with SHA to meet requirements.
- **SHA:** If OJT goal is included, provide guidance to subrecipient to meet requirements.

EROSION AND SEDIMENT CONTROL (E&SC)

23 CFR 650, Subpart B requires all federal aid highway projects to include erosion and sediment control measures in their plans and specifications. The subrecipient is responsible for ensuring these measures are installed and maintained according to the approved state standards. Additional references are the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control and the June 2023 Field Guide for Erosion and Sediment Control, and can be found on SHA's website.

All permits listed in the contract must be obtained by the subrecipient and active prior to commencement of work. A copy of all the permits shall be kept on site. The terms of the Erosion and Sediment Control (E&SC) permit must be strictly followed. The subrecipient will need to partner with the Maryland Department of the Environment (MDE) and/or other permitting authority.

The subrecipient must notify MDE of the impending project before commencement of work. Permit requirements may include:

- Ensuring the contractor submits the name and qualifying credentials of their designated Erosion and Sediment Control Manager (ESCM). Certifications include:
 - Maryland Department of Environment (MDE) Responsible Personnel Certification (RPC), formerly called "Green Card" Certification
 - MD SHA "Yellow Card" Certification when on SHA Right of Way
- Hosting an "E&SC pre-construction meeting" prior to any soil disturbance.
 - Discuss the proposed E&SC Plan.
 - Discuss sequence of construction and any specific permit conditions.
 - Invite appropriate MDE or permitting authority representatives.
- Conducting inspections of E&SC and documenting findings (frequency determined at meeting).
 - The contractor will perform Quality Control (QC) inspections.
 - The subrecipient will perform Quality Assurance (QA) inspections.

The subrecipient is the permittee because they obtain the required environmental permits to include the E&SC permit. Therefore, SHA's Office of Environmental Design (OED) Quality Assurance inspection team will not inspect these projects as they do for standard SHA projects. However, SHA would be available for technical guidance if requested by the subrecipient.

- **Subrecipient:** Ensure permits are active and available in project files on site and ensure compliance with permit terms and conditions.
- **SHA:** District Construction Office, Office of Environmental Design, and/or Highway Hydraulics Division are available for technical support or guidance. Reviews compliance documentation.



Gerardi Boulevard Sidewalks - Safe Routes to School
Town of Federalsburg

MAINTENANCE OF TRAFFIC (MOT)

Traffic control for motorists, pedestrians, and bicyclists must be considered for every project. "In accordance with 23 CFR 630 Subpart J (Work Zone Safety and Mobility) and Subpart K (Temporary Traffic Control Devices), all projects must provide for the safe and efficient movement of motorized and non-motorized traffic." All temporary traffic control devices and applications shall conform to the latest version of the Manual on Uniform Traffic Control Devices (MUTCD), per 23 CFR 655, and SHA standards.

The contractor is required to submit the name and copy of qualifying credentials of their designated Traffic Control Manager (TCM) prior to the start of any work involving traffic control. The TCM must possess a current Temporary Traffic Control Managers Certification as provided by the Maryland Transportation Builders and Materials Association (MTBMA). A copy of this certification card will be kept in the project file for all project TCMs. The contractor is also required to use Maryland certified flaggers with an active Flagging Certification card. The sub recipient inspection staff must verify and document the certifications of the TCM and all flaggers before they engage in traffic control operations.

The TCM shall be on site whenever the contractor's operations involve daily lane closures, flagging operations, or any disruption to normal flow of traffic. The TCM will be the direct contact to the subrecipient RC and/or designated on-site project staff for any traffic control issues and will have the authority to direct employees as needed to remedy any MOT deficiencies without delay. The TCM will request lane closure permits through the SHA District Office when working on or adjacent to SHA roadways.

The TCM will prepare daily inspections reports documenting all activities pertaining to MOT including use of lane closures, flagging operations, traffic accident/incidents within project limits, etc. if required by the subrecipient. If required, the subrecipient RC and/or designated on-site project staff shall receive copies of the MOT Reports on a daily basis and will maintain copies of MOT Reports at the field office.

- **Subrecipient:** Ensure contractor has a designated TCM with current certifications, who is on site anytime the project requires disruption to the normal flow of traffic. Perform Traffic Control Quality Assurance inspections as necessary. Document daily Maintenance of Traffic set-ups on IDRs.
- **SHA:** District Traffic Office is available for technical support or guidance.

SAFETY

Safety is the highest priority on any project. The subrecipient shall monitor project sites to ensure that all necessary measures are implemented to protect the life, health, and safety of all personnel and the traveling public, per 23 CFR 635.108.

Safety of the jobsite and for the workers/ inspectors carries many mandatory requirements. The contractor is required to be aware of and abide by all U.S. Department of Labor Occupational Safety and Health Administration (OSHA) and Maryland Occupational Safety and Health (MOSH) standards and requirements.

- The contractor and subcontractor shall permit inspection without delay and at any reasonable time on all premises where the work is being performed, by a federal or state inspector authorized to investigate compliance with health and safety statutes.
- The contractor shall correct any violations identified during inspections within a reasonable time after the issuance of a citation or notice, unless the contractor formally contests the validity through established administrative and judicial processes.

The contractor must submit the name and qualifications of their “Competent Person” as defined by OSHA (29 CFR 1926.32). This individual must be capable of identifying existing and predictable hazards and have the authority to take prompt corrective measures. The contractor shall maintain a project-specific Safety Plan that addresses site-specific hazards.

Safety for motorists, pedestrians (including ADA accessibility), bicyclists, and nearby residents is a primary concern. The contractor shall conduct the work to ensure the least practicable obstruction/ disturbance to the public. Accommodations made to provide safe travel through a construction zone shall be implemented and maintained according to the approved project design and MOT plan.

- **Subrecipient:** Ensure proper safety measures according to the Contractors Safety Plan and accommodations according to the design are implemented.
- **SHA:** Available for technical support or guidance.

QUALITY ASSURANCE PROGRAM

Material Clearance

OVERVIEW

A critical element of any project with federal funding is Material Clearance. Material Clearance is required to assure that the quality of the materials used are designed, produced and placed to meet federal requirements, as well as the system preservation, safety and environmental needs of the state’s communities. The Monthly Material Clearance for all construction projects should be performed in accordance with MDOT SHA SOP No. 5300.900.01 dated July 7, 2025. The project cannot be closed out until it receives “Material Clearance.”

The Final Materials Clearance should be accomplishment within 10 to 40 business days after receiving the 30-days’ notice of project completion from the Project Engineer. All materials must be sampled, tested, and inspected to comply with details as published in SHA

specifications, including Maryland Standard Specifications for Construction and Materials, Special Provision Inserts or Special Provisions at the time of award. The subrecipient must perform the Monthly Material Clearance Procedures in accordance with the State Quality Assurance (QA) Program. The subrecipient must follow Title 23 CFR 637.205 Quality Assurance Program to assure that the materials and workmanship incorporated into each federal aid highway construction project on the National Highway System (NHS) are in conformity with the federal requirements.

Within 30 days after receipt of notification of award of the Contract, submit the proposed sources of all materials to be incorporate into the project using the SHA's web-based Materials Management System (MMS) per SHA Standard Spec Section 900.01. All Materials shall comply with MDOT SHA's 2025 Standard Specifications for Construction and Materials, Category 900- Materials. Update and submit all nursery stock sources to OMT 45 days prior to the planting season in which the planting is to begin.

Do not introduce material into the work until sources are approved. All source approvals are made subject to continuing production of materials conforming to these specifications. Material sources may be rejected where it is evident that the material tends to be of marginal quality when compared to the limits in any of its specified properties. The subrecipient must sample according to the SHA's Sample Testing and Frequency Guide unless otherwise directed. SHA also reserves the right to inspect and/or test any material on the project for specification compliance at any time during construction.

SOURCE OF SUPPLY

The prime contractor and SHA's OMT complete a majority of the workload associated with materials clearance. The contractor must submit a Source of Supply (SOS) listing for all items used on the project, which identifies the manufacturer and supplier for each material. SHA's OMT representatives review the SOS listing. This is accomplished by two possible methods depending on the type and size of the project:

- For larger projects (Federal Aid Bridge, Appalachian Regional Commission, etc.), the SOS is submitted using SHA's web-based Materials Management System (MMS).
 - After creating an MMS account and designating authorized company representatives, the contractor will enter the SOS information into MMS.
 - SHA's OMT Area Materials Engineer and their staff are the primary representatives to review the submittals and approve if acceptable, or reject with explanation to the contractor of what needs to be changed/included.
 - The contractor would continue to work through the submittal process for each material until approved.
 - Note: SHA's OMT staff is available to provide a tutorial for new contractors and help walk them through the process.

When performing the source of supply reviews, SHA's OMT representatives will acknowledge that these are subrecipient projects and may contain some local characteristics not on SHA's Qualified Product List (QPL). (The QPL is available on the SHA website in the [Business Standards and Specifications section](#).)

For example, having a green signal pole to match the décor of all other signal poles in the city or use of a locally produced stone aggregate on a trail project to match the regional terrain could be perfectly acceptable. As long as the requests are off the state system (not going back to SHA for ownership and maintenance after project completion), would not compromise the integrity (structural or otherwise) of the project, and are not considerably more expensive, then SHA will work with the subrecipients to meet the aesthetic and other local characteristic goals of the project.

This can be accomplished with an SHA Form 14 or by working directly with the Area Materials Engineer and/or Materials Management Division Chief for approval. If the Public Interest Finding (PIF) is required, it should be discussed with SHA.

Any items requiring non-standard approval must be identified as early as possible to avoid any delays that may come from additional material testing and the approval process.

The subrecipient project inspection staff must ensure that a source of supply is submitted for all materials and **approved PRIOR TO USE** on the project. The subrecipient must keep also copies of all records of SOS on the site for review. The project inspection staff will then also ensure the materials come to the jobsite with the required paperwork/stamp indicated on the source of supply approval. The subrecipient RC must ensure that this procedure is followed and that no payments are made for any work that may have been completed without material approval. It is acceptable and expected to withhold payment for items of work that have not received material approval.

MATERIALS TESTING

The subrecipient shall follow all procedures for material testing and acceptance as outlined in the State Quality Assurance Manual, Processes, Details and Frequencies dated September 30, 2025. Some examples are:

- SHA Materials Inspector checking a steel beam in the manufacturing plant and stamping it prior to shipment to the jobsite.
- A certified project inspector taking and shipping concrete cylinders or HMA box samples according to the frequency guidelines in accordance with SHA's guidelines and procedures.
- SHA's Pavement Marking Technician coming out to test retro-reflective properties prior to final acceptance.
- A certified project inspector with a nuclear badge taking a compaction reading with the nuclear gauge.

The subrecipient's inspection staff must verify the material on site is approved by following the acceptance procedure noted on the SOS. This may require testing, collecting manufacturer's certification, or visual inspection etc.

The subrecipient can use SHA's lab for QA testing of many standard materials (at a cost to the project), or contract with a certified third party materials testing agency. This must be discussed with SHA prior to execution of the contract and should be discussed at the Pre-Construction Meeting to ensure all parties understand the predetermined testing process.

MATERIALS TICKETS AND INVOICES

Records of all materials used on the project must be kept on file as follows:

- Material tickets that are the basis for Item payments (i.e. Tons, CY, etc.), which shall be signed and dated by the subrecipient inspector on site and include Item Number, Description, Payment, Date and Location where it is installed.
- Any adding machine check and tape (please clarify) must also be attached to the forms. It is also recommended that the inspector attach an identification slip to all tickets that include Contract Number, Item Number, Item Description, Material Description, Quantity Paid, Date, and Inspector Signature.
- The Inspector Daily Report (IDR) shall document any material received and used on the project and include the ticket numbers.
- Material tickets should be filed under a particular pay item for easy access and review during an audit.
- Note: SHA is now using the HaulHub Technologies eTicketing platform for increased safety and numerous other advantages. Sub recipients may reach out to the District Construction Office and OOC's eConstruction Team for additional information and to set up use on project.

CLEARANCE REPORTING AND MATERIALS CLEARANCE LETTER

The subrecipient shall submit monthly material clearance reports to OMT. The subrecipient is responsible to ensure a response is received for each monthly clearance report from SHA AME to maintain that only paid materials are cleared for use. The subrecipient must follow up on any materials that may not have been cleared on previous reports.

Materials not paid for on the previous estimate can be included on the next estimate once all approvals and documentation have been received, reviewed and approved. (If completed prior to finalizing an estimate, the subrecipient must ensure materials are cleared before making payment to contractor.)

A Materials Clearance Report and Materials Approval Status Report are [Available Here](#).

At the conclusion of the project, all materials must be cleared. When that is complete, SHA will issue a Materials Clearance letter, which is a requirement for project closeout.

- **Subrecipient:** Ensure that the SOS is promptly submitted to SHA's OMT. Ensure materials are approved before use on project. Perform materials sampling, testing, etc. as specified. Collect tickets and invoices as described. Submit monthly Materials Clearance Report.
- **SHA:** OMT will review and approve SOS. OMT will review the monthly Materials Clearance Report and generate the Materials Approval Status Report. OMT will issue the Materials Clearance letter when the 30-days' notice is received from the subrecipient, if there are no outstanding items and all material issues are resolved. OMT shall submit the Final Clearance Letter to the District within 10 business days. OMT and the District Construction staff are available for technical guidance.

INSPECTION REQUIREMENTS

Per 23 U.S.C. 114 and 23 CFR 635.105, the subrecipient is responsible for the construction of the project. This includes providing adequate supervision and inspection to ensure the project is completed in conformity with the approved plans and specifications (23 U.S.C. 109).

Adequate construction inspection staff must be present during all construction activities. Personnel assigned to inspect these projects with federal funds are required to have and maintain proper experience and active credentials throughout the duration of the project. For Recreational Trails Program inspection requirements, see chapter 15. In addition to construction inspection experience, inspectors must have the required certifications related to the specific elements of each project.

Maryland participates in the Mid-Atlantic Region Technician Certification Program (MARTCP) to certify inspectors in several material related areas. MARTCP currently develops and administers core training programs in hot mix asphalt, concrete, soils and aggregates, and pavement markings. These certifications are required for inspectors/technicians performing hands-on testing of products used on projects.

The Maryland Department of the Environment (MDE) Responsible Personnel Certification (RPC), formerly called Green Card, certification is offered online. This certification is required for inspectors/ technicians performing duties on any project with any form of Erosion and Sediment Controls.

The Maryland Transportation Builders and Materials Association (MTBMA) offers courses for certification in Erosion and Sediment Control "Yellow Card" training (required for inspectors/ technicians performing duties on any project with any form of Erosion and Sediment Controls on SHA Right of Way), as well as Temporary Traffic Control Manager's training (required for inspectors/technicians performing duties on any project with any form of Maintenance of Traffic) as well as Traffic Barrier Certification (required for inspectors/technicians performing duties on any project with traffic barrier work).

Although not a core requirement, the U.S. Department of Labor Occupational Safety & Health Administration (OSHA) 10-hour Construction Safety certification is also fundamental for inspectors.

Subrecipients may source inspectors from subrecipient in-house forces, consultants subrecipient, or SHA's District Construction Inspection contracts.

Note: If the subrecipient planned to use a consultant working on SHA's District Construction Inspection contract, they would have first discussed availability with the District ADE-C. If the District had inspector(s) available, a separate estimate would have been drafted and agreement signed for the subrecipient to reimburse SHA for the inspector's expenses while working on the project. These discussions would have occurred weeks prior to the start of construction.

- **Subrecipient:** Determine who will be inspecting the work on the project. Ensure adequate construction inspection staff is present during all construction activities. Ensure inspectors assigned to projects have the required experience, credentials, and certifications. If applicable and inspectors are available, reach agreement with SHA on using their inspection services.
- **SHA:** Available for technical support or guidance in determining what inspector certifications are required for each project. If inspection services are requested, and inspectors are available, the District will reach an agreement with the subrecipient to provide inspectors.

CULTURAL RESOURCES AND UNANTICIPATED DISCOVERIES

To ensure project compliance with [Section 106 of the National Historic Preservation Act \(NHPA\)](#) (36 CFR § 800.13), Section 4(f) of the USDOT Act (23 U.S.C. § 138), [Title VI \(23 CFR Part 200\)](#), and applicable state and federal environmental laws, all project personnel must adhere to the following protocols regarding cultural resources.

The contractor shall be aware of the potential for discovering unanticipated cultural resources during project activities. During construction, if any previously unidentified cultural resource of a historical, archeological or paleontological nature is encountered, work shall be stopped immediately and contact made with the RC and SHA District Office. The contractor shall protect the discovery site (within a specific radius) from further equipment traffic, disturbance, or vandalism. Under no circumstances should artifacts or materials be collected, removed or handled.

If suspected human remains are discovered, the contractor must immediately notify local law enforcement, followed by the RC and SHA. Depending on the location and nature of the finding, SHA's Cultural Resources team from the Environmental Planning Division (if on SHA ROW), Maryland Historical Trust, FHWA, and/or other comparable local cultural resources/historical office will evaluate the site to determinate the appropriate course of action.

Section 106 requires a formal “post-review discovery” process. Section 4(f) strictly protects historic sites from transportation use. If a new historic site is discovered during construction, FHWA and SHA must evaluate it for Section 4(f) applicability before work destroys it.

- **Subrecipient:** Must ensure all contractors are aware of these unanticipated discovery protocols and must enforce immediate work stoppage and notification if findings occur. Subrecipients must coordinate closely with SHA, who act as the liaison for state and federal regulatory agencies.
- **SHA:** Available for technical support, oversight, and guidance. The Cultural Resources team from the Environmental Planning Division will respond to evaluate the discovery, initiate emergency consultation with MHT, FHWA, and consulting parties as required by Section 106, and determine the mitigation or clearance steps necessary to continue work.

RECORD KEEPING

The project files must be maintained by the subrecipient and must be complete, and readily available at a single location. The organization and content of the project file serve as a primary indicator of the subrecipient’s effective and efficient management of the project by the subrecipient RC. It also minimizes resources necessary for conducting process reviews.

The files must be organized and maintained in a manner that permits prompt inspection by SHA, FHWA other federal agency or pass-through entity, Inspectors General, the Comptroller General of the United States, or any of their authorized representatives.

These agencies must have the right to access any records of the recipient or subrecipient pertinent to the Federal award and to perform audits, project inspections process reviews, random checks, execute site visits, or any other official use. This also includes timely and reasonable access to the recipient’s or subrecipient’s personnel for the purpose of interview and discussion related to such documents or the Federal award in general.

The SHA District Engineer or designee (typically the District Contract Finals Personnel) shall periodically inspect during construction, the subrecipient’s project files for ongoing compliance with Federal requirements. Whenever the subrecipient is unable to produce requested data or information, it will be assumed by reviewing personnel the required actions were either never performed or not properly documented.

[Under 2 CFR § 200.339](#), remedies for noncompliance may include temporarily withholding reimbursement pending corrective action, disallowing costs (non-participation of federal funds), on either the entirety or part of the project and suspension or termination of the project. Maintaining organized and complete project files can help prevent these adverse consequences.



INSPECTOR DAILY REPORTING (IDR)

SHA highly recommends that the subrecipient use SHA's electronic Maryland Construction anagement System (eMCMS) platform to capture the IDRs. Should the subrecipient choose to use their existing IDR for recording the work, it must include all the necessary elements and sections required by SHA. The daily recorded information on the report should document all inspection activities and enough detail to support federal reimbursement and must follow the Directive and Memorandums on procedures as outlined in the IDR Memorandum 07210.100.14.

It is also important to be aware that all payments to the Item Ledger and Item Summary must originate from the IDR. The IDR Memorandum 07210.100.14, contains a detailed listing of the required elements for the IDR and a sample of the form used by SHA. This form can be copied for use on projects. SHA's IDR form, IDR Construction Standard Operating Procedure (SOP_5300.100.16 and SOP_5300.100.16 S.D. 01) and Construction Memorandum 7210.100.14 concerning IDR's are [Available Here](#).

ITEM LEDGER AND ITEM SUMMARY

The Item Summary Book must have a title sheet page, Inspector Signature Sheet, and an Item Summary Page for each Item. The Item Summary must contain the final payment quantities only. No estimated payments can be entered into the Item Summary. All Contract Payments that are area or volume payments must be sketched, and show the formula and the calculations for the payment quantity.

Linear foot payments may have to be sketched if station locations do not match payments. The OOC4 Sketch Book Title Sheet, OOC5 Signature Sheet, and OOC6 Summary of Final Quantities forms will be used to document the item ledger. These forms are [Available Here](#)

- **Subrecipient:** Ensure records are kept in an organized manner as described above.
- **SHA:** Available for technical support or guidance in record keeping. The District Contract Finals Personnel periodically inspects project records during construction.

PROGRESS/PARTNERING MEETINGS

Projects will continually make progress throughout the life of a job. While the project staff observes this movement on a daily basis, others also need to be updated on the progress and any issues that may arise.

Progress meetings are an excellent way to update all those involved in a project. During busy construction periods, once a month is a good timeframe to hold meetings. During the winter or other slow periods, less frequently held meetings may be appropriate.

Project partnering, both formal and informal, is another way to make a project successful. Partnering creates an atmosphere of open communication, trust, and honest dialog among all stakeholders who are involved in the project. The partnering process is an effort encouraged by the Maryland Quality Initiative (MdQI). Partnering resources including a detailed [Partnering Manual](#) can be found on MdQI's website. Several key partnering tools (listed below) are [Available Here](#):

- Sample Agenda
- Sample Meeting Minutes
- Issue Resolution Chart

These update sessions are commonly referred to as Progress/Partnering Meetings and have become standard practice. Sending out agendas and taking accurate minutes for distribution afterwards are key components. Issues should be assigned to appropriate parties and tracked through resolution with the Issue Resolution Ladder and Issue Resolution Chart.

- **Subrecipient:** Identify stakeholders and invite to regular Progress/ Partnering Meetings. Lead meetings by sending out agendas prior to meeting and distributing minutes afterwards. Track issues through resolution.
- **SHA:** Participate in Progress/ Partnering Meetings and be available for technical support or guidance.



Rehabilitation of the Camden Station
MTA

DOCUMENT FILING SYSTEM

The filing system should be an orderly arrangement that will make all documentation readily available. This organization can be done with hardcopies and/or electronically. When stored electronically, this must be backed up on the web server rather than just a standalone computer. More than one person should be able to produce the documentation in the filing system. Some critical documents include, but are not limited to, the following:

- Contract Plans
- Contract Specifications
- Notice of Award, Notice to Proceed
- Permits
- Agreements with Others (i.e. ROW, Utilities, Railroads, etc.)
- Disadvantaged Business Enterprise (DBE) Schedule of Participation & Documentation
- Certified Payrolls
- Contractor's Liability Insurance
- Subcontractor Approvals and Copies of Subcontracts
- Approved Initial Construction Schedule and Subsequent Schedule Updates

A detailed organizational structure for an SHA documentation filing system used for federally funded project is [Available Here](#). Every project's documentation files will be somewhat unique due to the specific project aspects.

- **Subrecipient:** Must provide SHA full access to Project Records- hardcopy or electronic.
- **SHA:** Available for technical support or guidance.

REQUESTS FOR INFORMATION (RFI)

Quite often design or material questions will arise during construction. These questions can be formalized using the Request for Information (RFI) process, so that all parties have definitive timelines and written requests/responses.

Design related questions will usually have to be coordinated with the designer of record. In most cases, the RC will have to maintain some type of service from the designer to assist in answering these questions. The designer may also have input in materials related questions. SHA's Office of Materials Technology will also be able to assist with materials questions if needed.

- **Subrecipient:** Take the lead in receiving/responding to RFIs. Maintain designer services to assist with responses.
- **SHA:** Available for technical support or guidance. Will need to review responses that will result in a change order that documents more detail.

CHANGE ORDERS

Change orders are an inevitable part of the construction process. The subrecipient should begin discussing the potential of a change order and the circumstances involved (reasoning, scope, timing, cost implications, etc.) with SHA (District Office and the Program Manager) as soon as it becomes evident that one may be necessary. All change order requests and approvals should be documented in writing. Only emergency situations involving immediate safety or property damage are allowed as an exception to allow verbal consent. SHA's Program Manager would give the verbal consent to continue with the CO process. Approval from SHA is necessary prior to executing the change order.

Process

Step 1: When the contractor or Project Engineer informs the RC of a situation for which a change order will be necessary, a written request for pricing and schedule impacts is sent to the contractor. For lump sum or negotiated prices, the contractor must submit a detailed, itemized breakdown of costs, including labor, equipment, materials, overhead, etc.

Step 2: While awaiting the submission of prices and/or schedule impacts, the subrecipient should compile an independent cost estimate for future comparison to determine if the contractor's price is reasonable. Normally, the SHA Price Index is used to compile this estimate, as it contains bid prices for all types of work on various contracts throughout the state. The Price Index is available on the SHA website in the [Business Standards and Specifications section](#).

Step 3: When the contractor's price is received, it should be compared to the independent cost estimate.

- If the price is excessively high or low, discussions or negotiations with the contractor are necessary to ensure they understand the scope of work.
- If a price is too high and a lower price will be sought, a letter should be sent to the contractor requesting a lower price or a price breakdown.
- Any accepted price that significantly deviates from historical averages, but is reasonable for the situation (small quantity, extra mobilization, etc.), must include written justification.

If the contractor requests a time extension, the duration request will also need to be justified. A time extension will only be considered and/or approved if the work or impact affects the critical path or controlling item of work. Delays caused by utilities, permits, or railroads typically are not eligible for federal funds unless specifically justifiable under 23 CFR § 635.109.

Step 4: Once agreement has been reached on price and time, the subrecipient must get a written confirmation approval from the SHA Program Manager that funds are available. After getting this confirmation, the subrecipient must prepare the following SHA forms that are

[Available Here](#) with samples:

- Change Order Cost Estimate, OOC25 (Available as an Excel file.)
- Change Order (Available as a fillable pdf.)
 - Ensure form is completely filled out to include: Item #, Description, Quantity, Reason Code (See Change Order Reason Code Description Sheet [Available Here](#)), and Value
- Initial Notification of Apparent Design Error and/or Omission form, OOC21 (Available as a Word file.)
 - Note – Only required if the CO is a result of an apparent design error and/or omission.
 - See Design Error and/or Omission Requirements section below for additional information.

The SHA District Construction Office will be able to provide guidance if there are questions in filling out these forms. The forms should be packaged together with supporting documentation.

Step 6: The Change Order will then be sent to the contractor for their signature in the appropriate block.

Step 7: When the signed Change Order is received from the contractor it will be delivered to the District Construction Office. The District Engineer will sign and the District Construction Office will send the package to the SHA Office of Construction's Engineering Support Division for approval.

Step 8: The SHA Office of Construction's Engineering Support Division will review and obtain the final approval signatures before sending back to the District for distribution to the subrecipient. Review and approval of the change order will normally take to four weeks at this step, depending on the complexity and cost.

Step 9: The Change Order is now fully approved and the subrecipient will be able to pay for the work associated with the change order on the next progress estimate after the work has been completed.

Note: Subrecipient must have SHA's prior approval in order to change the physical limits of the project, regardless if federal funds are used for the change order.

Local Subrecipient Approval

It is acknowledged that subrecipients may also need to get a change order approved through their leadership (County Commissioners, Mayor, etc.) in accordance with their local policies and procedures. This would be accomplished in addition to the SHA required process described above.

Force Account

In the event that a contractor is required to perform work for which there are no contract pay items, the work has been deemed non-incidental in any way to the original contract, and the subrecipient and the contractor cannot come to an agreement on price, it may be necessary to perform the work on a force account basis. The subrecipient is required to provide written authorization to proceed before the work can begin. Detailed force account records must be maintained as per Section TC-7.03, of the Standard Specifications for Construction and Materials.

Note that the owner (subrecipient) maintains the authority to regulate the work (i.e., number of laborers and equipment efficiency, etc.) to ensure cost-effectiveness (per 23 CFR 635.120). In addition, detailed records must be kept, including but not limited to, pay rate, fringe benefits, payroll burden, overhead/profit, materials, and equipment status (i.e., make, model, year, owned, rented, idle, etc.) must be documented daily using SHA's Daily Force Account Report form.

It is highly recommended that the subrecipient read TC-7.03 very thoroughly before choosing to utilize this specification. An alternative is to keep force account type records for informational purposes while negotiating a settlement, provided the work is not formally implemented as a force account specification until negotiations are exhausted. Force Account work should be documented with SHA's Daily Force Account Report form, OOC79 (Available as an Excel file [Available Here](#)).

Design Error and/or Omission Requirements

Defective work is defined as work that is found to be not reasonably close to the Contract requirements or not within the specified tolerances. Addressing defective work is the primary job of the field inspector.

Occasionally, construction PE shall notify Design PM who will then notify all applicable and affected support divisions, including design consultants and design liaisons. The PM shall discuss with District Construction to determine the need for assistance and determine the design's expected role in resolving the matter. The project team must then assess:

- the severity of the defect (how far does the work deviate from the contract requirement),
- the extent of the defect (widespread or localized),
- its impact on project functions (e.g., safety, mobility, structural capacity, aesthetics, maintenance, durability, environment, asset life, drainage, etc.), and
- its impact on other project elements (e.g., poor quality of aggregate base may affect subgrade, incorrect cross-slopes may also affect clearances under a bridge, etc.)

GP-5.09 requires the removal of defective work and its replacement at no cost to SHA. Likewise, the remedy for unauthorized work is removal or replacement at the Contractor's expense (per GP-4.08). Depending upon the circumstances, the contractor may need a licensed Professional Engineer (PE) to sign and seal the proposed remedy. The Contractor bears the cost of developing and implementing the remedy, including but not limited to any costs relating to permit modifications. The remedy may be in forms such as sketches, markup of plans, cut sheets, etc. The remedy should be unambiguous.

Materials Clearance Requirements

Materials Clearance is required on change order materials comparable to all other contract items. If a source of supply needs to be submitted for any material used in the Change Order work prior to final approval, the subrecipient shall contact the SHA Office of Materials Technology Area Materials Engineer or their designated representative to establish a new item identification number and add to the tracking database.

- **Subrecipient:** Coordinate with SHA as soon as it is known a change order is necessary. Prepare independent cost estimate. Obtain prices from contractor. Determine if negotiations are necessary and proceed as appropriate towards price agreement. Document on SHA Change Order Form and submit to SHA.
- **SHA:** District Construction Office is available for technical support or guidance throughout process and serves as a pass through for documents going to the OOC. OOC's Engineering Support Section obtains prior approval and final approval. Return to subrecipient for execution.

Audits

As mentioned in the Record Keeping Section, the SHA District Engineer or designee shall periodically inspect, during construction, subrecipient's project files for compliance with Federal and State requirements. Audits could be performed by the following:

- District Contract Finals Personnel, who primarily checks estimates, IDRs, and close out records.
- DEEO, who primarily checks for certified payrolls, DBE, OJT, etc. requirements.
- District Construction Staff Members, who may check any aspect of the project.
- Program Manager's Office, who may check any aspect of the project.
- Federal Highway Administration, who may check any aspect of the project.
- U.S. Department of Labor, who primarily checks labor related areas.
- FHWA other federal agency or pass-through entity, Inspectors General, the Comptroller General of the United States.

For this reason, it is imperative that files must be complete, available at a single location, and organized/maintained in a manner that permits inspection by SHA and FHWA personnel during an audit. Federal records retention requirements state all files and records must be maintained for three years following the date of the final voucher (FHWA's final payment to SHA). This date often occurs several years after construction is completed. Confirm this date with the SHA District Engineer.

Whenever the subrecipient is unable to produce requested data or information, it will be assumed by reviewing personnel the required actions were either never performed or not properly documented. This could be sufficient reason to withhold reimbursement. Insufficient record keeping can result in non-participation of federal funds on either the entirety or part of the project. Organized project files can eliminate these negative consequences.

A tool to prepare for audits is the FHWA Construction Inspection Checklist or Audit Checklist, which is [Available Here](#).

A project closeout audit is required by the District Contract Finals Personnel prior to processing of final reimbursements and contract closeout. The District Contract Finals Personnel will primarily check estimates, IDRs, pay quantities, and all applicable closeout records identified above. Any discrepancies will be noted and must be corrected before the project can be closed out. Once any/ all discrepancies have been addressed, the District Contract Finals Personnel will complete a modified District Engineer's Certification (OOC3, District Engineer's Certificate of Completion of Work) to cover topics applicable to subrecipient's project. A copy of this certification will go to the subrecipient. This District Engineer's Certification will be submitted as part of the final payment package.

- **Subrecipient:** Ensure records are kept in an organized manner and ready for an audit. Project staff shall be available during an audit to provide all requested information to auditors.
- **SHA:** Periodically inspect project records during construction. Assist subrecipient in preparation for Federal Audit. District Contract Finals completes closeout audit and a modified District Engineer's Certification prior to processing of final reimbursements and contract closeout.

Punchlist/Incremental Acceptance for Maintenance

As the project nears completion, the Project Engineer should be generating a project punchlist in coordination with the contractor, and the contractor should then be working to complete these items.

When the RC and project staff believe the project is ready, they will setup a project semi-final or final inspection meeting according to the specifications. The subrecipient shall invite all key project personnel (to include SHA District staff, and the Program Manager) for a project walk-through.

- If there are too many open items of work remaining, a more formal punchlist will be developed and provided to the contractor for follow-up and completion.
 - Time charges would likely continue at this point.
 - The contractor will be given a timeframe to make the required corrections/complete the remaining items.
- If the work completed is found to be satisfactory and only minor work items remain, then a partial acceptance on the entire project with the exception of the uncompleted work items can be granted. Examples of minor work are work that does not require lane or closure or impact public safety. Safety related items such as signs, signals and striping must be fully installed and functional prior to partial acceptance. FHWA advises against stopping the contract time when safety items are still outstanding.
 - The job would likely be substantially complete at this point, and time charges would be stopped.
 - The contractor will be given a timeframe to make the required corrections and complete the remaining items. If they are not completed, time charges for that period could be reinstated.
 - Final Acceptance for Maintenance is then granted if there are no remaining work items at the time of the walk-through or when these items are completed.
 - The job would be substantially complete at this point and time charges would have stopped previously.

After receiving concurrence from SHA District Office, the subrecipient shall send letters notifying the contractor of either Partial Acceptance for Maintenance (noting the exceptions) or Final Acceptance for Maintenance. SHA should be carbon copied on these letters as these are key milestone dates.

- **Subrecipient:** Develop punch list and track completion of items. Schedule final inspection meeting/walk-through. Send letter(s)
- **SHA:** District Construction staff must participate in the project final as SHA must approve project acceptance according to the Stewardship and Oversight Agreement. District Construction staff is available for technical support or guidance.

Additional Resources

For more information about the construction process, please reference the SHA OOC's [LPA Construction Manual](#).

CHAPTER 12

REIMBURSEMENT

BACKGROUND

The federal aid highway program, administered by SHA as the pass-through entity, operates strictly on a reimbursement basis. Per 2 CFR 200.305 and 23 CFR 630.106, subrecipients must first expend local funds for approved project costs before requesting reimbursement for the federal share of eligible activities. Any costs incurred before FHWA authorization, the effective date of the project agreement, or outside the scope of the approved project are not allowable reimbursable costs and are the sole responsibility of the subrecipient. Costs are only eligible for federal participation if they are:

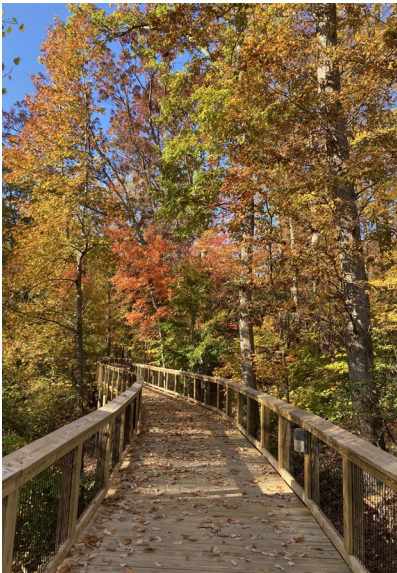
- Incurred after formal FHWA authorization
- Incurred within the Period of Performance defined in the project agreement
- Necessary, reasonable, and within the approved Scope of Work

Any costs incurred outside of these parameters are unallowable and remain the sole financial responsibility of the subrecipient.

In all cases, costs must be allowable, allocable, and reasonable documented per 2 CFR 200.403. Subrecipients must ensure all expenditures are thoroughly evaluated prior to making payment and seeking reimbursement. Direct and indirect costs are allowable only when supported by proper documentation and prior SHA approval.

Based on the specific federal aid program, subrecipient projects may have a variety of eligible reimbursable costs in five general areas:

1. Planning
2. Design (preliminary design and final design activities)
3. ROW
4. Construction
5. Other: equipment purchases and rentals, education or outreach efforts, publication costs, maintenance, and restoration costs of existing recreational trails



Indianhead Boardwalk
Town of Indianhead, MD

PROCESS

The reimbursement process is similar regardless of project phase. The subrecipient should submit requests for reimbursement including the following information as defined in the project agreement:

1. When requesting reimbursement for services or materials, the sponsor shall prepare the invoice cover letter for submission, along with a copy of the vendor receipt/contractor invoice and payment verification, to the project manager or other reviewers as defined below. When requesting reimbursement of more than one item, include a summary table detailing reimbursable items.
2. When requesting reimbursement or match for labor costs, the sponsor shall prepare an invoice cover letter for submission, along with the Personnel Activity Report (PAR) and payroll verification, to the project manager. The PAR must include a level of detail to justify the number of hours being claimed. When multiple employees are included in the invoice, include a summary table.
3. In addition to the invoice, the sponsor shall submit documentation for the matching funds corresponding to the reimbursement request amount. Include a summary table detailing the match items along with the documentation described for reimbursements.
4. Sponsor's final invoice for reimbursement will include the following certification, signed by the project sponsor:
I/we certify that the subject project was completed in reasonable conformance to the advertised plans and specifications, using materials of equal or greater quality specified in the advertised documents. I/we also certify to the workmanship of the project and that all advertised activities have been accomplished, unless written approval for modifications have been requested of and received from SHA. As of the date of this certification, any additional work and or maintenance on this project will be the sole responsibility of the Project Sponsor, or other entity as specified in the Memorandum of Understanding.
5. Once the invoice receives approval by all required Offices/Districts, it will be submitted to the Office of Finance for processing, approval, and payment.

For Recreational Trails Program and non-construction projects, see chapter 15.

For projects utilizing SHA A&E contracts, the subrecipient manager shall ensure that the invoices are thoroughly reviewed. The subrecipient manager will sign and date the invoice as a part of their review. After the invoice is reviewed by the subrecipient, it should be submitted to the consultant firm, who will then include it as a part of the monthly billing documents submitted to SHA for review and approval. After the invoice has been approved by SHA, the sub recipient will be billed their percentage of the invoice, at the rate agreed to in the Cost Sharing Agreement (CSA).

For construction projects, the Program Manager will send the request to the District subrecipient coordinator SHA Program Manager who will review invoices to verify the claimed work is complete. The project engineer and contractor shall develop a progress payment estimate and reconcile it against verified field quantity records (based on the contract payment items). Per 23 CFR 635.123, all quantities must be supported by source documentation before the parties agree on totals.

Any costs incurred prior to project agreement, outside the scope of the approved project, or claims that are the result of defective work, contractor errors or contractor's failure to follow contract specifications, would be considered unacceptable project costs and cannot be reimbursed.

The District Engineer/District Subrecipient Coordinator, at the respective district office, then prepares a memo to the Program Manager indicating the invoice has been reviewed and is eligible for reimbursement.

The subrecipient may use their accounting software to develop the construction estimate. The subrecipient's financial management system must provide for the following, per 2 CFR 200.302:

1. Identification of awards
2. Financial reporting
3. Accounting records
4. Internal controls/segregation of duties
5. Budget Controls/actual expenditures
6. Written procedures
7. Support for source documentation (receipt, invoice, timecard, etc.)

FINAL REIMBURSEMENT

The final reimbursement must be clearly labeled as Final. Prior to submission, the subrecipient should coordinate a final inspection with the SHA District office or Program Manager to certify that all work was completed and accepted in accordance with the approved scope, project plans, specifications and environmental commitments. The subrecipient is responsible for identifying and resolving any outstanding punch list items and determining any work needed to finalize the project before the final payment is processed.

When the project includes retainage, the final contractor payment of retainage must be released to the contractor and subcontractors upon satisfactory completion of all contract items and formal acceptance of the work/successful final inspection.

Once the SHA audit is completed and approved, the subrecipient can submit the final reimbursement request. The final reimbursement request and all closeout documentation must be submitted within 120 days of the project end date (2 CFR 200.344).

CHAPTER 13

TRANSPORTATION ALTERNATIVES PROGRAM

PROGRAM PURPOSE

The Transportation Alternatives (TA) Set-Aside from the Surface Transportation Block Grant (STBG) Program provides funding for a variety of generally smaller-scale transportation projects such as pedestrian and bicycle facilities; construction of turnouts, overlooks, and viewing areas; community improvements such as historic preservation and vegetation management; environmental mitigation related to stormwater and habitat connectivity; recreational trails; safe routes to school projects; and vulnerable road user safety assessments.

The TA sits at a unique intersection of federal, state, and local partners. The program is funded with FHWA resources, administered by the Maryland State Highway Administration (SHA) and is geared toward supporting projects led by local governments and public agencies. The involvement of federal, state, and local entities provides significant financing and support to projects that may not otherwise be funded. However, engagement from multiple levels of government also requires coordinated administration of projects to adhere to multiple levels of governmental regulations.

COMPLETE STREETS

TA projects that are within MDOT right of way (ROW) are subject to the MDOT Complete Streets Policy. Complete Streets focuses on creating a safe environment for all users including those who employ human-powered means of travel, which includes walking and bicycling with or without the use of mobility aids and may also include using other human-scaled or micromobility devices that may be electric-powered or electric-assisted, such as e-bikes and e-scooters.

Projects that are subject to the MDOT Complete Streets Policy shall establish a Complete Streets Objective Statement that addresses safe access for all users. This Objective Statement will articulate the transportation problem being addressed in the project and what is needed to solve that problem. These statements will prioritize multimodal options, improved accessibility, and the application of Complete Streets design features.



Shady Grove Metro Access
Bike Path
Montgomery County

AMERICANS WITH DISABILITIES ACT

All TA projects are required to comply with the Americans with Disabilities Act of 1990 (ADA), which prohibits discrimination based on disability. TA project sponsors should use the ADA Accessibility Guidelines for Buildings and Facilities (ADAAG) to ensure that their project complies with ADA. If the project links to or includes an SHA transportation facility, such as a shared-use trail, walkway, driveway, or access path, or is located along or intersects with a state roadway, SHA's Accessibility Policy & Guidelines for Pedestrian Facilities along State Highways must be followed.

The ADAAG recognizes that some requirements may be technically infeasible. Project sponsors should refer to ADAAG for guidance on technical infeasibility and design waivers.

ALLOCATIONS AND SUBALLOCATIONS

The TA is designed to allow eligible entities to apply for funds through competitive project selection processes that may be carried out at the State or sub-State level. The law also ensures that a share of funds flow through to sub-State areas and local governments through a process of suballocation. First, TA funds are automatically suballocated to sub-State areas based on their relative population size. After deducting the set-aside for the RTP, if applicable, the Bipartisan Infrastructure Law (BIL) increased the percentage of suballocated funding for the TA from 50 percent to 59 percent to areas based on their relative share of the total State population. See 23 U.S.C. 133(h)(2)(A).

After this suballocation, the remaining 41 percent of the TA set aside funds providing them for use in any area of the state using a statewide competitive project selection process. The state is responsible for selecting projects submitted by eligible entities through a competitive process for all funds not suballocated to MPOs representing urbanized areas with populations greater than 200,000 (23 U.S.C. 133(h)(4)(B)).

APPLICATION PROCESS

The competitive TA application process is facilitated through SHA's application website. Prospective project sponsors should first establish project eligibility for TA funding by determining the project's qualifying category, relationship to surface transportation, and reliable sources of non-federal transportation funding for the 20-percent cash match.

The application should state relevant project information clearly and concisely. Applications must provide enough detail in the project description, budget, and schedule for reviewers to establish eligibility and easily understand the project scope.

SHA will announce the application period for each grant cycle and accept applications for four weeks. Often, the application period opens in spring and grant cycles occur annually, but these time frames may fluctuate. Once the application period has closed, review and project selection will require four to six months before applicants are notified of a decision.

ELIGIBLE ENTITIES

Under 23 U.S.C. 133(h)(4)(A), as amended by the BIL, the entities eligible to receive TA set aside funds are:

1. **A local government.** Local government entities include any unit of local government below a State government agency, except for an MPO representing an urbanized area with a population over 200,000. Examples include city, town, township, village, borough, parish, or county agencies.
2. **A regional transportation authority.** Regional transportation authorities are considered the same as the Regional Transportation Planning Organizations defined in the statewide planning section (23 U.S.C. 135(m)).
3. **A transit agency.** Transit agencies include any agency responsible for public transportation that is eligible for funds as determined by the Federal Transit Administration.
4. **A natural resource or public land agency.** Natural resource or public land agencies include any Federal, Tribal, State, or local agency responsible for natural resources or public land administration. Examples include:
 - State or local park or forest agencies.
 - State or local fish and game or wildlife agencies.
 - Department of the Interior land management agencies.
 - U.S. Forest Service.
5. **A school district, local education agency, or school.** School districts, local education agencies, or schools may include any public or nonprofit private school. Projects should benefit the general public and not only a private entity.
6. **A Tribal government.**
7. **An MPO that serves an urbanized area with a population of 200,000 or fewer.** MPOs representing urbanized areas over 200,000 population are not eligible entities.
8. **A nonprofit entity.** The BIL removed the requirement that the nonprofit entity be responsible for the administration of local transportation safety programs.
9. **Any other local or regional governmental entity with responsibility for or oversight of transportation or recreational trails** (other than a MPO that serves an urbanized area with a population of over 200,000 or a state agency) that the state determines to be eligible, consistent with the goals of 23 U.S.C. 133(h).
10. **A state,** at the request of an eligible entity listed above.

SHA is not an eligible entity as defined under 23 U.S.C. 133(h)(4)(A) unless requested by another eligible entity. After projects have been selected, SHA may manage projects on behalf of the project sponsor, as defined in an executed MOU.

ELIGIBLE PROJECTS

The BIL retained previous TA eligibility, amended the reference for SRTS projects, and added activities in furtherance of a vulnerable road user safety assessment, as defined in 23 U.S.C. 148(a). See 23 U.S.C. 133(h)(3). TA eligible projects consist of:

Section 133(h)(3)(A): Projects or activities described in 23 U.S.C. 101(a)(29) or 23 U.S.C. 213 as in effect prior to the enactment of the FAST Act. Those sections contained the following eligible projects:

(1) Transportation Alternatives as defined in 23 U.S.C. 101(a)(29) as it appeared prior to changes made by the FAST Act: The term “transportation alternatives” means any of the following activities when carried out as part of any program or project authorized or funded under title 23 U.S.C., or as an independent program or project related to surface transportation:

(A) Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.).

(B) Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.

(C) Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other nonmotorized transportation users.

(D) Construction of turnouts, overlooks, and viewing areas.

(E) Community improvement activities, including:

(i) inventory, control, or removal of outdoor advertising;

(ii) historic preservation and rehabilitation of historic transportation facilities;

(iii) vegetation management practices in transportation rights of way to improve roadway safety, prevent against invasive species, and provide erosion control; and

(iv) archaeological activities relating to impacts from implementation of a transportation project eligible under title 23, U.S.C.

(F) Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to:

(i) address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff; or

(ii) reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats.

(2) The recreational trails program under 23 U.S.C. 206 of title 23. (See chapter 15. Any project eligible under the RTP also is eligible under the TA Set- Aside.)

(3) The [safe routes to school program](#) under section 1404 of the SAFETEA-LU (23 U.S.C. 402 note; Public Law 109-59) [now codified as 23 U.S.C. 208 and including]:

- Infrastructure-related projects eligible under section 1404(f)(1) [now eligible under 23 U.S.C. 208(g)(1)].
- Non-infrastructure-related activities eligible under section 1404(f)(2) [(now eligible under 23 U.S.C. 208(g)(2))].
- SRTS coordinators eligible under section 1404(f)(3) [now eligible under 23 U.S.C. 208(g)(3)].

(4) Planning, designing, or constructing boulevards and other roadways largely in the right of way of former Interstate System routes or other divided highways.

Section 133(h)(3)(B): projects and activities under the safe routes to school program under 23 U.S.C. 208.

Section 133(h)(3)(C): activities in furtherance of a vulnerable road user safety assessment (as defined in 23 U.S.C. 148(a)).

INELIGIBLE ACTIVITIES

TA funds cannot be used for the following activities:

- MPO administrative purposes.
- Promotional activities, except as permitted under the SRTS (2 CFR 200.421(e)(3)).
- Routine maintenance and operations, except trail maintenance and restoration as permitted under the RTP.
- General recreation and park facilities, playground equipment, sports fields, campgrounds, picnic areas, pavilions, or other facilities that do not serve an eligible TA, RTP, or SRTS purpose.

LOCATION

There are no location restrictions for the use of TA funds; they are not required to be located along highways. For SRTS non-infrastructure projects, traffic education and enforcement activities must take place within approximately two miles of a primary, middle, or high school (Kindergarten through 12th grade) (23 U.S.C. 208(a) and (g)(2)(A)).

Other eligible SRTS non-infrastructure activities do not have a location restriction. SRTS infrastructure projects eligible under 23 U.S.C. 208(g)(1) do not have location restrictions because SRTS infrastructure projects are broadly eligible under other TA eligibilities.

TREATMENT OF PROJECTS

Projects funded under 23 U.S.C. 133, including projects carried out under the TA under 23 U.S.C. 133(h), but excluding RTP projects carried out under 23 U.S.C. 133(h)(5), shall be treated as projects on a federal aid highway (23 U.S.C. 133(i)). This subjects all STBG projects

(excluding those funded from the RTP set-aside) to, among other things, [Davis-Bacon Act prevailing wage requirements](#) and other federal aid requirements applicable to projects on federal aid highways (e.g., Build America Buy America, planning, environmental review, letting, etc.).

Note that the BIL amended 23 U.S.C. 206 to add subsection (j), which states:

(j) USE OF OTHER APPORTIONED FUNDS—Funds apportioned to a State under section 104(b) that are obligated for a recreational trail or a related project shall be administered as if the funds were made available to carry out this section.

This means that TA funds that are obligated for RTP projects are to be administered as if they were made available to carry out 23 U.S.C. 206. Therefore, the treatment of projects provision in 23 U.S.C. 133(i) would not apply to such projects.

SPONSOR RESPONSIBILITIES

In general, the following are the responsibility of the subrecipient:

- All project work including project management, documentation, obtaining the appropriate reviews and permits, and completing the coordination with SHA
- Be prepared to start your project when funds are awarded
- Complete timely and accurate submissions
- Accurately evaluate technical assistance needs
- Be responsive to requests for information and project updates
- Develop and commit to a project schedule
- Track milestones and budget
- Be proactive with change and extension requests
- Schedule and lead milestone meetings with a regular cadence
- Provide funding for at least 20 percent of reimbursable project costs,
- Complete a cost sharing agreement to cover SHA oversight costs,
- Maintain the project for its lifespan, and assume liability for the duration of the project's useful life

CHAPTER 14

LOCAL GOVERNMENT BRIDGE PROGRAM

BACKGROUND

Preface and Purpose

This chapter is dedicated to the Local Government Bridge Program Project Delivery as a comprehensive guide for Maryland counties, municipalities, and other local jurisdictions that sponsor bridge projects using Federal Aid Highway Program funds administered through SHA.

This chapter consolidates guidance from federal regulations, SHA policies, and the LPA Manual into a single reference document focused specifically on bridge and culvert projects under the Local Government Bridge Program. It outlines procedures, forms, and coordination steps necessary to deliver projects in compliance with Federal Highway Administration (FHWA) and SHA requirements.

Intended Users

This chapter is intended for:

- Local Government officials responsible for planning, funding, and overseeing bridge projects;
- County and municipal engineers and their design consultants involved in project development and delivery;
- SHA staff supporting Local Government bridge projects, including personnel in the Office of Structures, Office of Finance, Office of Planning and Capital Programming, and District Offices; and
- FHWA personnel providing oversight of federal aid bridge activities.

Purpose

The purpose of this chapter is to:

- Establish a standardized process for developing, funding, and delivering bridge projects under the Local Government Bridge Program;
- Ensure compliance with federal and state laws, regulations, and policies governing the use of federal aid Highway funds;
- Define the respective roles and responsibilities of Local Governments, SHA, and FHWA at each phase of project development;



Henryton Road Bridge
Howard County

- Promote consistency, accountability, and transparency across all Local Government bridge projects; and
- Serve as a reference tool to facilitate coordination, improve communication, and streamline project delivery from initiation through Concurrence in Award (CIA).

Federal Highway Administration

FHWA, operating under the U.S. Department of Transportation (DOT), is responsible for overseeing the Federal Aid Highway Program. To fulfill this role, FHWA reviews and approves transportation plans, environmental assessments, and state-managed right of way acquisition activities. FHWA also enforces additional requirements, including civil rights laws, which Local Governments (LGs) must comply with as a condition of receiving federal aid funds.

FHWA is also responsible for oversight of the design and construction of federally funded projects. The level of federal involvement in a given project is determined by FHWA. Projects or project elements subject to FHWA review are classified as Projects of Division Interest (PoDI). PoDIs are projects that present elevated risk, contain higher-risk elements, or offer a meaningful opportunity for FHWA to enhance program or project objectives. Each year, the FHWA Division Office identifies PoDIs and shares the list with SHA and other relevant parties. Project selection is risk-based, and stewardship and oversight activities are directed toward addressing identified risks. This may include retaining specific project approvals or focusing oversight on particular project phases or elements.

The majority of LG projects are classified as Exempt projects. For these projects, FHWA has delegated administration of the Local Government Bridge Program to SHA. SHA is responsible for ensuring that Local Government bridges are inspected on schedule and that federal funds are spent appropriately. Regardless of project classification—Exempt or PoDI—all communication with FHWA shall be conducted through SHA.

FUNDING ELIGIBILITY/STRUCTURE MANAGEMENT PLAN

Given the significant shortfall in federal, state, and local funding for bridge projects, available resources must be prioritized to achieve the most efficient replacement or rehabilitation of the most critical and poor rated bridges.

The primary factor in determining funding eligibility is a bridge's structural condition. As such, understanding how numerical condition ratings are assigned is essential for establishing funding priorities. The primary objective of the Local Government Bridge Program is to assist local governments in maintaining their bridge infrastructure in a state of good repair. While a structure does not need to be rated in poor condition to qualify for funding, the proposed project and scope of work must be clearly justified.

FHWA requires all public bridge owners including state, city, and county agencies to perform routine inspections at regular intervals not to exceed 24 months. Inspection data, including bridge condition ratings, must be reported in accordance with the Specifications for the

National Bridge Inventory (SNBI). This chapter, and the federal funding associated with the Local Government Bridge Program, apply only to structures that are listed in the National Bridge Inventory (NBI) or any new highway bridge that upon the completion of construction would meet the established definition of a highway bridge and would be required to be reported to the NBI. Dams and tunnels are not eligible for participation in the program.

FHWA Bridge Performance Classifications

FHWA Notice of Proposed Rulemaking on bridge and pavement performance establishes three condition classifications for bridges and culverts: *Good*, *Fair*, and *Poor*. Classifications are based on the lowest component condition rating assigned to the primary Specifications for the National Bridge Inventory (SNBI) items.

1. Good

- A bridge is classified as *Good* when the lowest rating of B.C.01 (Deck), B.C.02 (Superstructure), or B.C.03 (Substructure) is **7, 8, or 9**.
- B.C.04 (Culvert) is classified as *Good* when the rating is **7, 8, or 9**.

2. Fair

- A bridge is classified as *Fair* when the lowest rating of B.C.01, B.C.02 or B.C.03 is **5 or 6**.
- A culvert is classified as *Fair* when B.C.04 is rated **5 or 6**.

3. Poor

- A bridge is classified as *Poor* when the lowest rating of B.C.01, B.C.02 or B.C.03 is **0 through 4**.
- A culvert is classified as *Poor* when B.C.04 is rated **0 through 4**.

Each LG shall develop a Structure Management Plan (SMP) covering all structures in its inventory that have been assigned a Poor condition rating (see [Attachment A](#)). It is mandatory to include all Poor-rated structures in the SMP. Structures that are not rated Poor may also be included in the SMP if the County intends to develop a project for those structures within the next five (5) years. This includes Preventative Maintenance projects. Refer to Section I-2 for detailed instructions on completing the SMP.

The SMP must be submitted to SHA by June 30 for review and approval for the upcoming fiscal year, which begins July 1. No project will be programmed for federal funding unless it is included on an approved SMP, except in cases of emergency.

Project Initiation

NEW PROJECT START PROCEDURE – PRELIMINARY ENGINEERING PHASE

To initiate a new project, the LG should send an email to the Office of Structures (OOS) Local Government Bridge Program team with **“NEW PROJECT START”** in the subject line.

The body of the email should include:

- A brief summary of the project, bridge number, location, etc.

- The anticipated scope of work
- Confirmation of whether the LG has a design contract in place, or if a consultant from SHA's A&E contract is required

Upon receipt, the OOS will review SHA's available consultants, confirm availability & funding, and assign a consultant to the project. The LG should expect a response from the OOS within three (3) business days, which will include a link to the Administrative Preliminary Documents. The LG should program the project in the TIP at this time.

ADMINISTRATIVE PRELIMINARY DOCUMENTS

Administrative Preliminary Documents are the forms and paperwork required to formally initiate a project under the LG Bridge Program. All forms should be typed. These documents must be submitted to the OOS by the LG for review and processing, and the project must be programmed in the TIP, before the Office of Finance (OOF) can be engaged and a funding request submitted.

Required Documents for the Preliminary Engineering Phase:

- Structure Management Plan with subject project included [[Attachment A](#)]
- Location Map
- Purpose and Need Statement (brief project justification)
- Current Bridge Inspection Report
- Supplemental Letter to the Master Agreement *** [[Attachments D & E](#)]
- Federal Aid Project Questionnaire (FAPQ) [[Attachment F](#)]
- Right of Way Questionnaire (ROWQ) [[Attachment G](#)]
- TIP/STIP Number
- Form 32L – Cost Sharing Agreement (CSA) [[Attachment B](#)] *
- Form 42 *
- Form 30 *
- Federal Aid Project Agreement **

* Form 32L, Form 42, and Form 30 are the responsibility of SHA.

** Federal Aid Project Agreement is the responsibility of FHWA.

*** Federal Funding Eligibility for Local Agencies without a Master Agreement

Local agencies that do not have an executed Master Agreement with the State Highway Administration (SHA), including municipalities and other non-county entities, may still be eligible to receive federal funding for bridge projects. In such cases, the local agency must coordinate with SHA to establish the appropriate agreements and approvals prior to initiating project development activities. Typically, this process involves either:

1. Executing a new Master Agreement with SHA; or
2. Partnering with a County or another eligible agency that already has an active Master Agreement in place, which may administer the federal funds on the local agency's behalf.

All local agencies seeking federal participation must comply with applicable federal and state requirements, including project authorization procedures, environmental approvals, right of way certifications (if applicable), and adherence to procurement and design standards.

Administrative Preliminary Documents

STRUCTURE MANAGEMENT PLAN (SMP):

An SMP [see [Attachment A](#)] is a complete listing of bridges within the County that are rated Poor. Bridges with a rating of Fair or good may also be included in the SMP if the County anticipates initiating a project for that structure within the next five (5) years.

An SMP must be submitted to the OOS and approved before any bridge project(s) are eligible for federal funding.

The following phases qualify for federal funds under an approved SMP:

- Preliminary Engineering (includes Preliminary Design and Final Design)
- Right of Way
- Utilities (once a prior rights determination is complete)
- Construction
- Bridge Inspection Program
- Scour Evaluation and Countermeasure Program
- Painting **
- Bridge Joint Repairs **
- Bridge Deck Overlays **

** Projects such as Painting, Bridge Joint Repairs, and Bridge Deck Overlays may be considered for funding only if fewer than 15% of the County's bridges are rated *Poor*.

The SMP Content

The SMP must include the following information for each bridge:

- County
- Bridge Number
- Project description & type of work
- On National Highway System (NHS) or not
- Roadway Functional Classification
- Estimated design and replacement/rehabilitation costs per fiscal year
- Condition rating of the bridge
- Average daily traffic volumes carried by the bridge
- Square foot deck area of the existing bridge

In addition to bridges rated *Poor*, the SMP may include *Good*- and *Fair*-rated bridges if:

- The project addresses maintenance needs that will prolong the service life, and
- The LG demonstrates from an asset management perspective that funds are being spent on the most appropriate project.

SMP Submittal and Updates

- The SMP shall be submitted by June 30 for review and approval for the upcoming fiscal year (July 1 start).
- No project will be programmed for federal funding unless it is included on the approved SMP, except in emergency situations.
- To add or withdraw projects, the LG must submit a revised SMP, including updated costs and TIP information for all listed projects.
- A revised SMP can be submitted at any time throughout the year.

Note: Once an electronic copy of the Federal Aid Project Agreement (obligation of federal funds for a given phase) is received by the LG, that phase of work shall be deleted from the next submitted SMP. A new SMP is not required solely for the removal of a completed phase.

Federal Funding and Participation

Infrastructure Investment and Jobs Act (IIJA) – Surface Transportation Block Grant (STBG) Off-System Bridge apportionment

- Federal funding provided through IIJA is available at an 80% federal/20% LG participation split for both design and construction phases.
- The federal funding source and subcategory for the funding source varies. Contact the LG Bridge Team for up-to-date information.
- The annual STBG Off-System Bridge apportionment is distributed to each County based on a formula that considers;
 - o Number of bridges owned by the County
 - o Area of bridge deck
 - o Number of bridges rated Poor within the County
 - o County population

Infrastructure Investment and Jobs Act (IIJA) – Bridge Formula Program (BFP)

- Federal funding provided through IIJA is available for LGs to apply for projects to receive 100% federal funds.
- Applications can be submitted at any time.
- This funding source is extremely limited and only supports a few projects annually.
- BFP funding can be used for Preliminary Design, Final Design and Construction.
- Unless the IIJA program is extended, IIJA submittals and requests will not be accepted beyond federal FY27.
- Once Infrastructure Investment and Jobs Act (IIJA) funding is awarded, the Local Government (LG) has four (4) years to obligate and expend the funds.

- While SHA manages federal fund obligation and internal accounting requirements, the LG is responsible for understanding the Fiscal Year (FY) in which funding is allocated, maintaining current TIP/STIP programming, monitoring project schedules, and advancing the project through key milestones to avoid delays that could jeopardize funding availability.
- Projects must be located on an off-system roadway classified as a Local Roadway (Urban or Rural) or a Rural Minor Collector to be eligible for this funding source.
- See [Attachment U](#) for the application template.

Note: If a project uses federal funding for any portion of design and/or construction, the design stage still must go through the same reviews, obtain ROW and environmental permits following FHWA requirements.

State Highway Administration Support

SHA will continue to support local government projects through a dedicated Local Government Bridge team and provide A/E contracts to support design efforts and construction-related services when requested. SHA will conduct mandatory contract document reviews during the Preliminary Design and Final Design stages. See the contract document development process section in this chapter for additional information on the review process.

SUPPLEMENTAL LETTER TO THE MASTER AGREEMENT:

Each LG entity is a signatory to the Master State/Local Agreement, which establishes the conditions under which the LG may carry out bridge-related projects using federal funds.

The Supplemental Letter provides project-specific information and is required for each project. It must describe:

- Project location
- Type of improvements to be made
- Need for Right of Way activity

[See [Attachment D](#) for a list of Master Agreement dates.]

Signature and Submission

- Every project requires an original Supplemental Letter signed by the Director of Public Works or an equivalent authority. [See [Attachment E](#) for a generic template.]

FEDERAL AID PROJECT QUESTIONNAIRE (FAPQ):

- See [Attachment F](#)
- A copy of the FAPQ must be attached to each original Supplemental Letter.
- The relevant sections of the FAPQ should be marked with an X.

RIGHT OF WAY FUNDING REQUESTS:

- If there is any land acquisition in conjunction with a design and/or construction project, the LG must coordinate with both:
 - The Office of Right of Way and Utilities (ORE) at SHA Headquarters
 - The District ORE

These offices provide the necessary guidance to initiate the acquisition process. Additional information for ROW processes can be found in Section II – Right of Way, and chapter 6.

FEDERAL AID RIGHT OF WAY QUESTIONNAIRE (ROWQ):

- See [Attachment G](#)
- The Federal Aid ROW Questionnaire completes the set of required federal aid forms.
- It must be completed using the best and most current information available.
- The form must be signed by the Director of Public Works or an equivalent authority.

COST SHARING AGREEMENT (FORM 32L – CSA):

- See [Attachment B](#)
- Documents that the LG agrees to pay for the costs of services provided by SHA.
- Services may include SHA reviews, surveys, ROW activities, consultant fees, etc.
- Document drafted by the OOS after anticipated SHA and consultant costs are determined.
- OOS submits CSA to the County for review and signature by authorized representative.
- LG returns signed CSA to OOS for processing.

FORM 42:

- OOS responsibility
- SHA capital program authorization form used at project inception.
- Defines and commits funding for each project phase (planning, design, ROW, utilities, construction).
- Establishes start and end dates for each phase.
- Includes reimbursement scheduling (Line 20) and amounts (Line 35) for projects involving utilities or railroad relocations.
- Any revisions to project cost, scope, or schedule are handled through amendments to Form 42.
- Approval is required before capital funds may be expended.
- A Project Agreement or Project Modification is issued by FHWA to confirm funding approval. This document will be forwarded to the LG for record keeping.

FORM 30:

- OOS responsibility
- Establishes the project number in the Financial Management Inventory System (FMIS).
- Cannot be submitted until Form 42 is fully executed.
- No work by SHA or consultants can begin until Form 30 is approved and a FMIS charge code is established.

FEDERAL AID PROJECT AGREEMENT:

The Federal Aid Project Agreement [see [Attachment O](#)] is the official FHWA document that authorizes the LG to proceed with a federal aid project. Once a project has been approved for federal funding, FHWA will forward the Agreement to the OOF FAPS. OOF FAPS will then provide the Agreement to the OOS LG Bridge Team and the LG. The Federal Aid Project Agreement includes important information such as type and amount of funding approved for the project, as well as the Project End Date (PED).

During the Preliminary Engineering Phase, any increases in project funding (e.g., EWO) require OOF FAPS to submit a request for a Federal Aid Project Agreement Modification.

Any revisions to the Federal Aid Project Agreement after project advertisement, but prior to bid opening, must be implemented through an approved addendum. The LG should coordinate with the OOS LG Bridge Team for guidance on preparing and issuing such addenda.

Responsibility for the Federal Aid Project Agreement rests with FHWA and OOF FAPS.

TIP/STIP Coordination

OVERVIEW

MDOT must maintain project funding in both TIP and STIP as close as possible to each project's current cost estimate. This alignment is essential to obtain federal approvals, particularly the authorization of federal funds.

Before FHWA will approve a NEPA document or authorize the expenditure of federal funds, MDOT must ensure that all capital and operating preservation expenditures are properly accounted for within the STIP and within the six Metropolitan Planning Organizations' (MPOs) TIPs.

TIP/STIP information, including the assigned TIP number and funding flow details, is required for any federal funding request or authorization.

COORDINATION AND TIMING

Amending a TIP or the STIP can require three to five months for completion. If a project is not included in the appropriate programming documents, FHWA will not authorize federal funding.

Because the Office of Structures' cost estimation policies often result in updated estimates during the PS&E stage, any TIP/STIP amendments may need to be processed quickly. Early and ongoing coordination with MDOT's Office of Planning and Capital Programming staff is necessary to avoid advertisement delays related to TIP/STIP actions.

WHAT IS THE STIP

The STIP is a federally-mandated document each state must produce and keep up-to-date as specified in 23 CFR 450.216. In Maryland, the STIP covers a period of four fiscal years and, generally, is updated biannually. The STIP includes all "regionally significant" transportation projects in a state and the details of projects' funding by fiscal year and project phase, i.e., planning, design, right of way acquisition, and construction.

Those projects within a Metropolitan Planning Area (MPA) are incorporated into the STIP by their inclusion in an MPO TIP. In essence, Maryland's STIP is the combination of seven documents: six TIPs and a seventh document covering rural area projects not included in an MPO TIP. The STIP (and TIPs) demonstrate fiscal constraint, which means programmed project funding in a given MPA and in the State as a whole does not exceed anticipated revenues.

[Statewide Transportation Improvement Program \(STIP\) - MDOT](#) – Rural areas not included in a TIP and statewide programmatic projects (i.e. OOS Bridge Inspection Program)

[FY-25-28 STIP Amendments - MDOT](#) – website tracks TIP and STIP actions with status and document links.

WHAT IS A TIP

A TIP is a federally-mandated document each MPO must produce and keep up-to-date as specified in 23 CFR 450.324. The projects included in a TIP are the same in nature as those to be included in the STIP, except TIP projects are geographically confined to a specific MPA (occasionally, a project is split geographically between multiple MPAs).

In Maryland, there were previously seven MPOs. Following the disbandment of the Cumberland Area MPO (CAMPO), six MPOs remain:

1. Baltimore Regional Transportation Board (BRTB) – Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties, the portion of Queen Anne's County west of Grasonville and Baltimore City.
2. Calvert-Saint Mary's Metropolitan Planning Organization (C-SMMPO) – Lusby and Solomons in Calvert County and California and Lexington Park in Saint Mary's County.
3. Hagerstown/Eastern Panhandle Metropolitan Planning Organization (HEPMPO) – Washington County.
4. National Capital Region Transportation Planning Board (TPB) – Charles, Frederick, Montgomery and Prince George's Counties.
5. Salisbury-Wicomico Metropolitan Planning Organization (SWMPO) – Wicomico County.
6. Wilmington Area Planning Council (WILMAPCO) – Cecil County.



Cumberland Area Metropolitan Planning Organization (CAMPO) – Allegany County – **Disbanded 11/04/2024**, projects now in rural STIP.

TIP/STIP NUMBER

Each MPO maintains a numbering system to uniquely identify projects in its TIP. These numbering systems vary from TIP to TIP. For those projects within an MPO, the TIP and STIP numbers are one in the same. Similarly, MDOT assigns numbers to rural area projects outside MPOs that are included in only the STIP.

When FHWA approves a TIP or STIP amendment, the initial TIP/STIP number is suffixed with a sequential MDOT control number and approval date. For example, if FHWA approves an amendment to CA4131 on April 25, 2016, which MDOT assigned MC #14-128, the new STIP number is "CA4131 MC #14-128 04/25/2016." The MC# and date indicates a TIP action has been amended into the STIP.

MPO	TIP Number Format	STIP Number Format
BRTB	BRTB <i>nn-nnnn-nn</i>	BRTB <i>nn-nnnn-nn</i>
C-SMMPO	C-SMMPO <i>c-yyyy-nn</i>	C-SMMPO <i>c-yyyy-nn</i>
CAMPO	CAMPO <i>yy-n</i>	CAMPO <i>yy-n</i>
HEPMPO	HEPMPO <i>Wyyyy-nn</i>	HEPMPO <i>Wyyyy-nn</i>
TPB	TPB <i>nnnn</i>	TPB <i>nnnn</i>
SWMPO	SWMPO <i>n</i>	SWMPO <i>n</i>
WILMAPCO	WILMAPCO <i>n-n</i>	WILMAPCO <i>n-n</i>
Rural Non-MPA Areas	n/a	Major projects - <i>ccnnnn</i> Areawide grouped projects - <i>RU project</i>

c=county, n=assigned number, y=year

PROGRAMMING A PROJECT

1. LG to estimate Preliminary Design, Final Design and Construction costs and initiate project in TIP.
2. LG to contact SHA to initiate project and give them TIP/STIP ID Numbers.
3. SHA on-boards Consultant & follows steps until full cost proposal is agreed upon.
4. LG updates TIP via amendment. SHA updates STIP to reflect changes.
5. SHA sends updated TIP information and full cost proposal to FHWA. FHWA issues project agreement.

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
- Phase V Services
- Biennial Bridge Inspection
- Scour Evaluation
- Environmental Documentation

CONSULTANTS CONTRACTED BY THE LOCAL GOVERNMENT (LG)

When the LG elects to utilize federal funds for a consultant to perform Preliminary Engineering (PE) and/or construction-related services, it is highly recommended that the LG employ SHA Open-End Consultants. Using these consultants simplifies the administrative process for federal funding and reduces paperwork.

Options for LG Procurement of Consultants Using Federal Funds

If the LG chooses to procure a consultant using federal funds, they must follow one of the three options below:

1. Adopt MDOT SHA A/E Policies & Procedures



Shepherd's Mill Road Bridge
Carroll County

- The LG adopts 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).
 - FAPS must have documentation of the LG's request and SHA's acceptance of the adoption
2. Prepare LG Specific Policies & Procedures
 - The LG prepares and maintains their own written policies and procedures in accordance with 23 CFR 172.5(c) (approved by MDOT SHA).
 - FAPS must have documentation of OPCM's review and SHA's approval of the LG's policies and procedures.
 3. Project Specific Documentation Submission
 - The LG submits documentation associated with each consultant procurement and 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*

CONSULTANT ON-BOARDING

When a consultant is assigned to a project, proper onboarding ensures they are prepared to perform their work efficiently and in compliance with SHA and FHWA requirements. The process includes administrative, technical, and communication steps.

The following procedure outlines the onboarding process for consultants during Preliminary Design. The procedure for Final Design and Phase V follows the same steps. A new task number will be provided to the Consultant for each stage of work (i.e. Preliminary Design, Final Design and Phase V).

1. **Assignment and Notification**
 - The OOS assigns a consultant based on availability, expertise, and funding.
 - The LG and consultants are notified via email. The notification includes:
 - Project summary
 - Key contacts
 - Request to schedule the scoping meeting
2. **Pre-Authorization Form & PCE-1**
 - The OOS drafts the Pre-Authorization Form and circulates for signature (4 signatures required).
 - This is an internal SHA document managed by the OOS LG Bridge Team.
 - If requested, the LG may receive a copy of the IMHE Approval Memo for record keeping.
 - The OOS requests assignment of an Office of Planning & Preliminary Engineering (OPPE) Environmental Planning Division (EPLD) team member and a PCE-1 form from the OPPE EPLD to begin design work.

3. Scoping Meeting

- Purpose: establish shared understanding of objectives, scope, schedule, and responsibilities.
- Ensures LG, SHA, and consultant are aligned before detailed work begins.
- To save time and effort, any funding caps on portions of the engineering effort should be identified and discussed during the scoping meeting.
- For Preliminary Design (PD) – consultant scope can include project initiation to NEPA approval.
- For Final Design (FD) – consultant scope can include post NEPA to advertisement, and bid-phase assistance.
- For Construction – consultant scope can include Phase V services.

Roles & Responsibilities: Scoping Meeting

Role	Responsibilities
County/Local Government (LG) prior to meeting	• Distribute project data, plans, and reports prior to meeting • Identify preliminary concerns and questions • Present project background, goals, and constraints • Facilitate discussion and document decisions and action items • Distribute meeting notes and track follow-ups • Develop Independent Man-Hour Estimate (IMHE)
Consultant	• Review project data and prepare preliminary design concepts • Present design approach and discuss challenges • Develop and submit proposal and man-hour estimates • Address comments from LG and SHA • Refine scope and design based on meeting outcomes
State (SHA – Office of Structures)	• Review project scope, history, and funding • Schedule meeting and confirm participants • Identify regulatory, permitting, and design constraints • Provide guidance on SHA standards and procedures • Review IMHE and assist with negotiations

4. Proposal and Independent Man Hour Estimate (IMHE)

- Consultant develops initial proposal and blank man-hour template → submits to LG and OOS for review.
- Once acceptable, the LG computes the IMHE and submits to OOS.
- OOS reviews and drafts the IMHE Approval Memo for signature (3 signatures required).
- This is an internal SHA document managed by the OOS LG Bridge Team.
- LG may request a copy for record keeping.

5. Full Proposal and Costs

- After IMHE approval, the OOS requests the consultants' full proposal and cost breakdown.
- Proposal is compared to IMHE:
 - Tasks >500 man-hours → must be within $\pm 10\%$
 - Tasks <500 man-hours → must be within $\pm 15\%$

6. Negotiation Meeting (if needed)

- If proposal exceeds acceptable buffer, OOS coordinates negotiation with consultant and County.
- Goal: agreement on appropriate hours (not strict adherence to buffer).

7. Proposal Approval Memo

- After proposal review/negotiation, the OOS drafts the Proposal Approval Memo for signature.
- This is an internal SHA document managed by the OOS LG Bridge Team.
- LG may request a copy for record keeping.
- Signature Requirements:
 - Without negotiations: 3 signatures
 - With negotiations: 3 signatures + OOS Director signature

8. Cost Sharing Agreement (Form 32L – CSA)

- See [Attachment B](#)
- Establishes funding agreement between SHA and LG.
- Drafted by OOS after SHA and consultant costs are determined.
- Submitted to County for review and signature → then executed by OOS Director.

9. Federal Funding Request

- OOS submits package to OOF Federal Aid Programming Section (FAPS).
- Reviewed by OOF → forwarded to FHWA for approval.

10. Form 42

- OOS completes and circulates Form 42 (11 signatures required).
- Authorizes programming of project funds.
- Internal SHA document.

11. Form 30

- OOS completes and circulates Form 30 (11 signatures required).
- Establishes FMIS charge code.
- Internal SHA document.

12. Notice to Proceed (NTP)

- After FMIS code activation, OOS drafts NTP and circulates for signature (1 signature required).
- Executed NTP sent to consultant and LG via email.

- Consultant may officially begin work.

13. Kick-Off Meeting

- Scheduled by LG after NTP issuance.
- Attendees: LG, consultant, subconsultants, SHA representatives.

Extra Work Order (EWO)

An Extra Work Order (EWO) is used to authorize work that is not included in the original scope of work but is necessary to complete the project. EWOs may be issued to address unforeseen site conditions, changes in scope, errors or omissions in design, or other circumstances that require additional work beyond the base consultant proposal.

The following procedure applies **only to projects utilizing SHA's A&E contracts**. Projects where the LG administers its own design contracts may follow a different process, as directed by the OOS.

- The LG must engage the OOS LG Bridge Team before committing to an EWO.
- EWOs must clearly describe the additional work, provide justification, and include associated costs.
- All EWOs require review and approval by SHA and FHWA prior to implementation.
- No extra work may begin until the EWO has been fully executed and funding approved.
- All EWOs are tracked in the official project record and may impact overall project cost and schedule.
- A revised Cost Sharing Agreement (CSA) [\[Attachment B\]](#) is required before the EWO package can be submitted to the OOF to request additional federal funds. Once the EWO costs are established, the OOS will draft a revised CSA for review and signature by the LG. Upon return, the CSA will be signed by the OOS Director, and the EWO package will be submitted to the OOS to request the additional federal funds.
- A revised Cost Sharing Agreement (CSA) [\[Attachment B\]](#) may also be required for increased SHA time and costs. The process is the same as outlined above.
- Approval of the additional funding is required before any funds may be expended.
- A Project Modification is issued by FHWA to confirm funding approval, and a copy is forwarded to the LG for record keeping.

Task Close-Out

After completion of each task, the consultant shall coordinate with the LG and OOS to verify that all work has been completed prior to submitting a Task Close-Out Letter to the OOS LG Bridge Team.

The letter should include the following information:

- Name of the prime consultant and any subconsultants
- Original task budget
- Amount billed to date for the task

- Amount returned to the contract (if applicable)
- Final task budget and any adjustments

After receiving the Task Close-out Letter, the LG Bridge Team will draft a cover letter and submit the package to the OOS Contract Manager for processing. The Consultant should expect a two-week turnaround time for processing the close-out request.

This close-out process ensures proper documentation of task completion, billing, and reconciliation of funds for federal and state reporting purposes.

TRANSPORTATION ASSET MANAGEMENT PLAN (TAMP)

Every State DOT shall establish a process for conducting life-cycle planning for an asset class or asset sub-group. A life-cycle planning process shall, at a minimum, including the following:

1. The State DOT targets for asset condition for each asset class or asset sub- group.
2. Identification of deterioration models for each asset class or asset sub-group, provided that identification of deterioration models for assets other than National Highway System (NHS) pavement and bridges is optional.
3. Potential work types across the whole life of each asset class or asset sub-group with their relative unit cost.
4. A strategy for managing each asset class or asset sub-group by minimizing its life-cycle costs, while achieving the State DOT targets for asset condition for NHS pavements and bridges under 23 U.S.C. 150(d).

The following local governments own and maintain bridges on the National Highway System (NHS): Baltimore County, Baltimore City, Montgomery County, Prince George's County, and Washington County. The Maryland Department of Transportation State Highway Administration (MDOT SHA) actively coordinates with these jurisdictions in the development of the Transportation Asset Management Plan (TAMP). MDOT SHA also monitors the submission of the Counties' Structure Management Plans (SMPs) to ensure that NHS bridges with Poor condition ratings are being appropriately addressed. Structures located on the NHS that meet applicable federal requirements are eligible to receive federal funding under this program.

Right of Way

See chapter 6 for a detailed explanation of the federal acquisition requirements.

Utilities

See chapter 8 for a detailed explanation of the utility requirements for relocation(s).

It is imperative that local governments begin coordination for ROW and utilities as early as possible in the project design process. All Right of Way and utility requirements outlined in the LPA Manual must be followed, even if federal funds are not being used for these project elements.

CONTRACT DOCUMENT DEVELOPMENT PROCESS

The development of contract documents through completed construction is carried out in **three distinct phases**, and each phase must be formally approved before the next begins.

Preliminary Engineering – Preliminary Design (PD) Phase

Includes all design activities through obtaining National Environmental Policy Act (NEPA) approval.

Preliminary Engineering – Final Design Phase

Includes completion of final design, preparation of contract documents, advertisement, bidding services, and concurrence in award.

Construction & Phase V Services Phase

Includes shop drawing reviews, response to Request for Information (RFI) and Redline Revisions as needed.

Preliminary Engineering – 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, scour analysis, TS&L (for bridge projects), Foundation Review, 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 considered complete once the NEPA document is approved with a selected alternative and all scoped Preliminary Design activities have been satisfactorily completed by the consultant. It is critical to note that federal funding may be jeopardized if Final Design activities are initiated before the necessary federal authorizations are obtained.

PRELIMINARY DESIGN ACTIVITIES:

Alternatives Analysis: Scope and Deliverables (if needed)

The Alternatives Analysis is a critical step in the development of bridge projects. It provides a structured evaluation of feasible solutions to address deficiencies, meet project objectives, and comply with federal and state requirements. Consultants performing this work should follow the process below to ensure consistency and completeness.

Purpose:

The Alternatives Analysis identifies, evaluates, and documents potential solutions for a bridge project, including rehabilitation, replacement, or other corrective actions. It informs decision-making by considering technical, environmental, and financial factors and supports the National Environmental Policy Act (NEPA) process when federal funds are involved.

Process:

1. Project Definition
 - Review the existing bridge inventory, condition ratings, and SMP data.
 - Define the project's purpose and need.
 - Identify constraints, such as roadway functional classification, traffic volumes, utilities, right of way, and environmental resources.
2. Identification of Alternatives
 - Develop a reasonable range of alternatives, including:
 - No-build (do nothing)
 - Rehabilitation or preservation strategies
 - Replacement options
 - Consider cost, constructability, service life, and future maintenance requirements.
3. Screening of Alternatives
 - Evaluate each alternative against technical, environmental, and financial criteria.
 - Identify the most feasible alternatives for detailed evaluation.
4. Preliminary Design Concepts
 - Prepare conceptual layouts or sketches for the selected alternatives.
 - Estimate preliminary costs and construction impacts.
 - Identify potential impacts on traffic, utilities, right of way, and the environment.
5. Environmental Coordination
 - Provide information to support NEPA documentation.
 - Identify permits, approvals, and environmental constraints that may influence alternative selection.
6. Documentation and Deliverables

Consultants are expected to provide the following:

 - Alternatives Analysis Report summarizing:
 - Purpose and need
 - All considered alternatives and screening rationale
 - Technical evaluation of feasible alternatives
 - Preliminary cost estimates and life-cycle considerations
 - Environmental, traffic, and constructability impacts
 - Conceptual Plans or Sketches for each feasible alternative
 - Supporting Data (e.g., inspection reports, condition ratings, traffic data, and environmental resource mapping)
 - Recommendations for the preferred alternative, with justification based on evaluation criteria

Roles & Responsibilities: Alternatives Analysis

Role	Responsibilities
County/Local Government (LG)	• Provide project oversight and assign point of contact • Define project purpose, need, and constraints • Provide traffic, right of way, and inspection data • Review and approve consultant deliverables • Coordinate with SHA and stakeholders
Consultant	• Conduct alternatives identification and screening • Develop conceptual layouts and cost estimates • Evaluate impacts including environmental and constructability • Prepare Alternatives Analysis report
State (SHA)	• Provide guidance on federal and state requirements • Review deliverables for compliance • Monitor schedule and funding eligibility • Assist with environmental coordination

HYDROLOGY AND HYDRAULICS REVIEW:

For structures located over waterways, wetlands, floodplains, or carrying water, a hydrologic and hydraulic analysis should be submitted to the OOS Structure Hydrology and Hydraulics Division (SHHD) for review and approval before the project is submitted to MDE for review.

H&H Process:

- Local Government review should be completed before SHA review to ensure compliance with local ordinances.
- SHA Review: The proposed hydrologic and hydraulic analysis should be submitted to the OOS Structure Hydrology and Hydraulics Division (SHHD) for review and acceptance. This ensures that SHHD concurs with the water surface elevation and all assumptions that will be used for subsequent scour analysis and structural design. SHA SHHD will provide a signed memo with preliminary approval of Hydrology and Hydraulics methodology. This is not H&H or scour approval.
- MDE Approval: Following SHHD acceptance, the project will be advanced to MDE for final review and approval.
- TS&L Review: after MDE has issued an approval letter, the OOS LG Bridge Team will schedule the Type, Size & Location (TS&L) meeting.

In addition to hydrology and hydraulic analyses, projects must account for floodplain impacts and stream stability:

- FEMA Floodplains: Consideration shall be given for impacts to any existing Federal Emergency Management Agency (FEMA) floodplains. The LG and their Consultant must determine if a Conditional Letter of Map Revision (CLOMR) or Letter of Map

Revision (LOMR) is required. Coordination with FEMA is typically tied to MDE Waterway Construction Permits and, where applicable, U.S. Army Corps of Engineers (USACE) Section 404 Permits.

- Stream Stability: An approximation of required stream stability work shall be identified based on a stream morphology assessment, including anticipated scour countermeasures, bank stabilization, or channel improvements. These measures must be consistent with regulatory agency expectations and incorporated into permit applications.

Roles & Responsibilities: Hydrology & Hydraulics Review

Role	Responsibilities
County/Local Government (LG)	• Review analyses for compliance with local requirements • Coordinate with consultant on floodplain and stream impacts • Provide approval prior to SHA submission
Consultant	• Prepare hydrologic and hydraulic analyses • Incorporate floodplain and scour considerations • Support permit applications and coordination
State (SHA – SHHD/OOS)	• Review and accept H&H analyses • Provide guidance and preliminary approval documentation • Ensure compliance with SHA requirements

BRIDGE TYPE, SIZE AND LOCATION (TS&L) REVIEW

The Local Government (LG) is required to submit the Type, Size, and Location (TS&L) plan review to SHA's Office of Structures (OOS) for the candidate bridge. This submission provides the OOS with the opportunity to apply its experience and expertise to verify that the project complies with applicable design loading requirements, as specified in the Office of Structures Guidelines and Procedures Memorandum (GPM) No. D-89-40(4), and to identify any potential constructability issues that could result in non-participation by FHWA.

The TS&L submission should be made after approval of the hydrology and hydraulics by MDE has been received.

Plans should be developed providing a minimum amount of information to have a thorough review for the acceptance of the type, size and location of the proposed structure. TS&L plan checklists can be found on the [Local Government Bridge Website](#), and should be followed to verify all pertinent information is included in the TS&L plans. At a minimum, the following plan sheets should be included in the TS&L submission:

Structure Sheets:

- General Plan and Elevation
- Sequence of Construction for Substructure and Superstructure (for staged construction)
- Abutment Plan and Elevation

- Abutment Typical Section
- Pier Plan and Elevation
- Pier Typical Section
- Wingwall Elevation
- Wingwall Typical Section
- Locations and Types of Repairs needed (for rehabilitation projects)
- Bridge Typical Section

Non-structure Sheets:

- Title sheet – with existing and future traffic data
 - ADT figures must be within 3 years of advertisement
- Roadway Typical Sections
- Roadway Profile and Geometrics
- Roadway Plans
- Maintenance of Traffic Plans
- E&S/SWM sheets if the project requires a stream diversion.

Additional Information:

A Structure Information Sheet shall be included with the TS&L plan set or report to assist reviewers. The sheet should provide a comprehensive overview of the structure and the proposed project, including:

- Photos of the existing structure
- Existing structure condition, including critical deficiencies
- Project purpose and need
- Planned structural repair or replacement work
- Key issues, highlighting decisions made or circumstances influencing the current plans
- Alternates considered and dropped, such as rehabilitation versus replacement options, or pre-TS&L alternatives
- Potential environmental or cultural resource issues, including:
 - Endangered species, Historic sites or structures, Watershed impairments and nearby dams
 - Aquatic Organism Passage (AOP) requirements
- Anticipated environmental permit requirements

SUBSTRUCTURE AND SUPERSTRUCTURE EVALUATION:

Before submitting TS&L plans or reports, the proposed superstructure must be evaluated to ensure structural adequacy and constructability:

- Superstructure Verification: Confirm that the proposed superstructure will perform as intended under design loads.
- Existing Piers and Caps: If present, analyze them to verify that they can accommodate staged construction or determine if temporary supports are required.

- Remaining Elements: Any portions of the existing superstructure or substructure that will remain in place must be evaluated to ensure they can safely carry current design loads.

TS&L MEETING

After submission of the project plans, a TS&L meeting will be scheduled by the OOS LG Team if needed. The complexity of the project will govern whether a TS&L meeting will be necessary. The OOS will provide comments and recommendations; however, implementation of these recommendations remains at the discretion of the project owner.

Attendees should include:

- OOS Local Government (LG) Team
- OOS Director
- OOS Deputy Directors
- OOS Division Chiefs
- OOS SHHD Engineer (if appropriate)
- LG Project Manager
- Design Consultant

Purpose and Format:

- The meeting may be held in-person or via TEAMS.
- The LG representative is expected to present a brief background of the project and the proposed work.
- The LG may elect to have the design consultant make the presentation on behalf of the LG.
- It will serve to review the plans, discuss any concerns with the proposed structure, discuss alternatives considered, and address supporting plans.
- For typical projects, the LG will leave the meeting with verbal approval of the TS&L review. This indicates preliminary agreement on the proposed Type, Size and Location of the structure, pending submission of the formal TS&L Report and Approval Memo.

TS&L Report:

Within 30 days following the TS&L meeting, the County shall submit a TS&L Report.

The report must include:

- **Project Description and Purpose & Need**
- **Site Conditions** (including existing roadway, structure, utilities, and right of way)
- **Hydrology & Hydraulics/Geotechnical Status** (as applicable, including approvals or key findings)
- **Meeting Summary** (including attendees and date)
- **Key Project Issues, Discussion Points and any Design Exceptions required.**
- **Questions, Comments and Responses**
- **Agreed-Upon Structure Type, Size, and Location (TS&L)**

Upon receipt of the TS&L Report, the LG Team will draft a TS&L Approval Memo for signature by the OOS Director.

- The memo serves as the official documentation of the TS&L review.
- It is a required submittal for the project file and confirms the agreed-upon Type, Size, and Location for the structure.

Roles & Responsibilities: Type, Size & Location (TS&L)

Role	Responsibilities
County/Local Government (LG)	• Submit TS&L plans to SHA • Ensure completeness of plan set • Present project at meeting • Submit TS&L report and implement recommendations
Consultant	• Prepare TS&L plan set and evaluations • Support meeting presentations • Ensure design reflects constraints and requirements
State (SHA – OSS)	• Review plans for compliance • Provide recommendations • Issue TS&L approval memo

PRELIMINARY INVESTIGATION (PI) MEETING

The PI Meeting is an early technical review of a project to determine feasibility, assess existing conditions, and identify potential constraints before detailed design work begins.

Purpose

- Introduce the project team, including LG staff, design consultant(s), and SHA representatives (required).
- Review project scope, constraints, and anticipated schedule.
- Confirm key contacts and communication protocols.
- Identify potential environmental, right of way, or regulatory issues early in the project.
- Discuss preliminary design considerations and required documentation.
- Allow input for project scope, cost estimates, and schedule development.
- The PI plans will be reviewed by OHD for the AASHTO compliance review, Bicycle review and Americans with Disabilities Act Accessibility Guidelines (ADAAG) compliance review.

Attendees

- LG Project Manager and supporting staff
- SHA Local Government Bridge Team
- SHA representatives (District Offices, Office of Materials Technology, etc.)
- Design Consultant(s)

Meeting Format

- The LG Team provides a template PI Invitation [see [Attachment H](#)], for the LG to prepare and email to attendees.
- Approximately four (4) weeks should be allowed between sending the invitation and the meeting to allow sufficient time for document review.
- The meeting may be held in-person or via virtual platforms (e.g., TEAMS).

PI Report

Within 30 days following the PI meeting, the LG shall submit a PI Report [see [Attachment I](#)]. The PI 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
- l. Any Design Exceptions required.

Upon receipt of the PI Report, the LG Team will draft a PI Approval Memo for signature by the OOS Deputy Director.

- The memo serves as the official documentation of the PI meeting.
- It is a required submittal for the project file.

As no two projects are identical, the guidelines for the report may be adapted to suit the specific needs of each project. Upon completion of the report, a representative of the Local Government (LG) shall sign to indicate concurrence with its content.

Roles & Responsibilities: Preliminary Investigation (PI)

Role	Responsibilities
County/Local Government (LG)	• Organize and schedule PI meeting • Provide documentation and templates • Submit PI report and track follow-ups
Consultant	• Provide technical support • Identify design considerations and constraints • Incorporate PI comments into design
State (SHA – OSS)	• Participate and provide guidance • Review compliance with standards • Issue PI approval memo

SCOUR AND FOUNDATION REVIEW

Following OOS approval of the PI Report, the Local Government (LG) shall prepare a Scour and Foundation Review submittal for the candidate project, incorporating comments received to date. This submittal is necessary to approve the recommended foundation type for each substructure unit.

This review is not required for minor rehabilitation, deck replacements, deck overlay and superstructure replacement projects, however a scour evaluation for these types of rehabilitation projects is required for structures crossing water.

SHA policy requires that a scour evaluation be performed for any bridge over a waterway that will be rehabilitated or replaced using federal or state funds. Box culverts and other structures with paved bottoms are exempt from this requirement.

Scour and Foundation Review Guidance

The scope and content of the Scour and Foundation studies, including the scour evaluation itself, should be comparable to studies prepared by the OOS. For certain project types—such as rehabilitation projects or those with unique bridge crossing conditions—a scour assessment may be appropriate instead of a full scour evaluation ([see chapter 11 of the OOS Manual of Hydrologic and Hydraulic Design](#)).

The LG is encouraged to coordinate with OOS personnel prior to commencing detailed studies. This coordination helps:

- Form an interdisciplinary team
- Define the scope of studies necessary for the scour assessment or evaluation

Scour Review Submittal Process

For all projects with structures crossing water, a scour analysis shall be developed to determine the estimated depth of scour at the existing or proposed structure based on the approved hydraulic model for the design and check flood for scour. This information shall be

incorporated into the design of the proposed structure foundations or used to design scour countermeasures for rehabilitation projects. The scour evaluation shall be documented in the Scour Analysis Report and summarized in the recommendation memo.

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](#). The LG is to use the latest version of the Manual and associated computer programs in the conduct of the scour evaluation. Studies that may be needed to support 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.
 - Scour Analysis Report: Submitted with a digital copy of the ABSCOUR analysis.
 - Bridge deck drainage design/spread analysis.
1. The LG will forward an electronic set of the Scour Review submittal package, accompanied by a cover letter, to the OOS LG Bridge Team requesting review and comments.
 2. The LG Bridge Team will forward the Scour Review submittal package to the appropriate OOS SHHD reviewer. The review will be completed within four (4) weeks.
 3. Upon completing the review, the OOS SHHD will issue a letter to the LG documenting:
 - Review and comments on the Scour Review package.
 - Any conditions under which the LG may proceed with the Structural Review, provided all comments are addressed.

Foundation Review Submittal Process

A Foundation Report shall be prepared in accordance with [GPM D-79-17\(4\)](#) Foundation Evaluation. The report shall:

- Describe each boring and site investigation.
- Outline foundation options evaluated based on structural and geotechnical information.
- Include scour considerations when applicable.
- Discuss constructability and cost implications for each foundation option.
- Make a recommendation for the preferred foundation type.

The geotechnical report and approved scour memo shall be included as attachments to the Foundation Report.

Foundation Approval Letter

An accompanying Foundation and Scour Approval Letter shall summarize the key information in the Foundation Report and provide a clear recommendation regarding the foundation type.

Foundation Review Plan Development

- Foundation Review Plan checklists may be used to verify that all required information is included.
- At a minimum, the submission shall include:
 - TS&L/PI plans with all comments addressed.
 - Foundation plan sheets showing the recommended foundation type from the Foundation Report.
 - Boring log sheets.
- Foundation Review checklists can be found [here](#).

Foundation Borings and Geotechnical Report

- Foundation borings shall be performed at each substructure unit in accordance with GPM D-79-17(4) Foundation Evaluation and the SHA Standard Specification for Subsurface Explorations.
- Testing of materials from borings shall be conducted to prepare a comprehensive geotechnical report.
- For structures over water, scour borings are required and the test results shall be included in the geotechnical report.

Critical Note

The LG shall not proceed to Structural Review until:

1. Foundation/Scour approval is received, and
2. Final Design funds are approved.

This ensures compliance with SHA policy and preserves eligibility for federal funding.

Roles & Responsibilities: Scour & Foundation Review

Role	Responsibilities
County/Local Government (LG)	• Prepare and submit scour and foundation package • Include reports and supporting data • Ensure approvals before advancing design
Consultant	• Perform analyses and geotechnical investigations • Prepare reports and evaluate alternatives • Incorporate review comments
State (SHA – SHHD)	• Review submittals and provide approval • Ensure compliance with SHA policy • Approve foundation type

Semi-Final Review

The Semi-Final Review is identified as a project milestone in the Office of Structures Guidelines

and Procedures Memorandum No. OOS-GPM-PM-202. While this submittal is not a Federal Highway Administration (FHWA) requirement, it is optional for Local Government bridge projects and may be conducted to confirm that the design is progressing as intended prior to final submission.

DESIGN EXCEPTIONS

All federal aid bridge projects shall be designed and constructed in accordance with AASHTO criteria and approved State standards. However, Design Exceptions may be considered when full compliance is impractical or would result in undue impacts. For additional information, see chapter 9.

Authority and Applicability

- **Controlling Criteria:** Any deficiency affecting controlling design criteria must either be corrected to meet minimum standards or approved through a formal Design Exception or waiver from the appropriate authority.
- Design exceptions for projects on the NHS require approval by the FHWA, or by the State transportation agency acting on behalf of FHWA under a Stewardship and Oversight Agreement.
- Approval of Design Exceptions is not delegated to LGs. LGs must submit all design exception requests to MDOT SHA's Office of Highway Development (OHD) based on MDOT SHA design criteria.
- **Non-Controlling Criteria:** Deficiencies affecting non-controlling criteria should be addressed to meet minimum design standards but do not require a formal Design Exception. If minimum standards cannot be achieved, the deficiency must be documented and justified according to LPA/State procedures.

Early Coordination

- LGs should submit Design Exception requests as early as possible during PE to allow sufficient time for review and integration into the design process.

Required Contents of a Design Exception Request

A complete Design Exception request should include, at a minimum:

1. Existing Bridge Information: Owner, route, crossing, structure type/age/length, horizontal/vertical clearances, condition, weight limits, users, and historic status.
2. Proposed Project Description: Purpose and need, proposed improvements, public input (including emergency services and schools), increased load capacity, railing type, and fracture-critical element retrofits.
3. Substandard Feature Description: Elements not meeting standards, minimum applicable standard, proposed substandard value, location, cost to meet full standards, and compatibility with adjacent roadway.
4. Safety Information: Present and projected traffic, three years of accident data, statewide accident rates if available, approach geometrics, detour route length, and narrative analysis.

5. Extenuating Circumstances: Reasons standards are not met, planned future improvements, environmental and ROW impacts, social impacts, contribution to accident history, stakeholder input, and cost considerations.
6. Mitigation Measures: Design features or strategies incorporated to compensate for the substandard element.

Review and Approval Process

- The OHD will review the Design Exception request, including all safety analyses, mitigation measures, and stakeholder input.
- Approval must be obtained prior to PS&E to ensure compliance with SHA and federal requirements.

Design Exceptions – Controlling Criteria

For all federal aid bridge projects, design elements that do not meet controlling criteria require a formal Design Exception. The specific criteria vary depending on the design speed and whether the project is on the National Highway System (NHS).

For Design Speeds $\geq$ 50 mph on the NHS

A Design Exception is required if any of the following controlling criteria are not met:

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. Superelevation Rate
10. Vertical Clearance

For Design Speeds $<$ 50 mph on the NHS

A Design Exception is required if any of the following controlling criteria are not met:

1. Design Speed
2. Structural Capacity

Note: Other non-controlling deficiencies should be addressed to meet minimum standards and documented appropriately but do not require a formal Design Exception.

Preliminary Engineering – Final Design Phase

Final Design establishes the detailed engineering necessary to construct the project. It includes preparation of plans, specifications, and estimates (PS&E) and incorporates all design work required to complete the project in accordance with federal, state, and local standards. Final Design activities include but are not limited to: detailed geometric and structural design,

refinement of horizontal and vertical alignments, drainage and stormwater design, roadway and bridge plans, right of way plans, utility coordination and relocation plans, construction phasing and staging, traffic control and maintenance of traffic plans, environmental mitigation implementation, cost estimates, and preparation of contract documents.

All Final Design work must be performed in compliance with federal and state regulations, including any conditions established during Preliminary Design and NEPA review. No Final Design work should commence before receipt of proper federal and state authorizations, as doing so may jeopardize eligibility for federal funds. Final Design culminates in the production of a complete PS&E package suitable for advertising the project for construction.

The process for on boarding a consultant should be followed for Final Design. Once the cost proposal for the Consultant has been received, and SHA costs for Final Design established, an updated Form32L – Cost Sharing Agreement will be developed by the LG Bridge Team and submitted to the LG for review and signature.

The updated Cost Sharing Agreement is necessary for all Final Design costs.

An updated TIP/STIP and Federal Agreement are required for Final Design.

Note: If federal funds are being used to support any design phase of the project, and/or construction, the NEPA process must be fully completed, an approved NEPA document obtained, and the Notice to Proceed (NTP) issued for Final Design before beginning any Final Design activities. This ensures that all alternatives were considered fairly and that federal funding requirements are met.

Final Design Activities

STRUCTURAL REVIEW

General Requirements

Following SHA approval of the Scour and Foundation Review submittal and with the NEPA environmental document approved, the LG shall submit the Structural Review package for the project. The Structural Review represents approximately a 90% plan development milestone.

Submittal Package

The Structural Review submittal package shall include:

- Plans (roadway and structure) developed to 90%.
- A cover letter to the OOS requesting review and comments.
- A point-by-point response for the Preliminary Investigation comments, Type, Size and Location Comments and Foundation Review comments.
- Plans should be updated to reflect the incorporation of these comments.

Plan Checklists

Structural Review Plan Checklists should be used to ensure that all pertinent information is included in the submittal. The Structural Review Plan Checklists can be found [here](#).

OOS Structural Details

If the LG intends to use OOS Structural Details, a list of details to be incorporated into the project shall be submitted to the OOS LG Bridge Team four (4) weeks in advance of the Structural Review submission.

- Upon request, the OOS will provide the Structural Detail Plates on reproducible sheets formatted with the LG's border, title block, etc.
- The Consultant will include these sheets as part of the Structural Review submission.

Modified OOS Details

- If approved OOS details require modification, they shall not be included as OOS Structural Detail sheets.
- Instead, modified details shall be placed within the appropriate plan section, without borders, detail numbers, or title blocks that identify them as approved OOS details.

Structural Review and Approval Process

Upon completion of the review, the OOS will:

1. Send a letter to the LG noting the review outcome.
2. Provide a marked-up set of plans identifying required revisions.
3. Indicate whether the plans are:
 - o Approved subject to comments, or
 - o Rejected pending resolution of the identified comments.

Roles & Responsibilities: Structural Review (Final Design)

Role	Responsibilities
County/Local Government (LG)	• Submit Structural Review package • Ensure PS&E completeness • Provide responses to prior comments
Consultant	• Develop 90% PS&E package • Incorporate prior comments • Ensure compliance with standards
State (SHA – OSS)	• Review and comment on plans • Provide approval or required revisions • Confirm compliance before advertisement

FINAL REVIEW MEETING

The Final Review Meeting shall be arranged by the LG after approval of the TS&L, Scour, Foundation, and Structural Review submittals. The LG will coordinate the meeting with the OOS in the same manner as the PI Meeting.

The LG will prepare and distribute a notice that includes the **date, time, and location** of the meeting. The notice and Final Review Package shall be sent to all parties involved with the project to allow sufficient time (4 weeks) for review prior to the meeting.

The **Final Review Package** shall consist of:

- A complete electronic set of the Final Review Plans (developed to 95%) incorporating all comments received to date,
- Draft Invitations for Bids (IFB), and
- Draft Cost Estimates.

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** preference requirements apply to all contracts eligible for assistance under a project within the scope of a NEPA decision, regardless of the funding source of such contracts, if any phase of the project (PE, ROW, or construction) or any contract for the project is funded with federal funds. FHWA regulation requires the use of domestically manufactured iron, steel, and manufactured products that will be permanently incorporated in a federal aid project. The Build America, Buy America Act (BABA) required FHWA to extend coverage of Buy America to construction materials. Please refer to MDOT SHA's federal proposal form packet (to be included with the project specifications) and chapter 8 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. SHA's OOS 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. 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. During the meeting, the LG and Consultant will provide an overview of the project scope, plan set, specifications, cost estimates, and ensure that all comments from prior reviews (TS&L, Scour, Foundation, and Structural) have been satisfactorily addressed.

The Final Review Meeting provides critical guidance to the LG in preparing the Plans, Specifications, and Estimates (PS&E) package. The PS&E submission represents the final review prior to FHWA's authorization of federal funds through the Federal Aid Project Agreement.

Final Review Report

Following the Final Review Meeting, the LG shall prepare the Final Review Report. The report shall include:

- Date, time, and location of the meeting,
- List of attendees and the organizations they represent,
- Summary of comments and recommendations discussed during the meeting, and
- Comments received from parties not in attendance at the Final Review.

After assembling the Final Review Report, a representative of the LG shall sign the report or provide a cover letter indicating concurrence with the content and decisions documented. A signature block shall also be provided for approval by the Director of the OOS.

The LG shall forward the Final Review Report to the OOS for review and approval. Upon approval, the OOS will return a finalized copy to the LG. The LG shall then distribute the approved report to all meeting attendees and any external stakeholders who provided comments to ensure that all parties are informed of the project decisions.

Roles & Responsibilities: Final Review Meeting

Role	Responsibilities
County/Local Government (LG)	• Schedule and lead meeting • Distribute final review package • Prepare and submit final report
Consultant	• Prepare 95% plans and estimates • Support meeting and respond to comments • Revise documents after meeting
State (SHA – OSS)	• Review package and attend meeting • Verify prior comments addressed • Approve final review report

CONSTRUCTABILITY REVIEW

The Constructability Review is identified as a project milestone in the Office of Structures Guidelines and Procedures Memorandum No. OOS-GPM-PM-202. While this submittal is not required, it is strongly recommended for Local Government bridge projects to help identify potential construction issues, improve project efficiency, and reduce the risk of cost overruns or schedule delays.



Stafford Road Bridge
Harford County

PLANS, SPECIFICATIONS AND ESTIMATES (PS&E) REVIEW

The PS&E represents the final submission of the design phase. All PS&E documents must be 100% complete prior to submission. The PS&E Review consists of a complete set of contract documents submitted to the OOS LG Bridge Team.

The IFB must include all required documentation to allow SHA to perform a thorough review. The LG is responsible for verifying the Engineer's Estimate to ensure accuracy, prevent typographical errors, and confirm that the Schedule of Prices pages correctly correspond to the Item Numbers, Quantities, and Description of Items. The Local Government is responsible for ensuring the Special Provisions and Wage Rates are up to date prior to Advertisement.

PS&E Submission Requirements

Once all prerequisite conditions have been met, the LG shall submit one electronic set of the complete PS&E package to the OOS LG Bridge Team for review. The PS&E Checklist [see [Attachment N](#)] shall be used to ensure that all required documents are included.

Typical items in the PS&E package include, but are not limited to:

- NEPA Re-evaluation (required to be performed within 3 months of Advertisement)
- Certification of Environmental Permits [see [Attachment L](#)]
- Approved Traffic Control Plan letter from the District Traffic Engineer
- Utilities Statement [see [Attachment M1](#)]
- Utility Certification [see sample, [Attachment M2](#)]
- Cover letter from the LG Project Engineer addressed to FAPS

Important Federal and State Compliance Notes:

- SHA will withhold authorization to advertise the project until the FAPS has received a copy of all documents included in the PS&E checklist.

This process ensures that all design, environmental, and utility considerations are complete and in compliance with federal and state requirements prior to solicitation for construction bids.

PS&E Review and Approval Process

Upon receipt of the PS&E Review package, the OOS LG Bridge Team will follow a structured review and approval process to ensure completeness and compliance with federal and state requirements.

1. Initial OOS Review & Coordination

- Verify that all required documents for the PS&E submittal have been received.
- Confirm that all previous comments from the TS&L, Foundation Review, Structural Review, and Final Review have been adequately addressed.
- Coordinate with the County to verify the level of support needed for construction-related services. The options for construction-related services include:
 - A. The LPA will use its internal staff to complete construction-related services (SHA oversight is still required).

- B. The LPA will hire staff to complete construction-related services (SHA oversight is still required).
 - C. The SHA will complete construction-related services for the project and bill for services at the percentage stated in the Form 32L – Cost Sharing Agreement.
 - Draft a request for construction inspection and materials testing cost estimate.
 - Submit the estimate request and PS&E package to the District Construction Office and the Office of Materials Technology.
 - Upon receipt of the cost estimate, OOS will draft a Form 32L – CSA for construction-related services and submit it to the LG for review and signature.
 - After the signed CSA has been received from the LG, OOS will submit a Form 42 to request federal funding for construction costs and construction-related services. *(Note: The CSA does not need to include construction costs.)*
2. **Forward to Federal Aid Programming Section (FAPS)**

After OOS completes its review, the PS&E package is forwarded to the OOF FAPS for verification of compliance with all federal and state requirements.
 3. **FAPS Comments**
 - FAPS prepares a list of comments identifying any items requiring revision or correction.
 4. **LG Revisions (if required)**

If substantial comments are identified, the PS&E package is returned to the LG for revision. The LG will address the comments, revise the package, and resubmit it to the LG Bridge Team.
 5. **Verification of Resubmittal**

The OOS verifies that all comments have been addressed and forwards the revised package to OOF FAPS.
 6. **Preparation of Authorization Request**
 - Once the PS&E is approved, FAPS will prepare a request for federal funds, including a FMIS Report, and forward the documents to FHWA for review and approval. The request will include costs associated with construction-related services.
 - If the cost estimate is not received (from District OOC and OMT) before OOF FAPS approves the Form 42 and requests the construction funds, FAPS will assume 10% of the project cost for construction-related services. This assumption will be revised once the estimate is received.
 7. **FHWA Review and Federal Aid Project Agreement**

FHWA reviews the request and, upon approval, issues the Federal Aid Project Agreement to FAPS, authorizing the use of federal funds.
 8. **Approval to Advertise**

FAPS forwards the Project Agreement and formal approval to advertise to both the OOS LG Bridge Team and the LG.

9. Federal Authorization and Advertisement

At this point, the LG has received approval of federal funding for construction and construction-related services, as well as authorization to advertise the project for bids.

QUALITY ASSURANCE (QA) REVIEW

LGs are responsible for conducting QA reviews at all stages of their projects. Each LG shall establish and implement a policy for performing QA reviews of all contract documents. A strong QA program is a deliberate and systematic approach designed to reduce the risk of errors and omissions in project design. A recommended resource for developing a QA program is AASHTO's Guide to Quality in Preconstruction Engineering.

Scope and Level of Review

The scope and intensity of the QA review should reflect the size, complexity, and redundancy of the bridge's structural system:

- Major or Complex Projects: For bridges with unusual, complex, or innovative features, an independent design consultant review of all advertisement documents is recommended to provide additional confidence in the quality of the design and construction documents.
- Routine or Standard Projects: For simpler or more conventional bridge projects, an established internal review using a structured checklist may be sufficient.

LGs may utilize consultants currently under SHA open-end contracts to perform independent reviews, particularly for complex projects.

Required QA Measures

At a minimum, the LG shall:

- Maintain a contract document checklist to perform an independent review of all contract documents.
- Consider using SHA's plan review checklists, which are available upon request, to ensure consistency and thoroughness in QA reviews.

A robust QA program ensures that errors are identified and addressed prior to advertisement, improving overall project quality and minimizing risk during construction.

VALUE ENGINEERING (VE)

In accordance with MAP-21 legislation, the following projects utilizing federal aid highway funding require a VE analysis:

1. National Highway System (NHS) Projects: Projects on the NHS with an estimated total project cost of \$50 million or more.
2. Bridge Projects on the NHS: Bridge projects (including any project where the primary purpose is to construct, reconstruct, rehabilitate, resurface, or restore a bridge) on the NHS with an estimated total project cost of \$40 million or more.
3. Major Projects: Projects with an estimated total cost of \$500 million or more, as defined in 23 U.S.C. 106(h).

4. Scope Changes: 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) that results in an increase in the total project cost exceeding the aforementioned thresholds.
5. Other Projects: Any other project that FHWA determines to be appropriate that utilizes federal aid highway program funding.

Note: The total project cost includes all phases such as environmental (planning/preliminary design), design, right of way, utilities, and construction.

Exemptions

A VE analysis is not required for:

- Projects delivered using the design/build method of construction.

Note: The requirement to perform a VE analysis on a larger project may not be avoided by dividing it into smaller projects.

Recommendations

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. The Value Engineering analysis should be conducted using the Final Review submission.

For additional information on Value Engineering, please refer to the frequently asked questions on the FHWA website: [fhwa.dot.gov/ve/vefaq.cfm](https://www.fhwa.dot.gov/ve/vefaq.cfm). For qualifying projects, please consult the OO LG Bridge Team for additional guidance.

ADVERTISING, BID OPENING, AND CONCURRENCE IN AWARD

Advertising

Advertising the project for construction is the responsibility of the LG. Advertising guidelines can be found on the eMaryland Marketplace Advantage website at [eMarylandMarketplace.com](https://www.emarylandmarketplace.com). The LG cannot advertise the project without federal authorization.

Addendum & Addenda

The local government and its consultant are responsible for preparing any revised contract documents (IFB, plans, and/or engineer's estimate) necessary to correct errors, make changes, or to address questions received during the advertisement period. All addenda must be submitted to the OOS Local Government Bridge Team for review and forwarded to OOF FAPS for approval prior to issuance.

Bid Opening

Following receipt of approval to advertise, the LG will notify the OOS, OOF FAPS and the District Construction Office in writing (email is acceptable), of the date, time and location of the bid opening [see [Attachment P](#)].

Concurrence in Award and NTP

After following SHA procedures on advertising for bids and, after receiving bids, the LG shall submit a formal request for concurrence in award to the OOS for SHA approval. The OOS will perform a review of the submittal to verify all documents necessary have been received, and forward the submittal to the OOF for review, and include the OOC and the OEO as cc's. 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. Should there be more than three (3) bidders for 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 (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
- e. Clear ROW Certification
- f. Copies of advertisements of bid opening
- g. Bid Analysis must be signed, verified and certified true and correct by the LG [see example [Attachment R](#)].

If the contractor's bid is more than ten (10) percent above or fifteen (15) percent below the final approved Engineer's Estimate, the LG must prepare a letter of justification [see example [Attachment S](#)]. The letter is addressed to the SHA Chief, Contracts Award Team, Office of Construction, and submitted along with the complete Concurrence in Award package to the OOS LG Bridge Team.

Additionally, the LG must verify the following before award:

- The contractor is not debarred from receiving federal aid contracts.
- The applicable wage determination is still valid.
- All required environmental permits have been obtained and not expired.

The Contract Award Division will prepare a memorandum requesting concurrence, which will be sent to the Office of Construction (OOC) Director for approval and signature. Once signed, a copy is forwarded to FAPS, who then transmits the signed concurrence memo [see [Attachment T](#)] to the LG Project Manager and the OOS LG Bridge Team.

Upon receipt of the signed concurrence memo, the LG may draft and issue the official NTP to the Contractor. The LG should include OOF FAPS, the OOS LG Bridge Team, and the District Engineer on the NTP distribution.

Roles & Responsibilities: Advertising, Bid Opening & CIA

Role	Responsibilities
County/Local Government (LG)	• Obtain federal authorization • Advertise project and conduct bid opening • Prepare bid analysis and submit CIA package • Issue NTP upon approval
Consultant	• Assist with advertisement documents • Support bid review and analysis • Provide technical assistance
State (SHA)	• Review addenda and CIA package • Provide concurrence in award • Ensure compliance with FHWA requirements

Construction Phase & Phase V

CONSTRUCTION

The Construction Phase encompasses all activities necessary to build the project in accordance with the approved Final Design and contract documents. This phase includes, but is not limited to: mobilization, site preparation, implementation of erosion and sediment controls, temporary traffic management, foundation and substructure construction, superstructure construction, roadway construction, utility relocations, environmental mitigation measures, quality assurance and materials testing, and final project acceptance.

All construction must comply with federal, state, and local regulations, permit requirements, and SHA standards. The Construction Phase is managed through contract administration, inspection, and oversight to ensure adherence to design, schedule, and budget. No construction activities funded with federal aid may begin prior to issuance of the NTP and activation of appropriate funding authorization.

Upon completion, the project undergoes final inspection, documentation, and acceptance to confirm compliance with the contract and design requirements.

CONSTRUCTION-RELATED SERVICES

The District Office of Construction will be responsible for monitoring the work to ensure compliance with contract specifications and for advising the LG as needed. All requests for subcontractor approvals, as well as any changes or deviations from the approved Minority/Disadvantaged Business Enterprise (M/DBE) plan, must be reviewed and approved by the MDOT SHA District Office.

All changes to the contract documents—including, but not limited to, drawing revisions resulting from RFIs—must be reviewed by the OOS Local Government Bridge Team, the District Construction Office, and the OOF. Redline and addenda should be submitted directly to the OOS LG Bridge Team.

OOS will review all redlines and addenda for technical compliance before forwarding them to District Construction for concurrence on the cost estimate. Once the OOS and District

Construction comments have been addressed, the OOS will forward the redlines or addenda to OOF for formal review and approval. For additional information, please use the following website: roads.maryland.gov/mdotsha/pages/index.aspx?PageId=855

PHASE V

Phase V encompasses engineering services performed by the Consultant or SHA during the construction phase of a bridge project. The objective of this phase is to ensure that the project is constructed in accordance with the approved contract plans, specifications, and applicable standards, and that all design intent and contract requirements are achieved in the field. The scoping meeting for Phase V activities can be held as soon as the project has been approved by OOF for advertisement.

Phase V Activities

Typical services under Phase V include, but are not limited to:

1. Shop Drawing and Submittal Review
 - Review contractor submittals, shop drawings, working drawings, and material certifications for compliance with the design intent and contract documents.
 - Provide timely recommendations or approvals to avoid construction delays.
2. Construction Support and Consultation
 - Provide engineering support to the LG during construction.
 - Interpret design details, respond to RFIs, and issue clarifications as needed.
 - Evaluate and recommend resolutions for field-identified discrepancies, unforeseen conditions, or proposed design modifications.
3. Field Visits and Inspections
 - Conduct periodic field visits at key construction milestones to confirm that the structure is being built in accordance with the plans and specifications.
 - Document site observations and provide written reports with photographs and recommendations, as appropriate.
4. Design Revisions and Plan Updates
 - Prepare design revisions or plan updates necessary to address construction changes, material substitutions, or as-built conditions.
 - Coordinate revisions with SHA's Office of Structures and the Local Government to obtain required approvals.

Deliverables

- Submittal review comments and approval letters.
- Field visit reports and photo documentation.
- RFI and change documentation.
- Revised Redline plan sheets or design memoranda (if applicable).
- Structure Inventory & Appraisal (SIA), Pontis, updated load rating.
- CADD files and compiled design calculations.

Phase V Completion

Phase V concludes upon the submission and acceptance of final record drawings and all associated documentation.

Roles & Responsibilities: Construction Phase & Phase V

Role	Responsibilities
County/Local Government (LG)	• Administer construction contract • Ensure compliance with permits and regulations • Manage schedule, budget, and changes • Coordinate closeout and acceptance
Consultant	• Provide Phase V engineering support • Review submittals and RFIs • Prepare Redline Revisions
State (SHA)	• Provide oversight and compliance monitoring • Review changes and subcontractors • Support inspections and final acceptance

Accelerated Bridge Construction (ABC)

The FHWA, through its Every Day Counts Initiative, promotes the use of Accelerated Bridge Construction (ABC) to minimize traffic disruption, enhance work zone safety, and reduce environmental impacts at the construction site. Local Governments (LG) are encouraged to consider ABC alternatives during project development. The following are commonly used ABC methods:

1. **Prefabricated Bridge Elements**

Prefabricated bridge elements involve casting concrete bridge components off-site in a controlled environment, transporting them to the construction location, and installing them in their final positions. This method can be applied to an entire bridge or select components, and can be combined with other ABC techniques. Prefabricated elements reduce on-site construction time by minimizing the need for deck forming, rebar tying, and curing. They are typically of higher quality than field-cast elements and are connected using high-strength grout, post-tensioning, or pretensioning.

2. **Geosynthetic Reinforced Soil-Integrated Bridge Systems (GRS-IBS)**

GRS-IBS combines Geosynthetic Reinforced Soil (GRS) and Integrated Bridge Systems (IBS) to create a cost-effective, rapid bridge support solution. GRS is composed of alternating layers of compacted fill and geosynthetic reinforcement, eliminating the need for traditional concrete abutments. IBS integrates the bridge substructure with the roadway approach, creating a uniform settlement zone and mitigating the “bump at the bridge” problem. This results in a smoother transition for vehicles and significantly reduces construction time. GRS-IBS abutments should only be considered when the bridge is not spanning over water.

3. **Bridge Slides (Slide-in Bridge Construction)**

Bridge sliding techniques involve constructing the new bridge superstructure on temporary supports adjacent to the existing bridge. Once complete, the old bridge

is removed, and the new structure is laterally slid into place, often overnight or over a weekend. In more complex scenarios, a bridge launch may be used to move the superstructure longitudinally into position. This method allows for minimal traffic disruption on primary roadways and reduces overall construction duration.

4. **Self-Propelled Modular Transporters (SPMTs)**

SPMTs are remote-controlled, self-leveling, multi-axle vehicles capable of transporting extremely heavy bridge components. Each axle can be independently adjusted, providing precise load control and stability. SPMTs can move laterally, rotate 360° with carousel steering, and are often used to build bridge segments away from the active roadway. Completed bridge components can then be installed in place with a short full closure, typically overnight, allowing rapid bridge replacement with minimal impact to traffic.

Implementation Considerations:

Local governments should evaluate the feasibility of each ABC method based on project size, complexity, site constraints, and traffic impacts. Combining ABC methods—such as using prefabricated elements with SPMTs or slide-in construction—can further accelerate construction and reduce public disruption. For more information, refer to FHWA’s Every Day Counts Initiative at [fhwa.dot.gov/everydaycounts](https://www.fhwa.dot.gov/everydaycounts).

Bridge Inspections and Walk-Through

ROUTINE BRIDGE INSPECTIONS

The Specifications for the National Bridge Inventory (SNBI) were developed with the NBIS regulation (23 CFR 650, Subpart C), the AASHTO Manual for Bridge Evaluation (MBE), the AASHTO Manual for Bridge Element Inspection (MBEI), and the FHWA Bridge Inspector’s Reference Manual (BIRM). The SNBI is incorporated by reference in the NBIS regulation and provides the specifications for reporting data for highway bridges, open to the public, to the FHWA for inclusion in the National Bridge Inventory (NBI).

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 24 months, either by the local jurisdiction staff or by private consultants. FHWA. Specifications for the National Bridge Inventory (SNBI). U.S. Department of Transportation, Washington, D.C., 2023. Available at: [fhwa.dot.gov/bridge/snbi/](https://www.fhwa.dot.gov/bridge/snbi/)

Data in the NBI serves the following practical purposes for FHWA: ensuring highway bridge safety; enabling oversight of the National Bridge Inspection Program; reporting to Congress; emergency response; administering a risk-based, data drive, performance management program in accordance with Title 23 U.S.C. 150 and the National Performance Management Measures for Assessing Bridge Condition regulation (23 CFR 490, Subpart D); and providing

quality data through clarify and ease of use. FHWA. *Specifications for the National Bridge Inventory (SNBI)*. U.S. Department of Transportation, Washington, D.C., 2023. Available at: fhwa.dot.gov/bridge/snbi/

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

POST-CONSTRUCTION BRIDGE INSPECTION (WALK-THROUGH)

It is the responsibility of the County and its consultant to confirm that all construction has been completed in accordance with the advertised plans and IFB, and to the County's satisfaction. This confirmation may be accomplished through a post-construction bridge inspection or walk-through, and is in addition to the construction inspection performed during the project build and routine bridge inspection. The post-construction walk-through is typically performed near the end of construction, just prior to final acceptance of the project.

The County Project Manager and the consultant should conduct a site visit to visually inspect the completed work and document any issues, deficiencies, or concerns. Following completion of the post-construction walk-through, the County is advised to prepare a memorandum or punch list identifying any items requiring correction. The post-construction memorandum should be submitted to the Contractor, with the SHA OOS and the District Construction Office included as carbon copies (cc).

While the post-construction walk-through and punch list memorandum are not required by FHWA, the SHA Office of Structures performs a post-construction walk-through for every completed bridge project and strongly recommends that local governments follow the same practice.

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. Please also note that, on occasion, some forms will change for various reasons. LGs should ask the OOS LG team for the most up-to-date package of forms prior to completing the forms for a new project. The attachments can be found on SHA [Federal Highway Bridge Program Guidelines for Local Governments](#) webpage.

- A. Structure Management Plan (SMP)
- B. Form 32L
- C. Form 25C - No longer applicable
- D. Master State/Local Agreement Dates
- E. Supplemental Letter to Master Agreement

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- 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. LG Bridge IIJA Program Project Submission Template

CHAPTER 15

RECREATIONAL TRAILS PROGRAM

BACKGROUND

The U.S. Congress created the National Recreational Trails Program (RTP) in the Intermodal Surface Transportation Efficiency Act of 1991. The Program was then reauthorized in 1998 under the Transportation Equity Act for the 21st Century (TEA-21); in 2005 under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for All Users (SAFETEA-LU); in 2012 under Moving Ahead for Progress in the 21st Century Act (MAP-21); in 2016 under the Fixing America's Surface Transportation (FAST) Act; and in 2021 with the Infrastructure Investment and Jobs Act (Pub. L. No. 117-58).

The RTP provides federal funds to states to develop and maintain land and water-based recreational trails and trail-related facilities for motorized and non-motorized recreational trail uses. Some of these uses include pedestrian uses (hiking, running, wheelchair use), road/mountain biking, equestrian, cross country skiing, snowmobiling, off-road motorcycling, off-highway vehicle riding, paddle sports, personal watercraft, and motorized boats.

The term recreational trail means a thoroughfare or track across land or snow, used for recreational purposes such as:

- (A) pedestrian activities, including wheelchair use
- (B) skating or skateboarding
- (C) equestrian activities, including carriage driving
- (D) nonmotorized snow trail activities, including skiing
- (E) bicycling or use of other human-powered vehicles
- (F) aquatic or water activities
- (G) motorized vehicular activities, including all-terrain vehicle riding, motorcycling, snowmobiling, use of off-road light trucks, or use of other off-road motorized vehicles

SHA encourages non-profit organizations and government agencies to utilize the RTP to fund land and water-based recreational trail-related projects. This chapter was developed to provide a broad overview of project reporting and financial management requirements. Minor adjustments and refinements may be made to address specific project needs.



Cunningham Falls State Park
Maryland Department of
Natural Resources

AVAILABLE FUNDING

The Infrastructure Investment and Jobs Act legislation provides Maryland with approximately \$1,000,000 per year for the RTP. All States must use 30% of their funds in a fiscal year for motorized trail uses, 30% for nonmotorized trail uses, and 40% for diverse trail uses (motorized or non-motorized or both for multiple user groups). Diverse motorized projects (such as snowmobile and motorcycle) or diverse non-motorized projects (such as pedestrian and equestrian) may satisfy two of these categories at the same time. Canoe, kayak, or rowboat trails may count toward a State's 30% non-motorized requirement, and motorboat or personal watercraft trails may count toward a State's 30% motorized requirement. Trails that allow e-bikes are classified as diverse trail use.

FEDERAL AND STATE REQUIREMENTS

RTP projects must conform to all applicable Federal and State requirements, metropolitan and statewide planning processes, and public involvement activities, including, but not limited to:

- United States Code (USC)
- Code of Federal Regulations (CFR) Title 23
- Code of Maryland Regulations (COMAR) Title 21
- Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and provided for under 49 CFR Part 24, and 23 CFR Subchapter H Part 710
- National Environmental Policy Act (NEPA)
- Section 106 of the National Historic Preservation Act (Section 106)
- Section 4(f) of the U.S. DOT Act
- Section 7 of the Endangered Species Act (Section 7)
- Section 404 of the Clean Water Act
- Chesapeake and Atlantic Coastal Bays Critical Areas Act
- [Federal Aid Essentials for Local Public Agencies](#)
- [FHWA Recreational Trails Program](#)
- 40 U.S.C 3141-3148, The Davis-Bacon & Related Acts
- 2 CFR Part 200 Uniform Administrative Requirements, Cost Principles, and Audit
- Requirements for Federal Awards, as supplemented by 2 CFR Part 1201 for Awards by the U.S. Department of Transportation
- 2 CFR 1201.317
- [MDOT Complete Streets Policy](#)

Note: Provisions under 23 USC 206, Recreational Trails Program, do not apply to discretionary programs or Community Project Funding/Congressionally Directed Spending projects (previously known as earmarks).

The RTP is administered by the Grants and Programs Management Division (GPMD) within SHA's Office of Planning and Preliminary Engineering (OPPE). The SHA is responsible for managing the program from screening applications and awarding projects to final inspection and closeout.

The RTP is federally funded and administered on a **reimbursement basis**. The subrecipient incurs and pays for approved expenditures and is reimbursed by SHA after a submitted invoice is approved. The RTP may reimburse up to 80% of the project's total eligible costs.

The FHWA is required to authorize all federally funded projects, including RTP projects. Expenses are only allowed after project authorization and obligation of funds. Proceeding without federal authorization will jeopardize federal participation and result in non-reimbursement by SHA.

The following are required for the obligation of federal funds:

1. The project authorization must reflect the federal funds needed based on an accurate cost estimate for the scope of work that is ready to proceed for an allowed purpose.
2. A reasonable period of performance needs to be established in which the recipient is to incur eligible costs on the project.
3. Projects must be monitored to ensure federal funds and project agreement estimates are reasonably aligned with current cost estimates and the performance schedule.
4. Obligations should be adjusted, and projects should be closed within a reasonable timeframe after all required work and applicable administrative actions (e.g., reporting and final invoicing) have been completed.
5. The period of performance must be monitored to ensure costs are incurred during the authorized period and invoiced as provided in the regulations.
6. Records must be properly retained by the recipient or subrecipient in accordance with the regulations.

SUBRECIPIENT RESPONSIBILITIES

Governmental agencies and IRS-approved non-profit organizations are eligible subrecipients to participate in RTP projects. A project subrecipient shall be responsible for:

- Identifying an employee in responsible charge of the project, including projects that employ consultants. This must be a full-time employee of the Local Public Agency (LPA), although he or she does not have to be an engineer nor dedicated full time to a project. This person supervises all project administration activities and coordinates with SHA based on the assignment of responsibilities. This employee in responsible charge typically performs the following activities:
 - o Maintains familiarity with day-to-day project operations, including safety issues
 - o Approves contract changes based on approval from SHA
 - o Performs field reviews with a frequency appropriate to the project size and

- complexity, including a final inspection to compare against the plans and specifications
 - o Reviews project financials to ensure that safeguards are in place to minimize fraud, waste, and abuse
 - o Directs staff to carry out project administration and ensure it is done satisfactorily
- Understanding all funding, program, and eligibility requirements.
- Applying for program funds.
- Signing a Memorandum of Understanding (MOU) with SHA, stipulating that program funds shall be spent in accordance with all applicable program requirements, state and federal laws.
- Obtaining environmental approvals (NEPA) and securing applicable permits as required for final design, ROW, and Construction authorizations.
- Obtaining ROW certification from SHA for construction authorizations.
- Meeting all State and Federal procurement regulations.
- Providing SHA with all necessary documentation when requesting RTP funds for reimbursement of project expenses.
- Providing a match value of a minimum of 20% of the total project costs, as well as contributing any costs beyond the approved award amount necessary to complete the project.
- Completing the entire project scope as defined in the MOU.
- Providing all necessary documentation and project status reports.
- Attending all project update and construction meetings.
- Inspecting all work for completion to meet applicable design requirements and to meet contract obligations or requirements prior to requesting reimbursement.
- Taking ownership and ongoing maintenance responsibility of the project.
- Retaining program paperwork for a minimum of three years after the date SHA requests to close the FMIS project (per 2 CFR 200.334).

The processes and guidance provided in this manual reflect the federal and state requirements set at the time of publication. The subrecipient is responsible for ensuring that they meet the most current regulatory requirements.

PUBLIC ACCESS REQUIREMENTS

All RTP projects must be legally and physically accessible to the public. The preference for federal aid investments is that the public interest in, and access to, the trail or trail amenity should be in perpetuity. The typical life expectancy and minimum term of public access is 20 years.

AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE

RTP projects within the federal aid highway right of way must comply with the ADA. The design standards issued under the ADA by the Department of Justice and the Department of

Transportation ensure access to the built environment for people with disabilities. The ADA Standards apply nationwide, in addition to any SHA and other applicable state or local codes, where facilities are newly built or altered. Any project off the highway right of way stating that it will be ADA compliant shall comply with all ADA requirements.

A trail or trail facility (e.g. rest rooms, water sources, picnic tables, shelters, etc.) outside of the federal aid highway right of way must be accessible according to the applicable standards as outlined in the U.S. Forest Service Trail Accessibility Guidelines, FSTAG 2013, and in compliance with all state and federal requirements. Any new trail construction, trail alteration and trail amenity must be built accessible to the extent feasible. Departures from specific accessibility guidelines are required to request an exception for any portion of the trail where compliance would:

- Cause substantial harm to cultural, historic, religious, or significant natural features or characteristics
- Substantially alter the nature of the setting or purpose
- Not be feasible due to terrain or the prevailing construction practices

MDOT COMPLETE STREETS POLICY

RTP projects within MDOT right of way are subject to the MDOT Complete Streets Policy. Complete Streets focuses on creating a safe environment for all users including those who employ human-powered means of travel, which includes walking and bicycling with or without the use of mobility aids and may also include using other human-scaled or micro-mobility devices that may be electric-powered or electric-assisted, such as e-bikes and e-scooters.

Projects subject to the MDOT Complete Streets Policy shall establish a Complete Streets Objective Statement that addresses safe access for all users. This Objective Statement will articulate the transportation problem being addressed and what is needed to solve that problem. These statements will prioritize multimodal options, improved accessibility, and the application of Complete Streets design features.



Baltimore Street
City of Cumberland

ELIGIBLE/INELIGIBLE PROJECT TYPES

This section describes the types of projects that qualify for RTP and specifies the types of activities and project components that are eligible to receive funding through the program. All projects that are awarded funds must be available for public use prior to the project being considered complete and eligible for final reimbursement.

Eligible Project Types

- Maintenance and restoration of existing recreational trails, including signage, bridges, and boardwalks.
- Development and rehabilitation of trailside and trailhead facilities and trail linkages for recreational trails:
 - If the primary purpose of the trailhead is trail use, it is fully eligible.
 - If the primary purpose is to serve the park, it is not eligible.
 - If the purpose is mixed, then it could be funded proportionally based on usage.
- Lease and purchase of recreational trail construction and maintenance equipment.
- Construction of new recreational trails (with restrictions on new trails and trail crossings on federal lands).
- Acquisition of easements and property for recreational trails or recreational trail corridors.
- Assessment of trail conditions for accessibility and maintenance.
- Development and dissemination of publications and operation of educational programs to promote safety and environmental protection related to the use of recreational trails.

Ineligible Project Types

- Condemnation of any kind of interest in property.
- Construction of a recreational trail on National Forest System land for motorized use unless:
 - The land has been designated for uses other than wilderness by an approved forest land and resource management plan or has been released to uses other than wilderness by an Act of Congress; and
 - The construction is otherwise consistent with the management direction in the approved forest land and resource management plan.
- Construction of any recreational trail on Bureau of Land Management land for any motorized use unless the land:
 - Has been designated for uses other than wilderness by an approved Bureau of Land Management resource management plan or has been released to uses other than wilderness by an Act of Congress; and
 - The construction is otherwise consistent with the management direction in the approved management plan.
- Upgrading, expanding, or otherwise facilitating motorized use or access to recreational trails predominantly used by nonmotorized recreational trail users and on which, as of May 1, 1991, motorized use was prohibited or had not occurred.

- **Condemned Land as Matching Value:** An RTP project may be located on land condemned with funds from other sources; however, it is not permissible to use the value of condemned land toward the match requirement for an RTP project.
- **Law Enforcement**
- **Railroads:** RTP projects should not be approved on railroad right of way on which the railroad tracks are in place, if trail users will traverse on or between the railroad tracks, except for providing railroad crossings in coordination with the railroad owner, operator, or State agency with jurisdiction over railroads.
- **Roads:** RTP funds may not be used for improvements to roads and/or bridges intended to be generally accessible by low clearance passenger vehicles (regular passenger cars), unless those roads/bridges are specifically designed for recreational use by the management agency.
- **Park amenities:** visitor centers, whole park restrooms, picnic pavilions, campgrounds, ball fields, etc.
- **Play areas, spray areas, swimming pools, marinas, etc.**
- **School facilities:** running tracks, sports fields, bleachers, parking areas, field lighting, etc.
- **Sidewalks** unless needed to complete a missing link between other recreational trails.

ELIGIBLE/INELIGIBLE COSTS

Project costs that may be eligible for funding reimbursement are listed below. To be eligible for reimbursement these costs must be included in the executed MOU or an executed MOU amendment. Proper procurement processes as described in the Procurement section of this manual must be followed for costs to be eligible for reimbursement or match. If any part of a project is within a federal aid highway right of way (ROW), the [Davis-Bacon Act](#) prevailing wage and additional requirements apply:

- Construction
- Materials
- Leased or purchased equipment
- Salary or personnel expenses including taxes and fringe benefits provided that they are accompanied by detailed payroll verification (state and local minimum and living wage requirements apply).
- Signage (design must include SHA logo)
- Supplies
- Land acquisition
- In-house design costs
- Design consultants procured following RTP regulations for preliminary and final design services.

Project costs that do not qualify for funding reimbursement are listed on the next page. However, some of these items may be eligible as allowable match items (see Table 1). For a complete list of ineligible items, see the [FHWA Recreational Trail Program legislation website](#).

- Employee salaries for time and/or work not tied to a specific trail, trail system, or trail maintenance project as described in the project MOU or NEPA document.
- Salary or personnel expenses beyond the base hourly rate without detailed payroll verification that identifies each benefit amount (taxes, unemployment, insurance benefits, etc.).
- Trail research and planning; project management (including subrecipient administrative time with permitting, application development, procurement and invoicing).
- Staff or volunteer time and mileage to and from the jobsite.
- Equipment not solely used for the construction or maintenance of the trail project.
- Food, beverages, lodging, or entertainment.
- Rental cars, transit, and other transportation-related expenses such as fuel, tolls, parking fees, etc.
- Business operation and overhead expenses such as general accounting, insurance policies, etc.

MATCH REQUIREMENTS

RTP will reimburse a grantee for up to 80% of the total eligible project costs up to the approved funding amount. At a minimum, a local match is required for 20% of the total eligible project costs. Matching (or cost sharing) is defined as the portion of project or program costs not borne by the Federal Government (2 CFR 200). **Note: Certain federally eligible items may not be eligible under the Maryland RTP Program guidelines.**

The RTP funds may be matched with funds available under other federal funding programs if the project also is eligible for funding under the other federal program. Federal funds received by any project subrecipient from another federal program may be credited as if they were the non-federal share (match).

RTP allows for both cash and in-kind match. Qualified in-kind match categories can be found in Table 1.

All matching sources that the subrecipient elects to secure must adhere to the requirements in the following sections and be documented in detail in the MOU and any subsequent MOU amendments. Match items are required to follow proper procurement procedures to be eligible. Changes to the subrecipient match made after the issuance of the MOU will require an amendment to the MOU. All changes must be coordinated with the RTP Manager (see Project Initiation section in this chapter).

Table 1 summarizes the allowable match items and provides applicable details and/or examples.

Table 1: Allowable Match Items

ALLOWABLE MATCH ITEMS	DETAILED DESCRIPTION
Donated right of way (ROW)	Appraised value of ROW is acceptable if both the donation of the ROW and the appraisal were completed within 18 months of federal authorization date. The deed and the plat must be submitted to the RTP Manager for review.
Past property acquisitions	Property acquisitions undertaken as part of the current project (less than 18 months prior to federal construction authorization date, but not after the project application submission) may be used toward the match. The deed and the plat must be submitted to the RTP Manager for review. The value of the match will be determined as the appraised value within 18 months of federal construction authorization date. For the property acquisitions to be considered a match, the subrecipient must have followed the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
Design and direct project development activities	Design and project development activities that are directly tied to the planning of the specific project. These activities must occur within 18 months of federal authorization of funding. If the activities occur after the federal authorization date, procurement must meet state regulations. This can be proof of payment to a licensed design professional or in-house staff time (see Wage Rates in Table 3).
Construction costs	Construction costs over and above the award amount.
Materials	Materials donated by a third party or those purchased by the subrecipient will be valued based on fair market value of materials legally acquired in the past. Fair market value must be established within 18 months of federal construction authorization date. The value of materials used as match for other federal aid projects or materials acquired under other federal aid projects are not eligible as match.
Equipment	Equipment purchased or rented specifically for the subject project and not sought for reimbursement. Value of equipment is based on fair market value of equipment legally acquired in the past. Fair market value must be established within 18 months of Federal construction authorization date. Cannot count the value of equipment used as match for other federal aid projects or for equipment acquired under other federal aid projects.
Donated funds	Donations specifically designated to the awarded project scope and identified to be used as match. Copy of canceled check must be submitted before or with the invoice.

Table 1: Allowable Match Items (cont.)

ALLOWABLE MATCH ITEMS	DETAILED DESCRIPTION
Work performed (directly related to the subject project)	Paid or volunteer work performed that is directly related to the awarded project provided it is accurately documented and a value can be established (see Invoicing for Reimbursement/Project Close-out). To be eligible, work must take place less than 18 months prior to, or after federal authorization of funding. Match verification documentation must be submitted monthly to be eligible.
Mileage and fuel	Mileage for vehicles being used to transport materials to and from a job site will require proper documentation and prior approval and take place less than 18 months prior to, or after federal authorization of funding.
Employee or staff fringe benefit expenses with detailed payroll verification	Taxes, unemployment, insurance benefits, leave time, etc. Activities must be related to the awarded project and take place less than 18 months prior to, or after federal authorization of funding.

Table 2 summarizes prohibited match items and provides applicable details and/or examples.

Table 2: Prohibited/Ineligible Match Items

PROHIBITED/INELIGIBLE MATCH ITEMS	DESCRIPTION
Mileage or rental vehicles	Mileage for employees or volunteers traveling to and from the job site.
Meals/food/beverages/entertainment/lodging expenses	Meals, food, beverages, entertainment, and lodging expenses.
Employee or staff fringe benefit expenses without detailed payroll verification	Taxes, unemployment, insurance benefits, leave time, etc.
Value of equipment or tools	The value of equipment or tools not purchased or rented solely for the project.
Donated equipment or tools	Value of donated equipment or tools.
Previously completed work	Any work completed prior to the date of the executed MOU and/or any work completed that is outside of the scope of work and/or project limits as noted in the MOU or MOU amendment.
Business and overhead expenses	Business operation and overhead expenses such as general accounting, insurance policies, application development, and grant management (such as invoicing, MOU, correspondence, procurement, etc.).
Equipment repairs	Equipment repairs for items not solely used for the project.
On-going maintenance activities	Maintenance activities after project completion.

The SHA will use the median wage rates listed in **Table 3** for volunteer match for RTP projects. These rates are from the 2022 Bureau of Labor Statistics (BLS) for Maryland. For anyone serving in multiple roles, time performed per activity must be documented with the corresponding wage rate. If an employee's time is used for match, documentation must be submitted (pay stubs or payroll records) to verify that rate.

Table 3: Allowable Wage Rates for Volunteer Match

LABOR CATEGORIES	HOURLY RATE
General unskilled labor (BLS Occupation Code: 47-2061) <i>Trail construction, maintenance, mowing, landscaping/weeding, brush removal</i>	\$20.49
Skilled Labor (BLS Occupation Code: 47-2073) <i>Operating engineers and other construction equipment operators. If an employee of the subrecipient is providing this type of labor, documentation demonstrating prior work experience and/or education is necessary.</i>	\$27.14
Construction Supervisor (BLS Occupation Code: 47-1011) <i>Supervisors of unskilled and skilled labor</i>	\$36.13
Professional Design1 (BLS Occupation Code 17-3019) <i>Prepare detailed drawings of architectural and structural features of projects.</i>	\$34.00
Foresters (BLS Occupation Code 19-1032) <i>Manage public and private forested lands for economic, recreational, and conservation purposes. May determine how to conserve wildlife habitats, creek beds, water quality, and soil stability, and how best to comply with environmental regulations.</i>	\$35.89

Source: [Occupational Employment and Wage Statistics](#)

APPLICATION

The RTP Application can be found on [Maryland OneStop](#). Applications are typically submitted in the spring, to be awarded in the fall. All applications are reviewed by the RTP staff and the RTP advisory committee. Recommendations are made to the SHA Administrator for final approval. Applicants receive written notification of award and denial by email.

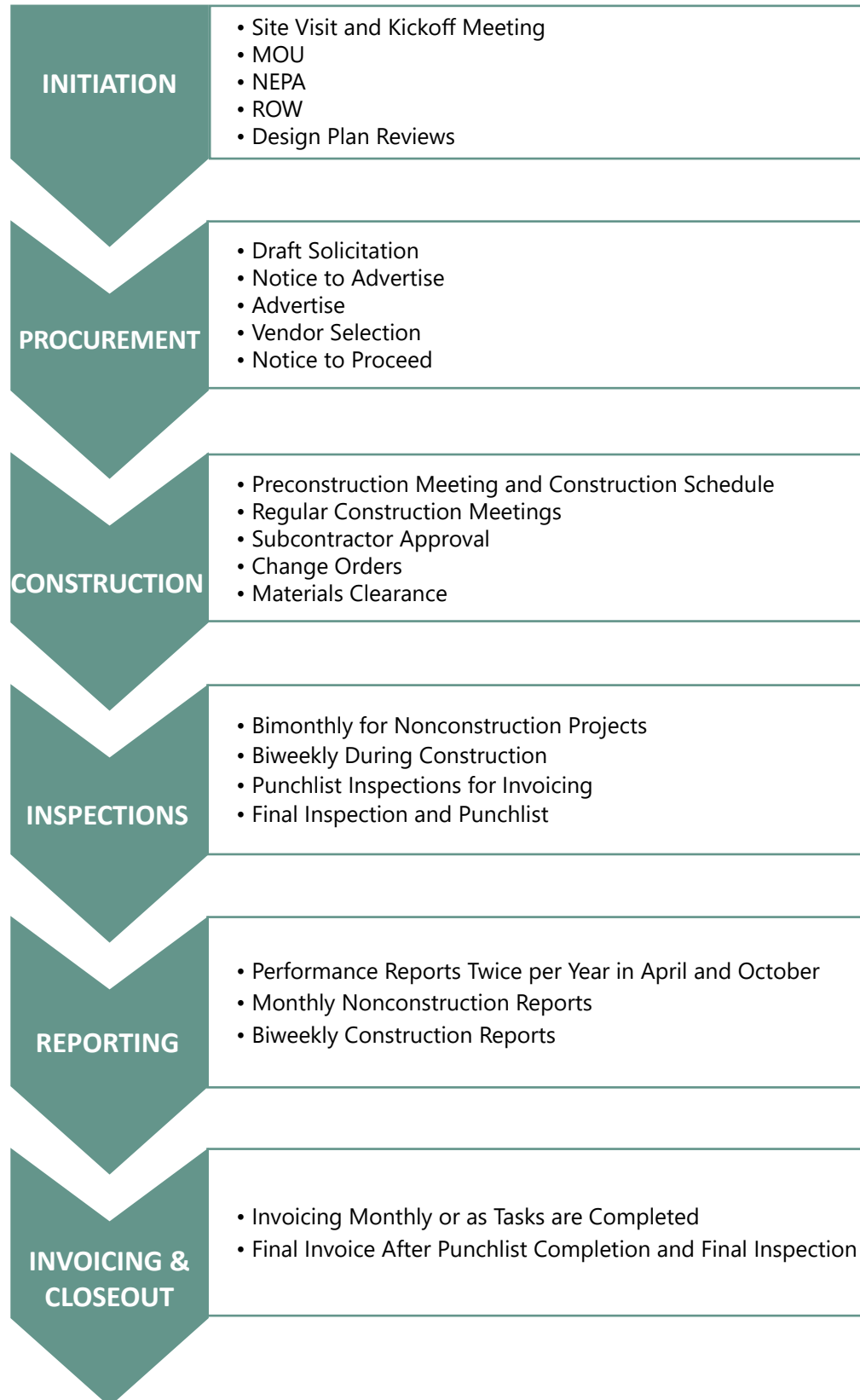
Shovel-ready projects with a complete scope of work and 30% design plans will be more competitive than those that are still in the conceptual phase. The RTP program places a priority on projects that enhance safety and approve accessibility for all. The minimum award request is \$25,000.

To defray the costs SHA incurs when administering RTP grants, SHA will add 10% to the total RTP funds requested (not including the project subrecipient's matching funds) for all awards. These costs help cover the cost of SHA design plan review, regulatory compliance, materials clearance, and construction inspection and oversight. This allows SHA to use RTP funding to reduce the burden of these costs on the subrecipient. The subrecipient will be responsible for the additional match associated with these costs.

Applicants can receive feedback on project applications if submitted during the completeness review period. The dates will be posted on [Maryland OneStop](#).



WORKFLOW



PROJECT INITIATION

Since the RTP is federally funded, each subrecipient is required to meet state and federal requirements before allocated funds can be authorized for spending. This section is intended to help subrecipients meet these requirements.

Notice of Award

Subrecipients of projects that are approved by the SHA for funding will receive a Notice of Award Letter. After this Letter is issued, SHA will contact the project subrecipient to schedule a kickoff meeting to discuss program requirements. This exchange of information will provide both parties with a detailed understanding of the project implementation process. The RTP staff may also complete a project initiation site visit.

Memorandum of Understanding (MOU)

PREPARATION OF AN MOU

SHA will prepare an MOU, or a supplemental agreement when a master agreement is in place, for each awarded project, outlining the project description, amount of funds awarded, activities for which funds will be reimbursed, matching obligations, and responsibilities of the SHA and the project subrecipient. The project subrecipient can request updates to the scope of work and amend any attachments, which will be considered on a case-by-case basis.

The subrecipient must sign the original electronically, as well as provide a Federal I.D. number, and then email the MOU to SHA for final signatures. Once the SHA signs the MOU, the executed MOU will be sent to the subrecipient via email. The MOU will expire five years from the date of execution.

The MOU will contain a provision that if the project does not move forward within one year of the date of the executed MOU, the funds for the project may be withdrawn by the SHA. The subrecipient can demonstrate moving forward by working toward NEPA and right of way certification, completing design plans and/or developing a procurement package. Any work started prior to Federal Authorization for the project will not be eligible for reimbursement.

MOU AMENDMENT PROCESS

Any changes to the project as described in the MOU must be coordinated with the RTP Manager and additional environmental approvals may be required for certain MOU amendments. MOU amendments will be considered on a case-by-case basis. The Program Manager will provide the MOU Amendment document to the subrecipient to sign, however all supporting materials for the MOU Amendment must be provided by the subrecipient. The MOU Amendment will be executed after it receives final signatures from SHA. Eligible MOU amendments are detailed below.

- a) Minor Location Change: A minor change in location means expanding or relocating the Limits of Disturbance (LOD) of an existing project, which will require additional environmental review. The location must be within the same project site.

- b) Scope Change: Any change in project scope requires an MOU amendment with justification, along with an updated work plan, design plans and detailed budget. The new scope must be consistent with the original project scope and may require additional environmental review.
- c) Funding Amount Increases: If essential to the project, a subrecipient may request additional RTP funding after the MOU is executed and before the project is awarded to a contractor. Requests for increases will require an amendment request with justification along with an updated work plan and detailed budget.
- d) Budget Line Item or Match Changes: If the amount or the type of match or budget line item changes, an MOU amendment is required prior to incurring the expenses.
- e) MOU Extension: If essential to project scope completion, an MOU expiration extension will be considered.

Minor amendments to the project MOU that do not impact the validity of the existing MOU and any Amendment(s) may be processed via a Letter of Approval.

Environmental Approval

Although SHA administers the RTP, the program is federally funded and must comply with NEPA and other federal and state environmental regulations. These regulations require evaluation of the potential environmental impacts of proposed actions. Laws ensuring environmental protection include, but are not limited to:

- NEPA
- Section 106 of the National Historic Preservation Act
- Section 4(f) of the US DOT Act
- Section 404 of the Clean Water Act
- Section 7 of the Endangered Species Act
- Wetland/Waterway/Floodplain/Erosion & Sediment Control Permits
- Chesapeake and Atlantic Coastal Bays Critical Areas Act

For projects that receive notice of federal funding, NEPA requires subrecipients to consider natural, cultural, and socioeconomic factors, and use a systematic, interdisciplinary approach before committing to a project. Environmental approval is required for all projects regardless of the scope of work. The level of environmental coordination and documentation for an RTP project is commensurate with the potential natural and cultural resource impacts.

For RTP projects, natural and cultural resource impacts are determined through coordination with resource agencies. The RTP Environmental Manager (EM) will facilitate coordination with the Maryland Historical Trust (MHT), Maryland Department of Natural Resources (DNR), and the U.S. Fish and Wildlife Service (USFWS) on behalf of the subrecipient. The subrecipient is responsible for identifying and obtaining any permits associated with the project.

Guidance on the NEPA process is outlined below:

1. Once the RTP funding has been approved by the SHA, the subrecipient should contact the RTP EM and provide a detailed project description with a map of the exact location/LOD. The location should be provided as a shapefile, .KML, .GPX or GPS coordinates. This project description should align with what was provided in the RTP application and MOU.
2. The RTP EM will review the level of coordination necessary for MHT. MHT has programmatically excluded some minor activities from individual MHT review. If the project is programmatically excluded, RTP EM will provide the subrecipient with this information and no further coordination is warranted. If the project requires further MHT coordination, the RTP EM will coordinate with MHT via SHA Cultural Resources on the subrecipient's behalf.
3. If RTP project results in impacts to non-tidal and/or tidal wetlands, waterways, or floodplains, the project subrecipient should coordinate with the Maryland Department of the Environment (MDE) and obtain a joint MDE and US Army Corps of Engineers (USACE) permit for impacts to those resources if that is determined by MDE. Obtaining permits is the responsibility of the subrecipient. The subrecipient should provide RTP EM with permit and impact information.
4. The RTP EM will review the level of coordination necessary for USFWS and DNR. Minor activities may be programmatically excluded from review and the RTP EM will inform the project subrecipient if their project falls within this category. Otherwise, the RTP EM, will use online tools to coordinate with USFWS and DNR to determine if federally- or state-listed rare, threatened, or endangered species may occur within the project area. If a species is identified, the RTP EM will work with USFWS and/or DNR to determine if time of year restrictions or other requirements are needed to complete the project. The RTP EM will forward all coordination with USFWS and DNR to the project subrecipient.
5. Chesapeake Bay and Atlantic Coastal Bay Critical Areas exist in all Maryland counties except for Carroll, Howard, Frederick, Montgomery, Washington, Allegany, and Garrett. If the project falls outside of these counties and is located near tidal waters, impacts to the Critical Area may be identified by DNR and further coordination with the Critical Area Commission (CAC) may be warranted. The RTP EM will work with the subrecipient to determine if further coordination is deemed necessary, however the CAC coordination must be conducted by the subrecipient.
6. The project subrecipient should ensure that the RTP project complies with all county and local ordinances.
7. After all coordination is complete, the RTP EM will draft the environmental document. The RTP EM will then submit the environmental document for internal SHA approval. This process typically takes two weeks. The subrecipient will be copied on the approved environmental document and a copy will also be sent to the subrecipient by email.

Permitting

The subrecipient is responsible for obtaining all required permits. The permits need to be identified as part of any procurement package and it is recommended that they be obtained prior to advertisement to avoid a delay in construction. All permits must be obtained prior to issuing notice to proceed to any contractor(s) and/or starting any work. Any additional project cost resulting from non-availability of environmental permits will be non-participating. The permits include, but are not limited to:

- Wetland permit/waiver (USACE, MDE) if impacts to wetlands or wetland buffers will occur.
- Waterway Construction Permits if the project involves a bridge (hydrology/hydraulic studies and a scour study are required for this) (MDE).
- Access permit for work within SHA ROW (refer to RTP Manager to provide contact information for SHA District Regional Engineers).
- Floodplain permits (MDE)
- Coordination with the Federal Emergency Management Agency (FEMA), if the project involves a bridge in a FEMA flood plain.
- Sediment and Erosion Control and Stormwater Management approvals (MDE)
- All other state and local required permits.

Federal Authorization

Federal funding requires the RTP Program Manager to submit each project individually for Federal Authorization upon execution of the MOU (including any amendments), NEPA clearance, and ROW Certification (for construction only). Procurement of goods and services for reimbursement cannot take place until the project funding is authorized. See Match Requirements to determine what match items are eligible up to 18 months prior to federal authorization approval date.

Design Review and Plan Approval

Projects may be reviewed by various offices within SHA depending on the complexity and permitting requirements. All structures, including bridges, puncheons, boardwalks, toilets, launches, and kiosks must have engineered design plans that are reviewed and approved by SHA. This process will be facilitated through RTP staff. All approvals are required prior to procurement and/or construction. All projects within federal aid highway ROW will require design review regardless of the scale of the project. SHA offices that may provide design comments include:

- Office of Structures (OOS): all bridges, boardwalks, and other large structures
- Office of Highway Development Highway Hydraulics Division (HHD): projects that require stormwater management facilities
- Office of Highway Development Design Technical Services Division: projects seeking ADA compliance or non-natural surface trail projects and comprehensive plan review
- District Office: Projects within federal aid highway ROW

RIGHT OF WAY CERTIFICATION

All subrecipients must coordinate with RTP staff to obtain ROW certification which is necessary prior to requesting Federal Authorization for construction.

Right of Way Verification Letter

SUBRECIPIENT OWNS THE LAND

If a subrecipient already owns the land, a ROW Verification Letter must be submitted to the SHA RTP Manager indicating this and verifying responsibility for ongoing maintenance of the project.

Land owned by a subrecipient that is under an easement or leased must follow the process below.

SUBRECIPIENT DOES NOT OWN THE LAND

If a subrecipient does not own the land, the subrecipient must coordinate with the landowner, the RTP Manager, and the SHA Office of Real Estate to determine requirements for ROW certification. This process must also identify who is performing the work and who is responsible for future maintenance of the project.

Land Acquisition

When subrecipients propose to acquire property or property easements for RTP projects, the acquisition of real property interests related to trail projects must conform to the Uniform Relocation Act and other governing state and federal laws. SHA will aid in the process. No state or federal funds may be used to improve private property or property not dedicated to public use.

The subrecipient shall be responsible for providing verifiable documentation evidencing compliance for any real property that may have previously been acquired for the project, which is to serve as the project match. Required documentation includes:

- Right of Way Plans/Plats with areas listed
- Appraisal, including letter to owners stating that they are encouraged to walk through the property with the Appraiser (especially if they need to point out features such as septic, drain fields, etc.)
- Appraisal Review (it can be done independently or by SHA Reviewers, if available)
- Title Search
- Written Offer Letter (based on Appraisal)
- Certified Record of Negotiations
- Signed and Approved Option Contract
- Waivers (if donation or dedication of property by owners)
- Relocation (if needed)
- Administrative Settlement Letter signed by SHA Office of Real Estate

PROCUREMENT

RTP project subrecipients are expected to adhere to all applicable federal, state, local, and tribal laws and regulations, in accordance with 2 CFR 200.318. All steel, iron, manufactured products, and construction materials used in the project shall be produced in the United States, in accordance with FHWA Buy America provision (23 USC 313 and 23 CFR 635.410) and Build America, Buy America (BABA) Act (2 CFR 184). In addition, project subrecipients must follow [COMAR Title 21](#). All items purchased for the project and/or any contracted work must go through the RTP procurement process. This may mean that a given project goes through the procurement process more than once. Failure to follow required procurement procedures shall result in denial of reimbursement.

Small procurement includes three cost categories, based on the cost of the procurement (COMAR 21.05.07.04).

- Category I <\$5,000
- Category II \$5,000 to \$14,999
- Category III \$15,000 to \$50,000

Procurements over the Category III Small Procurement threshold in COMAR or projects that are within the federal aid highway right of way will require review and approval by the federal aid Programming Division of the SHA's Office of Finance.



Bauer Preserve Trail
Irvine Nature Center

Procurement Process

Details on the general requirements and process to follow for procurement is provided below. All referenced documents will be provided to the subrecipient and are available by request.

1. Subrecipient develops the Procurement Package or Invitation for Bids (IFB). The RTP Manager will provide templates for both small procurement and competitive sealed bidding.
 - Each package must include the following items:
 - o Independent cost estimate;
 - o IFB;
 - o Project scope and specifications;
 - o Vendor minimum qualifications;
 - o Final design plans (when applicable);
 - o Bid submittal form;
 - o Preferred vendor disclosure form;
 - o List of potential bidders;
 - o Environmental Permit Certification form; and
 - o Federal Form Packet (excluding solicitations for supplies, materials and signage).
2. Subrecipient reviews NEPA document and any NEPA reevaluations to confirm that the scope of work, limits of disturbance, and reported permits and impact amounts are accurate and still valid. If not, subrecipient must contact the Environmental Manager to determine if a reevaluation is needed.
3. The procurement package/IFB is submitted to the RTP Manager for review and approval. The subrecipient determines whether the solicitation must be sent to a preferred vendor.
 - State preferred vendors must be given the opportunity to fulfill project needs for those items in the vendor catalog. Preferred vendors include Maryland Correctional Enterprises, Maryland Blind Industries, and Maryland Works. Additional guidance will be provided when the subrecipient enters the procurement phase.
 - All necessary affirmative action steps must be taken to assure that disadvantaged business enterprises (DBE), are used whenever possible. These steps shall include placing qualified businesses on solicitation lists and assuring that these businesses are solicited whenever there are potential sources. When a procurement is over \$50,000, a DBE goal for the contract will be assigned by SHA to be included in the IFB.
4. The SHA issues a signed Notice to Advertise (NTA).
5. If subrecipient has determined that the solicitation must be sent to a preferred vendor, the subrecipient must contact the Preferred Vendor with the solicitation. The preferred vendor will either provide a quote or issue a waiver.

6. If the subrecipient determines the solicitation does not need to be sent to a preferred vendor or if the preferred vendor issues a waiver the subrecipient can solicit the bid following the requirements outlined below:

Category I <\$5,000	No formal advertisement required	Subrecipient solicits at least two (2) vendors. Offers can be oral or in writing; however, documentation is required.
Category II \$5,000 to \$14,999	No formal advertisement required	Subrecipient solicits at least three (3) vendors. Solicitations must be in writing.
Category III \$15,000 to \$50,000	Formal advertisement required	Subrecipient posts solicitation on eMaryland Marketplace Advantage (eMMA) for a minimum of three (3) working days before the bids are due and opened.
Competitive Sealed Bidding >\$50,000	Formal advertisement required	Subrecipient posts solicitations on eMMA for a minimum of 28 days before bids are due and opened.

For category I verbal solicitations, the subrecipient must document the solicitation and verbal offers. The tabulation must include the date and time of the call, the name and address of the vendor, the name of the person providing the bid and the amount of the bid. The tabulation must be signed and dated.

For Category I and II, written solicitations will be sent directly to vendors by email. The email will act as documentation that the request for bids went to multiple vendors.

For Category III and Competitive Sealed Bidding, the Invitation for Bids (IFB) must be posted on eMMA either by the subrecipient if they are a government entity, or by SHA, and can additionally be posted on a bid board, a newspaper, or on the subrecipient website. These bids must be sealed and opened at a time specified in the IFB.

7. Subrecipient receives acceptable offers/bids and documents prices (at least two acceptable offers must be received to qualify). If only a single bid is received, contact RTP Manager for guidance on how to proceed.
8. Subrecipient selects a vendor based on the lowest responsive and responsible bid.
9. Subrecipient submits a request to SHA for concurrence in award, with the bid tabulation, bid submittal sheets, and contractor qualifications (when applicable). All subcontractors must be approved by SHA.
10. The SHA issues a signed Notice to Proceed (NTP).

Other Types of Procurement

Projects that are awarded for Architectural and Engineering Services, including design and assessment, will follow a distinct procurement process that includes a Request for Proposals (RFP) rather than an IFB. Detailed guidance will be provided by the RTP Manager.

Buy America Provisions

All steel, iron, manufactured products, and construction materials used in the project shall be produced in the United States, in accordance with FHWA Buy America provision (23 USC 313 and 23 CFR 635.410) and Build America, Buy America (BABA) Act (2 CFR 184).



Accessible Hunter Trail

Maryland Department of Natural Resources

CONSTRUCTION

In this context, construction applies to trail construction, rerouting, resurfacing and restoration as well as trail structures, trailheads and trailside amenity work. This is the case whether performed by a contractor, volunteers, or Conservation Corps members. All structures must be constructed by a contractor or qualified paid staff. When a contractor is used for construction, volunteers may be used for corridor clearing only.

Meetings and Construction Schedule

Construction projects require that the RTP project manager attend the pre-bid and preconstruction meetings. A construction schedule must be submitted and approved by the project manager prior to construction mobilization. The project manager will perform scheduled and unscheduled inspections and should be invited to all progress meetings held either virtually or on-site.

When structures are included in the project scope, the project manager must be notified prior to the start of construction of the structure. The project manager must be notified when there are changes to the construction schedule and/or if there are changes in contractors or subcontractors.

Change Orders

The subrecipient should begin discussing the potential of a change order and the circumstances involved (reasoning, timing, cost implications, design changes, eligibility, etc.) with the RTP project manager as soon as it becomes evident that one may be necessary. The RTP Program Manager may give verbal consent to continue with the construction process impacted by the change order.

Approval is necessary prior to executing any change order. Failure to receive prior approval will result in the work being deemed ineligible for reimbursement. Contact the RTP Manager for further instructions.

Construction Oversight

The subrecipient is responsible for providing adequate and documented oversight during construction to ensure projects are completed in conformance with the construction contract documents, plans, and specifications. The construction inspections may be performed by a consultant or by the subrecipient. SHA may require materials clearance prior to and during construction.

The project must be completed to the approved design plans and/or project scope to receive reimbursement. This will be verified by the RTP project manager. Any items failing inspection will need to be addressed at the subrecipient's expense.

PROJECT REPORTS AND INSPECTIONS

Quarterly Project Reports

Subrecipients are required to provide the project manager with updates via monthly project performance reports. Subrecipients must immediately notify the project manager of any developments that have a significant impact on the award-supported activities, and/or any problems, delays, or conditions which prohibit the grantee from meeting the objectives of the award.

Construction Reports

The subrecipient is required to submit biweekly construction reports to the project manager using the provided template. The reports should have a high level of detail and notify the project manager if there are any issues during construction or if a delay in construction completion is anticipated. The report should also include any photos and/or maps of the construction status.

Project Inspections

All project sites will receive periodic inspections by the RTP project manager or designee. When a project is in construction, there will be bi-weekly inspections. For maintenance projects, the inspections will be every four to six weeks. Inspection types include:

- Project initiation
- Pre-construction
- Project mapping
- Maintenance verification
- Construction
- Structure(s)
- Invoice verification
- Closeout verification

Any inspection findings must be addressed before seeking reimbursement for work completed.

INVOICING FOR REIMBURSEMENT/ PROJECT CLOSEOUT

Invoicing for Reimbursement

Project subrecipients will not be reimbursed for any project activities undertaken prior to execution of the MOU, NEPA approval, ROW certification (required for construction authorizations), and federal authorization. Any items not detailed in the MOU and application are not eligible for reimbursement. Failure to follow required procurement procedures will result in denial of reimbursement.

Project subrecipients are responsible for submitting, at minimum, quarterly invoices for projects incurring expenses unless a separate invoicing process is agreed upon by the subrecipient and RTP manager.

The following procedure shall be used for reimbursement to the subrecipient for eligible expenses:

1. When requesting reimbursement for services or materials, the subrecipient shall prepare the invoice cover letter and submit this, along with a copy of the vendor receipt/contractor invoice and payment verification, to the project manager. When requesting reimbursement of more than one item, include a summary table detailing reimbursable items.
2. When requesting reimbursement or match for labor costs, the subrecipient shall prepare an invoice cover letter and submit this, along with the Personnel Activity Report (PAR) and payroll verification, to the project manager. The PAR must include a level of detail to justify the number of hours being claimed. When multiple employees are included in the invoice, include a summary table.
3. In addition to the invoice, the subrecipient shall submit documentation for the matching funds corresponding to the reimbursement request amount. Include a summary table detailing the match items along with the documentation described for reimbursements.
4. Subrecipient's final invoice for reimbursement will include the following certification, signed by the project subrecipient:
I/we certify that the subject project was completed in reasonable conformance to the advertised plans and specifications, using materials of equal or greater quality specified in the advertised documents. I/we also certify to the workmanship of the project and that all advertised activities have been accomplished, unless written approval for modifications have been requested of and received from SHA. As of the date of this certification, any additional work and or maintenance on this project will be the sole responsibility of the Project Subrecipient, or other entity as specified in the Memorandum of Understanding.
5. A project site inspection for invoice verification or to certify project completion will be conducted prior to reimbursement.
6. Project must be open to the public prior invoice submission to receive final reimbursement.
7. The final payment will be processed, and the project closed.

On-going Maintenance

Funding allocated under this program comes with the long-term obligation to maintain and protect the project area after a project is complete. Adequate maintenance procedures must be developed and followed to maintain the property and the equipment. The RTP Manager may make routine follow-up visits to ensure compliance with this requirement.

