GLOSSARY OF TERMS

Abstention
Abstention is used when an agency/organization does not object with the concurrence point but does not sign the concurrence form. However, the agency/organization agrees not to revisit the concurrence point subject to the guidance on revisiting concurrence points. Please see the Merger MOU for more information.

Alternatives Evaluation
A reasonable range of specific transportation improvement proposals, alignments, options, design choices, etc., that have the potential to meet the needs expressed in the Purpose and Need Statement. Alternatives are generally confined to a defined study area. For a transportation project, alternatives to be studied normally include the no-action alternative, an upgrading of the existing roadway alternative, new transportation routes and locations, transportation systems management strategies, multimodal alternatives, and any combinations of the above. To be considered the Least Environmentally Damaging Practicable Alternative (LEDPA), an alternative must meet the Purpose and Need of the project and have less adverse impact on the aquatic ecosystem than the other practicable alternatives under consideration (if any), so long as the alternative does not have other significant adverse environmental consequences.

ATLAS Workbench
A repository on SharePoint in which final version of documents shall be uploaded to the SharePoint via the ATLAS Workbench. NCDOT staff and consultants will use the ATLAS Workbench to manage their projects. The Workbench steps reflects all facets of the project lifecycle and tracks the progression of a project based on reporting from multiple business units.

ATLAS Search/Screening Tools
The ATLAS Search Tool is used to help create project deliverables by searching for relevant data and downloading the files within the study area, such as an environmental base map for a project's Natural Resources Technical Report or Indirect and Cumulative Effects document. The ATLAS Screening Tool is used to assess study areas for potential affects to the human and natural environment so project teams can quickly understand a project's scope and schedule and obtain information essential to a Scoping meeting and for completion of the NEPA/SEPA documentation.

Applicant's (Agency's) Preferred Alternative
Also see "Section 404(b)(1) Guidelines"
The alternative that the lead agency believes would fulfill its statutory mission and responsibilities, giving consideration to social, economic, environmental, technical and other factors. It is typically identified so that agencies and the public can understand the lead agency's perspective.

Avoidance and Minimization Measures (AMMs)
A general phrase inherent in NEPA and Section 404 regulations necessitating that potential impacts to the natural and human environment are avoided and minimized to the extent practicable.

It is important to document Avoidance and Minimization Measures (AMMS) developed throughout the Merger Process to show compliance with the requirements of several laws and regulations. For example, the CWA specifically discusses avoidance and minimization of impacts to waters of the U.S. within the Section 404(b)(1) Guidelines (40 CFR 230.10 (d)) which notes that no discharge of dredged or

fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem. Additionally, 33 CFR 325.1 (d)((7) notes that applicants must include a statement describing how impacts to waters of the U.S. would be avoided and minimized. Another example is Section 7 of the Endangered Species Act, which requires Federal agencies to consult with the US Fish and Wildlife Service (USFWS) to ensure that actions they fund, authorize, permit, or otherwise carry out will not jeopardize the continued existence of any listed species or adversely modify designated critical habitats.

Best Fit Alignment

A road widening design approach that utilizes alignment shifts to avoid and minimize impacts to the human and natural environment in a cost-effective manner.

Bridge/Culvert Survey Report (BSR/CSR)

A BSR/CSR is a summary of the structural and hydraulic aspects of a bridge or culvert necessary for evaluating the preliminary design, FEMA hydraulic model, and scour potential. Included are historical data, site data, design parameters, and model output.

Coastal Area Management Act (CAMA) of 1974

The Coastal Area Management Act (CAMA) of 1974 has the following goals: (1) To provide a management system capable of preserving and managing the natural ecological conditions of the estuarine system, the barrier dune system, and the beaches, so as to safeguard and perpetuate their natural productivity and their biological, economic and esthetic values; (2) To insure that the development or preservation of the land and water resources of the coastal area proceeds in a manner consistent with the capability of the land and water for development, use, or preservation based on ecological considerations; (3)To insure the orderly and balanced use and preservation of our coastal resources on behalf of the people of North Carolina and the nation; and (4) To establish policies, guidelines and standards. CAMA regulations may require NCDOT to request a Major Permit, General Permit, Minor Permit or a variance for certain development activities we are pursuing within coastal resources.

Categorical Exclusion (CE)

A category of actions defined under Section 40 CFR 1508.4 (NEPA) which do not individually or cumulatively have a significant effect on the human (and natural) environment and for which neither an environmental assessment (EA) nor environmental impact statement (EIS) is required. FHWA actions which typically qualify as Categorical Exclusions are specifically defined at 23 CFR 771.117(a). Please see the current version of the FHWA/NCDOT CE agreement for more information.

Concurrence

Also see "Non-Concurrence"

Concurrence by an agency or organization means that the specific agency/organization representative does not object to decisions made at strategic points in the project development/permitting process and agrees to abide by the decision made unless there is a profound changed condition in the future. A profound changed condition does not include changes in agency/organization representatives. Please see the Merger MOU for more information.

Conflict Resolution Process

The process used by the Merger Team use if initial concurrence cannot be achieved. Please see the MOU Attachment B: Conflict Resolution Process for more information.

Comprehensive Transportation Plan (CTP)
A Comprehensive Transportation Plan (CTP) is a long range vision plan for transportation networks defined by the North Carolina General Statutes §136-66.

Cooperating Agency
Cooperating Agency means any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. Please see the MOU Attachment A: Merger Roles and Responsibilities for more information.

Designee
An NCDOT Project Manager or an agency may indicate a designee (another staff member or a consultant) who will perform the Merger-related responsibilities on their behalf.

Detailed Study Alternatives [Carried Forward] (DSAs)
Under the Merger Process, DSAs are preliminary alternatives which are carried forward once the Merger Team determines that these alternatives meet the project purpose and should be studied and evaluated in greater detail in the environmental document. The Merger Team selects the DSAs at Concurrence Point 2.

Draft Environmental Impact Statement (DEIS)
A concise public document prepared by a Federal or State agency to aid an agency's compliance with NEPA/SEPA and support its determination of whether to prepare an Environmental Impact Statement or a Finding of No Significant Impact. The general FHWA criteria for preparing a DEIS is found at 23 CFR 771.115 and the procedures for issuance at 23 CFR 771.123.

Endangered Species Act (ESA)
Section 7(a)(2) of the Endangered Species Act (16 USC § 1531 *et seq.*) requires that federal agencies, in consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), take such actions as necessary to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of such endangered or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary of the Interior or Commerce, as appropriate, to be critical. All NCDOT projects must comply with Section 10 of the ESA, which prohibits a landowner's activities affecting these protected species and their habitats unless authorized by an "incidental take" permit. Section 10 does not protect plants unless there is a Federal nexus.

Environmental Assessment (EA)
The preliminary environmental document, which includes those, project or program actions which may or may not result in a significant environmental impact. The FHWA criteria and procedures for EAs are contained at 23 CFR 771.115 and 771.119. The SEPA criteria for an EA are established by NCDOT pursuant to SEPA.

Environmental Features Map
A topographic or photogrammetric map of the study area illustrating resource areas of concern for both the natural and human environments. This mapping is used to identify potential alternatives that warrant study on a screening level basis.

Evaluation Criteria (Screening Evaluation Criteria or Performance Measures)

Occasionally, a project's range of reasonable alternatives present enough complexity (or potential difficulty in eliminating alternatives) that NCDOT needs to use alternatives evaluation criteria (aka performance measures or goals) to compare/contrast various alternatives. Such measures are typically tied to a project's P&N. They create a threshold to be met by all viable alternatives, which affords NCDOT (and our regulatory partners) a documented process to eliminate alternatives that do not meet the criteria. They cannot be arbitrary or designed to eliminate a particular alternative. As with P&N, NCDOT must be careful to not create a bias for or against a reasonable alternative when considering evaluation criteria. Special consideration must be applied when a particular alternative may need approval under other laws such as Section 4(f) and Section 404 of the CWA, both of which include specific alternatives analysis requirements. Evaluation criteria may also include extraordinary costs, community impacts, and regulatory compliance requirements.

Express Design Evaluation

Initial step in the planning and design process for a candidate project that describes the project, estimates preliminary costs, and identifies any potential problems. This evaluation investigates conceptual design option(s) and prepares costs needed for the prioritization process (SPOT). Please see the Merger Screening Guidance for more information.

Federal Lead Agency

The Federal Lead Agency (Lead Federal Agency) is the agency that has the primary responsibility for compliance with NEPA (federal environmental documentation). Where federal-aid funding is anticipated on a federal (USDOT) action, or where federal transportation approval is needed for an action, the U.S. Department of Transportation (FHWA) shall be the Federal lead agency in the environmental review process for a project. Where no federal-aid funding or federal transportation approvals are anticipated, the USACE will normally be the lead agency. Please see the MOU Attachment A: Merger Roles and Responsibilities for more information.

Final Environmental Impact Statement (FEIS)

The final environmental document for a project or program action which incorporates and addresses substantial concerns identified by the public or from review agencies following the issuance of the DEIS. FHWA requirements are specified at 23 CFR 771.125. USACE requirements are specified at Appendix B to Part 325 – NEPA Implementation Procedures for the Regulatory Program.

Finding of No Significant Impact (FONSI)

Note that while the term "EIS" is used below, this also applies to EAs.
A Finding of No Significant Impact is the decision document for an Environmental Assessment.
As noted in Council on Environmental Quality's (CEQ's*) Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulation (1986)*, the FONSI is a document in which the agency briefly explains the reasons why an action will not have a significant effect on the human environment and, therefore, why an EIS will not be prepared. The finding itself need not be detailed; but must succinctly state the reasons for deciding that the action will have no significant environmental effects, and, if relevant, must show which factors were weighted most heavily in the determination. In addition to this statement, the FONSI must include, summarize, or attach and incorporate by reference, the environmental assessment.

The EA or FONSI must document compliance with NEPA and other applicable environmental laws, Executive Orders, and related requirements. If full compliance with these other requirements is not

possible by the time the FONSI is prepared, the documents must reflect consultation with the appropriate agencies and describe when and how the requirements will be met.

Hydraulic Planning Report (HPR)

Used to determine the length of bridge or size of culvert that is needed for hydraulic conveyance. Culverts are considered major structures if they are equal to or larger than a 72-inch pipe or have an opening equal to or greater than 30 square feet.

Independent Utility

Also see Segmentation and Logical Termini. Note that while the term "EIS" is used below, this also applies to EAs.

An independent utility analysis focuses on whether or not a proposed project is a "stand alone" project (i.e., doesn't require/force the construction of another project) and will not cause segmentation, either to it or to another project (see Segmentation). That is, a project has independent utility if it serves a distinct purpose or function and will not necessitate the construction of another project to meet its purpose and need. The Council on Environmental Quality (CEQ) regulations use the term "unconnected single actions" to describe this concept. According to 40 CFR 1508.25(a), if an action i) does not automatically trigger other actions potentially requiring an EIS, ii) is not an interdependent part of larger actions it depends for its justification, and iii) does not require prior or simultaneous actions to be taken for the action to proceed, then the action should be said to demonstrate "independent utility" and the scope of the EIS should be for the direct, indirect, and cumulative impacts of the proposed action only.

Least Environmentally Damaging Practicable Alternative (LEDPA)

Also see "Section 404(b)(1) Guidelines"

To be the LEDPA, an alternative must meet the purpose of the project and comply with the requirements of the 404(b)(1) Guidelines (Guidelines). The Guidelines, at 40 CFR 230.10(a) require that "…no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."

As such, the LEDPA is the alternative that would have less adverse impact on the aquatic ecosystem (Waters of the U.S.) than the other alternatives under consideration, so long as that alternative does not have other significant adverse environmental consequences. Per 40 CFR 230.10(a)(2), an alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purpose(s). The evaluation of practicable alternatives must consider the impact to waters of the U.S. that would result from an alternative before compensatory mitigation is considered. For Merger Projects, the selection of a LEDPA also occurs after the public and other parties have had an opportunity to review and comment on alternatives under consideration. The USACE can only permit the LEDPA. This term refers to the 404(b)(1) Guidelines and not to NEPA. In the Merger Process, the selection of the LEDPA is Concurrence Point 3.

The AASHTO Practitioner's Handbook 14, titled, "Applying the Section 404(B)(1) Guidelines in Transportation Decision Making" provides detailed information about the Guidelines and the LEDPA determination.

Level of Service (LOS)

A qualitative assessment of a road's operating conditions. It is a standard measurement used by transportation officials which reflects the relative ease of traffic flow on a scale of A to F. LOS A is free-flow with no delays while LOS F is rated congested and significant delays.

Logical Termini

Also see Segmentation and Independent Utility.

Logical termini for project development are defined as (1) rational end points for a transportation improvement, and (2) rational end points for a review of the environmental impacts. Please see the FHWA Development of Logical Project Termini guidance for more information.

Long Range Transportation Plan (LRTP)

A plan with a 20-year minimum planning horizon that must be updated every three to five years and is only required for Metropolitan Planning Organizations (MPO). It incorporates all modes of transportation, including transit, bicycle, pedestrian, rail, aviation, ports and ferries. The plan may be viewed as a layering of fiscally constrained plans with each layer equating to a separate, but integrated, mode of transportation.

Major Hydraulic Structures

All bridges over waterbodies are considered major structures. Culverts are considered major structures if they are equal to or larger than a 72-inch pipe or have an opening equal to or greater than 30 square feet. The Merger Team concurs on the major hydraulic structure recommendations at Concurrence Point 2A.

Mass Transit Alternative

A Mass Transit Alternatives may be evaluated during alternatives analysis where applicable. These alternatives include bus or rail passenger service and could include the implementation of express lanes for transit vehicles.

Merger Management Team (MMT)

The Merger Management Team is comprised of representatives from NCDOT, FHWA, USACE, and NCDWR. The MMT will address program-specific questions, participate in the Conflict Resolution Process, review project-specific challenges, and assess issues arising from Merger Meetings. Please see the MOU Attachment A: Merger Roles and Responsibilities for more information.

Merger Plan

The Merger Plan is a project-specific plan intended to outline how the Merger Process will be conducted for an individual project; it provides the Merger Team with flexibility to identify the best approach to evaluate a specific project in the Merger Process, rather than to simply meet a schedule. The Merger Plan should be developed after Merger Pre-Screening and updated as needed through the Merger Process.

Merger Pre-Meeting

Prior to a scheduled concurrence point, the NCDOT Project Team may host a call or meeting with select members of the Merger Team to solicit any questions/concerns and to confirm assumptions/data prior to the meeting. These pre-meetings should include, at a minimum, NCDOT, FHWA (for federal projects), USACE, and NCDWR. Pre-meetings are required for CP 1 and CP 3 and strongly encouraged for other concurrence points on large or complex projects. Please see the Merger Basics Guidance for more information.

Merger Pre-Screening

NCDOT uses the Merger Pre-Screening process to determine if a project needs a formal Merger Screening coordination with the Merger MOU Signatories. There are two possible outcomes of pre-screening: 1) the Merger Process is not recommended for the project; or 2) Merger Screening is

recommended. If NCDOT EPU agrees that Merger Screening is appropriate, then NCDOT EPU will coordinate with the NCDOT Project Manager to determine how to accomplish Merger Screening. Please see the Merger Pre-Screening Guidance for more information.

Merger MOU Signatories

The four agencies (N.C. Department of Transportation; Federal Highway Administration, North Carolina Division; N.C. Department of Environmental Quality; and U.S. Army Corps of Engineers, Wilmington District) identified as primary signatories within the Memorandum of Understanding for the Section 404/NEPA Merger Process. They are the primary decision-making authorities with regards to NEPA and Section 404 permitting, and thus are the owners of the Merger Process and responsible for the successful implementation of the Merger Process, both holistically and project by project. They are also responsible for conflict or dispute resolution under the MOU and guidance contained herein. This term is inclusive of the representatives of the respective agencies throughout the Merger Process (e.g. the FHWA Director of Preconstruction and Environment represents FHWA on the Merger Management Team, but a Preconstruction and Environment Engineer/Specialist would represent FHWA on a project team).

Merger Screening

Merger Screening is the formal process where the NCDOT Project Team coordinates with the Merger MOU Signatories to decide if a project should be placed into the Merger Process. The decision to place a project into the Merger Process is made based on an evaluation of available project information with respect to key Merger indicators, including CWA Section 404 requirements, proposed project activities, potential conflicting resource impacts, and amount of impacts to Waters of the U.S. and other resources. Merger Screening will occur during or following development of the Project Scoping Report and completion of the Merger Pre-Screening Form.

Merger Screening Meeting

A meeting that is held with the NCDOT Project Team, NCDOT EPU, and the Merger MOU Signatories. At this meeting, the decision to include a project in the Merger Process is then made jointly by NCDOT, FHWA (if involved with the respective project), USACE, and NCDWR.

Metropolitan Planning Organization (MPO)

A regional policy body, required in urbanized areas with populations over 50,000, that is responsible for carrying out the metropolitan planning requirements of federal highway and transit legislation in cooperation with state and other transportation providers; develops transportation plans and programs for the metropolitan area. See the NCDOT MPO directory for MPO contacts in your project area.

Meeting Summary

At the end of each Merger Meeting, the Project Manager, will summarize the results of the meeting, including agreements or concurrence points achieved. If agreement or concurrence is not obtained, the next steps or action items will be clearly identified. If additional information or action is required, the type of information or action needed and the responsible agency(ies) or team member(s) will be clearly noted.

Metropolitan Transportation Plan (MTP)

The official intermodal transportation plan that is developed and adopted through the metropolitan transportation planning process for the metropolitan planning area, in accordance with 23 U.S.C. 134, 23 USC 135 and 49 U.S.C. 5303.

National Environmental Policy Act of 1969 (NEPA)

National Environmental Policy Act of 1969 (NEPA) is an umbrella law that encompasses a wide range of environmental laws. It requires that federal agencies consider environmental consequences in their totality when developing their projects and programs. NEPA ensures agencies consider the significant environmental consequences of their proposed actions and inform the public about their decision making. Please see 23 CFR 771 for more information.

Need

See "Purpose and Need" below.

NEPA/SEPA class of action

Three basic "classes of action" are allowed and determine how compliance with NEPA is carried out and documented. An Environmental Impact Statement (EIS) is prepared for projects where it is known that the action will have a significant effect on the environment. An Environmental Assessment (EA) is prepared for actions in which the significance of the environmental impact is not clearly established. Should environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment, a Finding of No Significant Impact (FONSI) is issued. Categorical Exclusions (CEs) are issued for actions that do not individually or cumulatively have a significant effect on the environment.

No-Build (No Action) Alternative

Note that while the term "EIS" is used below, this also applies to EAs.

As noted in *NEPA's Forty Most Asked Questions,* [the implementing regulations] require the alternatives analysis in the EIS to "include the alternative of no action." "No action"…would mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward. Where a choice of "no action" by the agency would result in predictable actions by others, this consequence of the "no action" alternative should be included in the analysis. For example, if denial of permission to build a railroad to a facility would lead to construction of a road and increased truck traffic, the EIS should analyze this consequence of the "no action" alternative…Accordingly, the regulations require the analysis of the no action alternative even if the agency is under a court order or legislative command to act. This analysis provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives. It is also an example of a reasonable alternative outside the jurisdiction of the agency which must be analyzed.

Non-concurrence

Non-concurrence implies that the agency or organization does not concur due to insufficient information, or they believe that concurrence would violate the laws and regulations of their program or agency. Please see the Merger MOU for more information.

North Carolina Riparian Buffers

A set of rules within specific watersheds in North Carolina that protect a riparian buffer which is a vegetated area bordering a body of water, such as a stream, lake or pond.

One Federal Decision

Executive Order (E.O.) 13807: Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects, was issued on August 15, 2017. It requires Federal agencies to process environmental reviews and authorization decisions for "major infrastructure projects" as One Federal Decision (OFD) and sets a government-wide goal of reducing, to two years, the

average time for each agency to complete the required environmental reviews and authorization decisions for major infrastructure projects, as measured from the date of publication of a notice of intent to prepare an environmental impact statement. Major infrastructure projects are projects requiring an EIS.

Participating Agencies

The Merger Team is comprised of the appropriate MOU Signatories and other agencies that are considered participating agencies. The composition of agencies on each Merger Team varies depending on the subject project's location and scope. This term will be used synonymously with "Merger Team Member." Please see the MOU Attachment A: Merger Roles and Responsibilities for more information.

Practicable Alternative under the Section 404(b)(1) Guidelines (40 CFR Part 230.10(a))

Under the Section 404(b)(1) Guidelines (Guidelines), practicable alternatives include, but are not limited to: 1) Activities which do not involve a discharge of dredged or fill material into the waters of the United State or ocean waters; and, 2) Discharges of dredged or fill material at other locations in waters of the United States or ocean waters.

An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purpose(s). **An alternative needs to fail only one practicability factor to be eliminated during the screening process**:

• Costs - Cost is analyzed in the context of the overall scope/cost of the project and whether it is unreasonably expensive. This determination is typically made in relation to comparable costs for similar actions in the region or analogous markets. If costs of an alternative are clearly exorbitant compared to those similar actions, and possibly the applicant's proposed action, they can be eliminated without the need to establish a cost threshold for practicability determinations. The data used for any cost must be current with respect to the time of the alternatives analysis. However, just because one alternative cost more than another does not mean that the more expensive alternative is impracticable. It is important to note that in the context of this definition, cost does not include economics. Economic considerations, such as job loss or creation, effects to the local tax base, or other effects a project is anticipated to have on the local economy are not part of the cost analysis;

• Existing Technology - The alternatives examined should consider the limitations of existing technology yet incorporate the most efficient/least-impacting construction methods currently available. For example, alternatives to a proposed highway that occur in unstable or dynamic soils may not be practicable due to a lack of technology to ensure the road will not crumble or collapse. Implementation of state of the art technologies might be available and should be considered if applicable. Engineered retaining walls and cantilevered road ways can also be incorporated into an alternative that substantially minimizes wetland or water impacts by eliminating fill slopes. However, it is recognized that such actions may result in the alternative being determined as impracticable due to costs; and,

• Logistics - The alternatives evaluated may incorporate an examination of various logistics associated with the project, i.e., placement of facilities within a specified distance to major thoroughfares, utilization of existing storage or staging areas, and/or safety concerns that cannot be overcome.

Preliminary Alternatives Impact Table
A table that allows clear comparison of pertinent impacts for each alternative on various human and natural environmental resources. These tables are used in Merger Packets, chiefly those for CP 2 and CP 3, as well as environmental documents to evaluate multiple alternatives.

Prioritization
NCDOT has developed a prioritization process to assist the state in determining which projects are added to the State Transportation Improvement Program. Its purpose is to 1) create a formal, documented and visible process, 2) collaborate between NCDOT and stakeholders, 3) rank projects with appropriate perspective (statewide, regional, local), 4) allows for the business case to be made for additional flexibility and funding, and 5) the outcome and data-driven approach is geared towards meeting the goals and objectives.

Project Manager
NCDOT will have a designated Project Manager to oversee the project from the Initiation stage through to construction letting. At any given juncture, they may designate a consultant or another NCDOT staff member to speak on behalf of the project, but there will always be a single NCDOT Project Manager to oversee the project's progress.

Project Scoping Report (PSR)
NCDOT's Project Scoping Report (PSR) provides basic information on the proposed project, environmental features mapping, some alternative concepts or conceptual design, other nearby projects, and a summary of potential impacted resources in the project scoping study area. The PSR may still be in draft format at the time of Merger Pre-screening and Merger Screening. Please see the Merger Pre-Screening Guidance for more information.

Purpose and Need
The purpose and need establishes why the project is proposed and is the foundation used to determine if alternatives meet the established need(s) in the study area. The project team will solicit comments from agencies, stakeholders, and the public on the Purpose and Need. Establishing Purpose and Need is the first concurrence point of the Merger Process. Please see Concurrence Point 1 Guidance, 40 CFR § 1502.13., "LEDPA", "Evaluation Criteria", and "Section 404(b)(1) Guidelines" for more information.

Project Initiation
The phase of project delivery that includes long range planning, express design development, project prioritization, and project scoping. Please see the Merger Pre-Screening Guidance for more information.

Range of Alternatives (for NEPA)
A noted in *NEPA's Forty Most Asked Questions*, the phrase "range of alternatives" refers to the alternatives discussed in environmental documents. It includes all reasonable alternatives, which must be rigorously explored and objectively evaluated, as well as those other alternatives which are eliminated from detailed study with a brief discussion of the reasons for eliminating them. Section 1502.14. A decisionmaker must not consider alternatives beyond the range of alternatives discussed in the relevant environmental documents. Moreover, a decisionmaker must, in fact, consider all the alternatives discussed in an EIS. Please see 40 CFR § 1505.1(e) for more information.

Record of Decision (ROD)
The ROD is the final step in the EIS process and is the lead agency's (normally FHWA) decision that identifies the alternative that has been selected for implementation. The ROD should: (1) state the basis

for the decision, (2) identify all the alternatives considered and specify the "environmentally preferable alternative", and (3) state whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted and, if not, why they were not. The ROD may not be issued sooner than 30 days after the approved final EIS is distributed, nor 90 days after the Draft EIS is circulated. After circulation of a draft EIS and consideration of comments received, the lead agencies, in cooperation with the applicant (if not a lead agency), must combine the final EIS and ROD, to the maximum extent practicable. Please see 23 CFR §771.124 for more information.

For projects where the USACE is the lead federal agency, the ROD serves as the permit decision for the project.

Rural Planning Organization (RPO)

Rural Planning Organizations (RPOs) work cooperatively with the state to plan rural regional transportation systems and to advise the department on rural transportation policy. See the NCDOT RPO directory for RPO contacts in your project area.

SAFETEA-LU

The **Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users** (SAFETEA-LU) signed into law on August 10, 2005. This law guaranteed funding for highways, highway safety, and public transportation totaling $244.1 billion. The **Bipartisan Infrastructure Law** (BIL) was signed into law on November 15, 2021, superseding SAFETEA-LU. The BIL provides $550 billion over fiscal years 2022 through 2026 in new Federal investment in infrastructure.

Section 6002

Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)

SAFETEA-LU provides a formal process for resolving serious issues that may delay the project or result in a denial of a required approval for the project. NCDOT or the Governor of North Carolina may invoke the Section 6002 process for issue resolution at any time. While the Section 6002 process is a tool available to States and project sponsors for resolving issues of concern, there are other options that are available to Lead and Participating agencies. Those options include this Implementation Guidance for Conflict or Dispute Resolution, other procedures embodied in a coordination plan, and the CEQ referral process under 40 CFR Part 1504.

Section 404 Clean Water Act (CWA) (33 USC § 1344)

Section 404 Clean Water Act (CWA) (33 USC § 1344) requires authorization from the Secretary of the Army, acting through the USACE, for the discharge of dredged or fill material into all waters of the U.S., including wetlands. Discharges of fill material generally include, without limitation, placement of fill that is necessary for the construction of any structure or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; dams and dikes; artificial islands; property protection or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for intake and outfall pipes and sub-aqueous utility lines; fill associated with the creation of ponds; and any other work involving the discharge of fill or dredged material. A USACE permit is required whether the work is permanent or temporary. Examples of temporary discharges include dewatering of dredged material prior to final disposal and temporary fills for access roadways, cofferdams, and storage and work areas.

Section 404(b)(1) Guidelines

Also see "Least Environmentally Damaging Practicable Alternative (LEDPA)"

Note that while the term "EIS" is used below, the information also applies to EAs.

The USACE is required to review all permits in accordance with the Section 404(b)(1) Guidelines of the Clean Water Act (40 CFR Part 230). The Guidelines specifically require that "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences". 40 CFR 230.10(a).These guidelines require that permits for work in waters of the U.S. (i.e., most wetlands, streams, rivers, lakes, etc.) can be issued only after all appropriate and practicable steps to avoid and minimize impacts have been taken and no permit may be issued for a proposed project if a practicable alternative exists that would have less adverse impact on the aquatic environment (known as the least environmentally damaging practicable alternative the LEDPA), provided that alternative does not have other significant adverse environmental consequences. Practicable alternatives include those alternatives that are "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose."

The requirements of Section 404(b)(1) Guidelines are typically more stringent that those of NEPA because the Guidelines require selection of the least environmentally damaging practicable alternative (i.e., the LEDPA). The USACE's determination of "practicability" under the Guidelines is distinct from the determination of "reasonableness" under NEPA for alternatives. Please see 40 CFR § 230 for more information.

The AASHTO Practitioner's Handbook 14, titled, "Applying the Section 404(B)(1) Guidelines in Transportation Decision Making" provides detailed information about the Guidelines and the LEDPA determination.

Section 4(f) of the Transportation Efficiency Act of 1966

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 prohibits the Federal Highway Administration (FHWA) and other USDOT agencies from using land from publicly owned parks, recreation areas (including recreational trails), wildlife and waterfowl refuges, or public and private historic properties, unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a use.

Section 6(f) of the Land and Water Conservation Act of 1965

Section 6(f)(3) of the Land and Water Conservation Act of 1965 states that no property acquired or developed with Land and Water Conservation Fund (LWCF) money shall be converted to other than public outdoor recreation uses without the approval of the Secretary of the Interior. If approved, the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location is required.

Section 10 of the Rivers and Harbors Act of 1899

Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 USC § 403) requires authorization from the Secretary of the Army, acting through the USACE, for the construction of any structure in, under, or over navigable waters of the U.S. Work or structures outside the limits defined for navigable waters of the U.S require a Section 10 permit if the work or structure affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable water of the U.S., and it applies to all structures, from the smallest floating dock to the largest commercial undertaking. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap,

revetment, bulkhead), mooring structure such as a piling, aerial or sub-aqueous power transmission line, intake or outfall pipe, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aid to navigation, and any other permanent or semi-permanent obstacle or obstruction.

Section 106 of the National Historic Preservation Act of 1966

Section 106 National Historic Preservation Act (NHPA) of 1966 (54 USC § 3001) requires that the head of any federal agency having direct or indirect jurisdiction over a proposed federal or federally assisted undertaking in any state and the head of any federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). The State Historic Preservation Office (SHPO) is responsible for the Section 106 process in North Carolina, with oversight by the Advisory Council on Historic Preservation (ACHP).

Section 401 of the Clean Water Act

Section 401 of the Clean Water Act states that a federal agency may not issue a permit or license to conduct any activity that may result in any discharge into waters of the United States unless a state or authorized tribe where the discharge would originate issues a Section 401 water quality certification verifying compliance with existing water quality requirements or waives the certification requirement. The NCDWR is responsible for the 401 certification program in North Carolina, with oversight by the USEPA.

Section 404 Permits

The Corps of Engineers authorizes impacts to waters of the U.S. for a project by general or standard permit(s).

Standard permits: Individual Permits (IPs) are a type of standard permit. IPs are required for projects that would have more than minimal effects, both individually and cumulatively, to the aquatic environment. Once an application for an IP is reviewed, the USACE will advertise it by public notice. To evaluate a project under an IP, the particular project will be processed in accordance with the USACE's implementing regulations (33 CFR Parts 320-332), which includes a Public Interest Review, and will be subject to a project-specific 404(b)(1) Guidelines analysis (40 CFR Part 230). Most Merger Projects will be IP level projects, with the exception of RGP 31 projects (note that the Corps will determine if RGP 31 will be used (vs. and IP) after completion of the Merger Process).

General permits: Nationwide Permits (NWPs) and Regional General Permits (RGPs) are types of general permits. These permits are reserved for projects that would have no more than minimal effects, both individually and cumulatively, to the aquatic environment. NWPs are issued for use nationwide. In North Carolina, RGPs are issued by the USACE, Wilmington District, for use statewide, or for particular areas in the State. All NWPs and RGPs must be issued for use every five years. When an applicant wishes to obtain authorization under a particular NWP or RGP, they must review the requirements to determine if (1) their project does or does not require submission of a pre-construction notification (PCN) to the USACE, or (2) submit a PCN to the USACE to obtain written verification from the USACE before proceeding. If a PCN is required, the USACE will review the project and will (1) issue a NWP or RGP verification letter (authorization) for that project, or (2) notify the applicant that the project will be elevated to an IP (note that this is not typical).

For those projects that are non-notifying projects under a particular NWP or RPG, the permittee is still conducting the work in waters of the U.S. a permit (e.g., the applicable NWP or RGP) and must comply with all terms and applicable general and regional conditions (for NWPs) and all terms and applicable special and general conditions (for RGPs).

Segmentation

Also see Independent Utility and Logical Termini.

Illegal segmentation is when an agency artificially divides a major federal action into smaller components to avoid application of NEPA to some of its segments/parts. Segmentation will not occur if a project:

(1) Has logical termini;
(2) Has independent utility;
(3) Does not restrict the consideration of alternatives for other transportation projects; and
(4) Does not irretrievably commit federal funds for closely related projects.

If a proposed project does not meet those criteria, it may be unlawfully segmented. After completion of the NEPA decision documents, projects may be divided into phases during construction to account for funding availability, contracting, constructability, etc.

Slope stake limits

Slope stake limits determine the point at which the proposed slope of a roadway intersects the existing ground, which define the construction limits. These limits are used to calculate environmental impacts with a specified buffer.

North Carolina Environmental Policy Act (SEPA)

The North Carolina Environmental Policy Act of 1971 (SEPA) requires state agencies to review and report the environmental effects of all activities that: 1) involve a state action, 2) involve an expenditure of public money or private use of public land, and 3) have a potential environmental effect. This may include some local government projects. If SEPA applies, the state agency involved must process an environmental document through the State Clearinghouse under the North Carolina Department of Administration before a permit, license, grant, or other state authority can be completed. See North Carolina Policy Act § 113A-1.

State Transportation Improvement Program (STIP)

The STIP is a multi-year capital improvement document which denotes the scheduling and funding of construction projects across the state over a minimum 4-year time period as required by Federal law. North Carolina's STIP covers a 10-year period, with the first six years referred to as the delivery STIP and the latter four years as the developmental STIP. North Carolina's STIP is generally updated every two years and developed in concert with federal and state revenue forecasts.

Project Study Area

The area in which alternatives are developed to meet the Purpose and Need for the proposed improvement and the boundary in which potential effects are most likely to occur. The boundary of a study area should be large enough that it covers reasonable alternatives, but not so large that NCDOT expends resource (time and budget) on resources that will not be affected by the project. Project study area is determined at CP 1, but can be amended later, if necessary.

Transportation Demand Management Alternative (TDM)

TDM is a term given to a variety of measures used to improve the efficiency of the existing transportation system. TDM addresses traffic congestion by reducing travel demand for the existing transportation system rather than increasing transportation capacity and focuses on alternatives such as ridesharing, flexible work schedules, telecommuting, guaranteed ride programs, bicycling, walking, and transit.

Transportation System Management Alternative (TSM)

TSM alternatives may be evaluated in alternatives analysis where applicable. TSM measures focus on operational improvements that aim at minimizing inefficient travel and include, but are not limited to optimizing traffic signal timing, signal coordination, ramp metering, speed restrictions, access control, special events management strategies, incident management, and turn prohibitions. TSM operational measures usually can be implemented easily and require little capital investment, relative to build alternatives. TSM physical improvements include such measures as grade separations, adding turning lanes, intersection realignments, or installing new traffic signals.

U.S. Coast Guard Permit

Section 9 of the Rivers and Harbors Act of 1899 and the General Bridge Act of 1946 gives the U.S. Coast Guard the authority to protect navigable waters of the United States. Navigable waters are those waters that at some time, in the past, present, or future are used to transport interstate or foreign commerce.

Waters of the US

"Waters of the United States" is a threshold term in the Clean Water Act and establishes the scope of federal jurisdiction under the Act. Clean Water Act programs, including Water Quality Standards, TMDLs, and sections 311, 402, and 404 address "navigable waters," defined in the statute as "the waters of the United States, including the territorial seas." On June 9, 2021, EPA and Department of the Army announced their intent to initiate a new rulemaking process that restores the protections in place prior to the 2015 WOTUS implementation and develops a new rule to establish a durable definition of "waters of the United States." Please see the EPA Waters of the United States guidance for more information.

WEX/WET file

A WEX file is a CAD file created for a Natural Resources Technical Report (NRTR) that shows the potentially jurisdictional waterbodies within a project study area. The WEX file is finalized into a WET file once the waterbodies in a project study area are determined jurisdictional in a Preliminary Jurisdictional Determination (PJD) or an Approved Jurisdictional Determination (AJD) by the US Army Corps of Engineers (USACE).