

# ARTICLE NO. 06

## EXAMPLE PROCESS FLOWS FOR ADVANCING LOCAL PROJECTS WITH FEDERAL-AID (FHWA)

*Provided are descriptions of typical steps with corresponding flow diagrams included at the end of the article to present the following:*

- **OVERVIEW OF THE PLANNING AND PROJECT DEVELOPMENT PROCESS—[Narrative Description of Steps](#) and associated [Flow Diagram](#)**
- **OVERVIEW OF THE PROJECT DESIGN AND IMPLEMENTATION PROCESS—[Narrative Description of Steps](#) and associated [Flow Diagram](#)**

*The information presented is not program-specific and, thus, may differ somewhat depending upon the funding program involved. Also, there are often unique circumstances that may result in deviations from these paths and the length of the processes will vary with the complexity of the project. Department staff will provide additional guidance throughout the processes.*

*The full detail of the process, particularly rules of eligibility, special provisions, requirements, or constraints is not within the purview of this reference document. It is imperative that municipal staff contact their regional planning organization (RPO) early in the process for guidance.*

*This simple guide is a product of coordination between:*

*the Federal Highway Administration, University of Connecticut's CTI-Technology Transfer Center and the State of Connecticut Department of Transportation.*

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*Other articles in the Reference Series: Transportation in Connecticut are posted at the Department's website ([www.ct.gov/dot](http://www.ct.gov/dot)) and can be located by navigating to Publications > Pamphlets. In addition to the CT DOT website, the Local Project Administration website of the University of Connecticut's CTI-Technology Transfer Center provides many resources for municipal staff and managers of local projects: [www.t2center.uconn.edu](http://www.t2center.uconn.edu).*

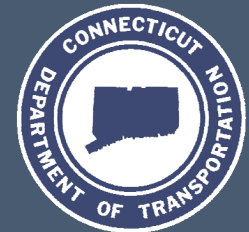
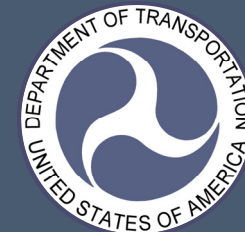
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Connecticut Department of Transportation  
2800 Berlin Turnpike  
P.O. Box 317546  
Newington, CT 06131-7546

Website: [www.ct.gov/dot](http://www.ct.gov/dot)

## REFERENCE SERIES: Transportation in Connecticut

This simple guide, through descriptions and illustrations of **Example Process Flows**, provides insight on how local transportation projects in Connecticut funded with Federal-aid under the Federal Highway Administration (FHWA) are administered. The typical steps, order and participant roles in the planning and project development process as well as project design and implementation process are presented.



# CONNECTICUT



## planning and project development

*The process described below is an example of the typical steps and order for the Planning and Project Development of local projects with Federal-aid participation. Later in this article, a [flow diagram](#) that includes greater visual detail for each step described herein is provided to assist Local Public Agencies (LPAs) in navigating the process.*

**IDENTIFY ISSUE, NEED OR DEFICIENCY** — A project purpose and need must be identified, such as roadway deficiencies relating to capacity or safety, intermodal connectivity, or the interest in enhancing accessibility.

**DEVELOP PROJECT CONCEPT AND RESEARCH AVAILABLE LOCAL RESOURCES (FUNDING, STAFFING, ETC.)** — A recommended solution, often referred to as a project concept, should then be developed and discussed with the regional planning organization (RPO). The LPA should carefully review available local resources to ensure that adequate funds will exist to match federal dollars. Be reminded that federal dollars are not eligible match to federal dollars, except in extremely rare cases.

**FEDERAL-AID AWARD NOT YET OBTAINED** — When a Federal-aid funding source has not yet been identified or an anticipated award of federal funds will leave a funding shortfall, the LPA should first review the funding program overviews provided in Article No. 2 in the [Reference Series: Transportation in Connecticut](#).

**FEDERAL-AID AWARD ALREADY PENDING** — When Federal-aid funding has already been identified in advance for the project concept, the LPA should contact the RPO to discuss the project concept and anticipated Federal-aid. This scenario may be triggered if the LPA receives a notice of a pending award, such as in response to a Congressional earmark or request for funding.

**DISCUSS PROJECT CONCEPT AND RESOURCES** — The LPA should contact the RPO to discuss the project concept and interest in Federal-aid. The LPA, in concert with the RPO, must determine that the proposed project area and improvement qualifies for use of federal funds.

**RECOMMENDATION** — The RPO will assist the LPA in identifying the appropriate funding source as well as evaluating the project concept. Options or modifications may be suggested at this time for improving the scope and/or meeting requirements of Federal-aid programs.

**COORDINATE REGARDING PROJECT CONCEPT AND PLANNING PROCESS** — As part of the planning process, the RPO will identify the appropriate venue for coordinating with the Department and any additional information needs, such as application materials or documentation. The RPO will work to determine availability of funds and further review eligibility constraints in concert with the LPA and the Department.

**COMPLETE APPLICATION MATERIALS, PROVIDE DOCUMENTATION AS REQUESTED, AND PRIORITIZE PROJECT LOCALLY** — After the LPA completes any application materials or other documentation identified as necessary, the RPO must prioritize the project and forward the necessary documents to the Department. The LPA and RPO will need to work towards including the project in comprehensive plans and capital programs, as necessary.

**FORMAL REVIEW AND SCOPING OF PROJECT CONCEPT, INCLUDING RESOURCE/SCHEDULE/COST EVALUATION** — The Department will perform a formal review of the project scope, Federal-aid eligibility, available local resources, anticipated available Federal-aid program balances, as well as an evaluation of estimated project schedule and costs.

**PROJECT SCOPE CONFIRMATION MEETING GO/NO GO** — The Department will meet with the RPO and LPA after completing its review. This is often referred to as a Project Scope Confirmation Meeting. The Department and the LPA review the project scope, budget and schedule and discuss the responsibilities for all phases of the project. The Department's project engineer outlines the State and federal requirements associated with the project. At this time, all parties evaluate whether to proceed with the project based on the findings of the scoping report.

**LOCAL ENDORSEMENT, COORDINATION AND PUBLIC INVOLVEMENT** — Often, an initial public outreach is performed to ensure that there is no significant public opposition to the proposed project concept. The level of public involvement is relative to the scope of the project. Public involvement opportunities continue to be provided throughout the project development process. This is also the period when the LPA arranges for municipal commitment to the project and local share, typically via a resolution of the governing financial body.

**PROJECT INITIATION THROUGH DEVELOPMENT OF A RECOMMENDED PROJECT MEMORANDUM (RPM)** — When a project is initiated, a recommended project memorandum (RPM) is prepared by the project manager at the Department. The RPM outlines the project scope, estimated costs, and proposed sources of funding and is based on review of the project concept and prior discussions with the RPO and LPA.

**TIP/STIP/AIR QUALITY CONFORMITY, FUNDING COMMITMENTS AND PUBLIC INVOLVEMENT AND CONTINUED PROJECT DEVELOPMENT** — The LPA will need to work with the Department to develop the project scope; satisfy TIP/STIP endorsements, air quality conformity, and commitment requirements for matching funds; and offer opportunities for public involvement as well as enter into agreements with the State. For additional information relating to the Statewide Transportation Improvement Program (STIP), refer to Article No. 05 in the [Reference Series: Transportation in Connecticut](#).

**PRELIMINARY DESIGN (PD) AUTHORIZATION GO/NO GO** — The RPM is utilized by the Department's fiscal staff to develop a formal request of the Federal Highway Administration (FHWA) for authorization of the federal funds. Without this authorization, federal funding is not available for the next project phases.

**PROJECT DESIGN AND IMPLEMENTATION (detailed in separate process flow)** — Ultimately, the LPA will prepare design materials, continue public involvement initiatives, meet environmental permitting requirements and implement the project. The [Project Design and Implementation Process](#) is detailed further in a separate process flow in this article. For additional information relating to the Project Design and Implementation Process, refer to Article No. 01 and other articles in the [Reference Series: Transportation in Connecticut](#) available from the Department's website at [www.ct.gov/dot](http://www.ct.gov/dot), by navigating to Publications > Pamphlets.

## project design and implementation

*The process described below is an example of the typical steps and order for the Project Design and Implementation of local projects with Federal-aid participation. Later in this article, a [flow diagram](#) that includes greater visual detail for each step described herein is provided to assist Local Public Agencies (LPAs) in navigating the process.*

**PLANNING AND PROJECT DEVELOPMENT (detailed in separate process flow)** — The [Planning and Project Development Process](#) is detailed in a separate process flow in this article. For additional information relating to the Planning and Project Development Process, refer to Article No. 01 and other articles in the [Reference Series: Transportation in Connecticut](#) available from the Department's website at [www.ct.gov/dot](http://www.ct.gov/dot), by navigating to Publications > Pamphlets.

**ADVERTISING FOR DESIGN CONSULTANT AND AWARD** — Design may be performed in-house by the LPA or be contracted out. If the LPA staff does not have the necessary expertise, the LPA must have the ability to hire consultants for designing the project. In cases where the LPA plans to utilize Federal-aid for a design consultant, the selection of the consultant must follow the Brooks Act (23 CFR 172.5) which requires the consultant to be hired through a Qualifications Based Selection (QBS) process. Procurement of such services must be done in accordance with State and federal procedures, including the [Consultant Selection, Negotiation and Contract Monitoring Procedures for Municipally Administered Projects](#) available at the Local Roads Unit page on the Department's website.

**DESIGN AGREEMENT BETWEEN STATE/LPA AND LPA/CONSULTANT** — The LPA will enter into a project agreement with the State which confirms that municipal officials understand the responsibilities of the local government in the administration of and financial commitment to the project. The LPA must be able to meet Federal Title 23 requirements covered in the Code of Federal Regulations. The agreement is prepared by the Department and will be sent to the LPA through the Department's project engineer. The agreement identifies the project's

scope, funding sources, including local share, and anticipated costs associated with Department oversight. Also, after advertising and award for a design consultant, the LPA will need to enter into an agreement with the design consultant for any work to be contracted out. Similar to the State/LPA agreement, the LPA/Consultant agreement is required to outline the consultant scope of work, schedule and cost as negotiated during the procurement of design process.

**NOTICE TO PROCEED** — Once federal authorization is obtained, all agreements are executed, and funds are programmed, a notice to proceed with preliminary design (PD) will be issued by the Department. Any PD work completed prior to this notice will not be reimbursable or qualify as match to Federal-aid.

**PRELIMINARY DESIGN (PD) PLANS 30%** — The LPA submits preliminary design (PD) design plans for review. At this time, plans are approximately 30% complete. PD plans are more than a concept plan but will be lacking some detail, especially for complex build scenarios or areas of sensitive resources that may require unique solutions. Some optional solutions may be presented in preliminary form at this time for these special cases. [Connecticut's Standard Specifications for Roads, Bridges and Incidental Construction Supplemented Form 816](#), available from the Department's website, should be followed.

**REVIEW** — The Department will review the plans and provide comments. It is imperative that plans submitted to the Department for this review are complete and of the highest quality to ensure that multiple iterations and reviews are avoided, as this will delay the delivery schedule and increase project costs.

**CULTURAL/HISTORIC AND NEPA/CEPA DOCUMENTATION/PUBLIC INVOLVEMENT** — Public involvement should be continuous throughout the process. Outreach is particularly critical at certain points in the process, such as after preliminary design plans have been developed. At minimum, a public informational meeting will be held. [Public Involvement Program Guidelines](#) are available at the Local Roads Unit page on the Department's website. Also, at this time, documentation required by the National Environmental Policy Act (NEPA) and Connecticut Environmental Policy Act (CEPA) as well as other relevant cultural and historic policies is developed. These materials are circulated for review by regulatory agencies and the public. The input of the regulatory agencies and public as well as the level of impacts to sensitive resources is considered in the determination of alternatives and a GO/NO GO decision on the project.

**AS NECESSARY, PROJECT MODIFICATION, TIP/STIP/AIR QUALITY CONFORMITY, FUNDING COMMITMENTS** — In the event that the project cost or scope has changed considerably upon further development or if a change in funding source is proposed, a modification of the original Recommended Project Memorandum (RPM) may be necessary —referred to as a project mod. Such changes may also trigger the need to revisit the TIP/STIP and air quality conformity processes. For additional information relating to the Statewide Transportation Improvement Program (STIP), refer to Article No. 05 in the [Reference Series: Transportation in Connecticut](#).

**DESIGN APPROVAL** — After completion of the prior steps, the proposed scope of work, schedule and costs are generally well-defined. At this point, the Department makes an internal determination to proceed with, redefine or cancel the proposed initiative based on feasibility, anticipated success at meeting project objectives, sensitive resource concerns, public input, available funding and various other factors.

**FINAL DESIGN (FD)/RIGHTS OF WAY (ROW) AUTHORIZATION GO/NO GO** — Once design approval has been obtained in-house, the Department formally requests authorization for final design (FD) and rights of way (ROW) from Federal Highways Administration (FHWA). Without this authorization, federal funding is not available for the next project phases.

**NOTICE TO PROCEED** — Once design approval and federal authorization of the project has been obtained, the Department will issue a notice to proceed with final design (FD). Rights of way (ROW) activities will also commence at this time. Any FD or ROW work completed prior to this notice will not be reimbursable or qualify as match to Federal-aid.

**SEMI-FINAL DESIGN PLANS 60-70%** — The LPA submits semi-final design plans for review. At this time, plans are approximately 60-70% complete and most of the major issues should have been addressed and/or resolved by this point. Recommendations for addressing complex build scenarios or areas of sensitive resources should be presented. [Connecticut's Standard Specifications for Roads, Bridges and Incidental Construction Supplemented Form 816](#), available from the Department's website, should be followed.

**REVIEW** — The Department will review the plans and provide comments. It is imperative that plans submitted to the Department for this review are complete and of the highest quality to ensure that multiple iterations and reviews are avoided, as this will delay the delivery schedule and increase project costs.

**PERMIT APPLICATIONS** — During the period when semi-final design plans are being reviewed, the necessary permit applications will be drafted and, ultimately, submitted to regulatory agencies for review and approval. To the extent practical, streamlining of the permit process will be sought. To do so, continuous coordination with regulatory agencies will be necessary throughout the process. Plan submittals that are timely, complete, and address concerns raised during initial discussions with regulatory agencies will greatly aid in reducing permit review time or the need for modifications in final design that could delay implementation of the project. In some cases, permit submittal may not occur until after final design plans for review (90%) are complete.

**FINAL PLANS FOR REVIEW 90%** — The LPA submits final plans for review. At this time, plans are approximately 90% complete and there should be few to no revisions required. Solutions for complex build scenarios or areas of sensitive resources should be incorporated that address concerns raised by Department staff and regulatory agencies. [Connecticut's Standard Specifications for Roads, Bridges and Incidental Construction Supplemented Form 816](#), available from the Department's website, should be followed. Additionally, information for [contract development and cost estimating](#) are provided at the Department's website and should be referenced and utilized at this time.

**REVIEW** — The Department will review the plans and provide comments. It is imperative that plans submitted to the Department for this review are complete and of the highest quality to ensure that multiple iterations and reviews are avoided, as this will delay the delivery schedule and increase project costs.

**PERMIT REVIEW AND APPROVAL GO/NO GO** — If practical, semi-final design plans will be submitted for review in an effort to reduce the project design and implementation process. Otherwise, 90% plans will be utilized. The review time necessary for regulatory agencies will be dependent upon several factors: successful early coordination; thorough and accurate design plans; public opinion; and the anticipated level of complex build scenarios or impacts to areas of sensitive resources. Without regulatory approval of the permit applications and associated plans, the project cannot proceed.

**FINAL DESIGN PLANS (FDP)** — After review of the 90% plans, a complete set of Final Design Plans (FDP) incorporating all comments must be submitted to the Department. To avoid delay in implementing the project, this package should be submitted as quickly as possible upon receiving comments by the Department and regulatory agencies. [Connecticut's Standard Specifications for Roads, Bridges and Incidental Construction Supplemented Form 816](#), available from the Department's website, should be followed. Additionally, information for [contract development and cost estimating](#) are provided at the Department's website and should be utilized.

**CONSTRUCTION AGREEMENT BETWEEN STATE/LPA** — The construction agreement between the State and LPA will be drafted as early as possible. Execution of the agreement requires reasonable construction cost estimates, available Federal-aid to program, and federal authorization of the construction project among other factors. The agreement is prepared by the Department and will be sent, when appropriate, to the LPA through the Department's project engineer. The agreement identifies the project's scope, funding sources, including local share, and anticipated costs associated with Department oversight.

**AS NECESSARY, PROJECT MODIFICATION, TIP/STIP/AIR QUALITY CONFORMITY, FUNDING COMMITMENTS** — In the event that the project cost or scope has changed considerably upon further development or if a change in funding source is proposed, a modification of the original Recommended Project Memorandum (RPM) may be necessary—referred to as a project mod. Such changes may also trigger the need to revisit the TIP/STIP and air quality conformity processes. For additional information relating to the Statewide Transportation Improvement Program (STIP), refer to Article No. 05 in the [Reference Series: Transportation in Connecticut](#).

**PLANS, SPECIFICATIONS AND ESTIMATES (PSE)** — Preparation of Plans, Specifications and Estimates (PSE) is the culmination of the planning, project development and design processes, including all the major products of those processes, as a means to initiate a construction project. PSE includes the FDP previously submitted to the Department as well as environmental documentation/permits and all necessary contractual documentation for purposes of advertising and implementing the project.

**DESIGN COMPLETION DATE (DCD) AND SUBMITTAL OF PSE APPROVAL REQUEST** — After the PSE is complete, internal Department offices review all the materials. If acceptable, the Chief Engineer, in concert with fiscal staff, approves the materials and forwards a PSE approval request memorandum to the federal agency. The date of the memorandum is typically considered the Design Completion Date (DCD).

**CONSTRUCTION AUTHORIZATION GO/NO GO** — Once PSE is complete and the formal request for approval has been forwarded to the Federal Highway Administration (FHWA), the materials, including supporting documentation, anticipated Federal-aid programming needs and schedules, will be reviewed by the federal agency. The federal agency will make a determination on authorizing a construction project without this authorization, federal funding is not available for the next project phase.

**NOTICE TO PROCEED** — Once federal authorization of the project has been obtained, the agreement between the State and LPA is executed, and funds are programmed, the Department will issue a notice to proceed with construction. Any construction work completed prior to this notice will not be reimbursable or qualify as match to Federal-aid.

**ADVERTISING FOR CONTRACTOR, AWARD, AND AGREEMENT BETWEEN LPA/CONTRACTOR** — Upon authorization to proceed, the LPA can advertise and select a contractor based on low bid. Procurement of services must be done in accordance with State and federal procurement regulations, including the [Advertising Procedures for Construction Contracts Administered by Municipalities](#) available at the Local Roads Unit page on the Department's website.

**PRE-CONSTRUCTION AND MUNICIPAL SYSTEMS ACTION TEAM (MSAT) MEETING** — Before construction commences, the Department's Municipal Systems Action Team, including district office personnel, will meet with the LPA's project team and other pertinent staff, such as local police and traffic services. This pre-construction meeting helps all parties to meet one another; review roles, schedules, and safety protocol; and answer or identify any outstanding questions.

**CONSTRUCTION, INSPECTION AND PROJECT COMPLETION** — Only after careful, timely and coordinated planning, project development and design are completed can a project be implemented. Construction, inspection, and project completion are, themselves, complex processes with many steps. Again, careful, timely and coordinated efforts are key to success. The Department's [Municipality \[Construction\] Manual](#) outlines the responsibilities and requirements of the LPA through the construction phase and is available at the Local Roads Unit page on the Department's website.

# OVERVIEW OF THE PLANNING AND PROJECT DEVELOPMENT PROCESS

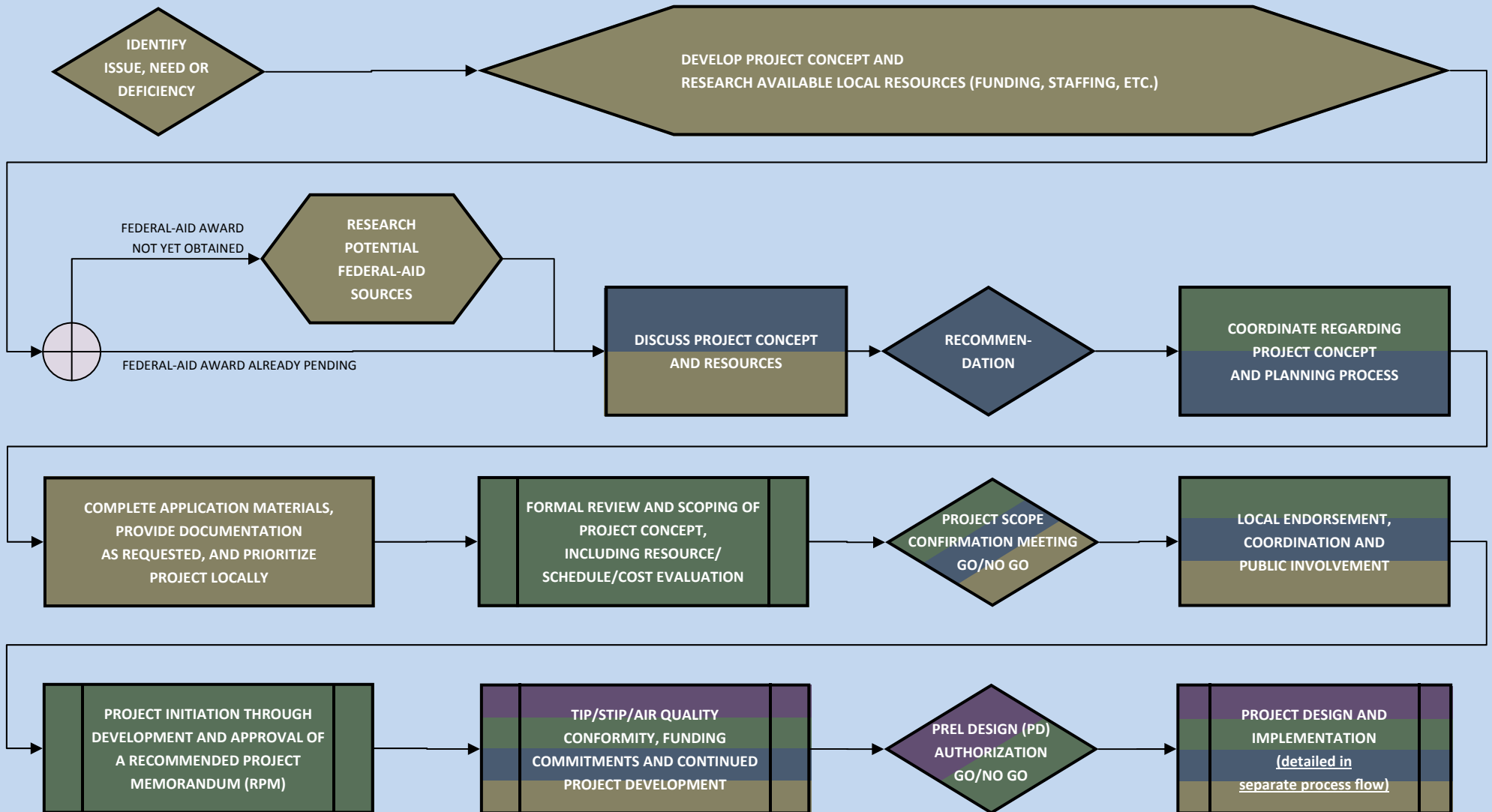
August 2012

### Color Legend:

- Federal / Other State Agency Action Required
- CT Dept. of Transportation Action Required
- Regional Planning Org (RPO) Action Required
- Local Public Agency (LPA) Action Required

### Shape Legend:

- Predefined Process
- General Process
- Decision
- Preparation



For more information relating to the Planning and Project Development Process, refer to the [Reference Series: Transportation in Connecticut](#). The series includes articles on various subjects and is available from the Department's website at [www.ct.gov/dot](http://www.ct.gov/dot), by navigating to Publications > Pamphlets.

# OVERVIEW OF THE PROJECT DESIGN AND IMPLEMENTATION PROCESS

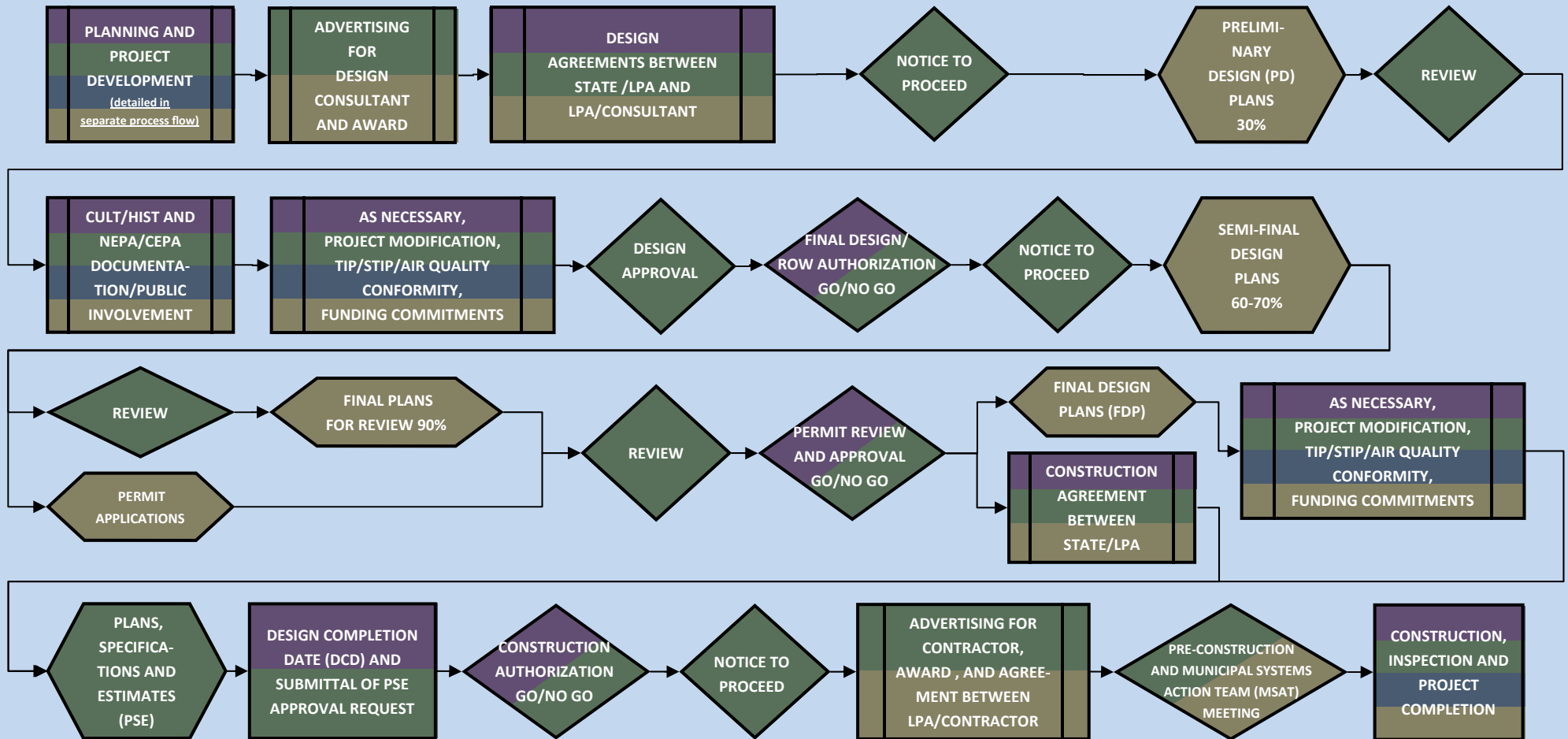
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- Decision
- Preparation



Connecticut Department of Transportation's Local Roads Unit staff will assist Local Public Agencies (LPAs) throughout the project design and implementation process.

## Local Roads Unit

Hugh Hayward, P.E., Principal Engineer  
 (860) 594-3219, hugh.hayward@ct.gov

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