Concept Development Activity Descriptions

June, 2025

Procedures are subject to change without notice.
Check the Capital Project Delivery website
to ensure this is the current version.

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Concept Development

Concept Development Initiated (2000)

The Concept Development Phase has been initiated (Milestone).

Activity Predecessor:	N/A
Activity Successor:	2015, 2020, 2025 (2015, 2025 for Limited Scope Study)

Update Management Systems Input (2015)

If Management System Input wasn't obtained during the Problem Screening Phase or over a year has passed since the information was obtained during Problem Screening, the Project Manager sends a letter to the service areas responsible for Management Systems that states the phase of the study and briefly describes the intent of the study. The request will solicit input or information that may be relevant to the study. The Management Systems should include:

- Congestion Management Systems (CMS)
- Safety Management Systems (SMS)
- Bridge Management Systems (BMS)
- Maintenance Management Systems (MMS)
- Drainage Management Systems (DMS)
- Rockfall Hazard Management Systems (RHMS)
- Pavement Management Systems (PMS)
- Smart Growth Management Systems (SGMS)
- Pedestrian Safety Management System (PSMS)
- Freight Management Systems

Service areas provide needed information to the Division of Project Management. Management Systems information may be utilized in the preparation of the CD Scope Statement.

Note for Limited Scope Study:

The Project Manager reviews the Project Reporting System to identify any conflicting projects. The Project Manager will utilize the management systems information to populate the appropriate Limited Scope CD Checklist.

Role Description	
Responsible:	Project Manager, Management Systems Owners
Consulted:	NA
Informed:	Designer
Activity Predecessor:	2000 (2000 for Limited Scope Study)
Activity Successor:	2045
Activity Duration:	20 (2 for Limited Scope Study)
Product Produced:	Updated Management Systems Input
Related Guidance Document:	CD Guideline, Risk Management Guideline, Risk Register Example, Risk Register Template, Project Input Contact Table

Determine Mapping Level and Resources Required (2020)

The Project Manager determines the "level of mapping" (Level 1, 2, 3, or 4 as outlined in "Mapping for Concept Development") needs based on project constraints.

The Project Manager coordinates with in-house Survey and CADD units to assure a good understanding of expected level of mapping to comply with the latest NJDOT standards, set up control points for level of mapping Levels 2, 3 and 4.

Note for Limited Scope Study:

Due to limited seasonal availability to conduct aerial survey, Limited Scope studies may have already had the mapping prepared under a separate task order. Consult with Survey Services to determine if mapping has already been acquired.

Role Description	
Responsible:	Project Manager
Consulted:	Survey Services
Informed:	Designer
Activity Predecessor:	2000
Activity Successor:	2045
Activity Duration:	10
Product Produced:	Determination of Mapping Level and List of Resources Needed
Related Guidance Document:	Mapping for Concept Development (Mapping section within CD Guideline)

Obtain Stakeholder Input (2025)

The Project Manager sends a letter to various internal NJDOT units and external stakeholders. This request may include, but is not limited to, information such as:

- Available traffic studies
- Recently completed work orders or projects
- Any development plans within study limits
- Bicycle/pedestrian plans
- Trails Plans
- Station area access plans
- Township Master Plan
- Adjacent or concurrent studies or proje
- Other relevant information

Various internal NJDOT units and external stakeholders send requested information to the Division of Project Management. Based on information received from the stakeholders, the Designer includes any project specific risks within the Risk Register.

This information is needed to refine the Problem Statement or define the Purpose and Need Statement.

Note for Limited Scope Study:
The Project Manager requests available as-built plans.

Role Description	
Responsible:	Project Manager, Stakeholders
Consulted:	NA
Informed:	Designer
Activity Predecessor:	2000 (2000 for Limited Scope Study)
Activity Successor:	2045 (2100, 2120, 2130, 2135, 2240, 2250 for Limited Scope Study)
Activity Duration:	30 (15 for Limited Scope Study)
Product Produced:	Collection of Stakeholder Input
Related Guidance Document:	CD Guideline, Risk Management Guideline, Risk Register Example, Risk Register Template, Project Input Contact Table

Develop Community Profile (2030)

The Designer obtains US Census demographic data for the study area and conducts a field trip to become familiar with the study area. Designer submits the community profile to the PM.The Project Manager and Designer (if assigned) should obtain US Census demographic data for the study area and conduct a field trip to become familiar with the study area. The field trip will help to determine the characteristics of the affected area, such as neighborhood boundaries, locations of residences and businesses, demographic and economic information, and land use pattern. The field trip should also alert the Project Manager to potential impacts from the proposed project and help to determine the boundary of the project study area. Information in the Community Profile will be helpful when developing the Public Involvement Action Plan and stakeholder list.

Role Description	
Responsible:	Project Manager, Designer
Consulted:	Community Group Leaders, Local Officials, Division of Community and Constituent Relations
Informed:	Division of Community and Constituent Relations, Designer
Activity Predecessor:	2060, 2065
Activity Successor:	2130
Activity Duration:	15
Product Produced:	Community Profile
Related Guidance Document:	CD Guideline, Community Profile Checklist

Prepare and Execute CD Public Involvement Action Plan (2035)

The Designer, in consultation with the PM, develops a Public Involvement Action Plan (PIAP) to identify critical points for public involvement, and the objectives for each point CD Phase.The goal is to solicit public involvement as early as possible. This will include, at minimum, developing a database of known stakeholders, determining the number of anticipated meetings with local officials, citizens groups and any outside agencies impacted by the proposed project.

The creation of a Community Advisory Committee (CAC) may be beneficial. The PM should consult the Division of Community and Constituent Relations to determine if a CAC would be beneficial on the project. CAC meetings should be held at points in project development where key decisions need to be made.

CD PIAP will be executed through out project development. The Division of Community and Constituent Relations (CCR) performs a final review and sign.off of the PIAP.

Role Description	
Responsible:	Designer, Project Manager, Division of Community and Constituent Relations
Consulted:	Project Manager
Informed:	Division of Community and Constituent Relations
Activity Predecessor:	2130
Activity Successor:	2270
Activity Duration:	15
Product Produced:	CD Public Involvement Action Plan
Related Guidance Document:	CD Guideline

Develop Draft CD Schedule (2045)

The Project Manager or Division of Project Management (DPM) Scheduler request the Office of Schedule and Budget Management to create an active schedule in Primavera based on the standard CD schedule template. The Project Manager sends the standard CD schedule template to the DPM Scheduler or Office of Schedule and Budget Management to customize the schedule based on the CD Scope Statement and historic data. The Project Manager negotiates the draft schedule with the Designer. Once approved by the ERM, the schedule is made active.

The Project Manager is responsible for updating all schedules on a monthly basis and may do so by providing updates to the DPM Scheduler or Office of Schedule and Budget Management.

Note for Limited Scope Study:
The Project Manager utilizes the Limited Scope CD primavera schedule. Refer to the Project Delivery Process Customization Guideline for necessary revisions to the schedule.

Role Description	
Responsible:	Project Manager, Division of Project Management Scheduler, Office of Schedule and Budget Management
Consulted:	Project Manager, Office of Schedule and Budget Management, Designer
Informed:	Project Manager
Activity Predecessor:	2015, 2020, 2025
Activity Successor:	2050
Activity Duration:	15 (10 for Limited Scope Study)
Product Produced:	Draft CD Schedule
Related Guidance Document:	CD Guideline

Approve CD Schedule (2046)

The Project Manager reviews customized schedule and forwards it to the ERM for approval. Once approved the schedule is active.

Role Description	
Responsible:	Project Manager
Consulted:	ERM, Designer
Informed:	
Activity Predecessor:	2056
Activity Successor:	2065, 2106
Activity Duration:	5
Product Produced:	Approved CD Schedule
Related Guidance Document:	

Develop CD Fee Proposal (2050)

The Designer prepares a Fee Proposal based on the CD Scope Statement. The Project Manager and the Designer negotiate the CD Fee Proposal.

Role Description	
Responsible:	Project Manager, Designer
Consulted:	NA
Informed:	NA
Activity Predecessor:	2045
Activity Successor:	2055
Activity Duration:	15 (10 for Limited Scope Study)
Product Produced:	CD Fee Proposal
Related Guidance Document:	CD Guideline

Update PRS (2055)

The Project Manager is required to enter all available information into Project Reporting System (PRS), such as study description, county/municipality, mileposts, organization representatives, costs; responsible managers, etc. PRS is required to be updated monthly (at a minimum) to reflect the current study status.

Role Description	
Responsible:	Project Manager
Consulted:	NA
Informed:	NA
Activity Predecessor:	2050
Activity Successor:	2056
Activity Duration:	1
Product Produced:	Updated PRS
Related Guidance Document:	NA

Submit Final Fee Proposal (2056)

The Designer submits the final Fee Proposal to the Project Manager. Project Manager uses the Designer's Final Fee Proposal to prepare the CD schedule and execute the CD task order.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	
Activity Predecessor:	2055
Activity Successor:	2060, 2046, 2105
Activity Duration:	5
Product Produced:	Final Fee Proposal
Related Guidance Document:	

Execute CD Task Order (2060)

The Division of Project Management (DPM) completes the Notice to Proceed (NTP) and instructs the Designer to begin work.

Prepare three copies of the original NTP form, sign and distribute for further execution. After execution of NTP, DPM will provide a copy to the Designer and accounting, and keep one copy in the study file.

Role Description	
Responsible:	Project Manager
Consulted:	NA
Informed:	NA
Activity Predecessor:	2056
Activity Successor:	2065, 2100, 2106, 2030
Activity Duration:	10 (3 for Limited Scope Study)
Product Produced:	Completed Notice to Proceed; Task Order
Related Guidance Document:	CD Guideline

Start Design Communications Report (2065)

The Designer will prepare the initial Design Communications Report (DCR). The Designer submits DCR entries to the Project Manager for approval. After approval is received, the Designer uploads the DCR into PMRS.

The Designer will maintain the DCR throughout CD.

Role Description	
Responsible:	Designer, Project Manager
Consulted:	Unit Subject Matter Experts as appropriate
Informed:	NA
Activity Predecessor:	2060, 2105, 2046
Activity Successor:	2030, 2115, 2145, 2144, 2135, 2150, 2120, , 2125 (2125 for Limited Scope Study)
Activity Duration:	5
Product Produced:	Design Communications Report
Related Guidance Document:	Interactive Communications Procedure

Conduct Traffic Counts (2100)

The Project Manager shall send a request memo to Bureau of Transportation Data and Support (BTDS) along with a Traffic Count Request form, marked-up straight-line diagram and study area map if it is determined that the BTDS will conduct the traffic counts. If existing data is not available, BTDS will usually perform traffic volume counts for small-scale projects through their Task Order Agreements. If the traffic volume counts are not performed by BTDS, they will be performed by the Designer.

The Designer establishes a traffic count program for the study. This should account for all roads, streets, ramps, highways, driveways, traffic generators, seasonal influences, and related modes that would have an impact on the study and surrounding area. It is important that the amount, location, and type of traffic data collected be study specific. Determine if the traffic flow within the study area has any seasonal characteristics

The traffic-counting program may require Automatic Traffic Recorders (ATR), manual traffic counts, vehicle classification counts, intersection turning movement traffic counts, bicyclist and pedestrian counts, and origin-destination surveys. The traffic count data may include travel time/speed studies and vehicle-delay data collection. All traffic related data must be uploaded to the NJDOT BTDS data warehouse as required in all NJDOT agreements.

Note for Limited Scope Study:
Traffic counts may not be necessary for Limited Scope studies if recent traffic data is available for the project area. For roadway resurfacing projects, traffic data should be obtained from the Pavement Recommendation Report.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Bureau of Transportation Data and Support
Informed:	NA
Activity Predecessor:	2060 (2060 for Limited Scope Study)
Activity Successor:	2110
Activity Duration:	30
Product Produced:	Traffic Counts Data
Related Guidance Document:	CD Guideline

Perform Supplemental Data Collection (2105)

Gather any additional data and information needed but not obtained during the Problem Screening or in the initial CD activities. The data may include the following:

- Plans & As-Built plans (Upon receiving a request from the Designer, Project Manager submits a completed EDU-2 form to the engineering Documents Unit)
- Drainage inventory
- Base Maps
- Jurisdictional Maps and Agreements
- ROW and Access
- Utility information
- Environmental Data
- Bridge Inspection and Scour Reports
- Intelligent Transportation Systems information
- Traffic Signal Timing Plans
- Maintenance Work Orders
- Permanent Traffic Monitoring station Locations
- Any relevant reports from other agencies such as the Metropolitan Planning Organization, County, Town, etc.

Note for Limited Scope Study:
For Limited Scope studies that may require ROW to address ADA compliance, obtain appropriate tax map and ROW As-built information to determine preliminary ROW impacts based upon the preliminary ADA compliance design.

Role Description	
Responsible:	Project Manager, Designer
Consulted:	Engineering Documents Unit
Informed:	NA
Activity Predecessor:	2056
Activity Successor:	2065, 2106
Activity Duration:	25
Product Produced:	Collected Data
Related Guidance Document:	Engineering Documents Unit Plan Request Form

Prepare ADA Compliance Curb Ramp Design Checklist & Memo (2106)

Note: This activity is necessary for all projects developed by NJDOT.

To fulfill Title II of the Americans with Disabilities Act (ADA), the Designer should complete the ADA Compliance Curb Ramp Design Checklist while performing a field visit. The results of this data collection should be summarized in a memo and submitted with the completed checklist to the Project Manager.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	Project Manager
Activity Predecessor:	2105, 2060, 2046
Activity Successor:	2110
Activity Duration:	15
Product Produced:	ADA Compliance Curb Ramp Design Checklist & Memo
Related Guidance Document:	Section 5 of the NJDOT Roadway Design Manual, Standard Construction Details, sheets CD-606-1 & CD-606-2, ADA Curb Ramp Checklist Items

Forecast Travel Projections (2110)

It is important to utilize the reasonable Growth Rate Factor for traffic projection calculations. A Background Growth Rate memo shall be developed by the Designer and approved by the Project Manager prior to forecasting. Utilize the traffic counts collected in Activity 2100 to forecast traffic

volumes 20 years beyond the anticipated construction completion date. For resurfacing projects, project out 10 years beyond the anticipated construction completion date.

Note for Limited Scope Study:
For roadway resurfacing projects, travel projections should be obtained from the Pavement Recommendation Report.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2100, 2106
Activity Successor:	2160 (2240 FF for Limited Scope Study)
Activity Duration:	10
Product Produced:	Forecasted Travel Projections
Related Guidance Document:	CD Guideline

Prepare CD Mapping (2115)

The Designer prepares photogrammetric base mapping as required for CD. This may include the utilization of New Jersey Department of Environmental Protection (NJDEP) aerials. Utilize as-built plans obtained in Activity 2105 to identify specific roadway features, including right of way, property lines and utility locations.

While Level 1 mapping will typically be created for CD, higher level mapping may be necessary.

Additional time to conduct detailed mapping:

Level 2: Approximately 12 weeks
Level 3: Approximately 24 weeks
Level 4: Approximately 32 weeks

Note:
Durations for higher level mapping activities may vary significantly from project to project. The duration to complete aerial flights may also be affected by time of year. The level of mapping required is determined in Activity 2020.

High level and low level flights may be performed during CD to provide a base for developing detailed mapping in Preliminary Engineering.

If Level 2, 3 or 4 mapping is required, the Geodetic Survey Report is prepared and submitted to the Geodetic Survey Unit for approval. Additionally, the duration of mapping activities will be longer and some mapping activities may not be required to be completed prior to Activity 2300 (Develop Alternatives).

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Survey Services
Informed:	NA
Activity Predecessor:	2065
Activity Successor:	2210, 2230, 2235
Activity Duration:	30
Product Produced:	Photogrammetric Base Mapping for CD
Related Guidance Document:	Aerial Photogrammetric Mapping Guidelines, Survey Manual

Conduct Field Inventory of Physical Conditions (2120)

Arrange a field visit to verify and evaluate existing conditions or measurements obtained from plans or reports, discuss important issues and potential solutions, and identify potential stakeholders. Invite the Project Manager and other subject matter expert units, the Designer, FHWA, Design Standards, and Maintenance, the municipal and county engineer and representative, Metropolitan Planning Organization (MPO), and Municipal Police on an as needed basis. Roadway features to be inventoried may include utilities, drainage, environmental, Intelligent Transportation Systems (ITS), Transportation Data & Safety, etc. Utilize the Complete Streets Checklist while performing the field inventory.

Note for Limited Scope Study:
The Designer and Project Manager utilize the appropriate Limited Scope CD Checklist while in the field to determine the full impacts associated with the identified problem. This effort will also include cross slope spot checks to verify the information on the as-built plans. If there is recent field survey information or recent flights and mapping, that may be utilized in lieu of spot checks.

In the unlikely event that the study does not qualify under the definition of the Limited Scope approach, the Limited Scope Study is terminated. In order to proceed, the proposed project is returned to the Capital Program Committee to advance under the standard project delivery process.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Subject Matter Expert Units, Design Standards, FHWA, Metropolitan Planning Organization, Maintenance, Local Officials
Informed:	NA
Activity Predecessor:	2065 (2025, 2060 for Limited Scope Study)
Activity Successor:	2155, 2122
Activity Duration:	20
Product Produced:	Field Inventory
Related Guidance Document:	CD Guideline, Complete Streets Checklist, (Limited Scope CD Pavement Checklist, Limited Scope CD Bridge Checklist, Limited Scope CD Culvert Checklist, Limited Scope CD Sign Structure Checklist or Limited Scope CD Thin Surface Treatment Checklist for Limited Scope Study)

Assess Initial USCG Bridge Permit Applicability (2122)

If the project involves construction, reconstruction, or modification of a bridge over navigable waterways as defined in 33 C.F.R. 2.36, the Designer determines if the project meets the exception criteria under (1) Section 107 of the Coast Guard Authorization Act of 1982, (2) 33 CFR Section 115.70 (Advance Approval of Waterways), or (3) under 23 U.S.C. 144 (c). The Designer confirms the determination with the Project Manger and prepares the Bridge Exemption Package.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	Structural Value Solutions Unit, Bureau of Landscape Architecture and Environmental Solutions, Project Management, FHWA
Activity Predecessor:	2120
Activity Successor:	2124
Activity Duration:	10
Product Produced:	Bridge Exemption Package
Related Guidance Document:	23 U.S.C. 144 (C) , FHWA Back to the Basics: Bridge Permitting

Submit Bridge Exemption Package (2124)

The Designer submits the Bridge Exemption Package to the Project Manager who distributes it to the Structural Value Solutions Unit (SVS) for review. Upon SVS approval, the Project Manager signs and submits the package to the United States Coast Guard (USCG) District Bridge Office (DBO) or FHWA, depending on the source of the project funding and the type of exemption. The exception determination at 23 U.S.C. 144 (c) is reserved for FHWA-funded projects and must be made by FHWA. The package is sent with a cover letter describing the project, the anticipated timeline, and specifically requests USCG DBO concurrence with exception finding as well as a determination of the need for lights and signals per 14 U.S.C. Section 85 and 33 CFR Part 118.

Role Description	
Responsible:	Project Manager, Designer
Consulted:	Structural Value Solutions Unit
Informed:	Designer, Bureau of Landscape Architecture and Environmental Solutions, FHWA
Activity Predecessor:	2122
Activity Successor:	2126
Activity Duration:	10
Product Produced:	Final Bridge Exemption Package
Related Guidance Document:	23 U.S.C. 144 (C) , FHWA Back to the Basics: Bridge Permitting

Identify Substandard Design Elements (2125)

Identify all existing substandard design elements (roadway and bridge) within the study limits. Compare this information directly with the crash information to determine if there is an excessive crash rate within or adjacent to the limits of a substandard element. If there are a high number of crashes within or near the limits of a substandard element, send the information to the Bureau of Safety, Bicycle and Pedestrian Programs (BSBPP) for analysis. BSBPP will determine if the crashes occurring are a result of the substandard element. This information should be available for discussion at the Scope Team Meeting and Core Group Meeting.

Note for Limited Scope Study:
Identification of substandard design elements is only required on projects types that require design exception approval. These specific project types are listed in the Project Customization Guideline. Substandard design elements should not be identified on projects that do not require design exception approval.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Bureau of Safety, Bicyle and Pedestrian Programs, Quality Management Services
Informed:	NA
Activity Predecessor:	2065 (2065, 2120, 2170 for Limited Scope Study)
Activity Successor:	2170
Activity Duration:	15 (5 for Limited Scope Study)
Product Produced:	Identified Substandard Design Elements
Related Guidance Document:	Design Exception Manual, Project Customization Guideline

Obtain written concurrence of exemption from US Coast Guard (2126)

The United States Coast Guard (USCG) District Bridge Office (DBO) reviews the Bridge Exemption Package and sends the determination to the Project Manager. The Project Manager directs the Designer to prepare a DCR entry indicating the determination, duration and conditions of the exemption; and informs NJDOT SMEs and FHWA. Once USCG exemption is granted, further coordination and additional submittals may be requested by the USCG. (Note: This request will usually be incorporated within USCG's response to the bridge exemption package. Additional submittals may include lights/signals, a notice of any work which may be an obstruction to navigation, bridge maintenance project plan and drawbridge temporary deviation (for movable bridges)

Role Description	
Responsible:	USCG District Bridge Office (DBO), Project Manager, Designer
Consulted:	Structural Value Solutions Unit
Informed:	Structural Value Solutions Unit, Bureau of Landscape Architecture and Environmental Solutions, FHWA
Activity Predecessor:	2124
Activity Successor:	2128
Activity Duration:	30
Product Produced:	USCG Bridge Exemption Determination
Related Guidance Document:	23 U.S.C. 144 (C) , FHWA Back to the Basics: Bridge Permitting

Submit USCG Project Initiation Request (2128)

If United States Coast Guard (USCG) District Bridge Office (DBO) exemption is not granted, the Designer prepares and submits the USCG Project Initiation Request to the Project Manager who distributes it to the Structural Value Solutions Unit (SVS) for review. Upon SVS approval the Project Manager submits the package to the USCG DBO. Upon receipt of the Initiation Letter, the USCG DBO will publish public a notice to gather navigation-related information from waterway users and stakeholders. If necessary, the Project Manager holds an early coordination meeting with USCG DBO, the Designer and SVS to discuss issue identification, identify the need for and scope of Navigation Impact Report (NIR), and determine the appropriate documentation requirements for a complete bridge permit application. Upon submission of the Project Initiation Letter, the USCG issues a public notice to solicit comments for navigational concerns and advertises the bridge project in the Local Notice to Mariners. This would occur before the first PIC and perhaps before the first local officials briefing; OCCR should be informed early.

Role Description	
Responsible:	Designer, Project Manager, United States Coast Guard District Bridge Office
Consulted:	Structural Value Solutions Unit
Informed:	Bureau of Landscape Architecture and Environmental Solutions, Office of Community and Constituent Relations (OCCR), FHWA
Activity Predecessor:	2126, 2240, 2250
Activity Successor:	2138, 2142
Activity Duration:	60
Product Produced:	USCG Project Initiation Request
Related Guidance Document:	See USCG Bridge Program Application Guide (BPAG) for content of Initiation Request. According to BPAG the P&N should be an element of the Initiation Request.

Coordinate with Local Officials (2130)

The Project Manager will coordinate with the affected municipalities and counties to solicit input on problem verification and the development of alternatives to address the project need. The Project Manager will identify any municipal input requested in Activity 2025 (Obtain Stakeholder Input) that remains outstanding. If a formal meeting is necessary, the Division of Community and Constituent Relations (CCR) will schedule the meeting at least three weeks in advance and coordinate with the engineer, planner, city, town, township, municipal manager, and administrator or appropriate agent a time and location convenient for the local officials. CCR prepares a Memo of Record. The Designer prepares Meeting Minutes.

Note for Limited Scope Study:
The Project Manager notifies the affected municipalities and counties of the proposed project.

Role Description	
Responsible:	Project Manager, Division of Community and Constituent Relations, Designer
Consulted:	Designer
Informed:	NA
Activity Predecessor:	2030 (2025, 2060 for Limited Scope Study)
Activity Successor:	2240, 2250, 2260, 2035 (2240 FF, 2250 FF for Limited Scope Study)
Activity Duration:	30 (5 for Limited Scope Study)
Product Produced:	Memo of Record and Meeting Minutes
Related Guidance Document:	CD Guideline, Complete Streets Checklist

Prepare USCG Participation Request & Submit to FHWA (2132)

The Project Manager prepares and provides the FHWA with the formal request for the United States Coast Guard (USCG) to be a cooperating or participating agency in the environmental review process when a USCG bridge permit is required.

Role Description	
Responsible:	Project Manager
Consulted:	NA
Informed:	Structural Value Solutions Unit, Bureau of Landscape Architecture and Environmental Solutions
Activity Predecessor:	2240, 2250
Activity Successor:	2134, 2138
Activity Duration:	5
Product Produced:	USCG Participation Request
Related Guidance Document:	MOU/MOA between USCG and FHWA

Submit USCG Participation Request (2134)

The FHWA submits the request to participate in the environmental review process to the United States Coast Guard District Bridge Office.

Role Description	
Responsible:	FHWA
Consulted:	NA
Informed:	Project Manager
Activity Predecessor:	2132
Activity Successor:	2136
Activity Duration:	5
Product Produced:	Submitted USCG Participation Request
Related Guidance Document:	MOU/MOA between USCG and FHWA

Perform Environmental Screening (2135)

The Designer or Bureau of Landscape Architecture and Environmental Solutions (BLAES) performs the Environmental Screening to identify environmental concerns or "fatal flaws." The Project Manager requests an environmental screening by sending a memo to BLAES. Prepare an Environmental Screening Report (ESR) which will identify and document potential environmental issues. It will include environmental constraints or sensitive areas, such as wetlands, parkland, cultural resources, hazardous waste, permits, air/noise, socio-economic, Environmental Justice, etc.

If the ESR is prepared by the Designer, the Project Manager will request BLAES to review NJDEP Regulations. This is necessary to determine the applicability of wetlands, Cultural Resources, Storm Water Regulation, and Deforestation regulations, etc. to the study.

Note for Limited Scope Study:
Preparation of an Environmental Screening Report may not be required for a Limited Scope Study. Consult with BLAES prior to conducting an environmental screening to determine if one is necessary.

Role Description	
Responsible:	Designer or Bureau of Landscape Architecture and Environmental Solutions (BLAES), Project Manager
Consulted:	Project Manager, BLAES
Informed:	NA
Activity Predecessor:	2065 (2025, 2060 for Limited Scope Study)
Activity Successor:	2140 (2140 (if needed), otherwise 2240 FF for Limited Scope Study)
Activity Duration:	30 (5 for Limited Scope Study)
Product Produced:	Environmental Screening Report
Related Guidance Document:	CD Guideline

Obtain USCG Participation Acceptance (2136)

The United States Coast Guard District Bridge Office reviews the participation request and provides written acceptance of participation to the FHWA. The FHWA provides a copy of the participation acceptance to the Project Manager who distributes a copy to the Structural Value Solutions Unit and the Bureau of Landscape Architecture and Environmental Solutions.

Role Description	
Responsible:	United States Coast Guard District Bridge Office, FHWA, Project Manager
Consulted:	NA
Informed:	Structural Value Solutions Unit, Bureau of Landscape Architecture and Environmental Solutions
Activity Predecessor:	2134
Activity Successor:	2138, 2510
Activity Duration:	30
Product Produced:	USCG Participation Acceptance
Related Guidance Document:	MOU/MOA between USCG and FHWA

Prepare Navigation Impact Report (2138)

With identified elements provided by the United States Coast Guard District Bridge Office, the Designer prepares a Navigation Impact Report (NIR) which analyzes the navigational impacts of the bridge design alternatives. The report is intended to document current and potential future navigation on the waterway and should be updated periodically to account for changes waterway usage. As part of the NIR, the Project Manager and the Office of Government and Community Relations receives and addresses public comments on navigational aspects.

The NIR should consider present governing bridges or aerial structures and any established guide clearances along the waterway, channel, tidal and hydraulic characteristics, present and prospective commercial and recreational uses, channel maintenance and any existing or planned federal navigation projects, access for maintenance of bridges and other structures in or along the water, river access points including fenders, docks, marinas and ramps, and any other natural or man-made conditions that affect navigation. The report should also consider whether mitigation measures may be possible for impacted waterway users.

Role Description	
Responsible:	USCG District Bridge Office (DBO), Designer, Project Manager, Office of Community and Constituent Relations (OCCR)
Consulted:	Structural Value Solutions Unit, Jurisdictional Agencies, NJDOT Subject Matter Expert Units, Local Officials, Affected Stakeholders
Informed:	Bureau of Landscape Architecture and Environmental Solutions
Activity Predecessor:	2128, 2132, 2136, 2280
Activity Successor:	2142
Activity Duration:	120
Product Produced:	Navigation Impact Report (NIR)
Related Guidance Document:	A modification to the consultant task order may be needed as the content of navigation impact studies can vary significantly depending on the project and waterway characteristics. See Bridge Program Application Guide (BPAG) for content of NIR.

Review Environmental Screening (2140)

This activity is only applicable if a Designer prepares the Environmental Screening Report. The Bureau of Landscape Architecture and Environmental Solutions (BLAES) will review the Environmental Screening Report and provide comments to the Designer.

Role Description	
Responsible:	Bureau of Landscape Architecture and Environmental Solutions
Consulted:	Project Manager, Designer
Informed:	NA
Activity Predecessor:	2135
Activity Successor:	2240, 2250 (2240 FF for Limited Scope Study)
Activity Duration:	20 (3 for Limited Scope Study)
Product Produced:	Comments on Environmental Screening Report
Related Guidance Document:	CD Guideline

Obtain Preliminary Navigation Clearance Determination (2142)

The Designer submits the Navigation Impact Report (NIR) to the Project Manager who distributes it to the Structural Value Solutions Unit (SVS) for review. Upon SVS approval the Project Manager submits the NIR to the United States Coast Guard (USCG) District Bridge Office (DBO). The USCG DBO reviews the NIR and the Designer addresses any comments or provides additional information as requested. Once all comments are addressed and review is complete, the USCG DBO provides a Preliminary Navigation Clearance Determination (PNCD) to the Project Manager. The Project Manager distributes a copy of the PNCD to the Designer and SVS. The PNCD is valid for three years and should be used in the evaluation of design alternatives.

Role Description	
Responsible:	Designer, Project Manager, Structural Value Solutions Unit, United States Coast Guard District Bridge Office
Consulted:	Jurisdictional Agencies, Local Officials, Affected Stakeholders
Informed:	Bureau of Landscape Architecture and Environmental Solutions
Activity Predecessor:	2128, 2138
Activity Successor:	2300
Activity Duration:	150
Product Produced:	Preliminary Navigation Clearance Determination
Related Guidance Document:	A modification to the consultant task order may be needed as the content of navigation impact studies can vary significantly depending on the project and waterway characteristics. See Bridge Program Application Guide (BPAG) for content of NIR.

Conduct Field Survey for Hydrologic & Hydraulic (2144)

The Designer conducts a field survey for Hydrologic & Hydraulic (H&H). This survey must provide the existing field conditions for all drainage, culvert, bridges, ditches or other structures that transfer stormwater, streams or tributaries within 200 feet of the projects. This includes material, elevations, sizes, inverts, grate elevations, low chord and parapet elevations, and median or other barriers over all water features.

If the project has a high potential of impacting flood elevations (e.g., change in hydraulic opening, creation or removal of obstruction, elevation of roadway, changes to piers, fill in the floodway), perform additional survey of the stream channel as necessary to model the stream hydraulics.

Note: Additional or expanded stream survey for projects with high potential of impacting flood elevations should only be done upon consultation with the H&H SME

Role Description	
Responsible:	Designer
Consulted:	BLAES
Informed:	
Activity Predecessor:	2065
Activity Successor:	2230
Activity Duration:	30
Product Produced:	Hydrologic & Hydraulic Field Survey
Related Guidance Document:	

Obtain Maps & Data for Hydrologic & Hydraulic (H&H) Analysis (2145)

Obtain the following data and information:

• NJDEP Flood maps, FEMA flood maps, and associated flood elevations, peak flows or Flood Insurance Study reports

• Land Use/Land Cover maps from NJDEP for study area

• LIDAR, USGS or other digitally available topography

• Evaluate all StreamStats mapped streams at or near the project area and provide maps of all streams shown with Drainage Areas.

• Obtain soil survey maps (Arc/Info coverage) from the Natural Resource Conservation. Service (NRCS) and Land Use maps (Arc/Info coverage) from NJDEP for the study area.

• Geo-reference all digital maps to the NJ State plane coordinate system.

For Limited Scope Projects:

• The Designer, through BLAES E-Team, obtains a determination from NJDEP whether a crossing to address fragmentation of wildlife passage is required.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2065
Activity Successor:	2230
Activity Duration:	5
Product Produced:	H & H Maps and Data
Related Guidance Document:	CD Guideline

Prepare Drainage Area Maps (2150)

For projects involving drainage improvements, produce drainage area maps for the study area. For example, drainage improvements include changes to or the addition of pipes, inlets, or drainage patterns. Delineate the drainage area boundaries for the roadway and the offsite areas contributing to the roadway. In the field, verify the drainage area boundaries and add additional drainage features identified in the study area that may alter the drainage areas.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2065
Activity Successor:	2230
Activity Duration:	30
Product Produced:	Drainage Area Maps
Related Guidance Document:	Drainage Design Manual

Send Utility/Railroad Contact Letter (2155)

The Designer determines which utility companies are serving the proposed project area through research and a field survey. Utilizing the NJDOT Utility Contact List, the Designer identifies the Regional utility owner contacts, confirms the Regional utility contacts with the Project Manager and sends the Utility Contact Letter. The intent of the Utility Contact Letter is to request verification that utilities are in the vicinity of a proposed project, request the specific utility and railroad field contacts,

and request an order of magnitude Preliminary Engineering (PE) Utility Engineering cost estimate. The Designer receives the responses and informs the Project Manager.

Note: If Utility/Railroad Master Agreement Change order/Agreement is required during CD phase, Follow Utility/Railroad Network path from Final Design phase

Role Description	
Responsible:	Designer, Utility Companies
Consulted:	Project Manager, Designer
Informed:	Project Manager
Activity Predecessor:	2120
Activity Successor:	2175, 2312 (2240 FF for Limited Scope Study)
Activity Duration:	20
Product Produced:	Response from Utility/Railroad
Related Guidance Document:	Utility Contact Letter Template, NJDOT Utility Contact List

Validate and Compare Travel Projections with Regional Model (2160)

Compare the traffic counts collected in Activity 2100 to assignments from the existing base year regional travel demand models for reasonableness. Use the appropriate future year model runs to calculate a future growth rate for the specific roadways. Compare this model derived future growth rate against the Growth Rate Factor obtained in Activity 2110.

This activity may only be necessary for studies that include congestion or capacity related issues. The Project Manager will determine if this activity is necessary.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Bureau of Statewide Strategies
Informed:	NA
Activity Predecessor:	2110
Activity Successor:	2205
Activity Duration:	10
Product Produced:	Comparison of Travel Projections
Related Guidance Document:	CD Guideline

Obtain Crash Records (2170)

The Designer completes the Crash Analysis Form to obtain the crash history for the most recent three years and sends it to the Project Manager. The Project Manager forwards the request to the Bureau of Safety, Bicyle and Pedestrian Programs (BSBPP). BSBPP compiles the requested crash records and sends to the Project Manager. The Project Manager forwards the crash records to the Designer.

Role Description	
Responsible:	Project Manager, Designer
Consulted:	Bureau of Safety, Bicycle and Pedestrian Programs
Informed:	NA
Activity Predecessor:	2125 (2060 for Limited Scope Study)
Activity Successor:	2200
Activity Duration:	20
Product Produced:	Crash Records
Related Guidance Document:	CD Guideline, Crash Analysis Form

Prepare Utility/Railroad Risk Assessment Plan (2175)

Utilizing data obtained in Activity 2120 (Conduct Field Inventory of Physical Conditions) and utility information obtained in Activity 2155 (Send Utility Contact Letter), prepare the Utility Risk Assessment Plan. The Designer assesses for potential high risk utility impacts and notes those impacts on the plan. This plan will be utilized to complete the utility section within the Project Fact Sheet. The Designer should consult with the utility companies to prepare the Utility Risk Assessment Plan.

The Designer discusses the project specific utility risks with the Project Manager. The Designer includes these within the project Risk Register.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Utility Companies, Utility Management
Informed:	NA
Activity Predecessor:	2155
Activity Successor:	2240, 2250, 2260
Activity Duration:	15
Product Produced:	Utility/Railroad Risk Assessment Plan
Related Guidance Document:	Risk Management Guideline, Risk Register Example, Risk Register Template, Utility Risk Assessment Plan Example

Prepare Crash Analysis & Crash Diagram (2200)

Utilizing the crash data that was obtained in Activity 2170, plot all crashes from police records on a crash diagram. Identify the cause of the crashes and associated sub-standard features identified in Activity 2125. This information will be used in the development of the Purpose and Need Statement and the preparation of the proposed Project Fact Sheet.

Note for Limited Scope Study:

If substandard design elements are identified, the Project Manager completes a Crash Analysis Form and sends to the Bureau of Safety, Bicycle and Pedestrian Programs to request a Design Exception Crash Analysis.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2170
Activity Successor:	2240, 2250 (2240 FF, 2360 for Limited Scope Study)
Activity Duration:	30 (20 for Limited Scope Study)
Product Produced:	Crash Analysis and Crash Diagram
Related Guidance Document:	NA

Conduct Existing Traffic Analysis (2205)

Analyze traffic counts to develop existing Level of Service (LOS) using the Highway Capacity Manual and software. Conduct a LOS analysis for the existing conditions (no-build condition) for the current year. Existing conditions LOS analysis is required for the construction year and 20 years after construction. For resurfacing projects, project out 10 years beyond the anticipated construction completion date.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2160
Activity Successor:	2240, 2250
Activity Duration:	15
Product Produced:	Level of Service Traffic Analysis
Related Guidance Document:	NA

Conduct Scour and Seismic Retrofit Analysis (2210)

The Designer will secure all information and details needed to perform scour analysis in the existing condition and evaluate whether the bridge has been identified as scour critical or not scour critical.

For Limited Scope, if the bridge has been identified as scour critical, propose required countermeasures and incorporate into the structural/geotechnical design.

If the Bridge has been identified as a full replacement in the screening phase, Seismic Retrofit Analysis is not needed in CD Phase.

If the Bridge has not been identified as a full replacement in the screening phase, perform an abbreviated Seismic Retrofit Analysis for each alternative including foundation to determine a structure's retrofit eligibility and cost effectiveness. If only a deck replacement is proposed, a Seismic Retrofit Analysis will be performed on a case by case
basis.
The results of these analyses shall be documented in the proposed Project Fact Sheet.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Bureau of Structural Design and Geotechnical Engineering
Informed:	NA
Activity Predecessor:	2115
Activity Successor:	2240, 2250
Activity Duration:	20
Product Produced:	Scour and Seismic Retrofit Analysis
Related Guidance Document:	Bridges and Structures Design Manual

Perform Conceptual Hydrologic & Hydraulic (H&H) Analysis (2230)

Identify all Flood Hazard Area regulated floodplains. For all streams with a drainage area of 45 acres or more, perform a simplified floodplain evaluation, such as Method 5 in the Flood Hazard Area Control Act Rules.

If the project has a high potential of impacting flood elevations (e.g., change in hydraulic opening, creation or removal of obstruction, elevation of roadway, changes to piers, fill in the floodway) perform detailed floodplain analysis of the different options identified sufficient to select a PPA.

Note: The determination of whether the project has a high potential of impacting flooding elevations should be done upon consultation with H&H SME.

Secure all pertinent information, data, and details necessary to model the stream flow, including existing HEC-2 analysis if the waterway is a State-studied stream, from the New Jersey Department of Environmental Protection (NJDEP). Perform backwater analysis to determine impacts to water surface elevation.

Identify whether the project requires stormwater management (SWM) compliance by consulting the applicable stormwater management regulations (SWM rules, Pinelands, Delaware and Raritan Canal Commission). If Stormwater Management compliance is necessary, identify whether and how many Stormwater BMPs will be required. Determine possible Right-of-Way issues.

For Limited Scope Projects:

In addition to the above, if Stormwater Management compliance is necessary, develop detailed Stormwater management calculations utilizing the NRCS Method and design the project to address quality, quantity and recharge requirements. Perform all soil testing necessary in potentially suitable areas to determine soil permeability and the seasonally high water table in accordance with the NJ Stormwater BMP manual. The Designer prepares an H&H Analysis Report documenting the analysis.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Bureau of Landscape Architecture and Environmental Solutions, New Jersey Department of Environmental Protection
Informed:	NA
Activity Predecessor:	2115, 2145, 2150, 2144
Activity Successor:	2240, 2250, 2260
Activity Duration:	30
Product Produced:	Conceptual Hydrologic & Hydraulic Analysis
Related Guidance Document:	Drainage Design Manual, RDM – Section 10

Conduct ITS Needs Assessment (2235)

The Designer reviews the existing Intelligent Transportation Systems (ITS) database and conducts an ITS needs assessment for additional ITS facilities. If additional ITS facilities are recommend by the Designer, the Project Manager coordinates with Bureau of Mobility Engineering and Operations to obtain concurrence.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Bureau of Mobility Engineering and Operations (ITS and Mobility Operations)
Informed:	NA
Activity Predecessor:	2115
Activity Successor:	2240, 2250
Activity Duration:	20
Product Produced:	ITS Needs Assessment; Concurrence from Bureau of Mobility Engineering and Operations
Related Guidance Document:	ITS Engineering Inventory, ITS Engineering Interim Guidelines

Prepare Project Fact Sheet (2240)

Prepare a proposed Project Fact Sheet; include relevant information such as traffic data, accident data, environmental data, management systems input, utility assessment, a description of the problem and

any other information necessary to understand the proposed project need and intent before holding the scope meeting. Send the proposed Project Fact Sheet and other relevant information to the Scope Team three weeks before the meeting.

Note for Limited Scope Study:
If approved by the Project Manager, a Limited Scope Checklist may be utilized in place of the Project Fact Sheet for Limited Scope studies.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	Subject Matter Experts
Activity Predecessor:	2130, 2140, 2175, 2200, 2205, 2210, 2230, 2235, (2025, 2060 for Limited Scope Study)
Activity Successor:	2270, 2260 SS (2110 FF, 2130 FF, 2135 FF or 2140 FF, 2155 FF, 2200 FF, 2260 for Limited Scope Study)
Activity Duration:	10
Product Produced:	Project Fact Sheet
Related Guidance Document:	NA

Determine Complete Streets Exemption (2244)

For Limited Scope Pavement Preservation projects, the NJDOT In-house design team reviews the Complete Streets Policy and the Complete Streets Handbook, and determines if the project is exempt from all Complete Streets Comprehensive Solutions. For all other projects, the Designer reviews the Complete Streets Policy and the Complete Streets Handbook and determines if the project is exempt from all Complete Streets Comprehensive Solutions. If the determination is that the project is exempt, the Designer will provide and submit justification to the Project Manager.

Role Description	
Responsible:	NJDOT In-house Design Team, Designer
Consulted:	Project Manager
Informed:	
Activity Predecessor:	2060, 2046
Activity Successor:	2246
Activity Duration:	5
Product Produced:	Complete Streets Exemption Determination and Justification
Related Guidance Document:	Complete Streets Policy #703, Completes Streets Handbook

Obtain Complete Streets Exemption Concurrence (2246)

For Limited Scope Pavement Preservation projects, the Project Manager submits the checklist and the justification to the Bureau of Safety, Bicycle & Pedestrian Programs (BSBPP) for concurrence. BSBPP reviews the provided information and provides the Project Manager with notification of agreement or disagreement. If the BSBPP decision is not in agreement, the Project Manager escalates the issue to the DPM Manager, Director, and Assistant Commissioner level, as outlined in the Complete Streets Compliance Process Flow Chart, until concurrence is reached.

For all other projects, the Project Manager reviews the Designer's recommendation and justification and completes the project exemption certification section in the Concept Development Complete Streets Checklist. The Project Manager submits the checklist and the justification to the Bureau of Safety, Bicycle & Pedestrian Programs (BSBPP) for concurrence. BSBPP reviews the provided information and provides the Project Manager with notification of agreement or disagreement. If the BSBPP decision is not in agreement, the Project Manager escalates the issue to the DPM Manager, Director, and Assistant Commissioner level, as outlined in the Complete Streets Compliance Process Flow Chart, until concurrence is reached.

Role Description	
Responsible:	NJDOT In-house Design Team, Project Manager, Bureau of Safety, Bicycle & Pedestrian Programs
Consulted:	Division of Project Management Manager, Division of Project Management Director, Assistant Commissioner, Capital Program Management
Informed:	
Activity Predecessor:	2244
Activity Successor:	2130
Activity Duration:	15
Product Produced:	Complete Streets Exemption Concurrence
Related Guidance Document:	Complete Streets Policy, #703, Completes Streets Handbook, Complete Streets Compliance Process Flow Chart, Concept Development Complete Streets Checklist

Prepare & Submit Draft CD Complete Streets Checklist (2248)

For both Limited and Full Scope projects, the Designer completes the CD Complete Streets Checklist and provides it to the Project Manager for review. The Draft CD Complete Streets Checklist will be discussed at the Scope Team Meeting. The checklist information will help determine the applicable Comprehensive Solution (Type A, B or C) for the project.

Role Description	
Responsible:	Designer, Project Manager
Consulted:	Scope Team Meeting SMEs
Informed:	
Activity Predecessor:	2060, 2046
Activity Successor:	2252, 2260
Activity Duration:	10
Product Produced:	Draft CD Complete Streets Checklist
Related Guidance Document:	CD Complete Streets Checklist, Completes Streets Handbook

Prepare Draft Purpose & Need Statement (2250)

A Purpose and Need Statement (PN) is a fundamental requirement to develop a concept that will require future National Environmental Protection Agency documentation and is the basis for alternatives development. The PN Statement has three parts: The Purpose, the Need, and Goals and

Objectives. The Purpose defines the transportation problem to address the issue. The Need provides data to support the problem statement (Purpose). The Goals and Objectives describe other issues that need to be resolved as part of a successful solution to the problem. The Designer will review the Concept Development Problem Statement and Management Systems input to ensure that facts support the stated problems and needs and considers the Department's Complete Streets Policy.

Role Description	
Responsible:	Designer, Project Manager, Bureau of Landscape Architecture and Environmental Solutions
Consulted:	NA
Informed:	Division of Project Management Executive Regional Manager
Activity Predecessor:	2130, 2140, 2200, 2205, 2210, 2230, 2235, 2175 (2025, 2060 for Limited Scope Study)
Activity Successor:	2270, 2260 SS (2130 FF, 2260 for Limited Scope Study)
Activity Duration:	10
Product Produced:	Draft Purpose & Need Statement
Related Guidance Document:	CD Guideline, Complete Streets Policy

Prepare & Submit Final CD Complete Streets Checklist (2252)

For Limited Scope Pavement Preservation projects, the NJDOT In-house design team completes the CD Complete Streets Checklist and submits the checklist to the Project Manager. The Project Manager submits the checklist to the Bureau of Safety, Bicycle & Pedestrian Programs (BSBPP) for approval. For all other projects, the Project Manager completes their portion of the CD Complete Streets Checklist and submits the checklist to the Bureau of Safety, Bicycle & Pedestrian Programs (BSBPP) for approval.

Role Description	
Responsible:	NJDOT In-house Design Team, Project Manager
Consulted:	Bureau of Safety, Bicycle & Pedestrian Programs
Informed:	
Activity Predecessor:	2248
Activity Successor:	2266, 2260FF
Activity Duration:	5
Product Produced:	Finalized CD Complete Streets Checklist
Related Guidance Document:	CD Complete Streets Checklist, Completes Streets Handbook

Hold Scope Team Meeting (2260)

The Project Manager determines potential Scope Team Members and schedules a Scope Team Meeting. The Project Manager conducts the Scope Team Meeting to discuss the Problem Screening Report, including Management System information, Project Fact Sheet, and the Draft Purpose and Need Statement. The Project Manager asks that the Scope Team members visit the study site, evaluate the data on the proposed Project Fact Sheet and be prepared to provide valuable input at the Scope Team Meeting.

The Designer will prepare Meeting Minutes and distributes to the Scope Team members.

Note for Limited Scope Study:
If issues identified during the field visit require further discussion, the Project Manager holds a Scope Team Meeting to resolve outstanding issues.

Role Description	
Responsible:	Designer, Project Manager
Consulted:	Scope Team Members (Including ROW SMEs)
Informed:	Scope Team Members (Including ROW SMEs)
Activity Predecessor:	2240SS, 2250SS, 2175, 2230, 2130
Activity Successor:	2270 (2280 for Limited Scope Study)
Activity Duration:	20 (5 for Limited Scope Study)
Product Produced:	Scope Team Meeting Minutes
Related Guidance Document:	CD Guideline

Review & Approve CD Complete Streets Checklist (2266)

BSBPP reviews the Finalized CD Complete Streets Checklist and provides the Project Manager with their sign off. If the BSBPP decision is not in agreement, the Project Manager escalates the issue to the DPM Manager, Director, and Assistant Commissioner level, as outlined in the Complete Streets Compliance Process Flow Chart, until concurrence is reached.

Role Description	
Responsible:	Bureau of Safety, Bicycle & Pedestrian Programs
Consulted:	
Informed:	Project Manager, Designer
Activity Predecessor:	2252
Activity Successor:	2290, 2300
Activity Duration:	10
Product Produced:	Approved CD Complete Streets Checklist
Related Guidance Document:	Complete Streets Policy, Completes Streets Handbook

Hold Initial Local Officials Briefing (2270)

An initial Local Officials Briefing is held with the affected municipalities and counties to solicit input on the Draft Purpose and Need Statement. Discussion items for the meeting should include a verification of the problem statement, the results of the data analysis, the input from the Scope Team Meeting, and the goals of the study and the role of the stakeholders in the overall process.

Division of Community and Constituent Relations (CCR) will schedule the meeting at least three weeks in advance, and coordinate with the engineer, planner, city, town, township, municipal manager, and administrator or appropriate agent a time and location convenient for the local officials. The CCR prepares a Memo of Record. The Designer prepares Meeting Minutes.

Role Description	
Responsible:	Project Manager, Division of Community and Constituent Relations, Designer
Consulted:	Local Officials
Informed:	NA
Activity Predecessor:	2260, 2240, 2250, 2035
Activity Successor:	2280 SS 25 day lag
Activity Duration:	30
Product Produced:	Memo of Record and Local Officials Briefing Meeting Minutes
Related Guidance Document:	CD Guideline

Complete Purpose and Need Statement (2280)

The Designer will review and finalize the Draft Purpose and Need Statement based on the input provided by the Local Officials and the Scope Team.

Note for Limited Scope Study:
For a Limited Scope Study, Local Officials input is considered, but not required.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Bureau of Landscape Architecture and Environmental Solutions
Informed:	NA
Activity Predecessor:	2270SS w/25 day lag (2260 for Limited Scope Study)
Activity Successor:	2290
Activity Duration:	5 (2 for Limited Scope Study)
Product Produced:	Final Purpose and Need Statement
Related Guidance Document:	CD Guideline

Purpose and Need Statement Completed (2290)

The Purpose and Need Statement has been completed (Milestone).

Activity Predecessor:	2280
Activity Successor:	2300 (2300, 2320, 2340, 2570 for Limited Scope Study)

Develop Alternatives (2300)

Produce alternative plans based on the data collected. Analyze each alternative to determine its ability to address the project need with respect to safety, capacity, community, environment and operational improvements, including Intelligent Transportation Systems (ITS) deployment. Use information from meetings with local officials/stakeholders and possibly the impacted community held earlier in the process to provide positive input up front and to lead to community ownership of the solution. Use a "complete streets" and "context-sensitive solution" approach to develop alternatives that strive to integrate the community's vision and provide accommodations for all current and future users. The conceptual solutions should consider the effects they may have on the land uses and community context both positive and negative. Considering the function of the proposed project, provide cost effective quality solutions.

Determine how to address the substandard design element identified in Activity 2125 by consulting with subject matter expert units and obtaining concurrence.

Note for Limited Scope Study:

Produce preliminary curb ramp, sidewalk, etc. designs in order to address ADA compliance based on the data collected. Using the preliminary designs, determine which locations may have ROW impacts due to ADA compliance.

An alternatives analysis narrative is prepared and included within the related section of the Limited Scope CD Report. Prepare a project limits graphic that illustrates project features and constraints.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2290, 2142
Activity Successor:	2310, 2320, 2322, 2330, 2340, 2350, 2360, 2380 (2560, 2570 lag, 3170 for Limited Scope Study)
Activity Duration:	60 (1 for Limited Scope Study)
Product Produced:	Alternative Plans; Alternatives Analysis Narrative (Limited Scope)
Related Guidance Document:	CD Guideline, Complete Streets Policy

Obtain Stakeholder Input on Developed Alternatives (2310)

Meet with stakeholders as per the Public Involvement Action Plan (PIAP) to obtain input on the developed alternatives to determine community support and preferences. Stakeholders may include a Community Advisory Committee, county officials, local officials and other agencies. This may require separate meetings with different stakeholder groups.

It is important at this point to confirm that the public involvement strategies being used are effective. Coordinate with the Division of Community and Constituent Relations for comments and review of the strategies used to date. Update the PIAP if necessary.

Note:
The 20 day activity duration is based on one meeting providing three week's notice of the meeting. The activity duration may increase based on the number of meetings necessary to obtain input.

Role Description	
Responsible:	Project Manager, Division of Community and Constituent Relations, Designer
Consulted:	Project Manager, Division of Community and Constituent Relations
Informed:	NA
Activity Predecessor:	2300
Activity Successor:	2380 FF, 2415
Activity Duration:	10
Product Produced:	Collection of Stakeholder Input/Meeting Minutes
Related Guidance Document:	CD Guideline

Establish Railroad Engineering Funding (2312)

Project Manager requests Federal Railroad Master Agreement (FRMA) Number and Change Order (CO) Number from the Utility Management Office. Utilizing the railroad preliminary engineering estimate obtained in Concept Development from the Utility (Railroad) Contact Letter, the Project Manager requests preliminary engineering funding from Capital Program Coordination. If no preliminary engineering estimate was received, an anticipated railroad design estimate is projected for the corresponding railroad company. Capital Program Coordination authorizes railroad engineering funding.

For State funded projects, only Railroad Engineering Estimate is required to establish funding for Railroad Engineering and Construction Agreement (RECA).

Role Description	
Responsible:	Project Manager, Capital Program Coordination
Consulted:	N/A
Informed:	Capital Program Coordination
Activity Predecessor:	2155 (4010 for Limited Scope)
Activity Successor:	2315, 2314
Activity Duration:	20

Product Produced:	Authorization of Railroad Engineering Funding
Related Guidance Document:	N/A

Prepare Railroad Engineering and Construction Agreement (2314)

For State Funded projects, the Project Manager prepares a Railroad Engineering and Construction Agrement (RECA). The Project Manager sends four (4) copies of the RECA to the railroad company.

The Project Manager obtains the signed Railroad Engineering Construction Authorization (RECA) from the railroad company(ies) and forwards to the Deputy Attorney General (DAG) for review and approval. Once approval is received, the Project Manager prepares a Department Action Slip (AD-12) for each RECA for internal circulation and signature. Once the RECAs are executed, the Project Manager prepares letters of transmittal and sends the RECAs to the railroad company(ies).

Role Description	
Responsible:	Project Manager
Consulted:	Designer
Informed:	Railroad Companies
Activity Predecessor:	2312
Activity Successor:	2316
Activity Duration:	10
Product Produced:	Railroad Engineering and Construction Agreement
Related Guidance Document:	PM Utility Agreement Template

Prepare Railroad Master Agreement Change Order (2315)

For Federally Funded projects, the Project Manager prepares Railroad Master Agreement Change Order (RRMACO).

Role Description	
Responsible:	Project Manager
Consulted:	Designer
Informed:	Railroad Companies
Activity Predecessor:	2435 (4010 for Limited Scope Study)

Activity Successor:	2520 (2318 for Limited Scope Study)
Activity Duration:	10
Product Produced:	Railroad Master Agreement Change Order
Related Guidance Document:	PM Utility Agreement Template

Execute Railroad Engineering and Construction Agreement (2316)

For State Funded Railroad Engineering and Contruction Agreement (RECA), Deputy Attorney General (DAG) review and approval is required for internal circulation and execution.

Department Action Slip (AD-12) and signature of the railroad company is required.

Role Description	
Responsible:	Project Manager, Railroad Companies, Deputy Attorney General
Consulted:	N/A
Informed:	Project Manager, Railroad Companies, Utility Management
Activity Predecessor:	2314
Activity Successor:	2300 (3045 for Limited Scope Study)
Activity Duration:	20
Product Produced:	Approval from DAG on Railroad Engineering and Construction Agreement
Related Guidance Document:	Railroad AD-12 Template, AD-37 for DAG transmittal/internal circulation

Execute Railroad Master Agreement Change Order (2318)

For Federal Railroad Master Agreement Change Order (FRMACO), Deputy Attorney General (DAG) review and approval is required for internal circulation and execution.

Department Action Slip (AD-12) and signature of the railroad company is not required.

Role Description	
Responsible:	Project Manager, Railroad Companies, Deputy Attorney General

Consulted:	N/A
Informed:	Project Manager, Railroad Companies, Utility Management
Activity Predecessor:	2315
Activity Successor:	2300 (3045 for Limited Scope Study)
Activity Duration:	20
Product Produced:	Approval from DAG on Railroad Master Agreement Change Order
Related Guidance Document:	Railroad AD-12 Template, AD-37 for DAG transmittal/internal circulation

Develop Preliminary Detour and Construction Staging Plans (2320)

Prepare a preliminary construction-staging plan to help determine how many stages of construction, anticipated durations, and if a detour of traffic will be necessary for all valid alternatives. Determine if a detour will be needed for traffic control and assess the need to include provisions for pedestrians and bicyclists. Prepare a construction sequence narrative that summarizes each stage. Coordinate efforts with outside agencies if a detour plan is proposed. These outside agencies will include local and county officials and engineers. Keep documentation of support from the local and county officials for a specific detour route on file and in the CD Report. Obtain concurrence from appropriate NJDOT Subject Matter Expert groups.

Note for Limited Scope Study:
For a Limited Scope Study, conceptual detour and construction staging schemes are prepared to ensure constructability.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, NJDOT Subject Matter Experts, Local & County Officials
Informed:	NA
Activity Predecessor:	2300 (2290 for Limited Scope Study)
Activity Successor:	2325 (2560, 2570 lag, 3170 for Limited Scope Study)
Activity Duration:	20 (5 for Limited Scope Study)
Product Produced:	Preliminary Detour and Construction Staging Plans; Construction Sequence Narrative; Support from Local and County Officials on Detour Route
Related Guidance Document:	CD Guideline

Perform Design-Build Screening (2322)

The Project Manager (PM) makes available the following information to Alternative Project Delivery (APD) for a project with an estimated construction cost of $20 million or more:

Management System Input

Stakeholder Input

Environmental Screening

Utility/Railroad Assessment Information

Project Fact Sheet

Purpose and Need Statement

Developed Alternatives

Risk Impact Assessment on Alternatives

Preliminary Construction Cost Estimate

APD consults with PM to collaborate with SMEs to initiate to Perform DB Screening;

Upon Development of Alternatives, APD will continue screening with select SMEs at the C-RA Workshop;

At the completion of Core Group Meeting, select SMEs will complete the DB Project Risk Checklist; As per the Design-Build Project Screening Guidelines, APD will submit project as a candidate, to utilize the Design-Build project delivery method, to the DB Screening Committee for final approval.

Role Description	
Responsible:	Design-Build Team
Consulted:	PM, SMEs
Informed:	
Activity Predecessor:	2300
Activity Successor:	2415
Activity Duration:	20
Product Produced:	DB Screening Decision
Related Guidance Document:	Alternative Project Delivery

Review Preliminary Detour and Construction Staging Plans (2325)

The Designer submits the Preliminary Construction Staging plans to the PM for Department review. This will be coordinated between the Traffic Workzone Unit, Traffic Operation Office (North/South) and the Office of Community and Constituent Relation for the complete assessment of the staging plans and any impact to local routes and the surrounding community. If it is determined that the proposed alternative may require detours during construction staging then the designer must develop preliminary detour plans in accordance with the latest policy and procedure for assessment of impacts due to proposed detours. Once the comments are received and reviewed by the PM, they will be provided to the designer for any needed revisions.

Role Description	
Responsible:	Designer, PM
Consulted:	Traffic Workzon Unit, Traffic Operation Office (North/Souht), Office of Community and Constituent Relation
Informed:	NA
Activity Predecessor:	2320
Activity Successor:	2415
Activity Duration:	20
Product Produced:	Comments Received on Preliminary Detour and Construction Staging Plans
Related Guidance Document:	

Perform Impact Assessment on Alternatives (2330)

Determine the impacts of each alternative on environmental resources, right of way, utilities, access, drainage, storm water management, walking, bicycling, transit and socio-economic features, etc. If the environmental screening identified Section 4(f), cultural resources or land use permit impacts, a more detailed alternatives analysis may be required. Assess the risks associated with each alternative. These risks will be included in the Alternatives Matrix prepared during Activity 2380.

If access is impacted, conduct a circulation study, if necessary, and include the determined impacts in the Alternative Matrix. If a risk register was not initiated during development of the problem statement , initiate at this phase. Submit the Risk Register to the Project Manager.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, NJDOT Subject Matter Experts, Construction Management
Informed:	NA
Activity Predecessor:	2300
Activity Successor:	2335, 2415, 2425
Activity Duration:	20
Product Produced:	Impact Assessment on Alternatives
Related Guidance Document:	Alternatives Matrix Example, CD Guideline Risk Management Guideline, Sample Risk List

Review Impact Assessment on Alternatives (2335)

PM circulates the Impact Assessment to the Core Group for input. The PM returns any comments to the Designer.

Role Description	
Responsible:	Project Manager
Consulted:	Designer
Informed:	NA
Activity Predecessor:	2330
Activity Successor:	2400, 2415
Activity Duration:	20
Product Produced:	Comments Received on Impact Assessment
Related Guidance Document:	

Develop Preliminary Construction Cost Estimates (2340)

Develop a preliminary construction cost estimate for each alternative. Apply the same base assumptions to each alternative, which is sufficient to compare alternatives. At a minimum, estimates should be done for construction, right of way and utilities.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2300 (2290 for Limited Scope Study)
Activity Successor:	2425 (2560, 2570 lag, 3170 for Limited Scope Study)
Activity Duration:	20 (5 for Limited Scope Study)
Product Produced:	Preliminary Construction Cost Estimates
Related Guidance Document:	Construction Cost Estimating Guide

Conduct Proposed Traffic Analysis (2350)

Perform the Level of Service (LOS) for each alternative for the current year, the year following construction (build year), and 20 years after construction. Conduct a failure year analysis if an alternative fails prior to the construction year. Utilizing the existing year LOS, determine the target LOS for the study area. All of the traffic analyses/ traffic simulations performed as part of this

activity are to be submitted to the Division of Traffic Engineering on a compact disc for their review and concurrence.

Develop a traffic simulation for the existing conditions, if necessary, and each alternative to analyze the conditions on a network-wide basis. These simulations may be presented to graphically show the traffic impacts to stakeholders and local officials.

Evaluate the traffic impacts caused on a regional level if appropriate. Analyze the regional traffic model (e.g., Metropolitan Planning Organization model) to assess the impact of the study on the regional traffic. The Project Manager will determine if this activity is necessary. Add 10 days to the activity duration to evaluate the affect on the regional model level.

Develop study specific model if needed. Study specific models may need to be developed by extracting data from the regional model and adjusted with study specific data. These models are used to study regional traffic, diversions, and complex scenarios such as interstate weave movements or Information Technology Systems (ITS) strategies and characteristics such as air quality impacts. Add 20 additional days to the activity duration if a study specific model is needed.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Division of Traffic Engineering
Informed:	NA
Activity Predecessor:	2300
Activity Successor:	2355
Activity Duration:	20
Product Produced:	Traffic Analysis
Related Guidance Document:	CD Guideline

Conduct Data Driven Safety Analysis (DDSA) (2354)

Note: This activity is required for all projects indicated as candidate projects eligible for Highway Safety Improvement Program (HSIP) funds and for projects that are highlighted by the Bureau of Safety, Bicycle and Pedestrian Programs (BSBPP).

As stipulated in the current New Jersey HSIP Manual (page 9 of the manual), prospective HSIP-funded projects that cost more than $250,000 are required to conduct DDSA.

The DDSA involves analyzing traffic volume and the roadway facilities' geometric, traffic operation and roadway characteristic in calculating crash frequencies using tools such as the HSM and its Part C spreadsheets. The Empirical-Bayes (EB) method, or other quantitative safety analysis tools, is required as applicable to the project.

The consultant/BSBPP (in-house staff) will conduct DDSA to include an economic appraisal that shows the Benefit/Cost Ratio (BCR) for at least three alternatives, one of which may be the no-build.

The consultant/PM should consult Highway Safety Manual (HSM), FHWA, and HSIP Manual for guidance on the methodology for which analysis applies to the project. BSBPP will provide the HSM input variables.

The DDSA with the Benefit Cost Ratio (BCR), or other quantitative safety benefits, and report listing assumptions, data used and spreadsheets will be submitted to the Project Manager for all identified HSIP-funded eligible candidate projects. DDSA for prospective HSIP-funded projects are then forwarded by the Project Manager to the BSBPP for review and concurrence. The review of the analysis is described in A-2356 (DDSA Review).

Note: DDSA, such as HSM analysis can also be used as a tool for calculating BCR as a criteria for selection of PPA on other (non-eligible HSIP) projects as well, at the discretion of the PM.

Role Description	
Responsible:	Designer/BSBPP (for in-house bureau projects)
Consulted:	Project Manager, BSBPP
Informed:	Project Manager, BSBPP
Activity Predecessor:	2355
Activity Successor:	2356
Activity Duration:	15
Product Produced:	DDSA, such as, Highway Safety Manual Analysis; Benefit/Cost Ratio
Related Guidance Document:	Highway Safety Manual, NJ - HSIP Manual, FHWA Safe System Approach and other guidance, HSM-input variables from BSBPP

Review Proposed Traffic Analysis (2355)

This is most important analysis for the congestion related or safety related problem statement. The analysis must be based on peak period traffic volumes on roadway network in or adjacent to the project limits. One of the critical factor in assessing the impacts or benefits of the proposed alternatives will be the outcome of the traffic analysis. This is probably Synchro Analysis or any other acceptable analysis for the project – However for project involving state arterials the acceptable software is either Synchro for isolated and multiple intersections or in some cases Highway Capacity Software (HCS) is also acceptable for the results of isolated intersections. However Synchro is generally preferred. The use of any another software has to be pre -approved by BTE. This can be reviewed for the probable conceptual solution and determined that which solution provide better solution to address the problem at hand. This must be reviewed by Traffic Engineering for their input

and any comments must be addressed by designer prior to advancing further. For details regarding the analysis the designer is encouraged to coordinate through the project PM with the SME for clarification in addition to visiting the design guidelines.

Role Description	
Responsible:	Designer
Consulted:	Mobility Engineering
Informed:	Project Manager
Activity Predecessor:	2350
Activity Successor:	2415, 2354
Activity Duration:	20
Product Produced:	Comments Received on Proposed Traffic Analysis
Related Guidance Document:	

Review Data Driven Safety Analysis (DDSA) (2356)

Note: This activity is required for all projects indicated as candidate projects eligible for Highway Safety Improvement Program (HSIP) funds and for projects that are highlighted by the Bureau of Safety, Bicycle and Pedestrian Programs (BSBPP).

The BSBPP will review submitted DDSA and report for prospective HSIP-funded projects to ensure conformance to DDSA methodologies in attaining the most accurate quantification of crashes and severities, relative to the existing and proposed conditions of the project.

Aside from relevant tool specific variables, such as Safety Performance Function (SPF) variables, the review will include checking the correctness of geometric and operational characteristics, the Crash Modification Factor (CMF) or other quantified safety performance variables for safety countermeasure/s, the project's compatibility to the selected DDSA tool such as, HSM Part C model being used, and the economic appraisal.

Upon completion of a review, the PM and consultant will be notified by BSBPP of the comments or acceptance. If corrections are needed, a revised DDSA will be reviewed again until BSBPP deems it acceptable. The consultant is required to submit a Comment Resolution Summary with the revised submissions, clearly indicating the changes/compliance with BSBPP comments.

Note: DDS Analyses should be used as a tool during alternative analysis to assist in the PPA decision-making process for all HSIP eligible projects and can be used for PPA selection for non-HSIP projects. The Project Manager will be responsible for the review and approval of submitted DDSA for projects that are not prospective HSIP-funded projects.

Role Description	
Responsible:	BSBPP for selected projects/Project Manager
Consulted:	Project Manager, BSBPP
Informed:	Project Manager, BSBPP
Activity Predecessor:	2354
Activity Successor:	2430
Activity Duration:	15
Product Produced:	Comments Received on Highway Safety Manual Analysis
Related Guidance Document:	Highway Safety Manual, NJ - HSIP Manual, HSM-input variables from BSBPP

Eligibility Approval for HSIP Funding (2358)

Note: This activity is required for all projects indicated as candidate projects eligible for Highway Safety Improvement Program (HSIP) funds and for projects that are highlighted by the Bureau of Safety, Bicycle and Pedestrian Programs (BSBPP).

Upon completion of any revisions needed in the DDSA review of prospective HSIP-funded projects and having the revised analysis considered acceptable, BSBPP evaluates the project's eligibility approval for HSIP Funding.

The final decision will be shared with the PM. A copy of the approval shall be included with the authorization package for all HSIP funded projects. The approval might require collaboration with NJ FHWA.

Role Description	
Responsible:	BSBPP/FHWA
Consulted:	FHWA
Informed:	Project Manager
Activity Predecessor:	2480
Activity Successor:	2570, 2520
Activity Duration:	10
Product Produced:	FHWA Approval for HSIP Funding
Related Guidance Document:	

Geometric Review for Design Exception (2360)

Designer prepares a memorandum listing the anticipated substandard elements for the alternatives being developed for Geometric Review and submits to the Geometric Solutions Unit, within the Bureau of Design Standards. The Designer requests Exception Crash Analysis Memorandum prepared by the Bureau of Safety Programs is included with the memorandum. The Project Manager also submits base mapping, and plans of each alternative, Project Fact Sheet and a discussion of the order of magnitude of what it would take to obtain the standard for each anticipated substandard element. This order of magnitude estimate would be a general idea of the issues (ROW, utilities, environmental, etc.) without getting into specific impacts (detailed costs, number of ROW parcels, permits, etc.) which would normally be obtained during further advancement of the project (preliminary engineering). The Geometric Solutions Unit reviews the package and provides the Project Manager with a decision on the likelihood a design exception would be approved.

Note for Limited Scope Study:

The geometric review must be conducted and approved for Limited Scope Deck/Superstructure Replacements and other applicable Limited Scope projects that may alter roadway geometric features.

Design exception approval is only required for specific project types. These project types are detailed in the Project Customization Guideline. For these specific project types, the Project Manager notifies the Geometric Solutions Unit in advance of any upcoming requests for Geometric Review of substandard elements of the project requiring a design exception. The Project Manager provides the Geometric Solutions Unit with a list of substandard elements (with plans as available) and the crash analysis for the substandard elements.

Role Description	
Responsible:	Project Manager, Bureau of Safety, Bicycle and Pedestrian Programs, Quality Management Services
Consulted:	Designer
Informed:	NA
Activity Predecessor:	2300 (2200 for Limited Scope Study)
Activity Successor:	2415 (2560, 2570 lag, 3170, 3870 or 3890 for Limited Scope Study)
Activity Duration:	20
Product Produced:	Design Exception Package; Geometic Solutions Unit Decision
Related Guidance Document:	CD Guideline, Project Customization Guideline

Prepare Alternatives Matrix (2380)

Develop a comparison matrix of all the alternatives. The Project Manager will determine which of the following will be included in the matrix.

Access Impacts and waivers if necessary	Additional traffic analysis if needed (Transit 7F, Traf Net Sim, etc.)
Complete Streets Policy Compliance	Existing & Design year Level of Service analysis, year of Level of Service F if before the design year
Constructability	Estimated Construction Cost
Design Exceptions	Limits of Disturbance
Anticipated Environmental Document	Environmental Constraints and Mitigation Costs
Community Impacts (Environmental Justice)	Estimated ROW (# of acquisitions, total acres)
Design Criteria	Design standards (NJDOT Standard Specifications, AASHTO)
Railroad Crossing impacts	ROW impacts (areas, easements, land use & impacts, lot and block)
Safety Improvement	Signal warrants for all proposed signals
Structures	Traffic Management Alternatives
Typical Sections	Utilities relocation and associated costs
Major Risks	

Note:

The Designer lists the major risks specific to each alternative in the Alternatives Matrix.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Risk Management Support Group
Informed:	NA
Activity Predecessor:	2300, 2310FF
Activity Successor:	2415, 2400
Activity Duration:	20
Product Produced:	Comparison Matrix of All Alternatives
Related Guidance Document:	Alternatives Matrix Example, CD Guideline, Complete Streets Policy, Risk Management Guideline

Coordinate with Permitting Agencies (2400)

The Bureau of Landscape Architecture and Environmental Solutions begins consultation with permitting agencies, if the Environmental Screening (Activity 2135) indicates that major permitting agency coordination will be required to obtain the necessary permits.

If significant impacts are anticipated in the study area such as wetlands, endangered species, historic structures, riparian, storm water, provide the Alternatives Matrix to the permitting agencies to present the study and range of alternatives being considered. Invite the permitting agencies to the next scheduled core group meeting to solicit input on the selection of the Preliminary Preferred Alternative.

Permitting agencies may include:

- Highlands Council
- Pinelands Commission
- Meadowlands Commission
- Delaware and Raritan Canal Commission
- State Historic Preservation Office
- Division of Land Use Regulation Program
- Army Corps of Engineers

Role Description	
Responsible:	Bureau of Landscape Architecture and Environmental Solutions
Consulted:	Project Manager
Informed:	Designer
Activity Predecessor:	2380, 2335
Activity Successor:	2430
Activity Duration:	10
Product Produced:	Consultation with Appropriate Permitting Agencies
Related Guidance Document:	CD Guideline

Conduct Concept Design Constructability-Risk Analysis Workshop (2415)

The Designer, PM and CM coordinate scheduling of a Concept Design Constructability-Risk Analysis (CDCRA) Workshop. The Designer and Construction Management will facilitate the CDCRA workshop, which will provide an opportunity for the PM, Designer, Constructability Unit, Construction Management, and select SMEs to collaborate on the review of the current Alternatives and Alternative Matrix.

This CDCRA workshop group will review identified risks and opportunities that may impact the project's delivery and constructability such as: construction staging, traffic control, work zone safety, ROW, Access, Utilities, and environmental risks, all with a goal to eliminate alternatives that have either fatal flaws or unacceptable risks. The group may narrow down the alternatives to those that could have acceptable or cost effective risk response strategies, for the selection of a draft-PPA by the Core Group.

The Designer will utilize the draft-Risk Register to include major risks for each alternative. If needed, the Designer may utilize the Sample Risk List when populating the draft-Risk Register. The Designer adds to the draft-Risk Register, for the Alternatives, major risks that have a high or very high probability of occurrence and a high or very high magnitude of impact.

The result of the CDCRA Workshop will assist the Designer and Project Manager to revise the Alternatives Matrix for the Core Group to then select the draft-Preliminary Preferred Alternative (PPA). Upon the selection of a draft-PPA, the project deliverability/project constructability-risk (impact) information will be updated in the Risk Register for that selected draft PPA, for inclusion in the CD Report.

Role Description	
Responsible:	Designer, Project Manager, Construction Management
Consulted:	Constrution Management, select SME's
Informed:	Project Manager
Activity Predecessor:	2380, 2310, 2355, 2360, 2330, 2425, 2322, 2325, 2335
Activity Successor:	2420
Activity Duration:	20
Product Produced:	Concept Design Constructability-Risk Analysis Workshop
Related Guidance Document:	CD Guideline, Risk Management Guideline, Sample Risk List

Revise Alternatives Matrix (2420)

Revise the Alternatives Matrix based on the input provided by the subject matter expert units. Update the preliminary construction cost estimate and include any other pertinent information received since the Alternatives Matrix was created.

Significant revisions may require repeating several previous activities starting with Activity 2300 (Develop Alternatives) resulting in delays and additional costs.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2415
Activity Successor:	2430
Activity Duration:	20
Product Produced:	Revised Alternatives Matrix
Related Guidance Document:	Alternatives Matrix Example, CD Guideline

Perform Quantitative Risk Analysis (2425)

For projects with a total construction cost over $100 million and if approved by the Project Manager and concurred with by the Executive Regional Manager, the Designer performs quantitative risk analysis. Quantitative risk analysis provides the Project Manager and Core Group with additional cost and schedule impact information to assist in selecting the Preliminary Preferred Alternative.

Utilizing the Quantitative Risk Analysis Worksheet, the Designer includes each major risk for each alternative. If needed, the Designer may utilize the Sample Risk List when populating the Quantitative Risk Analysis Worksheet. For each risk that is added to the worksheet, the Designer calculates the probability of occurrence and magnitude of schedule and cost impact. For each risk that has a high or very high probability of occurrence and a high or very high magnitude of impact, the Designer performs quantitative risk analysis. Methods to quantify cost and schedule impacts vary and the Designer and Project Manager should determine how best to calculate these impacts. Quantitative risk analysis results in a more accurate estimation of probability of occurrence and a numerical value in days of schedule impact and dollars of cost impact.

The quantitative risk analysis is documented in the Quantitative Risk Analysis Report. The risk strategy and plans will be used in the development of the PE Scope Statement.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, NJDOT Subject Matter Experts, Construction Management
Informed:	NA
Activity Predecessor:	2330, 2340
Activity Successor:	2415

Activity Duration:	40
Product Produced:	Quantitative Risk Analysis
Related Guidance Document:	CD Guideline, Quantitative Risk Analysis Worksheet Template, Risk Management Guideline, Sample Risk List

Hold Core Group Meeting (2430)

The PM holds a Core Group Meeting to review and compare each alternative, ultimately recommending one alternative (draft PPA) that best accommodates design standards, community needs and has reasonable cost for the derived benefit.

When the Core Group selects a draft PPA, the Project Manager instructs the Designer to populate the Risk Register with the associated risks for the draft PPA.

At the conclusion of the meeting, there should be clear direction on which alternative will best serve as the Preliminary Preferred Alternative (PPA).

The Designer will develop the meeting minutes to document important decisions. All decisions will be documented in the Design Communications Report.

Role Description	
Responsible:	Project Manager, Designer
Consulted:	NJDOT Subject Matter Expert Units *Include the following for projects with ROW issues: ROW Technical support Unit, ROW District, ROWE and OAD, Other ROW units as needed
Informed:	Designer, Project Manager
Activity Predecessor:	2420, 2356, 2400
Activity Successor:	2432
Activity Duration:	20
Product Produced:	Core Group Meeting Minutes
Related Guidance Document:	CD Guideline, Risk Register Example, Risk Register Template, Sample Risk List

Draft PPA Selected (2432)

The Draft Preliminary Preferred Alternative has been Selected (Milestone).

Role Description	
Responsible:	NA
Consulted:	NA
Informed:	NA
Activity Predecessor:	2430
Activity Successor:	2435
Activity Duration:	
Product Produced:	Selection of Draft PPA
Related Guidance Document:	

Conduct Value Engineering Review (2435)

As per FHWA Regulation 23 CFR Part 627, a Value Engineering Technical Report shall be prepared on all Federal-aid projects with an estimated total cost of $25 million or more for roadway projects, a total cost of $20 million or more for bridge projects or any other project designated by the Secretary of Transportation. Effective as of October 1, 2012, the Moving Ahead for Progress in the 21st Century Act, (MAP-21) raised the limit to $50 million or more for new roadway projects and $40 million for new bridge projects authorized after this date.

A multi–disciplined Value Engineering (VE) team performs a review of the draft Preliminary Preferred Alternative (PPA) to identify, evaluate, develop and recommend alternative designs or methods that will provide an acceptable or improved product to maximize the value of every dollar spent and minimize life cycle costs. The VE team identifies the function of the proposed project and provides a cost effective, quality solution.

To perform an adequate review, a workshop is required with appropriate internal and/or external stakeholders. If significant issues are identified, an outcome of this review may be to re-evaluate one or more alternatives and perform further analysis. The Change Control Board will determine the level of work required to address the VE recommendations.

In addition to meeting the federal requirements, a VE Review should be performed for any project that the Project Manager deems appropriate.

Role Description	
Responsible:	Value Engineering Unit
Consulted:	Subject Matter Expert Units, Project Manager, Designer
Informed:	Project Manager
Activity Predecessor:	2432
Activity Successor:	2440, 2445, 2315
Activity Duration:	25
Product Produced:	Value Engineering Review
Related Guidance Document:	CD Guideline

Hold Local Officials Briefing (2440)

Schedule and hold a Local Officials Briefing to present the developed alternatives to the local and county officials. Only those alternatives that were approved by the core group will be presented. Provide copies of the alternatives to the attendees at least one week in advance of the briefing for their review. The goal of this briefing is to obtain support of an alternative. If support of an alternative cannot be obtained at the briefing, additional briefings may be required.

Resources included in the meeting may include a handout, project location map/aerial, display of the alternatives, profile plans, detour route, construction staging, traffic flow diagrams, crash diagram, environmental concerns/screening and photographs. Notify the local officials that an official Resolution of Support will be needed to advance an alternative.

The Division of Community and Constituent Relations (CCR) will schedule the briefing at least three weeks in advance, and coordinate with the city, town, township, municipal manager, and administrator or appropriate agent a time and location convenient for the local officials. The CCR prepares a Memo of Record. The Designer prepares Meeting Minutes.

Role Description	
Responsible:	Division of Community and Constituent Relations, Project Manager, Designer
Consulted:	Project Manager, Local Officials
Informed:	NA
Activity Predecessor:	2435
Activity Successor:	2460
Activity Duration:	30
Product Produced:	Memo of Record; Local Officials Briefing Meeting Minutes
Related Guidance Document:	CD Guideline

Prepare Value Engineering Technical Report (2445)

The Value Engineering (VE) team prepares a Technical Report documenting the VE review results and recommendations. Approximately 10 days after you conduct the VE Review, begin the VE Technical Report.

The VE Technical Report is included as an attachment within the CD Report.

Role Description	
Responsible:	Value Engineering Unit
Consulted:	Subject Matter Expert Units, Project Manager, Designer
Informed:	Project Manager
Activity Predecessor:	2435
Activity Successor:	2446
Activity Duration:	30
Product Produced:	Value Engineering Technical Report
Related Guidance Document:	CD Guideline

Review VE Technical Report (2446)

The Value Engineering Unit sends the VE Technical Report to the Project Manager for review. The Project Manager consults with the Designer and the appropriate SMEs to determine if any or all the design recommendations within the report should be incorporated into the project design.

Role Description	
Responsible:	Value Engineering Unit, Project Manager
Consulted:	Subject Matter Expert Units, Designer
Informed:	
Activity Predecessor:	2445
Activity Successor:	2470
Activity Duration:	20
Product Produced:	Comments Received on Value Engineering Technical Report
Related Guidance Document:	

Hold Public Information Center (2460)

Schedule and hold the Public Information Center (PIC). The goal of the PIC is to obtain public input on the PPA. The PIC is conducted in all cases unless the Executive Regional Manager and the Division of Community and Constituent Relations (CCR) representative agree that it is not needed. The PIC is a community outreach forum to develop a partnership with the public. The public is a stakeholder, along with local and state officials, and public interest groups. It is preferable to obtain documentation of local support before the PIC; however, the officials may not support a proposed project until the public has provided input.

The Project Manager requests CCR to consult with the Division of Communications to review the PIC handout and mailing list. The display boards may include: an aerial of the study area, the Preliminary Preferred Alternative, a profile of the existing condition and the proposed improvement, existing and proposed typical sections, environmental concerns, a right of way matrix showing the amount of each property impact, detours, construction staging, traffic volumes, collision diagrams, structural elevations, and photo simulations. Consult with CCR for review and comment of the displays.

CCR prepares a Memo of Record. The Designer prepares Meeting Minutes to document the input obtained and attaches the sign-in sheet to the minutes.

Role Description	
Responsible:	Project Manager, Division of Community and Constituent Relations, Designer
Consulted:	Division of Communications
Informed:	NA
Activity Predecessor:	2440
Activity Successor:	2480
Activity Duration:	30
Product Produced:	Memo of Record; Public Information Center Meeting Minutes
Related Guidance Document:	CD Guideline

Finalize Preliminary Preferred Alternative (2470)

Finalize the Preliminary Preferred Alternative based on the input received at the Local Officials Briefing, Town Council Presentation (if held) and Public Information Center. Coordinate with appropriate subject matter expert units if necessary.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2446
Activity Successor:	2480
Activity Duration:	20
Product Produced:	Final Preliminary Preferred Alternative
Related Guidance Document:	CD Guideline

Preliminary Preferred Alternative Selected (2480)

The Preliminary Preferred Alternative has been selected (Milestone).

Activity Predecessor:	2470, 2460
Activity Successor:	2500, 2540, 2510, 2358, 2535, 2485, 2515

Investigate need for Traffic Regulation Orders (2485)

Following NJDOT Policy and Procedures 907, Adoption of Traffic Regulations, the Designer investigates the need for any Traffic Regulation Orders (TROs) for the Preliminary Preferred Alternative (PPA). The Designer notifies the Project Manager of the TRO need investigation outcome. The Project Manager notifies the appropriate municipal officials about the future need for any TRO resolutions (upon reaching substantial construction completion) to support the TRO process.

Role Description	
Responsible:	Designer
Consulted:	NA
Informed:	Project Manager
Activity Predecessor:	2480
Activity Successor:	2570, 2520
Activity Duration:	15
Product Produced:	Outcome of Traffic Regulation Orders Need Investigation
Related Guidance Document:	NJDOT Policy and Procedures 907, Adoption of Traffic Regulations

Complete PPA Constructability-Risk Report (2500)

After completion of a Concept Design Constructability-Risk Analysis (CDCRA) Workshop, and after the selection of the draft-Preliminary Preferred Alternative (PPA) by the core Group, the Designer will draft a PPA Constructability-Risk Report, which will include the updated Risk Register.

The PPA Constructability-Risk Report will be included in the draft-Concept Development (CD) Report.

NOTE: When a Limited Scope Concept Development (LSCD), the PMS and Designer may choose not to conduct a CDCRA Workshop. In that case, the PPA Constructability-Risk Report will be submitted by the Designer to summarize the risks identified and response strategies and that information will be updated in the Risk Register for the selected PPA, for inclusion in the LSCD Report and to advance to Final Design.

Role Description	
Responsible:	Designer, Project Manager, Construction Management
Consulted:	Construction Management, select SME's
Informed:	Project Manager
Activity Predecessor:	2480, 2545
Activity Successor:	2570
Activity Duration:	20
Product Produced:	PPA Constructability-Risk Report
Related Guidance Document:	Constructability Process Summary, Risk Management Guideline

Confirm Environmental Document (2510)

The Project Manager coordinates with the Bureau of Landscape Architecture and Environmental Solutions (BLAES) to determine the environmental document that will be obtained in PE. If BLAES determines that a Categorical Exclusion is applicable, Certified Categorical Exclusion criteria are assessed. Reference the Programmatic Agreement for Approval of Certain Categorical Exclusions between FHWA and NJDOT to determine if the project qualifies as a Categorical Exclusion or Certified Categorical Exclusion.

Role Description	
Responsible:	Project Manager, Bureau of Landscape Architecture and Environmental Solutions
Consulted:	Designer
Informed:	Designer
Activity Predecessor:	2480
Activity Successor:	2520, 2570
Activity Duration:	10
Product Produced:	Determination of Environmental Document
Related Guidance Document:	Programmatic Agreement for Approval of Certain Categorical Exclusions

Prepare PE Public Involvement Action Plan (2515)

The Project Manager and Designer develop a PE Public Involvement Action Plan (PIAP) to identify critical points for public involvement during PE, and the objectives for each point. The PE PIAP includes, at minimum, updating the database of known stakeholders, determining the number of

anticipated meetings with local officials, citizens groups and any outside agencies impacted by the proposed project.

The Project Manager circulates the PIAP to CCR for final comments and signature.

Role Description	
Responsible:	Project Manager, Designer, Division of Community and Constituent Relations
Consulted:	NA
Informed:	Division of Community and Constituent Relations, Project Manager
Activity Predecessor:	2480
Activity Successor:	2570, 2520
Activity Duration:	10
Product Produced:	PE Public Involvement Action Plan
Related Guidance Document:	CD Guideline

Prepare PE Scope Statement (2520)

The PM initiates the process in PMRS. The Designer reviews the master Preliminary Engineering (PE) Scope Statement template and customizes it to reflect PE tasks necessary for the completion of PE phase of the project. The PE Scope Statement includes project specific commitments to Stakeholders (including SME units) and provides an area for the SME units to state any assumptions.

Role Description	
Responsible:	Designer, Project Manager
Consulted:	NJDOT Subject Matter Expert Units
Informed:	NA
Activity Predecessor:	2540, 2535, 2485, 2515, 2510, 2358, 2315, 2545
Activity Successor:	2522
Activity Duration:	40
Product Produced:	PE Scope Statement
Related Guidance Document:	Scope Management Guideline, PE Scope Statement Template

Execute PE Scope Statement (2522)

The Project Manager reviews the PE SS and if in concurrence, circulates the PE SS to the appropriate NJDOT SME units for review and comment. If the PM cannot resolve the SME's comments, sends the unresolved comments to the Designer for resolution. The Designer revises the PE SS as needed. Upon resolution of all comments, the PM approves the PE SS which moves to BLAES for approval. The PE SS moves to the Executive Regional Manager for their approval upon approval by BLAES. Execution is complete. The PM receives a notification from PMRS that PE SS process is complete.

Role Description	
Responsible:	Project Manager, Designer, BLAES
Consulted:	NJDOT SMEs
Informed:	NA
Activity Predecessor:	2520
Activity Successor:	2570FF, 2700, 2710
Activity Duration:	20
Product Produced:	Comments Received on PE Scope Statement; Final PE Scope Statement
Related Guidance Document:	

Prepare Systems Engineering Review Form (2535)

If additional Information Technology Systems (ITS) facilities are proposed for the study area (Activity 2235), the Designer prepares a Systems Engineering Review Form (SERF). For the majority of standard ITS deployments, a programmatic conformance process has been established and a SERF must be completed. Any ITS deployment that is not covered as programmatic will require the Designer to develop a Concept of Operations Report, including coordination with impacted stakeholders to address the seven sections under the SERF. The SERF, including a detailed Concept of Operations Report, if required, is to be included as an attachment within the CD Report. The SERF is approved by Bureau of Mobility Engineering and Operations-Mobility Operations (formerly Traffic Operations) and submitted to FHWA. Submission of a SERF is not required if the scope is only replacing in-kind existing ITS facilities.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Bureau of Mobility Engineering and Operations (ITS and Mobility Operations)
Informed:	Bureau of Mobility Engineering and Operations (ITS and Mobility Operations)
Activity Predecessor:	2480
Activity Successor:	2570, 2520
Activity Duration:	20
Product Produced:	Systems Engineering Review Form
Related Guidance Document:	ITS Interim Guidelines, SERF-Programmatic Instructions, SERF-Programmatic Template

Prepare & Submit CD ROW and Access Impact Plan and Matrix (2540)

Prepare a CD Right of Way (ROW) Plan, CD ROW Matrix and ROW Access Impact Plan for the selected Preliminary Preferred Alternative (PPA).

The CD ROW Plan will show the proposed area of takings, type of takings, and type of use of properties for the proposed project. Any temporary takings will identify the estimated length of time needed to complete the work.

The CD ROW Matrix will list each affected parcel (including the Early Acquisition or Advance Acquisition) by Block and Lot indicating the type of acquisition (it may be partial/entire fee takes or easements), the area of property to be acquired, the existing use of the property (e.g., residential, commercial, industrial), and the estimated length of time for any temporary takings.

Submit two (2) sets of the CD ROW plans and CD ROW Matrix for the Preliminary Preferred Alternative (PPA) to ROW Technical Support. Also submit one (1) set of tax maps and a Google imagery depicting superimposed areas of takings locations and types of takings within the project limits.

The ROW Access Impact Plans will show all of the properties with proposed access impacts (adjustment, modification, revocation, waiver) within the project limits.

Submit two (2) sets of the ROW Access Impact Plan of the PPA to OAD.

*Note for Early Acquisition or Advance Acquisition:

The Project Manager and the Designer will discuss with ROW Technical Support and the District when there are potential candidates for an Early Acquisition (ROW purchases for needed ROW to benefit the project prior to environmental review being completed) or Advance Acquisition (ROW purchases of a limited number of parcels for hardship claims or protective buying on a proposed

project prior to environmental review being completed). The Designer will list the affected parcel(s) and begin to develop a conceptual ROW Submission for estimated ROW acquisition.

Role Description	
Responsible:	Designer
Consulted:	Project Manager, Right of Way Regional Office, ROW Tech Support Manager, OAD
Informed:	Project Manager
Activity Predecessor:	2480
Activity Successor:	2570, 2520, 2545
Activity Duration:	20
Product Produced:	CD ROW & Access Impact Plan & Matrix
Related Guidance Document:	CD Guideline, Access Design Guidelines

Review CD ROW & Access Impact Plan & Matrix (2545)

ROW Technical Support receives the CD submission from the consultant and distributes it along with an in-house CD submission transmittal to the District requesting they provide comments and a corresponding cost estimate.

Role Description	
Responsible:	ROW Technical Support Unit
Consulted:	Consultant, Project Manager, ROW Tech Support Manager,
Informed:	ROW Tech Support Manager,
Activity Predecessor:	2540
Activity Successor:	2500, 2520 SS w/ 5 day lag, 2570 SS w/ 5 day lag, 2550
Activity Duration:	5
Product Produced:	Comments Received on CD ROW & Access Impact Plan & Matrix
Related Guidance Document:	CD Guideline, Access Design Guidelines

Prepare CD ROW and Access Cost Estimate (2550)

ROW Technical Support receives the CD submission from the consultant and distributes it along with an in-house CD submission transmittal to the District requesting they provide comments and a corresponding cost estimate.

The District reviews the CD submission, provides comments and prepares the CD ROW cost estimate. The District's CD ROW cost estimate is submitted to the ROW Technical Support Manager to be updated with in-house costs. Upon finalization of the costs, the ROW Technical Support submits CD ROW cost estimate and comments to the Project Manager to program the ROW costs for the project.

OAD receives and reviews the ROW Access Impact Plans. If any access sites are identified with significant costs, they will be relayed to the District to be included in the CD ROW cost estimate. Any comments on the access issues will be submitted directly to the Project Manager.

Role Description	
Responsible:	ROW Technical Support Unit, Right of Way Regional Office and OAD
Consulted:	Project Manager, ROW Tech Support Manager, Right of Way Regional Office and OAD
Informed:	Project Manager, (Designer Optional)
Activity Predecessor:	2545
Activity Successor:	2570FF
Activity Duration:	40
Product Produced:	CD ROW and Access Cost Estimate
Related Guidance Document:	CD Guideline

Complete CD Quality Certification (2560)

The Designer completes the certification form that stipulates the Designer has completed work in accordance with the approved CD Scope Statement. The Designer sends the signed CD Quality Certification to the Project Manager. The Project Manager will not sign and approve the CD Quality Certification until the Capital Program Committee approves the completion of CD.

Role Description	
Responsible:	Designer
Consulted:	NA
Informed:	Project Manager
Activity Predecessor:	2570 SS w/ 20 day lag (2300, 2320, 2340, 2360 for Limited Scope Study)
Activity Successor:	2580
Activity Duration:	1
Product Produced:	CD Quality Certification
Related Guidance Document:	Design Submission Procedure, CD Designer Certification Template

Execute Project Assignment Contract (2565)

Based upon preliminary interest expressed in Problem Screening, In-House Design and Project Management execute a Project Assignment Contract which indicates that a Roadway Design Group and/or Structural Design and Geotechnical Engineering have accepted the assignment of delivering Preliminary and /or Final Design for a Capital project. After consulting with the applicable In-House Design Managers, the Project Manager completes the Project Assignment Contract and send it to the Executive Regional Manager for negotiation/agreement. Upon agreement, the respective In-House Division Director (Division of Highway and/or Traffic Design and Division of Bridge Engineering and Infrastructure Management) signs the Project Assignment Contract and forwards to Director, Division of Project Management. Once all directors sign, the Contract is forwarded to the Assistant Commissioner, Capital Program Management for approval.

Role Description	
Responsible:	In-House Design Managers, DPM Executive Regional Manager
Consulted:	Directors of Highway and Traffic Design, Bridge Engineering and Infrastructure Management and Project Management
Informed:	Project Manager
Activity Predecessor:	2580
Activity Successor:	2610
Activity Duration:	10
Product Produced:	Project Assignment Contract; Approval of Project Assignment Contract
Related Guidance Document:	Project Assignment Contract

Prepare Draft CD Report (2570)

The Designer prepares and submits the Draft CD Report to the Project Manager for review and comment. The Draft CD Report should include all support information used to develop the Preliminary Preferred Alternative. The CD Report template lists all the items to be included in the Draft CD Report.

Note for Limited Scope Study:
For Mill X, Pave X, plus 1" projects or bridge deck/superstructure replacement projects, utilize the appropriate Limited Scope CD Report Template. For other types of Limited Scope projects, customize the Limited Scope CD Report Template as needed to match the project's characteristics.

For all Limited Scope projects, the environmental document is submitted to FHWA with the Final Design Authorization Package. The environmental document is not included as an appendix within the Limited Scope CD Report.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2550, 2540, 2535, 2485, 2515, 2510, 2358, 2500 , 2522FF, 2545 (2300 lag, 2320 lag, 2340 lag, 2360 lag for Limited Scope Study)
Activity Successor:	2580, 2700, 2710, 2560SS 20 day lag, 2690SS 20 day lag (2560 FF, 2580 for Limited Scope Study)
Activity Duration:	30 (10 for Limited Scope Study)
Product Produced:	Draft CD Report
Related Guidance Document:	CD Report Template, CD Guideline, Limited Scope CD Report Pavement Template, Limited Scope CD Report Bridge Template

Review Draft CD Report and Address Comments (2580)

The Project Manager reviews the Draft CD Report. If necessary, the Project Manager requests review input from applicable Subject Matter Experts (SMEs). The Project Manager provides all review comments to the Designer. The Designer addresses the comments and makes the appropriate changes. The Designer submits a final Draft CD Report to the Project Manager.

Role Description	
Responsible:	Project Manager, Designer
Consulted:	NA
Informed:	NA
Activity Predecessor:	2570
Activity Successor:	2600, 2565
Activity Duration:	20 (15 for Limited Scope Study)
Product Produced:	Comments Received on Draft CD Report; final Draft CD Report
Related Guidance Document:	CD Guideline

FHWA Reviews and Approves CD Report (2600)

Only for PoDI projects, FHWA will review the Draft CD Report and provide comments to the Project Manager for incorporation in the CD Report. The Designer addresses FHWA's comments and the Project Manager re-submits to FHWA for approval. This process will be repeated until FHWA approves the report.

The duration for FHWA review and comment is 30 days. The duration for making changes to the CD Report will vary based on the extent of FHWA comments.

Role Description	
Responsible:	Project Manager, Designer, FHWA
Consulted:	Designer
Informed:	NA
Activity Predecessor:	2580, 2690 20 day lag, 2560 20 day lag (2580 for Limited Scope Study)
Activity Successor:	2610 (2610 for Limited Scope Study)
Activity Duration:	45 (5 for Limited Scope Study)
Product Produced:	FHWA Approval of CD Report
Related Guidance Document:	CD Guideline

Present to CPSC (2610)

The Project Manager sends a memo to the Division of Capital Investment Planning and Development (CIPD) once the CD Report has been approved. The memo will either recommend that the Preliminary Preferred Alternative (PPA) advance to PE or no further action be taken and will request placement on the agenda of the next scheduled Capital Program Screening Committee (CPSC) Meeting. The memo will also include an information package that briefly presents the PPA and provides supporting documentation. The Executive Regional Manager will forward the approved memo and package information to CIPD. CIPD will place the study on the agenda of the next CPSC meeting.

The Project Manager presents the PPA to CPSC. The CPSC provides their recommendation for advancement to the Project Manager and forwards their recommendation to the Capital Program Committee (CPC) for approval.

Note for Limited Scope Study:
If no community impacts are anticipated the Project Manager prepares a memo recommending advancement to Final Design. If significant community impacts are anticipated (e.g., detours, travel disruption) the Project Manager prepares a CPSC memo recommending advancement to Final Design and presents the PPA to the CPSC.

Role Description	
Responsible:	Project Manager, Executive Regional Manager, Division of Capital Investment Planning and Development, Capital Program Screening Committee
Consulted:	Designer
Informed:	NA
Activity Predecessor:	2600, 2565
Activity Successor:	2620
Activity Duration:	20
Product Produced:	PPA Information Package
Related Guidance Document:	CD Guideline

CPC Approves Advancement (2620)

The Capital Program Committee (CPC) provides agreement and support to advance the proposed project to Preliminary Engineering (PE). If the Preliminary Preferred Alternative is approved by the CPC to advance to PE, the PE designer selection process may begin if in-house design staff will not be completing the project design work.

The Project Manager signs and approves the CD Quality Certification upon receipt of CPC approval to advance the project to the PE phase.

Note for Limited Scope Study:
Under the Limited Scope process, a study is advanced to Final Design upon CPC approval.

Role Description	
Responsible:	Project Manager, Capital Program Committee
Consulted:	Division of Project Management
Informed:	Designer
Activity Predecessor:	2610 (2600 for Limited Scope Study)
Activity Successor:	2630, 2750 (2630, 2750 or 3240 for Limited Scope Study)
Activity Duration:	30 (10 for Limited Scope Study)
Product Produced:	CPC Approval; Signed CD Quality Certification
Related Guidance Document:	CD Guideline

Finalize CD Report (2630)

The Designer updates the CD Report, indicating Capital Program Committee approval. The Designer provides copies of the Finalized CD Report to the Project Manager and in-house design if they will be completing the project design work.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2620
Activity Successor:	2640 (3950 FF for Limited Scope Study)
Activity Duration:	5 (2 for Limited Scope Study)
Product Produced:	Final CD Report
Related Guidance Document:	CD Guideline

Complete CD Closeout (2640)

As outlined in the NJDOT Procedures Manual, perform the series of steps necessary to close out the existing task order in CD. Instruct the Designer to submit their Final Invoice. Update the Project Reporting System and notify appropriate subject matter expert units of the Capital Program Committee decision.

Role Description	
Responsible:	Project Manager
Consulted:	NA
Informed:	NJDOT Subject Matter Expert Units, Designer
Activity Predecessor:	2630
Activity Successor:	2950
Activity Duration:	10
Product Produced:	Final Invoice from Designer
Related Guidance Document:	NJDOT Procedures Manual

Confirm Funding Source via STIP (2690)

Project Manager (PM) confirms the source of funding via STIP and Capital Investment & Program Coordination (CIPC). PM also determines the type of solicitation (1-Step or 2-Step, Batch, Group, or Multi-Project) based on the funding and complexity of the project.

Role Description	
Responsible:	Project Manager
Consulted:	Capital Investment & Program Coordination
Informed:	NA
Activity Predecessor:	2570 20 day lag
Activity Successor:	2600
Activity Duration:	10
Product Produced:	Confirmation of Funding Source and Determination of Solicitation Type
Related Guidance Document:	

Prepare & Submit Solicitation Package (2700)

The Project Manager determines the selection process (1-Step or 2-Step) to be used and prepares the solicitation package. The Division of Project Management Director sends the solicitation package to the Division of Procurement Professional Services. Professional Services approves and posts the solicitation documents on the NJDOT Website.

Role Description	
Responsible:	Project Manager, Division of Project Management Director, Division of Procurement Professional Services
Consulted:	NJDOT Subject Matter Expert Units
Informed:	NA
Activity Predecessor:	2570, 2522
Activity Successor:	2715, 2710FF
Activity Duration:	20
Product Produced:	Solicitation Package
Related Guidance Document:	NJDOT Policy #312, NJDOT Policy #328, NJDOT Policy #354, NJDOT Professional Services Forms

Form Technical Evaluation Committee (2710)

The Project Manager will form a Technical Evaluation Committee consisting of the Project Manager, and appropriate subject matter expert staff. The committee is responsible for developing rating criteria, evaluating and ranking designers' technical proposals for a 1-Step process and oral presentations when required for the 2-Step process.

Role Description	
Responsible:	Project Manager
Consulted:	NA
Informed:	NA
Activity Predecessor:	2570, 2522, 2700FF
Activity Successor:	2715
Activity Duration:	15
Product Produced:	Technical Evaluation Committee
Related Guidance Document:	NJDOT Policy #312, NJDOT Policy #328, NJDOT Policy #354, NJDOT Professional Services Forms Unit procedure (Professional Services)

Post Solicitation (2715)

Professional Services posts the solicitation documents on the NJDOT Website. Consultant Designers review the solicitation and a prepare technical proposal.

Role Description	
Responsible:	Division of Procurement Professional Services
Consulted:	NA
Informed:	Consultant Designer
Activity Predecessor:	2700, 2710
Activity Successor:	2720
Activity Duration:	20
Product Produced:	Technical Proposal
Related Guidance Document:	

Receive Technical Proposals (2720)

After the solicitation has been posted, pre-qualified consultants submit Technical Proposals to the Division of Procurement Professional Services within 15 working days from the posting date, unless otherwise noted.

Role Description	
Responsible:	Pre-Qualified Designers, Division of Procurement Professional Services
Consulted:	Division of Procurement Professional Services
Informed:	Project Manager
Activity Predecessor:	2715
Activity Successor:	2730
Activity Duration:	20
Product Produced:	Receipt of Technical Proposals
Related Guidance Document:	NJDOT Policy #312, NJDOT Policy #328, NJDOT Policy #354, NJDOT Professional Services Forms

Score Proposals (2730)

1-Step Process: The Technical Evaluation Committee will review and rank technical proposals and submit the results to the Consultant Selection Committee (CSC).

2-Step Process: The Technical Evaluation Committee will review and rank technical proposals and submit the results to the CSC. The Technical Evaluation Committee also determines the list of technically qualified firms within 5% of the top ranked firm. The Project Manager presents this list to the CSC to determine the short-list of technically qualified firms that will be requested to give an oral presentation.

Role Description	
Responsible:	Technical Evaluation Committee, Division of Procurement Professional Services
Consulted:	NA
Informed:	Professional Services, Designers
Activity Predecessor:	2720
Activity Successor:	2740
Activity Duration:	30
Product Produced:	Technical Proposal Scores; List of Technically Qualified Firms
Related Guidance Document:	NJDOT Policy #312, NJDOT Policy #328, NJDOT Policy #354, NJDOT Professional Services Forms

Hold Oral Presentations (2 Step) (2740)

The second step of a 2-Step process will be an oral presentation. The oral presentation will be followed by a question and answer period from the Technical Evaluation Committee. After presentations are evaluated and ranked, prepare and forward the scores and designer recommendation to the Secretary/Moderator of the Consultant Selection Committee, to request selection.

Role Description	
Responsible:	Designers, Technical Evaluation Committee
Consulted:	NA
Informed:	Consultant Selection Committee
Activity Predecessor:	2730
Activity Successor:	2750
Activity Duration:	20
Product Produced:	Oral Prsentation Scores; Designer Recommendations
Related Guidance Document:	Unit procedure (Professional Services), NJDOT Policy #312, NJDOT Policy #328, NJDOT Policy #354, NJDOT Professional Services Forms

Select Designer (2750)

The Project Manager presents the technical evaluation results and designer recommendation to the Consultant Selection Committee (CSC). The CSC reviews the recommendation for selection, the factors responsible for the distribution of the scores, significance of the rating criteria, selects one designer and verifies that the selected designer has an approved Quality Management Plan. The Division of Procurement Professional Services notifies the Project Manager and the selected designer of the outcome of the Consultant Selection Committee meeting. If the selected designer does not have an approved Quality Management Plan, they have 10 working days to obtain one. Upon confirmation that the selected designer has an approved quality management plan, the Deputy Commissioner signs the Executive Decision Document approving selection.

Prepare an electronic debriefing memo and provide to designers upon request.

Note for Limited Scope Study:
A designer is selected to perform Final Design from a previously solicited batch agreement.

Role Description	
Responsible:	Consultant Selection Committee, Division of Procurement Professional Services
Consulted:	NA
Informed:	Project Manager, Designer
Activity Predecessor:	2740, 2620 (2620 for Limited Scope Study)
Activity Successor:	2810 (2810, 3235 for Limited Scope Study)
Activity Duration:	10 (20 if no approved Quality Management Plan) (1 for Limited Scope Study)
Product Produced:	Selection of Designer; Electronic Debriefing Memo
Related Guidance Document:	NJDOT Policy #312, NJDOT Policy #328, NJDOT Policy #354, NJDOT Professional Services Forms

Develop PE Independent Cost Estimate (2800)

The Project Manager requests that the Office of Schedule and Budget Management develop an Independent Cost Estimate (ICE) to compare to the designer's fee proposal. An ICE will be used in contract negotiations. The Project Manager submits the Scope of Work Form and consultant's proposal or PE Scope Statement to the Office of Schedule and Budget Management. The Office of Schedule and Budget Management consults with subject matter expert units when developing man-hour estimates on unique or major tasks. The Office of Schedule and Budget Management submits the Preliminary ICE to the Project Manager for review and comment.

Role Description	
Responsible:	Office of Schedule and Budget Management
Consulted:	Project Manager
Informed:	NA
Activity Predecessor:	2810
Activity Successor:	2820
Activity Duration:	10
Product Produced:	PE Independent Cost Estimate
Related Guidance Document:	Iterim Schedule and Budget Management Guideline

Develop Designer Fee Proposal (2810)

The selected designer will prepare a Fee Proposal utilizing the PE Scope Statement and forward the proposal to the Project Manager within 10 days of the selection. The Project Manager ensures the Fee Proposal is prepared in accordance with internal NJDOT Policy and Procedure #328, "Agreement Development Process for Procurement of Professional Services."

Note for Limited Scope Study:
The selected designer prepares a Fee Proposal utilizing the Limited Scope FD Scope Statement.

Role Description	
Responsible:	Designer
Consulted:	Project Manager
Informed:	Project Manager
Activity Predecessor:	2750 (2750 for Limited Scope Projects)
Activity Successor:	2800, 2850
Activity Duration:	10 (5 for Limited Scope Study)
Product Produced:	Designer Fee Proposal
Related Guidance Document:	P&P #328

Negotiate Contract (2820)

In accordance with NJDOT Policy and Procedure #328, the Project Manager reviews the Designer Fee Proposal and negotiates with the designer utilizing the Independent Cost Estimate (ICE) as a comparison. If PE is performed in-house, the Project Manager will negotiate with the appropriate division of NJDOT in-house design. The designer may update the PE Scope Statement with detailed task descriptions, if necessary. Changes to the PE Scope Statement will be approved by the Project Manager. If the designer's fee proposal exceeds 10% of the ICE, review and request further clarification and justification.

If negotiations are unsuccessful, escalate unresolved issues according to NJDOT Policy and Procedure #328. If items of contention with consulting firm are not resolved, the Division of Project Management Director will request authorization from the Consultant Selection Committee to terminate negotiations and begin negotiations with the next ranked firm.

After completion of negotiations, the Project Manager sends the total negotiated hours to the Office of Schedule and Budget Management.

The Project Manager may request the Office of Schedule and Budget Management prepare a Summary ICE Report that provides a comparison of design man-hour estimates between ICE values and the designer's man-hour proposal.

Role Description	
Responsible:	Project Manager, Office of Schedule and Budget Management
Consulted:	Designer
Informed:	NA
Activity Predecessor:	2800 (2810, 3235 for Limited Scope Study)
Activity Successor:	2830, 2860 (2830, 3240 for Limited Scope Study)
Activity Duration:	30 (5 for Limited Scope Study)
Product Produced:	Negotiation of Fee
Related Guidance Document:	P&P #328

Finalize Proposal (2830)

The designer revises the original fee proposal per negotiations and submits to the Project Manager.

Role Description	
Responsible:	Designer
Consulted:	NA
Informed:	Project Manager
Activity Predecessor:	2820
Activity Successor:	2840, 2865
Activity Duration:	5
Product Produced:	Revised Fee Proposal
Related Guidance Document:	P&P #328

Prepare Draft Agreement (2840)

Once the final proposal is fully negotiated, enter the fee proposal, schedule and scope of services into the appropriate Model Agreement. The Project Manager prepares the Draft Agreement and sends to the Division of Procurement Professional Services for review and comment. If changes are needed to the Draft Agreement, the Division of Procurement Professional Services sends comments to the

Project Manager. Once Professional Services provides the Project Manager with final approval, the Draft Agreement is considered final.

Role Description	
Responsible:	Project Manager, Division of Procurement Professional Services
Consulted:	NA
Informed:	NA
Activity Predecessor:	2830
Activity Successor:	2880 (3270 for Limited Scope Study)
Activity Duration:	15 (10 for Limited Scope Study)
Product Produced:	Final Agreement
Related Guidance Document:	P&P #328

Develop Draft PE Schedule (2850)

The Project Manager or Division of Project Management (DPM) Scheduler request the Office of Schedule and Budget Management to create an active schedule in Primavera based on the standard PE schedule template. The Project Manager sends the standard PE schedule template to the DPM Scheduler or Office of Schedule and Budget Management to customize the schedule based on the PE Scope Statement and historic data. The Project Manager negotiates the draft schedule with the Designer. The Project Manager provides the negotiated draft schedule to the DPM Scheduler or Office of Schedule and Budget Management to update the active schedule.

The Project Manager is responsible for updating all schedules on a monthly basis and may do so by providing updates to the DPM Scheduler or Office of Schedule and Budget Management.

Role Description	
Responsible:	Project Manager, Division of Project Management Scheduler, Office of Schedule and Budget Management
Consulted:	Project Manager, Office of Schedule and Budget Management, Designer, Subject Matter Expert Units
Informed:	Project Manager
Activity Predecessor:	2810
Activity Successor:	2860
Activity Duration:	15
Product Produced:	Draft PE Schedule
Related Guidance Document:	Iterim Schedule and Budget Management Guideline

Develop Draft PE Budget (2860)

The Project Manager requests the Office of Schedule and Budget Management develop a Draft PE manhour budget estimate. The budget estimate includes subject matter expert (SME) unit man-hours to support the Designer. If NJDOT in-house design staff completes PE, the budget estimate includes inhouse design man-hours and supporting man-hours separately. An Office of Schedule and Budget Management Budget Analyst develops the Draft Budget in the Project Reporting System with input from SME units for support hours. The Project Manager is responsible for negotiating any SME unit support hours.

Role Description	
Responsible:	Project Manager, Office of Schedule and Budget Management Budget Analyst
Consulted:	NJDOT Subject Matter Expert Units
Informed:	Project Manager
Activity Predecessor:	2850
Activity Successor:	2865
Activity Duration:	20
Product Produced:	Draft PE Manhour Budget Estimate
Related Guidance Document:	Iterim Schedule and Budget Management Guideline

Finalize PE Budget (2865)

After the Project Manager (PM) reviews and accepts the draft PE Budget and forwards consultant's negotiated proposal to the Office of Schedule and Budget Management to finalize the PE Budget. The

finalized PE Budget report will be forwarded to the PM for funding authorization request. The PM compiles necessary documents for funding request and forward to the Division of Capital Investment Planning and Development (CIPD).

Role Description	
Responsible:	Project Manager
Consulted:	NA
Informed:	Division of Project Management Director
Activity Predecessor:	2860, 2830
Activity Successor:	2870
Activity Duration:	10
Product Produced:	Final PE Budget Report
Related Guidance Document:	Iterim Schedule and Budget Management Guideline

Approve PE Budget (2870)

After PE funds authorized, The Project Manager forwards funding authorized document and signed Budget Baseline Action Form to the Office of Schedule and Budget Management to approve and baseline the PE Budget in the Project Reporting System. Note: For all budget revisions (modifications), Budget Baseline Action Form must be submitted to Director of Div. of Project Management for review and Signature.

Role Description	
Responsible:	Division of Project Management Director, Project Manager, Office of Schedule and Budget Management
Consulted:	NA
Informed:	NA
Activity Predecessor:	2865, 2880
Activity Successor:	2890FF
Activity Duration:	5
Product Produced:	Approved PE Budget Baseline Action Form
Related Guidance Document:	Iterim Schedule and Budget Management Guideline

Authorize PE (2880)

The Project Manager requests FHWA authorization to begin PE. The Project Manager prepares and submits the funding request to the Division of Capital Investment Planning and Development (CIPD)

(as per FHWA authorization procedures), who prepares the request to FHWA for authorization of funds. CIPD notifies the Executive Regional Manager of FHWA approval and provides a copy of the job number and Federal Agreement ID.

Note:
For each federally-funded project, a "Federal Project End Date" should be established per NJDOT Policy No. 365 and the Capital Project Delivery Project End Date Guidance.

Role Description	
Responsible:	Project Manager, Division of Capital Investment Planning and Development, FHWA
Consulted:	NA
Informed:	Division of Project Management Executive Regional Manager
Activity Predecessor:	2840
Activity Successor:	2890, 2870
Activity Duration:	20
Product Produced:	FHWA Approval/Authorization of Funds
Related Guidance Document:	FHWA Design Standards 23 CFR Part 625, NJDOT Policy No. 365, Capital Project End Date Guidance

Execute Designer Agreement (2890)

The Division of Project Management (DPM) Contract Manager sends the Final Agreement and Articles to the Designer. The Designer signs the Final Agreement and sends two signed and sealed original copies back to the DPM Contract Manager along with copies of the Corporate Resolution and Business Registration Certificates for the Prime and all Sub-consultants. The DPM Contract Manager sends the signed and sealed Final Agreement Package to the Deputy Attorney General for approval. The DPM Contract Manager forwards the approved Final Agreement Package and an AD-12 to NJDOT Management for signature and approval. The DPM Contract Manager distributes the executed Agreement to the appropriate parties, including FHWA.

Role Description	
Responsible:	Division of Project Management Contract Manager, Designer, Deputy Attorney General
Consulted:	NA
Informed:	Project Manager, Designer
Activity Predecessor:	2880 (3270 for Limited Scope Study)
Activity Successor:	2870FF, 2950
Activity Duration:	30 (20 for Limited Scope Study)
Product Produced:	Approved Final Agreement Package
Related Guidance Document:	P&P #328

Concept Development Completed (2950)

The Concept Development Phase has been completed (Milestone).

Activity Predecessor:	2640, 2890
Activity Successor:	3000