Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Final Design Initiation	FD	4.1	Final Design Initiation encompasses deliverables associated with the development, implementation and control of the project's schedule, budget and scope. The lead office develops these project parameters as project baseline documents in the early stages of project development. The baseline documents serve to help manage the project's development.
Financial Plan (Major Projects)	FD	4.1.1	An Approved Initial Financial Plan (Major Projects) includes the completion of Project Financial Plans for Major Projects, as required by FHWA regulations. In accordance with FHWA regulations, a Management Plan and Financial Plan must be completed for a project that is estimated to cost \$500,000,000 or more. If a project is estimated to cost \$100,000,000 or more, a Financial Plan must be completed.
Roadway Engineering	FD	4.2	Roadway Engineering encompasses deliverables associated with the project's roadway design features, such as pavement design, soil erosion and sediment control, horizontal and vertical geometry, traffic lighting, drainage, and survey efforts. It also encompasses the completion of jurisdictional limit maps and agreements.
Revised Pavement Recommendation	FD	4.2.1	A Revised Pavement Recommendation is the recommended pavement depth and material composition updated based on current conditions.
Final Horizontal/Vertical Geometry	FD	4.2.2	Final Horizontal and Vertical Geometry includes the completion of the horizontal and vertical geometry calculations, bridge geometrics, driveway profiles, basins, layout & contours, roadway widths, and slopes & ROW Impacts.
Final Design Supplemental Survey	FD	4.2.3	The Final Design Supplemental Survey includes the undertaking of any additional survey needed to support the project's final design development.
Traffic Lighting Design Report	FD	4.2.4	The Traffic Lighting Design Report identifies the lighting needs associated with a project, and identifies lighting design features proposed for the project.
Traffic Control and Staging Plans	FD	4.2.5	The Traffic Control and Staging Plans detail the protection and maintenance of traffic during construction.
Soil Erosion and Sediment Control Report	FD	4.2.6	The Soil Erosion and Sediment Control Report and Certification identifies the measures, such as silt fences and inlet filters, that will be used to mitigate soil erosion and sedimentation associated with the project's construction.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Soil Erosion and Sediment Control Plans	FD	4.2.7	The Final Soil Erosion and Sediment Control Plans identify those specific measures to be taken to mitigate the project's soil erosion and sediment impacts.
Jurisdictional Limit Maps and Agreement	FD	4.2.8	Jurisdictional Limit Maps and Agreements document the stakeholders who will have jurisdiction over improvements completed under the project.
Final Drainage Plans	FD	4.2.9	The Final Drainage Plans present the completed design for the project's drainage features, such as proposed stormwater inlets and piping, stormwater basins and outfall structures. Items to be constructed are identified and quantified.
Final Drainage Design Report	FD	4.2.10	The Final Drainage Design Report sets the scope of the project's drainage design for environmental clearances and final plan development.
Final Lighting Plans	FD	4.2.11	The Final Lighting Plans present the completed design for the project's highway lighting features, such as the number and type of lamps, poles and pole attachments. Items to be constructed are identified and quantified.
Final Roadway Plans	FD	4.2.12	The Final Roadway Plans include the completion of the project's final roadway design, culminating in the completion of final roadway plans. Some key design features presented in the project's final roadway plans include: proposed horizontal and vertical geometry, grading details, and existing and proposed roadway cross sections. Items to be constructed are identified and quantified.
Final Traffic Signing, Striping and Signal Plans	FD	4.2.13	The Final Traffic Signing, Striping and Signal Plans include the completion of the project's final signing, striping and signal design, culminating in the completion of final signing, striping and signal plans. Some key design features presented in the project's final traffic signing, striping and signal plans include: proposed traffic sign types and locations, proposed roadway striping, and proposed traffic signal layout and electrical design. Items to be constructed are identified and quantified.
Final Landscape Plans	FD	4.2.14	The Final Landscape Plans include the completion of the project's Landscape design, culminating in the completion of final landscape plans. Some key design features presented in the project's final landscape plans include: vegetative plant types, locations, and quantities, and other proposed landscape architectural features, such as landscape walls and aesthetic treatments. Items to be constructed are identified and quantified.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Final Intelligent Transportation Systems Facilities Plans	FD	4.2.15	The Final Intelligent Transportation Systems (ITS) Facilities Plans include the completion of the project's ITS Facilities design, culminating in the completion of final ITS plans. Some key design features presented in the final ITS plans include: proposed traffic camera types, quantities, and locations; and, proposed communications conduit and fiber installation types, quantities and locations. Items to be constructed are identified and quantified.
Hydrologic and Hydraulic Stream Analysis	FD	4.2.16	Hydrologic and hydraulic (H&H) stream analysis is completed for all projects proposing a change to the bridge opening, roadway profile, or any activity within the 100-year floodplain of a stream with a drainage area over 50 acres to the point of interest. H&H analysis includes stream flow modeling and backwater analysis to determine impacts to water surface elevation.
Flood Hazard Area Permit Application	FD	4.2.17	A Flood Hazard Area Permit is required for all projects proposing a change to the bridge opening, roadway profile, or any activity within the 100-year floodplain of a stream with a drainage area over 50 acres to the point of interest.
Railroad 60% Submission	FD	4.2.18	The Railroad 60% Submission includes the roadway or bridge plans submitted to the railroad company at the 60% point of design. If the project has Amtrak involvement, there must be a 30% and 60% submission. Included within the submission is a proposed construction sequence for railroad work that will minimize impacts to existing facilities.
Diagnostic Team Meeting Memo of Record or Order	FD	4.2.19	The Memo of Record or Order documents the discussions and decisions made at the Diagnostic Team Meeting (DTM). The first DTM is held during Preliminary Engineering. If the design of the roadway has been altered significantly after the first DTM was held or strong public opposition or comments are presented, another DTM is held to address a possible amendment to the Memo of Record or Order.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Railroad 100% Submission	FD	4.2.20	The Railroad 100% Submission includes the completed roadway or bridge plans submitted to the railroad company and a master bill of material, which quantifies every component within every assembly detail. This submission includes: • The final bonding and grounding plan and elevations • The final bonding and grounding assembly • The final structure erection diagrams • The final detailed structural elements • The final catenary and transmission structural hardware design. • The new catenary and transmission hardware • The final bill of materials and scope of work related to the individual structures.
Final Design Systems Engineering Review Form	FD	4.2.21	If additional Intelligent Transportation Systems (ITS) facilities have been proposed since the latest Systems Engineering Review Form (SERF) revision (either in Concept Development or Preliminary Engineering), a revised SERF shall be prepared to obtain approval from Traffic Operations prior to submitting it to ITS Engineering. The Systems Engineering Review Form has been developed to document the development of all ITS deployments.
Structural Engineering	FD	4.3	Structural Engineering encompasses deliverables associated with the project's structural design features, such as bridges, culverts and retaining walls.
Final Structure Appraisal and Design Report	FD	4.3.1	The Final Structure Appraisal and Design Report documents the final recommendations for the footprint of the bridge and details the project's structural design approach. Bridge GP&E plans shall be prepared, and the report shall identify ROW needs and environmental impacts.
Geotechnical Foundation Engineering Report	FD	4.3.2	The Final Geotechnical Foundation Engineering Report includes the final recommendations on the projects structural foundations and documents coordination with the Department's Geotechnical Subject Matter Experts. The report also includes analysis of items such as soil bearing capacity, pile bearing capacity, estimated pile tip elevation, required pile embedment, foundation settlement and foundation stability.
Final Structures Documents	FD	4.3.3	The Final Structures Plans document the final recommendations on the project's structural design, culminating in the completion of final structural plans.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Scour Analysis	FD	4.3.4	Scour Analysis includes the calculations to determine the existing scour of a structure and if necessary, the countermeasures to incorporate in the structural design.
Seismic Retrofit Analysis	FD	4.3.5	Seismic Retrofit Analysis includes the calculations to determine a structure's retrofit eligibility and cost effectiveness. The Seismic Retrofit Analysis recommendations are included with the Final Design Submission Package.
Noise Barrier Detail Plans	FD	4.3.6	The Noise Barrier Detail Plans for the approved noise walls are included within the Final Roadway Plans and Final Structures Documents and are submitted as part of the Final Design Submission.
Geotechnical Roadway and Rock Engineering Report	FD	4.3.7	The Geotechnical Roadway and Rock Engineering Report includes the roadway geotechnical analysis and recommendations required for the design of roadway embankments and cuts. Geotechnical analysis includes items such as slope stability, settlement, required ground improvement, and subsurface drainage analysis.
Boring and In-Situ Testing Layout Plan	FD	4.3.8	A Boring and In-Situ Testing Layout Plan shows the location of borings and the in-situ testing required to initiate the subsurface explorations. The plan may also include geophysical and geologic surveys. The Boring and In-Situ Testing is used to evaluate foundation support, settlement, slope stability and ground water conditions and determines the general geology of the project site.
Boring Contract Specifications	FD	4.3.9	Boring Contract Specifications include the number, location and depth of borings, the depth and types of samples and the in-situ testing required to initiate the subsurface explorations.
Boring Data Submission	FD	4.3.10	The Boring Data Submission consists of the boring logs, boring location plans, in-situ testing and other investigative analysis, as well as foundation type selection. The boring data is submitted to the Geotechnical Engineering Unit according to the Boring Data Submission Template and Standards located on the NJDOT Geotechnical Data Management System (GDMS) website.
Right of Way and Access	FD	4.4	Right of Way, Access and Jurisdiction encompasses deliverables needed to acquire right of way required for the project, complete driveway access changes required for the project and obtain jurisdictional agreements.
Final Right of Way Cost Estimate	FD	4.4.1	The Final Right of Way (ROW) Cost Estimate is developed by the ROW District Office and is based on the ROW Plans and Documents.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Pre-Final Right of Way Submission	FD	4.4.2	The Pre-Final Right of Way Submission includes the review and approval of the project's pre-final right of way engineering documents through the Department's Right of Way Engineering subject matter experts (Subject Matter Expert's).
Final Right of Way Submission	FD	4.4.3	The Final Right of Way Submission includes the review and approval of the project's final right of way engineering documents through the Department's Right of Way Engineering subject matter experts. This submission is based on the input obtained for Subject Matter Expert's on the pre-final submission.
Right of Way Authorization	FD	4.4.4	Right of Way Authorization includes the deliverables necessary to secure the project's Right of Way Funding.
Acquired Right of Way	FD	4.4.5	Acquired Right of Way is the right of way purchased by the Department that is needed to accommodate the project's proposed improvements.
Riparian License Application	FD	4.4.6	A Riparian License is needed from the NJ Department of Environmental Protection for proposed roadway and bridge construction within tidal areas. The license provides the Department with permission to access those areas to construct, operate and maintain the highway infrastructure.
Access Cut-Outs	FD	4.4.7	Access Cut-Outs include the project work packages that show the proposed revisions to existing driveways affected by the project.
Access Impact Assistance Report	FD	4.4.8	An Access Impact Assistance (AIA) Report details the investigation, analysis and documentation of all site impacts related to access alterations and provides feasible mitigation measures.
Lot Owner Lease Agreement	FD	4.4.9	A Lot Owner Lease Agreement is a form the lot owner signs if he agrees to have the contractor enter his property for an administratively determined payment to construct the access alterations.
Lot Owner Access Concurrence	FD	4.4.10	A Lot Owner Access Concurrence is a form the lot owner signs if he agrees to the proposed access alterations.
Green Acres Compensation Appraisal	FD	4.4.11	A Green Acres Compensation Appraisal is required for any Green Acres parcels and any replacement parcels to be acquired. Appraisals may be performed by in-house staff or by an appraisal consultant.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Title Summary Document	FD	4.4.12	A Title Summary Document summarizes the information obtained during the title search and accompanies all right of way submissions.
Right of Way Plans and Documents	FD	4.4.13	The Right of Way Plans and Documents include the Entire Tract Maps (ETM), General Property Parcel Maps (GPPM), descriptions of each parcel, the Individual Parcel Maps (IPM) and all project commitment letters or memorandums.
Entire Tract Map	FD	4.4.13.1	An Entire Tract Map is a plan used to show the location of all parcels to be acquired and their remaining area. This map shall be signed and sealed by a New Jersey licensed surveyor and filed by NJDOT's Engineering Documents Unit in the County courthouse where the deed was obtained.
General Property Parcel Maps	FD	4.4.13.2	General Property Parcel Maps are plans used to show each property to be acquired. This map shall be signed and sealed by a New Jersey licensed surveyor and filed by NJDOT's Engineering Documents Unit in the County courthouse where the deed was obtained.
Individual Parcel Maps	FD	4.4.13.3	Individual Parcel Maps (IPM) are plans that depict a parcel and related parcels, having unity of ownership and associated easements and are used for appraising and negotiating acquisition. An IPM is also used as the map attached as an exhibit to a condemnation complaint and declaration of taking where and when condemnation is pursued. It must be based upon and totally consistent with the General Property Parcel Map.
Parcel Descriptions	FD	4.4.13.4	Parcel Descriptions include a description of each parcel to be acquired with their respective metes and bounds.
Utility Engineering	FD	4.5	Utility Engineering encompasses deliverables to protect, adjust and/or relocate existing utility facilities required for the project. It includes activities needed to develop the project's contract documents and activities to establish project responsibilities between the DOT and the Utility and Railroad owners.
Utility Owner Design Authorization Checklist	FD	4.5.1	The Utility Owner Design Authorization Checklist is a form signed by the Utility Owner, NJDOT and the Designer that includes information regarding the proposed impacts (e.g., interruption of service, seasonal impacts) to the Utility Owner's facilities.
Utility Agreement Plans, Specifications and Estimates	FD	4.5.2	The Utility Agreement Plans are the project's utility accommodation plans, which are developed by the project's designer based on coordination with affected utility companies. The plans are referenced within and attached to the Utility Agreement Modification (UAM).

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Utility Agreement Modifications	FD	4.5.3	During Final Design, modifications are needed to the project's utility engineering and construction agreements (UECA's) to finalize the construction scope of work and funding reimbursement between the Department and affected Utility Companies. These modifications are commonly referred to as, Utility Agreement Modifications, which constitutes the interagency agreement between the Department and the affected utility companies during the project's construction stage.
Utility Master Agreement Change Order	FD	4.5.4	A Utility Master Agreement Change Order modifies the affected utility company's existing Utility Master Agreement to accommodate any necessary utility design work.
Utility Authorization	FD	4.5.5	Utility Authorization is the approval sent to each utility company informing them that utility construction work can begin.
Alternatives of Accommodation Plan	FD	4.5.6	An Alternatives of Accommodation Plan confirms the proposed utility accommodation with each utility company. On complex projects where multiple utilities may be in conflict, a Utility Master Plan that overlays all utilities present within the project area is prepared.
Supplemental Subsurface Utility Engineering Report	FD	4.5.7	The Supplemental Subsurface Utility Engineering (SUE) Report identifies additional locations of potential utility conflicts with the proposed design through subsurface test pits and includes the notes from the SUE Contractor and or Utility Company.
Quality Management	FD	4.6	Quality Management encompasses deliverables associated with the development and implementation of quality management plans, and identifies actions that must be taken to obtain a project's quality management certification. Quality Management Plans document the specific quality controls that shall be applied during the Concept Development, Preliminary Engineering and Final Design phases. A project specific Quality Management Plan for complex projects may be required.
Quality Management Certifications	FD	4.6.1	Quality Management Certifications include the checklist and certification form that certifies that the Department's Quality Management procedures have been followed for the project.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Final Design Submission Quality Management Certification	FD	4.6.1.1	The Designer completes and submits the Final Design Submission (FDS) Quality Management Certification to the Department with the FDS Submission that states they have performed the work on the project in accordance with the current Department Quality Management Process and Procedures, and the project has been designed in accordance with all applicable State and Federal design standards and requirements.
Department Certification	FD	4.6.1.2	The Department completes the Department Certification and submits to FHWA certifying that they have managed the work on the project in accordance with the current Department and FHWA Quality Management Process and Procedures.
PS&E Submission Quality Management Certification	FD	4.6.1.3	The Designer completes and submits the Plans, Specifications and Estimate (PS&E) Quality Management Certification to the Department with the PS&E Submission that states they have performed the work on the project in accordance with the current Department Quality Management Process and Procedures, and the project has been designed in accordance with all applicable State and Federal design standards and requirements.
Communications	FD	4.7	Communications encompasses deliverables associated with communicating project information to internal and external project stakeholders, such as public officials, the general public, outside agencies, internal management, subject matter experts, and project consultants.
Design Communications Report	FD	4.7.1	The Design Communications Report shall be updated during FD to further document significant issues/critical decisions and provide clarity of design decisions.
Community Relations	FD	4.7.2	Community Relations includes the development and implementation of the project's public involvement action plan (PIAP). Some common elements of those plans include official's briefings, public information centers, public workshops and hearings.
Resolution of Support	FD	4.7.3	A Resolution of Support is a document approved by a municipality formally supporting a project. A Resolution of Support may be needed during Final Design to obtain approval for installation of noise mitigation measures.
Traffic Regulation Order Confirmation Letter	FD	4.7.4	The Traffic Regulation Confirmation Letter indicates that Traffic Regulation Orders will be needed based upon the Final Design.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Environmental Documents	FD	4.8	Environmental Documents include deliverables associated with the project's environmental evaluations and securing any needed environmental clearances and approvals. It also includes activities associated with incorporating the project's environmental commitments.
Environmental Reevaluations	FD	4.8.1	For federally funded projects, Environmental Reevaluations (ER's) must be completed, at certain stages of a project's development, in accordance with federal environmental policies and procedures. After completion of the project's original environmental documentation, ER's are needed to secure additional federal funding authorizations, such as right of way, utilities and construction authorizations. ER's also are needed when there is a change in the project's scope and/or social, environmental and economic impacts. ER's involve completion and approval of the Department's Environmental Revaluation Form, which assesses the project's current scope and associated impacts, and identifies the project's current environmental classification, as defined by federal regulations.
Environmental Permits and Licenses	FD	4.8.2	Based on the project's involvement with environmental resources, certain environmental clearances (usually in the form of permits or licenses) are needed from state and/or federal environmental resources agencies. Those clearances typically must be obtained prior to advancing the project to the construction stage.
Final Environmental Plans	FD	4.8.3	The project's Final Environmental Plans provide information on the environmental constraints, impacts, mitigation and commitments included in the project.
State House Commission Approval for Green Acres Parcels	FD	4.8.4	State House Commission approval is needed for projects affecting Green Acres parcels.
Conceptual Wetlands Mitigation Plans	FD	4.8.5	The Designer or Bureau of Landscape Architecture and Environmental Solutions (BLAES) develops various alternatives to mitigate wetland impacts. These various alternatives are the Conceptual Wetlands Mitigation Plans.
Final Noise Study	FD	4.8.6	If necessary, a Final Noise Study is prepared to document the location, height and aesthetics of proposed noise barriers or other sound attenuation measures. The Final Noise Study includes input from NJDOT, FHWA, local officials and stakeholders.
Reforestation Application	FD	4.8.7	The project's Final Reforestation Plans identify mitigation needed to address impacts on forest habitat.

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	Phase	Index	
Element Name	Filase	Number	Work Breakdown Structure Element Description
Final Wetlands Mitigation Plans	FD	4.8.8	The project's Final Wetlands Mitigation Plans identify mitigation needed to address impacts on wetland habitat.
Asbestos Survey	FD	4.8.9	An Asbestos Survey is performed on all buildings that are scheduled for demolition in a given project when the property in question has been acquired or a Right of Entry has been obtained. The presence of asbestos requires remediation. The Right of Way (ROW) District Office notifies the Project Manager if an asbestos survey is necessary.
Material Management Plan	FD	4.8.10	A Material Management Plan provides a defined set of procedures to be employed when contaminated soil and ground water are encountered during construction activities. A Material Management Plan shall be completed when a project involves properties where environmental contamination is present in accordance with the NJDEP Linear Construction Technical Guidance.
PAECE Report	FD	4.8.11	A PAECE Report shall be completed when a project involves properties where environmental contamination is present.
Noise Mitigation Questionnaire	FD	4.8.12	A Noise Mitigation Questionnaire is prepared to solicit feedback from the local community regarding proposed noise mitigation treatments. The Noise Mitigation Questionnaire is then utilized to complete the Final Noise Study and obtain a formal resolution of support from the local officials.
Wetlands Monitoring Plan	FD	4.8.13	A Wetlands Monitoring Plan puts forth the details on monitoring newly constructed wetlands to determine if they are successful. A Wetlands Monitoring Plan is only necessary if it was a condition of the permit approval.
Wetland Delineation Report	FD	4.8.14	A Wetland Delineation Report details the results of the wetland delineation including the marked locations of the wetland limits. The marked locations are surveyed and included in the construction plans.
Cultural Resources Mitigation Report	FD	4.8.15	Cultural Resources Mitigation Reports document the project specific cultural resource mitigation design measures being incorporated in the project design plans and specifications. Depending upon the specific cultural resource mitigation design measures being proposed, various Cultural Resources Mitigation Reports (e.g., Historic American Engineering Record) may be prepared and submitted to the appropriate agencies and interested parties.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Environmental Summary Memorandum	FD	4.8.16	The Environmental Summary Memorandum (ESM) provides costs from the Property Acquisition Environmental Cost Estimate (PAECE) Report and indicates the appropriate environmental clause to be used in the acquisition agreement. Once the PAECE Report and ESM are sent to the appropriate ROW District Office, the negotiations with the property owner can begin.
Site Investigation Report	FD	4.8.17	The Site Investigation Report presents the results of the sampling performed at all sites of concern. The Site Investigation Report is sent to the appropriate property owners notifying them of the findings. If contamination levels are above NJDEP soil remediation standards, the Designer must hire a Licensed Site Remediation Professional (LSRP) to oversee the management of contamination encountered during the linear construction project.
Remedial Investigation Report	FD	4.8.18	A Remedial Investigation Report presents the results of the delineation sampling conducted at the contaminated properties. Delineation sampling determines the extent of contamination identified in the Site Investigation Report. The Remedial Investigation Report is sent to the appropriate property owners notifying them of the findings.
Final Design Submission	FD	4.9	The Final Design Submission includes the project's final construction contract plans, specifications and construction schedule and estimate. The plans typically consists of the following types: (1) roadway, (2) lighting, (3) traffic signing, striping, and signals, (4) intelligent transportation systems facilities, (5) landscape, (6) drainage, (7) structures, (8) environmental, and (9) reforestation.
Interim Design Submission (Optional)	FD	4.9.1	An Interim Design Submission may be required at the Department's direction to provide feedback on the design prior to the Final Design Submission.
Project Plans	FD	4.9.2	Project Plans are the complete package of plans included in the Final Design Submission Package that are produced during Roadway Engineering, Structural Engineering, Right of Way and Access, Utility Engineering, and Environmental Documents.
Project Specifications	FD	4.9.3	The project's specifications include the project's Special Provisions outlining where the project's specifications differ from the Department's currently approved Standard Specifications.
Construction Cost Estimate	FD	4.9.4	A detailed Construction Cost Estimate shall be completed for the project, for use in comparing the bids eventually received from prospective construction contractors.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Construction Schedule	FD	4.9.5	A detailed construction schedule shall be completed for use in identifying the project's substantial completion and final completion dates.
Risk Report	FD	4.9.6	A Risk Report is a summary of the information contained within the Risk Register and is included with the Final Design Submission. It is intended to summarize the major risks that the Department should be aware of prior to Construction.
Updated Risk Register	FD	4.9.6.1	A Risk Register is a tool that the Project Risk Manager and Project Risk Team Members can use to address and document project risks throughout the project life cycle. It is a living document that includes a comprehensive listing of risks and the manner in which they are being addressed. It is updated throughout the life of the project whenever new risks are identified or response action plans are modified.
FD Constructability-Risk Analysis Workshop Summary Memo	FD	4.9.6.2	The FDCRA workshop summary memo will include 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.
Certified Plans, Specifications and Estimate	FD	4.10	The Plans, Specifications and Estimate (PS&E) package is prepared in response to comments received from project stakeholders on the project's final design submission package. The project's PS&E package shall be certified by the Department. Certification of the package proceeds upon receipt of the designer's plans, specifications, and estimate package.
Pre-PS&E Package (PoDI Only)	FD	4.10.1	The Pre-PS&E package is a submission that is sent to the FHWA for review. The FHWA will review the Pre-PS&E Package for PoDI projects. The Pre-PS&E review will be required when the Final Design Submission falls less than 100% complete. All FHWA comments will be addressed and the decisions documented in the Design Communications Report.
Final Project Plans	FD	4.10.2	The Final Project Plans include the complete package of plans that are produced during Roadway Engineering, Structural Engineering, Right of Way and Access, Utility Engineering, and Environmental Documents that have addressed the Final Design Submission Package comments.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Final Project Specifications	FD	4.10.3	The Final Project Specifications include the project's Special Provisions outlining where the project's specifications differ from the Department's currently approved Standard Specifications.
Final Construction Cost Estimate	FD	4.10.4	The Final Construction Cost Estimate shall be completed for use in comparing the bids eventually received from prospective construction contractors.
Final Construction Schedule	FD	4.10.5	The detailed Final Construction Schedule shall be completed for use in identifying the project's substantial completion and final completion dates.
Certifications and Clearances	FD	4.10.6	There are a number of certifications and clearances needed in support of the project's certified plans, specifications and estimate. Typical certifications and clearances include: Designer's Certification, Project Management Division Certification, Soil Erosion and Sediment Control Certification, Right of Way Clearance Letter, Utility Clearance Letter, and Environmental Reevaluation and Checklist. For 100% state funded projects, an Environmental Reevaluation and Checklist is not needed.
Contracts	FD	4.11	Contracts includes deliverables associated with the development, execution, and implementation of project-specific agreements, such as consultant design agreements. Tasks associated with modification and closeout of those agreements are also included.
Consultant Agreement Addendums	FD	4.11.1	A Consultant Agreement Addendum is typically needed to secure additional project support during the next phase of project development (e.g., an agreement addendum is issued when advancing from Preliminary Engineering to Final Design, under the same consultant agreement). The Construction Engineering Addendum is the contract addendum that provides additional funding for the same consultant to continue from Final Design to Construction Engineering.
Final Invoice	FD	4.11.2	The Project Manager requests the consultant designer submit a Final Invoice to close out the FD phase of work.
Final Design Approvals	FD	4.12	Final Design Approvals encompasses deliverables associated with securing project-related approvals from the Department's Senior Management, including such approvals as: (1) advancing the project to the next major phase of development; and, (2) approval of proposed changes in a project's scope, schedule and budget.
Advertising Authorization Package	FD	4.12.1	The Authorization Package shall be completed for the project's construction advertisement.

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Element Name	Phase	Index Number	Work Breakdown Structure Element Description
Authorization to Advertise	FD	4.12.2	For federally funded construction projects, FHWA grants Authorization to Advertise upon approving the Advertising Authorization Package. For state funded construction projects, an AD-12 is circulated for signature to grant Authorization to Advertise.
Updated Project Management Plan (Major Projects)	FD	4.12.3	An Updated Project Management Plan (Major Projects) shall be prepared to reflect any changes to Approved Project Management Plans for Major Projects, as required by FHWA regulations. This updated plan should be submitted 90 days prior to the start of the Construction Phase. In accordance with FHWA regulations, a Management Plan and Financial Plan must be completed for a project that is estimated to cost \$500,000,000 or more. If a project is estimated to cost \$100,000,000 or more, a Financial Plan must be completed.

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