

The information contained in Chapter Two: Roadway Design Standards, dated May 2022, has been updated to reflect the **July 2026 Errata**. The errata addresses errors, changes in procedure, changes in NDOT department titles, changes in other Roadway Design Manual chapters and other reference material citations occurring since the latest publication of this chapter.

Chapter Two

Roadway Design Process

This chapter is an overview of the **NDOT** roadway design process. Its purpose is to supplement, not replace, the Design Process Outline and should be read with the Design Process Outline at hand. The roadway designer should refer to the Roadway Design Manual, the Drainage Design and Erosion Control Manual, and consult with their **Unit Head** for more detailed information.

1. DESIGN PROCESS OUTLINE

The Design Process Outline (*DPO*), (Ref. 2.1, [Design Process Outline](#)), summarizes the major activities to be completed during the design of a project. Activities consist of groups of tasks separated into reviews, actions, and deliverables. Upon completion of the tasks associated with a given activity, a major project benchmark is reached.

Each activity number corresponds to an activity in Clarity, a computerized system that programs, schedules, and monitors projects through preconstruction. The **Project Scheduling and Program Management Division (Project Scheduling)** tracks the progress of all projects in Clarity and updates the actual project schedule as activity completion dates are supplied. Estimated letting dates, based on the activity completion dates, are provided to other decision makers for prioritization and funding.

2. PHASE 2: PLANNING (ACTIVITY 5200)

2.A Initial Project Review And Setup (Task 5282)

During Task 5282, the **Roadway Design Unit Head (Unit Head)** will review the Clarity schedule and decide which activities and tasks are appropriate for the project and the priority they have for completion. The **Unit Head** will also review the preliminary Municipal Financial Agreement (pMFA) if applicable and available.

The roadway designer should become familiar with the project by reviewing the available information including, but not limited to, the project scope, the signed Form NDOT-73 (Highway Improvement Planning Request), the as-built plans, the environmental documentation from the **Planning and Project Development Division (PDD) Environmental Section**. (See Chapter Thirteen: Planning and Project Development, Section 5, of this manual), the **Federal Emergency Management Agency (FEMA)** Flood Plain Maps, and the survey (if conditions have changed in the field or the project scope has been changed from an overlay to a reconstructed section, additional or a new survey may be needed).

Project Scope Review and Scoping Changes

The roadway designer should review the project scope and alignment with the **Unit Head**. If considerable time has passed since the project was originally programmed there may have been changes in design guidance or roadway conditions which will impact the scope of the project.

Any changes in project scope initiated by the roadway designer or **Unit Head** which are not included in the Engineering Review and/or the Plan-in-Hand Report require approval at different **Nebraska Department of Transportation (NDOT)** administrative levels depending upon the magnitude of the change in terms of funding required, length of project, etc. (changes from the Engineering Review that affect alignment or add temporary roads should be coordinated with **PDD**). Major scope changes, including changes to the project termini, will require a revised Form NDOT-73 ("Highway Improvement Program Request").

An updated cost estimate must be requested whenever a change in project scope occurs, (See Chapter Twelve: Cost Estimating & Funding, Section 6.C, of this manual). Because a change in project cost affects a **District's** budget, the **District Engineer (DE)** shall be involved in the decision-making process regarding project scope changes.

The location of the approved changes in scope of the project occurring after the Engineering Review, but before the Plan-In-Hand field inspection shall be furnished to the **Deputy Director-Engineering, Division Head, DE, the Roadway Design Utilities Unit (Utilities), the Environmental Documents Unit (EDU) of PDD, and the Project Scheduling and Program Management Engineer**. All applicable **Divisions/Sections/Units** involved with the project shall be advised of the change in project scope.

2.B Planning Alignment (Task 5240)

District will create an alignment.xml file for the existing alignments which the roadway designer will use to create an alignment.dgn file consisting of the preliminary horizontal and vertical alignments, with attention given to any bridge areas on a project. The .dgn file will be submitted to the **Bridge Division (Bridge)** for use in hydraulic analysis and to the **Roadway Design Plans Development Unit (PDU)** for use in creating the roadway base files (PDU Task 5235). The files are also made available to the **Right-of-Way Division (Right-of-Way)** to begin the Ownership right-of-way plans. Any changes to the alignment need to be verified and updated by **District** to the.xml file.

2.C Project Coordination Meeting 20 (Task 5290)

Project Coordination Meeting (PCM) 20 is held to review and verify the project scope, description, purpose & need, and to identify possible environmental issues and impacts. For additional information see Chapter Thirteen: Planning and Project Development, Section 4, of this manual.

2.D Prep Principal Controlling Design Criteria (Task 5281)

The roadway designer, in consultation with the **Unit Head** will determine the appropriate design criteria and typical section for the project. This information will be used in completing Form NDOT-76 ("Roadway Design – Principal Controlling Design Criteria", see Chapter One: Roadway Design Standards, Section 10, of this manual). The information from Form NDOT-76 will be used to guide the design and to highlight any design relaxations or exceptions that will be required (See Chapter One: Roadway Design Standards, Section 11, of this manual).

2.E Roadway Base Files (PDU Task 5235)

PDU will create the Roadway Base Files using the as-built plans, ground survey, alignment.dgn file (Task 5240) and culvert books. **PDU** will also create a location map for the project at this time. These files will be placed in OnBase for use in Roadway Design (Task 5350).

3. PHASE 3: DESIGN (ACTIVITY 5300)

3.A Roadway Design (Task 5350)

Information

Information provided for Roadway Design comes in three categories:

- Information readily available at the beginning of the project (e.g. Correspondence File, signed Form NDOT-76)
- Information which must be requested (e.g. Earthwork Balance Factor, Crash Reports)
- Information from other **Divisions/Sections/Units** that will become available as the project progresses (e.g. Utility Survey, Traffic Studies)

The roadway designer should review the *DPO* (Ref. 2.1) for the various information items available and determine which items are relevant to the project.

Begin Design

Create the vertical and horizontal alignments, including preliminary intersection and frontage road design if applicable. Coordinate lane configuration and compatibility with traffic requirements (turn-lane length, signing, etc.) with **Traffic Engineering**. Earthwork computations should be made after the horizontal and vertical alignments have been developed and surveys and balance factors have been obtained.

Airport Coordination

Identify all public-use airports which may be impacted by the project and coordinate with **NDOT Aeronautics**. See Chapter Ten: Miscellaneous Design Issues, Section 3, of this manual for additional information.

Drainage Design

The Drainage Design and Erosion Control Manual (*Drainage Manual*) (Ref. 2.2), Chapter One: Drainage ([Chapter One](#)), describes drainage design procedures. This activity will begin by determining if the project is in a floodplain and what the allowable headwater is. The roadway designer should request a list of known drainage concerns from the **District**, compute the drainage areas, determine the Q values, and size drainage structures. Begin the following designs:

- Culverts and storm sewers.
- Special ditches.
- Median drains.
- Erosion and sedimentation control measures (preliminary).

Work with the **Bridge Hydraulics Section** on bridge-sized structures (i.e., 20 feet in width measured along the roadway centerline). The **408 & Roadway Design Hydraulics Unit** in **Bridge Hydraulics** should be consulted on roadway drainage design and for non-bridge-sized structures.

Preliminary Access Control Determination

Access control is required on all Interstate, expressway and four-lane divided highways. **NDOT** will consider acquiring access rights on other highways when:

1. The 20-year forecast traffic (ADT) is 3001 or greater, as shown on the current 20 Year Forecast Traffic Map; or
2. The route is within the present or projected two-mile zoning limits of first-class cities (population 5,000 to 99,999) and within the present or projected three-mile zoning limits of primary (population 100,000 to 299,999) and metropolitan class cities (population more than 300,000); or
3. There are three miles or less between the Interstate and the connecting or parallel highway.
4. The development of a major highway, particularly where mobility is important.

Determine preliminary access control by:

- Checking OnBase for existing Right-of-Way permits
- Obtaining relevant information from the **DE** and others
- Reviewing the zoning, existing and future land use
- Conducting a field examination
- Considering intersection sight distance, natural barriers, property lines, and the development of future frontage roads

Once the roadway designer is prepared to make recommendations regarding access control, the **Highway Right-of-Way Associate** in the **Property Management Section** of **Right-of-Way** should be contacted with a request for the project to be placed on the agenda for the next access control meeting to present the roadway designers' recommendations to the **Access Control Group**.

See Chapter Fifteen: Right-of-Way, Section 3, of this manual and the Access Control Policy to the State Highway System, (Ref. 2.3), (<https://dot.nebraska.gov/media/v45nhanu/access-control-policy.pdf>) for additional information.

Pedestrian Access During Construction

Determine the need for pedestrian access during construction, particularly pedestrians with disabilities. If needed, estimate the time of closure of the pedestrian access during construction. See Chapter Sixteen: Pedestrian and Bicycle Facilities, Section 10, of this manual.

Initiate Agreements

Roadway Design initiates agreements by completing Form NDOT-65 (“Request for Agreement”). The request form is forwarded to the appropriate **Division** for processing. The roadway designer should keep track of the agreement progress and provide any necessary information. Agreements are transmitted to the **DE** to obtain signatures from other parties to the agreements. See DOT-OI 45-5, “Agreements”, for further information regarding agreements.

Covenant Relinquishment Agreements

A covenant relinquishment agreement (CRA) is a signed agreement between **NDOT** and a **City/County** in which **NDOT** maintains ownership of the right-of-way for utility easement purposes but relinquishes responsibility for the maintenance and operation of the roadway facility to the **City/County**. For further information on relinquishments see Chapter Fifteen: Right-of-Way, Section 7.D, of this manual and DOT-OI 60-13, “Relinquishment of Roads from the Highway System”.

Preliminary Municipality Financial Agreement

If a pMFA was not executed during project scoping (See Section 2.A of this chapter), a pMFA will be created when there is Municipal cost sharing on a project.

Irrigation Agreements

PDD works with the appropriate **Water Districts** regarding irrigation agreements.

Railroad Agreements

The **Rail Highway Liaison Manager** in the **Local Assistance Division** is responsible for all agreements, easement documents, and railroad special provisions. Some agreement and easement documents take considerable time to be executed, early coordination is essential.

When there is railroad involvement, but an agreement and/or easement is not needed, **Local Assistance** will draft railroad special provisions to add to the letting package. See Chapter Ten: Miscellaneous Design Issues, Section 1, of this manual for further information.

3.B Alternative Design Analysis (Task 5366)

This task will be added to the schedule if triggered by impacts to wetlands, parks, cemeteries, etc. Task 5366 generally will only appear on new construction or reconstruction projects with new alignment. Alternate alignments will be designed to the extent necessary (e.g. horizontal and vertical alignments, drainage, right-of-way, environmental impacts, estimates) to provide for comparison between alternate designs and selection of a preferred alignment.

3.C Preliminary T&E Checklist (Task 5395)

The preliminary Threatened & Endangered Species (T&E) Checklist is used by **T&E Biologists** in **PDD** to assess potential impacts to threatened and endangered species (plants, birds, animals, insects, etc.) in order to implement pre-determined conservation conditions to avoid or minimize impacts to the species and associated habitat.

3.D Preliminary Waterway Permit Data Sheet (Task 5353)

During this activity the roadway designer will compute the impacts to wetlands based on the preliminary limits-of-construction. **Wetland Biologists** in **PDD** will use this information to determine a Wetland Mitigation Strategy for use in creating the Preliminary Mitigation Plans and to begin the permitting process, if required.

3.E Stormwater Treatment Within MS4 Communities

This task will be added to the schedule if the project is in a MS4 Community. Stormwater Treatment is a condition of **NDOT's** Municipal Separate Storm Sewer System (MS4) permit. The objective of stormwater treatment is to minimize the discharge of potential pollutants from a highway's post project stormwater runoff to waters of the state. The roadway designer will work with the **408 & Roadway Design Unit** in **Bridge Hydraulics** in the preliminary MS4 Stormwater Treatment design. For additional information see Chapter Three: Stormwater Treatment, of the *Drainage Manual* (Ref. 2.2) ([f-chap-3-stormwater-treatment.pdf](#)).

3.F Preliminary Mitigation Plans

Using information from the "Preliminary Waterway Permit Data Sheet" (Task 5353), preliminary wetland mitigation areas, environmentally sensitive areas from **PDD**, the Wetland Mitigation Strategy generated by **PDD** from Task 5353, et. al., the roadway designer will create Preliminary Mitigation plans for the Plan-in-Hand visit (Task 5380).

3.G PDU Design Files (PIH Plans) (PDU Task 5354)

PDU will compile the Design Files (PIH Plans) and upload the files to OnBase.

3.H Status 30 Cost Estimate (Task 5368)

The cost estimate checklist (**EXHIBIT 12.8** of this manual) should be checked to be certain that all applicable items for the project are incorporated into the cost estimate. Funding splits should be verified with the **Unit Head** for projects within city limits and/or within railroad rights-of-way. The roadway designer will input the estimated quantities into AASHTOWare. The **Unit Head** will review the estimated quantities before transmittal to the **Construction Division Cost Estimating Unit (Cost Estimating)**. See Chapter Twelve: Cost Estimating & Funding, Section 4, of this manual for further details.

3.I Send Quantities to Construction (Task 5319)

After **Unit Head** review of the Status 30 Cost Estimate, the roadway designer will mark the design complete in AASHTOWare, transmitting the estimated quantities to **Cost Estimating**.

3.J Project Coordination Meeting 30 (Task 5315)

PCM 30 is held to share information and provide answers about the project that are necessary to begin the environmental/NEPA process. For additional information see Chapter Thirteen: Planning and Project Development, Section 4, of this manual.

3.K Plan-In-Hand Distribution) (Task 5317)

Prior to the Plan-in-Hand Distribution, the roadway designer and the **Unit Head** will review the plans for completeness, content, and quality, see **EXHIBIT 11.2** of this manual for the required plan sheets.

The plan-in-hand plans set should be distributed and notification of plan availability given at least two weeks prior to the inspection date of the Plan-in-Hand Visit (Task 5380).

The plans should include the following preliminary details:

- Earthwork balance points, quantities, and balance factor.
- Line shifts (new geometrics).
- Limits of construction.
- Detailed limits of construction for urban areas.
- New grade line with vertical curve data and grades.
- Intersection designs, frontage roads, county road alignments, major commercial driveways.
- Begin and end project stations.
- Proposed culvert sizes (include Drainage Area, Design Q, and Headwater).
- Channel changes, if any.
- Preliminary storm sewer design in urban areas.
- Edge of pavement, drives and walks in urban areas.
- Project centerline and surveyed baseline on an aerial photo sheet.
- Areas of impacted wetlands.
- All available aerial and underground utility facility locations (electrical, telephone, pipelines, gas, cable TV, etc.).

3.L Plan-In-Hand Visit (Task 5380)

The plan-in-hand visit is a field inspection of the proposed project. The Plan-in-Hand checklist should be used (“Draft” PIH Report in OnBase) as a reference to note any items that need to be addressed during the plan-in-hand inspection.

If there are changes to the project resulting from the plan-in-hand inspection, the roadway designer will consult with the **PDD Environmental Section Environmental Project Manager** to review the changes and to determine if changes to the pre-permit application consultation process will be necessary.

Following the plan-in-hand inspection, consolidate all sets of comments into one set of plans, label the set as “PIH Set” and place them in OnBase. These plans are a milestone document for the project.

3.M Scope (PIH) Report (Task 5388)

This activity consists of the preparation and review of the plan-in-hand report. An optional meeting may be held with the **ADE** and the **Roadway Design Division Head** to discuss the plan-in-hand prior to the completion of the plan-in-hand report. The plan-in-hand report outline, in OnBase, will be followed. An abbreviated report format may be used for off-system projects. Note that starred topics must have comments attached for all projects.

The plan-in-hand report, location map, accident report, engineering review statement, signed Form NDOT-76, and other attachments, as appropriate, are routed to the appropriate individuals for review and approval. Once the appropriate parties approve the plan-in-hand report, the report is made available for additional distribution.

Any change in the scope of the project occurring after the routing of the Plan-In-Hand Report (e.g., a change in project length or alignment) should be handled as a supplement to the report. At the initiation of the scope change, the roadway designer should inform the recipients of the Plan-In-Hand Report that a supplement to the Plan-In-Hand Report is being prepared, detailing the basics of the change. When the scope change is approved, the supplement to the Plan-In-Hand Report should be sent directly to each of the recipients of the Plan-In-Hand Report (the supplement does not need to be routed through the list).

3.N Confirm/Update Project Description/Project Details/Purpose & Need (Task 5396)

The roadway designer will review the approved highway Improvement Programming Request (Form NDOT-73), the Project Details (Form NDOT-173), the Planning Document, and the notes from the Plan-in-Hand Visit (Task 5380). Based on this review, the Project Description, Project Details, and the Purpose and Need statement will either be verified or updated as required.

3.O Final T&E Checklist

The roadway designer will review and update the Preliminary T&E Checklist (Task 5395) and finalize or update if/as required by observations from the Plan-in-Hand Visit (Task 5380).

3.P Waterway Permit Data Sheet (Task 5589)

The roadway designer will review and update the Preliminary Waterway Permit Data Sheet (Task 5353) and finalize or update if/as required by observations from the Plan-in-Hand Visit (Task 5380).

3.Q Finalize Stormwater Treatment Within MS4 Communities

The roadway designer, in consultation with the **408 & Roadway Design Unit in Bridge Hydraulics**, will complete the MS4 Treatment design based on information from the Plan-in-Hand Visit (Task 5380). For additional information see Chapter Three: Stormwater Treatment, Section 8.D, of the *Drainage Manual* (Ref. 2.2).

3.R Design L.O.C.s to ROW (Task 5389)

The limits of construction plans should show the final limits of construction including all culverts, driveways, intersections, dikes, etc. and shall meet the needs of **ITS/Lighting, Utilities, PDD TRU, and Traffic Engineering**. Distribute the limits of construction plans with location maps and typical sections (See **EXHIBIT 11.2, Plan Set Sheet Organization**, of this manual).

After L.O.C. plans have distributed notice should be given to **ROW Design, Utilities, Bridge, Traffic Engineering, PDD TRU** or other **Divisions/Sections/Units** when changes are made to the L.O.C. plans that may impact their work. Some examples of changes:

- Construction Limits
- Special Ditches (even if within the planned R.O.W., it may affect utilities)
- Vertical Profile
- Intersection/Drive Locations
- Temporary Roadways, etc.
- Impacts to Wetlands areas

The notification shall include the following information:

- Project Name & Number
- Control Number
- Tract Numbers affected
- A brief description of the changes
- An approximate completion date

ROW Design, Utilities and any other affected sections/units shall be notified when work is beginning on a change.

3.S Final Mitigation Plans (Task 5518)

The roadway designer will finalize the Preliminary Mitigation Plans, incorporating comments from the **Army Corps of Engineers** and observations from the Plan-in-Hand Visit (Task 5380).

3.T Project Coordination Meeting 35 (Task 5331)

PCM 35 is held after the plan-in-hand visit to review changes to the project since PCM 30 and from the Plan-in-Hand Visit (Task 5380). The need for PCM 50 will be determined at this meeting (See Section 5.H of this chapter). For additional information see Chapter Thirteen: Planning and Project Development, Section 4, of this manual.

3.U Design Prep for Public Meeting (Task 5338)

Communication between **NDOT** and the public is an important ongoing activity coordinated by the **Communication and Public Policy Division (Communications)**. Depending on the nature of the project, several types of contact may be made during the course of a project, **Communications** prepares a Public Involvement Plan for each project as the situation requires. If the **Public Involvement Specialist in Communications** determines that a meeting will required for the project, the roadway designer will be contacted with the details.

Types of public meetings that may be held include:

- Public Hearings
- Public Information Meetings.
- City and/or County Officials Meetings.

Public Hearings

Public Hearings are **only** held for Environmental Class I and Environmental Class III projects. They are not required for Environmental Class II (Categorical Exclusion (CE) projects). See Chapter Thirteen: Planning and Project Development, Section 5.A.1, for additional information.

Public Information Meetings

Public Information Meetings may be held for major relocations and location studies, right-of-way appraisal, design and scope changes, wetlands impacts, projects in **Villages** and **Cities**, and sometimes for an engineering review.

City and/or County Officials Meeting

The **ADE** will determine when a **City and/or County** officials meeting is to be held. While it is not necessary that **Roadway** conduct all of the meetings and coordination, such as in utilities conflicts, they are responsible for seeing that it is accomplished.

4. PHASE 4: ENVIRONMENTAL APPROVAL (ACTIVITY 5400)
(Required for Environmental Class I and Class III Projects)

4.A Functional Design (Task 5428)

Functional design is only required for Environmental Class I and Class II projects and is accomplished ***only if a Public Hearing*** will be held.

If required, the roadway designer should consult with the **City, County, Irrigation District, etc.** to determine conflicts and if rehabilitation will be part of the project. Design details to be considered may also include locations of borrow and/or waste pit sites, guardrail locations, etc. Erosion control design should also be coordinated with the **PDD Roadside Development & Compliance Unit (RDC)**.

4.B Status 40 Cost Update (5406)

Only required if a Public Hearing will be held. The cost estimate checklist (**EXHIBIT 12.8** of this manual) should be checked to be certain that all applicable items for the project are incorporated into the cost estimate. Funding splits should be verified with the **Unit Head** for projects within city limits and/or within railroad rights-of-way. The roadway designer will input the estimated quantities into AASHTOWare and the **Unit Head** will review the estimated quantities. After the **Unit Head** review the roadway designer will mark the design complete in AASHTOWare, transmitting the estimated quantities to **Cost Estimating**. See Chapter Twelve: Cost Estimating & Funding, Section 4, of this manual for further details.

5. PHASE 5: PLAN DETAILS (ACTIVITY 5500)

5.A. Roadway Design Details (Task 5508)

The following information is required **before** beginning Roadway Design Details on Federal-Aid Projects:

- Final EA – Finding of No Significant Impact (FONSI)
- Final EIS – Record of Decision (ROD)
- **Or**
- The project is classified as a CE

For additional information see Chapter Thirteen: Planning and Project Development, Section 5, of this manual.

The roadway designer will make any revisions required by a review of any public meeting plans and minutes and the approved PIH Report comments. Typical cross-sections should be updated as necessary. The geometrics and grades for driveways, intersections, frontage roads and cross-sections shall be completed during this activity. Plans and notes for Stormwater Treatment Facilities will be prepared. The roadway designer will begin writing any special provisions that may be needed for the project.

The roadway designer will coordinate with **Aeronautics** in the permitting process, if necessary, and request a review of the Phasing Plans by **Traffic Engineering**.

When all applicable tasks and reviews have been accomplished (See the *DPO*, Ref. 2.1), the roadway designer will back-up the roadway design to ProjectWise and notify **PDU** that the files for the Design Detail Plans are available.

5.B RD Request Bridge Special Plans (Task 5516)

The roadway designer will request project specific special plans (e.g. concrete box culverts, retaining walls, stairs) from the **Bridge Special Plans Unit** for inclusion in Design Details Plans (PDU Task 5532)

5.C PDU Plan Details (Design Detail Files) (PDU Task 5532)

PDU will create the Design Detail Sheet files for the Design Detail Plans and upload the plans to OnBase.

5.D Design Detail Review (Task 5576)

The roadway designer should review Clarity to verify that the project schedule is still on track, keeping the following (and other similar) activities and concerns in mind:

- **Agreements:** Recognize that some **City/County Councils** may only meet once a month. Also be aware that irrigation modifications can only be done during that part of the year when there is no water in the systems. **Railroad Owners** may be out of state resulting in agreements requiring an extended lead-time.
- **Final Relinquishment Agreement:** agreements must be executed prior to submittal of the plans package to **PS&E**.
- **Wetlands:** permitting requires input from multiple agencies; mitigation should be done in winter months, if possible.
- **Utilities:** seasons are also critical for utility relocation.
- **Right-of-way:** acquisition is a lengthy process.
- **Soils:** surcharge and settlement may need to be programmed into the construction schedule.
- **Phasing:** coordinate bridge and roadway construction phasing, etc.
- **Promises:** be aware of promises made, e.g., construction completed before football season.
- **Logo signs:** tourist-oriented directional (TOD) signs should be moved during the off- peak tourist season, if possible.
- **Miscellaneous:** nesting seasons of birds that nest on bridges, trout migration, etc.

The estimated working days for construction should also be reviewed and the letting date should be confirmed. Lettings usually occur once a month.

5.E Status 45 Cost Estimate (Task 5584)

The cost estimate checklist (**EXHIBIT 12.8** of this manual) should be checked to be certain that all applicable items for the project are incorporated into the cost estimate. Funding splits should be verified with the **Unit Head** for projects within city limits and/or within railroad rights-of-way. The roadway designer will input the estimated quantities into AASHTOWare and the **Unit Head** will review the estimated quantities. After the **Unit Head** review the roadway designer will mark the design complete in AASHTOWare, transmitting the estimated quantities to **Cost Estimating**. See Chapter Twelve: Cost Estimating & Funding, Section 4, of this manual for further details.

5.F Municipality/Municipality Financial Agreement

The Municipality Agreement (MA) is used to communicate/assign project information, responsibilities, and other important information to the Municipality. If cost sharing is required, a Municipality Financial Agreement (MFA) is required. A MFA will supersede a pMFA if one was executed.

5.G Letter of Notification

A Letter of Notification (LON) is required anytime work is being performed within or directly adjacent to a Municipality and a Municipal or a Municipality Financial Agreement is not required.

5.H Project Coordination Meeting 50 (Task 5510)

The need for PCM 50 is determined at PCM 35 (See Section 3.T of this chapter) and is held to review required design modifications from PCM 35, environmental commitments, changes to right-of-way, and any outstanding action items prior to NEPA approval. For additional information see Chapter Thirteen: Planning and Project Development, Section 4, of this manual.

6. PHASE 6: R.O.W. (ACTIVITY 5600)

6.A Design Plans to Utility Unit (Task 5614)

At this stage of the project the design is complete except for any changes from right-of-way negotiations and any unforeseen utility changes. **ROW Design** will notify the **Utility Coordinator** that the Appraisal Right-of-Way plans are available in OnBase. The roadway designer will inform the **Utilities Coordinator** that the Utility Plan Set is available in OnBase. Contact the **Utilities Coordinator** to discuss the project further and to check for any other utility conflicts.

6.B R.O.W. Review Meeting (Task 5610)

At this stage of the project, right-of-way design is on the critical path. **ROW Design** holds a Preliminary R.O.W. plan review meeting, inviting the roadway designer and the **Unit Head**, to discuss the preliminary right-of-way design. For additional information see Chapter Fifteen: Right-of-Way, Section 2.D.5, of this manual.

6.C Appraisal Plans Review (Task 5620)

The roadway designer will review the Appraisal Right-of-Way plans (See Chapter Fifteen: Right-of-Way, Section 2.E, of this manual) along with the meeting minutes from the R.O.W. Review Meeting (Task 5610) to verify that the activities required by that meeting have been accomplished. The roadway designer will e-mail the **ROW Designer** stating that the Appraisal Plans are ready for use or detailing changes which are still be made.

If the **ROW Negotiator** schedules a pre-negotiation meeting, the roadway designer and the **Unit Head** are **required** to attend.

The roadway designer will make any required changes that result from appraisal and negotiations and notify all impacted parties, such as the **Utility Coordinator**, of the changes.

7. PHASE 7: PLAN PACKAGE (ACTIVITY 5700)

7.A Plans Verification for PS&E Package

This is the beginning of the final compilation of all of the information for the PS&E package. The roadway designer will review the plans from other **Divisions/ Unit** to verify that they are complete, correct, and that they correspond to the information given on other plans in the package.

7.B Plan Package Design Modification (Task 5705)

At this time the roadway designer will complete any design details that remain (e.g. guardrail), check on the status of agreements, calculate funding splits, cross-check information on various plan sheets and estimate forms for disparities, complete the required forms, etc. In short, the roadway designer will accomplish any tasks on the *DPO* (Ref. 2.1) required in the completion of the Plan Package.

Plans, specifications, and estimates from other **Divisions/ Units** will be consolidated with **Roadway Designs'** information into a Plan Package which the roadway designer will check to verify that everything required for the PS&E turn-in is included.

This Plan Package is submitted to **PS&E**. **PS&E** checks the plans and quantities and informs the roadway designer of any required changes. The roadway designer will review the changes and give them to **PDU** for use in the PDU Plan Package Design Modification for PS&E (PDU Task 5765).

7.C PDU Plan Package Design Modification for PS&E (PDU Task 5765)

PDU will create the PS&E Plan Package by incorporating design changes/updates from the Plan Package Design Modification (Task 5705) into the Design Detail Plans (PDU Task 5532) and adding the requisite plan files from other **Divisions** and **Consultants**.

7.D Status 50 Cost Estimate

The cost estimate checklist (**EXHIBIT 12.8** of this manual) should be checked to be certain that all applicable items for the project are incorporated into the cost estimate. Funding splits should be verified with the **Unit Head** for projects within city limits and/or within railroad rights-of-way. The roadway designer will input the estimated quantities into AASHTOWare and the **Unit Head** will review the estimated quantities. After the **Unit Head** review the roadway designer will mark the design complete in AASHTOWare, transmitting the estimated quantities to **Cost Estimating**. See Chapter Twelve: Cost Estimating & Funding, Section 4, of this manual for further details.

7.E Project Coordination Meeting 70 (Task 5770)

PCM 70 is held to verify that previous action items have been resolved and that the project is ready for submittal to **PS&E**. For additional information see Chapter Thirteen: Planning and Project Development, Section 4, of this manual.

7.F Plans Package Submittal (Task 5790)

The roadway designer will e-mail the **PS&E Turn-in Group** that the PS&E Plans Package from PDU Task 5765 is available in OnBase.

8. PHASE 8: LETTING (ACTIVITY 5800)

8.A Agreements

If required, the roadway designer will prepare and submit a Supplemental City Financial Agreement for signatures. The **ADE** will submit a Public Interest Letter to **FHWA** for approval, if necessary (See Chapter Fifteen: Right-of-Way, Section 6.A, of this manual).

8.B PDU PS&E Corrections (PDU Task 5845)

PDU will make the corrections requested by **PS&E** to the Construction Plans and upload the resulting PS&E Letting Plans to OnBase.

8.C Blue Lines Submitted to PS&E (Task 5850)

The roadway designer will update the Horse Blankets with any corrections from **PS&E**. The **ADE** and **Unit Head** will review the PS&E Letting Plans from PDU Task 5845; if there are no problems, the responsible engineer will sign, seal, and date the plans. The Horse Blankets and the signed, sealed, and dated PS&E Letting Plans will then be uploaded to OnBase.

During the period after a project has been advertised for letting until it has been let to contract, all questions from outside **NDOT** (i.e. contractors or suppliers) regarding the project and plans shall be referred to the **Highway Construction Scheduling Manager** in **Construction**.

9. PHASE 9: BEGIN CONSTRUCTION PHASE (ACTIVITY 5900)

Activity 5900 covers all post letting Design functions including the Pre-Construction Conference, construction review of any type, Plan Revisions, and the Post-Construction Conference. The project is not complete until construction is finished and **NDOT** has accepted the finished product.

Changes To The Design Plans

See Chapter Eleven: Highway Plans Assembly, Section 7, of this manual

Archiving The Project File

After the project is completed, the roadway designer is responsible for archiving the project file. This usually occurs two years after final computations are completed.

9.A Create As-Built Plans

When **PDU** has been informed by **Contracts** that the project has been awarded, the PS&E Letting Plan .dgn files and the relevant plan .dgn files from other **Divisions/Consultants** will be combined into a .dgn file, which **District** will use to create the As-Built Plans.

10. REFERENCES

- 2.1 Nebraska Department of Transportation, Design Process Outline, Current Edition ([Design Process Outline](#))
- 2.2 Nebraska Department of Transportation, Drainage Design and Erosion Control Manual, Current Edition ([Roadway Design Manuals - NDOT](#))
- 2.3 Nebraska Department of Transportation, Access Control Policy to the State Highway System, Current Edition. (<https://dot.nebraska.gov/media/v45nhanu/access-control-policy.pdf>)