

Leading Teams Through Plans, Specifications, & Estimates (PS&E)



Leading teams through PS&E consists of coordinating with team members to fulfill all the requirements to deliver a project to construction letting. The project team must work together toward timely and complete delivery of a high-quality 100% PS&E package. This includes approved project plans, provisions, pay item quantities, agreements, certifications, regulatory approvals and supporting documentation. The team evaluates estimates for contract time and money to develop letting strategies and secure construction funding.

Why Important

The Department expects timely and complete delivery of high-quality 100% PS&E packages. The PS&E package is the compilation of all pre-construction activities and is the basis for the development of the documents that will be provided to construction contractors for bidding purposes. Thorough and well-coordinated PS&E packages provide the necessary information to reduce and address known construction risks allowing the Department to receive bids, execute a contract successfully and build a project with minimal revisions and claims. The PS&E package includes (but is not limited to) a full set of approved plans, special provisions, and Intermediate Contract Times (ICTs), pay item quantities, and required supporting documentation.

The Project Manager serves as the primary point of contact and should focus on effective leadership during this critical time. The PM should use an interdisciplinary approach to guide team delivery by driving coordination, monitoring funds and estimates, ensuring quality, and communicating key dates for all active phases of work (design, right of way and utility).

Central Let Project Touchpoints

For central let projects, the 15 Month Meeting is the first formal touch point in moving a project toward letting. The goals of that meeting are to determine if projects are ready to advance to the 12-month let list and to ensure program stability. Project Managers must be present at the meeting to provide a status update about cost estimates, right of way and utility status, agency coordination and other activities that would impact a project's ability to make current letting schedule. The PS&E Checklist and the Sample Questions for the 15-month meeting have been provided to help PMs prepare for the meeting. The PS&E Checklist can be used as a living document to track and ensure complete PS&E packages are submitted according to requirements.









The PS&E Turn In Review Meeting is the second formal touch point for central let projects. This meeting focuses on projects that are within 2 weeks to 6 weeks of PS&E turn in to ensure that all the required documents have been or will be obtained by turn in and that the plan set will be 100% complete by the established date. The Project Manager attends that meeting to provide the status update and address any concerns prior to turn in. Important steps that occur after PS&E turn in include fund authorization, plan checking, proposal creation, cost and time estimating, advertising and LET.

Division Let Project Touchpoints

For division let projects, the division may have similar or more informal processes for capturing and tracking projects as they enter the 12-month let list. In addition to the PS&E checklist (required for central let projects) divisions might have their own checklists or guidance that PMs will need to understand and adhere to.

PMs should ensure that their project teams understand the differences (and similarities) in PS&E turn in deadlines and requirements for division let projects. It is also important to establish who is responsible for authorizing construction funds prior to advertisement and after bid opening (if required).

Key PM Responsibilities

	<p>Utilize PS&E Checklist Review and use this tool as a living document to track and ensure complete packages.</p>		<p>Drive Coordination Ensure coordination includes all disciplines and stakeholders to ensure complete quality product.</p>
	<p>Review Let Strategy Cost estimates, moratoriums, status of ROW/UBO, special events, may require strategic let.</p>		<p>Update Construction Cost Ensure a cost verification memo is provided 13 months prior to construction authorization.</p>
	<p>Communicate Key Dates Once on the 12-mll it is critical to track and communicate key dates to support program stability.</p>		<p>Project Commitments Ensure PS&E addresses moratoriums and construction commitments.</p>
	<p>Pay Items and Provisions Ensure pay items accurately and completely cover work and that provisions support time/phasing.</p>		<p>Manage ROW and Utility Ensure the team is coordinating closely with ROW and utility activities essential to LET.</p>

Key Things to Consider

Letting Type

- Is the current letting type appropriate and are there reasons that should be revisited?
 - Is your construction estimate close to the statutory limit for division letting?
 - Is your project suited to be let as a Small Business Enterprise (SBE) project or constructed with an Indefinite Delivery/Indefinite Quantity contract?
 - Do you need multiple lettings to construct the projects (i.e. Early Clearing, Grubbing and Erosion control, ITS install in advance of construction, Landscaping after construction)

- Do you have complex risk or are there opportunities for innovation and creative construction phasing that would indicate an alternative project delivery method should be considered?

15 MLL Considerations

- Is the current letting date appropriate and are there reasons that should be revisited?
- Do you have restrictive moratoriums that will impact when construction activities can start and occur? If so, does let date align and are there ICTs to be included in the contract to address? Do those dates align with the commitment tracker and permit conditions?
- Are there special events or seasonal activities that need to be considered in the letting date (i.e. road closures near schools to be handled during summer months)?
- Are right of way activities and utility relocation activities completed (whole or in phases) to allow work availability to the Contractor? Are special provisions required to address any delays or phasing?
- Has there been adequate coordination with other projects within the area and are there ICTs or special provisions required to ensure coordination?
- Does your project have triggers that may warrant an extended 8-week advertisement (estimate exceeds \$50 million, large borrow quantity, unique project materials)? And does your plan turn in date account for that?

PS&E Preparation

- Is the project team coordinating across disciplines to ensure the individual deliverables come together as a whole? Is a multi-disciplinary review meeting(s) set up to ensure consistency across all plans?
- Do you (as the PM) have a clear understanding of each discipline’s deliverable and deadlines? Have you led the team in planning to meet these deadlines?
- Is the team working together to quickly address any concerns and consider impacts of any changes to other disciplines/deliverables?
- Has the team reviewed the plan set to ensure consistency between disciplines and resolve any conflicts?

Best Practices & Common Pitfalls

Best Practices	Common Pitfalls
<p><u>15 Month Meeting</u></p> <ul style="list-style-type: none"> ✓ Attend the 15 Month Meeting with a concise project update including status of cost estimates and right of way and utility progress. ✓ Review environmental documentation, project commitments and permit requirements to ensure all environmental requirements are identified and properly scheduled. ✓ Establish early if an extended 8-week advertisement is going to be required and ensure schedule accounts for early turn in. 	<p><u>15 Month Meeting</u></p> <ul style="list-style-type: none"> ✗ Not taking time to review critical project information and coordinating with others before the 15 Month Meeting. ✗ Assuming environmental commitments and permits are being handled by others and will be received in time for letting. ✗ Waiting until PS&E turn in to determine whether an extended 8-week advertisement would benefit the project.

Best Practices	Common Pitfalls
<p><u>12 Month Let List</u></p> <ul style="list-style-type: none"> ✓ Be intentional as the project enters the 12-month let list to ensure stable program delivery. <p><u>PS&E Turn In</u></p> <ul style="list-style-type: none"> ✓ Use the PS&E Checklist as a living document to track activities as a project enters the 12mll. ✓ Use the dates from flow chart generators to advise your project schedule with consideration of early completion, when able. ✓ Submit special provisions for specialty items that comply with proprietary products procedures. ✓ Perform a PS&E review in advance to identify and address issues with final deliverables prior to submitting to Contract staff for letting. ✓ If there is potential for a lot of bidder questions or confusions include logistics in the proposal for a pre-bid conference. ✓ Setup the WBS list and Category list and ensure designers get their pay items and quantities entered in PIQ or AWP (especially important if you are combining projects). <p><u>Let</u></p> <ul style="list-style-type: none"> ✓ Monitor construction bids and ensure a low bid adjustment occurs, if required. ✓ Ensure let milestone is confirmed upon successful award of project. ✓ Have a cost-plus construction revision contract in place and ready to support post let activities. ✓ Monitor PE expenditures closely. Work to clear commitments and close PE WBS element after construction award. 	<p><u>12 Month Let List</u></p> <ul style="list-style-type: none"> ✗ Failing to have updates estimates (within 3 months) which prevents your project from entering the 12mll. ✗ Waiting until your project enters and is published in the 12mll and then submitting a schedule change based on known information. <p><u>PS&E Turn In</u></p> <ul style="list-style-type: none"> ✗ Waiting until PS&E turn in date is eminent to complete the checklist. ✗ Using the dates on flow chart generators as your project schedule. ✗ Submitting a special provision for a product that must be identified by name without complying with the proprietary products procedures. ✗ Relying on Contracts staff to provide a complete design and pay item review and then assuming the team will have time to address issues properly without jeopardizing letting. ✗ Unclear special provisions or design plans can lead to excessive questions and addendums during the advertisement period. ✗ Assuming individual groups/disciplines will coordinate on pay item entry and assign properly to project WBS. <p><u>Let</u></p> <ul style="list-style-type: none"> ✗ Not considering construction funding authorization and low bid reconciliation. If adequate construction funds are not available, the project cannot be advertised. ✗ Confirming the let milestone at time of bid opening. If a project cannot be awarded PM may be required to submit a SCR for the new letting date. ✗ Waiting until issues occur in the field to ensure the design team is ready to support revisions. ✗ Allowing PE WBS to remain open and charges to continue well after letting has occurred.

Tools

[PS&E Checklist](#)

[Pay Items & Quantities \(PIQ\) Tool One Page Summary](#)

[Project Flow Chart Generator](#)

Training:

Preconstruction Session: [Ingredients for a 100% Complete PS&E Package](#)

Guidance:

[Proprietary Products](#)

[Division Let Guidance](#)

[Construction Contract Decision](#)

Memos:

All are on the internal Preliminary Engineering SharePoint Site:

[11-7-2023 PSE from Contract Standards](#)

[9-12-2023 15 Month & PSE Meeting Memo and Procedures](#)

[6-27-22 Cost Verification Memo 6th Month ROW List and 13th MLL](#)

[3-30-2022 AWP announcement](#)

[11-15-2021 Memo to DEs WBS Funding Released Prior to Project Advertisement \(002\)](#)

Definitions

Advertisement	The period (normally 3 for DPOC, 4 for LET) between the date sealed plans and proposals are posted and the date sealed bids are accepted. The advertisement period allows potential bidders to review bid documents, perform outreach to sub-contractors and assemble confidential bids.
Award	Formal notification from the Department to the successful bidder stating intent to move forward with executing the contract upon completion of requirements (bonds, signatures, etc.).
Build America/Buy America	NCDOT and FHWA policy that requires domestic manufacturing process for all steel and iron products that are permanently incorporated into a highway construction project.
Exception	A formal process that allows NCDOT to continue forward in rare instances with construction authorization, advertising and project let without all required documentation pending justification and proper approvals (State Funded - Chief's Engineer's Office and Federal Funded – FHWA)
Let	The act of receiving bids and reading aloud of responsible contractor cost proposals.
Non-Participating	When the Construction firm is doing work on a project not funded by NCDOT, this work is categorized as NPAR, meaning NCDOT is non-participating.
Pay Items	Define the required work, acceptance standards and associated quantity of measurement. Standard Pay Items reference a corresponding section of

	the Standard Specifications while Special Pay Items require a corresponding Special Provision.
Pre-Bid Conference	A mandatory or non-mandatory meeting held during the advertisement period provides an opportunity for NCDOT to share information and bidders to ask questions. Some examples of projects that might benefit from a pre-bid conference include third party concerns, complex traffic control concerns or specialty work.
Proprietary Products	Products that are brand specific cannot be procured by NCDOT via generic performance and design-based specifications or as part of a list of options that cite at least three items of equal or equivalent design.
PS&E	Plans, Specifications and Estimates
Proposal	A bidding document that outlines instructions to bidders, provisions, permits, and bid items necessary to construct a project. If accepted and executed the proposal becomes the project contract.