

Process Improvement & Training Subcommittee: Part 1

Hanne Eastwood, ODOT
Paul Rudwick, PBOT
Co-Chairs

Introductions

Within your table:

- Your name, agency and experience with delivering federal-aid projects
- Why you chose to come to the PI&T Subcommittee session



The CUG had plentiful input on relevant training topics, collected over the past few years. Note that the Framework is extensive, and that today we are using the portion of it that best aligns to the previous survey results and input. We are doing groundwork today that will allow us to move on to a proposed workplan.

This Morning's Objectives

Work in groups on five key training topics:

- 1) *Plans, Specifications, and Estimate (PS&E)*
- 2) *Scoping*
- 3) *Advertise, Bid and Award*
- 4) *Construction*
- 5) *Right-of-Way, Environmental, Utilities*

For each topic:

- Identify target audiences
- Describe learning objectives
- Share thoughts about good training sources

Discussion Questions

Core questions

- Who in the agency needs to learn about this topic, and why?
- What do each of these audience groups need to be able to do as a result of going to training? Consider whether there are differences in the level of skill or knowledge across audiences.
- Where did *you* learn what you know on this topic? How do you stay up to date?

If time allows . . . *(add to Notes chart)*

- What are some of the common issues or misunderstandings that people could make on this topic?
- What do you think the frequency needs to be for this training? (annual, on demand, something else?) Does frequency differ by audience group?

5

Those in attendance discussed the questions above and then a Round Robin structure allowed groups to contribute their thoughts to each of the 5 topics. Notes from the discussion are shown on slides 6 – 23.

Topic A: Plans, Specifications, and Estimate (PS&E)

| Objective | Audience | Notes |
|---|--|--|
| 1. Know what permits are needed and verify receipt of necessary permits | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction) | ~ |
| 2. Meet the federal standards for an estimate | Program Manager/Liaison, Project Manager (Design), LAL\TPM, Engineer of Record (EOR) | |
| 3. Ensure/maintain current accuracy of an estimate/plans/specifications | Program Manager/Liaison, Project Manager (Design), LAL\TPM, Engineer of Record (EOR) | <ul style="list-style-type: none"> • Refreshed/current based on market conditions or milestones • Consistent bid items |
| 4. ASSHTOWare – Know ODOT Expectations regarding the use of it | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Inspector, Procurement, LAL/TPM, Engineer of Record (EOR) | |

Topic A: Plans, Specifications, and Estimate (PS&E) (Continued)

| Objective | Audience | Notes |
|--|--|----------------------------------|
| 5. Meet the most up to date specifications that apply to the project, including knowledge of those specifications (e.g. which ones to use) | Program Manager/Liaison, Project Manager (Design), Procurement, LAL/TPM, Engineer of Record (EOR) | |
| 6. Stay up to date on changes to federal requirements and PS&E | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), LAL/TPM | How to handle changes mid-stream |
| 7. Understand and prepare the ODOT PS&E checklist | 1,2,5.6.8 Program Manager/Liaison, Project Manager (Design), Procurement, LAL/TPM, Engineer of Record (EOR) | Effectively communicate updates |

Topic A: Plans, Specifications, and Estimate (PS&E) (Continued)

| Objective | Audience | Notes |
|--|---|---|
| 8. Effectively coordinate with a consultant | Program Manager/Liaison, Project Manager (Design), Engineer of Record (EOR) | |
| 9. Make sure funding is in place | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), LAL/TPM | Resources for other audiences (inspectors) |
| 10. Make sure activities are eligible for the kind of funding on the project | Program Manager/Liaison, Project Manager (Design), LAL/TPM | Program requirements of other funding limitations |
| 11. Submit PS&E documentation in the correct format | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Procurement. LAL/TPM | Also data formats as necessary |

Topic A: Plans, Specifications, and Estimate (PS&E) (Continued)

| Objective | Audience | Notes |
|---|--|-------|
| 12. Build a schedule that will meet STIP phase let date | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), LAL/TPM | |
| 13. Build a process map for their agency's PS&E Process | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), LAL/TPM | |
| 14. Understand and implement ODOT Civil Rights Requirements | Program Manager/Liaison, Project Manager (Design), LAL/TPM | |

Topic B: Scoping

| Objective | Audience | Notes |
|---|---|---|
| 1. Planning levels/phases | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), LAL/TPM | |
| 2. Level of detail required | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), LAL/TPM | |
| 3. How to find/complete templates | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction) | When required/utilizing technical scope sheet |
| 4. Difference between obligation dates v. project schedules | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Procurement | |
| 5. Estimate, contingency details, budgeting | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Quality Control Compliance Specialist (QCCS) | More actual costs from ODOT; reduce underestimate |

Topic B: Scoping (*Continued*)

| Objective | Audience | Notes |
|---|--|---|
| 7. Identify risks | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Inspector, LAL/TPM | List of common risks |
| 8. Best practices | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), LAL/TPM | Dev cost for inflation and oversight estimate |
| 9. Steps (Timeline of occurrences/time budget; who to involve in future agreements; PPE | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), LAL/TPM | Workflow chat |
| 10. Avoid scope creep | ALL - Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Inspector, Procurement, LAL/TPM, Quality Control Compliance Specialist (OCCS), Engineer of Record (EOR), Contractor | |

11

Topic B: Scoping (*Continued*)

| Objective | Audience | Notes |
|--|---|---|
| 11. Understand project limits | Program Manager/Liaison, Project Manager (Design), Inspector, LAL/TPM, Engineer of Record (EOR), Contractor | |
| 12. ODOT sharing their scoping process | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), LAL/TPM | Typically on budget |
| 13. Handoff from scoping and design | Program Manager/Liaison, Project Manager (Design), LAL/TPM | Defining “scoping,” understanding scoping types. Planning v. scoping. |

Topic C. Ad, Bid, & Award

| Objective | Audience | Notes |
|---|---|---|
| 1. Contract Admin | Project Manager (Design), Project Manager (Construction) | On-demand training |
| 2. Process communication/ (internal and external); Advertisement length | Project Manager/Liaison, Project Manager (Design), Procurement | Asking proper questions during ad; understanding bid timing |
| 3. Bid evaluation/ n+p, funding obligation | Program Manager/Liaison, LAL/TPM | |
| 4. Bid timeline | Program Manager/Liaison, LAL/TPM | |
| 5. DBE goals (Pre-construction item) | Project Manager (Design), Project Manager (Construction), LAL/TPM | Depending on agency |
| 6. Work Expenses/on the job training/LAG | Project Manager (Design), Project Manager (Construction), Procurement | |

Topic C. Ad, Bid, & Award (*Continued*)

| Objective | Audience | Notes |
|--|---|-------|
| 7. Previous lessons learned/Risk management/Best practice on cost Estimate | Project Manager (Construction), Procurement | |
| 8. What to do when amount is over the threshold (amount in STIP and what we can award with available funds; steps to move forward or reject bid) | Program Manager/Liaison, Procurement | |
| 9. Knowledge of eval bidder | Program Manager/Liaison, Project Manager (Design), Procurement, LAL/TPM, Quality Control Compliance Specialist (QCCS) | |

Topic D. Construction

| Objective | Audience | Notes |
|---|--|-------|
| 1. How to write change orders | Program Manager/Liaison, Project Manager (Construction), Inspector, Procurement | |
| 2. Participating v. non-participating costs | Project Manager | |
| 3. Scheduling during construction | Program Manager/Liaison, Project Manager (Construction), Inspector, Procurement | |
| 4. Environmental compliance | Program Manager/Liaison, Project Manager (Design), Inspector | |
| 5. Timely invoicing | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Inspector | |
| 6. Construction management software – paperless (i.e. e-builder, Procore) | | |

Topic D. Construction

| Objective | Audience | Notes |
|---|--|-------|
| 7. Risk management | Program Manager/Liaison, Project Manager | |
| 8. Specification interpretation | Project Manager (Design), Project Manager (Construction), Inspector, Quality Control Compliance Specialist | |
| 9. Material certification (Verification, QC/QA) | Project Manager (Construction), Inspector, Quality Control Compliance Specialist (QCCS) | |
| 10. Submittals | Project Manager (Construction), Inspector, Quality Control Compliance Specialist (QCCS) | |
| 11. Funding | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Procurement, LAL/TPM | |

16

Topic D. Construction (*Continued*)

| Objective | Audience | Notes |
|--------------------------------|--|----------|
| 12. Risk-based reviews | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Inspector, Quality Control Compliance Specialist (QCCS) | RAS ODOT |
| 13. Communication (General) | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), inspector, Procurement, LAL/TPM, Quality Control Compliance Specialist (QCCS) | |
| 14. Public notification | Program Manager/Liaison, Project Manager (Construction), Inspector | |
| 15. Construction safety (TPAR) | Project Manager (Construction) Inspector, Quality Control Compliance Specialist (QCCS) | |

Topic D. Construction (*Continued*)

| Objective | Audience | Notes |
|-----------------------------|--|-------|
| 16. Civil Rights Compliance | Project Manager (Construction), Inspector, LAL/TPM | |
| 17. RFI's | Project Manager (Construction), Inspector, LAL/TPM | |
| 18. Utility coordination | Project Manager (Design), Project Manager (Construction), Inspector | |
| 19. Construction closeout | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Inspector, Procurement, LAL/TPM, Quality Control Compliance Specialist (QCCS), Engineer of Record (EOR) | |
| 20. Payroll verification | Project Manager (Construction), Procurement | |

Topic D. Construction

| Objective | Audience | Notes |
|--|--|-------|
| 21. Construction incentives | Project Manager (Construction), Inspector | |
| 22. Public's expectation management | Program Manager/Liaison, Project Manager (Construction), Inspector | |
| 23. AASHTOWare? (New requirements) | | |
| 24. DEQ requirements (New requirements; reporting) | | |
| 25. Close-out cost accounting | | |
| 26. ITS construction (especially closeout) | | |
| 27. EA Extensions/Authorizations (Final documentation) | | |

Topic E. ROW/Environmental/Utilities

| Objective | Audience | Notes |
|--|--|--|
| 1. Coordinate and plan early and often (UT ROW, Env) <ul style="list-style-type: none"> Understand scheduling, agency timelines, and communication Ensure these items are critical path Maintenance | Program Manager/Liaison Project Manager (Design), Project Manager (Construction), Inspector, LAL/TPM Consultants Engineer of Record | <ul style="list-style-type: none"> Agreements ODOT ROW Charges Flowchart for each and combined (swim lane flow chart) |
| 2. Understand NEPA & environmental clearance requirements (Env) <ul style="list-style-type: none"> Engagement | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Inspector, LAL/TPM, Consultants, Engineer of Record | |

Topic E. ROW/Environmental/Utilities (Continued)

| Objective | Audience | Notes |
|---|--|-------|
| 3. Understand process of acquisition and clearance (ROW) | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Inspector, LAL/TPM, Consultants, Engineer of Record | |
| 4. Understand responsibilities (ODOT v. LPA and other agencies/private utilities (UT) | Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Inspector, LAL/TPM, Consultants, Engineer of Record | |

Topic E. ROW/Environmental/Utilities (Continued)

| Objective | Audience | Notes |
|--|---|-------|
| <p>5. Understand process of how to ID and document for utility reimbursement (UT)</p> <ul style="list-style-type: none">• Funding – how to use funding to keep project moving• Railroads<ul style="list-style-type: none">• Coordination and timing EARLY• Nearby v. crossing• Stormwater coordination• Wetland mitigation• Hazard mitigation – design with this in mind• How federal, state, and local laws/rules apply | <p>Program Manager/Liaison, Project Manager (Design), Project Manager (Construction), Inspector, LAL/TPM, Consultants, Engineer of Record</p> | |

Topic E. ROW/Environmental/Utilities (Continued)

| Objective | Audience | Notes |
|--|----------|-------|
| 6. Right of Entry – when you can use different easements and tools (ROW) | | |
| 7. Areas of Potential Impact (API) – defining and buffer (Env) | | |
| 8. SOW – environmental review requirement | | |
| 9. Best Practices for communicating with consultants agreements | | |
| 10. Entry level (basic knowledge) and advanced training | | |
| 11. Utility notification process | | |
| 12. Understand the potential pitfalls/cliffs | | |

Process Improvement & Training Subcommittee: Part 2

Hanne Eastwood, ODOT
Paul Rudwick, PBOT
Co-Chairs

This Afternoon's Objectives & Process

For a Key Set of Training Topics:

- Identify priorities among the five areas discussed in the morning session
- Convene in small groups and identify recommended top learning/training needs out of the morning brainstorm.
- Be prepared for a spokesperson to share your recommendations

Multivote Results:

| Topic | # Votes |
|--|---------|
| PS&E | 20 |
| Scoping | 9 |
| Advertise, Bid, and Award | 1 |
| Construction | 12 |
| Right-of-Way, Environmental, Utilities | 18 |

26

Based on the vote, Ad, Bid and Award was not examined in the afternoon breakout. Afternoon discussion notes are shown on slides 27 – 30.

Priority Recommendations – PS&E

ODOT PS&E Checklist Training. Include topics on:

- Scheduling
- Process mapping (step by step)
- Customize for local agency

AASHTOWARE – Part of the process

- Clarity of requirements
- Civil Rights Part

Risks to on-time delivery

- Permits
- Railroads
- Specification
- Agreements
- Funding

Priority Recommendations – Scoping

Top Priorities

- Best practices/identifying risks
 - Level of detail/effort
 - Estimates/budgeting
 - Use of consultants
- Process
 - Templates
 - Understanding Approvals
 - Timeline steps/workflow chart

Methods

- Materials developed by experts (linked to project development and funding)
- Bootcamp conference – interactive w/ guru panel
- Case studies and retrospectives
- Online materials and video of conference
- Appointed resource person with experience (should this be LALs?) OR by resource (Hazmat, ROW, ODOT experts, etc.) with office hours (i.e. one hour/week)

Priority Recommendations – Construction

Top Priorities:

- 1) Project example (walk through construction process)
 - Construction closeout
 - Civil Rights compliance
 - Environmental compliance
- 2) Paynotes
- 3) Public outreach/expectation management during construction

Other areas:

- Specs interpretation
- Submittals
- Material certifications/exceptions

Methods:

- Panel Discussions - Lessons learned
- Inspector training – *Interacting with Inspectors*

Priority Recommendations – ROW, Environmental, Utilities

- Understand NEPA/Environmental clearance requirements
- Understand RR coordination requirements and timing
- Understand ROW process of acquisition and clearance
- Understand how to ID and document utilities for reimbursement
 - Flowchart
 - Updates of key changes
 - Case studies

How You Can Contribute

