

ASHE / D9 JOINT WORKSHOP

District 9 Plans Unit Update

Presented to:



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PORTFOLIO MANAGER/PLANS ENG

APRIL 18, 2022



TODAY'S TOPICS

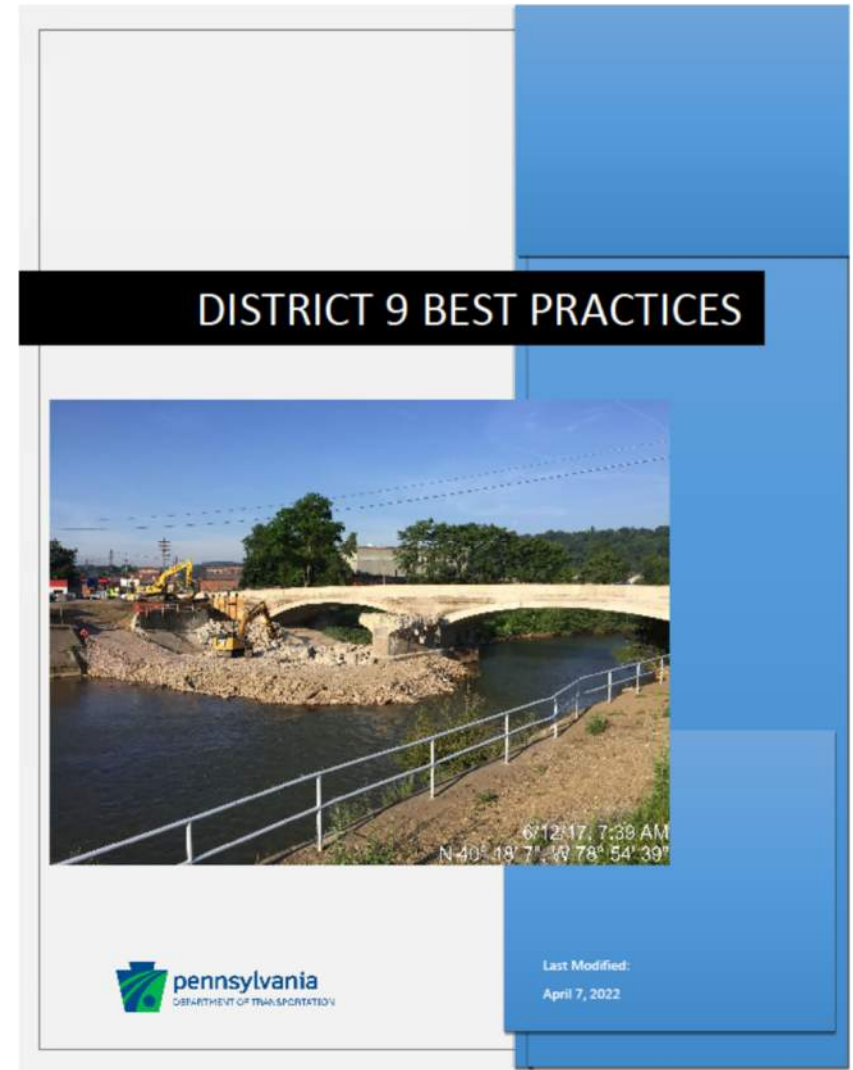
- Best Practice Updates
 - Constructability
 - RULDs
- Miscellaneous
 - Public Mtgs
 - District Staff Mtgs
- D9 Submission Tracking System



D9 BEST PRACTICES

- District Best Practices
 - Summary of District Design Circulars, Design Memos and Policy Related e-mails
 - Available in ECMS File Cabinet
 - Last Updated: April 7, 2022
 - Attachments are not accessible in the File Cabinet – Ask your PM for any documents of interest

- New to District Best Practices...



CONSTRUCTABILITY & MAINTAINABILITY POLICY

- Developed in line with Appendix N – Pub 10X (DM-1X)
- Outlines D9 procedures for each of type of project/design criteria as defined in DM2-Chapter 1, Section A.
- Example: Bridge Replacement Project
 - LG&T: Submit to Construction Unit for concurrent review with the Sr Project Manager
 - DFV: Submit to Construction and Maintenance Units and QA/QC Reviewer
 - CPM/Constructability/Maintainability Review in FD: Submit package 4 weeks in advance of the meeting (package to include CPM, special provisions, cost estimate and D9 Con/Maint Form)
- New Constructability/Maintainability Form:
 - Serves as a title sheet to the final CPM
 - Includes items needing verified at the CPM/Constructability Meeting that can affect the schedule, construction and future maintenance
 - Includes concurrence lines for Construction and Maintenance Units



CONSTRUCTABILITY & MAINTAINABILITY POLICY

District 9-0 Constructability & Maintainability Policy

Purpose:

The District is dedicated to enhancing the quality, constructability and maintainability of our projects. Recent statewide guidelines set forth in *Publication 10X (DM-1X) Appendix N – Constructability/Maintainability Review Procedures for Highway and Bridge Projects* have laid out the expectations for District responsibility and procedures. This policy is designed to ensure the guidelines are followed and quality, constructible and maintainable projects are produced.

The purpose of a constructability review is to refine a project's design, increase its construction efficiency, and ensure long term maintainability. Increased efficiency reduces the need for change orders and the inherent higher unit costs. Constructability reviews also have the potential to reduce disputes, cost overruns, and delays (*NCHRP Report 390*).

Staff Involved:

PM – Project Manager
 PM3 – Senior PM
 DPM – District Portfolio Manager
 CSE – Construction Services Engineer
 SCE – Structural Control Engineer (to be included when project includes structure work)
 ACE – Assistant Construction Engineer
 DMM – District Maintenance Manager
 CMM – County Maintenance Manager
 ACM – Assistant County Manager
 MSE – Maintenance Services Engineer
 MPM – Maintenance Program Manager
 DTE – District Traffic Engineer
 QA/QC – QA/QC Officer

Procedures:

The policy has been developed to coincide with the highest level design criteria (in accordance with Pub 13 – DM-2, Chapter 1, Section A) being used for the project. The thought being that a higher level project, such as, New Construction will require additional scrutiny than a typical Pavement Preservation Project. PM's should discuss individual projects with the QA/QC Officer if they feel their project should vary from the procedures set forth. The procedures are for both in-house and consultant design projects. The PM will be responsible for backchecking comments on previous submissions and ensuring greenlined plans are included in the next milestone submission to ensure they have been addressed appropriately. PM is

Constructability/Maintainability Review Meeting Record

SR/Sec: _____ Let Date: _____
 County: _____ Meeting Date: _____
 Title: _____ MPMS: _____
 WBS Number: _____

Project Criteria: New Con/Recon/New Bridge _____ BA/Bridge Rep/Intersection/Super or Deck using Phased or Temp Roway _____
 Pavement Pres./Main/Super or Deck using Detour _____ Formal CPM Mtg Required? _____

A. Project Description: Short Description of work _____

B. Project Specific Conditions: Anything to be noted that is specific to this project? _____
 a. Night Work Restrictions: See District 9-0 BP under PM title - Policy Email from Portfolio Manager 4/4/2017 _____
 b. Operation Durations Acceptable: Attendees agree on durations _____
 c. Calendar Used: Pdf of calendars used sent to CM with PDC items _____
 d. Multiple Shifts Required: Required for any/all tasks to complete accelerated tasks? _____
 e. Material Delivery: General material delivery concerns _____
 f. Event Restrictions: Local events to be aware of that need to be worked around _____

C. Utility Coordination: What utilities are involved? _____
 a. Utility Durations Sufficient: Enough time built in to the schedule and coordinated with the Utility Unit? _____
 b. Prior vs Coordinated Work: Detour shown for prior work are needed for utility agreements/4181's _____
 c. Crane Placement Verified: As needed _____

D. Structure Type: Culvert? Bridge (beam type)? _____
 a. Fabrication Concerns: Concerns in regards to the fabrication durations _____
 b. Delivery Concerns: Concerns with ability to deliver the structural members _____
 c. Cure Time Concerns: Any need for specialty mixes/curing compounds/methods? _____

E. Traffic Control: Traffic control method(s) to be used? _____
 a. Milestones/Open to Traffic: Show "open to traffic" milestone on CPM _____
 b. Community Commitments: Commitments as they pertain to TCP _____
 c. Phasing Conflicts Resolved: Any overlaps resolved/sufficient temporary shoring? _____
 d. Detour Conflicts Resolved: Are there detours on projects in the area that use the same routes? Timing reviewed? _____

F. Signal Lead Time/Activation: Sufficient time for fabrication and testing required? _____

G. Innovative Bidding/Project Schedule Considerations: Were any of the below used? If so, correct specs used? _____
 a. Lane Rental: _____
 b. RULD's: _____
 c. A+Bx Bidding: _____
 d. Incentive/Disincentive: _____



DDC 2022-01 | RULD, CONSTRUCTION RESTRICTION & MPT SPECIAL PROVISIONS

- DDC issued 1/4/22
 - Supplements DDC 2013 – 8 | District 9 RULD Approval Request | RULD Calculator Release
 - Current version of RULD Worksheet and Guidebook available in ECMS File Cabinet
- To create consistency in enforcing the duration of detours, long-term lane closures and other traffic restrictions to minimize the effects on the traveling public and stakeholders
- RULDs should be included on projects that have a detour or long term lane closure to minimize the effects on the travelling public



DDC 2022-01 | RULD, CONSTRUCTION RESTRICTION & MPT SPECIAL PROVISIONS

- Detours & Long-Term Lane Closures:
 - Use RULDs to enforce the start and end dates
 - Note that the RULD for these long-term lane closures do not necessarily prohibit activities such as tree trimming or signal work, etc. that utilize short term traffic control operation
- Special Events/Temporary Lane Closures:
 - Use RULDs to enforce community/special events requiring unrestricted traffic flow or apply it to any traffic restriction
 - Use even on short-term patterns during peak hours



DDC 2022-01 | RULD, CONSTRUCTION RESTRICTION & MPT SPECIAL PROVISIONS

- RULD Use in District 9-0:
 - Concern that RULDs drive up bid prices:
 - 89 projects let from 1/11/18 thru 10/7/21 that included RULD special provisions ranging from \$400 to \$50,000/day
 - Bids were -2.87% less than the design estimate
 - During same timeframe, 114 projects were let without RULD specs and bids were on average -2.16% less than design estimate
 - What amount is too high:
 - 12 of the 89 had RULD specs with rates > \$20,000/day
 - Percent diff from design estimate was 1.6%
 - General Considerations:
 - Do not go above calculated value or round up, but can go lower
 - Typical upper limit is \$25k but could be higher depending on the urgency to get the road open and lower limit is typically \$1k



DDC 2022-01 | RULD, CONSTRUCTION RESTRICTION & MPT SPECIAL PROVISIONS

- Construction Restrictions Special Provision:
 - Spec should only capture special commitments (made by ROW Unit or local coordination) or for construction operation related requirements and not summarize all the restrictions on a project.
 - Examples:
 - *Sheetz requires two weeks to schedule and perform the removal of their existing sign at Station 1160+52 RT. Notify Sheetz two weeks prior to work operations that will require the removal of the sign.*
 - *The Reliance Savings Bank located on Parcel No. 1 is to remain in operation until 9/2/22. All utility services are to be maintained to this location until that time. Continuous access to this parcel must be maintained until that time as not to interfere with normal business operations.*
 - *No blasting will be permitted on this project.*
- Maintenance and Protection of Traffic Spec:
 - Spec should not repeat information in the RULD spec or notes on the TCP



DDC 2022-01 | RULD, CONSTRUCTION RESTRICTION & MPT SPECIAL PROVISIONS

- A + Bx Bidding Procedures:
 - Consider using A+Bx for any project with a detour or long- term lane closure
 - Incorporate the RULD into the A+Bx special provision
 - Refer to D9's A + Bx Guidance
 - Statewide standard specs: Item 9000-6100 A+Bx Project Completion and Item 9000-610X A+Bx Interim Milestone(s) available in the Special Provision library in ECMS.
 - Statewide usage:
 - Contract Management reviewed ECMS records across the state for past 3 years:
 - Only 12 projects let using A+Bx
 - 10 jobs in 2019
 - 2 jobs in 2020
 - None in 2021



PUBLIC MTGS & DISTRICT STAFF MTGS

- Public Meetings have switched back to primarily being held in person.
 - Possible to do a virtual meeting if no concerns are anticipated.
 - Back to the traditional sending letters to the public officials for that meeting and inviting adjacent property owners, stakeholders, maybe businesses to an in-person meeting.
 - Difference being that we do not need to place an ad in the newspaper.
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- Most meetings with the District will be held virtually and not in person.
 - District is teleworking permanently, and our managers chose their schedules.
 - Not everyone from the District will be in the office at the same time.
 - Meetings held in Teams or a hybrid with some in a conference room and some joined from home thru Teams.



SUBMISSION TRACKING

PURPOSE

- Needs identified through various quality reviews and initiatives:
 - Reviewer workload
 - Number of submissions
 - Overall submission review/revision time
 - How does this information compare to ASTA schedule timeframes?



PURPOSE

- Considerations:
 - Revamp project log database
 - Entry was cumbersome and time consuming
 - Common for submissions to not be closed out when complete
 - System was closed after we transitioned to electronic submissions
 - Something that was user friendly and more automated was desired
 - Automatic timestamped workflow documentation tool
 - Enough info would be needed to develop useful reports with minimal effort
 - Stretch Goal: Make the transmittal process more efficient



SYSTEM

- 2 Key Components:
 - Microsoft Outlook:
 - Transmittals are stored via an Outlook Resource Account:
 - PD, District 9-0 Design Submissions:
 - RA-PDD9DesignSubmissions@pa.gov
 - Timestamped with the Sent Date of the e-mail
 - Subject Line is Key to Project and Submission Specific Information
 - Microsoft Excel:
 - Retrieves the information in the Outlook Resource Account
 - Routines have been developed to process the data and develop reports



POLICY – CONSULTANT DESIGN

- Need a way to have consultants produce consistent and correct formatted e-mail to work with the system
- Instructions are provided with Macro and without Macro incase a firm's security parameters won't allow it (in "Instructions" tab)
- File is self contained



SUBMISSION TRACKING EXCEL FILE DEMO

COMMON ERRORS

- Errors that could be eliminated by using the Excel routines:
 - Manually created subject line issues:
 - Not enough pipes “|”
 - Spaces off between “|”
 - Identifying multiple review units
 - No project title



COMMON ERRORS

- Subject Line Errors
 - Wrong submission numbers
 - Becomes an issue when the same submission number is used more than once for the same submission to the same reviewer
 - Multiple submissions with the exact same subject line



COMMON ERRORS

- “Reply All” Errors
 - Consultant submits another e-mail to the reviewer saying that they have additional information relative to that submission and copies the resource account
 - Consultant asks for additional information but copies the resource account on the request
 - Consultant responds back with a “Thank you” e-mail after a submission is approved, but copies the resource account.



COMMON ERRORS

- A submission should be 2 e-mails per sub# and Unit
 - 1 “FOR REVIEW” from PM to the Reviewer
 - 1 “RESUBMIT” or “APPROVED” back to the PM
- Back and forth correspondence should not include the resource account



REPORTING

- Weekly Report
 - Sent every Tuesday to all PM's and above that are involved with the submission review process
 - Identifies Open Submissions and how long they've been with the reviewer
 - District Goals:
 - 2 Submission Approval
 - 30 Calendar days or less for Sub 1
 - 15 Calendar days or less for Sub 2 and beyond



REPORTING – WEEKLY OPEN SUBMISSION

D9 Open Submissions

Goals: 1st Sub - 30 Calendar days
2nd and later - 15 Calendar days

Report Run Date: 4/5/22 12:36 PM

Quality Control Officer

| Reviewer | Submitter | MPMS | County | SR-Sec | Project Title | Submission | Sub # | For Review | Cycle Time |
|-------------------------|--------------|--------|---------|---------|---|-------------|-------|------------|------------|
| Yeager, James (PennDOT) | ORoark, Jake | 107234 | Blair | 4013-7 | SR 4013 - Tenth Street to Greely Street | CPM Package | 1.0 | 03/28/22 | 8.0 |
| Yeager, James (PennDOT) | Hook, Paul | 113999 | Cambria | 271-20B | Cambria P/C Box Clvrt Joint Rpr | QAQC | 2.0 | 04/04/22 | 1.1 |

Construction Services Engineer

| Reviewer | Submitter | MPMS | County | SR-Sec | Project Title | Submission | Sub # | For Review | Cycle Time |
|----------------------|--------------------------|--------|---------|----------|--|-------------|-------|------------|------------|
| Bridenbaugh, Garth D | ORoark, Jake | 107234 | Blair | 4013-7 | SR 4013 - Tenth Street to Greely Street | CPM Package | 1.0 | 03/28/22 | 8.0 |
| Bridenbaugh, Garth D | Young, Jeffrey (PennDOT) | 114003 | Cambria | 3031-05B | SR 3031 over US 219 Galleria - 11 3031 0010 0916 | CPM Package | 1.0 | 03/25/22 | 11.1 |

Assistant Construction Engineer

| Reviewer | Submitter | MPMS | County | SR-Sec | Project Title | Submission | Sub # | For Review | Cycle Time |
|----------------|--------------------------|--------|---------|----------|--|-------------------|-------|------------|------------|
| Casper, Joseph | Young, Jeffrey (PennDOT) | 114003 | Cambria | 3031-05B | SR 3031 over US 219 Galleria - 11 3031 0010 0916 | CPM Package | 1.0 | 03/25/22 | 11.1 |
| Helsel, Thomas | Hook, Paul | 110123 | Fulton | 522-18B | US 522 White Oak Run - 29 0522 0040 0701 | Design Field View | 1.0 | 03/25/22 | 10.9 |

District Geotech Engineer

| Reviewer | Submitter | MPMS | County | SR-Sec | Project Title | Submission | Sub # | For Review | Cycle Time |
|-------------------|--------------------------|--------|------------|----------|---|-----------------------------|-------|------------|------------|
| Collier, Gloria L | Seese, Raymond | 23357 | Somerset | 7224-504 | T-504 Fike Bridge - 55 7224 0504 3067 | Structure Foundation Report | 1.0 | 03/03/22 | 33.1 |
| Collier, Gloria L | Hoover, Nathan (PennDOT) | 110100 | Huntingdon | 7211-529 | T-529 Miller Rd over Laurel Run - 31 7211 0529 4005 | Structure Foundation Report | 1.0 | 03/25/22 | 11.1 |
| Collier, Gloria L | Sherlock, Adam | 110104 | Fulton | 7210-340 | T-340 Fairview Rd over Indian Grave Run - 29 7210 0340 4005 | Structure Foundation Report | 1.0 | 03/15/22 | 21.0 |
| Collier, Gloria L | Sherlock, Adam | 113442 | Somerset | 403-15 | PA 403 - US 219 to PA 985 | Geotech Report | 1.0 | 03/24/22 | 12.2 |

Project Manager

| Reviewer | Submitter | MPMS | County | SR-Sec | Project Title | Submission | Sub # | For Review | Cycle Time |
|--------------------------|----------------|--------|------------|----------|---|---------------------------------|-------|------------|------------|
| Himmelwright, Jaclyn L | Jerome Bendo | 113442 | Somerset | 403-15 | PA 403 - US 219 to PA 985 | RSGER | 1.0 | 03/24/22 | 12.2 |
| Stone, Michael (PennDOT) | James, Brad | 108163 | Bedford | 220-18 | US 220 - Maryland State Line to Narrow Lane | Line, Grade and Typical Section | 1.0 | 03/25/22 | 10.9 |
| Stone, Michael (PennDOT) | James, Brad | 108163 | Bedford | 220-18 | US 220 - Maryland State Line to Narrow Lane | TS&L | 1.0 | 04/04/22 | 1.1 |
| Stone, Michael (PennDOT) | Rebecca Silver | 114181 | Huntingdon | 7206-573 | T-573 Wilson Road - 31 7206 0573 4004 | Other | 1.0 | 04/01/22 | 4.2 |



Questions?

