PennDOT Engineering District 10 Construction Unit ISO 9001:2015 Quality Management System

Quality Process Manual

Version 15.8

Updated: September 2024

Preface

The following document is a part of The Pennsylvania Department of Transportation Engineering District 10-0, Construction Unit Quality Manual as required by ISO 9001:2015; Quality Management System Standards. The master copy of this document is located and maintained electronically on the Departments Local Access Network (LAN) and addressed ***J:\Construction\ISO 9001***. All hard copies issued are uncontrolled and are noted as such. It is the user's responsibility to verify that all referenced copies of this manual are current prior to use.

PennDOT District 10-0 Construction Unit

Approved by:

Paul F. Koza, P.E. – Assistant District Executive - Construction

Jeffrey Mountain – ISO Management Representative

Process Index

C1 EPR (Employee Performance Review) Processing
Process Owner: Assistant District Executive - Construction

Purpose:
To establish measures and goals for the employee to achieve.

Scope:
All Construction Unit personnel

Reference Documents:
- Position Descriptions for Direct Supervisors/Managers
- Position Descriptions for Reviewing Officers
- Employee Performance Review User Guide
- Employee Performance Review Website Link

Procedure:
HR sends an automated email to all supervisors or managers. The automated email comes from EPR-NoReply@pa.gov and is sent 30 days before an employee's EPR due date. Supervisory employee EPRs are due at the end of July each year and all other EPRs are due at the end of November.

At the time of receiving the EPR email notification, supervisors are to complete the EPR by the stated deadline. To complete an EPR, staff will go to the EPR website link, and select an employee that is listed under their supervision. This is auto populated through the HR system. After selecting an employee, staff will follow the steps to complete the form. There is a Resources link on the left-hand side of the page that consists of user guides for completing an EPR.

The online position descriptions are also to be completed with the EPRs. Position descriptions are to be completed yearly just as the EPRs are. They are standardized descriptions created by HR for each standard position and should be changed or updated as necessary by the supervisor. The employee, supervisor, and reviewing officer review and electronically sign both the EPR and Position Description. The completed EPR and Position Description is then automatically updated in the system. If a probationary EPR is being completed, the same steps apply except the EPR is saved as a PDF and emailed to HR to alert them that the employee's probationary period is almost complete, and performance has been evaluated.

C2 Customer Satisfaction

Process Owner: Construction Services Engineer

Purpose:
To define the process for monitoring information relating to customer perception as to whether the organization has met customer requirements

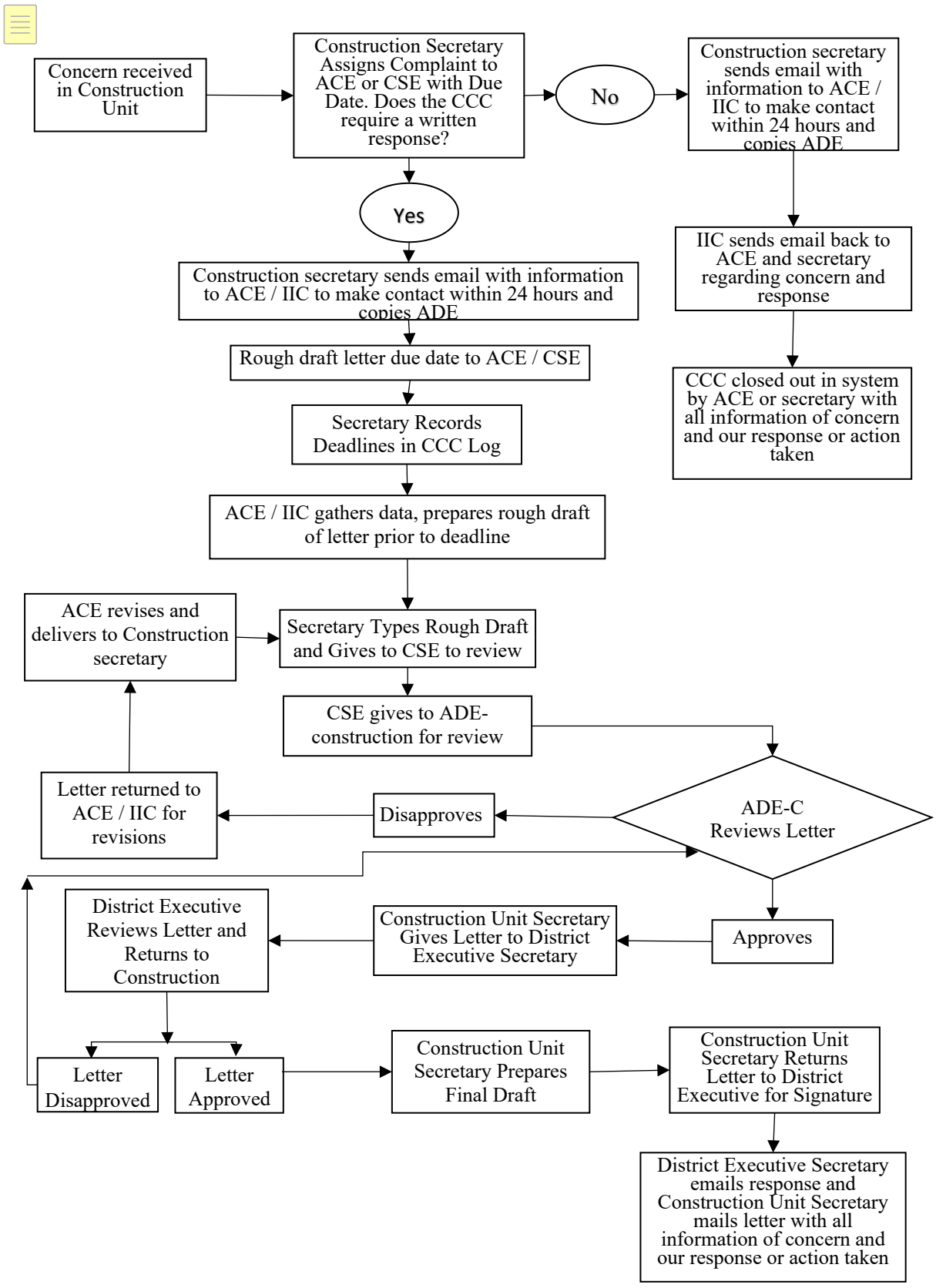
Scope:
Applies to all Construction Unit operations

Reference Documents:

- District Customer Service Questionnaires:
  (External, Internal, Prime Contractors, Consultants)
- Customer Surveys
- After Action Review's (AAR)
- Customer Care Center (eCCC - Public & eCCC - Employees)

Procedure:
The District 10 Construction Unit employs several strategies to monitor customer perception as to whether the organization has met customer requirements. Since the ultimate customers are the users of the roads and bridges we build, the construction unit conducts customer surveys with both Internal and External customers, which include, the traveling public, Material Suppliers, Prime Contractors, Consultants, and Department staff in Design, Maintenance, and Central Office. The public surveys are sent out electronically (explain where these are sent and set up) Surveys for xxx (Describe how we send surveys to contractors, suppliers, and internal staff).
Information relating to customer perception as to whether the organization has met customer requirements shall be discussed and handled in at least one of the following: Immediate response to concern within time frame of CCC, weekly Construction Staff meetings if immediate attention/discussion is required, Management Reviews and for Group discussion at Winter School.

Process:
CCC Process Below:


Concern received in Construction Unit
Construction Secretary Assigns Complaint to ACE or CSE with Due Date. Does the CCC require a written response?
No
Construction secretary sends email with information to ACE / IIC to make contact within 24 hours and copies ADE
IIC sends email back to ACE and secretary regarding concern and response
CCC closed out in system by ACE or secretary with all information of concern and our response or action taken
Yes
Construction secretary sends email with information to ACE / IIC to make contact within 24 hours and copies ADE
Rough draft letter due date to ACE / CSE
Secretary Records Deadlines in CCC Log
ACE / IIC gathers data, prepares rough draft of letter prior to deadline
ACE revises and delivers to Construction secretary
Secretary Types Rough Draft and Gives to CSE to review
CSE gives to ADE-construction for review
Letter returned to ACE / IIC for revisions
Disapproves
ADE-C Reviews Letter
District Executive Reviews Letter and Returns to Construction
Construction Unit Secretary Gives Letter to District Executive Secretary
Approves
Letter Disapproved
Letter Approved
Construction Unit Secretary Prepares Final Draft
Construction Unit Secretary Returns Letter to District Executive for Signature
District Executive Secretary emails response and Construction Unit Secretary mails letter with all information of concern and our response or action taken

C3 Equipment Procurement

Process Owner: Finals Unit Manager

Purpose: To ensure accountability and tracking of Department-issued equipment

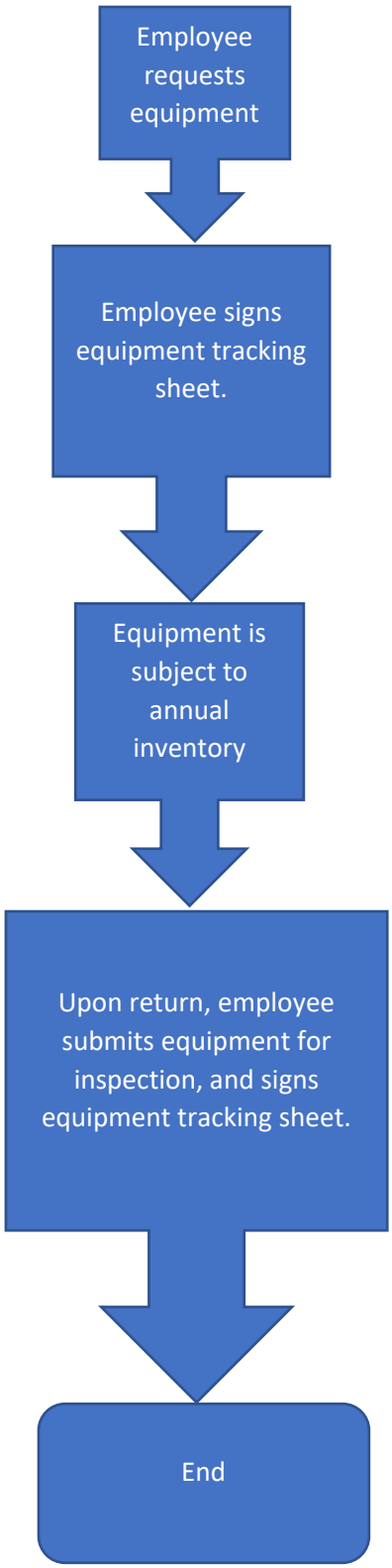
Scope: Applies to all Unit personnel.

Reference Documents:

- J:\Construction\Finals Unit\Staff Equipment

Process:

The Department issues the necessary PPE (Personal Protection Equipment) for all personnel and makes various tools available to its staff as required. Additional specialized equipment can be purchased as necessary. PPE is issued by the Finals Unit Manager. Additional supplies are provided by the Unit Secretary.


Employee requests equipment
Employee signs equipment tracking sheet.
Equipment is subject to annual inventory
Upon return, employee submits equipment for inspection, and signs equipment tracking sheet.
End

C4 Internal Audit

Process Owner: ISO Management Representative

Purpose:
To define the Internal Audit process for District 10 Construction Unit.

Scope:
Applies to all District 10 Construction Unit QMS Processes

Reference Documents:

- ISO 9001:2015 Manual
- Blank Internal Audit Forms
- Internal Audit Schedule and Completed Audits
- Process Manual
- Quality Manual
- CPAR Log

Procedure:
The ISO management representative prepares an annual audit schedule, showing audits to be performed throughout the year based on status and importance. The schedule shall be presented to the ADE-Construction for review and approval and distributed to all affected departments. Internal audits shall be conducted on a periodic basis, with all aspects of the Quality Management System being audited within a 3-year period. Consideration will be made during the schedule planning on the importance of processes to be audited based on negative trends in product conformance (CPAR's reported for an area) or any other issues that adversely impact our system.

The ISO management representative maintains a list of qualified personnel to conduct internal audits. The ISO management representative ensures that personnel assigned to perform internal audits are competent, impartial, and objective. Auditors may not audit their own work.

A team of one or more qualified auditors conduct individual audits. The auditor(s) notify the auditee at least one week prior to the meeting or a timeframe mutually agreed by both parties.

Upon completion of each audit, a report is prepared and presented to the ADE – Construction, the manager or supervisor of the area being audited, the ISO Management Representative, and other individuals at the discretion of the auditor within 5 working days for distribution. Completed audit reports will be stored electronically on the departments' Local Access Network (LAN). Adverse audit findings, if any, shall be captured on Corrective/Preventative Action Request forms.

The disposition of any Corrective/Preventative Action Requests as the result of an internal audit shall follow the Corrective Action procedure, noting that this

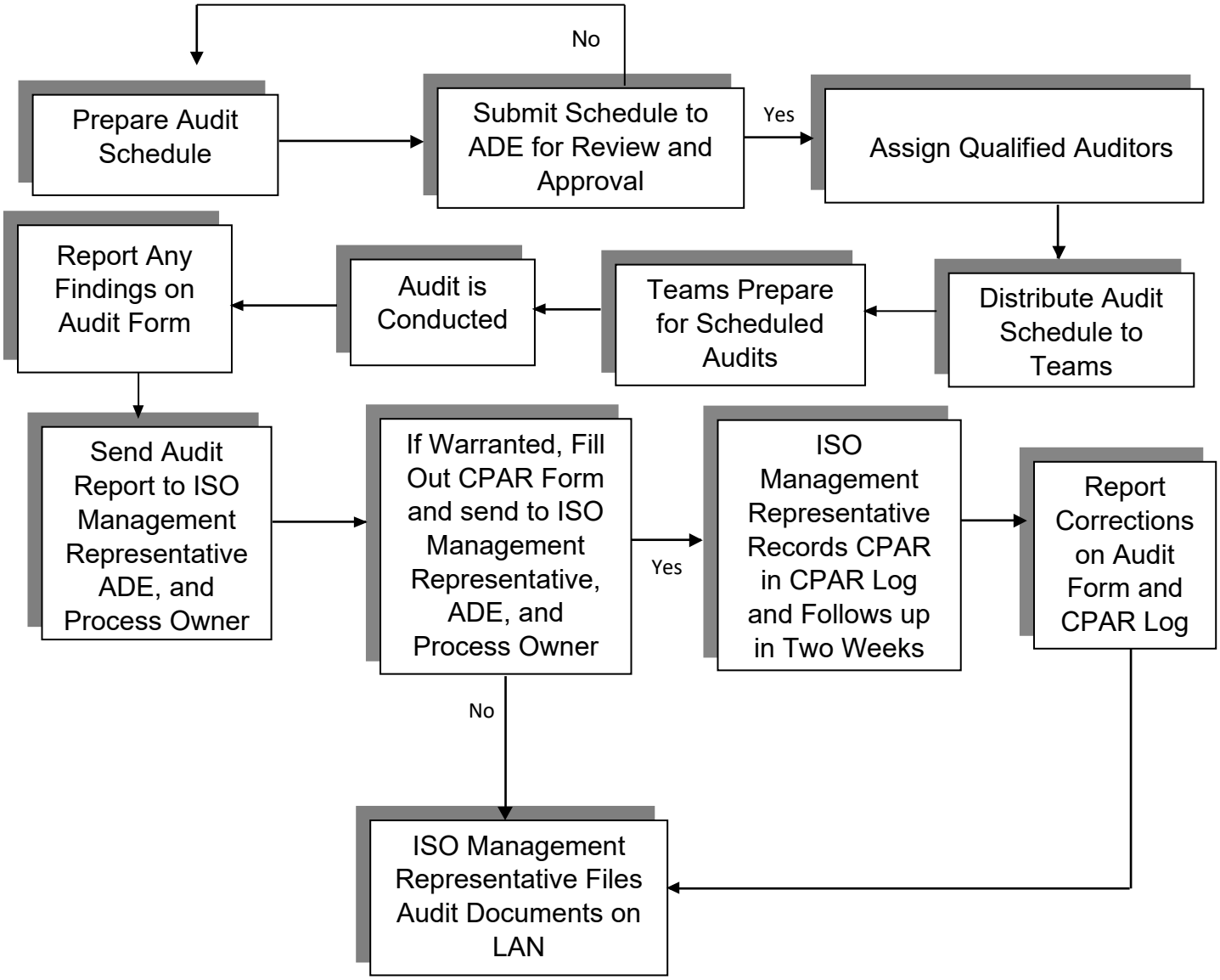
procedure requires verification of the actions taken and the reporting of verification results. Management responsible for the area being audited shall respond to any observations, areas for improvement identified and nonconformities noted during the audit prior to the next regularly scheduled management review meeting.

The management representative shall review all internal audit reports and analyze them for trends and opportunities for improvement, as well as report the results of this analysis to the ADE – Construction at least twice during the year. Chart 8.2.2 provides a summary of the audit process.

If an internal audit cannot be completed in the timeframe designated on the approved audit schedule, the ISO Management Representative shall determine if there is adequate reason to re-schedule the audit without implications on the auditor's EPR.

Chart 8.1

Summary of Audit Process



CA1 Execution of Consultant Agreements

Process Owner: Consultant Agreement Engineer

Purpose:
To obtain the inspection, management, or consultation services of Consultant Engineering firms to supplement Department staff as needed. The type of agreement, Project Specific or Open End, is dependent but not limited to the type of services required, estimated dollar figure of services, length of project, etc.

Scope:
Using ECMS Engineering Agreements section; create, advertise, select firm, execute agreement, and manage the agreements for construction services in District 10.

Reference Documents:

- Procedures for the Execution of Consultant Agreements – Publication 93

Procedure: See process, Chapter 2, Publication 93

CA2 Open-End Agreement Work Order Creation

Process Owner: Consultant Agreement Engineer

Purpose:
To obtain the inspection, management or consultation services of Consultant Engineering firms using an established Open-End agreement through Work Order process as needed.

Scope:
Using ECMS Engineering Agreements section to create a work order and execute a legal agreement for the work order so that consultant services may be used to supplement Department Staff or meet other needs as required.

Reference Documents:

- Procedures for the Execution of Consultant Agreements – Publication 93

Procedure: See process, Chapter 4.5, Publication 93

CPM1 Construction Project Scheduling

Process Owner: Construction Scheduling Manager

Purpose:
To ensure quality pre-bid construction schedules are developed for the determination of proper project completion dates and milestone dates as well as ensure quality, realistic, and specification compliant schedules are provided by the construction contractor for the successful management of the project's contract time.

Scope:
Includes pre-bid Critical Path Method schedule (CPM) and any schedules provided by the contractor for roadway/bridge construction projects in District 10.

Reference Documents:
General references:

- Project Office Manual (POM) – Publication 2 - Part C, Section1, Page 8-1
- Scheduling Manual - Procedures for PennDOT Schedules - Publication 615
- District 10-0 Position Paper – "Pre-bid Schedule Development and Selection of Scheduling Item for Construction Projects"
- Publication 408 Specifications Section 689

Project Specific references: ECMS Project # required

- Contract Documents, (primarily Special Provisions and Utility Clearance)
- Project Plans
- Project Pre-bid Construction Schedule
- Contractor's Construction Schedule submissions
- Publication 408 Specifications Sections Applicable to Project Work Items

Procedure:

The responsible roles involved in this process are:

- Design Project Manager
- Construction Scheduling Manager
- Inspector-in-Charge
- Project A.C.E.

1. A Pre-bid CPM Schedule is developed for ALL construction projects except for short duration maintenance style contracts (RPM, Small Paint, etc.).

2. If the project is consultant designed, the pre-bid CPM is developed by the consultant design team and obtained by the PennDOT Design Project Manager to route for review as part of the project's

constructability and plans review processes. If adjustments or corrections are needed the Design Project Manager coordinates revisions with the consulting design firm.

3. If the project is PennDOT (in-house) designed, the pre-bid CPM is developed by the Construction Scheduling Manager with input from the PennDOT design team. A Pre-bid CPM Scheduling meeting is held at least a month prior to the 90% Constructability Review. Attendees vary based on the complexity of the project, but at minimum will include the Design Project Manager and Construction Scheduling Manager. Scheduling meeting is for the purpose of creating the Pre-bid CPM Schedule. Pertinent information to be discussed and considered in development of the pre-bid CPM includes, but is not limited to:
    - Construction Plan
    - Work quantities and any specifics effecting typical production rates
    - Special Provisions
    - Utility Clearance (D-419)
    - Prior / recent comparison projects of similar type, size, and complexity.
    - All project specific critical dates: Stream restrictions, school / community / county commitments, local events, etc.
    - Any desired project milestone dates.

4. Once pre-bid CPM schedule has routed through plans review and constructability reviews and any necessary revisions made, the final version of the pre-bid CPM will be provided to Contract Management by the Design Project Manager for inclusion in bid documents and to set the required project completion date and any necessary milestone dates.

5. As part of plans routing and constructability reviews the Construction Scheduling Manager verifies inclusion of the proper contract work item for construction project scheduling. This begins the process of contract time management by ensuring the contractor provides the desired construction schedule type to best aid that process.

6. The construction contractor generates and submits their Construction Schedule (Narrative or CPM) in PPCC shortly after the project award according to Publication 408 Section 689.

7. The project IIC verifies the schedule meets contract requirements. IIC also reviews to ensure the schedule's logic and planned activity durations appear accurate and that the contract work is shown to meet contract time and requirements.

8. The Construction Scheduling Manger then reviews the schedule against Pub. 408 Specifications Section 689 requirements using "…. Schedule Review

Checklist's found in the Project Office Manual (Pub. 2) C-1- pg. 8-7 to 8-12 to ensure schedule will sufficiently serve the purpose of monitoring project time for successful and timely project completion.

9. The Construction Project A.C.E. then completes a final review of the baseline CPM using input from the IIC and Construction Scheduling Manager's review to determine final approval of the baseline CPM.

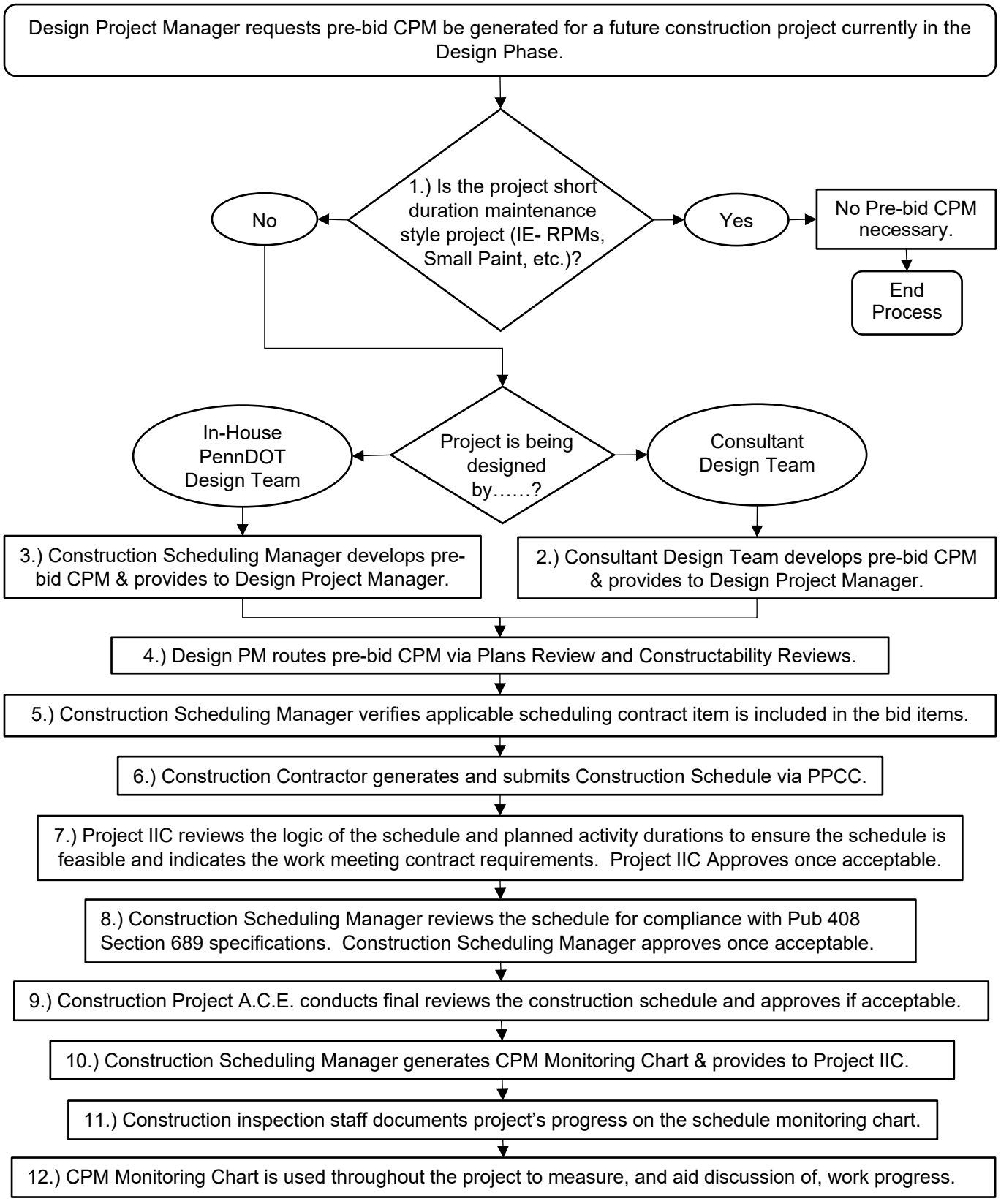
10. Upon baseline CPM approval by the Construction Project A.C.E., the Construction Scheduling Manager will use the submitted schedule to create a Schedule Monitoring Chart (Excel Spreadsheet, or Printed Wall Chart if requested) for the project management staff to use to create an As-Built schedule as the work progresses.

11. The project inspection staff will use the monitoring chart to document by activity: days worked, days which inclement weather impeded work, days which the contractor chose not to work but could have; in addition to any other critical dates (IE – Utility notifications).

12. The CPM Monitoring Chart along with CPM Updates submitted by the contractor will be used throughout the project to communicate work progress and to aid in discussion of work progress in relation to successful on time project completion and milestone compliance and will be filed with the other project documentation for as needed reference after project completion.

    See process map below:

ISO Process Map CPM1 – Construction Project Scheduling



CR1 Constructability Review

Process Owner: Constructability Engineer

Purpose:
The purpose of a constructability review is to refine a project's design and increase its construction efficiency. Increased efficiency reduces the need for change orders and the inherent higher unit costs.

Scope:
The review of construction projects while in the design phase to identify problems with the plans, constructability, and maintenance of the project. This process is intended to combine the experience of design, construction, and maintenance to reduce extra costs associated with change orders and future maintenance costs. Constructability reviews also have the potential to reduce disputes, cost overruns, and delays.

Reference Documents:

- DM 1X - Appendix N (Design Manual)
- J:\Design\CONSTRUCTABILITY Reviews
    - Agenda / Sign in / Comments Sheets
    - 30% Design Submission
    - 60% Design Submission
    - 90% Design Submission
    - After Action Review's (AAR)
    - Position Paper
    - Invite List
- Terms & Definitions are found in the ISO Quality Manual

Procedure:
A constructability / maintainability review for design projects is conducted at thirty percent and at ninety percent of the design process. Representatives from the design, construction and maintenance units have been identified to review the plans submitted by the design project manager. A meeting is then scheduled for the representatives to discuss the items established on the constructability review agenda. The comments from this meeting are recorded and are addressed by the design team to improve the quality of the design submission. An after-action review is then conducted after the final inspection of the construction project to further identify areas for future improvement.

Process:

1) Identify Team Members:

Lead Role – Constructability Coordinator

- Identifies Team Members.
- Coordinates with the Design PM to schedule meetings.
- Attends all reviews.
- Coordinates the AAR with Construction and Design staff.

Design Project Manager – Determined by Project

Assistant Construction Engineer/Manager – Determined by Project

Construction Project Manager (IIC) – Determined by Project

Assistant County Manager – Determined by Location of Project

Construction Schedules – Scheduling Manager

Traffic – Assistant Traffic Engineer / Manager

Environmental – Environmental Manager

Geotechnical – Geotechnical Engineer

Utilities – District Utility Administrator

Bridge – Assistant Bridge Engineer

Maintenance – Maintenance Services Engineer

2) Review Process:

a. The Design Project Manager determines the stages for reviews in collaboration with the Constructability Coordinator (30%, 60%, 90%) and schedules the meetings at the appropriate stages of the design. See Table A. Construction and Maintenance representatives are also invited to attend all design meetings at critical phases.

Table A: Minimum Number of reviews

	In-House Design Projects * +	**Consultant Design Projects * +**
Minor Project: Limited Review **	Not subject to limited review	1 – 30% review in PE 1 – 90% review in FD by Consultant
Minor Project: Non-Limited Review	1 – 30% review in PE 1 – 90% review in FD (Bridge projects only need a FD review for full structure replacement)	1 – 30% review in PE 1 – 90% review in FD
Moderate Project	1 – 30% review in PE 1 – 90% review in FD	1 – 30% review in PE 1 – 90% review in FD
Complex Project	3 reviews: 30% Review – Pre-Design Field View Submission 60% Review – Pre - ROW plan 90% Review – Pre - P S &E	3 reviews: Pre-Design Field View Submission Pre - ROW plan Pre - P S & E
PM Project (Roadway PM, Bridge paint/minor repair, etc)	1– 30% review in PE 1– 90% review in FD	1 – 30% review in PE 1 – 90% review in FD by Consultant
SIP / Maint. Project (Tree trimming, patching, small paint, guiderail, minor SIP, etc.)	The need for a constructability review will be evaluated by the Construction Unit Constructability Coordinator.	NA

-***** Interim informal reviews are to be held between the design project manager and the relative unit regarding specific issues throughout design.

-** Publication 10X- DM 1, Part 1X, Appendix AB "Minor Projects Design Procedures for Consultant Designed Projects"

-**+** The Department review team(s) should remain consistent for all reviews for each individual project.

-PE = Preliminary Engineering, FD = Final Design, PM = Preventative Maintenance Project.

-PE review should be at design field view level.

b. The Design Project Manager is responsible for delivering the design submissions to the team members prior to the scheduled meeting for consultant and in-house designs. See Table B for review times. Additional time of 3 weeks or as necessary for projects over $10M
    - The files are loaded in the folder "J:\Design\CONSTRUCTABILITY Reviews" based on the county the project is located in.
    - Hard copies can be obtained through the Grade Crossings Engineer / Plans Room
    - All Team Members are required to review prior to the meeting. The level of review should be consistent with the Team Member's specialty.

Table B: Minimum Review Times

Project Description	Review Time (minimum) / Design Stage		
	TS&L / DFV - 30 %	Final Design - 60 % (before R/W plan approval)	Final Design - 90% (before Final Plan check)
Enhancement	2 weeks	2 weeks	2 weeks
HOP			
Traffic Signal	1 week	1 week	
Group SIP			
3R Betterment	3 weeks	3 weeks	3 weeks
Bridge Deck Replacement			
Bridge Deck & Superstructure Replacement			
Bridge Rehabilitation			
Bridge Painting			
Capitol Improvement			

c. Minimum Requirements for Constructability Review submissions:

30% Design Review

- Scoping Field View
- TS&L – Type, Size and Location
- PennDOT connects info
- Conceptual erection plan – if applicable

90% Design Review

- Plans – Traffic Control, Structure, E&S, Roadway, Quantities, Stormwater, Cross Sections, Etc.
- Special Provisions
- CPM Schedule
- RULD Calcs

** 60% Design Review requirements are determined on a project by project basis and is dependent on complexity and scope.

d. Comments and Resolution Process:
    - The Review Comment Spreadsheet is included in the folder with the Design Submissions above.
    - Comments can be entered on the sheet by any Team Member prior to the meeting.
    - Consultants will be responsible for documenting comments made during the meeting

- For in-house design, the Design PM is responsible for documenting comments made during the meeting. This can be delegated to other team members.
- All comments/notes shall be documented on the comment sheet or the like.
- Design PM is to provide responses to comments within 2 weeks of review and notify Constructability Manager. Constructability Manager will send out to all attendees and copy ADEs for final approval.

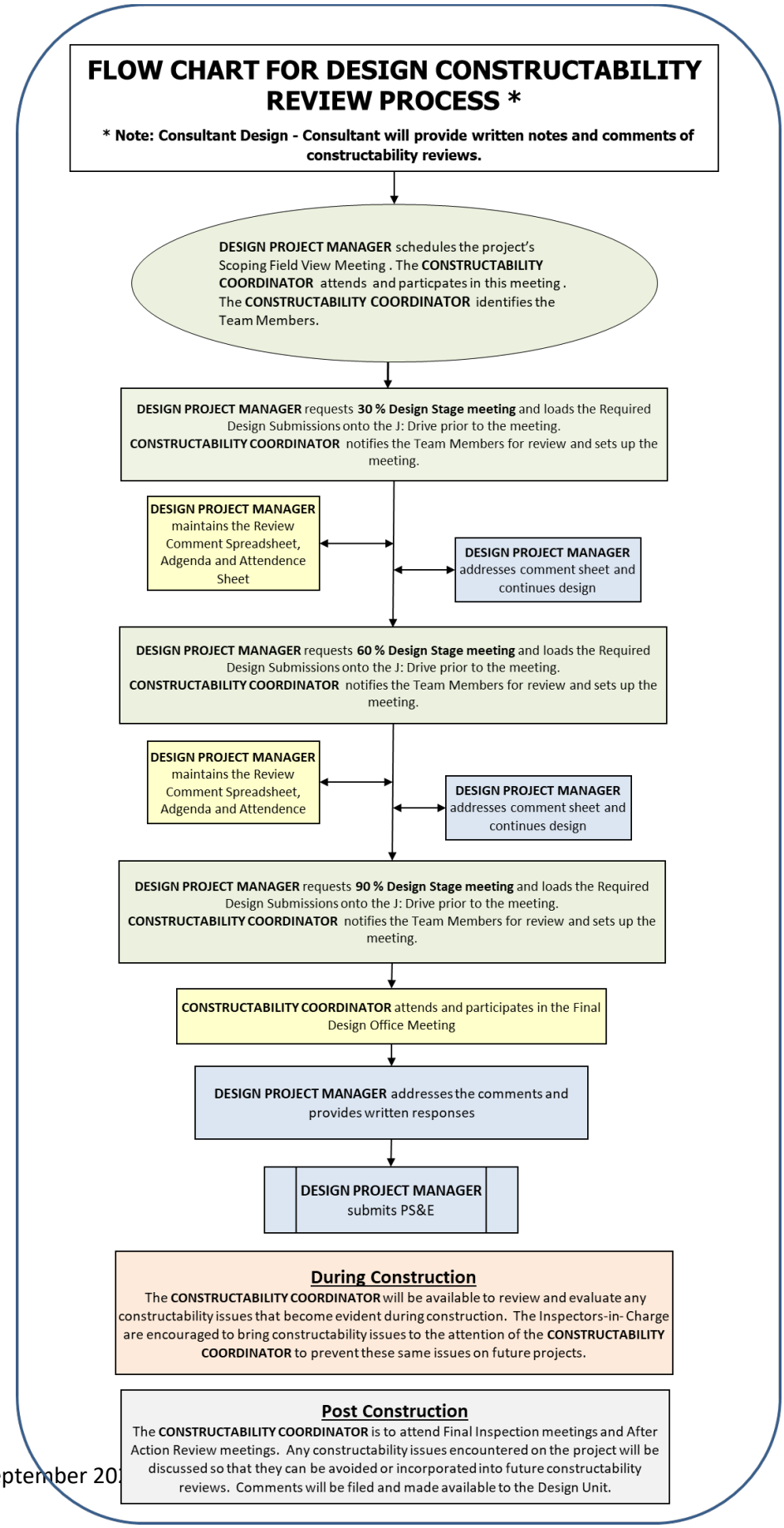
e. PennDOT Connects planning decisions are implemented through the construction contracts.

f. Final Inspection is held at the completion of the project to address concerns provided by Design, Maintenance and Construction Team Members.
   - Members from each unit are invited to the final inspection.
   - An on-site review is performed followed by an AAR meeting – may be a virtual AAR meeting
   - Comments are recorded on the AAR form and stored at J:\Construction\AARs\Construction AAR's\Construction (YEAR)
   - The Assistant County Managers are invited to attend all Progress Meetings during Construction to address concerns.
   - Data is archived for future reference.
   - Design/Construction/Maintenance Meetings are held at the end of the construction season to maintain continuity between the units.

3) Process Flow Chart

FLOW CHART FOR DESIGN CONSTRUCTABILITY REVIEW PROCESS *

*** Note: Consultant Design - Consultant will provide written notes and comments of constructability reviews.**



During Construction

The **CONSTRUCTABILITY COORDINATOR** will be available to review and evaluate any constructability issues that become evident during construction. The Inspectors-in- Charge are encouraged to bring constructability issues to the attention of the **CONSTRUCTABILITY COORDINATOR** to prevent these same issues on future projects.

Post Construction

The **CONSTRUCTABILITY COORDINATOR** is to attend Final Inspection meetings and After Action Review meetings. Any constructability issues encountered on the project will be discussed so that they can be avoided or incorporated into future constructability reviews. Comments will be filed and made available to the Design Unit.

CR2 AAR (After-Action Review)

Process Owner: Constructability Supervisor

Purpose:

To ensure that continuous organizational learning and improvement in construction and design happen with the use of feedback from completed project AAR's.

Scope:

The scope includes all construction projects in the district that have conducted AAR's after completion of project.

Reference Documents:

- District 10-0 AAR Form
- Electronic Form

Procedure:

1.) AAR's will be held following all project Final Inspections and/or as required during construction of a project
2.) Project IIC's will facilitate the AAR and complete the District 10-0 AAR Form.
3.) AAR meeting notes will be maintained in the project files and a copy provided to all attendees to include the Constructability Review Manager.
4.) Constructability Review Manager will review and maintain all project AAR Meeting Notes electronically on the J: Drive at: J:\Construction\AARs\Construction AAR's
5.) The folder location is shared with all Construction and Design Admin staff. Findings will be shared so that Design and Construction personnel can update District Best Practices as necessary to improve the constructability process

F1 Work Order Creation

Process Owner: Construction Work Order Specialist

Purpose:

The purpose is to make contract item quantity adjustments including additional work, and to add extra work items to contracts of current construction projects.

Scope:

The process can be utilized on federally funded contracts, state funded contracts and (local) municipal contracts to make contract change orders.

Reference Documents:

- Project Office Manual (POM) – Publication 2
  Section B-3-1
- Specifications – Publication 408
  Sections 110.02 and 110.03
- Authorization for Contract Work (ECMS)
- CS-4347 types for extra work cost justification (Forms Index) (ECMS)

Procedure:

- The key responsible areas involved are as follows:
- Construction inspection staff creates/submits/reviews work authorizations, negotiates prices, creates, or reviews cost justifications, and prepares work orders.
- Cost justifications are submitted by contractor through IIC via ECMS.
- Construction Documentation Specialist reviews and approves item cost justifications, submitted work orders, and select contract adjustments on estimates.
- Assistant Construction Engineer reviews work orders and contract adjustments.
- Maintenance Program Engineer reviews work orders from a fiscal view.
- Construction Services Engineer reviews work orders for ADE Construction
- ADE Construction, reviews work orders for DE (if funded 100% state, federal or any combination).
- Central Office reviews select Work Orders prior to Federal review.
- FHWA reviews and approves expenditures (only for Federal Oversight or PennDOT Oversight-NHS projects).
    - Central Office reviews legal Work Orders prior to Federal review.
- Field Inspection staff prepares and submits estimate for payment

See process map in Project Office Manual (POM) – Publication 2, B-3-1, pg. 1-33 to 1-43

F2 Finals Unit Project Set-Up

Process Owner: District Finals Unit Manager

Purpose:

The purpose is to establish the construction unit's project records tracking. Set up establishes and identifies record keeping methods by using PPCC, as well as, identifying estimate dates to project managers at all pre-job meetings.

Scope:

This process is used to distribute and track custody of construction records for municipal, state, and federal contracts.

Reference Documents:

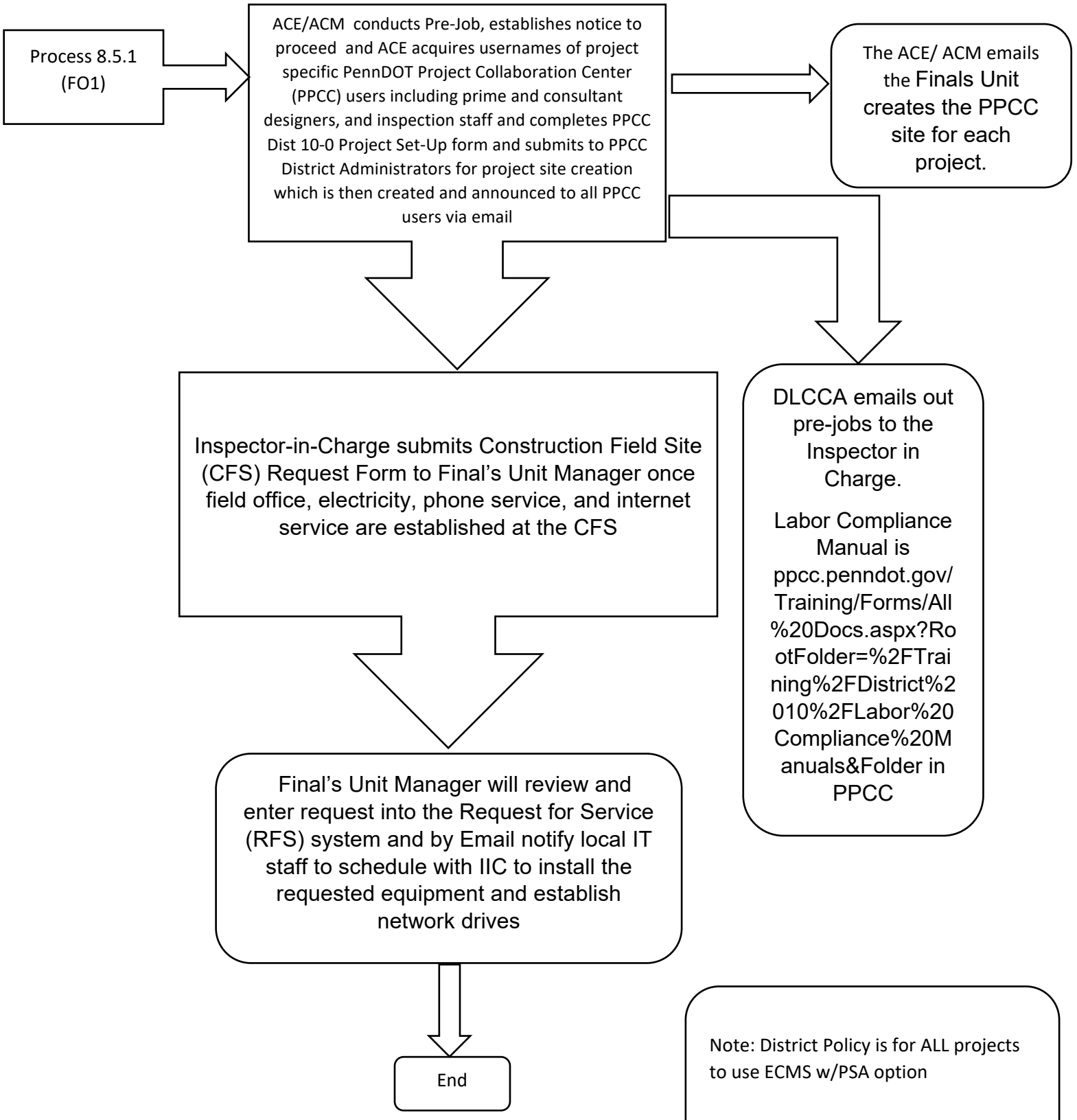
- Construction Field Site Service Request
- PPCC – Dist 10-0 Project Set Up
- IT Request for Service

Procedure:

- The Contract Management Unit begins the process with an executed contract.
- The ACE/ACM conducts a pre-job meeting and establishes the notice to proceed (NTP).
- The Finals Unit creates the PPCC site for each project.
- Inspector-in-Charge (IIC) submits Construction Field Site (CFS) Request Form to Final's Unit Manager once field office, electricity, phone service, and internet service are established at the CFS.
- Final's Unit Manager will review and enter the request into the Request for Service (RFS) system which will notify local IT staff to schedule a meeting at the CFS with the project IIC to install the requested equipment and establish network drives.
- The ACE acquires usernames of project specific PennDOT Project Collaboration Center (PPCC) users including the prime contractor and sub-contractor users, consultant designers, consultant inspection staff, and PennDOT inspection staff.
- The ACE then completes the PPCC Dist. 10-0 Project Set-Up form and submits it to the PPCC District Administrators for project site creation, which is then created and announced to all PPCC users via email.
- The Project Manager is responsible for any records not uploaded in PPCC Site, until they are returned to the Finals Unit for record keeping.

See process map below:

Set-Up Distribution of Records



F3 Finals Unit Project Closeout

Process Owner: District Finals Unit Manager

Purpose:

The purpose of this procedure is to close out construction projects (from "construction" status into "final" status") and ensure all documentation during the project has been kept and all payments have been made and are correct.

Scope:

This process is to be used for all municipal, state, and federal construction projects to close out construction projects and their records. Project check in sheet and Final inspection and Punch-list CS-4137/CS4136 is emailed to Final's Unit Manager to be upload by using ECS Highway Administration system.

Reference Documents:

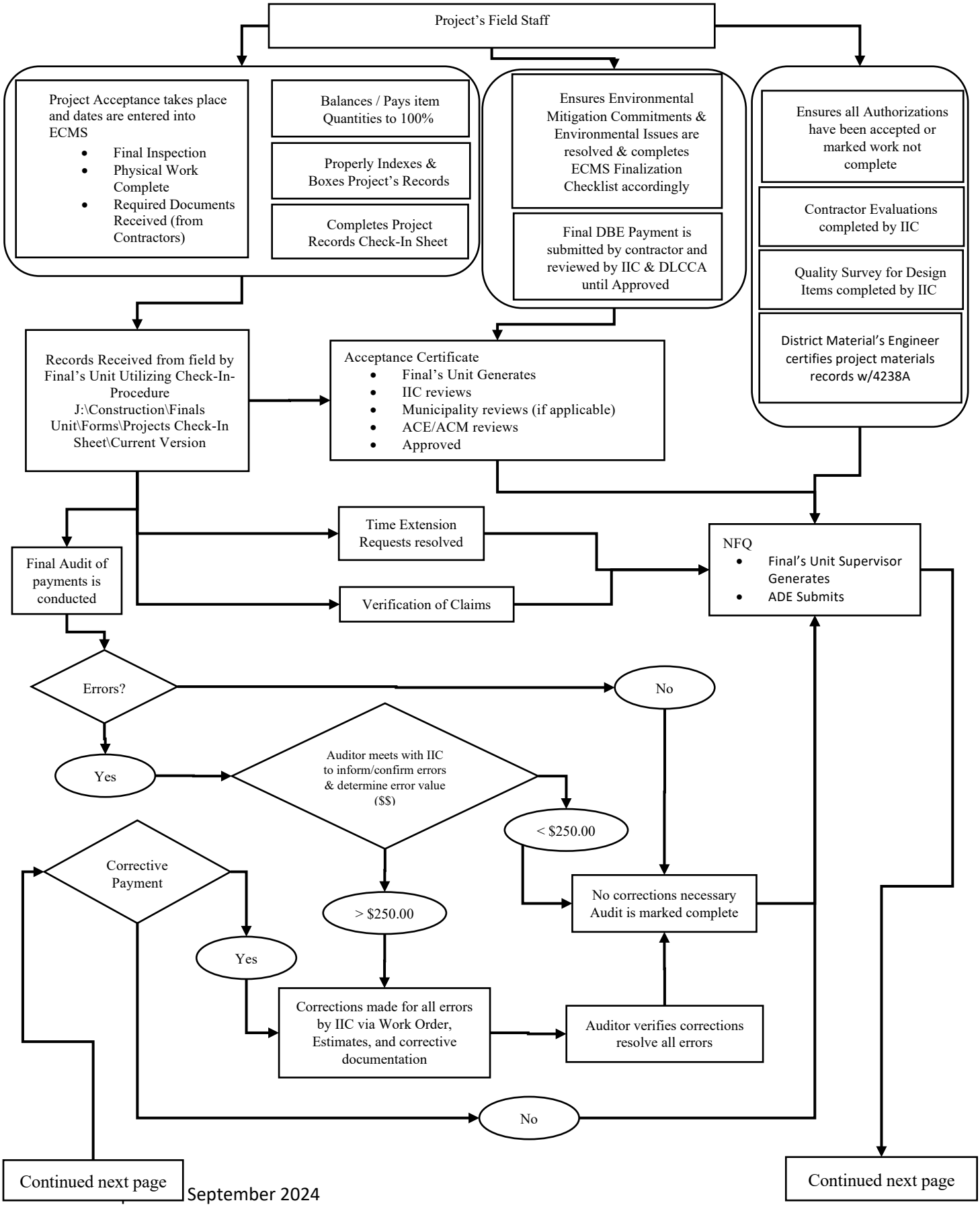
- Project Records Check-In Sheet
- PPCC Finals unit Documentation Guides
- Final Inspection Form CS-4137
- Punch List Form CS-4136
- ECS Highway Administration
- Finals Records Storage
- ECMS
  - Acceptance Certificate CS-4138
  - Time Extension
  - Interest Payment
  - Notification of Final Quantities (NFQ)
  - Finalization Checklist

Procedure:

- Project moves from "Construction" status to "post-Construction" status when physical work is complete
- Physical work complete (PWC) date is entered into the ECMS – Finalization Checklist. Final quantities are balanced and paid for by project inspection staff.
- The Finals Unit ensures accumulated construction field documentation required during construction, which support payments and details work performed, are recovered for use in finalization, storage, and future reference until established destroy date.
- During the Project Closeout, everything is being tracked and discussed during the monthly meeting. Using the "Finals Project Status" spreadsheet.
- Project finalization includes Project Acceptance, Acceptance Certificate, Environmental Mitigation Commitments, District

Materials Certification, Final Records Audit, Verification of Claims, Verification of Time Extension Resolution, Resolution/Verification of Funding closure, and Notification of Final Quantities. Generation of Records Storage location spreadsheet is updated with a destroy date should there be any tickets or paperwork that are not electronic.

See process map below:


Project's Field Staff
Project Acceptance takes place and dates are entered into ECMS
Final Inspection
Physical Work Complete
Required Documents Received (from Contractors)
Balances / Pays item Quantities to 100%
Properly Indexes & Boxes Project's Records
Completes Project Records Check-In Sheet
Ensures Environmental Mitigation Commitments & Environmental Issues are resolved & completes ECMS Finalization Checklist accordingly
Final DBE Payment is submitted by contractor and reviewed by IIC & DLCCA until Approved
Ensures all Authorizations have been accepted or marked work not complete
Contractor Evaluations completed by IIC
Quality Survey for Design Items completed by IIC
District Material's Engineer certifies project materials records w/4238A
Records Received from field by Final's Unit Utilizing Check-In-Procedure J:\Construction\Finals Unit\Forms\Projects Check-In Sheet\Current Version
Acceptance Certificate
Final's Unit Generates
IIC reviews
Municipality reviews (if applicable)
ACE/ACM reviews
Approved
Final Audit of payments is conducted
Time Extension Requests resolved
Verification of Claims
NFQ
Final's Unit Supervisor Generates
ADE Submits
Errors?
No
Yes
Auditor meets with IIC to inform/confirm errors & determine error value ($$)
< $250.00
Corrective Payment
No corrections necessary Audit is marked complete
> $250.00
Yes
Corrections made for all errors by IIC via Work Order, Estimates, and corrective documentation
Auditor verifies corrections resolve all errors
No
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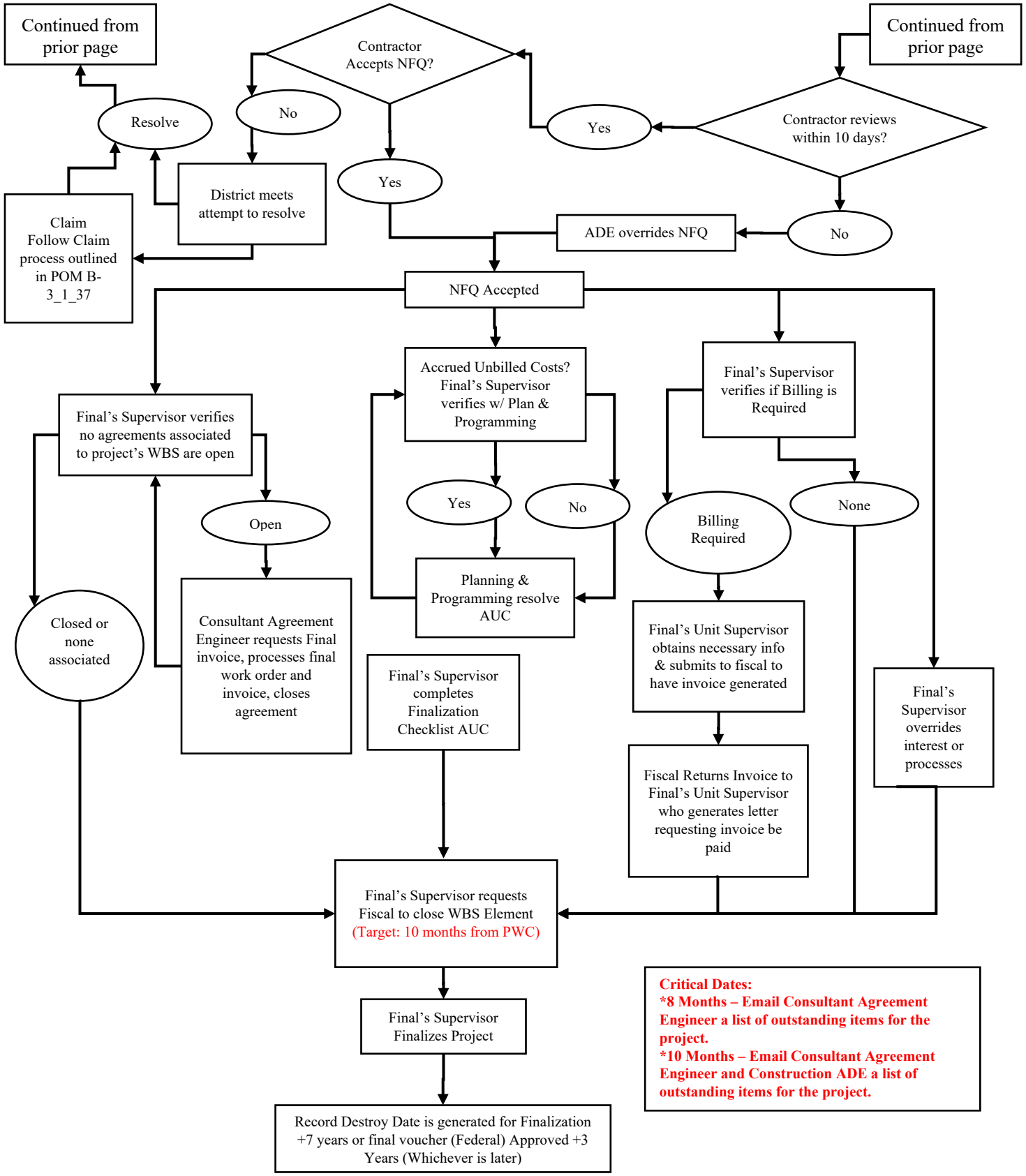
Continued next page


Continued from prior page
Contractor Accepts NFQ?
No
Yes
Resolve
District meets attempt to resolve
Claim Follow Claim process outlined in POM B-3_1_37
Yes
Continued from prior page
Contractor reviews within 10 days?
No
ADE overrides NFQ
NFQ Accepted
Final's Supervisor verifies no agreements associated to project's WBS are open
Open
Closed or none associated
Consultant Agreement Engineer requests Final invoice, processes final work order and invoice, closes agreement
Accrued Unbilled Costs? Final's Supervisor verifies w/ Plan & Programming
Yes
No
Planning & Programming resolve AUC
Final's Supervisor completes Finalization Checklist AUC
Final's Supervisor verifies if Billing is Required
Billing Required
None
Final's Unit Supervisor obtains necessary info & submits to fiscal to have invoice generated
Fiscal Returns Invoice to Final's Unit Supervisor who generates letter requesting invoice be paid
Final's Supervisor overrides interest or processes
Final's Supervisor requests Fiscal to close WBS Element
(Target: 10 months from PWC)
Final's Supervisor Finalizes Project
Record Destroy Date is generated for Finalization +7 years or final voucher (Federal) Approved +3 Years (Whichever is later)
Critical Dates:
*8 Months – Email Consultant Agreement Engineer a list of outstanding items for the project.
*10 Months – Email Consultant Agreement Engineer and Construction ADE a list of outstanding items for the project.

Final's Unit Project Records Check-In Tasks

Project Staff:

- Completes Project Record Check-In sheet and email it the Final's unit Manager

Final's Unit Staff

- Review Project Record Check-In sheet with Project Staff to ensure it is complete and is upload in the ECS Highway Administration system.
    - Obtain completed Final Inspection & Punch-list, emailed from Inspector in Charge to the Final's Unit Manager and upload to ECMS Finalization Checklist using the ECS Highway Administration system.
- Final's Unit selects location for storage of records (any tickets have not loaded in to the PENNDOT Project Collaboration Center) been and records information in
    - ECMS, Finalization Tracking Spreadsheet, and Record's Storage Spreadsheet for paper files
- The Final's Unit Manager or IIC must complete the "Time Extension Requests
    - Resolved" in Finalization checklist if all time extension issues are resolved.
- The Final's Unit Manager or IIC must complete "Verification of Claims" in
    - Finalization Checklist if there are no known claims.
- Have IIC complete and submit quality survey for design items in ECMS

Record's Control (For each project as applicable)

RECORD	STORED	PROTECTED	RETRIEVED	RETENTION	DISPOSAL
ECMS Database PSAs	ECMS	Access Control	ECMS Authorization	Retained	Retained
Copy of Plans	Stored w/ Project files PENNDOT Project Collaboration center or ECMS	Building has secure limited access – only employees or escorted visitors have access to these records.	Request desired records from Final's Unit Staff and sign-out by type of Record or PENNDOT Project Collaboration Center	The later of: 7 Years after FINALIZATION date or 3 years after Final Voucher (Federal) is issued.	Confidential records are shredded, and all are recycled. Electronic Files deleted.

F4 Right-to-Know (RTK), Treasury Database Update

Process Owner: District Finals Unit Manager

Purpose:
To input construction project work order and time extension information into thee-Contracts Library of the State Treasurer website (www.patreasury.gov) to meet Right-to-Know obligations.

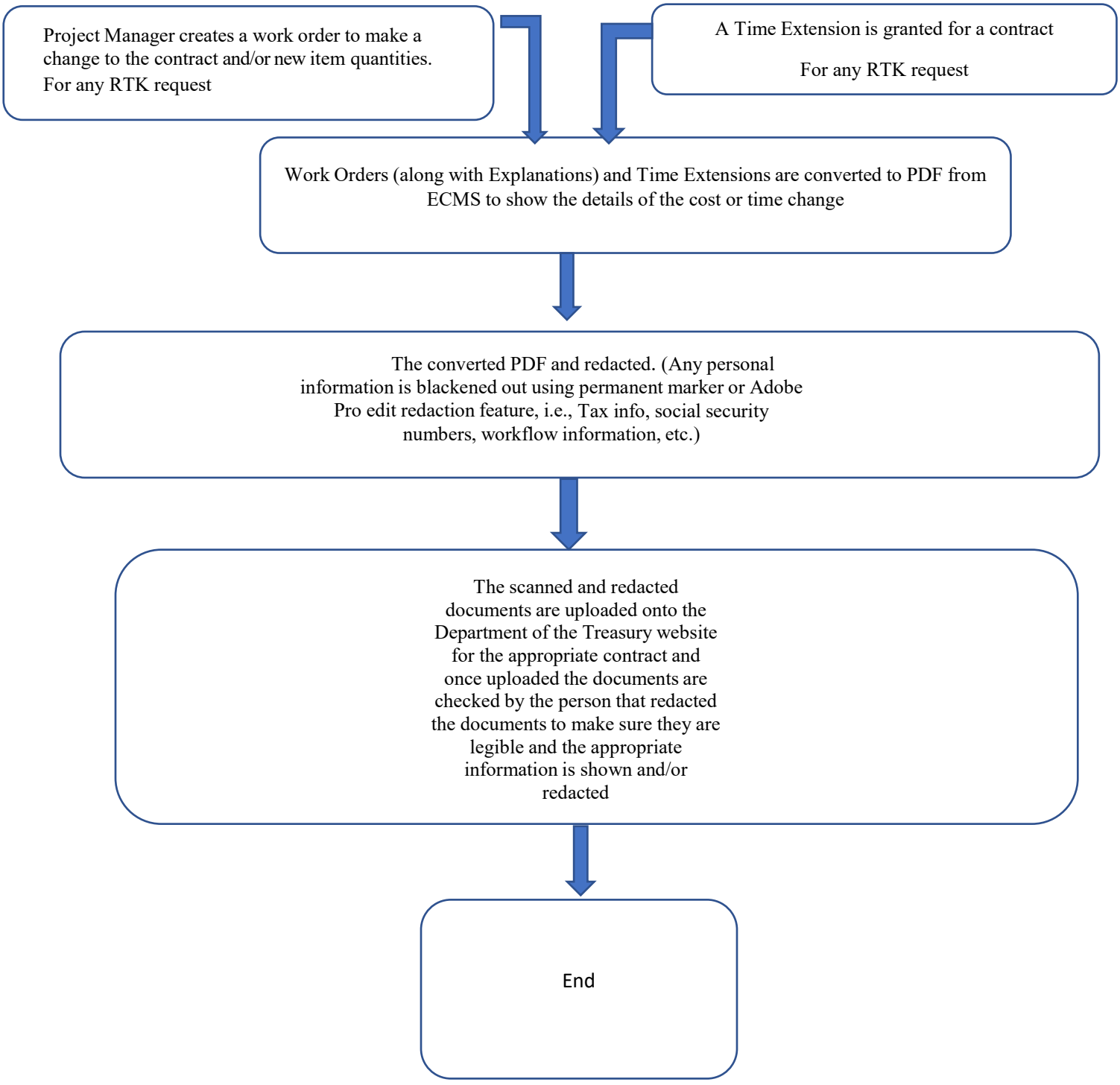
Scope:
Input applicable work orders and time extensions for construction projects (contracts) into the state treasurer website to meet Right-to-Know obligations. Remove all information that is not public information by redacting the documents prior to uploading them into the treasury database.

Reference Documents:

- Right-to-Know Law (Chapter 17), Act 3 of 2008

Procedure:
See process map below:

Input Construction Project Work Orders and Time Extension into the Treasury Database



FO1 Field Operations – Startup

Process Owner: Construction Services Engineer

Purpose:
The purpose of this procedure is to outline steps involved in the startup of a construction project.

Scope:
The scope includes all projects in District 10 that are bid and let for roadway/bridge construction.

Reference Documents:
General references:

- Project Office Manual (POM) – Publication 2
- Construction Manual – Publication 8
- Pennsylvania Test Methods Manual (PTM) – Publication 19
- ACE Manual – Publication 80
- Specifications – Publication 408
- Pre-Job Packet
- Pre-job Template Memorandum (2014)

Project Specific references: ECMS Project # required

- Contract Documents, including Special Provisions
- Project Plan
- Designer Notes

Procedure:

- The responsible areas involved in this process are:
- Construction Services Engineer conducts pre-bid meeting if required
- Central Office Contract Management section advertises, lets and awards contracts through ECMS.
- Assigned ACE/ACM is responsible for scheduling and conducting pre-job meeting

1. Project advertised for bidding; the advertisement and contract may contain a schedule for a pre-bid meeting. This meeting may be mandatory for some projects. If the contract indicates that a pre-bid meeting will be held, the Construction Services Engineer will schedule a meeting in advance to review the project in the pre-bid meeting.

2. A pre-bid meeting is held, if required, to review contract details and unique situations with the prospective bidders.

3. Project let by Central Office in ECMS.

4. Project awarded to successful bidder in ECMS (within 60 days of the bid opening, 30-day extensions may be made with mutual consent) by Central Office per section 103 of the Publication 408 specifications

5. Contract is posted in ECMS by Central Office.

6. ACE/ACM schedules pre-construction conference (Pre-Job) with all parties/individual units. The Pre-Job is held to establish/discuss topics outlined on the Pre-Job memorandum template.

7. Contract is executed in ECMS by Central Office per section 103 of Publication 408 Specifications

8. The ACE/ACM issues the Notice To Proceed (NTP) in ECMS. This cannot occur in ECMS prior to contract execution but must be within 30 days of the award date unless a mutual written extension is in place per section 108 of Publication 408 Specifications.

9. The ACE/ACM assigns the IIC and other project team members in ECMS.

10. The IIC shall ensure that a field office is established if applicable and in accordance with contract terms.

FO2 Field Operations – Project Management

Process Owner: Construction Services Engineer

Purpose:

The purpose of this procedure is to ensure that construction projects are built to specifications.

Scope:

The scope includes activities of project management staff from constructability review to project startup through project closeout.

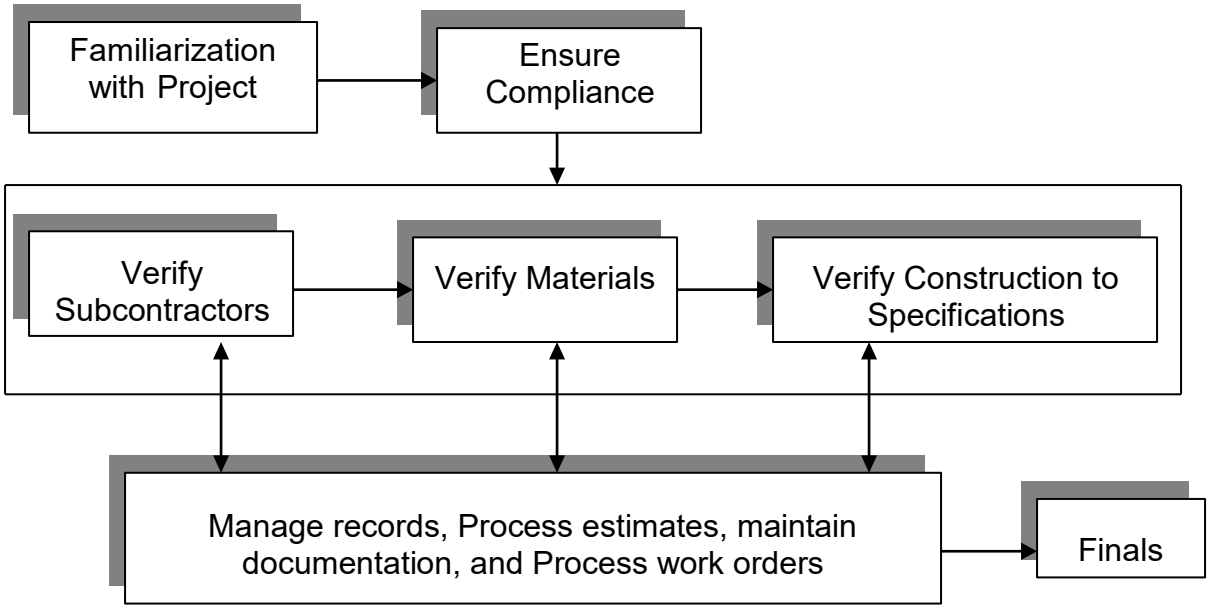
Reference Documents:

- Project Office Manual (POM) – Publication 2
- Construction Manual – Publication 8
- Specifications – Publication 408
- Roadway Construction Standards – Publication 72M
- Traffic Control Standards – Publication 111
- Bridge Construction Standards – Publication 219M
- Official Traffic Control Devices – Publication 212
- Temporary Traffic Control Guidelines – Publication 213
- ACE Manual – Publication 80
- Finals Unit – 30 Day Turn In Plan
- Contract Documents, including Special Provisions
- Project Plan
- Designer Notes

Procedure:

The project management staff is responsible for monitoring the field inspectors, managing the project records, and ensuring contract compliance.

Project Management



The assigned IIC shall ensure that:

- Adequate staffing has been assigned to the project
- Risk based construction inspection is performed.

When assigned a project, Field Operation's personnel shall:

- Become familiar with all project requirements as contained in the:
  - Contract
    - Special Provisions
    - Project Specifications
  - Project Plan prepared by design unit or others
  - Standards
    - Publication 408
    - Bridge, Roadway, and Traffic Standards
  - Designer Notes

To ensure compliance with contract requirements, the assigned IIC along with field operations staff shall:

- Ensure field operations staff is using the correct version of specifications as per contract documents.
- Ensure subcontractors are approved through ECMS prior to them starting any work.

- Verify that materials that are being incorporated into the work are listed on the Approved Source of Supply
- Verify that all construction operations are performed to specifications, contract documents, and applicable standards, i.e. Publication 408, PTM, etc.
- Ensure documentation required is prepared and submitted to Finals Unit, including change authorization, negotiated costs and work orders.
- Follow the "Finals Unit – 30 Day Turn In Plan" to ensure that all project documentation is obtained from the contractor in a timely manner.
- Ensure required records are created as indicated in the Project Records Check-in List.

FO3 Field Operations – Project Closeout

Process Owner: Construction Services Engineer

Purpose:

The purpose of this procedure is to ensure that construction projects records and documentation are closed out to meet the requirements of Publication 2, Project Office Manual, Part B, Section 1, Page 2-1, Finals Unit requirements and as outlined on the attached flowchart.

Scope:

The scope includes all construction projects in the district that are reviewed by the Finals Unit.

Reference Documents:

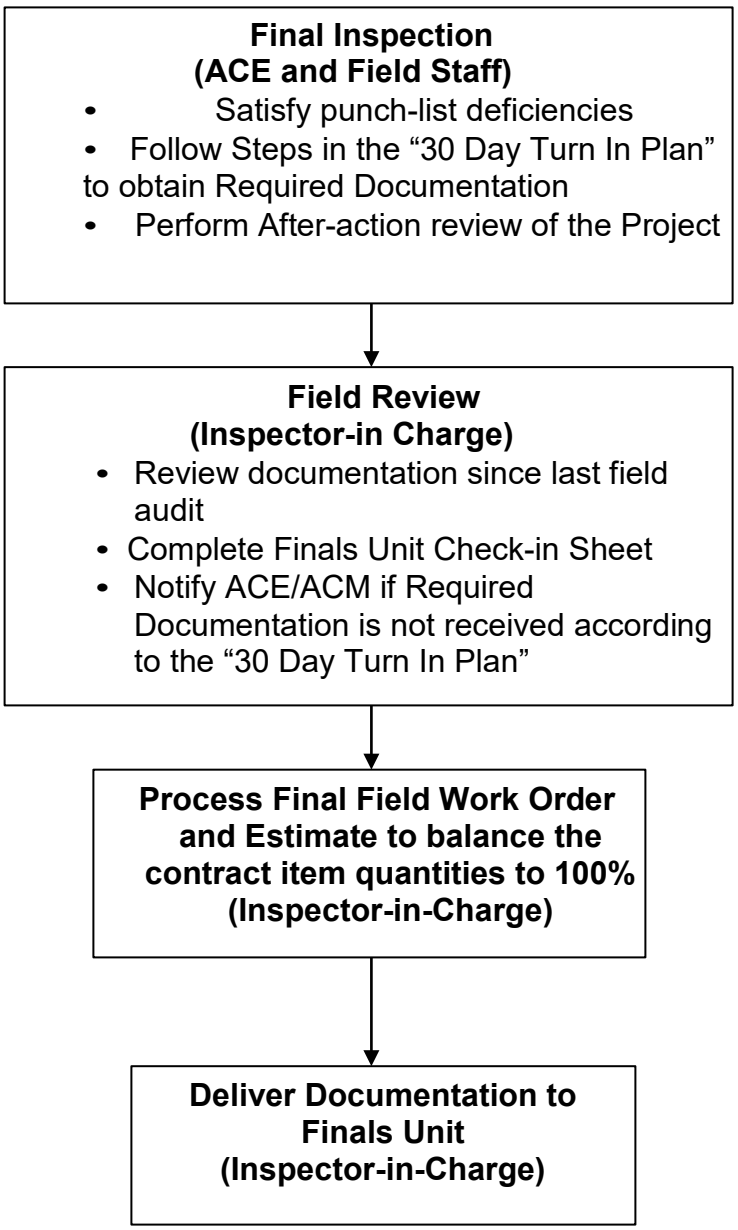
- Project Office Manual (POM) – Publication 2
- Specifications – Publication 408
- Roadway Construction Standards – Publication 72M
- Traffic Control Standards – Publication 111
- Bridge Construction Standards – Publication 219M
- ACE Manual – Publication 80
- Finals Unit – 30 Day Turn In Plan
- Project Records Check-In Sheet

Procedure:

The Inspector-in-Charge is responsible for submittal of final documentation to the
Finals Unit.

See process map below

Project Close-out



FO4 Field Operations – E&S Details

Process Owner: Construction Services Engineer

Purpose:

The purpose of this procedure is to ensure that construction projects E&S controls are inspected in a timely manner and that modification to the E&S plans are appropriately approved.

Scope:

The scope includes activities of project staff from constructability review to project launch, through project closeout.

Reference Documents:

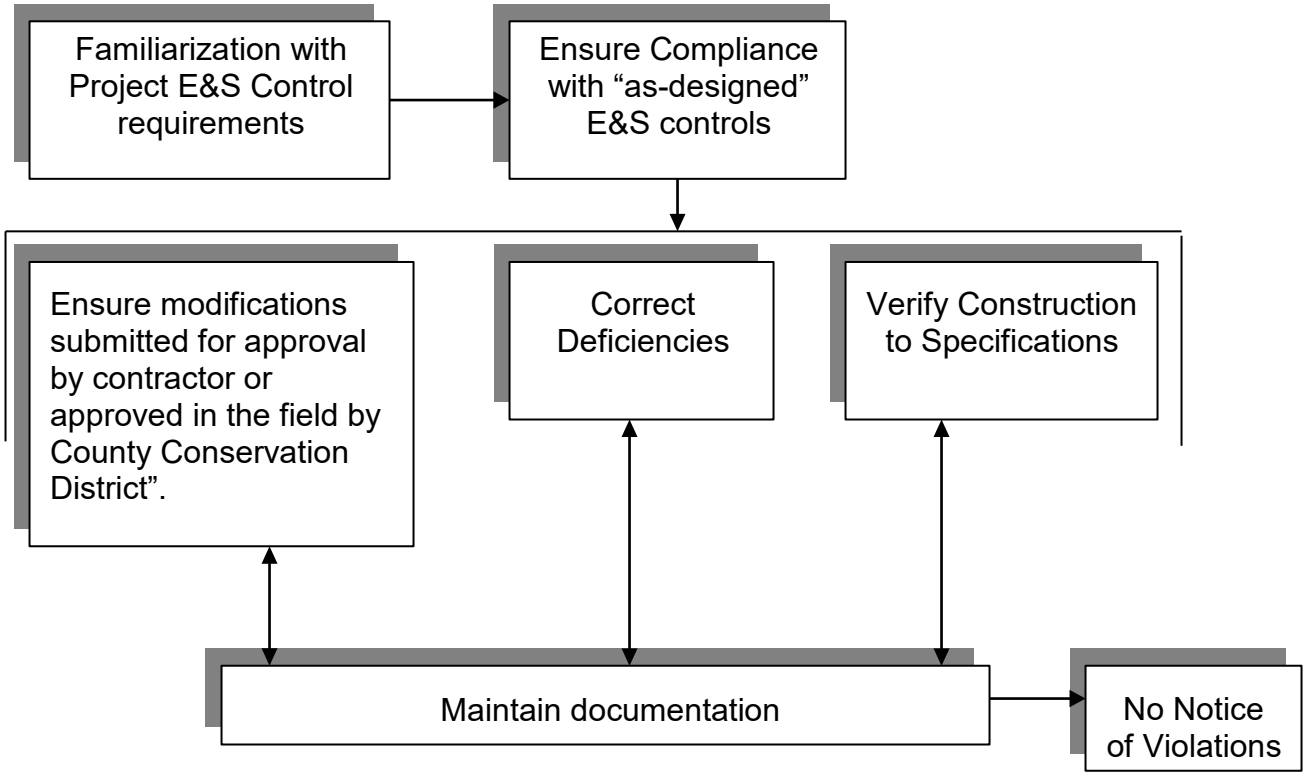
- Project Office Manual (POM) – Publication 2
- Specifications – Publication 408
- ACE Manual – Publication 80
- Contract Documents, including Special Provisions
- Project Plans
- Designer Notes
- Roadway Construction Standards – Publication 72M
- Traffic Control Standards – Publication 111
- Bridge Construction Standards – Publication 219M
- Environmental mitigation sheet and permits (ECMS)
- Visual Site Inspection Report (VSIR App & ECMS)

Procedure:

The project staff is responsible for inspecting the E&S controls, at a minimum, weekly or after each measurable event. The project staff must report the inspection, inform the contractor of necessary corrections and monitor the corrections. If timely corrections are not made, all other contract work shall be stopped until all corrections are completed. The project staff must ensure any changes to the contract E&S plan are approved by the county conservation district and/or DEP regional office prior to implementation. Standard forms for documenting reviews and meeting minimum requirements are located on the Department's LAN (J- drive) and on an iPad application.

See process map below:

Project Management



When assigned a project, Field Operation's personnel shall:

- Become familiar with and ensure all project E & S requirements are in place and functioning as specified:
  - Contract
    - Special Provisions
    - Project Specifications
  - E&S control Plan
  - Standards
    - Publication 408
    - Other state published standards applicable to the project, e.g. Roadway Construction Standards
  - Designer Notes
  - Environmental mitigation sheet and permits

The assigned Project manager shall ensure that:

- Staffing has been assigned to inspect the E&S controls on a daily basis and after each rain event with the reviews documented in the inspector's daily diary (PSA or app)

- A review of the E&S control and plans occurs with the contractor.

- E&S control deficiencies are corrected

- Modifications to the "as designed" E&S controls are forwarded to the appropriate regulatory agency and approval is obtained before any related work is performed.

- Visual Site Inspection Form is completed when required.

To ensure compliance with contract E&S requirements, the assigned project manager with field operations staff shall:

1. Ensure the contractor or subcontractor is using the correct version of sequencing and phasing as per contract documents.
2. Verify that contractors are correcting deficiencies found as a result of an E&S control inspection.
3. Verify that all construction operations are performed to specifications, contract documents, and applicable standards, i.e. Publication 408.

4. Ensure documentation required is prepared and submitted to the pertinent regulatory agency.

FO5 Field Operations – Field Peer Reviews

Process Owner: Construction Services Engineer

Purpose:

The purpose of this procedure is to ensure that construction unit personnel are completing field audits of their peers to maximize the efficiency and standardization of all field operations.

Scope:

To ensure peer reviews are being conducted on selected projects.

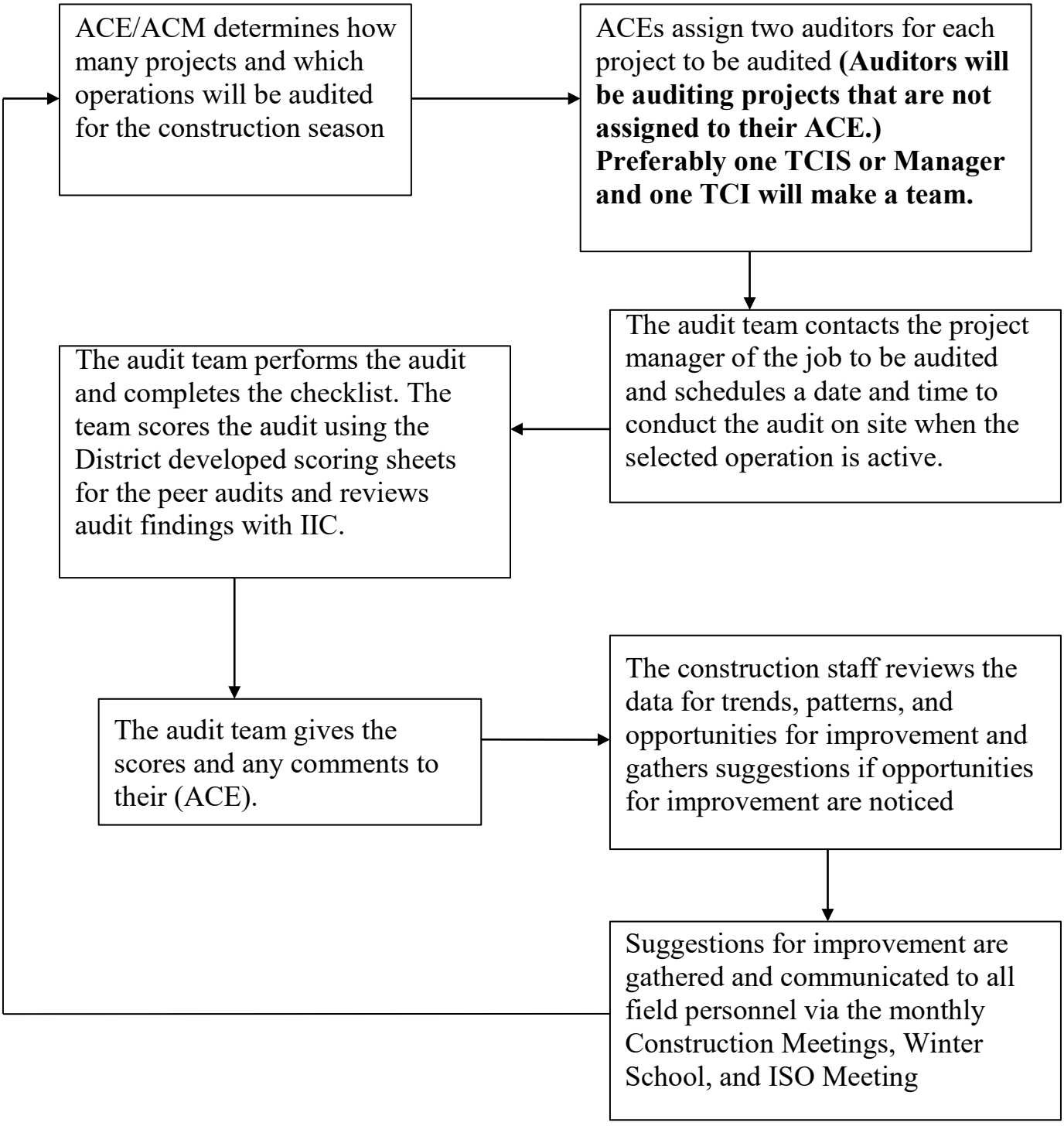
Reference Documents:

- District Checklists as developed for the field peer reviews
- District 10 Field Peer reviews folder
- Audit Log

Procedure:

See process map below:

Field Peer Reviews



FO6 Design Error Review

Process Owner: Construction Services Engineer

Purpose:

The purpose of this procedure is to resolve design errors that are encountered in the plan sets during construction that are inaccurate and unable to be constructed as presented and to put the designer on notice as to such.

Scope:

To hold designers accountable to provide solutions to errors that affect the constructability or cost of the project.

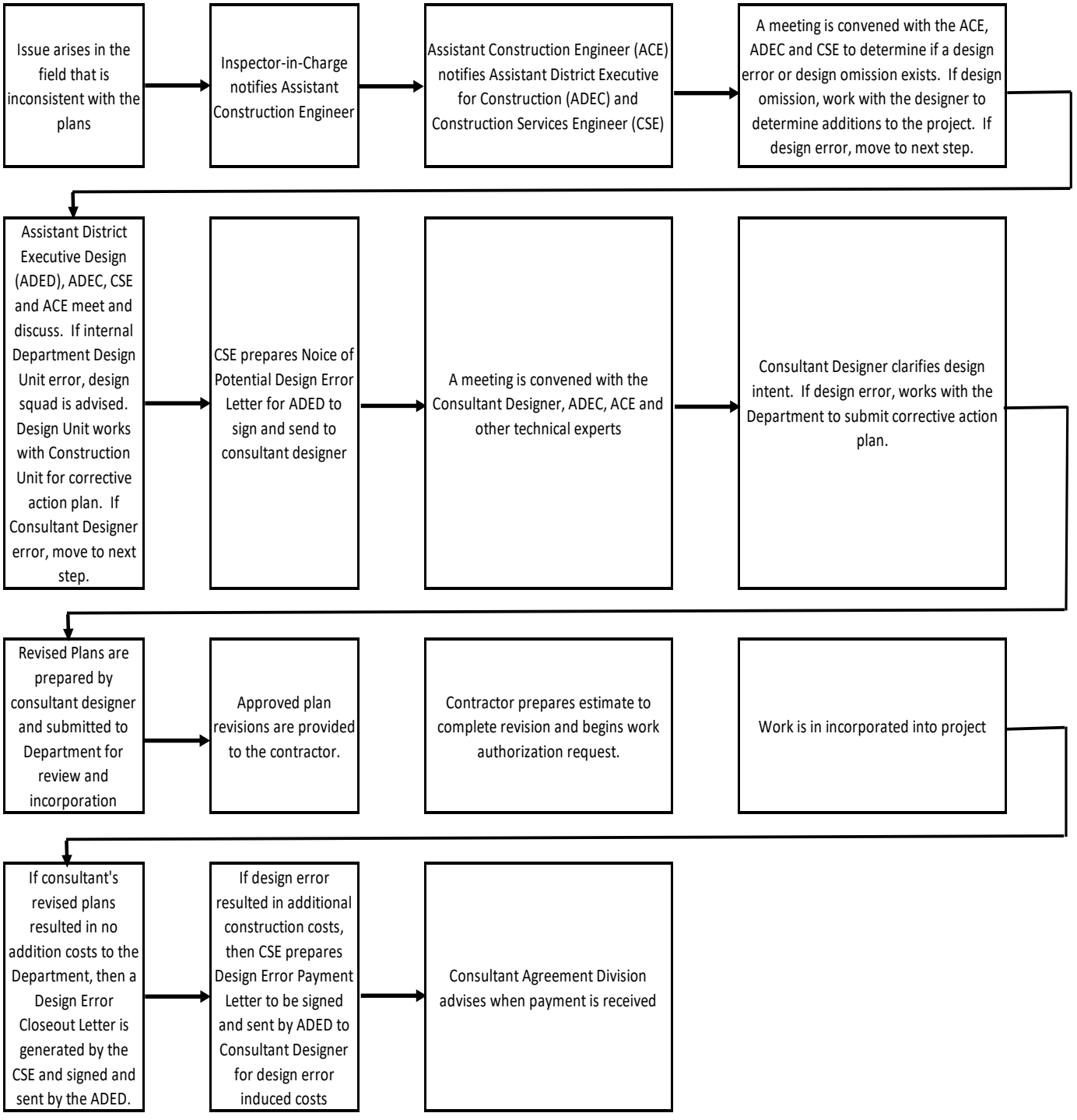
Reference Documents:

- Design Manual Part 1C - Publication 10C

See process map below:

Design Error Process Flow Map

10/17/2023



F07 Construction As-Built Plans

Process Owner: Assistant Construction Engineer/Manager (ACE/ACM)

Purpose:
To document the as constructed conditions, specifically those which significantly differ from the as-designed condition of construction projects. To ensure that field construction changes pertinent to future site maintenance and/or development are properly documented, that a record of the changes is designer verified / accepted, and that the information is properly archived for later reference.

Scope:
All roadway/bridge construction projects in District 10 that have construction plans (roadway, maintenance, and/or structural drawings).

Reference Documents:
General references:

- Project Office Manual (POM) – Publication 2
  - POM B-1-16
  - POM D-2-2
- Design Manual Part 3 – Publication 14M

Project Specific references: ECMS Project # required

- Project Plans

Procedure:

The responsible areas involved in this process are:

- Design Project Manager reviews the As-Built Plan Set ("As-Builts") for agreement with any changes as well as for proper documentation via the as-built record.
- Project A.C.E. ensures "As-Builts" are completed and submitted for review and archiving.
- Inspector-in-Charge and/or delegates markup plan sets with pertinent, significant changes from the As-Designed condition and submit for review.

1. Inspector-in-Charge will download a plan set (an assembly containing each original drawing, or revised sheet) of the project from ECMS in PDF format and save to a location accessible as a living document to serve solely as the "As-Builts".
   - Shop drawings may also be added to the "As-Builts" at any point through the project if they provide any relevant information.
2. "As-builts" will be maintained for the purpose of recording approved field changes which are not shown on the drawings. Such field changes are usually of minor nature, as more significant changes usually require documented

revisions to the plans. However documented plan revisions will also need incorporated into the “As-Builts” (possibly by replacing pages) so that the final “As-Builts” are an accurate record of the project’s construction.

3. “As-builts” will be maintained throughout the project shown as mark-ups on the PDF files utilizing the current electronic devices and procedures. The "As-Builts” shall be prepared per plan presentation procedures stated in Publication 14M, Design Manual Part 3, Plans Presentation, and should include the following:
    - On the Title Sheet upper left-hand corner, list the following project data:
        - Contractor’s name and address
        - District Executive
        - Assistant District Executive for Construction
        - Assistant Construction Engineer
        - Inspector-in-Charge
        - Calendar Days Allowed
        - Calendar Days Used
        - Pertinent Dates - Start, Completion, Open to Traffic, and Final Inspection
        - Sources of Significant Materials
    - Changes in limits of work. (Mark "Final" on all Limits of Work)
    - Changes in location of:
        - pipe
        - inlets
        - utility holes
        - pipe underdrain / pavement base drains including outlets (should be plotted on the “as-built” even if construction to plan stations)
        - guiderail
        - concrete barrier
        - permanent impact attenuating devices
    - Changes in types of material.
    - Changes in geometry
    - Construction Items with alternatives, such as pipes, binder courses, stabilized aggregate base course, shoulders, conduits, etc. should be recorded by showing only the choice used "as-built" and crossing out all other alternatives for the item involved on the plans, summary sheet, tabulation of quantities sheet or the required list.
    - Changes made to structure drawings:
        - footing elevations
        - reinforcement details
        - piling
        - average pile tip elevation

- Changes will be indicated by adding correct data and crossing out incorrect data.
- “As-builts” should NOT include quantity changes to the Summary of Quantities Sheets, Tabulation of Quantities Sheets, or the Bridge Summary of Quantities Sheets, however the following note shall be placed on the Quantities Sheets: “ THE QUANTITIES LISTED ON THIS SHEET MAY NOT MATCH THE QUANTITIES FOR THE AS-BUILT PLAN REVISIONS."

4. The Inspector-in-Charge will submit the Final “As-Builts” via PPCC PennDOT submittal type: “As-Built Drawings” which will workflow to the Design Project Manager for acceptance.
5. Design Project Manager will review “As-Builts” for adherence to DM-1-C requirements. If the “As-Builts” are unacceptable they will be returned to the IIC by PPCC’s Revise and Resubmit function until acceptable.
6. Upon “As-Built Drawings” approval by the Design Project Manager, PPCC will notify:
    - Project A.C.E.
    - Assistant Bridge Engineer
    - Finals Unit Supervisor
    - Plans Room Clerk

    of their approval.
7. Plans Room Clerk will scan the approved “As-Built” Drawings for archiving if necessary (if paper “As-Built” is kept in lieu of the electronic version).
8. The electronic files will be maintained by the District Plans Unit which may be obtained for future use by maintenance or others that need the information contained thereon.
    - Files within the PPCC PennDOT submission “As-Built Drawings” will be archived to ECS (PennDOT’s Electronic Record Retention system) in addition to cataloged storage by the District Plans Unit.

FO8 NPDES Compliance Management/Closeout and District Self Inspection

Process Owner: Construction Services Engineer

Purpose:

The purpose of this procedure is to ensure NPDES compliance and yearly District self-inspections are performed.

Scope:

The scope includes activities of project construction staff ensuring NPDES compliance and the District self-inspection process.

Reference Documents:

- Project Office Manual (POM) – Publication 2
- Construction Manual – Publication 8
- Specifications – Publication 408
- ACE Manual – Publication 593
- Contract Documents, including Special Provisions
- Project E&S and/or PCMS Plan
- Designer Notes
- Environmental Pre-Job checklist, uploaded to PPCC for each project

Procedure:

The project management staff is responsible for monitoring NPDES requirements and proper implementation of environmental controls placed as part of the project. Project ACE and District ADE-C are responsible for ensuring District self-inspections are scheduled.

Chapter 102 NPDES Permit forms:

- IIC ensures the following forms are properly completed during the Pre-Job Meeting and submitted
  - CO-Permitee Acknowledgement Form
    - Completed by prime contractor and subcontractors
    - IIC to upload signed forms into PPCC and send to County Conservation District
  - Application for NPDES/WQM Permit Transfer
    - Completed by Permittee/PennDOT and Contractor
    - IIC to upload signed forms into PPCC and send to County Conservation District
  - Co-Permittee Liability Release Form
    - This can be filed when a co-permittee has completed their portion of work
    - IIC to upload signed forms into PPCC and send to County Conservation District
- IIC ensures closeout documents are completed and submitted. Documents may be completed once 70% vegetative cover has been established.
  - Notice of Termination (NOT)

        - Completed by contractor and PennDOT. Prime contractor to have P.E. sign and stamp section 5
        - Completed original NOT form sent to District Office for review by Construction Unit Environmental Permit Coordinator
        - Completed NOT is then mailed to County Conservation District for closeout.
        - Copy of NOT is sent to Construction Services Engineer, Environmental Unit and Construction Unit Environmental Permit Coordinator
    - As-built PCSM Plan
        - Completed by project field staff and submitted to District Environmental Unit and Construction Unit Environmental Permit Coordinator.

District Self Inspections are required yearly for all NPDES permitted projects that are not yet closed out

- District ADE-C and project ACE's ensure District Self-Inspections are scheduled
    - Construction Unit Environmental Permit Coordinator ensures self-inspections are conducted by qualified personnel. Personnel assigned to the project cannot complete a District Self-Inspection for that project
    - Self-inspections are performed using the Visual Site Inspection Report (VSIR) application utilizing the inspection type of "District Self-Inspection" from the dropdown menu.

GT1 In-House Design Requests

Process Owner: District Geotechnical Engineer

Purpose:

The purpose of this procedure is to ensure that geotechnical reports are created in accordance with the appropriate requirements, as defined in Department and AASHTO Publications.

Scope:

The scope includes all requests for geotechnical information from the Design Unit concerning roadway or structure design.

Reference Documents:

The following references are applicable:

- Geotechnical Investigation Manual – Pennsylvania Publication 222
- Geotechnical Engineering Manual – Pennsylvania Publication 293
- Pennsylvania Design Manual 4 – Publication 15
- AASHTO LRFD Bridge Design Specifications (Project Specific Version)

Procedure:

The responsible areas involved in this process are:

- Design Unit makes request for information (utilizing Geo Request form) Geotechnical Request Form
- Geotechnical Unit provides report (Following Pub 293/DM-4)

Step 1: Receive request for geotechnical information from Design Unit
Step 2: Perform Geotechnical Studies in accordance with Reference Documents
Step 3: Provide Design Unit with a report including the requested information

GT2 Construction Consultation

Process Owner: District Geotechnical Engineer

Purpose:

The purpose of this procedure is to ensure that the appropriate steps are taken to provide geotechnical assistance and/or expertise to construction projects.

Scope:

The scope includes any field visit to a construction project to offer geotechnical advice or provide an inspection. (Footer checks, caisson checks, test piles, retaining wall construction, cut and fill slopes, borrow material approval, etc.)

Reference Documents:

- Specifications – Publication 408
- Contract Special Provision for appropriate item
- Geotechnical Engineering Report or Foundation Report for specific project
- Bridge Construction Standards – Publication 219M
- Roadway Construction Standards – Publication 72M
- Construction plans

Procedure:

The responsible areas involved in this process are:

- Construction Project Managers request consultation
- Geotechnical Unit provides field inspection

Step 1: Receive request for field visit from Construction IIC.
Step 2: Review ECMS and necessary design information.
Step 3: Report to construction site.
Step 4: Perform inspection / review project.
Step 5: Give guidance, approval or participate in discussion, as needed.
Step 6: Follow up with documentation (email or memo) or solution to problem, if required. Provide copy to Structure Control Engineer, if applicable. Standard footer checks and test pile inspections only require documentation in project field records by the field staff unless there are issues or concerns.

GT3 Geotechnical Hazard Inspection and Remediation Process

Process Owner: District Geotechnical Engineer

Purpose:
The purpose of this procedure is to ensure that the proper steps are taken to inspect a geotechnical hazard and design a repair for the situation, if required.

Scope:
The scope includes all requests from the Maintenance Unit regarding landslides, rockslides, subsidence and failing retaining walls.

Reference Documents:
The following references are applicable:

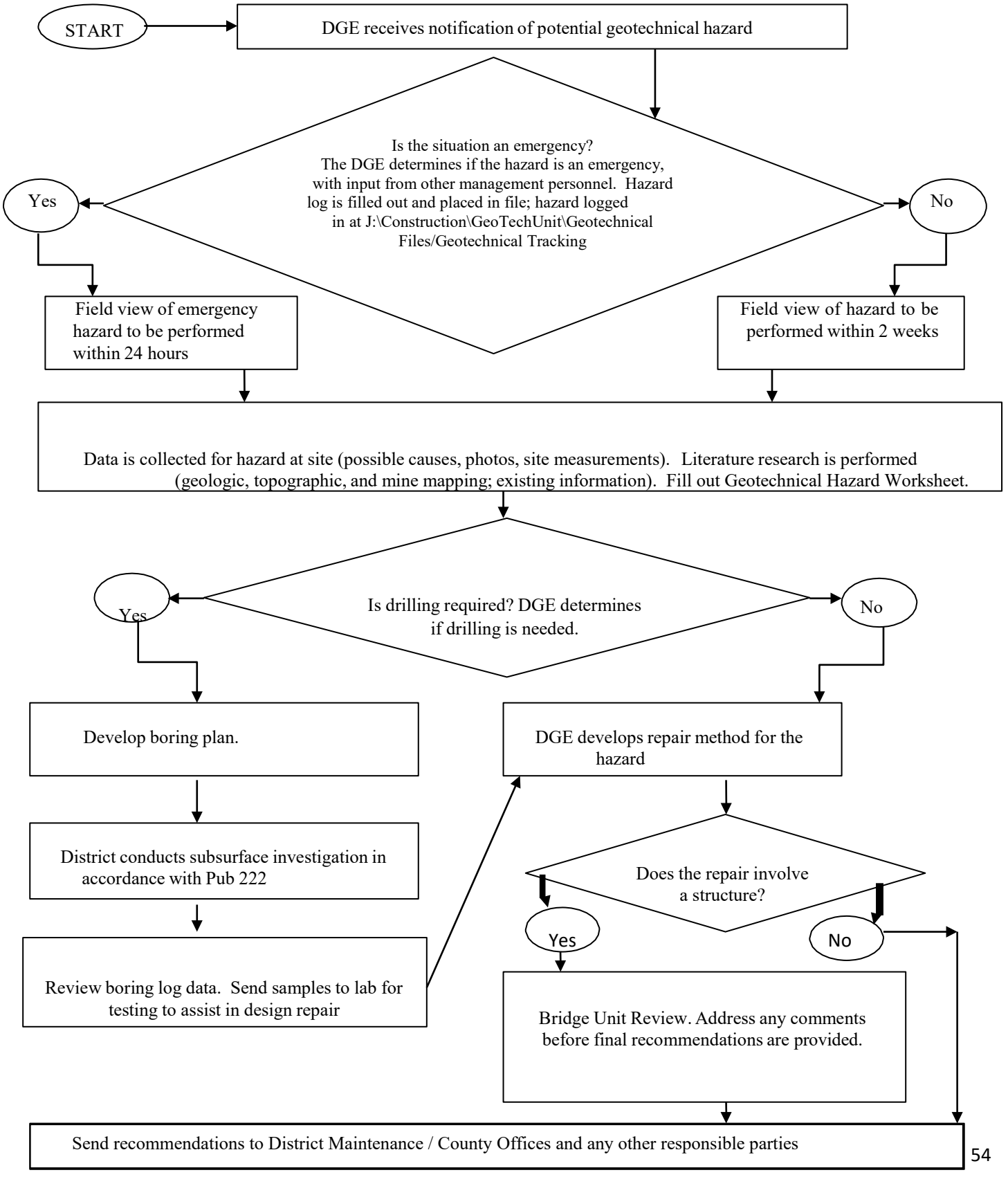
- Geotechnical Investigation Manual – Publication 222
- Geotechnical Engineering Manual – Publication 293
- Specifications – Publication 408
- Various Geotechnical Textbooks

Procedure:
The responsible areas involved in this process are:

- Maintenance Unit requests review of site and guidance for repair
- Geotechnical Unit inspects the site and prepares recommendation report
- Bridge Unit reviews designs involving structures

See process map below:

ISO Process Map – GT3 – Geotechnical Hazard Inspection and Remediation Process



GT4 Geotechnical Review of Consultant Reports

Process Owner: District Geotechnical Engineer

Purpose:

The purpose of this procedure is to ensure that consultant submissions are reviewed in a consistent and thorough manner.

Scope:

The scope encompasses all geotechnical reports including: Technical and Price Proposals; Subsurface Exploration Planning Submission; Geotechnical Engineering Reports; Subsurface Boring and Testing Contracts (SBSTC); and Structure Foundation Submissions.

Reference Documents:

The following references are applicable:

- Design Manual Part 4 – Publication 15M
- Geotechnical Investigation Manual – Publication 222
- Geotechnical Engineering Manual – Publication 293
- J:\Construction\GeoTechUnit\Geotechnical Files\ISO\review checklists

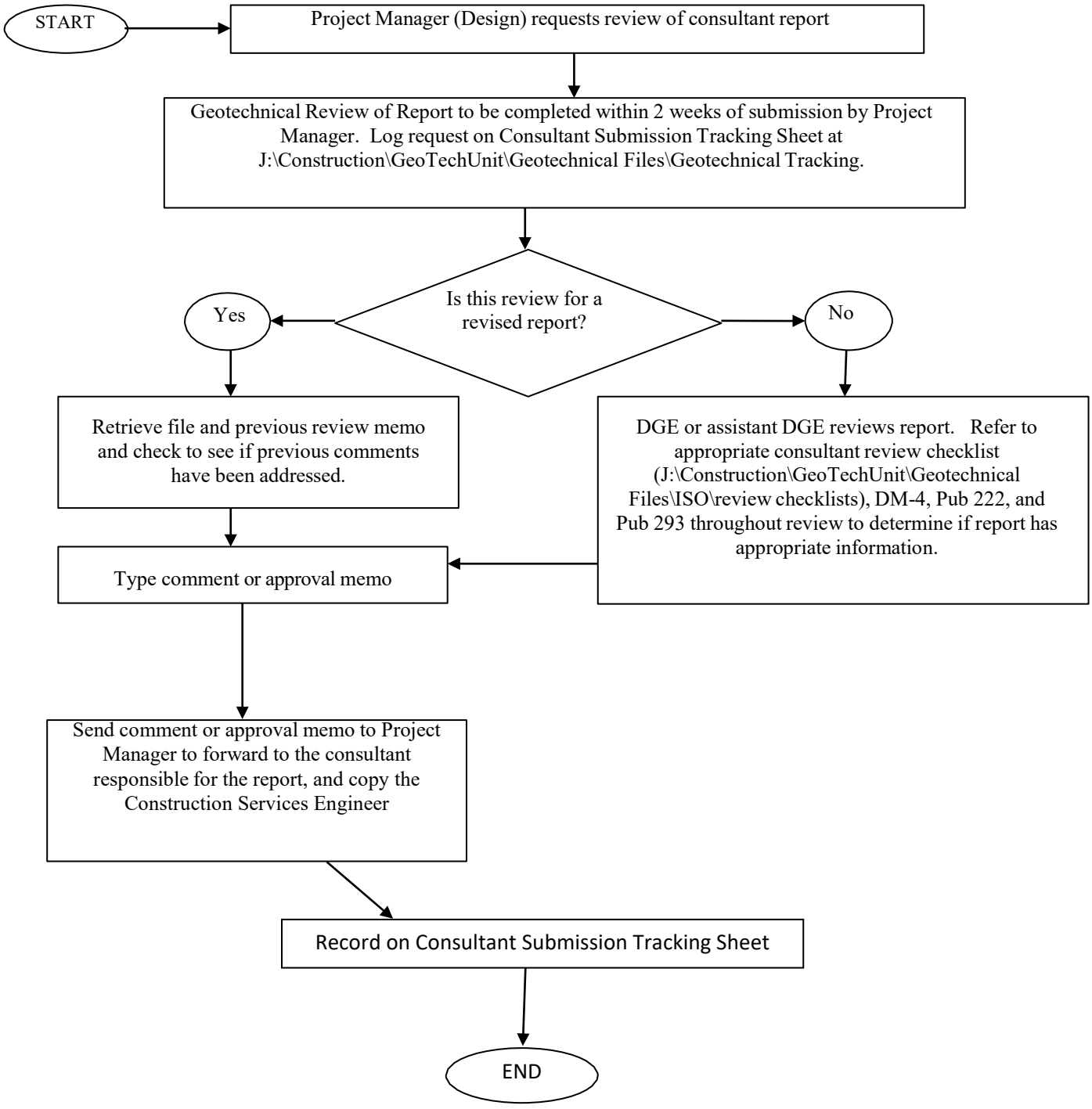
Procedure:

The responsible areas involved in this process are:

- Design Unit Project Manager Requests review
- Geotechnical Unit reviews report using checklists and prepares comment memo and sends it to Project Manager
- Consultant receives comments and revises reports

See process map below**:**

ISO Process Map – GT4 – Geotechnical Review of Consultant Reports



GT5 Review of Contractor Submissions

Process Owner: District Geotechnical Engineer

Purpose:
The purpose of this procedure is to provide review of submissions from contractors in a consistent and thorough manner.

Scope:
The scope includes contractor submissions such as temporary shoring designs, blast plans, compaction plans and caisson installation plans.

Reference Documents:
The following references are applicable:

- Specifications – Publication 408
- Design Manual Part 4 – Publication 15M
- Contract Plans and Special Provisions

Procedure:
The responsible areas involved in this process are:

- IIC requests review of a contractor submission through PPCC
- Geotechnical Unit reviews and provides comments or approval through PPCC
- The Contractor receives comments to revise submission if necessary.

Step 1: Receive submission for review in PPCC
Step 2: Refer to Design file
Step 3: Review Special Provisions to ensure submission meets the contract requirements
Step 4: Review Submission based on DM-4, special provisions, and Pub 408
Step 5: Accept submission or provide comments in PPCC.

GT6 Mine Variance Review

Process Owner: District Geotechnical Engineer

Purpose:
The purpose of this procedure is to ensure that mining operation submissions are processed in a consistent manner for the protection of the public safety in the use of state highways.

Scope:
The scope includes all submissions regarding surface and subsurface mine operations which may or may not affect State highways or their right-of-way (ROW).

Reference Documents:
The following references are applicable:

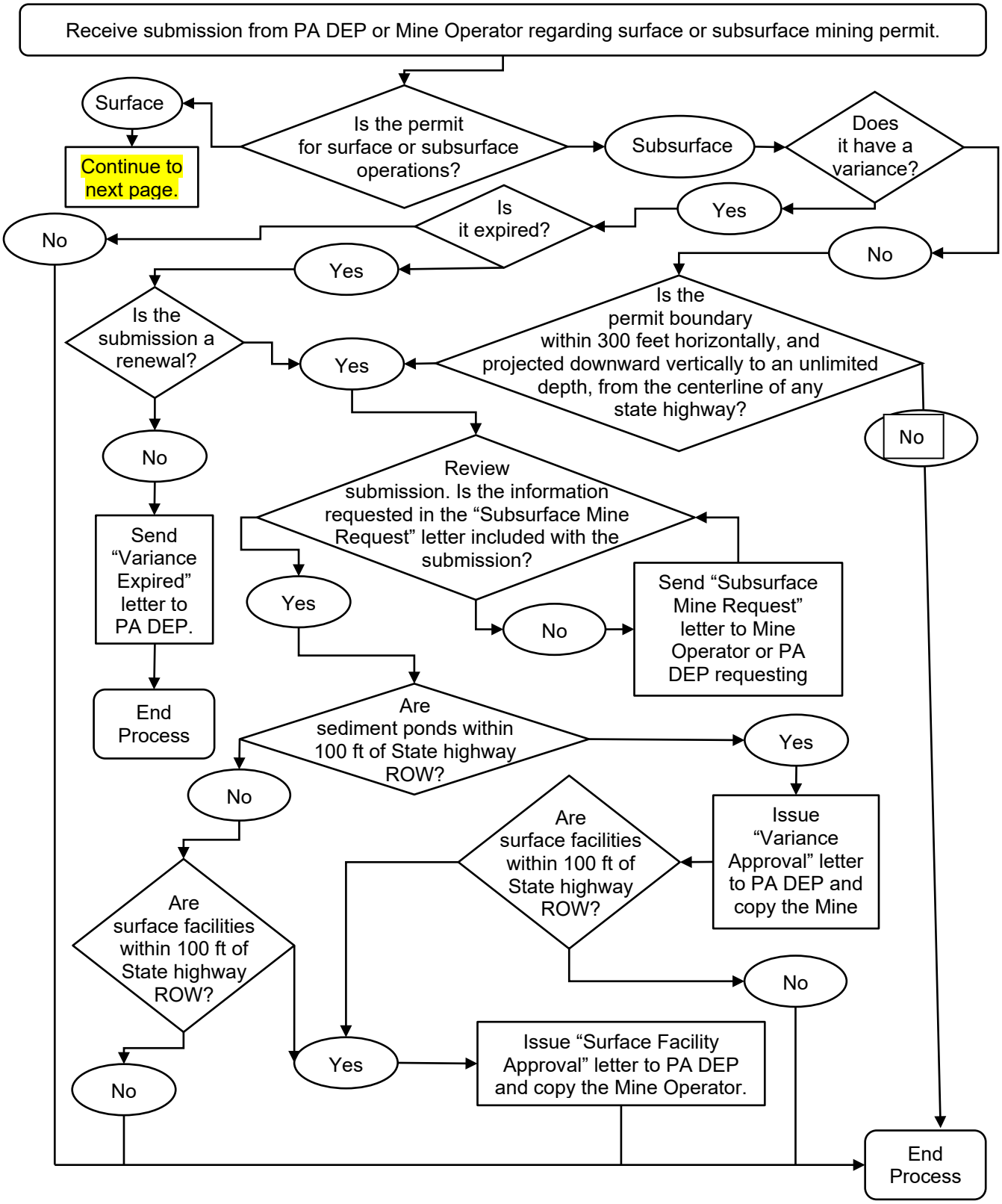
- Handbook for Mining Operations

Procedure:
The responsible areas involved in this process are as follows:

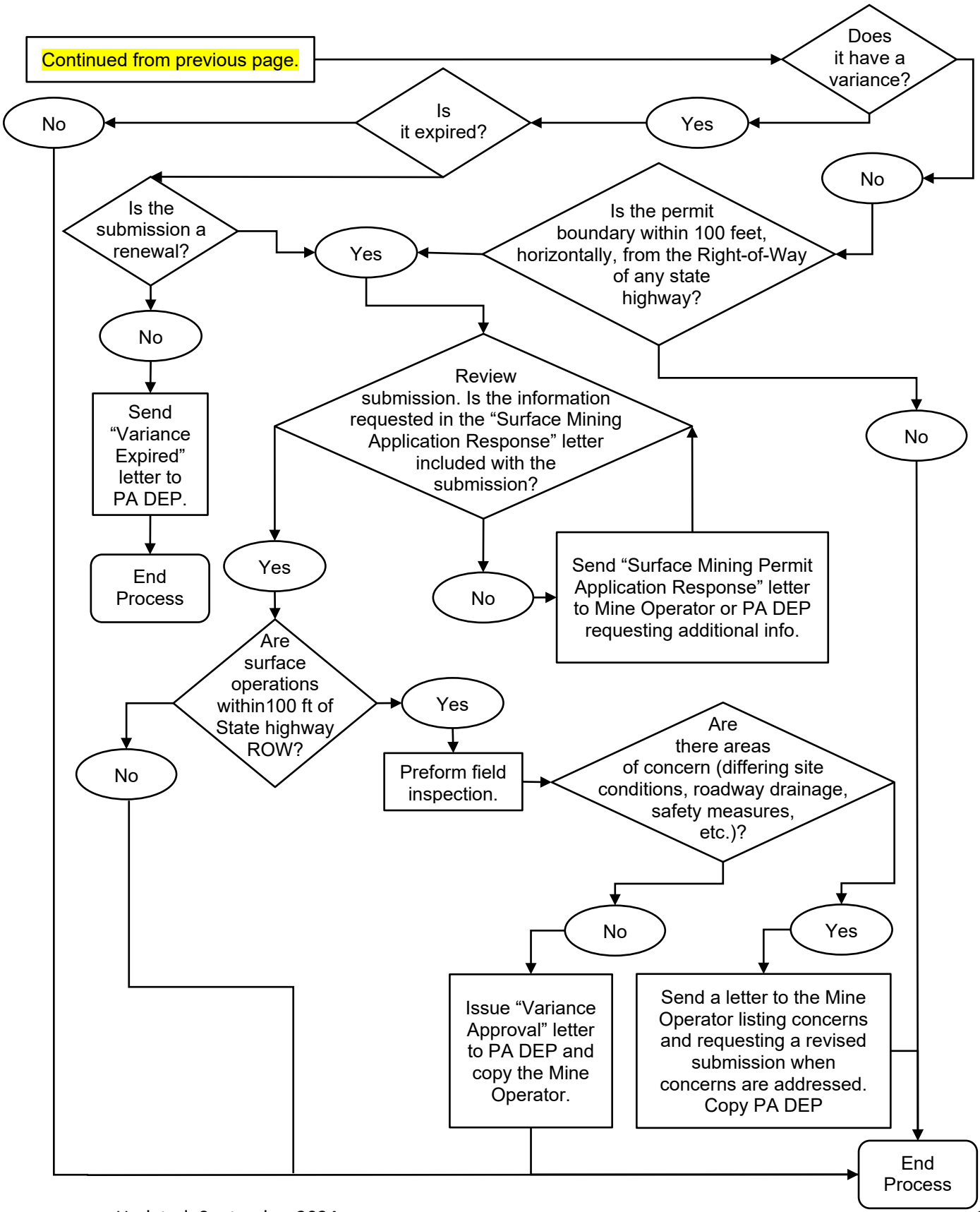
- Mine Operator requests variance, renewal, transfer, closeout, or other modification directly or through DEP.
- Geotechnical Unit reviews request information and provides comments or approval.

See Process Map below:

ISO Process Map GT6 – Mine Variance Review



ISO Process Map GT6 – Mine Variance Review (Cont.)



GT7 Compaction Control

Process Owner: District Geotechnical Engineer

Purpose:

The purpose of this procedure is to ensure that the appropriate steps are taken to provide compaction control for embankment construction.

Scope:

The scope includes any field visits, laboratory testing and documentation for a construction project that requires compaction control of materials being placed.

Reference Documents:

The following references are applicable:

- Specifications – Publication 408
- Project Office Manual (POM) – Publication 2
- Bridge Construction Standards – Publication 219M
- Roadway Construction Standards – Publication 72M
- Pennsylvania Test Methods Manual (PTM) – Publication 19
- Contract Special Provisions
- Construction Plans
- TR-4276AC (5-21) - Report on Compaction Density by Nuclear Method – Contractor Form
- TR-4276AD (5-21) - Report on Compaction Density by Nuclear Method – Department Form
- TR-478A (8-18) - Report on Compaction Density by Non-Movement

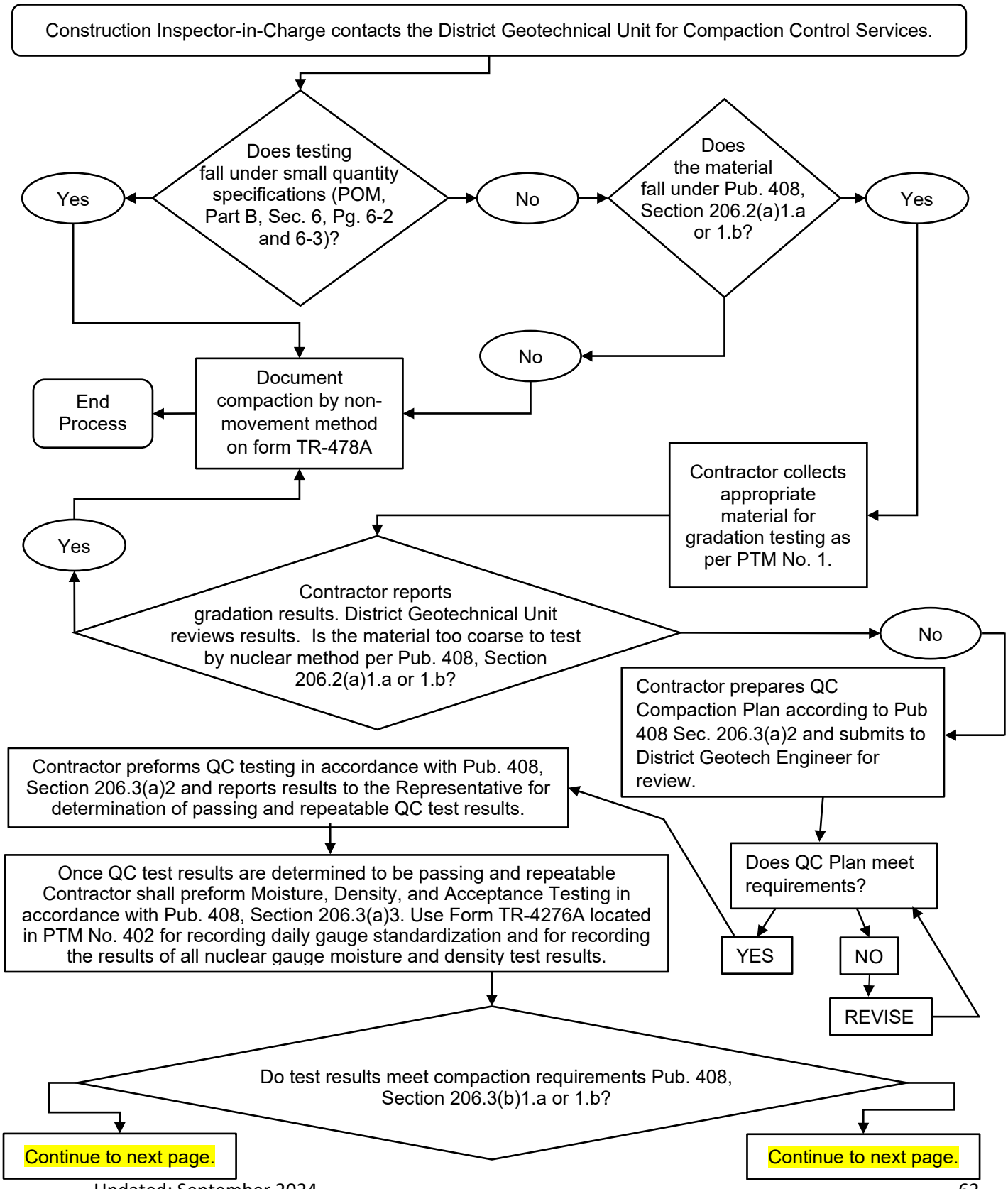
Procedure:

The responsible areas involved in this process are as follows:

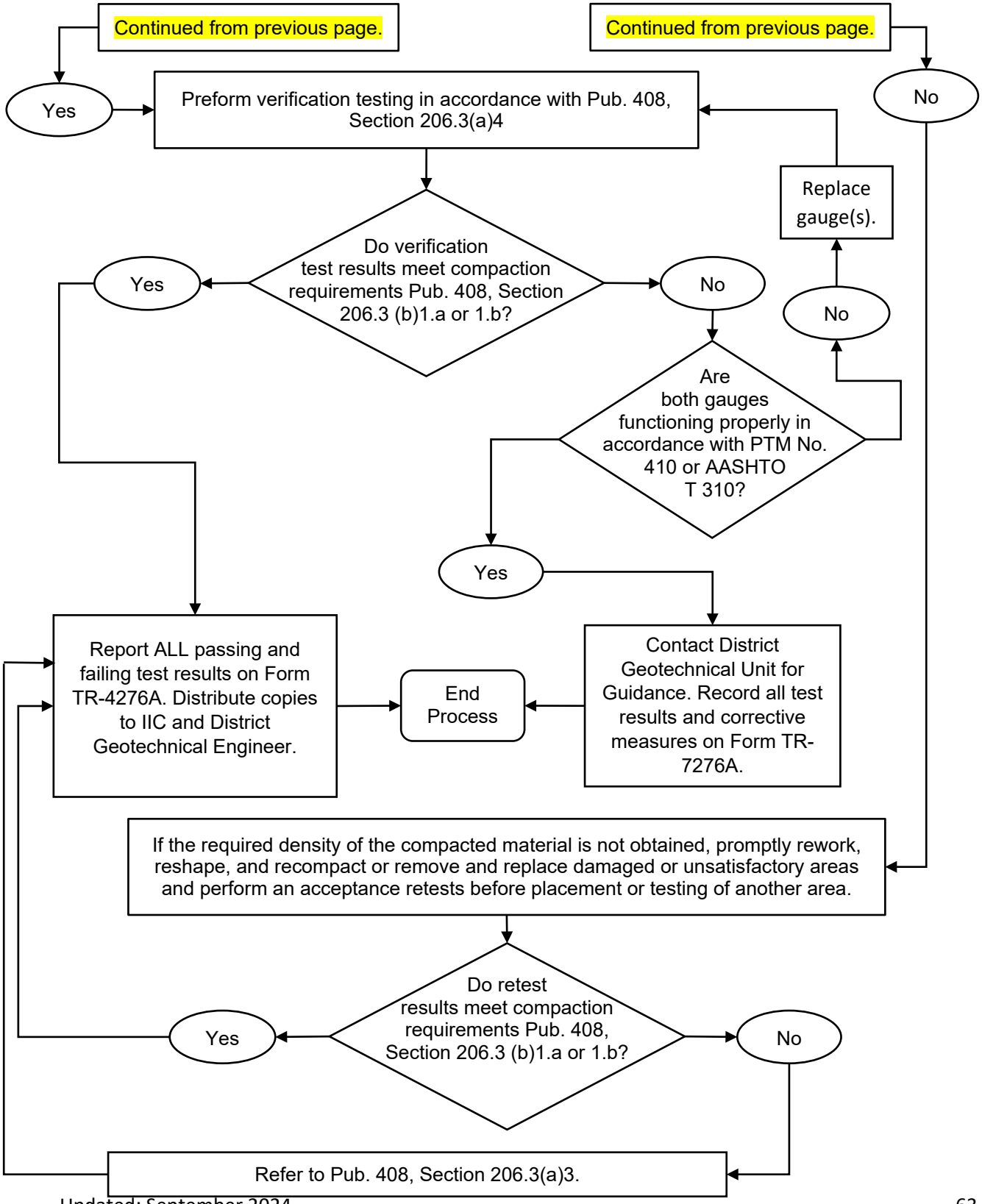
- IIC requests Geotechnical Unit services
- Geotechnical Unit reviews project information and provides guidance.

See Process Map Below:

ISO Process Map GT7 – Compaction Control



ISO Process Map GT7 – Compaction Control (Continued)



LC1 Subcontractor Approval

Process Owner: District Labor Contract Compliance Agent

Purpose:
To verify approval of subcontractors on construction projects within District 10-0

Scope:
The subcontractor approval process is conducted for all active construction projects in District 10-0

Reference Documents:

- Project Contract
- Project Office Manual (POM) – Publication 2
- Labor Compliance Manual (PPCC Website/References/District 10/Labor Compliance Manuals)
- ECMS
- J:\Construction\10-0 DLCCA\Clearance Certificate\Clearance Certification

Procedure:

1.) Open the ECMS welcome web page (ECMS)

2.) Enter User ID & Password
Click on the “LOGIN” button

3.) Click on Work Queue
Click Subcontractor Requests

4.) Click the request number to display the request (hyperlink)

5.) At the bottom of the screen look at the Requested Items
If any items are in Review status, they must be reviewed by Harrisburg

ALL ITEMS MUST BE APPROVED BEFORE SUBCONTRACTOR CAN BE APPROVED

6.) Click on the Contractor Responsibility Program (CRP) hyperlink in ECMS
Click on “Log In”
Click on “CRP Check(s)”
Click on “Official CRP Check"

7.) Copy the Federal ID # for the subcontractor in ECMS
Paste the Federal ID # in to the “TIN” field on the CRP screen
Remove the “-“ and type the last # of the ID in the last space of the “TIN”

8.) Copy the Business Partner name from the Subcontractor Request Page

Paste the Business Partner name in the “Name” box of the CRP request page

9.) Click on the “Search” button
If the CRP check is ok you will see a Print Certification Button, go to step 12

If the Print Certification button is missing, go to step 10

10.) The bottom of the CRP screen will show who the subcontractor needs to contact to get a clearance certificate so that the subcontract can be approved
In comment box in ECMS type - “Sub Contractor to contact *Contact Name Here* @ *Contacts phone # here* to get a clearance certificate. Fax clearance cert to *Your Name Here* @ 724-357-5951 and resubmit sub request.”

11.) On the top of the ECMS screen Click on the Workflow button, then Correct

12.) Click on the Print Certification Button

13.) This opens up the CRP Check Certification Form
Click on the top left button – Export
Select Acrobat Format (PDF) then click OK
Save File to J:\Construction\10-0 DLCCA\Clearance Certificate
Close the CRP

14.) Back at the section Subcontractor Request in ECMS
Using the drop down next to Found on CRP select Yes or No

15.) Attach the scanned CRP check to the Subcontractor Request by:
Clicking on “Browse”
Go to J:\Construction\10-0 DLCCA\Clearance Certificate
Select appropriate PDF document
Select Document Type “CRP Check”

16.) At the top of the screen click on Save button
Click on the Workflow button and approve.

LC2 Labor Compliance Project Review

Process Owner: District Labor Contract Compliance Agent

Purpose:
To ensure Labor Compliance and Safety on Construction Projects.

Scope:
Review Construction project site(s) to ensure Labor Compliance and Safety activities are being enforced and monitored in accordance with the Labor Compliance Manual.

Reference Documents:

- Project Contract
- Project Office Manual (POM) – Publication 2
- Labor Compliance Manual (PPCC Website/References/District 10/Labor Compliance Manuals)

Procedure:

1.) Contact the project IIC to set an acceptable review date to ensure a project representative will be onsite to assist in the review for helping to retrieve any required documents or explanations to questions that arise during review.

2.) The review consists of ensuring all Labor Compliance Manual Sections, 1 through 11, are completed and up to date with the most recent information as directed or required by each section's content.

3.) If any findings or issues are identified, a detailed list will be provided to the project IIC of those findings or issues and the IIC is responsible for following up and addressing all as required.

Notes: All detailed finding lists will be maintained locally at the project

Whether findings or issues are identified or not, any review performed by the project staff or DLCCA will be logged into the attached "Review and Noncompliance Tracking Sheet ", in the back of the Labor Compliance Manual to ensure if further action is required, those actions are tracked to completion.

4.) If there is a pattern of identified systematic issues/failures found on various projects that cannot be easily revised or additional training should occur for our staff, a CPAR will be issued for correction of highlighted issue(s)

M1 Source of Supply

Process Owner: District Materials Unit Manager

Purpose:

The purpose of this procedure is to review and approve materials to be used on a PennDOT construction project submitted by the contractor.

Scope:

The scope incorporates all PennDOT construction projects active within the district.

Reference Documents:

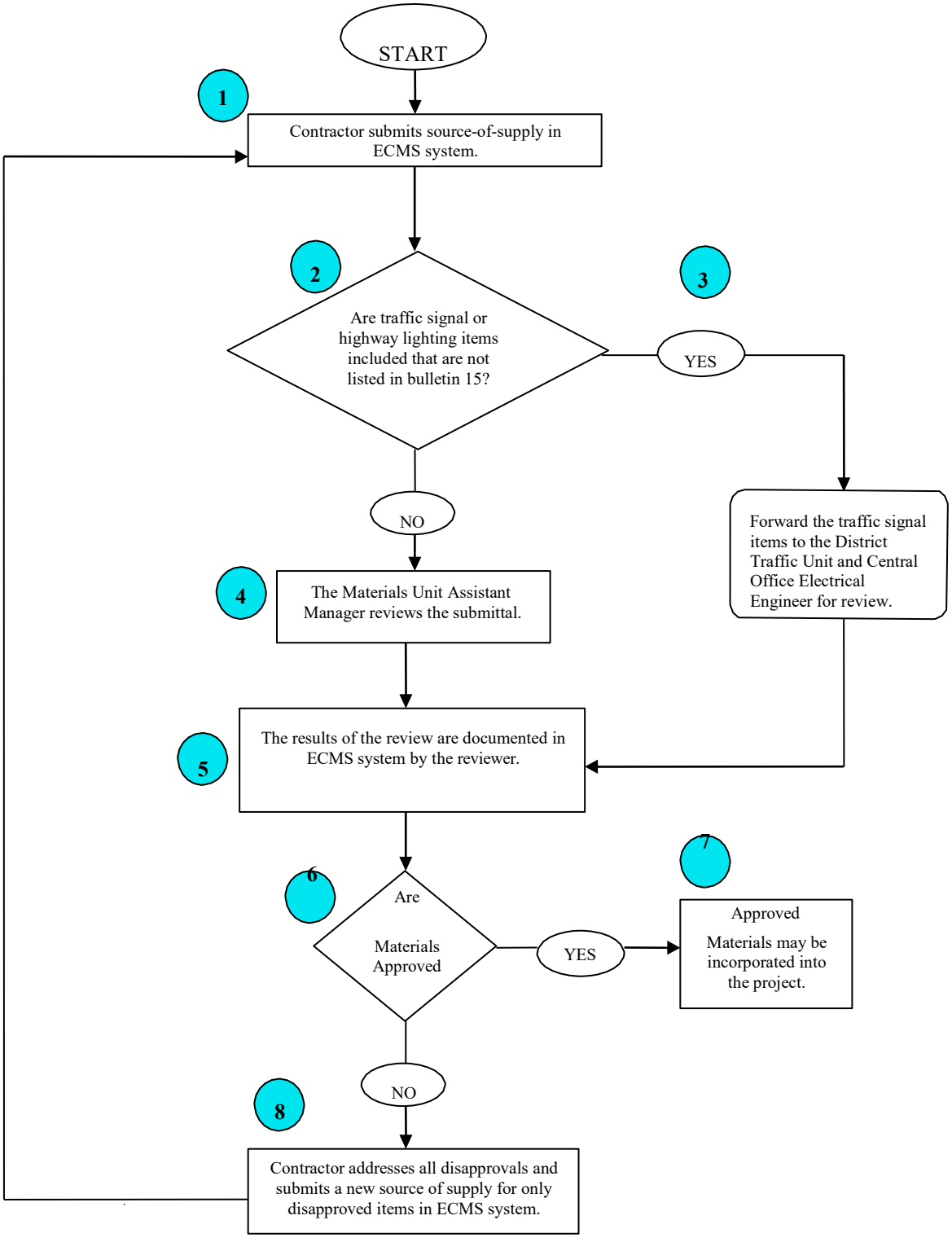
- Bulletin #14 Approved Aggregate Producers – Publication 34
- Bulletin #15 Approved Construction Materials – Publication 35
- Bulletin #41 Approved Bituminous Asphalt Producers – Publication 41
- Bulletin #42 Approved Concrete Producers – Publication 42
- Specifications – Publication 408
- Project Office Manual (POM) – Publication 2
- ASTM and AASHTO Specifications

Procedure:

The responsible areas involved in this process are as follows:

- Contractor submits source of supply in ECMS system for internal review and approval of materials to be incorporated into the project.
- Traffic signals Items that are not listed in Bulletin 15 are reviewed by District Traffic Unit and Central Office Electric Engineer. The approvals or disapprovals of these items will be incorporated into the District Materials review comments that are sent back to the contractor.
- The District Traffic Unit and Central Office Electric Engineer reviews and approves traffic signal items not listed in Bull 15. The Traffic Units comments are recorded into the Material Units Review. This does not increase the 14 day allowed for review.
- The Materials unit Assistant Manager reviews the submittal in accordance with Publication 408 and Bulletin #14, #15, #41, #42 and contact documents as applicable. If the submission includes highway lighting material ref to POM Section B6 (13-1). The materials unit completes the review within 14 days of receipt of the request.
- The results of the review are documented in ECMS system by Assistant Materials Manager. Some Materials are approved and some materials may need resubmitted.
- Contractor needs to check ECMS system to verify if materials are approved and may be incorporated into the project and if materials need to be resubmitted.
- Materials that have been reviewed and approved may be incorporated into work on the project in the field.
- For materials that have been disapproved the contractor must submit new source of supply in ECMS for the disapproved materials. This will start the new process once submitted.

See process map below:


START
1
Contractor submits source-of-supply in ECMS system.
2
Are traffic signal or highway lighting items included that are not listed in bulletin 15?
3
YES
Forward the traffic signal items to the District Traffic Unit and Central Office Electrical Engineer for review.
NO
4
The Materials Unit Assistant Manager reviews the submittal.
5
The results of the review are documented in ECMS system by the reviewer.
6
Are Materials Approved
YES
7
Approved
Materials may be incorporated into the project.
NO
8
Contractor addresses all disapprovals and submits a new source of supply for only disapproved items in ECMS system.

Explanation of Blocks in the Flowchart for Material Supply Review (M1)

BLOCK NUMBER	EXPLANATION
1	Contractor submits source of supply in ECMS system for internal review and approval of materials to be incorporated into the project.
2	Traffic signals Items that are not listed in Bull 15 are reviewed by District Traffic Unit and Central Office Electric Engineer. The approvals or disapprovals of these items will be incorporated into the District Materials review comments that are sent back to the contractor.
3	The District Traffic Unit and Central Office Electric Engineer reviews and approves traffic signal items not listed in Bull 15. The Traffic Units comments are recorded into the Material Units Review. This does not increase the 14 day allowed for review
4	The Materials Unit Assistant Manager reviews the submittal. in accordance with Publications 408 and Bulletin #14, #15, #41, #42 and contract documents as applicable. If the submission includes highway lighting materials refer to POM Section B6 (13-1). The Materials Unit completes the review within 14 days of receipt of the request.
5	The results of the review are documented in ECMS system by Assistant Materials Manager. Some Materials are approved and some materials may need resubmitted.
6	Contractor needs to check ECMS system to verify if materials are approved and may be incorporated into the project and if materials need to be resubmitted.
7	Materials that have been reviewed and approved may be incorporated into work on the project in the field.
8	For materials that have been disapproved the contractor must submit new source of supply in ECMS for the disapproved materials. This will start the process over once submitted.

M2 Equipment Verification

Process Owner: District Materials Unit Manager

Purpose:

The purpose of this procedure is to verify that maintenance organizations seal coat equipment (distributors, chippers and rubber-tired rollers) perform to specifications.

Scope:

This procedure is conducted on equipment used by maintenance organizations for state projects.

Reference Documents:

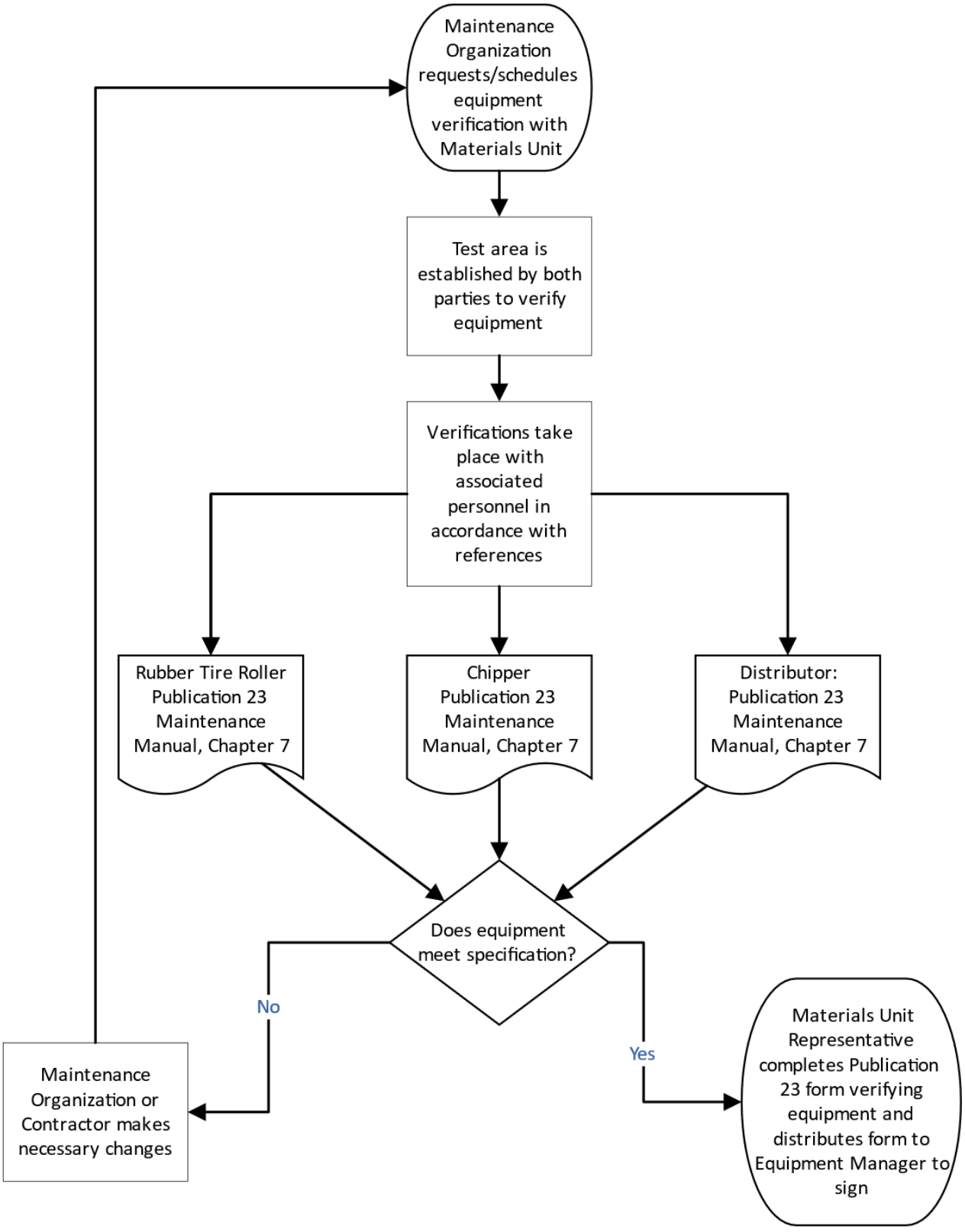
- Maintenance Manual – Publication 23
- Pennsylvania Test Methods Manual (PTM) – Publication 19
- Specifications – Publication 408
- District Forms (District Materials Unit OneDrive)

Procedure:

The responsible areas involved in this process are as follows:

- Maintenance organizations prepare equipment for verification and make requests to materials unit to schedule.
- Materials unit schedules and performs verification.
- Copy of verification sent to County Equipment Manager and saved in District Materials Unit OneDrive Equipment Verification File.

See process map below:


Maintenance Organization requests/schedules equipment verification with Materials Unit
Test area is established by both parties to verify equipment
Verifications take place with associated personnel in accordance with references
Rubber Tire Roller Publication 23 Maintenance Manual, Chapter 7
Chipper Publication 23 Maintenance Manual, Chapter 7
Distributor: Publication 23 Maintenance Manual, Chapter 7
Does equipment meet specification?
No
Yes
Maintenance Organization or Contractor makes necessary changes
Materials Unit Representative completes Publication 23 form verifying equipment and distributes form to Equipment Manager to sign

M3 Initial Aggregate Plant Inspection – Annual

Process Owner: District Materials Unit Manager

Purpose:
The purpose of this procedure is to ensure aggregate producers maintain requirements to provide material to meet PennDOT specifications.

Scope:
The scope includes all aggregate producers shipping to state related projects in the District.

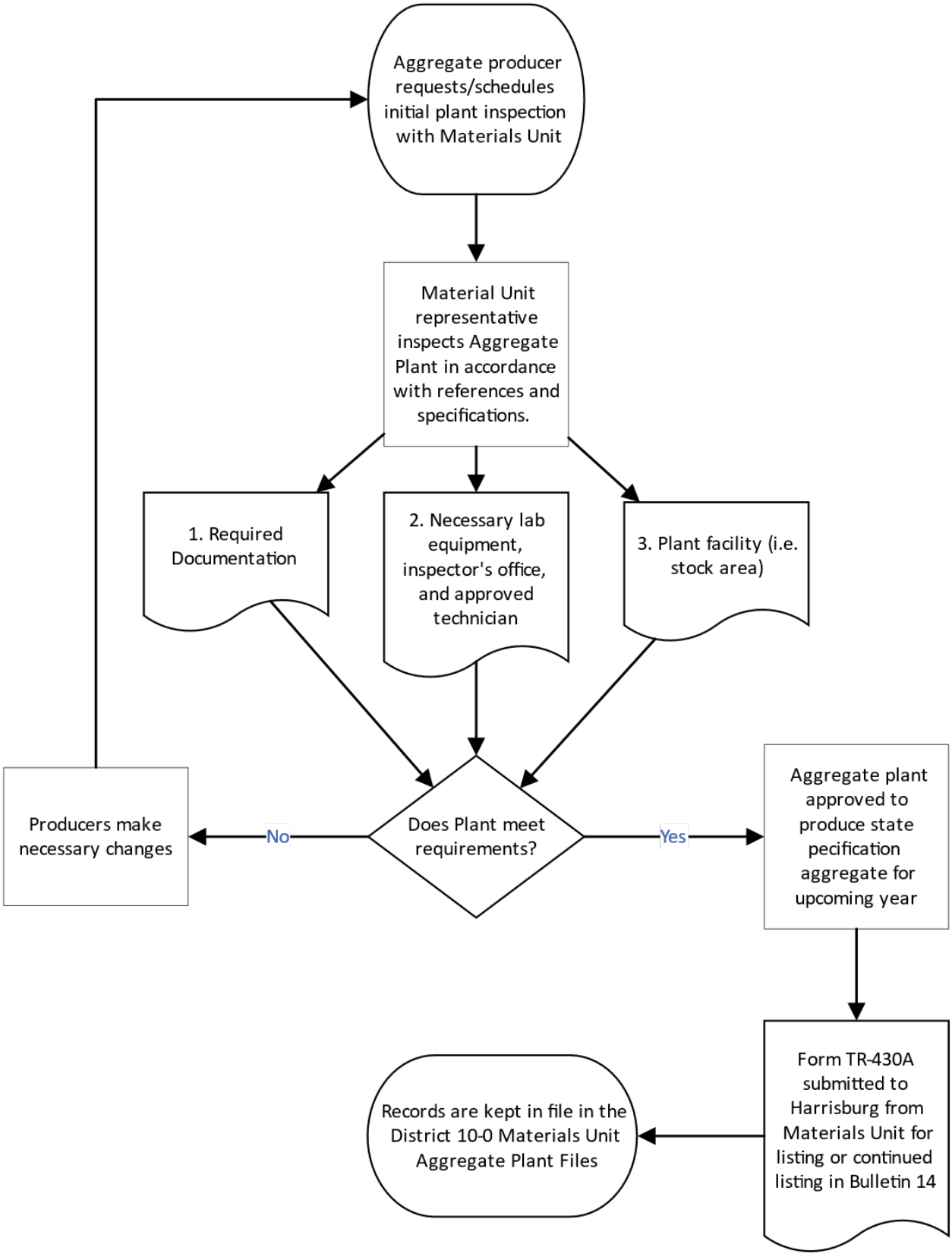
Reference Documents:

- Project Office Manual (POM) – Publication 2
- Pennsylvania Test Methods Manual (PTM) – Publication 19
- Bulletin #14 Approved Aggregate Producers – Publication 34
- Specifications – Publication 408
- ASTM and AASHTO Specifications
- TR-430A Aggregate Source Evaluation Report

Procedure:
The responsible areas involved in this process are as follows:

- Aggregate producer requests/schedules initial plant inspection with material unit
- Materials Unit Representative inspects aggregate plant in accordance with references and specifications
- Aggregate Plant approved to produce state specification aggregate for upcoming year.
- Form TR 430A submitted to Harrisburg from Material Unit for listing or continued listing in Bulletin 14.
- Copy of TR 430A saved in Materials Unit OneDrive, Plant file.

See process map below:


Aggregate producer requests/schedules initial plant inspection with Materials Unit
Material Unit representative inspects Aggregate Plant in accordance with references and specifications.
1. Required Documentation
2. Necessary lab equipment, inspector's office, and approved technician
3. Plant facility (i.e. stock area)
Does Plant meet requirements?
No
Yes
Producers make necessary changes
Aggregate plant approved to produce state pecification aggregate for upcoming year
Form TR-430A submitted to Harrisburg from Materials Unit for listing or continued listing in Bulletin 14
Records are kept in file in the District 10-0 Materials Unit Aggregate Plant Files

M4 Initial Asphalt Inspection – Annual

Process Owner: District Materials Unit Manager

Purpose:

The purpose of this procedure is to ensure asphalt producers maintain requirements meeting specifications to provide material to PennDOT projects on an annual basis.

Scope:

The scope includes all asphalt producers shipping to state related projects in the District or surrounding Districts.

Reference Documents:

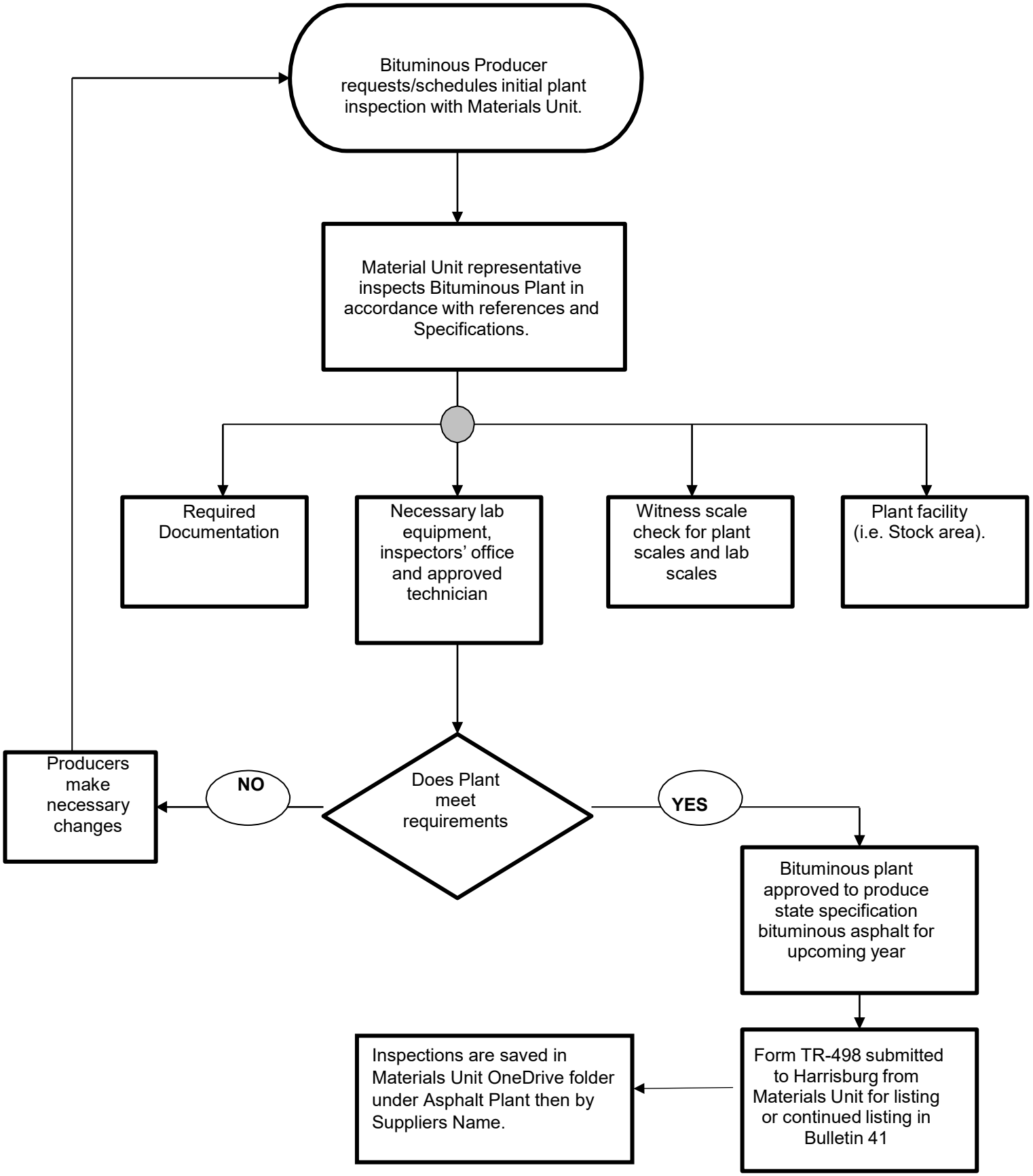
- Project Office Manual (POM) – Publication 2
- Pennsylvania Test Methods Manual (PTM) – Publication 19
- Bulletin #14 Approved Aggregate Producers – Publication 34
- Bulletin #15 Approved Construction Materials – Publication 35
- Bulletin #41 Producers of Bituminous Materials - Publication 41
- Specifications – Publication 408
- Bulletin #27 Bituminous Concrete Mixtures, Design Procedures – Pub. 27
- ASTM and AASHTO Specifications
- Plant Inspections (District Materials Unit OneDrive)
- TR – 498 Bituminous Concrete Plant Inspection Report

Procedure:

The responsible areas involved in this process are as follows:

- Asphalt producer requests plant inspection
- Materials unit conducts inspection
- Other outside agencies (i.e. Scale company, raw material representatives)

See process map below:


Bituminous Producer requests/schedules initial plant inspection with Materials Unit.
Material Unit representative inspects Bituminous Plant in accordance with references and Specifications.
Required Documentation
Necessary lab equipment, inspectors' office and approved technician
Witness scale check for plant scales and lab scales
Plant facility (i.e. Stock area).
Does Plant meet requirements
NO
Producers make necessary changes
YES
Bituminous plant approved to produce state specification bituminous asphalt for upcoming year
Form TR-498 submitted to Harrisburg from Materials Unit for listing or continued listing in Bulletin 41
Inspections are saved in Materials Unit OneDrive folder under Asphalt Plant then by Suppliers Name.

Annual Asphalt/Concrete Plant Inspection Bulletin #41/Bulletin #27-1	
Scale Check: P.T.M. #410 P.O.M. B-7/5-1	Checked Annually – Show Increments Paperwork on File & Scales Stickered Scales 0.5% or less of Batch Wt. Repeat Check 0.1% of Scale Capacity
Lab Scales: Bulletin #27 1-2 & 3	AASHTO M-231 Certified Annually-Paperwork on file and Stickered
50 lb. Test Weights: Bulletin #27 1-10	Paperwork on file (Class F) Certified by state or other agency every 3 years
Lab Equipment: Bulletin #27 / 1 to 3	As per Bulletin #27 / 1A – 1.7
Break Machine:	Witness Calibration or paperwork on file
Plant Inspection Report: Bulletin #41 / F-1	Form TR-498 on file
Inspectors Office: Bulletin #41 / F-1	As per 408/609.2 & 714.5
Q.C. Plan: 408 / 106.03 (2A) 408 / 413(e)1a	Approved and On File for Current Year
Plant Tech Evaluation Sheet: 408/413(e)1b Bulletin #27 / 1-4	On File Pub. 408 / 409.2E & Bulletin #27/1-4
Truck Scales: Bulletin #27/1-8	Checked Annually by Dept. of Agriculture or other agency – Paperwork on File
Drum Continuous Mix Plants: Bulletin #27 / 1-15	Calibrate annually (Asphalt Pump every 4 Months) – Paperwork on file.
Volumeters Bitumionometers: Bulletin #27 / 1-15 P.O.M. B-7 / 5-3	Calibrate & Document Twice a year
Fluidmeter:	Checked annually – Paperwork on file Continuous Mix Plants – Sprocket Paperwork on file
Mix Designs: 408 / 413(e)	Approved & On File (Not Needed for Inspection)
Asphalt:	If Asphalt is left in the tanks over winter is to be used, lift sample for testing
Weightmaster: Bulletin #27 / 1-8	Licensed (Bulletin #27 (1A – 1.11)
Stockpiles: 408 / 106.05(B)	Partitions Base of BCBC or Type “C” Concrete / 4” min.
Ignition Ovens: Bulletin #41/F-1 P.T.M. #608	Have Scales Checked
Mechanical Shakers: Bulletin #42/F-1 P.T.M. #608 Bulletin #27/1-3	Calibrate Annually
Gyratory Compactor: Bulletin 27 / 2-3	Calibrate Bi-Annually / Verify Bi- Annually Internal Angle 1.16 ± .02 Check Mold Diameter 0.50
AASHTO & ASTM:	Copy of Test Methods on File

M5 Initial Concrete Plant Inspection – Annual

Process Owner: District Materials Unit Manager

Purpose:

The purpose of this procedure is to ensure concrete producers maintain requirements meeting specifications to provide material to PennDOT projects on an annual basis.

Scope:

The scope includes all concrete producers shipping to state related projects in the district or surrounding districts.

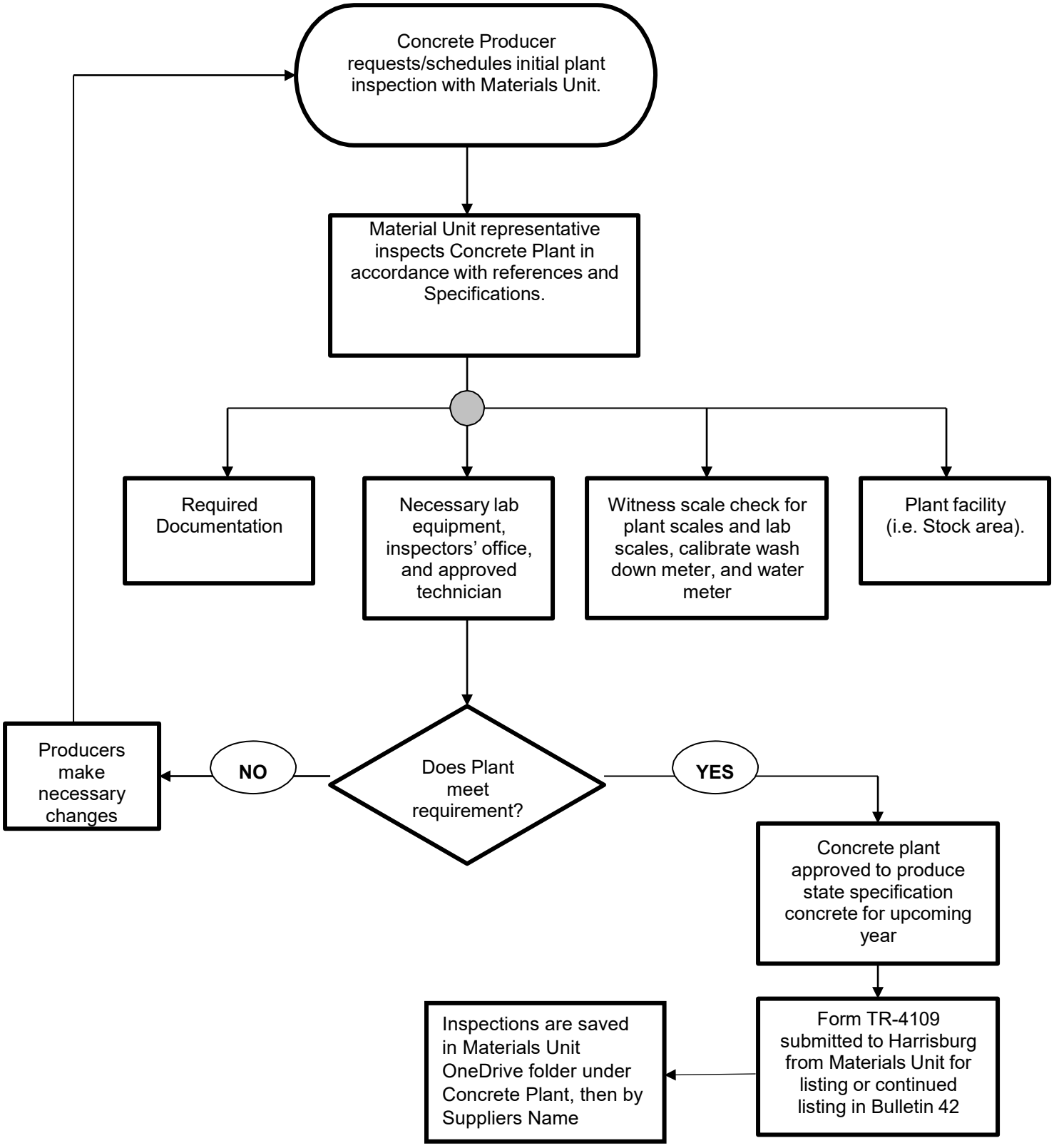
Reference Documents:

- Bulletin # 5 Design Methods for Air-Entrained Portland Cement Concrete and Ready-Mixed Portland Cement Concrete
- Plant Inspections (District Materials Unit OneDrive)
- Project Office Manual (POM) – Publication 2
- Pennsylvania Test Methods Manual (PTM) – Publication 19
- Bulletin #14 Approved Aggregate Producers – Publication 34
- Bulletin #15 Approved Construction Materials – Publication 35
- Specifications – Publication 408
- ASTM and AASHTO Specifications
- TR – 4109 Portland Cement Concrete Plant Report

Procedure:

- The responsible areas involved in this process are as follows:
- Concrete producer requests plant inspection
- Materials unit conducts inspection
- Other outside agencies (i.e. Scale Company, raw material representatives)

See process map below:


Concrete Producer requests/schedules initial plant inspection with Materials Unit.
Material Unit representative inspects Concrete Plant in accordance with references and Specifications.
Required Documentation
Necessary lab equipment, inspectors' office, and approved technician
Witness scale check for plant scales and lab scales, calibrate wash down meter, and water meter
Plant facility (i.e. Stock area).
Does Plant meet requirement?
NO
Producers make necessary changes
YES
Concrete plant approved to produce state specification concrete for upcoming year
Form TR-4109 submitted to Harrisburg from Materials Unit for listing or continued listing in Bulletin 42
Inspections are saved in Materials Unit OneDrive folder under Concrete Plant, then by Suppliers Name

Annual Asphalt/Concrete Plant Inspection Bulletin #41/Bulletin #27-1	
Scale Check: P.T.M. #410 P.O.M. B-7/5-1	Checked Annually – Show Increments Paperwork on File & Scales Stickered Scales 0.5% or less of Batch Wt. Repeat Check 0.1% of Scale Capacity
Lab Scales: Bulletin #27 1-2 & 3	AASHTO M-231 Certified Annually-Paperwork on file and Stickered
50 lb. Test Weights: Bulletin #27 1-10	Paperwork on file (Class F) Certified by state or other agency every 3 years
Lab Equipment: Bulletin #27 / 1 to 3	As per Bulletin #27 / 1A – 1.7
Break Machine:	Witness Calibration or paperwork on file
Plant Inspection Report: Bulletin #41 / F-1	Form TR-498 on file
Inspectors Office: Bulletin #41 / F-1	As per 408/609.2 & 714.5
Q.C. Plan: 408 / 106.03 (2A) 408 / 413(e)1a	Approved and On File for Current Year
Plant Tech Evaluation Sheet: 408/413(e)1b Bulletin #27 / 1-4	On File Pub. 408 / 409.2E & Bulletin #27/1-4
Truck Scales: Bulletin #27/1-8	Checked Annually by Dept. of Agriculture or other agency – Paperwork on File
Drum Continuous Mix Plants: Bulletin #27 / 1-15	Calibrate annually (Asphalt Pump every 4 Months) – Paperwork on file.
Volumeters Bitumionometers: Bulletin #27 / 1-15 P.O.M. B-7 / 5-3	Calibrate & Document Twice a year
Fluidmeter:	Checked annually – Paperwork on file Continuous Mix Plants – Sprocket Paperwork on file
Mix Designs: 408 / 413(e)	Approved & On File (Not Needed for Inspection)
Asphalt:	If Asphalt is left in the tanks over winter is to be used, lift sample for testing
Weightmaster: Bulletin #27 / 1-8	Licensed (Bulletin #27 (1A – 1.11)
Stockpiles: 408 / 106.05(B)	Partitions Base of BCBC or Type “C” Concrete / 4” min.
Ignition Ovens: Bulletin #41/F-1 P.T.M. #608	Have Scales Checked
Mechanical Shakers: Bulletin #42/F-1 P.T.M. #608 Bulletin #27/1-3	Calibrate Annually
Gyratory Compactor: Bulletin 27 / 2-3	Calibrate Bi-Annually / Verify Bi- Annually Internal Angle 1.16 ± .02 Check Mold Diameter 0.50
AASHTO & ASTM:	Copy of Test Methods on File

M6 District Quality Assurance, Asphalt Plant 30 Day Review

Process Owner: District Materials Unit Manager

Purpose:

The purpose of this procedure is to ensure that the appropriate steps are taken to verify an asphalt plant may provide material.

Scope:

The scope includes any review of plants for the purpose mentioned above.

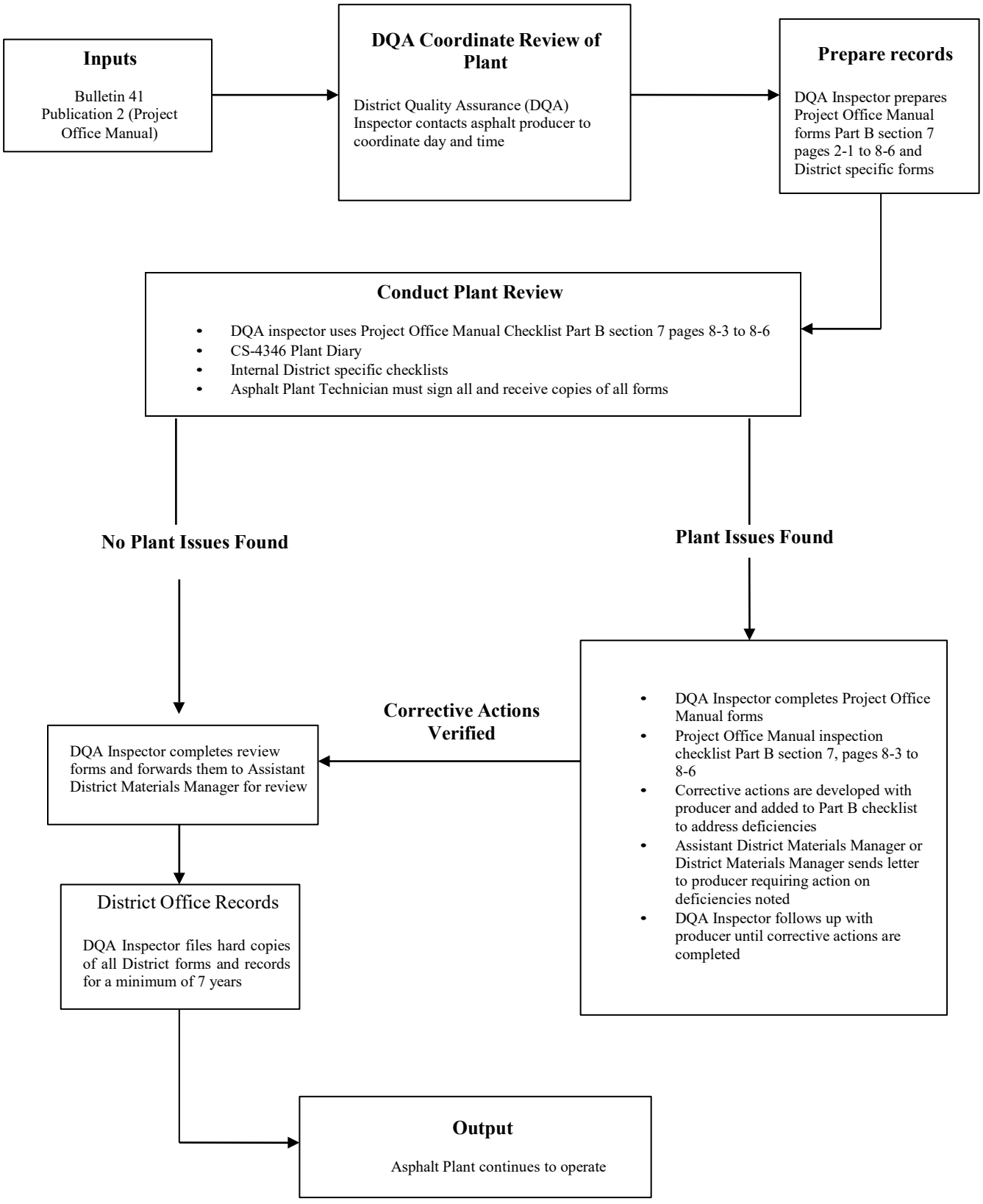
Reference Documents:

The following references are applicable:

- Project Office Manual (POM) – Publication 2
- Bulletin #41 Approved Bituminous Asphalt Producers – Publication 41
- Specifications – Publication 408
- District Internal forms (District Materials Unit OneDrive)

Procedure:

See process map below:


Inputs
Bulletin 41
Publication 2 (Project Office Manual)
DQA Coordinate Review of Plant
District Quality Assurance (DQA) Inspector contacts asphalt producer to coordinate day and time
Prepare records
DQA Inspector prepares Project Office Manual forms Part B section 7 pages 2-1 to 8-6 and District specific forms
Conduct Plant Review
DQA inspector uses Project Office Manual Checklist Part B section 7 pages 8-3 to 8-6
CS-4346 Plant Diary
Internal District specific checklists
Asphalt Plant Technician must sign all and receive copies of all forms
No Plant Issues Found
Plant Issues Found
DQA Inspector completes review forms and forwards them to Assistant District Materials Manager for review
Corrective Actions Verified
DQA Inspector completes Project Office Manual forms
Project Office Manual inspection checklist Part B section 7, pages 8-3 to 8-6
Corrective actions are developed with producer and added to Part B checklist to address deficiencies
Assistant District Materials Manager or District Materials Manager sends letter to producer requiring action on deficiencies noted
DQA Inspector follows up with producer until corrective actions are completed
District Office Records
DQA Inspector files hard copies of all District forms and records for a minimum of 7 years
Output
Asphalt Plant continues to operate

M7 Warranty Review

Process Owner: District Materials Unit Manager

Purpose:
The purpose of this procedure is to ensure that reviews of work components associated with any warranties are conducted and communicated within the warranty term.

Scope:
The scope includes all construction projects that have active warranties.

Reference Documents:
Project special provisions located in ECMS
Pub. 448 Chapter 6
Manufacturer specifications

Procedure:

- Finals Unit Supervisor will review projects throughout the construction phase (pre-construction conference, project progress meetings, project records turn-in, project closeout) to see if any warranties are incorporated. Projects having a warranty will be added to the Warranty Tracking Sheet and a Misc. Finalization Checklist item will be created.
- Warranties are incorporated into the project via:
    - Quality Based Method of Innovative Bidding (following Pub. 448 Chapter 6)
        - Warranty toggle located in the ECMS detail screen will be checked “Yes. Finalization Checklist header screen of ECMS will also display Warranty: YES.

      Note : Warranty indicator in ECMS is only to be utilized for the Innovative Bidding type and not for the other methods of Warranty incorporation.
    - Special Provision
    - Contract Item (408 Specification)
    - Work Order / Authorization (Warranty added to the project after bid).
- Notify appropriate Unit for warranty review (or combination of below)
    - Roadway
        - Pavement Manager
        - Material Manager
    - Structure
        - Structure Control Engineer
        - Bridge Unit
    - New Product
        - Design Unit
        - Material Manager
        - CE Council

- After each review (including final review), a letter is drafted and sent to the Contractor informing Contractor of the findings of the review and status of the warranty.
- Finalization Checklist will be updated by Finals Supervisor to include the documentation of each review.
- Once Warranty work has been reviewed and accepted by the Department requiring no further remediation Miscellaneous Finalization Checklist Item is dated as complete.

M8 Construction Unit Clearance Transmittal Tracking

Process Owner: District Materials Unit Manager

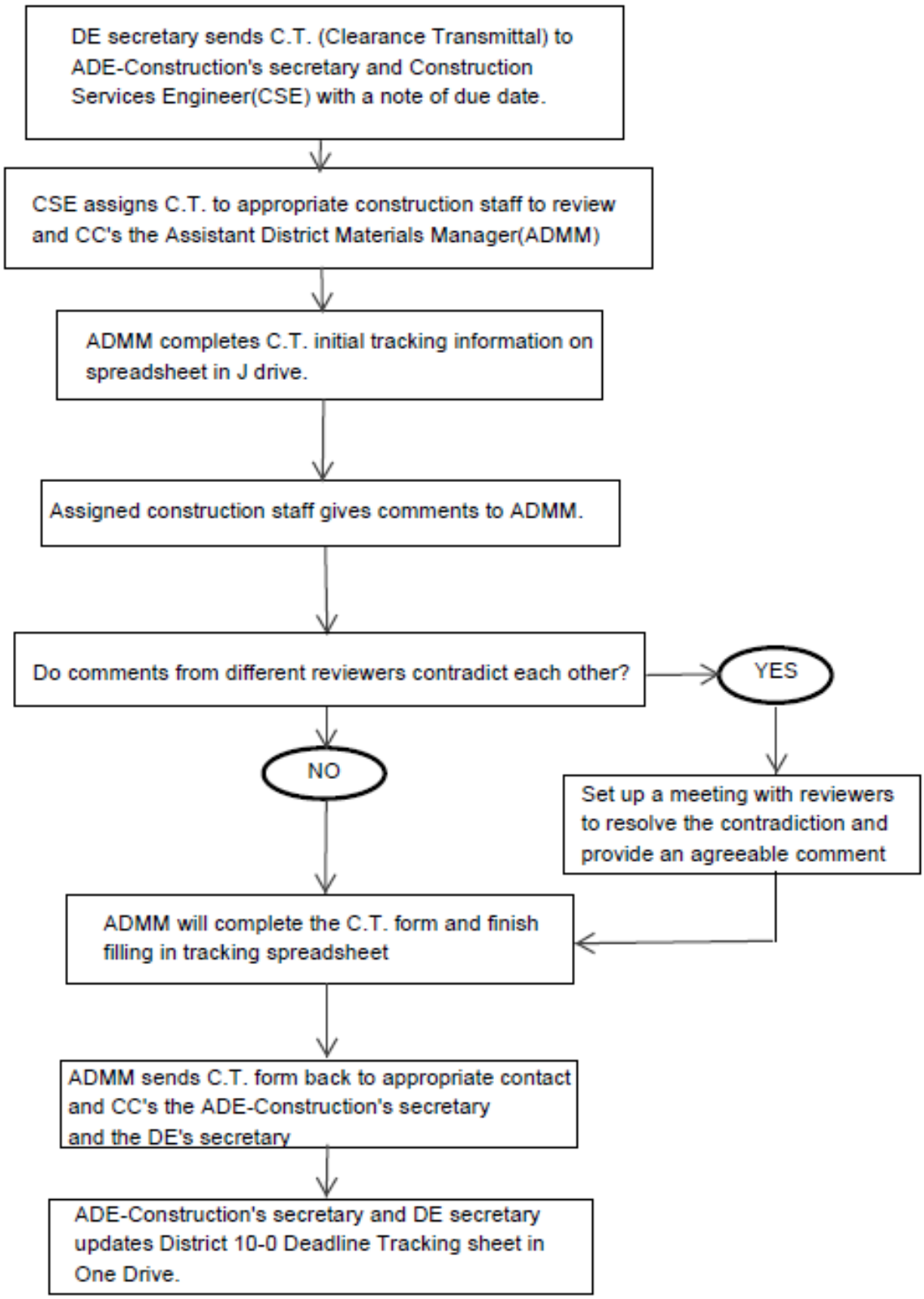
Purpose:
The purpose of this procedure is to track clearance transmittal to be reviewed by the construction staff.

Scope:
This procedure is to track clearance transmittal submitted by central office.

Reference Documents:
- Clearance Transmittal Tracking Sheet

Procedure:
The process are as follows:
- District Executive secretary sends Clearance Transmittal to Assistant District Executive-Construction secretary and Construction Services Engineer
- Construction Services Engineer assigns Clearance Transmittal to appropriate Construction staff to review and CC's the Assistant District Materials Manager.
- Assistant District Materials Manager completes Clearance Transmittal initial tracking information on spreadsheet in J Drive.
- Assigned construction Unit staff gives comments to the Assistant District Materials Manager.
- Assistant District Materials Manager will complete the Clearance Transmittal form and finish filling in tracking spreadsheet.
- Assistant District Materials Manager sends Clearance Transmittal form back to appropriate contact and CC's the Assistant District Executive-Construction secretary and District Executive secretary.

See process map below:


DE secretary sends C.T. (Clearance Transmittal) to ADE-Construction's secretary and Construction Services Engineer(CSE) with a note of due date.
CSE assigns C.T. to appropriate construction staff to review and CC's the Assistant District Materials Manager(ADMM)
ADMM completes C.T. initial tracking information on spreadsheet in J drive.
Assigned construction staff gives comments to ADMM.
Do comments from different reviewers contradict each other?
YES
NO
Set up a meeting with reviewers to resolve the contradiction and provide an agreeable comment
ADMM will complete the C.T. form and finish filling in tracking spreadsheet
ADMM sends C.T. form back to appropriate contact and CC's the ADE-Construction's secretary and the DE's secretary
ADE-Construction's secretary and DE secretary updates District 10-0 Deadline Tracking sheet in One Drive.

SC1 Structure Plans Review

Process Owner: District Structure Control Engineer (SCE)

Purpose:
To review structural plans for construction projects prior to bid letting.

Scope:
Priority structure projects designed by Bridge Designers. A priority structure project is defined as any bridge or culvert project carrying traffic on or over the National Highway System or with a structure cost estimate exceeding $1,500,000.

Reference Documents:

- Specifications – Publication 408
- Design Manual Part 4 – Publication 15M
- Bridge Construction Standards – Publication 219M
- Bridge Design Standards – Publication 218M
- Contract Specifications
- Proposed Special Provisions
- AASHTO Manual
- AWS Manual (Bridge Welding Code)
- Structure Plan Reviews

Procedure:
The responsible parties involved in this process are as follows:

- Design Project Manager
- Bridge Designer (either In-House or Consultant)
- Structure Control Engineer or Assistant Structure Control Engineer

Steps:
1. Upload structure plans into the District's Document Routing System (DRS) or the appropriate Constructability Review folder – by the Design Project Manager
2. Notify Structure Control Engineer by email that structure plans are available for review
3. Structure Control Engineer enters the project information in the Structure Plan Reviews spreadsheet.
4. Structure Control Engineer decides as to whether the project meets the criteria for a priority structure project
5. Review structure plans for priority structure projects and input comments into the DRS or the District 10-0 Constructability Comment Sheet – by the Structure Control Engineer
6. Notify the Design Project Manager that comments have been submitted to the DRS (automated by the DRS) or submit the completed Comment Sheet - comments are permitted to be entered up to two weeks after constructability reviews - by the Structure Control Engineer

7. After consultation with the Bridge Designer, the Design Project Manager provides responses in the DRS or the Comment Sheet to the Structure Control Engineer's comments
8. The Design Project Manager may meet with the Structure Control Engineer to review comment responses and settle any differences, if needed
9. The Design Project Manager directs the Bridge Designer to update the structure plans incorporating the changes

SC2 Disposal of Bridge Paint Waste

Process Owner: District Structure Control Engineer (SCE)

Purpose:
This procedure outlines steps to be followed in disposing of bridge paint waste.

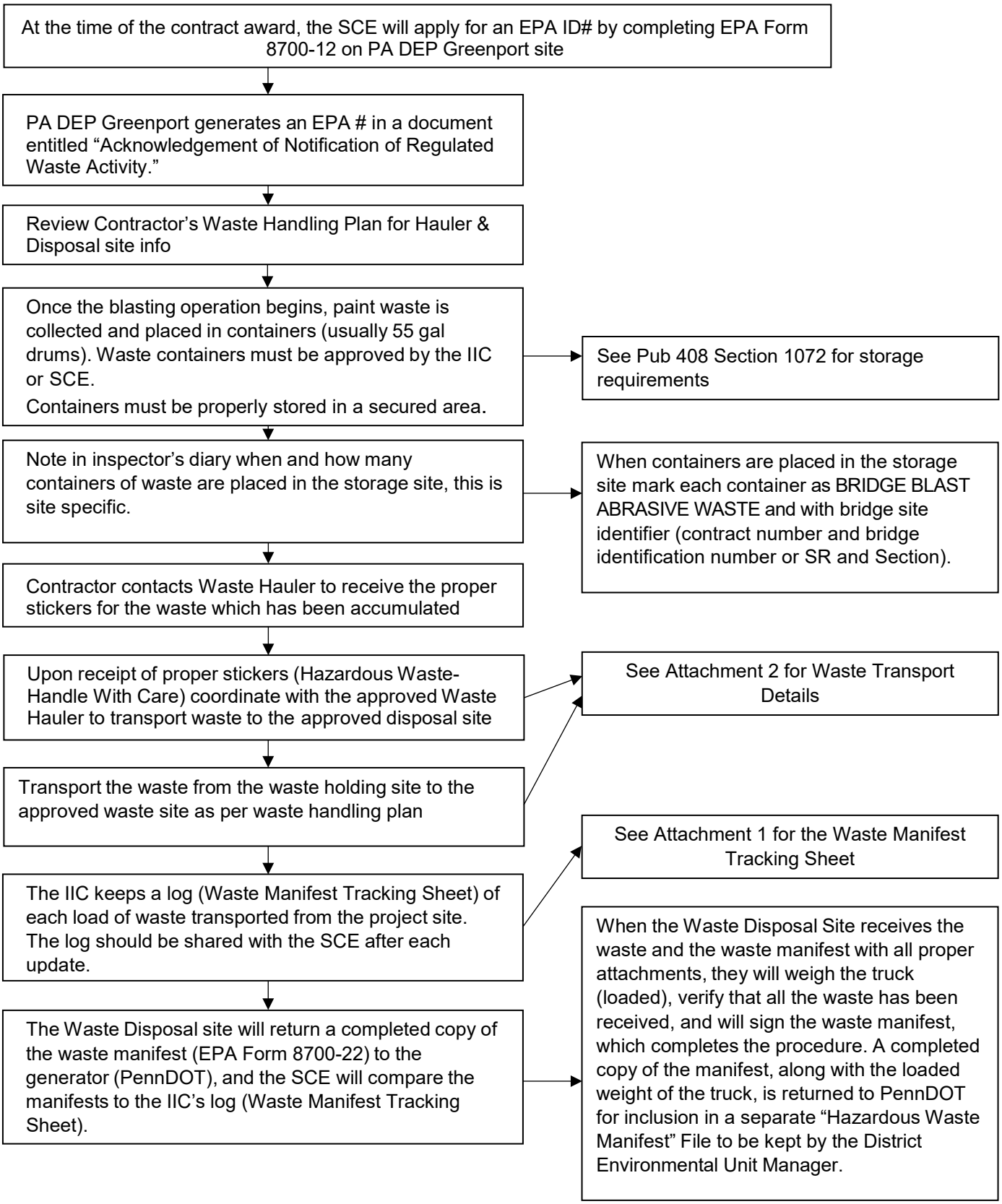
Scope:
All bridge painting projects in District 10.

Reference Documents:

- Specifications – Publication 408
- Project Office Manual (POM) – Publication 2 Part B, Section 4, p. 15-1
- Project Office Manual (POM) – Publication 2 Part B, Section 4, p. 18-1
- Waste Manifest Tracking Sheet
- Special Provisions to the contract
- Approved Waste Disposal Plan
- EPA Form 8700-12 (Notification of RCRA Subtitle C Activity)
- EPA Form 8700-22 (Uniform Hazardous Waste Manifest)
- DEP Greenport

Procedure:
See the process map below:

Disposal of Bridge Paint Waste - Process Map



ATTACHMENT #1
WASTE MANIFEST TRACKING SHEET

PAINT WASTE MANIFEST TRACKING SHEET

3/30/17

ECMS Number _____	County _____	Project Name _____
S.R. _____	Section _____	Structure Name* _____
Storage Area Description _____		Does storage area meet requirements of special provision and waste disposal plan (Y/N) _____

Field Personnel to Complete				SCE to Complete
Manifest Tracking Number	EPA Provisional ID #	Transport Date	Dept. Rep That Signed Manifest	Date Manifest Returned to District

* Provide a separate sheet for each structure for projects with multiple structures.

ATTACHMENT # 2

BRIDGE PAINT WASTE TRANSPORT DETAILS

1. Refer to Pub 408 Section 1072.3(c) and POM, Part B, Section 4, page 18-1

2. 90 days after the first waste container was placed into the waste storage site it is to be transported to the designated waste facility as per waste handling plan. The waste-handling plan is to be submitted to the Department representative for review and acceptance by the contractor a minimum of 21 calendar days prior to the start of paint removal operations.

3. Prior to transporting waste, the contractor will sample, test the stored waste, and prepare a Waste Characterization Data Sheet and provide it to the Department representative for review and signature.

4. Department Representative prepares Additional Information Sheet (See POM Part B, Section 4, page 15-3).

5. Contractor is to provide a waste manifest (EPA Form 8700-22) for each transport of bridge paint waste.

6. The Department representative is to review the waste manifest. A listing of the type of waste generated and the disposal facility being used as per waste handling plan should be found on the waste manifest.

7. The Department representative will verify the number of waste containers being transported matches the information indicated on the manifest.

8. After the waste manifest has been reviewed, a certified Department Representative signs the manifest.

9. The signed manifest and the waste are transported to the approved disposal facility. The Department Representative documents the waste transport on the Waste Manifest Tracking Sheet and sends a copy to the SCE.

10. The contractor provides a certification for each manifest shipment that the waste was accepted by the disposal facility, and properly disposed.

11. The SCE files all completed manifests and waste certificates in a separate file for such and the documents are kept indefinitely.

12. The SCE compares the manifests received with the IIC's Waste Manifest Tracking Sheet to ensure all manifests have been received by the Department.

SC3 Project Initiation – Local Bridge Projects

Process Owner: District Structure Control Engineer (SCE)

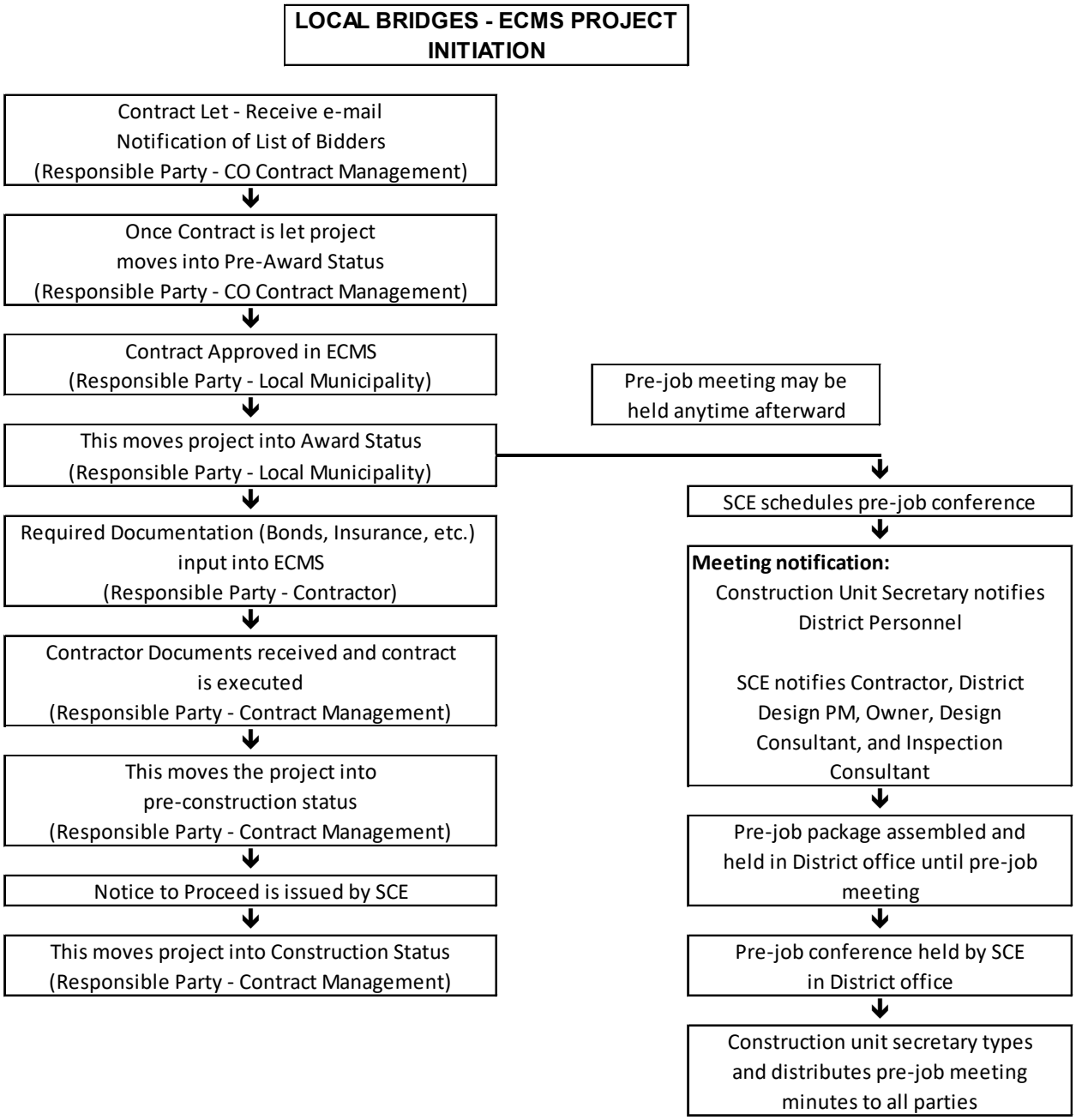
Purpose:
This procedure is to describe project initiation tasks associated with a local bridge project.

Scope:
All local bridge projects in District 10.

Reference Documents:

- Bridge Construction Standards – Publication 219M
- Bridge Design Standards – Publication 218M
- Specifications – Publication 408
- Contract Specifications
- Special Provisions to the Contract
- AASHTO Manual
- AWS Manual (Bridge Welding Code)
- Design Manual Part 4 – Publication 15M

Procedure:
See process map below:


LOCAL BRIDGES - ECMS PROJECT INITIATION
Contract Let - Receive e-mail Notification of List of Bidders (Responsible Party - CO Contract Management)
Once Contract is let project moves into Pre-Award Status (Responsible Party - CO Contract Management)
Contract Approved in ECMS (Responsible Party - Local Municipality)
This moves project into Award Status (Responsible Party - Local Municipality)
Required Documentation (Bonds, Insurance, etc.) input into ECMS (Responsible Party - Contractor)
Contractor Documents received and contract is executed (Responsible Party - Contract Management)
This moves the project into pre-construction status (Responsible Party - Contract Management)
Notice to Proceed is issued by SCE
This moves project into Construction Status (Responsible Party - Contract Management)
Pre-job meeting may be held anytime afterward
SCE schedules pre-job conference
Meeting notification:
Construction Unit Secretary notifies District Personnel
SCE notifies Contractor, District Design PM, Owner, Design Consultant, and Inspection Consultant
Pre-job package assembled and held in District office until pre-job meeting
Pre-job conference held by SCE in District office
Construction unit secretary types and distributes pre-job meeting minutes to all parties

MR1 Management Review (9.3)

Process Owner: ISO Management Representative

9.3.1 General

Process owners and top management of construction constitute the Management Review Committee. This committee shall review the quality management system annually, to ensure its continuing suitability, adequacy, and effectiveness. The review shall evaluate the need for changes to the organization's quality management system, including an annual review of the quality policy and quality objectives. Individual process owners are assigned to review their process(es) and are to note any potential improvements, updates, and/or changes that may be necessary and report them at the Management Review meetings.

9.3.2 Review Input

The Management Review Committee shall review the effectiveness of the quality system, current performance, and improvement opportunities in meetings held at least yearly. The discussion items shall be documented in minutes of the meetings. The subjects to be included in the Management Review are:

- Old Business and Prior Action Items
- Certification Status
- CPAR
- Quality Management System Review
- Feedback – Survey Results and CCC
- Resources
- Process performance
- Opportunities/Risk
- Follow up Action Items

9.3.3 Review output

Minutes of the Management Review meetings shall include actions related to the improvement of the Quality Management System and its processes. Minutes shall include discussions regarding improvement of products related to customer requirements and related resource needs. Minutes shall be issued as a result of the reviews, and are maintained by the Management Representative.