



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

Quality Process Manual

Version 1.0

Updated: April 2020

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**. 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

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C1 Employee Performance Review Processing

Process Owner: Construction Services Engineer

Purpose:

To establish measures and goals for the employee to achieve.

Scope:

All Construction unit personnel

Reference Documents:

- Position Descriptions (in ESS under “Supervisor Self Service User” tab
 - Update Position Descriptions
 - Under “Create/Update PD” click on “Select”
- [Employee Performance Review User Guide](#)
- [Employee Performance Review Website Link](#)

Procedure:

HR sends out reminder to the units to complete Union and Nonunion EPR’s at appropriate times.

The position description is pulled from the on-line file; employees listed under their supervisor’s position number. The employee performance review form is updated with any changes in the employee’s position and updates for the new year. The supervisor goes over the old year’s review and assigns any comments and reviews the new year’s measures with the employee. The employee, supervisor, and a reviewer electronically sign the document. The completed EPR is then emailed to the HR portal.

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 Survey Index (CSI)
- After Action Review's ([AAR](#))
- Customer Care Center ([eCCC](#))

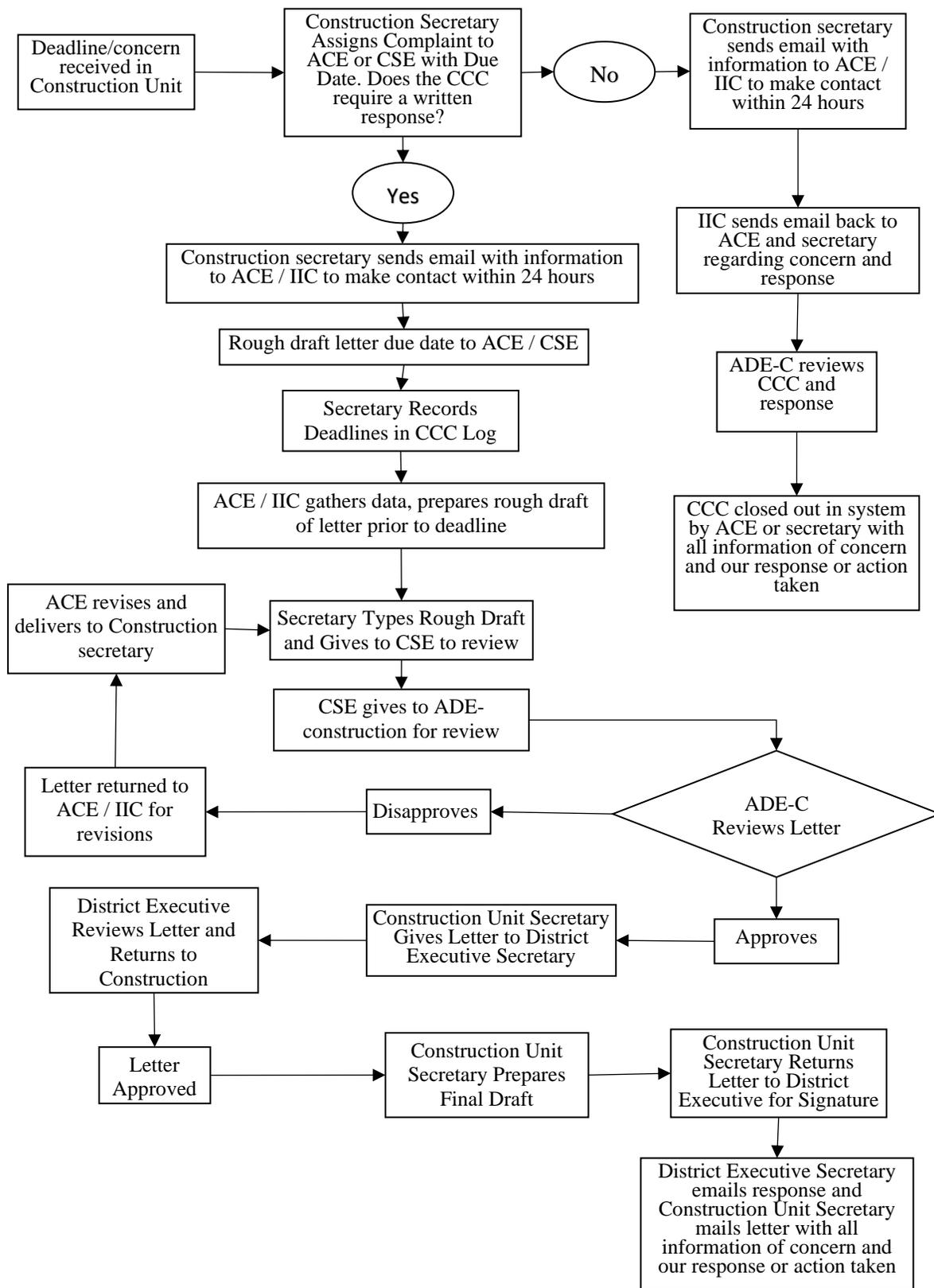
Procedure:

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. District 10 Construction conducts customer surveys, Internal, External – Project Specific property owners, commuters, Material Suppliers, Prime Contractors and Consultants. The specific projects are decided by Management.

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



C3 Equipment Procurement

(This process is under development)

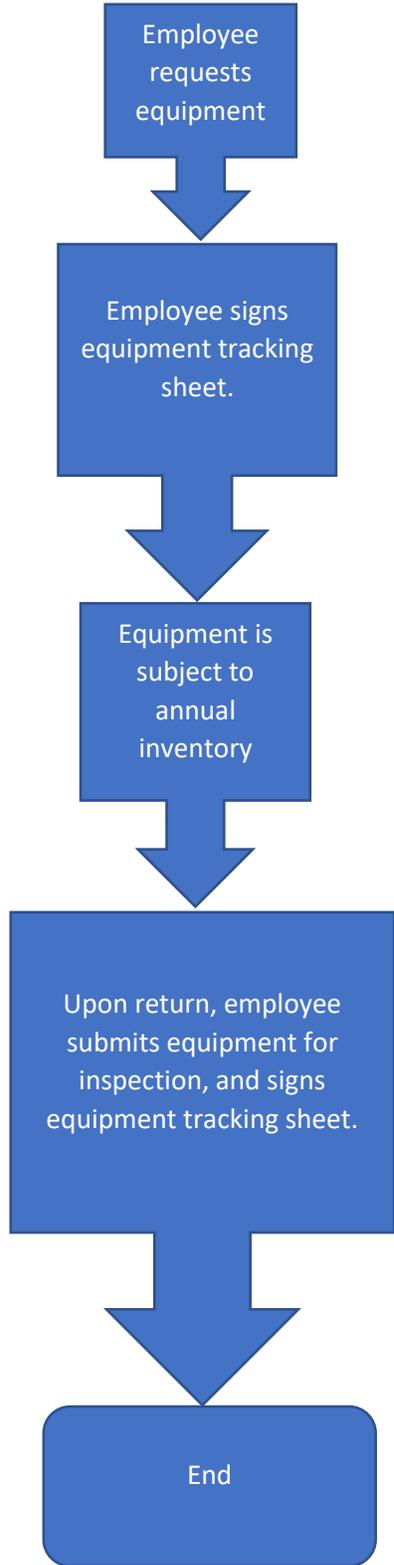
Process Owner: Construction Unit Secretary

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

Scope: Applies to all Unit personnel.

Process:

The Department issues necessary PPE 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 Construction Unit's Safety Coordinator. Additional supplies are provided by the Unit Secretary.



C4 Internal Audit

Process Owner: ISO Management Representative

Purpose:

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

Scope:

Applies to all District 10 Construction Unit QMS Processes

Reference Documents:

- ISO 9001:2015
- Internal Audit Schedule

Procedure:

The management representative shall prepare 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. The schedule shall be reviewed in Management Reviews for appropriateness. 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 management representative shall maintain a list of qualified personnel to conduct internal audits. The management representative shall ensure 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 shall conduct individual audits. The auditor(s) shall 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 shall be prepared and presented to the ADE – Construction, the manager or supervisor of the area being audited, the 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 Action Request forms.

The disposition of any Corrective 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

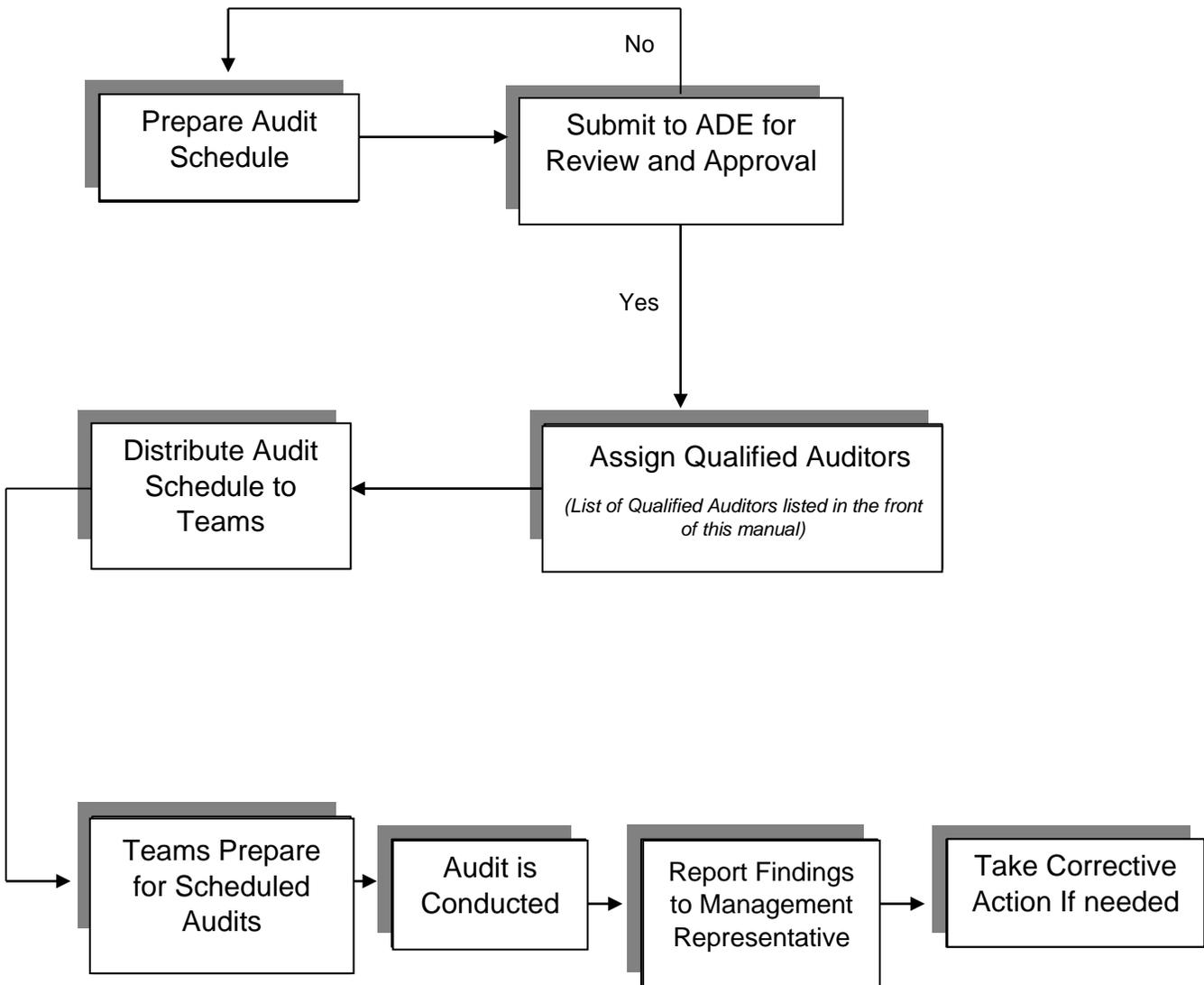
during the audit prior to the next regularly scheduled management review meeting.

The management representative shall review all internal audit reports and shall analyze them for trends and opportunities for improvement and shall report the results of this analysis 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 by the approved audit schedule, the 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. Type of agreement, Project Specific or Open End, is dependent but not limited to type of services required, estimated dollar figure of services, length of project, etc.

Scope:

Using ECMS Engineering Agreements section; create, advertise, select, execute, and manage consultant 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

CR1 AAR (After-Action Review)

Process Owner: Scheduling and Constructability Manager

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](#)

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.) Constructability Review Manager will hold annual AAR Review with Construction Admin Staff to discuss findings.
- 6.) Findings will be shared with Design and Construction personnel to update District Best Practices as necessary to improve the constructability process

CR2 Constructability Review

(This process is under development)

Process Owner: Constructability Review Coordinator

Purpose: To assist in the development of quality construction plans, the Construction Unit shall provide regular input to the design process.

Scope: Applies to projects that are in the design process.

Reference Documents:

Constructability review checklists

[District Document Routing System](#)

[Publication 10](#) (Design Manual 1 and appendices)

Process:

For the purpose of this process, the Unit's customers are defined as the District's Design Unit. The project ACE supplies an Inspector-In-Charge to participate in the scoping process and future Constructability Reviews. Reviews are conducted in accordance with the requirements in DM-1 at specified intervals throughout the plan development process. Constructability meetings are currently scheduled and arranged through the Design Unit. This process defines the Construction Unit's interactions within that process and the flow of information within the Unit and to its external customers. Formal meetings are only a part of the Unit's responsibility toward plan development. Sub-units within the Unit also provide their expertise formally and informally throughout the plan development process.

FLOW CHART FOR DESIGN CONSTRUCTABILITY REVIEW PROCESS *

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

DESIGN PROJECT MANAGER schedules the project's Scoping Field View Meeting. The CONSTRUCTABILITY COORDINATOR attends and participates in this meeting. The CONSTRUCTABILITY COORDINATOR creates a working file for the project.

DESIGN PROJECT MANAGER informs CONSTRUCTABILITY COORDINATOR OF TS&L and/or DFV Submission Stage and submits two (2) 1/2-sized sets of plans, DPM Constructability Review Checklist and any pertinent information. CONSTRUCTABILITY COORDINATOR sets up and coordinates meeting and documents attendance.

CONSTRUCTABILITY COORDINATOR generates completed checklist and submits to DESIGN PROJECT MANAGER

DESIGN PROJECT MANAGER addresses checklist and continues design

DESIGN PROJECT MANAGER informs CONSTRUCTABILITY COORDINATOR OF 60 % Design Stage and submits two (2) 1/2-sized sets of plans, DPM Constructability Review Checklist and any pertinent information. CONSTRUCTABILITY COORDINATOR sets up and coordinates meeting and documents attendance.

CONSTRUCTABILITY COORDINATOR generates completed checklist and submits to DESIGN PROJECT

DESIGN PROJECT MANAGER addresses checklist and continues design

CONSTRUCTABILITY COORDINATOR attends and participates in the Final Design Office Meeting

DESIGN PROJECT MANAGER informs CONSTRUCTABILITY COORDINATOR OF 90 % Design Stage and submits two (3) 1/2-sized sets of plans, DPM Constructability Review Checklist and any pertinent information. CONSTRUCTABILITY COORDINATOR sets up and coordinates meeting and documents attendance.

CONSTRUCTABILITY COORDINATOR generates generates completed checklist and submits to DESIGN PROJECT MANAGER

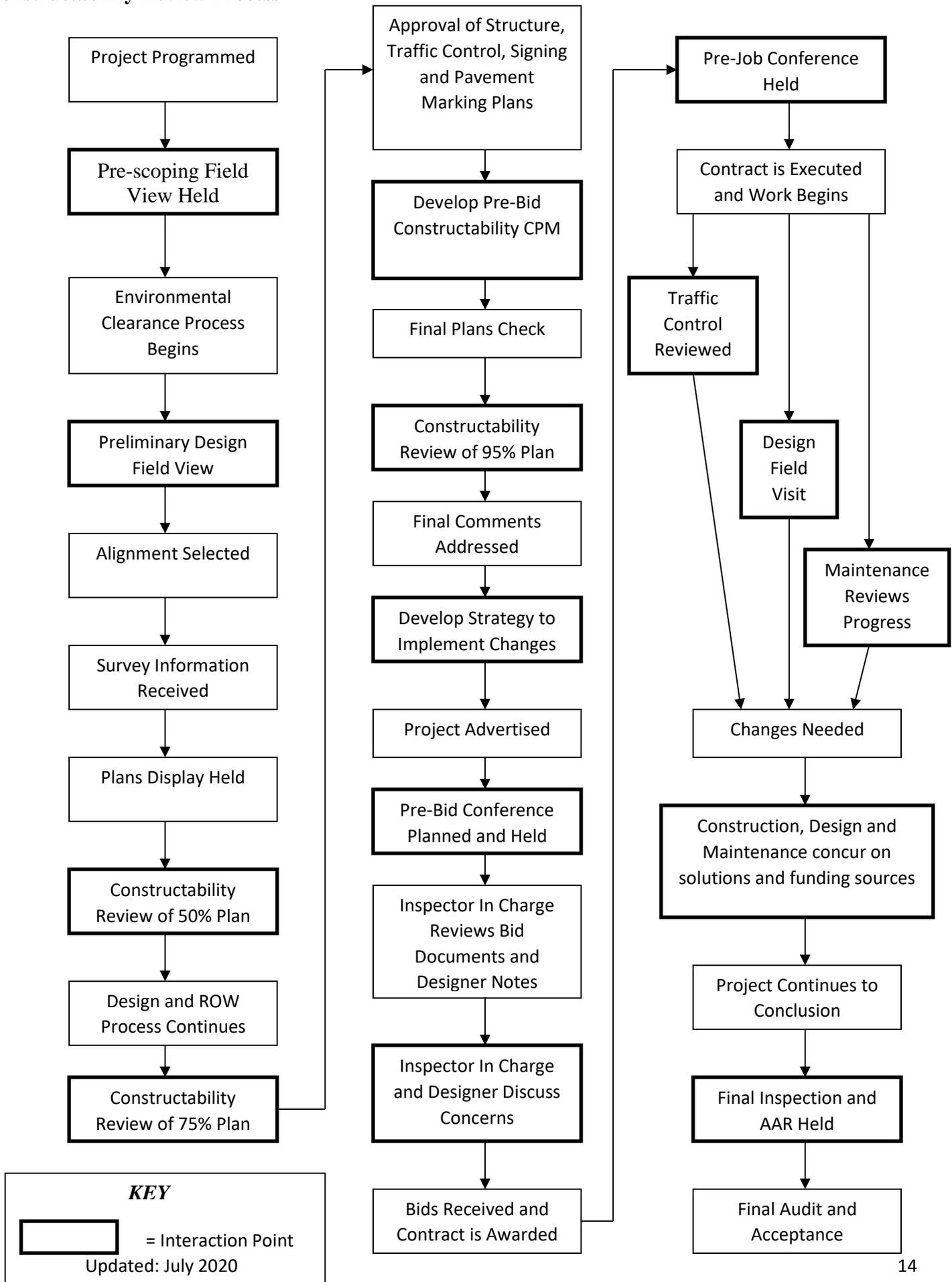
DESIGN PROJECT MANAGER addresses checklist and provides written responses to CONSTRUCTABILITY COORDINATOR to file electronically; continues design

DESIGN PROJECT MANAGER submits PS&E

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.

Constructability Review Process



F1 Work Order Creation

Process Owner: District Finals Unit Supervisor

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](#))

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 PennDOT Project Collaboration Center (PPCC).
- Construction Documentation Specialist reviews and approves item cost justifications, submitted work orders, and select contract adjustments.
- 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 Supervisor

Purpose:

The purpose is to establish the construction unit's construction project records tracking. Set up establishes and identifies record keeping methods and the distribution custody of field books and estimate dates to project managers.

Scope:

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

Reference Documents:

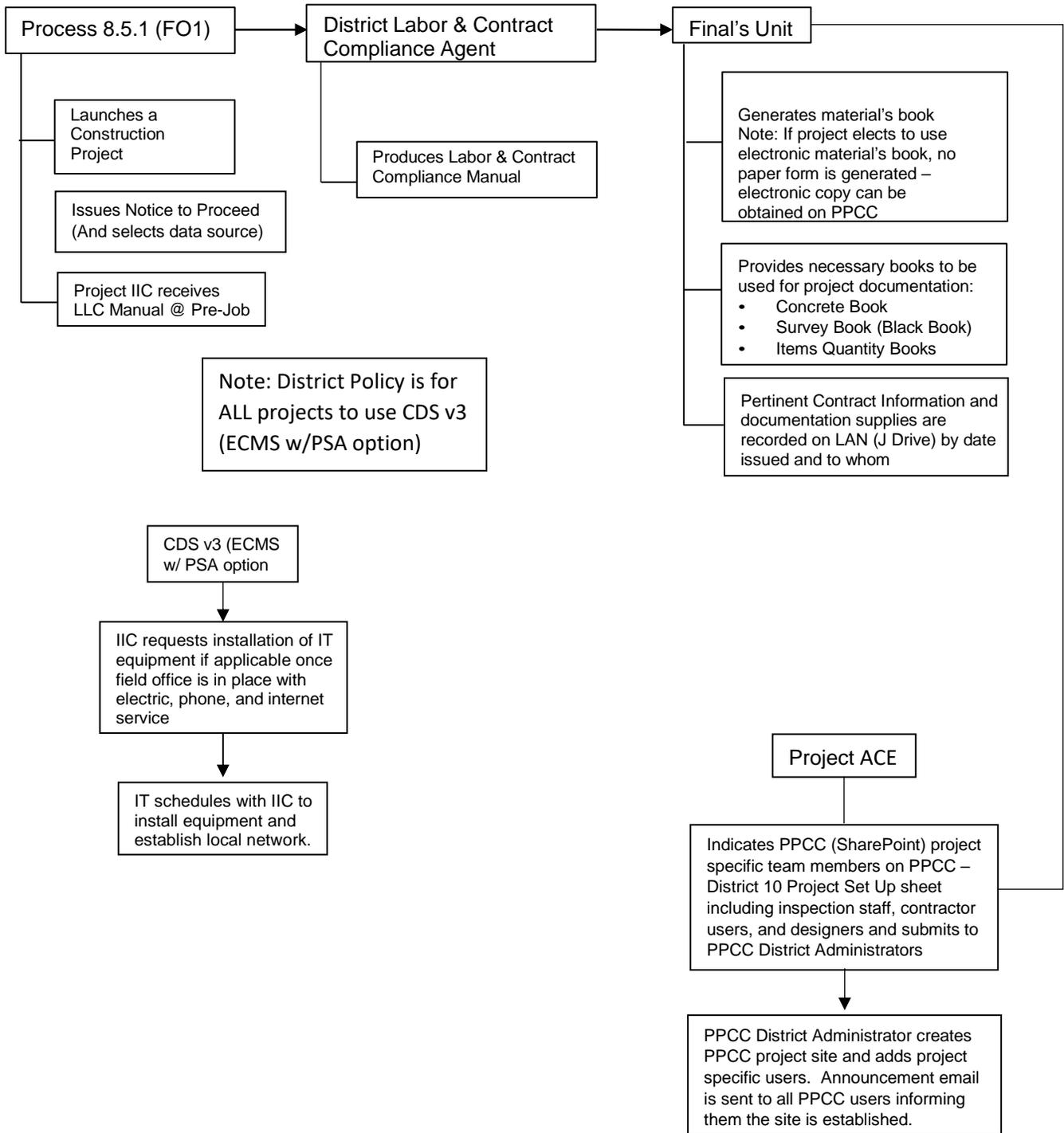
- Items/Estimate Report
- Materials Book (Electronic)
- Items Quantity Book
- Concrete Book (MCCID App)
- Field Survey (Black Book)
- Project Site Activities (PSAs – MCPSA App)
- Contract (ECMS)
- Plans (ECMS)
- [Construction Field Site Service Request](#)
- [PPCC – Dist 10-0 Project Set Up](#)

Procedure:

Contract Management unit begins the process with an executed contract. ACE/ACM conducts a pre-job meeting and establishes notice to proceed. The Finals Unit distributes necessary books for project documentation project records. Finals Unit personnel update data base with pertinent contract information and documentation tools issue dates. Inspector-in-Charge submits Construction Field Site (CFS) Request Form to Final's Unit once field office, electricity, phone service, and internet service are established at the CFS. Final's Unit will review and enter request into the Request for Service (RFS) system which will notify local IT staff to schedule with IIC to install the requested equipment and establish network drives. ACE acquires usernames of project specific PennDOT Project Collaboration Center (PPCC) users including prime and sub-contractor users, consultant designers, and inspection staff and completes PPCC Dist 10-0 Project Set-Up form and submits to PPCC District Administrators for project site creation which is then created and announced to all PPCC users via email. Project Manager is responsible for records until they are returned to construction/finals.

See process map below

Set-Up Distribution of Records



F3 Finals Unit Project Closeout

Process Owner: District Finals Unit Supervisor

Purpose:

The purpose of this procedure is to closeout construction projects (move from “construction” status into “final” status”). Final quantities are balanced and paid by project oversight staff. The final’s unit ensures all assigned and distributed record books and 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. 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, Notification of Final Quantities and generation of Records Storage location and destroy date.

Scope:

This process is to be used for all municipal, state and federal construction projects to closeout construction projects and their records.

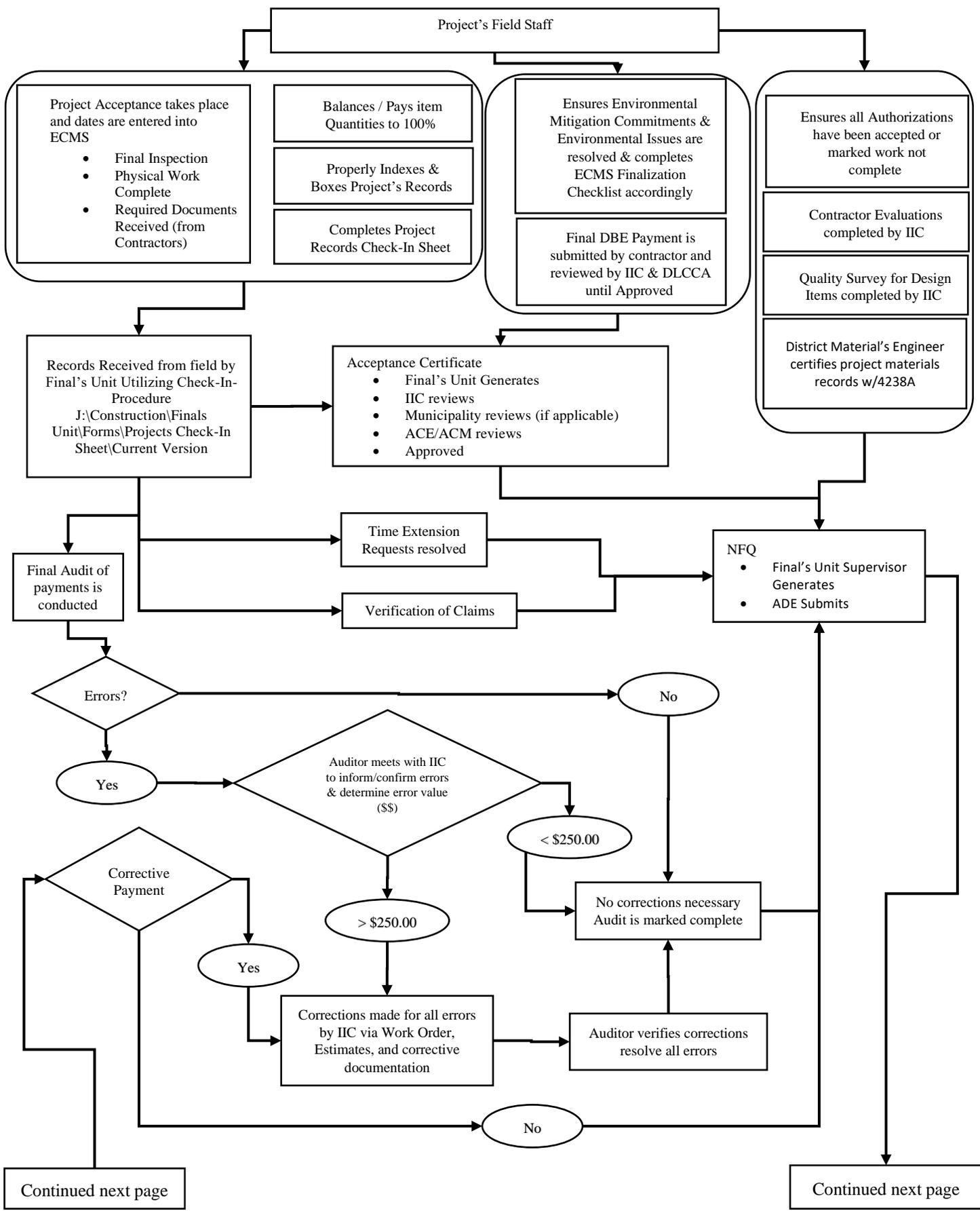
Reference Documents:

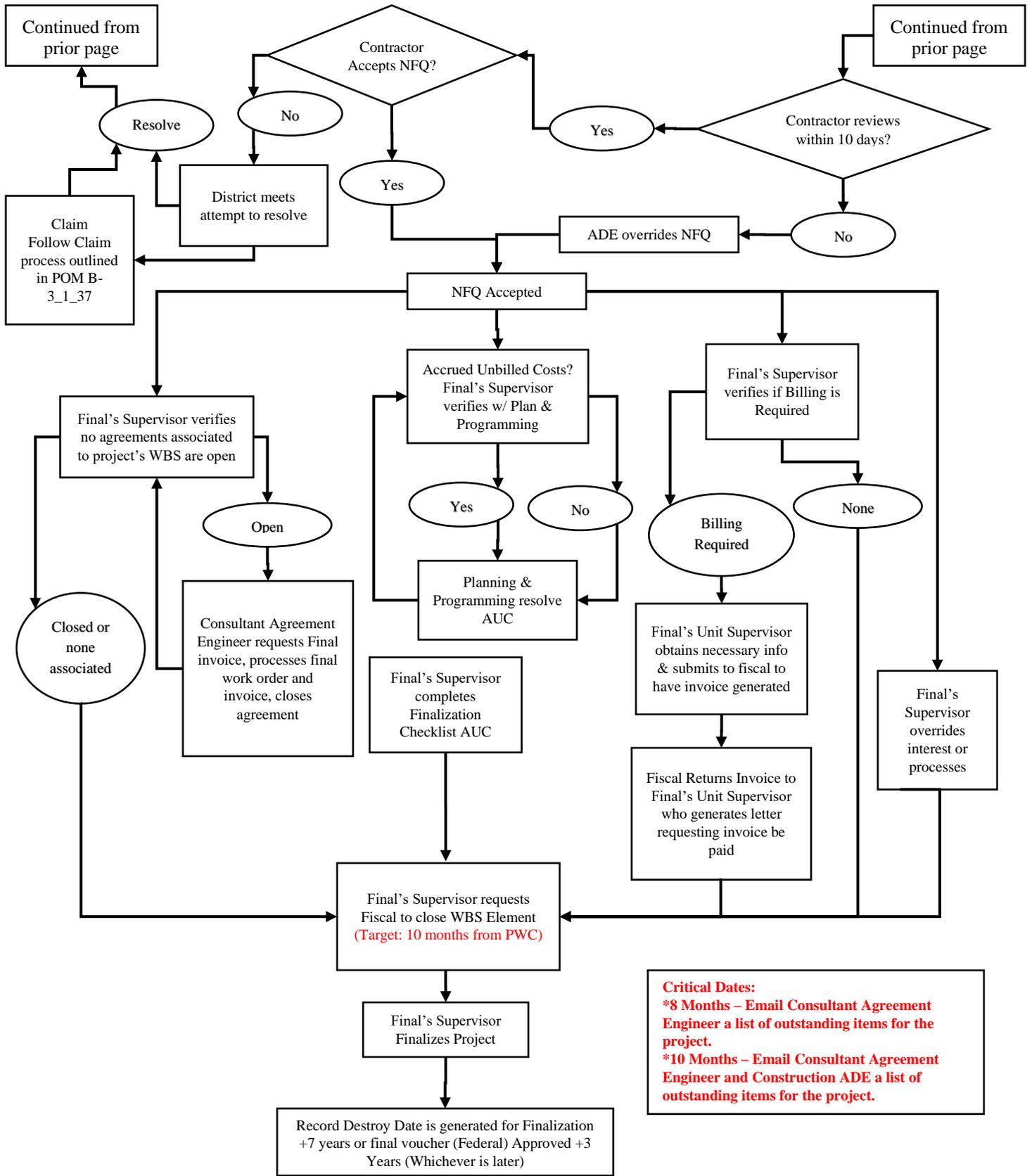
- [Project Records Check-In Sheet](#)
- The Final Inspection and Punch-List CS-4137/CS-4136
- ECMS
 - Acceptance Certificate CS-4138
 - Time Extension
 - Interest Payment
 - Notification of Final Quantities
 - Finalization Checklist (ECMS)
- Finals Unit Guide Book

Procedure:

Project moves from “Construction” status to “Post-Construction” status when physical work is complete and entered into ECMS – Finalization Checklist.

See process map below





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:

- Schedules date & time for Project Turn-in
- Completes Project Record Check-In sheet

Final's Unit

- Obtains Record's log page from Network Drive (Generated Project Setup)
- Verifies all assigned materials are being returned
- Review Project Record Check-In sheet with Project Staff to ensure its completeness
- Obtain completed Final Inspection & Punch-list, scan & attach to ECMS Finalization Checklist
- Final's Unit selects location for storage of records and records information in ECMS, Finalization Tracking Spreadsheet, and Record's Storage Spreadsheet
- The Final's Unit Supervisor or IIC must complete the "Time Extension Requests Resolved" in Finalization checklist if all time extension issues are resolved
- The Final's Unit Supervisor or IIC must complete "Verification of Claims" in Finalization Checklist if there are no known claims
- Verify "As Built" Mylars have been submitted to "ACE" then to Plans Clerk
- Have IIC complete and submit quality survey for design items in ECMS

Record's Control (For each project as applicable)

<u>RECORD</u>	<u>STORED</u>	<u>PROTECTED</u>	<u>RETRIEVED</u>	<u>RETENTION</u>	<u>DISPOSAL</u>
ECMS Database PSAs	ECMS	Access Control	ECMS Authorization	Retained	Retained
Copy of Plans Materials Book (Paper or Electronic) Labor Compliance Manual IQ Books Survey Books General Project Files (According to Suggested Master Index) As Built Plan	Stored w/ Project files in District rolling record storage or State Record's Center	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	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.
	Microfilm	Limited Access	Request from Plans Clerk	Retained	Retained

F4 Right-To- Know, Treasury Database Update

Process Owner: District Finals Unit Supervisor

Purpose:

To input construction project work order and time extension information into the 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.

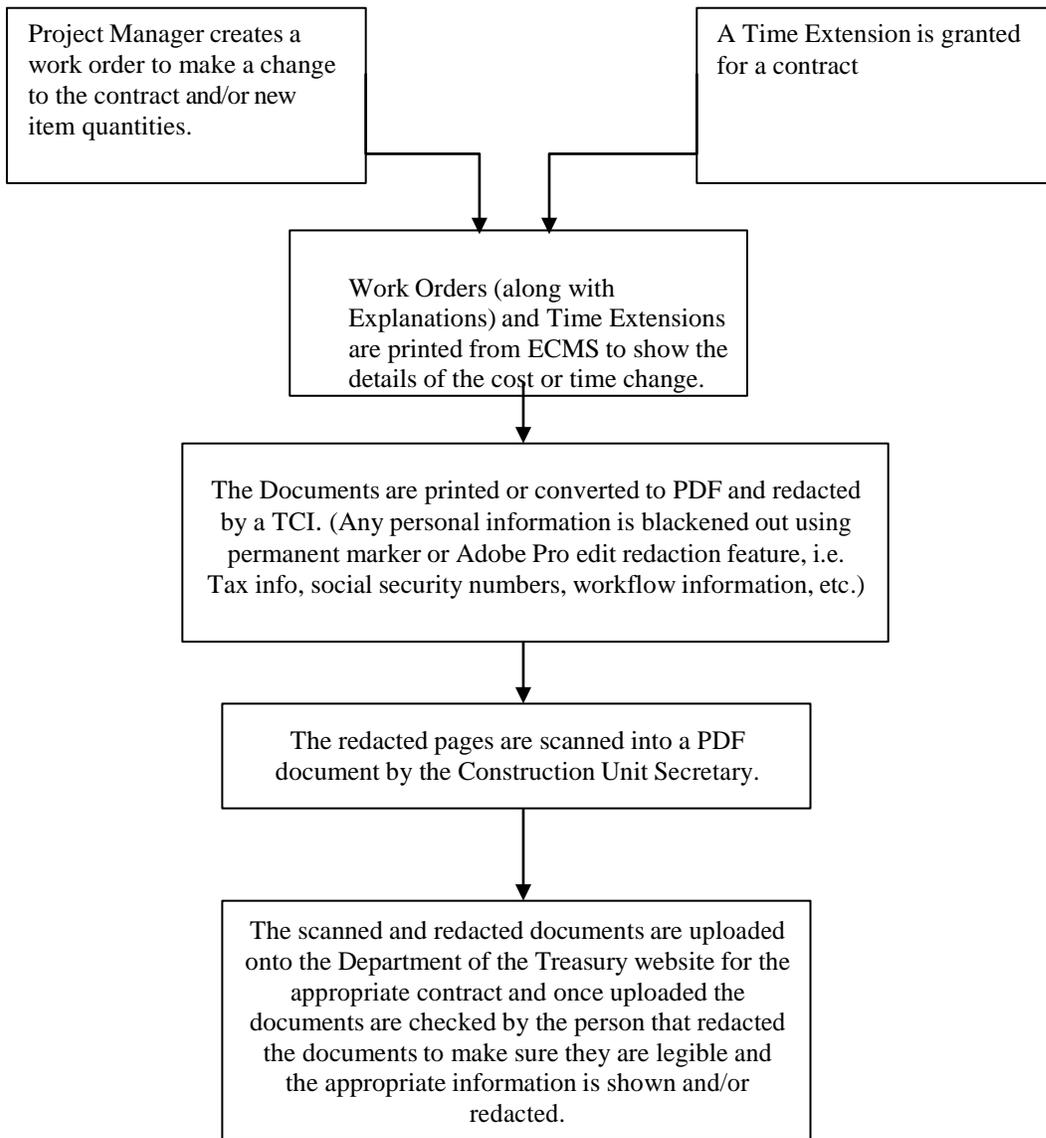
Reference Documents:

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

Procedure:

See process map below:

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



F01 Field Operations – Startup

Process Owner: Construction Services Engineer

Purpose:

The purpose of this procedure is to outline steps involved in 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 593
- [Specifications – Publication 408](#)
- [Pre-Job Packet](#)
- [Pre-job Template Memorandum \(2014\)](#)
- [Finals Unit – 30 Day Turn In Plan](#)
- [Project Record Check-In Sheet \(2019\)](#)
- *Other State published standards that are applicable to the project, e.g. Roadway and Bridge Standards*

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 contract 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 Support Service 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.

F02 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.

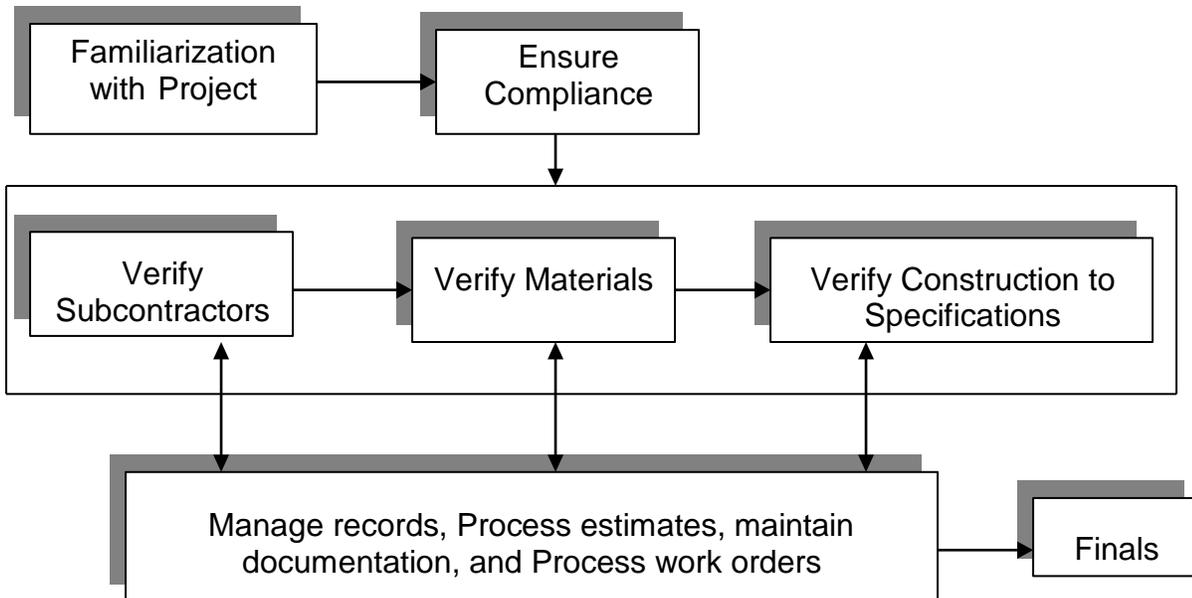
Reference Documents:

- [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 593
- [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.

F03 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:

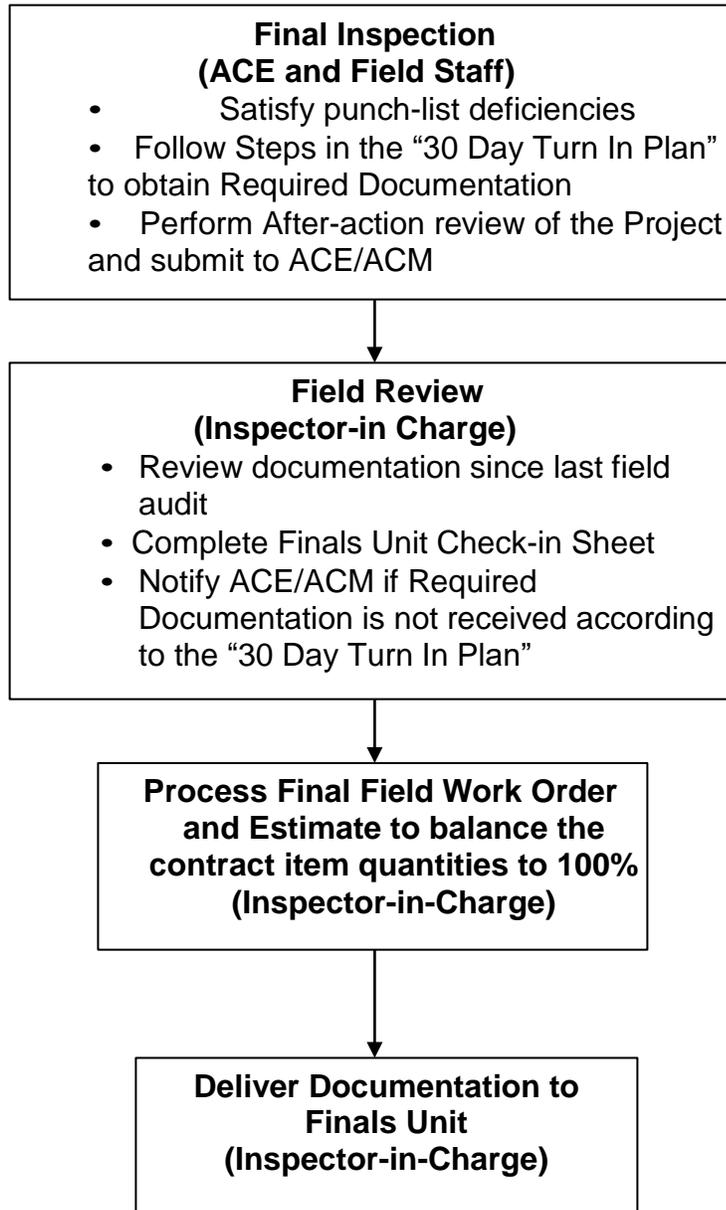
- [Project Office Manual \(POM\) – Publication 2](#)
- [Specifications – Publication 408](#)
- [Roadway Construction Standards – Publication 72M](#)
- [Traffic Control Standards – Publication 111](#)
- [Bridge Construction Standards – Publication 219M](#)
- ACE Manual – Publication 593
- [Finals Unit – 30 Day Turn In Plan](#)
- [Project Records Check-In Sheet](#)
- Contract
- Official Governing Document
- Lists Special Provisions
- Cross Sections
- Project Plans
- Designer Notes

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:

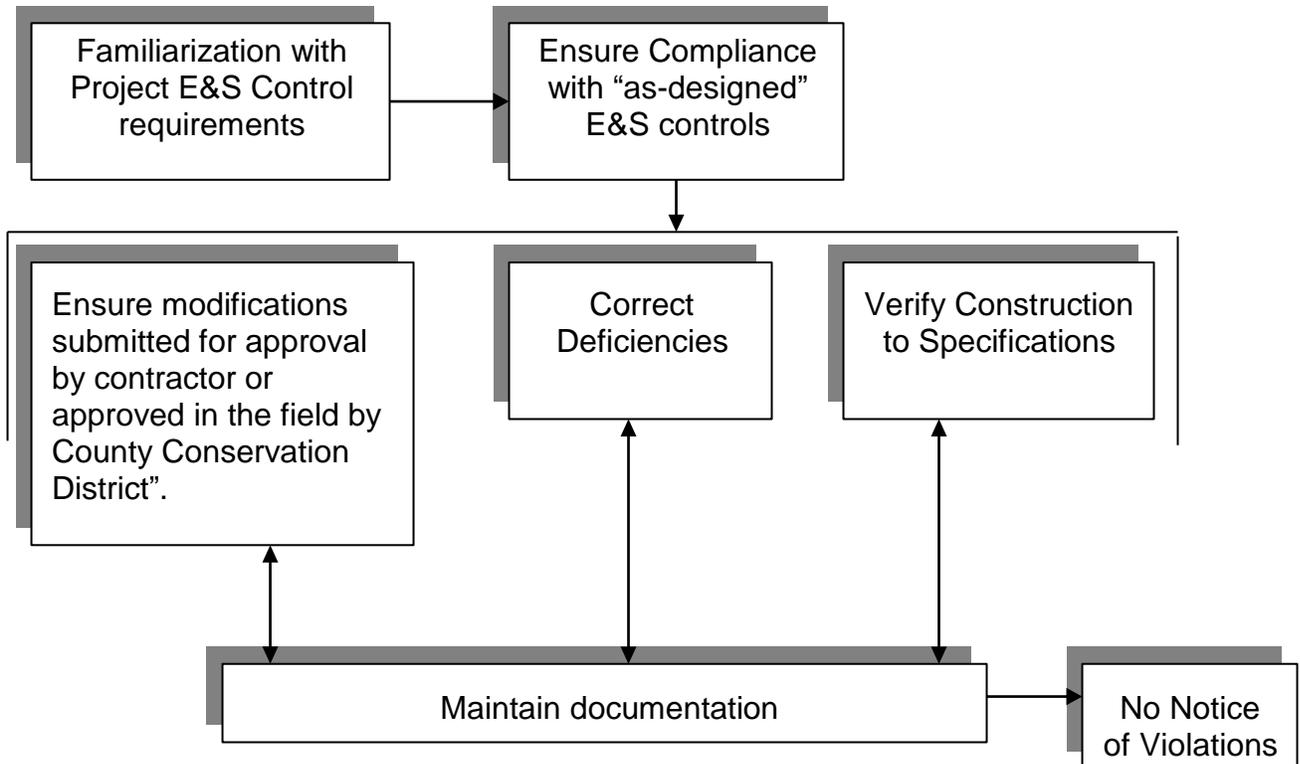
- [Project Office Manual \(POM\) – Publication 2](#)
- [Specifications – Publication 408](#)
- ACE Manual – Publication 593
- Contract Documents, including Special Provisions
- Project Plans
- Designer Notes
- [Roadway Construction Standards – Publication 72M](#)
- [Traffic Control Standards – Publication 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.

F05 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.

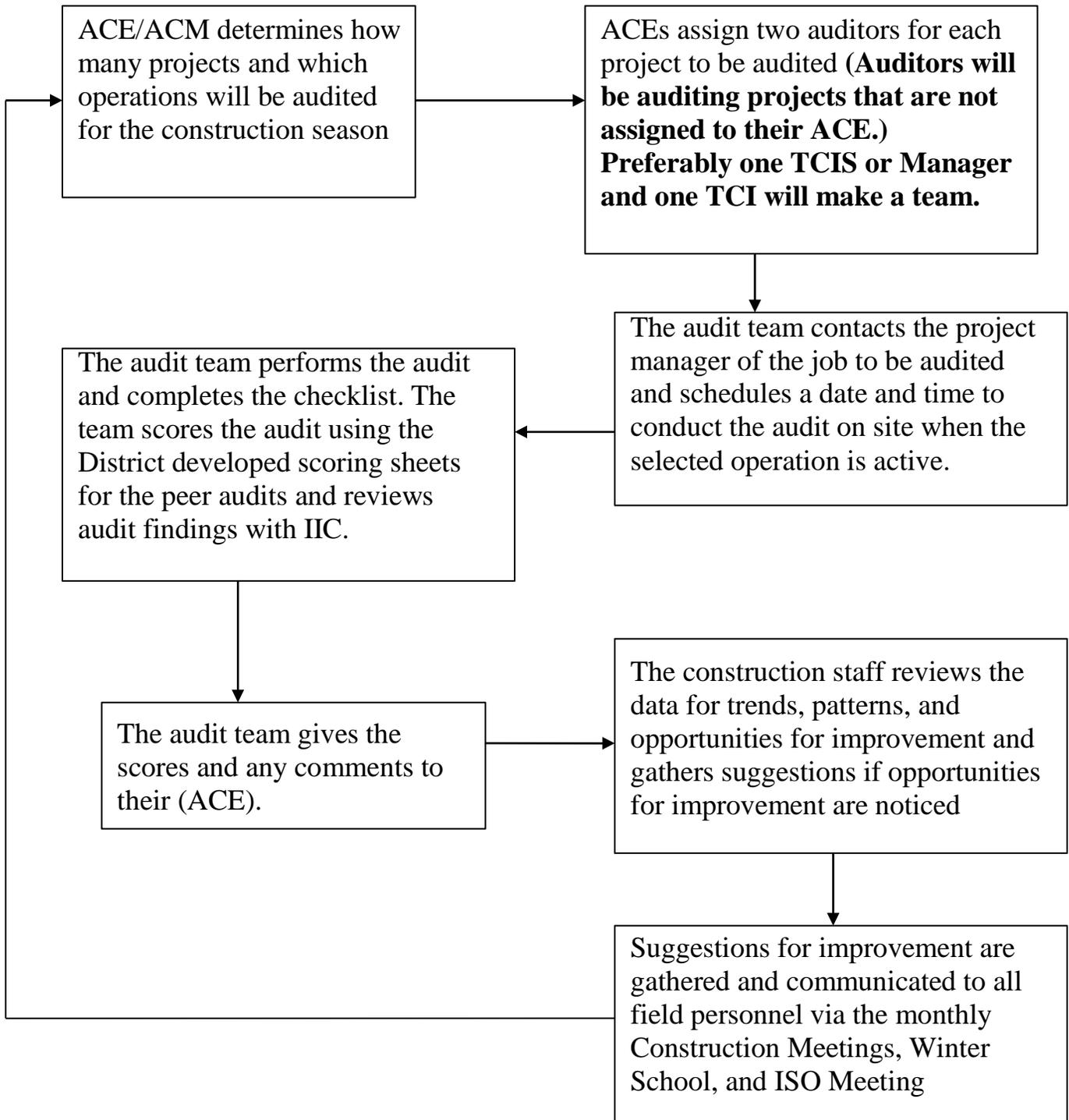
Reference Documents:

- 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

(This Process is Under Development)

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 State 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)
[\\pdfpcoclu2k302\pd10fap2k01\dist10\Construction\GeoTechUnit\Geotechnical Files\Geotechnical Request Forms\Blank GeoRequest 2018.doc](#)
- Geotechnical Unit provides report (Following Pub 293/DM-4) (If structure is involved, Bridge Unit reviews report)

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: Pull design file and review necessary

information Step 3: Report to construction site

Step 4: Perform inspection / review project

Step 5: Give advice, approval or participate in discussion

Step 6: Follow up with documentation (letter or memo) or solution to problem, if required. Provide copy to Structure Control Engineer, if applicable. Standard footer checks and test piles inspection only require documentation in project field records.

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

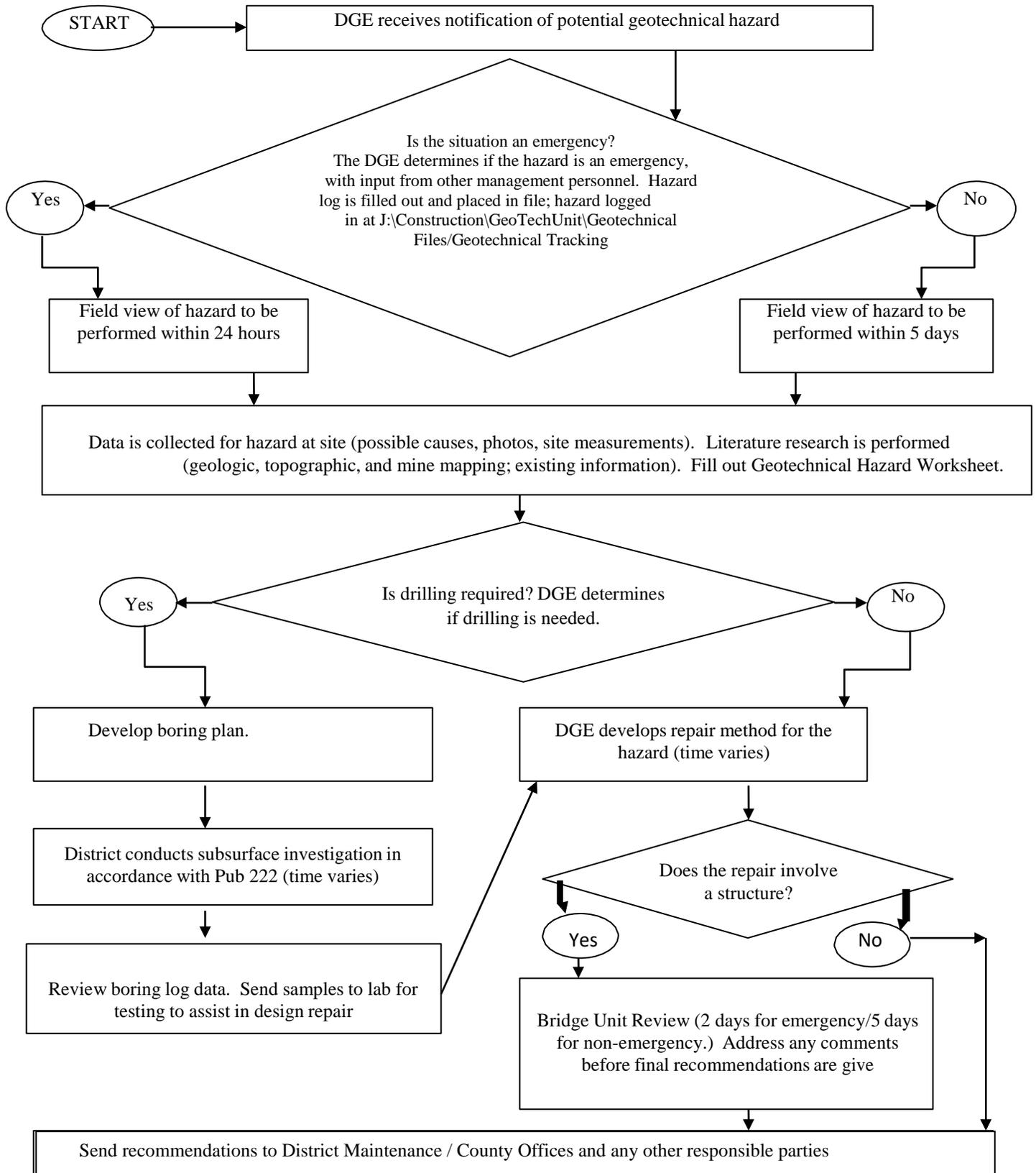
Procedure:

The responsible areas involved in this process are:

- Maintenance Unit requests review of site and advice 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; RSGER; GER; Subsurface Boring and Testing Contracts (SBSTC); and 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](#)

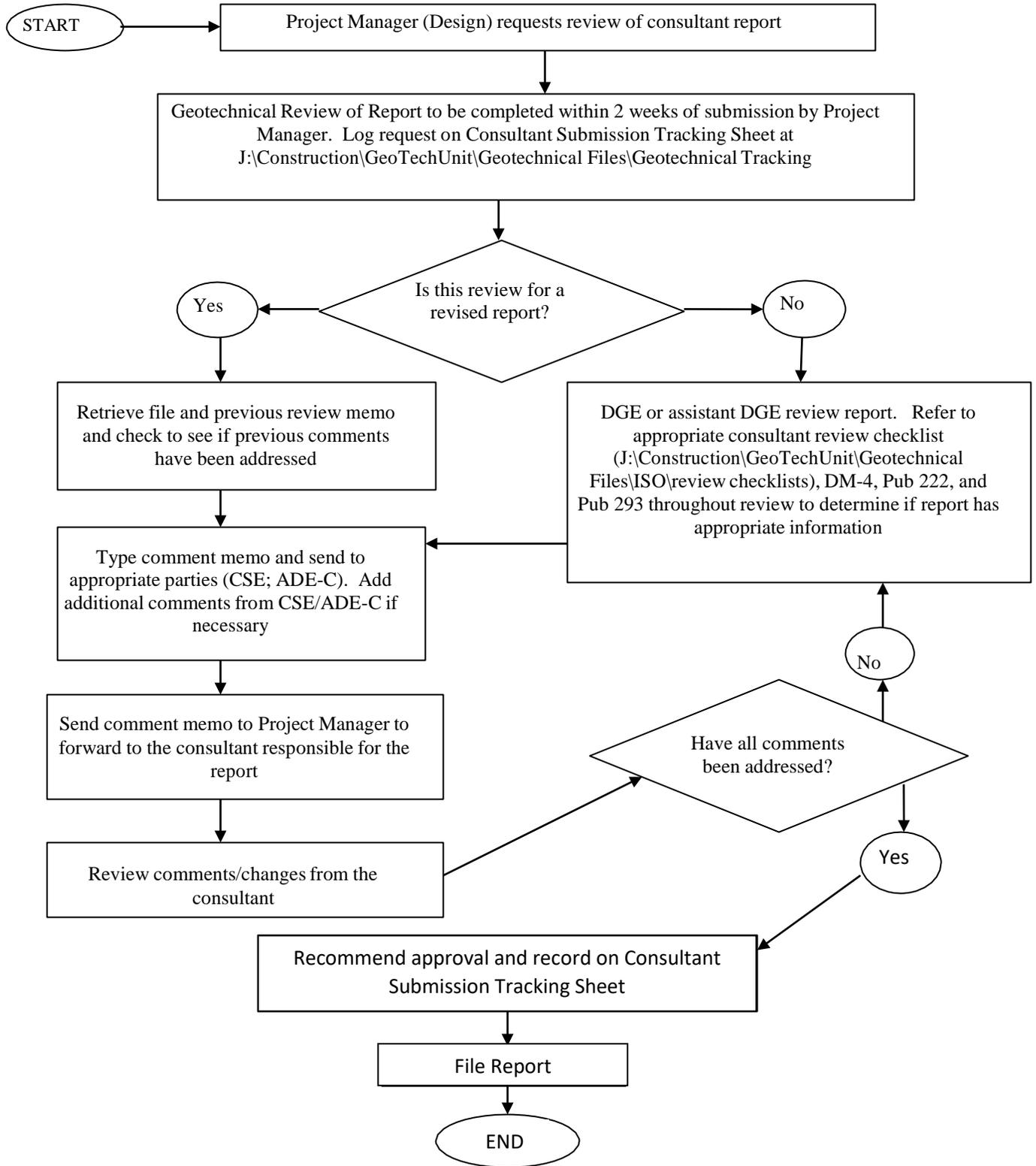
Procedure:

The responsible areas involved in this process are:

- Design Unit Project Manager Requests review
- Geotechnical Unit reviews report using checklists and prepares comments
- 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 and alternate foundation designs.

Reference Documents:

The following references are applicable:

- [Specifications – Publication 408](#)
- [Design Manual Part 4 – Publication 15M](#)
- Contract Special Provisions

Procedure:

The responsible areas involved in this process are:

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

Step 1: Receive submission for review

Step 2: Pull Design file related information

Step 3: Review Special Provisions to ensure submission meets the contract requirements

Step 4: Review Submission based on DM-4, special provisions and 408

Step 5: Send letter of approval or comments for revision.

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:

- Pennsylvania Department of Transportation Handbook for Mining Operations

Procedure:

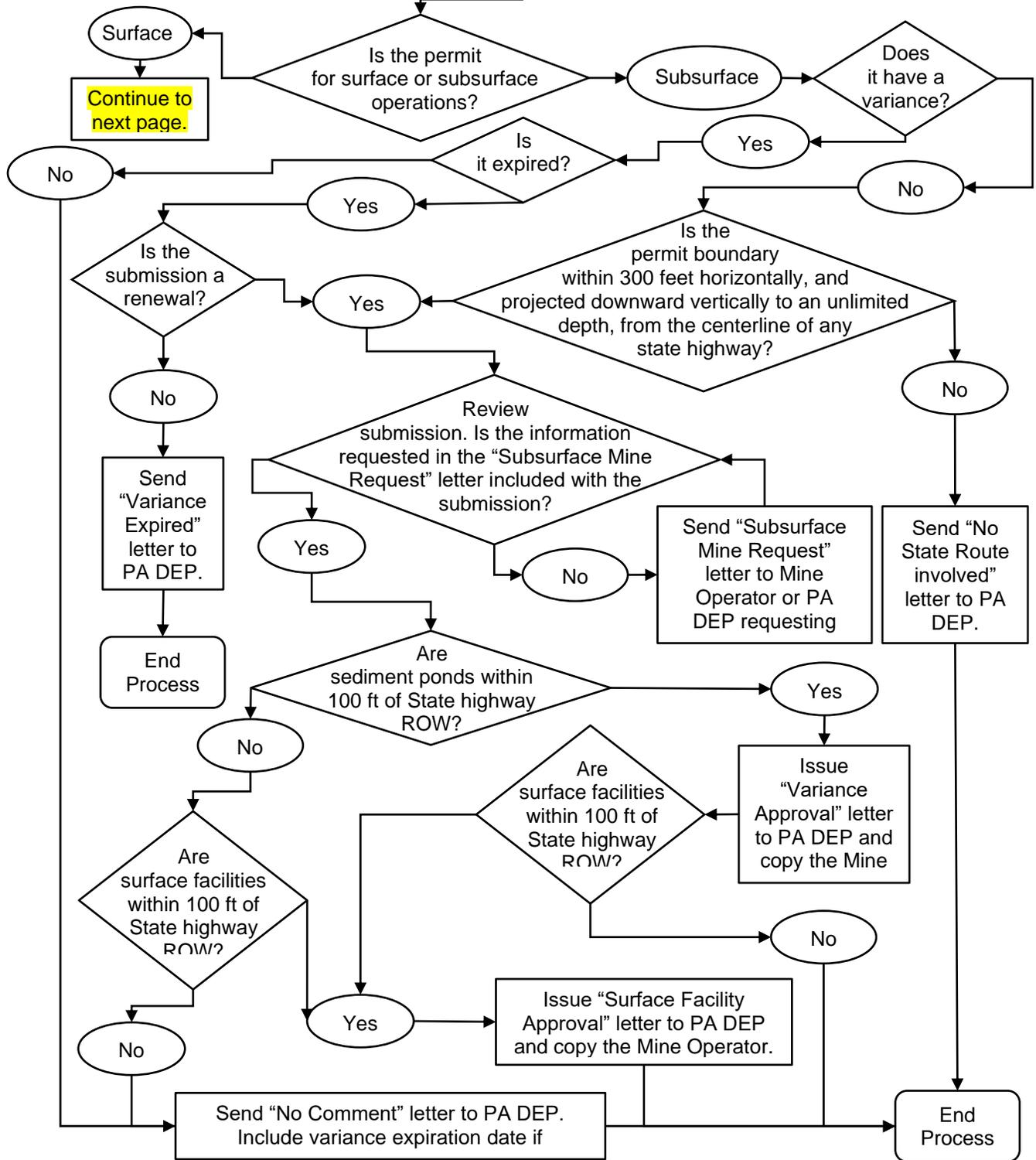
The responsible areas involved in this process are as follows:

- Mine Operator requests permit application, renewal, transfer, closeout, or other modification.
- Geotechnical Unit reviews request information and provides comments or approval.

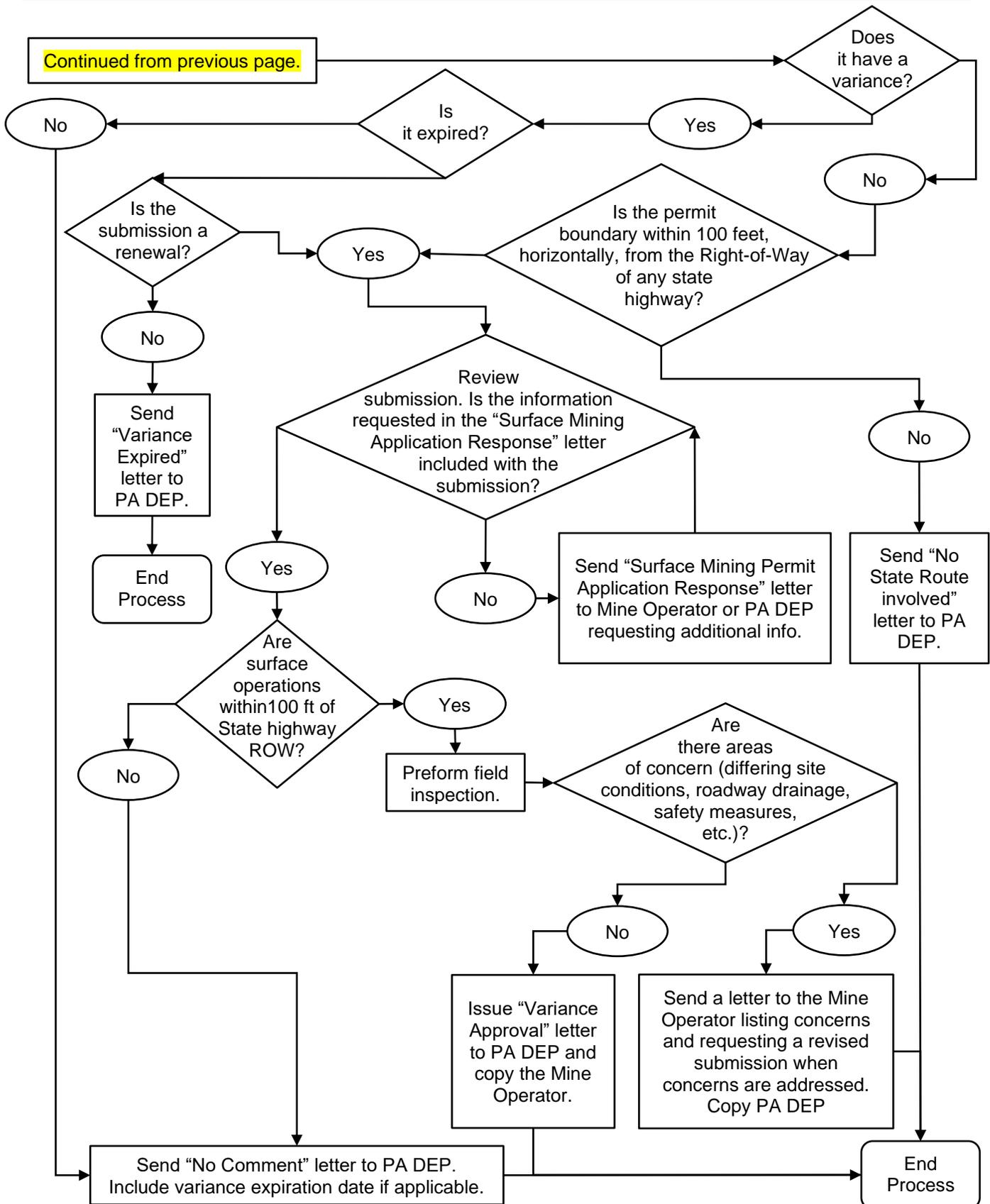
See Process Map below:

ISO Process Map GT6 – Mine Variance Review

Receive submission from PA DEP or Mine Operator regarding surface or subsurface mining permit.



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-4276A \(1-19\) - Report on Compaction Density by Nuclear Method](#)
- [TR-478A \(8-18\) - Report on Compaction Density by Non-Movement](#)

Procedure:

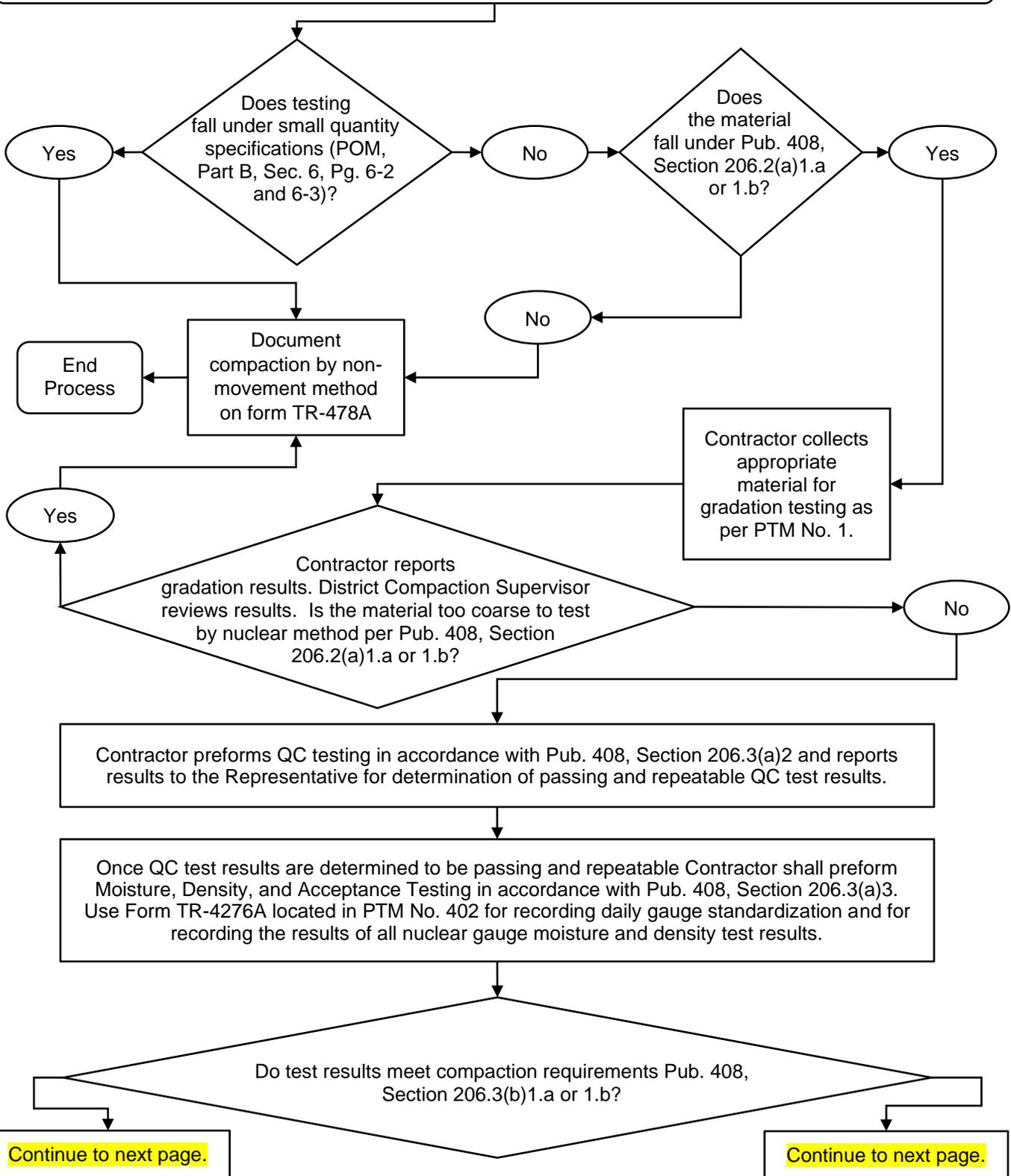
The responsible areas involved in this process are as follows:

- IIC requests geotechnical unit services
- Geotechnical unit provides a compaction control technician.

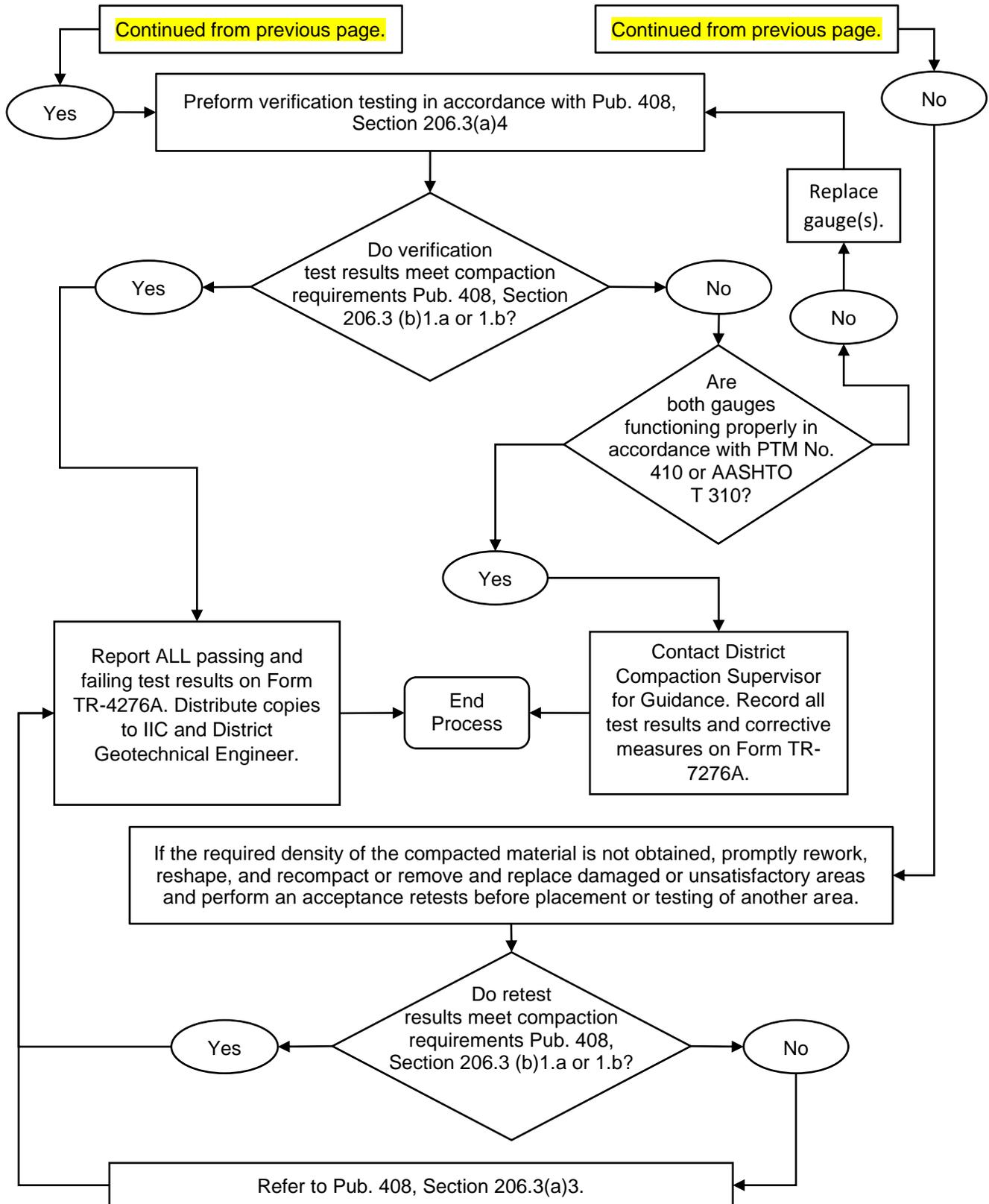
See Process Map Below:

ISO Process Map GT7 – Compaction Control

Construction Inspector-in-Charge contacts the District Geotechnical Unit for Compaction Control Services.



ISO Process Map GT7 – Compaction Control (Continued)



LC1 Subcontractor Approval

Process Owner: 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

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 “Doing Business with the Commonwealth”
Click on “CRPS”
Click on the icon in the center of the page “CRPS”
Click on “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\EDMS>
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\EDMS>
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 (Project Specific)

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 to follow up and address 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 Material Supply Letter

Process Owner: District Materials 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:

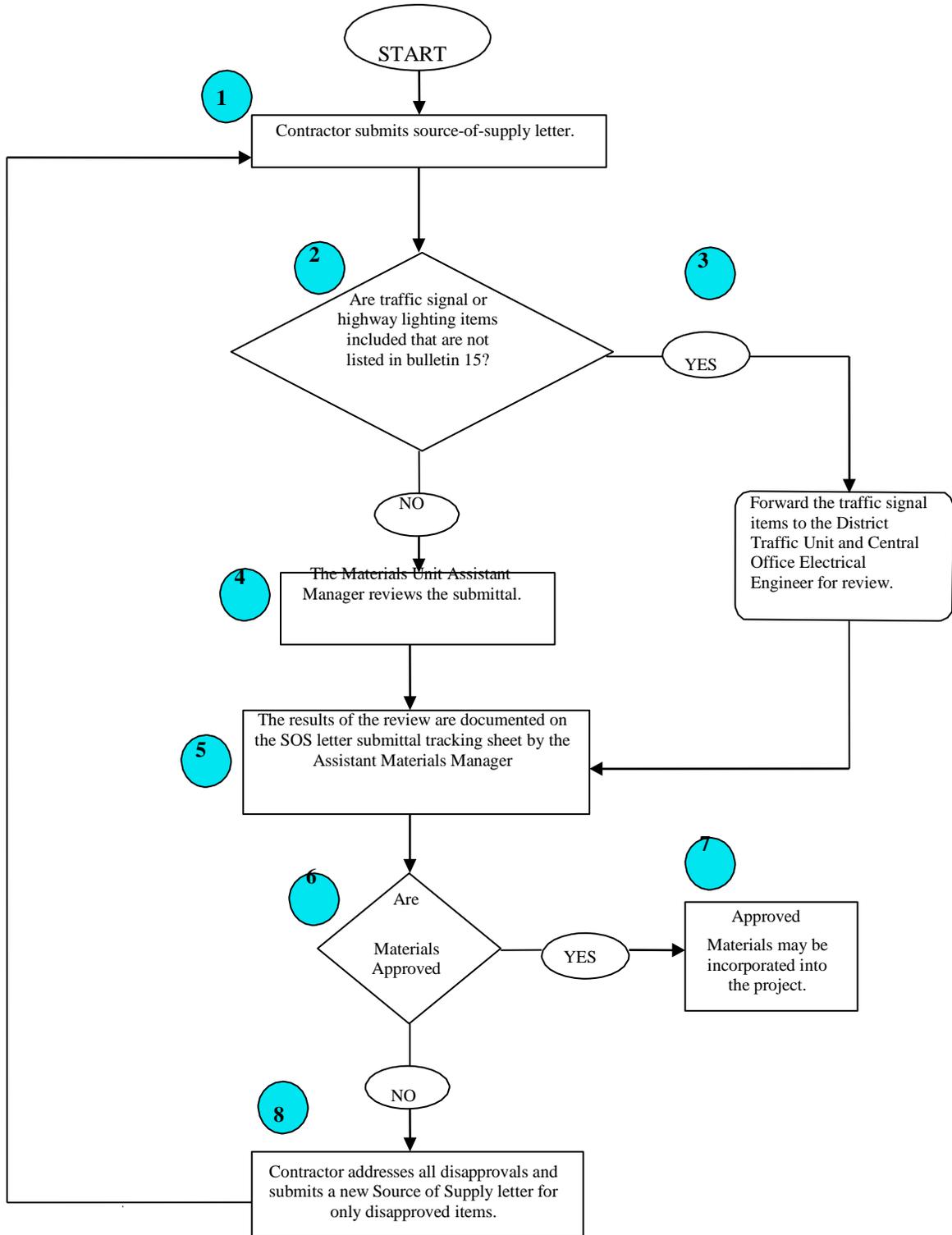
- [Bulletin #14 Approved Aggregate Producers – Publication 34](#)
- [Bulletin #15 Approved Construction Materials – Publication 35](#)
- [Bulletin #41 Approved Bituminous Asphalt Producers – Publication 41](#)
- [Bulletin #42 Approved Concrete Producers – Publication 42](#)
- [Specifications – Publication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

Procedure:

The responsible areas involved in this process are as follows:

- Contractor submits material supply letter to materials office
- Materials unit reviews and approves the use of construction materials noted on the contractor's submission
- Traffic unit reviews signal items associated with projects
- Central office electrical engineer reviews highway lighting items associated with the project
- Construction unit secretary types approval/disapproval letter and distributes to contractor, project manager, materials unit and file

See process map below:



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

BLOCK NUMBER	EXPLANATION
1	Contractor submits source-of-supply letter (CS-200 and/or CS-201) to District 10-0 Materials Unit via hard copy at the pre-job or electronically via e-mail for initial review and approval of materials to be incorporated into the project (as per SOL 421-04-11).
2	Traffic Signal Items that are not listed in Bulletin 15 are reviewed by the District Traffic Unit and Central Office Electrical Engineer. The approvals and/ or disapprovals of these items will be incorporated into the District Materials Unit review comments that are sent back to the contractor.
3	The District Traffic Unit and Central Office Electrical Engineer reviews and approves traffic signal items not listed in Bulletin #15. The Traffic Unit's comments are incorporated into the Materials Unit review. This does not increase the 14 days 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 on the SOS letter submittal tracking sheet by the Assistant Materials Manager. Some Materials are approved and some materials may need re-submitted.
6	A letter is sent to the contractor by the District Materials Manager. The letter informs the contractor which materials are approved and may be incorporated into the project and which materials need to be resubmitted. A copy of this letter is kept in the Materials Unit project files and the field office project files.
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 a new source of supply letter for the disapproved materials. This will start the process over once the new letter is received by the Materials unit.

M2 Equipment Verification

Process Owner: District Materials Manager

Purpose:

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

Scope:

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

Reference Documents:

- [Maintenance Manual – Publication 23](#)
- [Pennsylvania Test Methods Manual \(PTM\) – Publication 19](#)
- [Specifications – Publication 408](#)
- District Forms

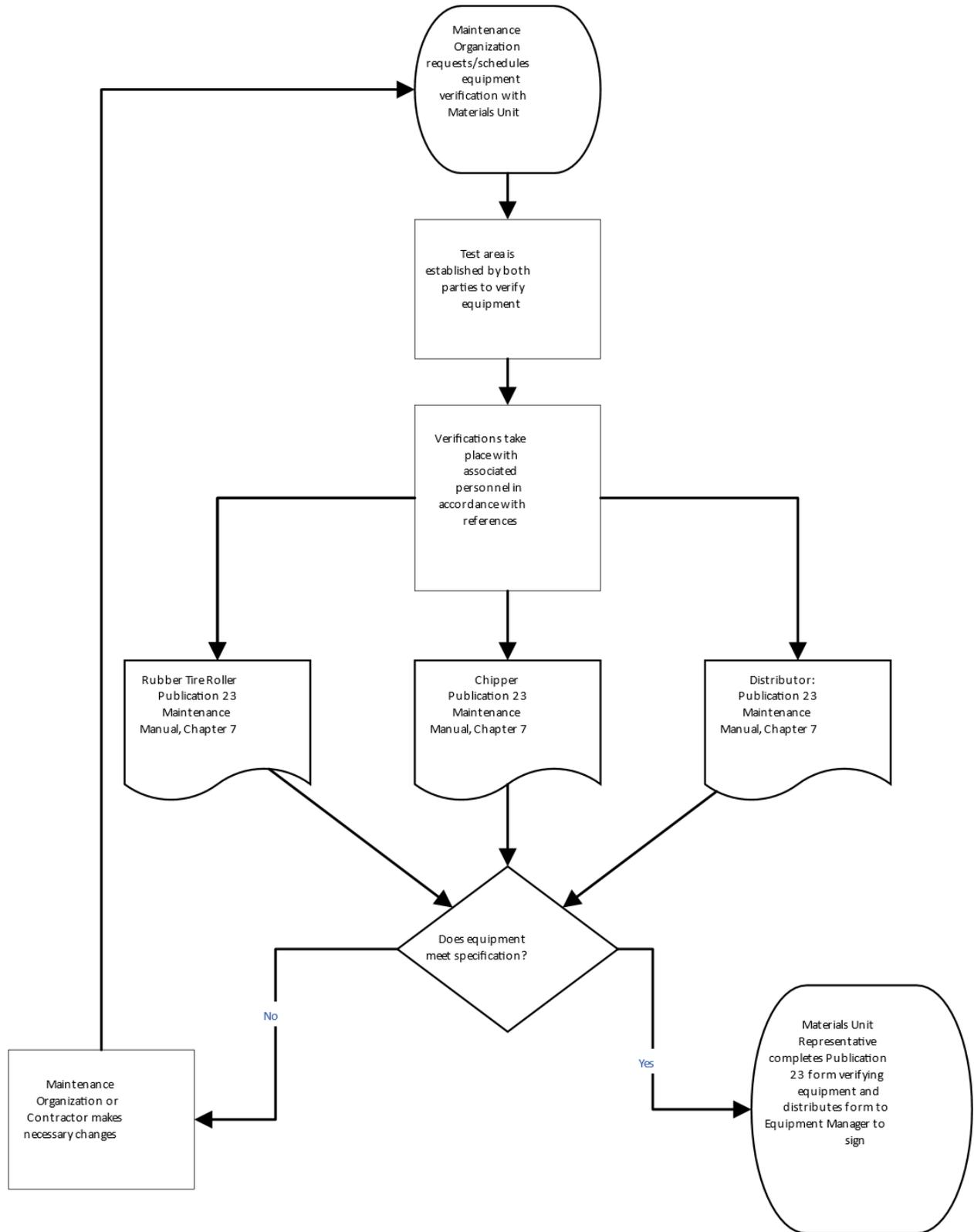
Procedure:

The responsible areas involved in this process are as follows:

Maintenance organizations prepare equipment for verification and make requests to materials unit to schedule.

Contractors prepare equipment for verification and make requests to materials unit to schedule.

Materials unit schedules and performs verification.



M3 Initial Aggregate Plant Inspection – Annual

Process Owner: District Materials Manager

Purpose:

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

Scope:

The scope includes all aggregate producers shipping to state related projects in the district.

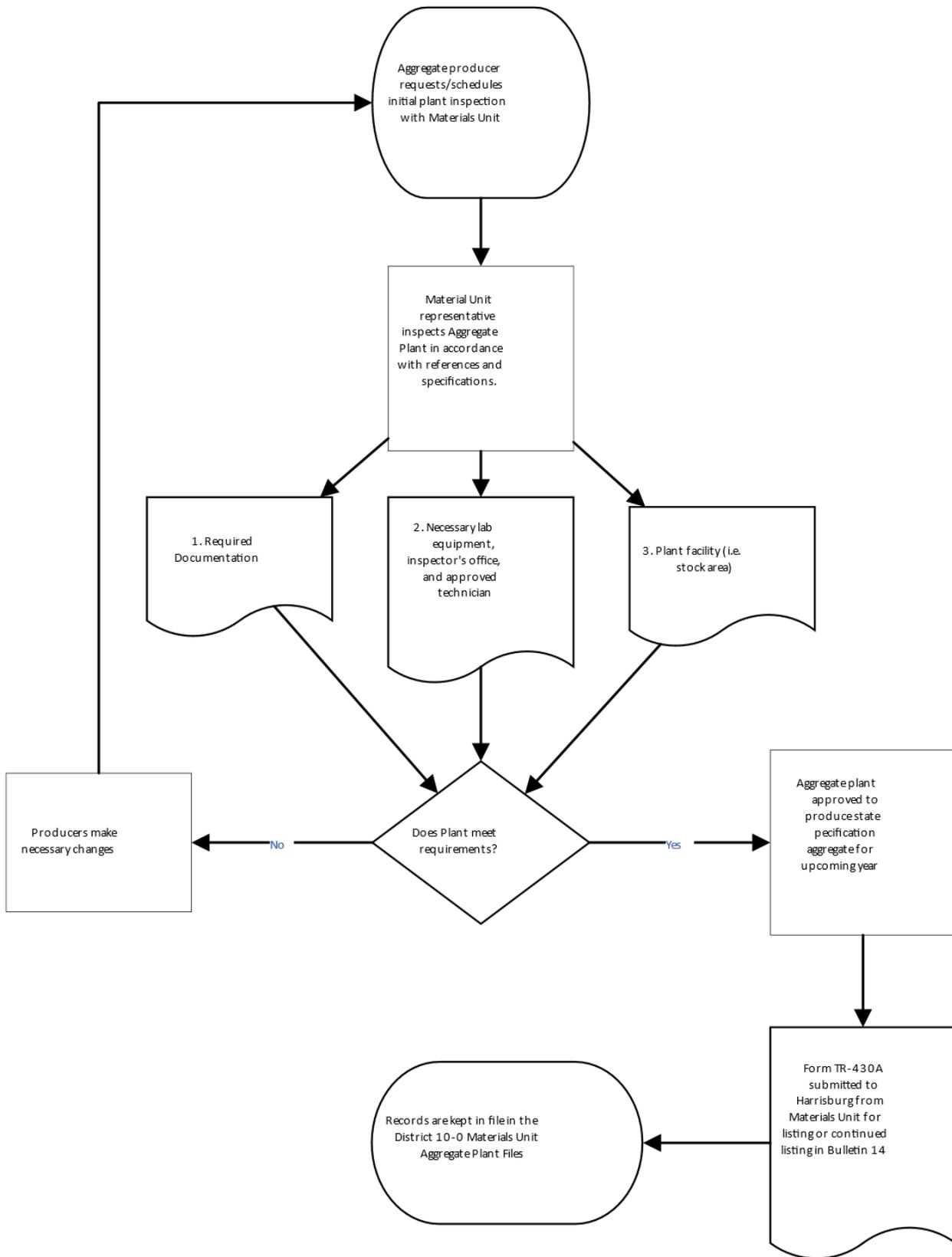
Reference Documents:

- [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 plant inspection
Materials unit conducts inspection

See process map below:



M4 Initial Asphalt Inspection – Annual

Process Owner: District Materials Manager

Purpose:

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

Scope:

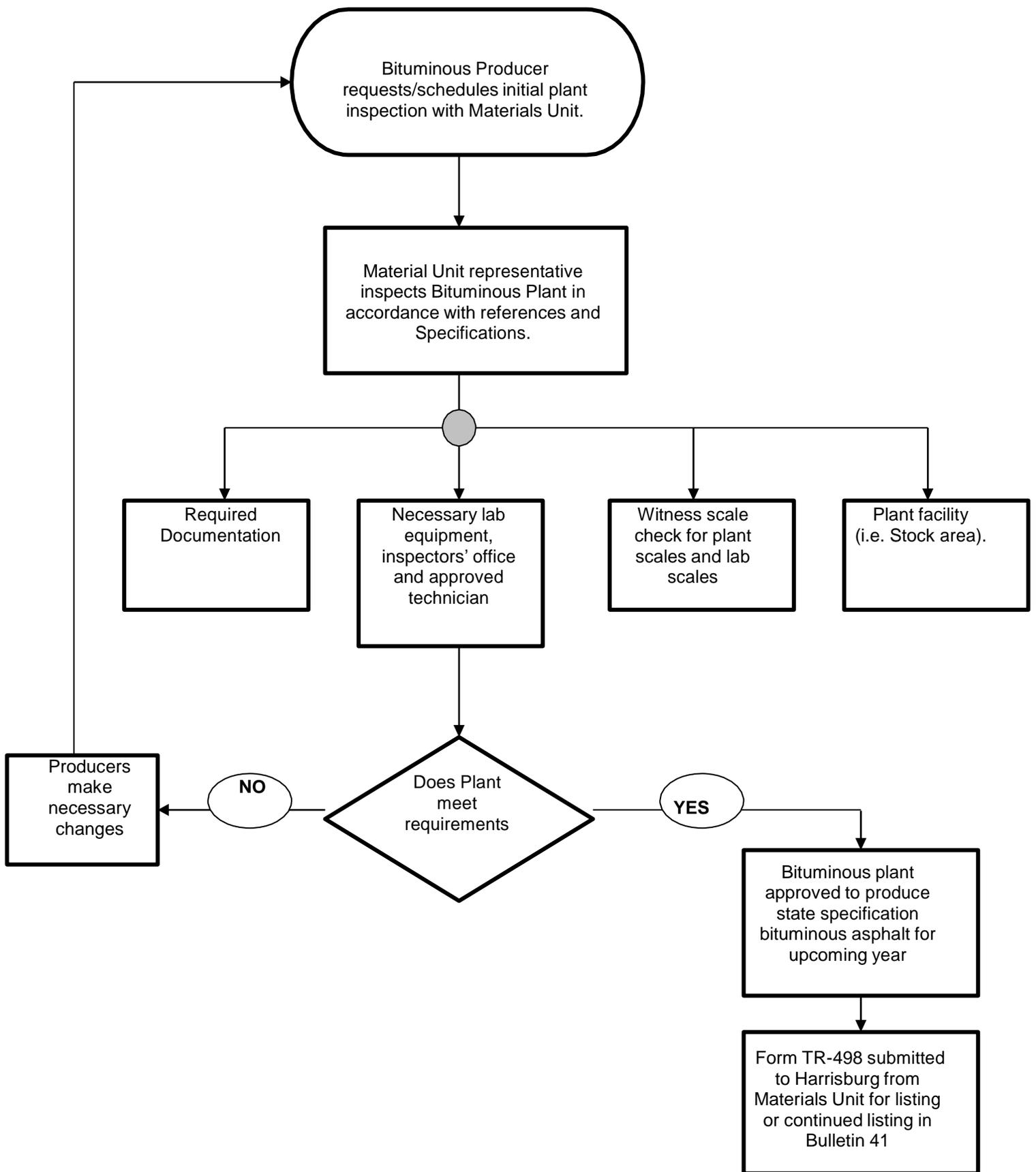
The scope includes all bituminous asphalt producers shipping to state related projects in the district or surrounding districts.

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
- [TR – 498 Bituminous Concrete Plant Inspection Report](#)

Procedure:

The responsible areas involved in this process are as follows: Bituminous asphalt producer requests plant inspection Materials unit conducts inspection Other outside agencies (i.e. Scale company, raw material representatives) See process map below:



Annual Bituminous 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 / 409.2E	Approved and On File for Current Year
Plant Tech Evaluation Sheet: 408/409.2E 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 / 409.2E	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 Manager

Purpose:

The purpose of this procedure is to insure 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.

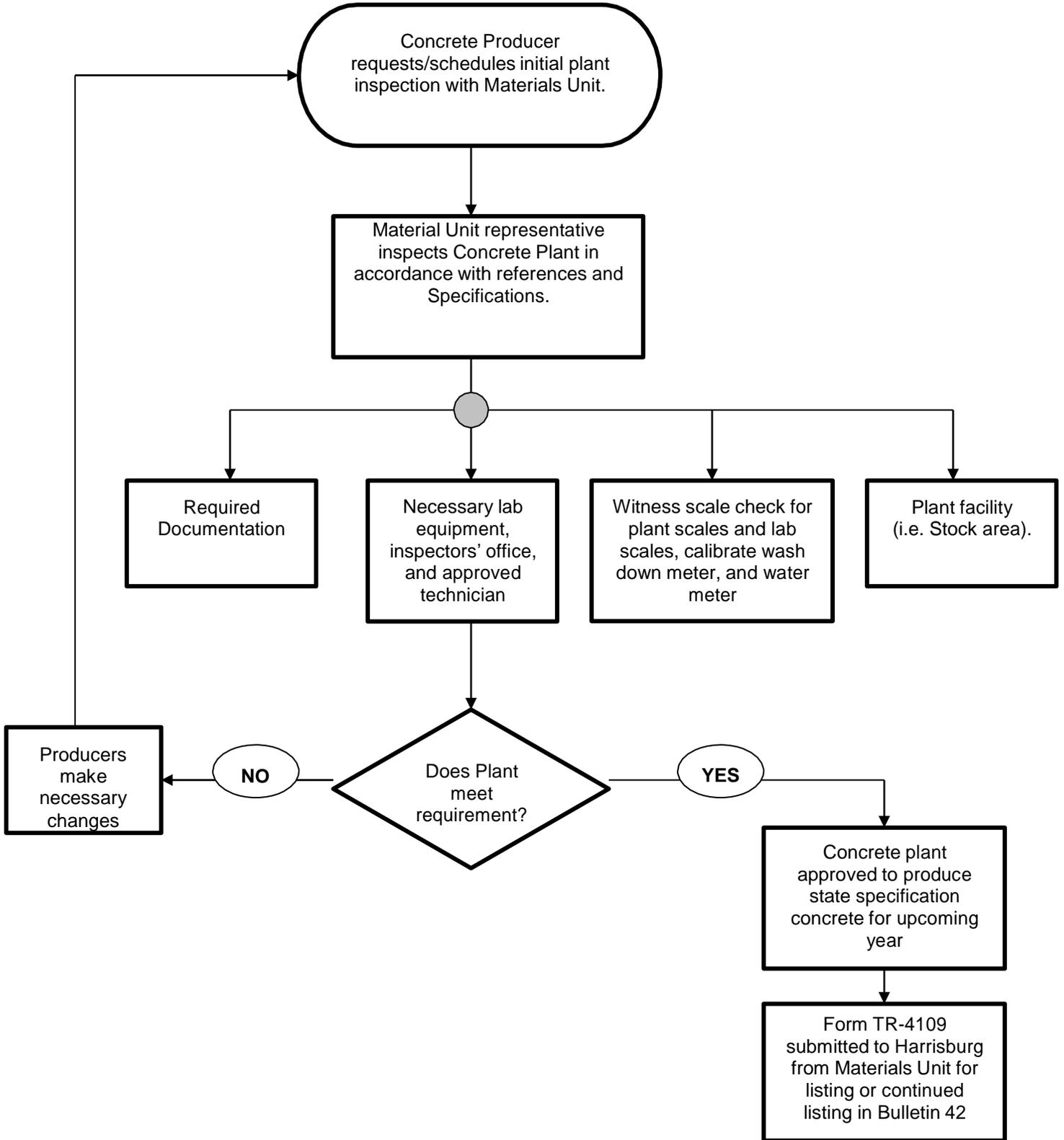
Reference Documents:

- Bulletin # 5 Design Methods for Air-Entrained Portland Cement Concrete and Ready-Mixed Portland Cement Concrete
- [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:



M6 District Quality Assurance, Hot/Warm Mix Asphalt Plant 30 Day Review

Process Owner: District Materials Manager

Purpose:

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

Scope:

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

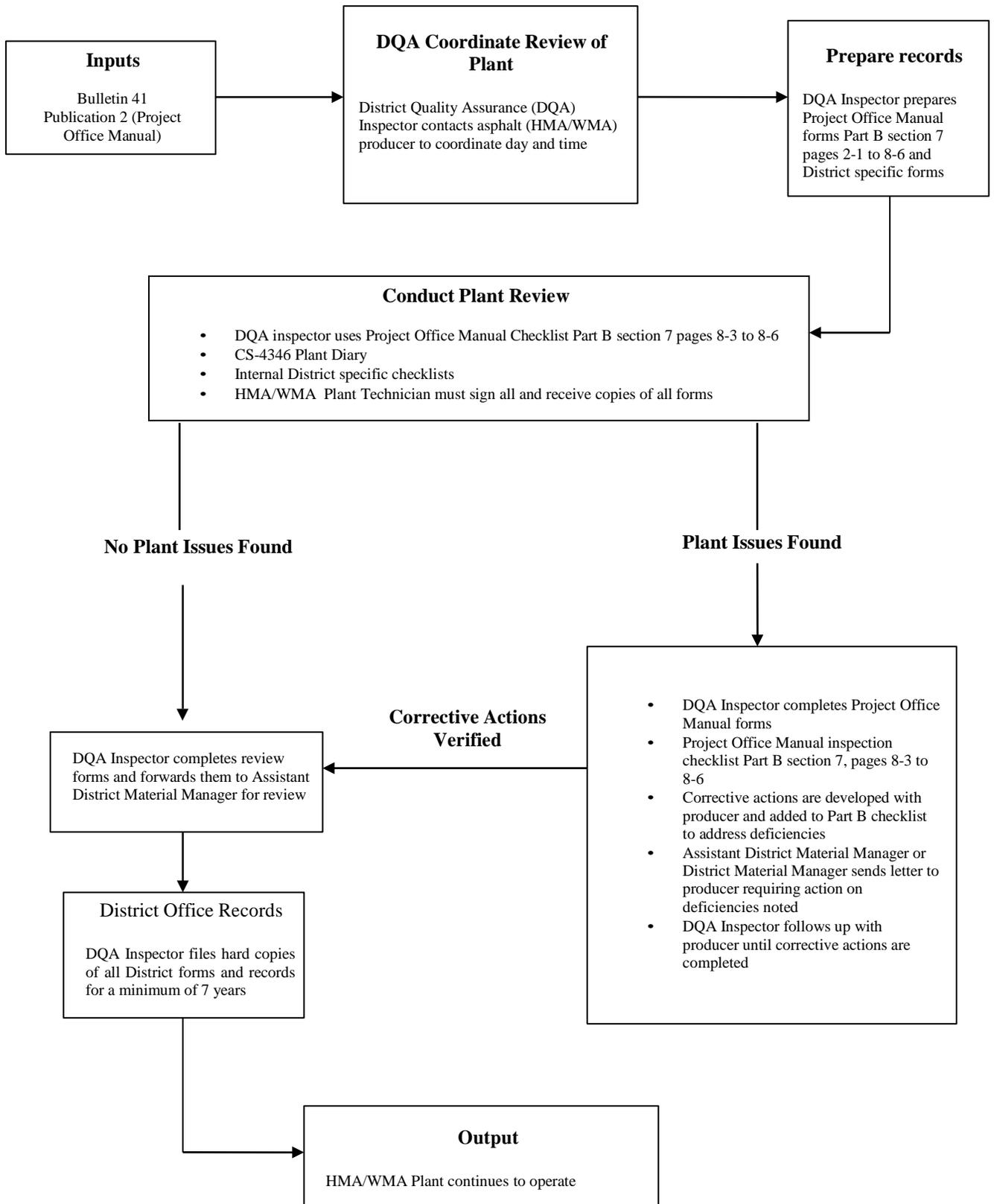
Reference Documents:

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

Procedure:

See process map below:



M7 Warranty Review

Process Owner: Construction Services Engineer

Purpose:

The purpose of this procedure is to ensure that all projects requiring a warranty are reviewed as per special provision timeframe.

Scope:

The scope includes all projects that have warranties regardless of item or timeframe.

Reference Documents:

Project special provision located in ECMS
Manufacturer specifications

Procedure:

- Assistant Construction Engineer / Manager have the responsibility to review projects to see if warranties are incorporated.
- Ensure that the warranty toggle located in the detail screen in ECMS is checked "Yes". As per special provisions and/or work orders.
- 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
- Finalization checklist
 - Warranty date is when the warranty expires.
 - Add a miscellaneous detail for warranty information and reviews.
 - Conduct warranty reviews as required by warranty. Place reviews as conducted in miscellaneous detail.
- After each and final review, a letter is drafted and sent to the Contractor informing Contractor of the findings and status of the warranty.

SC1 Structural Plans Review

Process Owner: District Structural Control Engineer

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)
- Bridge Coatings Inspection Manual

Procedure:

The responsible parties involved in this process are as follows:

- Design Project Manager
- Bridge Designer (either In-House or Consultant)
- Structural Control Engineer or Asst. 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 Structural Control Engineer by email that structure plans are available for review
3. Structural Control Engineer enters the project information in the Structural Plans Reviews spreadsheet.
4. Structural 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 Structural 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 prior to the constructability meeting - by the Structural Control Engineer
7. After consultation with the Bridge Designer, the Design Project Manager provides responses in the DRS or the Comment Sheet to the Structural Control Engineer's comments

8. The Design Project Manager meets with the Structural Control Engineer to review comment responses and settle any differences
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 Structural 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.

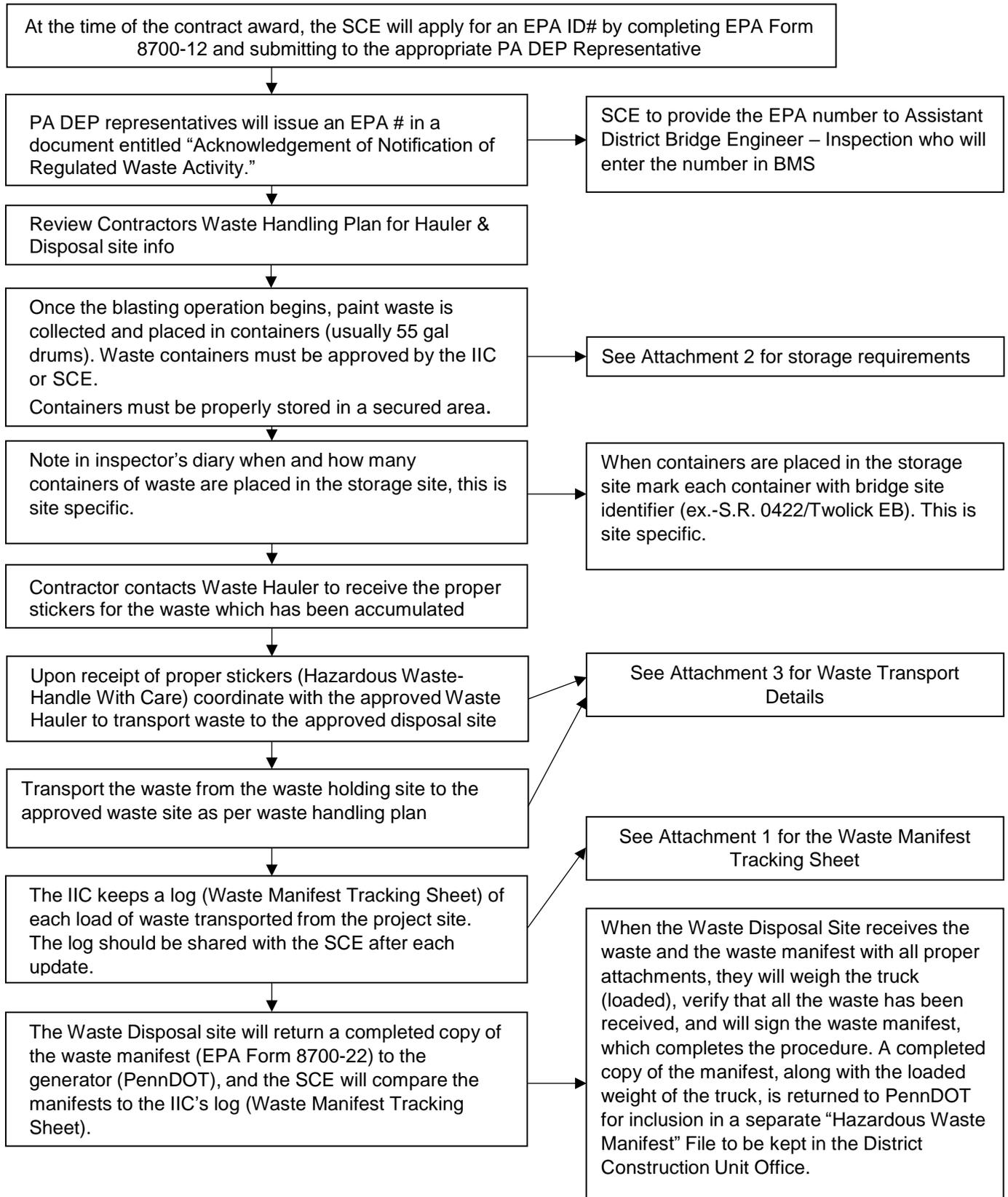
Reference Documents:

- [Specifications – Publication 408](#)
- [Project Office Manual \(POM\) – Publication 2](#)
Part B, Section 4, p. 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)

Procedure:

See the process map below:

Disposal of Bridge Paint Waste - Process Map



ATTACHMENT #2

BRIDGE PAINT WASTE STORAGE REQUIREMENTS

*Refer to “Disposal of Bridge Waste” standard special provision, Section 9073.3(e)

* The waste holding site is to be secured and labeled with the proper warning signs indicating, material specific, what is stored in the waste containers. This waste holding site is to be located away from any flood plains and the ground in the containment should be stable and covered with an impervious tarp. The storage site is to be approved by a Department Representative.

* Stage the containers together in the waste holding site in lots no greater than two rows of five containers each.

* Maintain a minimum lane clearance of 36 inches between each lot of ten containers.

* If waste from more than one site is being stored in the holding site, keep the containers separated site specific.

ATTACHMENT # 3

BRIDGE PAINT WASTE TRANSPORT DETAILS

1. Refer to “Disposal of Waste” standard special provision, section 9073.3(g) 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 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 is 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 Structural Control Engineer

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

