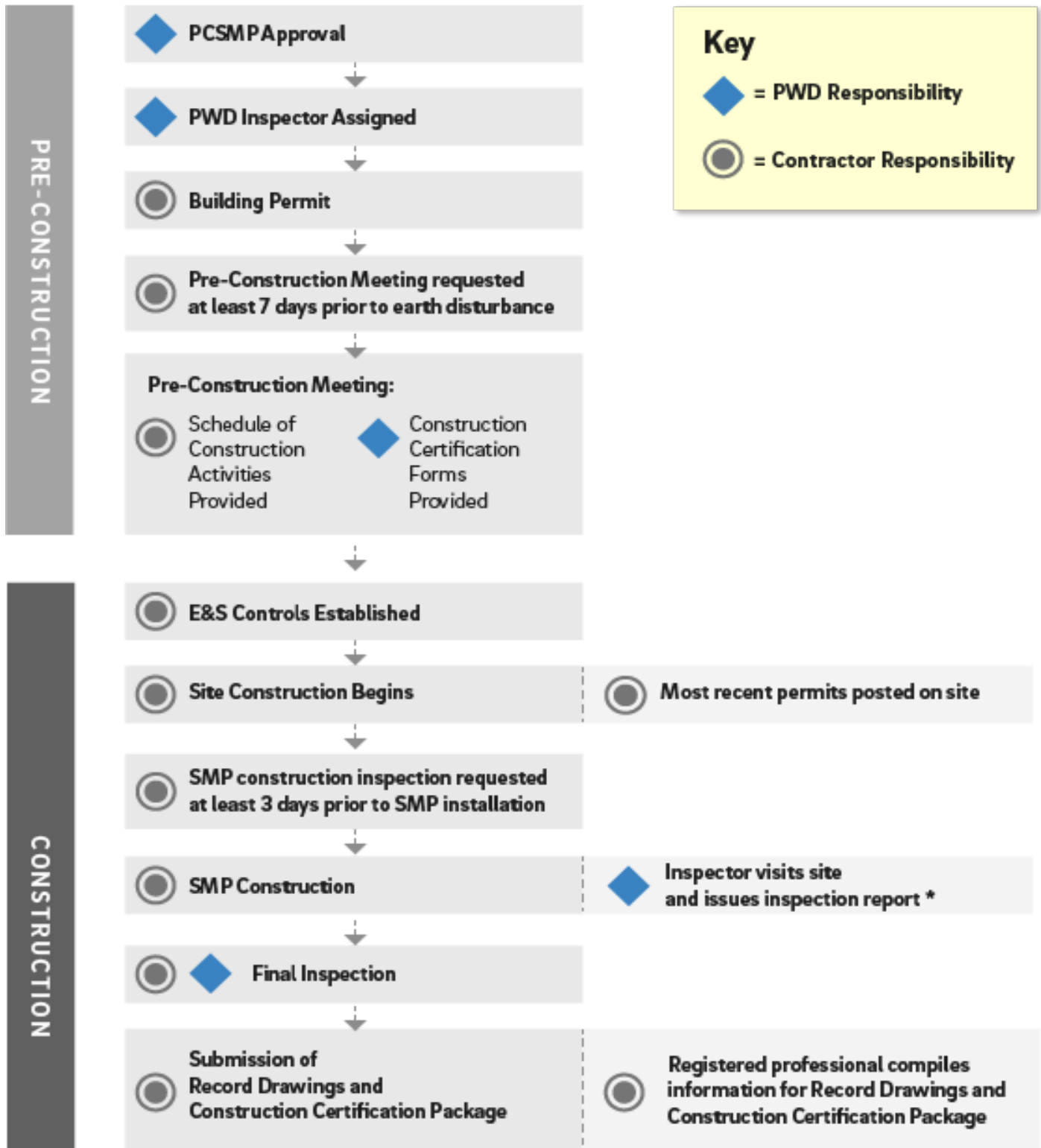


5.1 Construction Inspection

Effective construction inspection addresses both Erosion and Sediment Control (E&S) and stormwater management practice (SMP) construction. To supplement construction oversight provided by the property owner and the designer, the Philadelphia Water Department (PWD) inspects both E&S measures and SMP installation to verify that the site is maintained properly and correct installation practices are used. PWD staff inspects the site at several stages of the construction process, and inspections may occur both on a scheduled and a complaint-driven basis. An overview of the construction inspection process is shown in Figure 5.1-1.

Figure 5.1-1: Overview of Construction Inspection Process



*Any noted deficiencies to be resolved **by contractor**.

IMPORTANT: Field Changes deviating from Approved PCSMP design may require submission to, and review and approval by, PWD Stormwater Plan Review.

water.phila.gov/pool/images/swmg-figure-5-1-1-overview-of-construction-inspection-process.png

PWD's inspections serve a number of purposes. For instance, PWD must verify and document the installation of SMP elements prior to backfill in order to prevent costly repairs and/or re-excavation that may be needed either during or after construction. PWD's inspections are also critical to ensure the long-term performance of SMPs and minimize future enforcement scenarios stemming from improper installation practices. PWD Inspectors verify that infiltration areas are correctly sized, shielded from sediment loading prior to site stabilization, and protected from compaction.

PWD Inspectors are authorized to access sites under authority provided by **Philadelphia Code (§14-306(1)(a))** <https://codelibrary.amlegal.com/codes/philadelphia/latest/overview>. PWD Inspectors will inspect the project site throughout construction.

5.1.1 Coordinating Inspections with Other PWD Units

Different PWD units may inspect multiple parts of construction projects (E&S, SMP installation, sewer connections, pumping, private cost construction, etc.). The following divisions can be contacted based on project needs:

Table 5.1-1: PWD Unit Contact Information

Unit Name	Phone Number	Inspection Type
Stormwater Inspections	215-685-6387	E&S Measures SMP Construction
Water Transport Records	215-685-6270	Water and Sewer Connections
Construction Division	215-685-6345	Private Cost Construction
Industrial Waste	215-685-6085	Pumping of Stormwater

Stormwater Inspections must be contacted for all site development and SMP construction projects. PWD Water Transport Records (WTR) must be contacted for any inspections related to water and/or sewer connections. Written approval from WTR following the completion of certain sewer connection requirements will be required for project close-out. A permit is required for sewer tie-ins six inches in diameter or larger. Direct pumping of stormwater to a storm inlet or manhole is prohibited. The PWD Industrial Waste Unit should be contacted for all pumping needs, including permits. If the project includes the construction of public infrastructure using private money (Private Cost Project), the contractor must contact the PWD Construction Division to arrange an inspection at least seven days in advance of work. The designer is referred to **Section 2.5** water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-5-pwds-development-review-process for additional information on the role of these units.

5.1.2 Preconstruction Processes

Assignment of PWD Inspector

Following Post-Construction Stormwater Management Plan (PCSMP) approval, project contacts supplied by the applicant will receive an email from Stormwater Inspections that assigns a PWD Inspector to the project. This PWD Inspector will be the main contact for E&S and SMP inspections. PWD will only email the project contacts that have been provided by the applicant at the time of PCSMP Approval. As such, the email may be sent to the design engineer, but not the contractor, particularly if a contractor had not been selected at the time of PCSMP Review Phase submission. It is the responsibility of the applicant to ensure that all necessary parties have been notified that an inspector has been assigned. If unaware of the specific PWD Inspector for the project, the applicant should contact Stormwater Inspections.

Once the PCSMP Approval Letter is received, the applicant can obtain a Building Permit for the project from the City of Philadelphia Department of Licenses and Inspections (L&I), pending the receipt of other required approvals. PWD Stormwater Plan Review or Stormwater Billing and Incentives must be notified of any changes to the Approved E&S and PCSMP, layout, and/or materials prior to installation. Field changes may require new PWD and Pennsylvania Department of Environmental Protection (PA DEP) approvals, in addition to approval by the design engineer. The designer is referred to [Section 2.3.1](https://water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-3-review-phases#2.3.1) water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-3-review-phases#2.3.1, PCSMP Review Phase, for more information on field changes.

Preconstruction Meeting

After a Building Permit and a PA DEP National Pollutant Discharge Elimination System (NPDES) Permit (if applicable) have been obtained, but prior to the start of construction activities, a preconstruction meeting must be held with the contractor, design engineer, an owner's representative, and the PWD Inspector for any projects that have received a PCSMP Approval. PWD may also require an E&S-only preconstruction meeting for certain projects in the Development Exemption or Demolition Review Paths. The PWD Inspector must be provided with at least seven days notification to schedule this meeting.

At the preconstruction meeting, the PWD Inspector will provide the contractor with the Construction Certification Forms ([Appendix J](https://water.phila.gov/development/stormwater-plan-review/manual/appendices/j-construction-certification-package) water.phila.gov/development/stormwater-plan-review/manual/appendices/j-construction-certification-package) that were prepared for each SMP by the design engineer during the PCSMP Review Phase. The contractor must provide the PWD Inspector with an estimated schedule for the placement of geotextile, stone, storage media, piping, soil, etc.

5.1.3 Construction Processes

Once construction begins, the contractor must ensure that copies of the Approved PCSMP, E&S Plan, and NPDES Permit (if applicable) are available on-site at all times. The most recently PWD-approved versions of these plans must be used for SMP construction.

The contractor must provide at least three days' notice to the assigned PWD Inspector prior to the installation of any SMP elements. This is especially critical for subsurface system elements, as without proper inspection prior to backfill or closure of any SMP elements, the PWD Inspector may request re-excavation in order to verify correct installation.

Throughout construction observation, the PWD Inspector will regularly send out (via email) inspection reports that detail any deficiencies or issues observed related to SMP construction or E&S measures. PWD expects the contractor to respond to any issues in a timely fashion, and, depending on the type of issue, may provide a timeframe for the contractor to remediate the issue.

In instances where major E&S issues are observed, the PWD Inspector will issue a notice of violation to fix any E&S concerns with a re-inspection date listed. If these concerns are not addressed by the date of re-inspection, PWD will pursue a Stop Work Order that will remain in place until the project is brought back into compliance.

During any stage of work, if the PWD Inspector determines that SMPs are not being installed in accordance with the most recently Approved PCSMP, or that adequate E&S practices are not being implemented on-site, and the contractor is not responsive to such notice by PWD, the site may be subject to a Stop Work Order and/or other enforcement measures. This also applies to projects found to be disturbing earth without the appropriate approvals or inadequate E&S measures.

5.1.4 Final Inspection

A final inspection will be conducted by the PWD Inspector to confirm the constructed conditions of the site and general accordance with the Approved PCSMP prior to the issuance of the Certificate of Occupancy or equivalent. PWD may request that L&I withhold the Certificate of Occupancy for any project with outstanding issues until these issues are adequately addressed. The contractor must be present on-site for completion of the final inspection. A Post-Construction Stormwater Management (PCSM) Final Inspection Report will be issued identifying the SMPs found to be complete as well as any deficiencies identified during the inspection. All deficiencies identified during PWD's final inspection and report must be addressed prior to any re-inspections.

Upon completion of PWD's final inspection process, an updated PCSM Final Inspection Report will be issued indicating that all components of the SMP construction are complete and the as-built conditions of the site are in general accordance with the Approved PCSMP. Final inspection reporting and its conclusions are preliminary, and the final determination of site compliance will be based on the Record Drawing and Construction Certification Package (CCP) for the site. The Record Drawing and CCP should be provided at the time of the final inspection, if possible. Final inspection is required for issuance of a Record Drawing compliant letter for a project to be eligible for stormwater credit ([Section 6.3](https://www.water.phila.gov/development/stormwater-plan-review/manual/chapter-6/6-3-stormwater-credits/) [water.phila.gov/development/stormwater-plan-review/manual/chapter-6/6-3-stormwater-credits/](https://www.water.phila.gov/development/stormwater-plan-review/manual/chapter-6/6-3-stormwater-credits/)).

5.1.5 Post-Construction Submissions

If not submitted during the final inspection, the project's Record Drawing and CCP must be submitted to PWD for review following the final inspection. Submitted Record Drawing(s) must also incorporate any constructed variations/discrepancies documented in the PCSM Final Inspection Report.

For PA DEP Notice of Termination (NOT) for NPDES Permits, PWD is required to sign-off on completion of the project prior to PA DEP issuance of the NOT. PWD will not sign-off without a PCSM Final Inspection Report deemed complete, a complete CCP, and compliant Record Drawing(s).