

**GENERAL INSPECTION PRACTICES
PROPOSED STREETS FOR ORDINATION**

SHENANGO TOWNSHIP, LAWRENCE COUNTY

1. The developer's engineer must certify that proper staking of horizontal and vertical control has been established. Prior to construction, the developer shall provide project roadway stakeout in conformance with PennDoT type B surveying. In addition a cut sheet shall be provided to the Township Engineer in order to inspect the construction. Storm water and sanitary sewer facilities shall be staked with adequate points at each manhole or inlet to inspect the work. No work shall commence until the cut sheets have been reviewed and approved by the Township Engineer.
2. Upon establishing the sub-grade elevation and after compaction, the entire road bed shall be proof milled with a loaded triaxle. Compaction acceptance will be determined on the basis of non movement of the road bed under the loaded triaxle. Soft or failed areas must be removed to an acceptable depth as approved by the township's inspector and stabilized by using acceptable construction materials and approved methods. (This shall include the placement of oversize fabric, etc.)
3. Upon acceptance of the sub-grade, the developer shall place and compact the subbase to the Township specified depth. Compaction will be tested and accepted as specified in item NO #2.
4. Upon acceptance of the subbase layer, the developer shall place the bituminous material to the township specified depths. Loose samples of the bituminous materials will be taken during placement and tested to verify that materials conform with the approved job mix design formulas. Depth checks and yield checks will also be conducted during actual construction.
5. Certification papers from the asphalt plant will be required to verify compliance with PennDoT specifications and approvals.
6. Core samples will be taken from the finished paved surface to test for depth and final compaction. (Binder and Wearing course).
7. All work is to be conducted with prior notification to the township and the inspector.
8. Approvals will be given after each step outlined above.

9. A minimum of Twenty-Four (24) Hours notice must be given to the township in order to schedule an inspection.
10. Deviation from the above process may jeopardize the acceptance of the project.
11. The developer will be responsible for all fees associated with the inspection process and will pay all charges associated with the approval process for which the township is billed by its engineer and/or inspection firm.
12. Adjustments may be made to the above process upon recommendation to the township by the Township Engineer or inspector in the interest of insuring that the completed construction will meet the minimum standards established by the township. Such adjustments may include additional materials to stabilize soft areas, additional compaction testing, establishing roller patterns, etc. All such adjustments will be at the developer's expense.
13. All utilities which may be in the cart way must be installed, inspected and approved by the respective public utility prior to placement of bituminous courses.
- 14. All materials and workmanship must meet the most current edition of the Penn DoT Publication 408.**

Note: All other conditions of the Developer's Agreement and any previous approvals through subdivision, planned residential development and or the building permit process remain in effect. The above referenced steps are to serve as a guide to the contractor performing the work. Should any questions arise during the construction phase, such questions should be noted in writing and submitted to the township for a written response. Failure to do so may jeopardize final approval.

PAVEMENT CONSTRUCTION AND REPAIR

1. SCOPE

The work covered by this section of these specifications consists of furnishing all labor, equipment and materials, as well as, performing all operations in connection with the construction of paving in strict accordance with this section of the specifications and applicable drawings.

In general, pavement construction shall conform to the requirements of this section. Where reference is made in these specifications to PennDoT Publication 408, it shall be understood to mean Commonwealth of Pennsylvania, Department of Transportation Specifications (2000), or the latest version, including all supplements. Those sections of PennDoT Publication 408, as referred to shall be as much a part of these specifications as though they were herein attached.

2. ORDER OF WORK

Each Developer(Contractor) shall so plan the work under this section to insure completion of the work contained herein at such a time when the majority of work has been completed in order to keep heavy traffic loads during construction to a minimum over finished road surfaces. Final inspection and acceptance of the work will be made when construction is completed.

Roadway surfaces will only be placed when weather conditions will not detrimentally affect the quality of the finished work.

3. SUBGRADE PREPARATION

Approved construction equipment shall be used for this operation. Where saturated or unstable material unsuitable for proper compaction is encountered, such material shall be removed and replaced with granular material or rock meeting the requirements of Penn DoT Publication 408, Section 206. Subgrade shall be brought to required line, grade, and cross section and thoroughly compacted, as determined by the Township Engineer, using approved compaction equipment.

This operation shall include any reshaping and wetting required along with rolling and tamping of the subgrade, to obtain proper compaction. All boulders encountered in the excavation shall be removed or broken off to a depth of not less than six (6) inches below

the subgrade. The resulting area and all other low sections, holes or depressions shall be brought to grade with material meeting the requirements of PennDoT Publication 408, Section 206. The entire subgrade shall be shaped to line, grade and cross section and thoroughly compacted as herein provided and in accordance with PennDoT Publication 408, Section 210.

4. PAVEMENT BASE DRAIN

Pavement Base Drain, as per PennDoT Publication 408, Section 610, shall be placed prior to pavement construction where combination storm sewer and underdrain is not located. The base drain shall be placed as per the direction of the Township Engineer. Base drains shall generally empty into the storm sewer catch basins or manholes and shall enter at or above the flow line of the main storm sewer line at that location.

5. ROADWAY CONSTRUCTION

The pavement structure shall consist of the following:

1. The construction of a subbase consisting of 8" of No. 1 and 2" of No. 2A Coarse Aggregate on a prepared subgrade area, meeting the material and construction requirements of PennDoT Publication 408, Section 350.
2. The construction of a 3" Superpave Asphalt Mixture Design, HMA Binder Course, 19.0 mm Mix, meeting the requirements of PennDoT Publication 408, Section 409.
3. The construction of an initial 1" Superpave Asphalt Mixture Design, HMA Wearing Course, 9.5 mm Mix and final 1" Superpave Asphalt Mixture, HMA Wearing Course 9.5 mm Mix after 75 percent of the building construction is completed and 3 years of time has elapsed.

Reference shall be made to the Typical Roadway Section Details bound to the rear of these specifications.

The Superpave Mixture Design designating PG Binders, ESALS and SRL criteria must be approved by the Township based on the proposed road use.

Each Developer (Contractor) shall use water, oil, calcium chloride, dependent on existing conditions, to control excessive dust conditions during construction or while maintaining surface areas including those in or along State Highways at the direction of the Township Engineer.

6. STORM SEWERS, MANHOLES AND INLETS

Combination storm sewers and underdrains shall be designed as per the Township's Storm Water Management Requirements. Construction and material specifications shall be as follows:

- Pipe Culvert – PennDoT Publication 408, Section 601
- Inletss - PennDoT Publication 408, Section 605
- Manholes - PennDoT Publication 408, Section 605

Storm water management facilities shall be built in a sequence that provides protection for all surrounding properties. A written sequence shall be provided to the Township prior to construction and be approved by the Township Engineer.

Refer to the Typical Roadway Section Details bound to the rear of these specifications for details on inlet placement.

7. RESTORATION AND REPAIRS – TOWNSHIP ROADS

All open cuts made in any Township Road shall be completed and restored as detailed herein.

1. Permission must be secured from the Township.
2. Pavement to be removed shall be saw cut to neat lines prior to excavation.
3. Backfill openings in any Township Road with coarse aggregate meeting the material requirements of the PennDoT Publication 408, Section 350.
4. Compact backfill as determined by the Township Engineer up to the bottom of the existing pavement.
5. The roadway pavement shall be replaced "in-kind" or with 3" of ID-2 Binder and 1 ½" of ID-2 Wearing, whichever has the greater thickness. Bituminous materials shall meet the material specifications and be placed as herein provided.