

SECTION 16

INDUSTRIAL PARK STREETS

Purpose

The purpose of this section is to set forth the requirements of the State of Delaware Department of Transportation for the planning, design, construction, inspection and acceptance for maintenance of Industrial Park Streets. All other aspects of the "Rules and Regulations" not addressed in this section are considered applicable, such as Construction Plans, Soils, Investigation, Drainage Criteria, Utilities, Traffic Impact Studies, etc.

Definitions

Industrial Park - (See Sec. 1 under **Definitions**)

Industrial Park Street - Classified as a Subdivision Street (See Sec. 1 under **Definitions**)

Right-of-Way

- I. Right-of-Way Plan - See Section 2 for Industrial Park Street right-of-way widths (curbed and not-curbed sections).
- II. Maintenance Responsibility - See Section 2, Acceptance of Right of Way Dedicated to the Public Use pertaining to Division of Highways control over the dedicated right-of-way and its maintenance responsibility.

Construction Plans

Street Construction plans must be signed and sealed by an Engineering Firm certified by the DelDOT Consultant Control Committee to perform local road land street Design. Engineer Certification is being required by DelDOT since this policy given the developer and/or property owner the option of having state maintained streets serving Industrial Parks. Further, due to the type and projected traffic volumes on these streets, design is a major factor in ensuring that future maintenance costs by DelDOT be kept to a minimum.

Typical Sections

I. Street Classification - See Figure XVI - 1 - "Typical Sections for Industrial Park Street".

II. Standards - See Section 4 "Industrial Park Streets" for standards pertaining to curbed and uncurbed street sections.

III. Standard Pavement Sections for Industrial Park Streets - The designer should first obtain the following traffic data for the proposed streets:

- a) Estimated Average Annual Daily Traffic (AADT).
- b) Truck Percentage of AADT (% trucks).

In order to project the future traffic data it is recommended that the industrial park under study be compared with existing typical sites. Due to the uncertainty of future truck weight patterns the pavement design will be based on an 18 Kip Equivalency Factor of 1.50.

The following formula is then used to determine the daily number of 18 kip axle loadings expected on this pavement:

$$\text{A.A.D.T.} \times \frac{1}{2} \times \% \text{ Trucks} \times \frac{18 \text{ kip}}{18 \text{ kip Axle}} = \text{Number of}$$

The above procedure covers all truck traffic in one direction to an equivalent number of a single axle carrying 18,000 lbs. Car traffic is neglected due to its minor influence.

This equivalent number of 18 kip single axle loadings is then used with the following chart to determine the strength or Structural Number required for the pavement widening:

PAVEMENT DESIGN CHART

Number of 18 kip Pavement Axle Loadings	Required Structural Number (S.N.) (Poor Soil)	Example Sections
1-20	2.8	2" C Hot Mix 3" B Hot Mix 6" Crusher Run <hr/> SN = 2.84
21-50	3.2	2" C Hot Mix 4" B Hot Mix 6" Crusher Run <hr/> SN = 3.24
51-100	3.6	2" C Hot Mix 6" Bit Base 6" Crusher Run <hr/> SN = 3.64
101-300	4.0	2" C Hot Mix 6" Bit Base 8" Crusher Run <hr/> SN = 4.10
301-600	4.4	2" C Hot Mix 7" Bit Base 8" Crusher Run <hr/> SN = 4.45

The above tabulation is based on soils having a soil support value ranging between 2.3 and 3.5. These soils fall within the A-4, A-5 and A-7 AASHTO soil classification.

Geometric Criteria

See Section 6 for Industrial Park Street Design Criteria. In addition all other portions of this section remain applicable to the design of streets within Industrial Parks.

Traffic Signal Agreement

Should the Department determine that a traffic signal is required at the entrance/exit to an Industrial Park the developer and/or said property owner shall establish a maintenance corporation for the purpose of reimbursing the Department for the installation, operation and maintenance of said traffic signs. The maintenance corporation and an agreement between said parties shall be established to the satisfaction of the Department prior to the recordation of the Major Land Development Plan by New Castle County.

Inspection and Acceptance

Prior to the issuance of a Notice to Proceed, the Developer must follow the same procedure as outlined in Section 13. Also, included in the same section is the Standard Construction Agreement for Public Industrial Park Street Construction. It shall be noted that the developer is responsible to provide inspection of the bonded Industrial Park Streets as per the Construction Agreement. Further, it will be a requirement that the Developer's Engineer be certified by the DelDOT Consultant Control Committee to perform Construction Engineering.

On completion of all aspects of the initial street construction to the satisfaction of the ENGINEER, a first final inspection will be held. After the first final inspection a 3 year waiting period is required prior to the acceptance of said streets into the Department's maintenance system. At this time a second final inspection will be held to ensure that all punch list items have been corrected and that the streets as designed have held up to the anticipated traffic loading. The 3 year waiting period has been required by the Department because of the significantly higher traffic volumes that will be generated by an industrial park type development and the heavier vehicle loadings that will be experienced by the high percentage of truck traffic. Also, since acceptance of industrial park streets for maintenance is a new policy created by the Department to give the developer the flexibility of creating a development with public streets, the 3 year waiting period gives the necessary protection in determining the adequacy of these new design standards.