

**APPENDIX “E”**  
**ROAD CONSTRUCTION STANDARDS**  
**Hood County, Texas**

1. General

The Hood County Road Operations Department shall be notified forty-eight (48) hours prior to the commencement of any major construction items such as subgrade stabilization, installation of flexible base, prime coat application or placement of surface course. It shall be the owner/developer’s responsibility to provide adequate inspection of the construction to insure compliance with county standards. All construction and testing reports shall be furnished to the Road Administrator certifying that the construction requirements of these standards have been met. The test results must be approved prior to initiating the next phase of construction.

A “STOP WORK ORDER” shall be issued whenever the owner/developer or his contractor fails to adhere to the approved plat, construction plans or these specifications. The owner/developer may not continue development until the deficiencies listed in the “STOP WORK ORDER” are corrected. If the owner/developer or his contractor fails to correct the deficiencies, the Commissioners’ Court will not accept the roadway and/or subdivision.

Roadways built within the unincorporated areas of Hood County, whether maintained by the County or a Homeowners’ Association shall be designed and constructed to achieve a minimum Structural Number (SN) of 2.50. The Hood County Commissioners’ Court has approved the following road section comparisons:

\*Note: All thickness are minimum. Layers found to be deficient after testing shall be removed and replaced or modified to match the minimum numbers shown below.

	Layer Thick.	Layer Coef.	SN
1.5-inch Asphalt Course Penetration	1.5	0.44	0.66
9-inch Flex Base (Type A, Grade 2)	9	0.14	1.26
6-inch Stabilized Subgrade (depth dependent on PI value)	6	0.11	0.66
		TOTAL	2.58
2-inch HMAC	2	0.44	0.88
8-inch Flex Base (Type A, Grade 2)	8	0.14	1.12
6-inch Stabilized Subgrade (depth dependent on PI value)	6	0.11	0.66
		TOTAL	2.66
5-inch Reinforced Concrete	5	0.5	2.5
5-inch Stabilized Subgrade (depth dependent on PI value)	5	0.11	0.55
		TOTAL	3.05

All work, methods and materials not covered by these standards shall conform to the most current issue of the “Standard Specifications for Public Works Construction” published by the North Central Texas Council of Governments (NCTCOG).

## 2. Preparing Right-of-Way

All preparing of the right-of-way and/or clearing, and grubbing shall be completed before starting the sub-grade preparation. All utilities, which require roadway crossings, shall be installed before starting the Subgrade preparation.

## 3. Subgrade Preparation

Prior to the start of construction on subgrade, soil samples shall be taken along the proposed roadway at a frequency determined by the Road Administrator. Using these samples, a soils analysis shall be made by a certified soil laboratory to determine if a soil stabilizer (lime, cement, liquid chemical, etc.) is required. A Plasticity Index (PI) range of not less than ten (10) or greater than twenty (20) is acceptable. Copies of the tests results shall be furnished to the Road Operations Department.

If analysis reveals that soil properties are not acceptable, tests must be made to determine the appropriate stabilizers and optimum quantities for desired results to meet road design.

Subgrade is defined as “that portion of the roadbed upon which the flexible base or pavement is to be placed”. Generally, the subgrade for local roadways is thirty feet (30’) wide.

The subgrade shall be scarified and shaped in conformity with the typical sections and the lines and grades indicated, or as established by the Engineer, by the removal of existing materials or addition of approved material. All unsuitable material shall be removed and replaced with approved material.

The subgrade shall be compacted by approved mechanical equipment to a density of not less than ninety-five percent (95%) standard Proctor density. Prior to the placement of any base material, tests from a certified soils laboratory shall be supplied by the owner/developer to the Road Operations Department stating that the subgrade has been compacted to ninety-five percent (95%) density to a depth of six inches (6”) for all sub-grade and for the full depth of all fills. If the subgrade fails to meet the density specified, it shall be reworked as necessary to obtain the density required.

Fills must be placed and compacted on horizontal lifts of not over twelve inches (12”) depth to the specified density. Fill sections whose depth exceeds eight feet (8’), at any point on the cross section, shall require a slope stability analysis and/or approval of the Road Operations Department.

## 4. Flexible Base Course

The base material must meet the requirements of TxDOT Item 247, Flexible Base, Type “A” Grade 2.

The flexible base material shall be compacted to a minimum 95% standard Proctor density and optimum moisture of -2 to +4. The base shall be tested by an Independent Testing Laboratory for standard Proctor density. The frequency of these tests shall be as required by the Road Administrator. Copies of the tests results shall be supplied by the owner/developer to the Road Operations Department. Base material shall be placed and compacted in equal horizontal lifts when possible. No lift shall exceed six-inches (6”) in depth after compaction.

Base course shall be maintained by blading, and the surface, upon completion, shall be smooth and in conformity with the typical section indicated, and to the established lines and grades.

All irregularities, depressions or weak spots which develop shall be corrected immediately by

scarifying the areas affected, adding suitable material as required, re-shaping and re-compacting by sprinkling and rolling.

Should the base course, due to any reason or cause, lose the required stability, density and finish before the surface is complete, it shall be re-compacted and refinished at the sole expense of the contractor.

## 5. Surface Course

Roadways paved with one of the following types of surface shall conform to the requirements of the respective type used.

### (a) Asphalt Course Penetration Surface

The three-course penetration seal (3-CPS) shall meet the requirements of TxDOT Item 316, "Surface Treatments." The asphaltic materials shall include both a prime coat of either emulsified or medium curing asphalt and surface coats of rapid setting asphalt in accordance with TxDOT Item 300, "Asphalts, Oils, and Emulsions." The types and quantities of asphalt to be applied shall be accordance with generally accepted road construction practices or as directed by the Road Administrator.

The aggregates for surface treatment shall meet TxDOT Item 302, "Aggregates for Surface Treatments" Type A, Grade 4.

In the event a three-course penetration seal (3-CPS) is used, a minimum of twenty-two (22) months shall have passed before placing the third and final course penetration seal.

Surface treatments will be applied after April 15<sup>th</sup> and prior to October 15<sup>th</sup> of each calendar year. Surface treatments shall not be applied when the air temperature is below 60 degrees and falling, but it may be applied when the air temperature is 50 degrees and rising.

### (b) Hot Mix Asphaltic Concrete (HMAC) Surface

The asphaltic material for Prime Coat shall meet the requirements for TxDOT Item 310, Prime Coat. Prime Coat shall be applied at a rate not to exceed 0.35 gallon per square yard of surface.

The HMAC surface course shall meet the current specifications of TxDOT Item 340, Type D. HMAC pavement shall not be placed when the general weather conditions, in the opinion of the County Road Administrator, are not suitable. Test reports showing material compliance, from a certified testing laboratory, shall be submitted to Road Operations. Minimum tests made and submitted shall be one for each day's production, or one per 1,000 tons placed, whichever is, with a minimum of one per project. Such tests shall be made by and at the expense of the owner/developer.

All asphaltic mixtures shall be placed with a spreading and finishing machine. The mix shall be compressed thoroughly and uniformly compacted immediately after placing to the required density. All compaction rolling shall be complete before the material cools below 175 degrees F. The completed surface shall meet the approval of the Developer's Engineer and the County Road Administrator for riding surface, finish, and appearance.

(c) Concrete Surface

Test beams will be required for each 50 CY or a minimum of one beam for each class of concrete. A slump test will be required with each set of test beams. Air entraining and retarding agents used shall be from the approved TxDOT list.

The driving surface shall be six inches (6”) of Class “A” (3,000 lb in 28 days) concrete with number three (#3) reinforcing at twenty-four inch (24”) centers both ways. Concrete shall not be placed when the ambient temperature is below 40 degrees F and falling, without permission from the County Inspector.

No concrete shall be laid at any time unless Road Operations is notified twenty-four (24) hours in advance.

6. Street Sign Installation

Street signs shall be installed by the owner/developer in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways.

The owner/developer of a subdivision shall install the street name signs on new streets. The proper installation of these signs is a part of the required construction standards of Hood County, and will be inspected for approval prior to the release of the performance bond.

The owner/developer of a subdivision shall not be required to install any traffic control sign or device. The installation of such control signs or devices shall be the responsibility of Hood County or other affected governmental agencies only.

ROAD R.O.W. (60')

