

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

June 28, 2017

DESIGN BULLETIN No. 17-02

SUBJECT: Earthwork and Embankment Related Special Provisions

The following Illinois Tollway special provisions have been revised/issued for use on the Illinois Tollway system whenever there is work involving earth excavation or construction of embankment.

- **Illinois Tollway Special Provision “EARTH AND ROCK EXCAVATION”, dated May 15, 2017** – this special provision modifies the Standard Specifications to remove references to “unstable” materials. All materials previously identified as “unstable” under the Standard Specification will be categorized as unsuitable material and handled accordingly under this special provision and the associated “Embankment” special provision. (This special provision revises previous versions related to earth and rock excavation.)
- **Illinois Tollway Special Provision “EMBANKMENT”, dated May 15, 2017** – this special provision defines Zone “A” and Zone “B” embankment and provides the requirements for the materials and construction of both. Zone "A" Embankment is defined as the structural embankment required for support of the roadbed. Zone "B" Embankment consists of those portions of the complete embankment lying between the foreslopes of Zone "A" Embankment and the neat line slopes of the complete embankment section. Zone "B" Embankment is only allowed within the extents shown on the plans for roadways, right-of-way and infields under Illinois Tollway jurisdiction. It incorporates handling of what would previously be “unstable” materials with appropriate treatments based on the use in either Zone “A” or Zone “B”, but only if the material is unsuitable due to excessive moisture content. Any additional materials previously categorized as “unstable” due to physical properties other than moisture content are now classified as unsuitable materials that must be stored on-site or disposed of. The special provision provides the requirement for disking and drying of such materials, or for the chemical and mechanical treatments of such materials by giving reference to the appropriate associated Illinois Tollway special provisions “Subgrade Soil Stabilization” and “Embankment Modification”. (This special provision revises previous versions related to embankment construction.)
- **Illinois Tollway Special Provision “SUBGRADE SOIL STABILIZATION”, dated May 15, 2017** – this special provision provides for the chemical and mechanical treatments of soils that require stabilization when the subgrade for the pavement structure and shoulders is prepared in accordance with Section 301 of the Standard Specifications. It applies to all compacted soils that require stabilization within 2 feet of the finished subgrade surface as a result of excessive moisture content, and within 1 foot of the finished subgrade surface where full area stabilization of the subgrade under pavements is required by design. Its use is governed by the latest version of the Illinois Tollway “EMBANKMENT” special provision. (This special provision revises/replaces previous versions related to subgrade soil modification.)

- **Illinois Tollway Special Provision “EMBANKMENT MODIFICATION”, dated May 15, 2017** – this special provision provides for the chemical treatment of suitable but excessively moist embankment soils that require stabilization using a modifier (lime or fly ash) that are 2 feet or more below the finished subgrade surface. Usage is governed by the latest version of the Illinois Tollway “EMBANKMENT” special provision.

Design Section Engineers (DSE) must analyze the project soil conditions and proposed earthwork usage to estimate required embankment and subgrade soil treatment as related to these requirements of these special provisions.

DSE are expected to incorporate this Design Bulletin into all contracts currently under design and future contracts. Exceptions to this directive shall be coordinated with the project manager and documented as a design deviation.



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Chief Engineer

6/29/17

Date