



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Design Memorandum No. 14-04 Technical Advisory

March 27, 2014

Replaces Design Memo 14-04 previously issued March 26, 2014

TO: All Design, Operations, and District Personnel, and Consultants

FROM: /s/ Elizabeth W. Phillips
Elizabeth W. Phillips
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Division of Bridges

SUBJECT: Subgrade Treatment

REVISES: *Indiana Design Manual* Chapter 17-4.02(01)

SUPERSEDES: Design Memo 10-15

EFFECTIVE: Lettings on or after September 1, 2014

The *Standard Specifications* for subgrade treatment have been revised to permit only a single option for each subgrade type.

The revised subgrade treatment options are shown below and have been incorporated into the *Indiana Design Manual*. The specific revisions are shown in the attachment to this memo.

Subgrade	Option
Type I	24 in. of soil compacted to density and moisture requirements
Type IA	Type IA has been deleted from the <i>Standard Specifications</i> .
Type IB	14 in. chemical soil modification.
Type IC	12 in. of subgrade excavated and replaced with coarse aggregate No. 53
Type II	6 in. of the subgrade excavated and replaced with coarse aggregate No. 53.

Type IIA	8 in. chemical soil modification.
Type III	6 in. of soil compacted to density and moisture requirements.
Type IIIA	Type IIIA has been deleted from the <i>Standard Specifications</i>
Type IV	12 in. of the subgrade excavated and replaced with coarse aggregate No. 53 on Type IB geogrid.
Type V	3 in. of subgrade excavated and replaced with 3 in. coarse aggregate No. 53.

Designers should contact the Office of Geotechnical Services for a revised subgrade treatment recommendation if the current recommendation is for Type IA, Type IIIA, or a specific option within the remaining types that is no longer valid.

For Subgrade Treatment Type IIIA, shown in the *Standard Drawings* series 610-DRIV and 610-UTMO, Subgrade Treatment Type II should be used. The drawings will be updated accordingly.

RSP 207-R-616 should be called for if the project includes a pay item whose 3-digit prefix is 207 or 215. The RSP will be available on the Recurring Special Provisions and Recurring Plan Details Menu at a later date.

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17-4.02(01) Subgrade-Treatment Types [Rev. Jan. 2011, Mar. 2014]

For each of the subgrade treatment types described below, the contractor is to choose from the applicable options for each type. Where subgrade treatment other than that described here below is recommended by the Office of Geotechnical Services, a special provision should be prepared.

The subgrade treatment methods are as follows:

1. Type I. This treatment consists of The contractor's options are as follows:
 - a. 14 in. chemical soil modification;
 - b. 12 in. of the subgrade excavated and replaced with coarse aggregate No. 53; or
 - c. 24 in. of soil compacted to density and moisture requirements.
2. Type IA. Type IA has been deleted from the *Standard Specifications*. The contractor's options are as follows:
 - a. 14 in. chemical soil modification; or
 - b. 12 in. of the subgrade excavated and replaced with coarse aggregate No. 53.
3. Type IB. This treatment consists of 14 in. chemical soil modification.
4. Type IC. This treatment consists of 12 in. of subgrade excavated and replaced with coarse aggregate No. 53.
5. Type II. This treatment consists of The contractor's options are as follows:
 - a. 8 in. chemical soil modification;
 - b. 6 in. of the subgrade excavated and replaced with coarse aggregate No. 53; or
 - c. 12 in. of soil compacted to density and moisture requirements.
6. Type IIA. This treatment consists of The contractor's options are as follows:
 - a. 8 in. chemical soil modification; or
 - b. 6 in. of the subgrade excavated and replaced with coarse aggregate No. 53.
7. Type III. This treatment consists of The contractor's options are as follows:
 - a. 6 in. of soil compacted to density and moisture requirements; or
 - b. 6 in. of the subgrade excavated and replaced with coarse aggregate No. 53.
8. Type IIIA. Type IIIA has been deleted from the *Standard Specifications*. This treatment consists of 6 in. of the subgrade excavated and replaced with coarse aggregate No. 53.

9. Type IV. This treatment consists of 12 in. of the subgrade excavated and replaced with coarse aggregate No. 53 on Type IB geogrid.
10. Type V. This treatment consists of 3 in. of subgrade excavated and replaced with 3 in. coarse aggregate No. 53.

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