



Illinois Department of Transportation

Memorandum

To:	Fawad Aqueel	Attn:	Praveen Kaini Richard Hoffman
From:	Stephen Jones	By:	Giancarlo Gierbolini
Subject:	Roadway Geotechnical Report*		
Date:	March 6, 2025		



*Route: FAI 290 (Interstate 290, I-290)
Location: at Laramie Avenue
Section: NA
County: Cook
Contract: 62R61

The IDOT District One Geotechnical Unit has reviewed the Roadway Geotechnical Report (RGR) prepared by GSG Consultants, Inc. dated March 5, 2024 for the above-referenced project. The report provides geotechnical recommendations for the proposed improvements at the crossing of I-290 and Laramie Avenue in Cook County.

The proposed project improvements will include the replacement of the existing bridge that carries Laramie Avenue over I-290. The project will also include full depth pavement reconstruction on either end of the bridge, where Laramie Avenue crosses Flournoy Street on the north side of the bridge and Lexington Street on the south side of the bridge. The exploration and recommendations for the proposed bridge structure replacement are covered in a separate Structure Geotechnical Report (SGR).

After reviewing the roadway geotechnical report, the report is approved with the following comments and recommendations. A revised report is not required.

1. Based on the soils encountered at the subgrade level, the soils report did not recommend performing undercuts at this time. We recommend including a plan quantity of Aggregate Subgrade Improvement (CU YD) equal to at least 25% of the planned full depth pavement area, assuming a thickness of 12 inches. This material should be used to replace any unsuitable soils below the bottom of the improved subgrade layer that are encountered in the field during construction. The actual need for removal and replacement with Aggregate Subgrade Improvement should be

determined in the field at the time of construction by the Geotechnical Engineer or soils inspector. All potentially unstable soils should be tested with a cone penetrometer and treated in accordance with Article 301.04 of the SSRBC and the undercut guidelines in the IDOT Subgrade Stability Manual. Any material not needed for undercut replacement at the time of construction should be deleted from the contract with no extra compensation to the contractor.

Based on the above recommendation, there will be a need for two separate Aggregate Subgrade Improvement line items in the Schedule of Quantities (SOQ) included in the design plans:

- **AGGREGATE SUBGRADE IMPROVEMENT 12" (SQ YD)** – This will be used for the 12 inch aggregate subgrade improvement below new pavement sections and widening pavement sections.
- **AGGREGATE SUBGRADE IMPROVEMENT (CU YD)** – This will be used in locations where there are undercuts (below the 12 inch improved subgrade layer) where poor soils were removed.

Both of these pay items reference the IDOT Bureau of Design and Environment (BDE) Aggregate Subgrade Improvement Special Provision (April 1, 2022).

We also recommend including a plan quantity of **GEOTECHNICAL FABRIC FOR GROUND STABILIZATION (SQ YD)** equal to at least 25% of the planned full depth pavement area. We recommend placing geotextile fabric at the base of undercut areas where low strength subgrade soils are encountered. The 12 inches of improved subgrade is not considered an undercut, and we do not recommend placing geotextile fabric at the base of the proposed 12 inch improved subgrade layer unless it is determined to be necessary to achieve stability by the Geotechnical Engineer or soils inspector at the time of construction. Fabric should meet the requirements of Article 210, Fabric for Ground Stabilization, of the SSRBC. Any material not needed at time of construction should be deleted from the contract with no extra compensation to the contractor.

If you have any questions regarding this review, please contact Robert Claussen, P.E. at (847)705-4735 or Giancarlo Gierbolini, P.E. at (847) 705-4003.

Cc: IDOT Soil Inspector