Illinois Department of Transportation

Memorandum

To:	Fawad Aqueel	Attn:	Suleyman Tulgar Ana Abreu
From:	Stephen Jones	By:	Giancarlo Gierbolini
Subject:	Roadway Geotechnical Report*		
Date:	October 16, 2025		

*Route: FAI 80 (Interstate Route 80)
Location: at Chicago Street and Ramp B
Section: 2017-057F
County: Will
Contract: 62F94

The IDOT District One Geotechnical Unit has reviewed the Roadway Geotechnical Report (RGR) prepared by GSG Consultants, Inc., dated September 25, 2025 for the above-referenced project. The report provides geotechnical recommendations for the proposed improvements to Interstate Route 80 (I-80) at the crossing with Chicago Street, in Will County.

The geotechnical report covers I-80 east of the crossing with Chicago Street to the east side of the crossing with Gardner Street, as well as Ramp B which will be located to the east of the crossing of I-80 and Chicago Street. The proposed project improvements will include the reconstruction and widening of the existing roadway and the realignment and lowering of the access ramps. The geotechnical exploration and recommendations for the bridge structures are included in a separate Structure Geotech Reports (SGR's).

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, however, the soil borings for the proposed Ramp B alignment did not extend deep enough to reach the subgrade soils that will be present below the lowered road profile.

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.

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 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 the 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.

2. We recommend that all of the topsoil that is stripped be stockpiled, sorted, and reused for the proposed landscaping improvements. The pay item for this is **TOPSOIL EXCAVATION AND PLACEMENT (CU YD)**. We recommend that a plan note containing the stockpiling information be included in the contract documents. We recommend using a topsoil removal depth of 6 inches for estimating purposes. The actual removal depth and the quantity of topsoil removal should be verified in the field.

3. To provide drainage for the proposed pavement in areas where the roadway will be completely reconstructed, we recommend installing both longitudinal and transverse pipe underdrains below the pavement. We recommend installing the transverse drains using a spacing of 300 feet as well as in low areas and at the base of any undercuts. The underdrains should tie into the storm water drainage system, and should be installed per Article 601 in the IDOT Standard Specifications (Adopted January 1, 2022) and consist of Type 2 underdrains

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