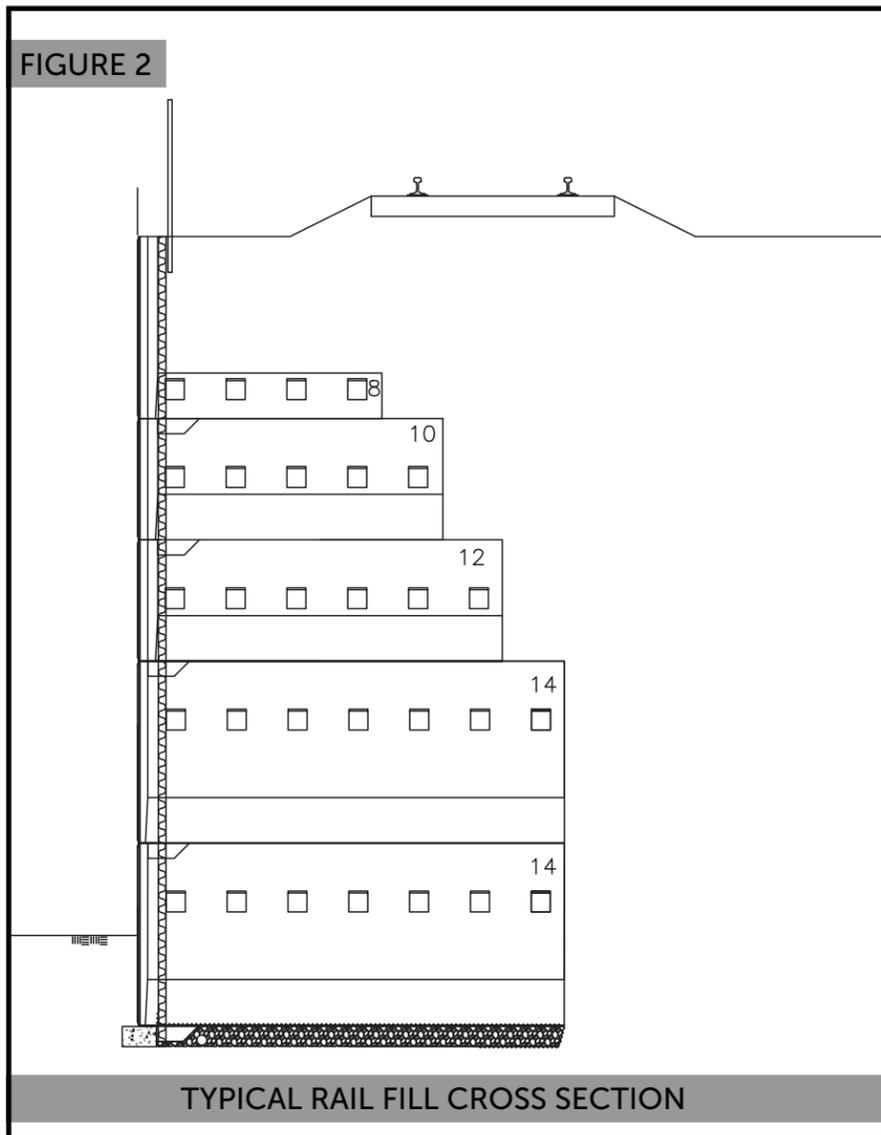


INTRODUCTION TO GRAVIX

Gravix is a gravity retaining wall system used primarily in the DOT and Rail construction markets. It is the first retaining wall system to fully capture the weight of backfill by utilizing qualities inherent in common soil. Infill placed between two opposing angled surfaces causes the soil to arch between the two surfaces (Figure 1). This process creates one monolithic gravity structure that can retain significant earth pressures and bear substantial loads. Gravix is designed using AASHTO's Precast Modular methodology, allowing for a shorter embedment depth: approximately 50% of the wall height.



Gravix construction begins with the pouring of an unreinforced concrete leveling pad and laying of a drainage blanket composed of poorly graded stone or other free-draining material. Drainage is important for retaining walls, so the blanket drain is typically under the entire Gravix retaining wall footprint. The first row of Gravix units is placed on top of the drainage blanket and leveling pad which assists in wall alignment and starting the base course level. Consecutive units are then placed thereafter – backfilling, compacting, and lining the vertical and horizontal joints with filter fabric and drainage composite. Two protruding nodes are located beneath each Gravix unit allowing for easy stacking. Adjacent Gravix units are separated by a 3/4-inch gap, permitting differential settlement without affecting the individual precast concrete units' structural integrity.



Gravix is competitive in numerous retaining wall applications, especially where select fill must be brought in for frictional wall systems, such as mechanically stabilized earth (MSE), and where excess soil or contaminated soils would otherwise need to be hauled off. Gravix has the ability to use up to 50% fines (passing the #200 sieve), greatly decreasing construction costs. In tight footprint scenarios where soil nail walls, pile walls, temporary shoring, or earth anchors are commonly used, Gravix can utilize slot cut construction to reduce the required excavation. The integrated, one-piece Gravix Traffic Barrier unit uses the same soil arching technology to provide moment resistance rather than a costly and time-intensive cast-in-place moment slab. The Gravix Traffic Barrier has successfully passed the MASH TL-4 impact test and received an FHWA eligibility letter.

