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CAROLINA CROSSROADS QUARTERLY

JANUARY 2024

All About Retaining Walls

When you drive along any major highway, you may notice the tall, sturdy walls that line the roadway. You may also notice them under bridges. Often, those walls are retaining walls. Retaining walls serve two primary purposes: they hold back masses of earth to ensure safety to travelers, and provide structural support to roads and bridges.

For the Carolina Crossroads Project, two types of retaining walls are primarily used, MSE (Mechanically Stabilized Earth) and precast retaining walls. While both walls provide structural integrity, they are used under different conditions.

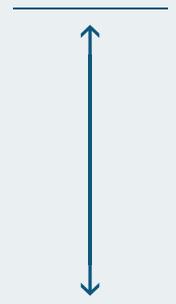
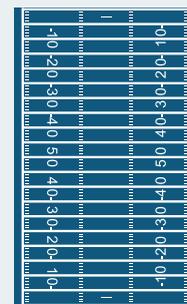
MSE walls consist of alternating layers of compacted soil and reinforcement elements. They are commonly visible under bridges along the Carolina Crossroads Phases 1 and 2 route. Precast retaining walls are a better fit for tight spaces. In areas where digging to remove soil or rocks may be difficult, precast retaining walls are preferred.

Retaining walls take up a lot of space along the project footprint. So far, roughly 57,000 square feet of MSE and 23,000 square feet of precast retaining wall have been installed along Phase 1. In Phase 2, approximately 17,000 square feet of MSE and 3,000 square feet of precast retaining wall have been installed.

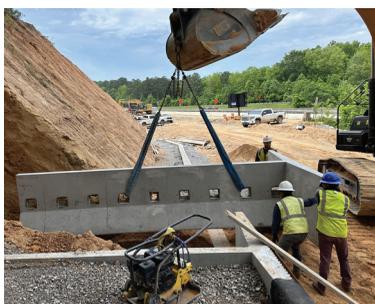
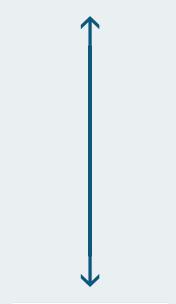
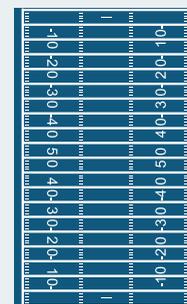
To get a look of each type of wall, just take a quick drive through the project area. Precast retaining walls can be seen along I-26 westbound within Phase 1. To see MSE walls, just take a quick glance to the left or right as you travel under the new Broad River Rd. bridge currently being constructed along I-20.

Picture this!

A football field is 47,700 square feet. So far, more than 100,000 square feet of retaining walls have been installed on this project. This is larger than two football fields.



95,400 sq ft



Phase 1 precast retaining wall construction.



Phase 2 MSE wall construction.



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Phase 1 - Colonial Life Boulevard at I-126 Interchange

Phase 1 Progress

All steel girders have been set for the new bridge that will carry traffic from Colonial Life Blvd. to I-126 westbound and I-26 eastbound/westbound.

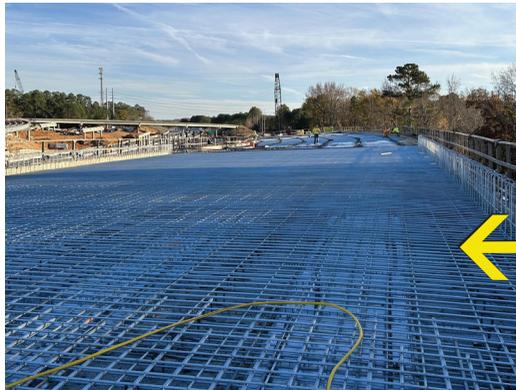
All shafts and piles have been driven for the new exit ramp that will carry traffic from I-26 westbound to I-126 eastbound towards Columbia and to Colonial Life Blvd. and Bush River Rd. Next, concrete decks will be poured.

Additional tasks completed or in progress include:

- Relocation of sewer pump station
- All drainage bores under I-126 completed
- Started setting girders for the new ramp that will carry traffic from I-126 eastbound and I-26 westbound to Colonial Life Blvd. and Bush River Rd.



Steel girders set.



Bridge ready for the concrete deck pour.

Program Update

Construction continues to progress steadily on CCR Phases 1 and 2. As the CCR team looks toward the remaining phases of the project, we are taking the opportunity to use valuable information gathered during the initial phases of the project to enhance and improve future phases.

We are in the process of restructuring plans for future construction phases. This strategic reset is intended to optimize utility coordination and incorporate the expedited widening of I-26 and I-20 in the area.

Details of the new project sequence and schedule are being finalized, and we look forward to sharing them with you in the coming months.

Did You Know?

Deck steel refers to the reinforcement bars used in the construction of a bridge deck. The bridge deck is the bridge's upper surface that supports the traffic load and serves as a highway for vehicles, pedestrians, and other modes of transit.

Phase 2 - Broad River Road at I-20 Interchange

Phase 2 Progress



Overview of progress of the first of three bridges to be erected near Broad River Rd.



Approximately 142 tons of reinforcing steel have been installed.

For the new Broad River Rd. overpass over I-20, all steel girders have been set and stay-in-place deck forms installed on the first of two bridges.

Additional progress includes:

- Placed 11,000 tons of asphalt for I-20 widening
- Significant portions of waterline utilities have been relocated



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