

Reasons for Selecting Specific IRs

IRs (Importance Ratings) that are used in the development and selection of ERSs (Earth Retaining Structures). Each IR was selected based on the relevancy and importance of each Importance Selection Factor (ISF) to the proposed project.

1. Ground Type – The existing ground that comprises the shell of the Saluda Shoals Dam is not anticipated to be important to the construction repair. Since in some of the construction methods that material will be left in place, while in others it will be completely removed.
2. Groundwater – There is no groundwater anticipated at this site. Though there may be some seepage from the either the road surface or through the dam. All ground water amounts are anticipated to be small.
3. Construction Considerations – The size of the construction area is anticipated to be small with closure of at least 1 lane heading south. There will be limited area to store materials at this project site.
4. Speed of Construction – Speed of the construction process is important to this project, since at least 1 lane heading south will have to be closed and because of the heavy traffic.
5. ROW – No additional Right-of-Way will be required as the existing pavement is located on the Saluda Shoals Dam by easement.
6. Aesthetics – Aesthetics will be of some concern, especially with the existing MSE Wall located on the Saluda Shoals Dam. Panels will be required for the steel sheetpile and soldier pile and lagging walls.
7. Environmental Concerns – There are no known environmental concerns at this site.
8. Durability and Maintenance – Maintenance will be important to the long-term performance of the selected ERS or RSS.
9. Tradition – SCDOT has a tradition of using MSE Walls and RSSs within existing slopes. SCDOT has limited experience using soil nailing.
10. Contracting Practice – Standard contracting practice is anticipated, but not known.
11. Cost – Cost is anticipated to factor in the selection of the repair option. Several of the options will require removal of the existing material, while others will require the mobilization of specialized construction equipment.
12. Displacement – The proposed repair must have a limited amount of movement as this is a heavily traveled road and is located on an existing major (high-hazard) dam.