

South Carolina Department of Natural Resources

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Alvin A. Taylor
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December 20, 2019

Electronic Submission

Dr. Richard L. Darden
U.S. Army Corps of Engineers
Charleston Regulatory Office
69-A Hagood Avenue
Charleston, South Carolina 29403

Mr. Charles Hightower
South Carolina Department of
Health & Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: P/N SAC-2019-00924, South Carolina Department of Commerce and
DT Real Estate Holdco, LLC, York County

Dear Dr. Darden and Mr. Hightower:

Personnel with the South Carolina Department of Natural Resources (SCDNR) have reviewed the proposed project, evaluated its impact on natural resources and offer the following comments.

Project Inspector Description

The proposed work consists of the construction of a world-class professional sports and training facility and corporate headquarters in Rock Hill, South Carolina. In detail, this project would involve the placement of fill material within 0.87 acre of wetlands and 4,991 linear feet of freshwater tributaries to accomplish phased construction of a mixed-use, pedestrian-friendly community anchored by the National Football League's Carolina Panthers practice/training facilities and corporate headquarters with emphasis on retail, entertainment, research and development, residential dwellings, commercial offices, medical facilities, recreation, and open space uses. According to the applicant, the project purpose is to develop, construct, and operate a world-class professional sports practice and training facility along with a state-of-the-art corporate headquarters in northern South Carolina as well as additional mixed-use development on a property that has sufficient contiguous acreage, proximity to Charlotte, direct interstate highway frontage and/or access, and is located close to a major airport.

The Project Area is known as the Hutchinson Site located approximately 2.5 miles northeast of Rock Hill in York County. The Project Area is adjacent to and bounded on the east and west sides by Interstate 77, south of Eden Terrace, and east of Mt. Gallant Road. No current interchange exists to provide direct access to the Hutchinson Site from Interstate 77; however, a

partial cloverleaf interchange is proposed that would be located approximately 1.1 miles south of Interstate 77 Exit 82 (U.S. Highway 21) and approximately 1.3 miles north of Interstate 77 Exit 79 (SC Highway 122/Dave Lyle Boulevard). The total size of the Project Area (Proposed Project boundary) is approximately 278 acres, with approximately 234 acres being developed for the Panthers practice/training facilities and headquarters and additional mixed-use development. The remainder of the Project Area primarily east of Interstate 77 will be for the construction of the new interchange.

SCDNR Comments on the Individual Permit Application

3.0 Proposed Project Area

The permit application indicates that a partial cloverleaf interchange will be constructed to access the site via Interstate 77; however, the permit drawings provided indicate that the interchange layout, grading and drainage plans are to be designed by the South Carolina Department of Transportation. If the interchange is to be permitted under the same permit as the proposed facilities additional, more detailed design plans will be required for review.

4.1 Project Phases

During the Environmental Stakeholders Meeting on December 11, 2019 it was stated that a 30-year permit would be preferred by the applicant. The description of the project phases states that Phase I is planned from 2020 through 2022 and Phase II will take place over a seven-year time frame following Phase I. What is planned to occur during the remaining time frame?

7.2.1 Surface Waters

More information should be provided on the streams on the project site. This information should include the Rosgen classification of the streams proposed for impacts and a more detailed description of the existing impairments.

7.2.3 Floodplains

Please include a copy of FEMA FIRM Panel 4501930328F for the project area in the permit application.

Appendix II – Permit Exhibits

The design plans indicate on Sheets 6 and 7 that Wetland B, Wetland C and Stream NWW-1 are proposed to be filled for an area identified as an open space and park. Can all or portions of these wetlands/streams be incorporated into the design? If not, please provide a justification.

Appendix VII – Alternative Analysis

The Alternative Analysis considers eight potential alternatives under a Level 1 screening. This Level 1 screening also considered a no action alternative. A Level 2 analysis further considered three of the eight alternatives and the no action alternative. Please quantify the environmental impacts as a part of the site selection process in the Alternative Analysis. Additionally, the Blanchard Blackwell Site is approximately 31 miles from the Bank of America Stadium and 31.6 miles from Charlotte Douglas International Airport, just slightly passed the 30 miles required. Please provide further documentation as to why this site was not chosen versus the Hutchinson Site in the Alternative Analysis.

Proposed Compensatory Mitigation

The applicants have proposed to mitigate for impacts to wetlands and/or waters of the United States by implementing a Permittee-Responsible Mitigation (PRM) plan on a 484.16-acre parcel in Chester County known as the Landsford Tract (a portion of Parcel Identification Number 162-00-00-001-000). Proposed mitigation activities would include a combination of preservation, enhancement, and restoration to 19,840 linear feet of stream channels and 1.5-3.0 acres of associated wetlands within the Catawba River watershed.

Personnel from the SCDNR have reviewed the Landsford Tract PRM Plan included as Appendix VI of the permit application package and submit the following comments.

4.3 Site Protection

The Mitigation Unit Map (Figure 4) indicates that only the streams and the adjacent buffered areas (114.62 acres) are to be placed under a conservation easement. The SCDNR recommends that the entire 484.16-acre parcel be protected by a conservation easement held by an accredited land trust. However, if the applicant chooses to retain the existing coverage for the mitigation area under a conservation easement, the SCDNR asks that a secondary easement be placed on the remained of the parcel. The agency's preference is for the entire parcel to be placed under a conservation easement.

4.4.5 Hydrology

The SCDNR recommends that more than one groundwater monitoring well be installed in case of equipment malfunctions or technical failures. The SCDNR staff recommend the lateral ditch effects model be considered instead of multiple wells to establish baseline hydrology. Please note that well data will still be required to assist in calibrating the model.

4.5 Determination of Credits

The credit schedule factors in the mitigation worksheet currently state that the mitigation will occur concurrent with the impact site development. In the Environmental Stakeholders Meeting on December 11, 2019, the applicant stated that the goal was to begin construction as early as March 2020. Please adjust the credit schedule factors as appropriate if impacts occur to waters of the United States prior to completion of the restoration work outlined in the final PRM plan.

4.6 Mitigation Work Plan

The mitigation work plan submitted is very conceptual and lacks details needed to fully evaluate the proposed mitigation site. In the following subsections of 4.6 Mitigation Work Plan, the SCDNR submits the following recommendations for developing a complete PRM plan.

4.6.2 Riparian and Upland Buffer Enhancement

- As previously mentioned, the SCDNR prefers the protection of the entire parcel under a conservation easement. Regardless, the SCDNR recommends that the proposed 150-foot riparian or upland buffers for all streams be extended to 300 feet.
- A detailed planting plan should be provided that includes a list of native species to be planted, as well as proposed planting densities.

4.6.3 Access Road

The construction of a new access road should occur prior to any mitigation activities. A map of the new road and all roads to be maintained onsite should be included in the PRM plan.

4.6.4 Invasive Species Management

A list of invasive species on the site should be included in the PRM plan.

4.7 Maintenance Plan

- This Access Road and Gate Section states that “When necessary, recommendations for maintaining the access road and gate will be provided in the long-term management report.” This would be more appropriate covered during the monitoring period and not something that is used in reference to long-term management.
- This section also states that “Vehicular travel within the Landsford Tract will be strictly prohibited except along the proposed access road.” Will this restriction be possible without a conservation easement placed on the entire parcel?
- The Wildlife Management Section implies that beaver depredation may occur on the project site. Please note that no traps or depredation activities can occur on the areas of UT 1 that is property currently held by SCDNR without SCDNR permission.

4.8 Performance Standards

Performance standards should be clearly stated and should include measures (quantitative/qualitative) that are reproducible by others. Further, the performance standards should be based on the goals of the mitigation plan and should be detailed for each management unit based on aquatic resource type (stream, wetland, etc.) and mitigation method (restoration, enhancement, or preservation). The SCDNR suggests the following be considered in the development of performance standards. Please note these may differ depending on the details provided in the final PRM plan.

Streams

Streams should demonstrate a stable channel, pattern and profile in accordance with stream morphology Natural Channel Design criteria ranges (Rosgen stream type, drainage area, bankfull mean velocity, width to depth ratio, riffle max depth ratio, bank height ratio, meander length ratio, radius of curvature ratio, meander width ratio, sinuosity, valley slope, riffle slope ratio, run slope ratio, glide slope ratio, pool slope ratio, pool max depth ratio, pool width ratio, pool-to-pool spacing ratio and entrenchment ratio) following two bankfull events (documented by crest gages).

- BEHI for streams should be maintained from very low to low.
- Water quality data (dissolved oxygen, temperature, conductivity, pH, turbidity and fecal coliform) should demonstrate that parameter values are maintained or improved.
- Macroinvertebrate data should demonstrate that number and diversity of species are maintained or improved.
- Plantings should include a diversity of species similar to those found in a suitable reference area. Planting should occur during the dormant season to maximize survival. An initial stocking density of a minimum of 450 trees per acre (~10' x 10' spacing) is recommended with a target density of 320 trees alive and growing at the end of three growing seasons and 260 alive and growing after five growing seasons. The natural recruitment of tree and shrub species can be factored into vegetative success, provided recruits are comparable to reference site native species and invasive species should not dominate and make up more than 5% of the site. Vegetative success criteria should in addition to survival rate include that seedlings show a consistent increase in height, lateral growth and root collar diameter throughout the monitoring period. Bottomland

herbaceous species seeded should be native species only. Planted tree species should average between five to seven feet at the end of the five year monitoring period.

- Bankfull frequency and duration should not be comparable to the reference reaches if they are located a considerable distance offsite, such as another state or ecoregion, where climate and topography influence the stream. Bankfull frequency and duration should be comparable with a stable riffle either upstream/downstream of the restoration activity or a similar Rosgen Type stream nearby.

Reference Streams

Note that stream references for dimension, pattern and profile and design criteria can come from past projects or formed based upon a series of stable riffle cross sections upstream of the project site or at another similar Rosgen stream type within the watershed. References for stream conditions, such as woody debris or vegetation, if used, must come from a stream of similar Rosgen type. Reference streams for comparison of condition for water quality and benthos, if used, should be a stream within the same ecoregion and pristine in nature—stable stream with high water quality parameters and good diversity of macroinvertebrates. Comparison of water quality and benthos condition should demonstrate and quantify how much functional lift has been gained from restoration/enhancement efforts. Stream morphology data and cross sections of the reference streams should be provided.

Wetlands

- For areas involving vegetative restoration, plantings should include a diversity of species similar to those found in a suitable reference area. Planting should occur during the dormant season to maximize survival. An initial stocking density of a minimum of 450 trees per acre (~10' x 10' spacing) is recommended with a target density of 320 trees alive and growing at the end of three growing seasons and 260 alive and growing after five growing seasons. The natural recruitment of tree and shrub species can be factored into vegetative success, provided recruits are comparable to reference site native species and invasive species should not dominate and make up more than 5% of the site. Vegetative success criteria should in addition to survival rate include that seedlings show a consistent increase in height, lateral growth and root collar diameter throughout the monitoring period. Planted tree species should average between five to seven feet at the end of the five-year monitoring period.

Reference Wetlands

Reference wetlands should be located within the same ecoregion and of similar Cowardin type and soils of target wetlands proposed for restoration/enhancement. Vegetation data from reference wetlands only needs to be collected at baseline if vegetative enhancement are proposed for the wetland area.

4.9.2 Monitoring Parameters

Baseline Data Collection

In order to include a sufficient level of detail in the proposed PRM plan, the SCDNR suggests following the guidance referenced below in developing a baseline monitoring plan. Include representative photographs of each of the aquatic features described. Please note these are

suggestions and that the baseline data required may differ depending on the details provided in the final PRM plan.

Streams

In order to provide quantitative measures to prove channel stability and floodplain connectivity, Bank Erosion Hazard Index (BEHI) and entrenchment ratios should be collected. Baseline data for streams should include data on stream geomorphology, water quality, riparian buffers and macroinvertebrates.

- Geomorphology data should include: basemapping (planform, longitudinal profiles and cross sections), typical instream structure drawings, and morphometry parameters (Rosgen stream type, drainage area, bankfull mean velocity, width to depth ratio, riffle max depth ratio, bank height ratio, meander length ratio, radius of curvature ratio, meander width ratio, sinuosity, valley slope, riffle slope ratio, run slope ratio, glide slope ratio, pool slope ratio, pool max depth ratio, pool width ratio, pool-to-pool spacing ratio and entrenchment ratio).
- Water quality baseline data collection should include: dissolved oxygen, temperature, conductivity, pH, hardness, and turbidity at a minimum of four times in one year.
- Macroinvertebrates sampling should be collected in accordance with the standards set forth by SCDHEC and include biotic index, abundance, diversity, and species composition.
- Riparian buffer information should include the width and extent of buffers and a description of the vegetative community if present (species composition, density, forest age and approximate density or presence of invasive plant species).

Vegetation Plots

The location and placement of vegetation plots for yearly monitoring should be identified and shown on a map. In areas where vegetation restoration/enhancement is occurring, there should be a minimum of 3-5 vegetation plots (10 x 10 meter plots) per habitat/community type or location to ensure representativeness of the data. Additional vegetation plots may be required on a case-by-case basis depending on the size and configuration of the site.

4.9.3 Monitoring Plan

Streams

The following should be collected annually for the monitoring plan:

- Rosgen stream type, bankfull mean velocity, width to depth ratio, riffle max depth ratio, bank height ratio, meander length ratio, radius of curvature ratio, meander width ratio, sinuosity, valley slope, riffle slope ratio, run slope ratio, glide slope ratio, pool slope ratio, pool max depth ratio, pool width ratio, pool-to-pool spacing ratio and entrenchment ratio; BEHI; basemapping (planform, longitudinal profiles and cross sections). Between 3 and 6 permanent cross sections should be placed (one in riffle and one in pool) within each Rosgen stream classification type and additionally in any areas (one in a riffle and one in pool) above and/or below structures placed for major instability issues.
- Riparian Buffer Vegetation: Monitoring should occur between July 1 and leaf drop. Data should include count, height, root collar diameter and lateral growth in addition to

density of all trees by species including natural regeneration. When recording, include number and species noted on tag. Species composition and estimated coverage of shrub and herbaceous species should also be included. The location and density (estimated coverage) of invasive species should be identified and quantified. In areas where vegetation restoration/enhancement is occurring, there should be a minimum of 3-5 vegetation plots (10 x 10-meter plots) per habitat/community type or location to ensure representativeness of the data. Additional vegetation plots may be required on a case-by-case basis depending on the size and configuration of the site. Water quality data collection should include dissolved oxygen, temperature, conductivity, pH, hardness, turbidity and fecal coliform (tested by a certified lab) collected at a minimum of four times in one year.

- Macroinvertebrates should be collected based on SCDHEC standards at least one time a year. Biotic index, abundance, diversity, and the species list for each station should be listed in the monitoring report.

Post Construction - Streams

- Following construction, stream as-built design criteria should be provided to include the following: Rosgen stream type, bankfull mean velocity, width to depth ratio, riffle max depth ratio, bank height ratio, meander length ratio, radius of curvature ratio, meander width ratio, sinuosity, valley slope, riffle slope ratio, run slope ratio, glide slope ratio, pool slope ratio, pool max depth ratio, pool width ratio, pool-to-pool spacing ratio and entrenchment ratio; two bankfull events documented by crest gages; bedform diversity; BEHI; basemapping (planform, longitudinal profiles and cross sections). Between 3 and 6 permanent cross sections should be placed (one in riffle and one in pool) within each Rosgen stream classification type and additionally in any areas (one in a riffle and one in pool) above and/or below structures placed for major instability issues
- It is recommended that geomorphology data for the baseline condition, the design criteria and the results of the cross sections for the as-built/post-construction or monitoring years be included in one table for each stream that has channel manipulations (restoration/enhancement).

4.10 Long-Term Management Plan

- The SCDNR looks forward to continuing discussions to clarify the long-term stewardship role and to work with the consultant and Katawba Valley Land Trust to finalize conservation easement language that protects the integrity of the aquatic features on site, but also allows for wildlife management to occur on the property.

4.10.3 Identification of Conservation Easement Holder

As previously mentioned, the SCDNR recommends that the entire parcel be placed under a conservation easement.

4.12 Financial Assurances

The justification for the level of funding needed should provide assurance estimates to include planning (design & engineering), construction and planting, monitoring and maintenance, adaptive management, legal and administrative and long-term management costs. This can be supplied in a simple spreadsheet that shows the activity, level of effort, cost, frequency of the activity and an estimated annual cost.

A helpful tool for financial assurances is the TNC Stewardship Calculator:
<https://www.conservationgateway.org/ConservationPlanning/ToolsData/Pages/stewardshipcalculator.aspx>

Force Majeure

Please add a section defining force majeure. The applicant must notify the USACE following damage from such an event.

Figures 4 & 8

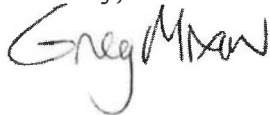
- UT 3 Section 4 appears to include UT 4 and UT 5 based on the labeling on the map. Please provide a more detailed map of that area or use color coding to better differentiate the reaches.
- The labeling of UT 2 Section 2 and UT 2 Section 3 indicates two separate reaches of both of these sections of UT 2. We suggest a nomenclature of UT 2 Section 2a for the 1,097 LF section, UT 2 Section 2b for the 931 LF section, UT 2 Section 3a for the 1,597 LF section and UT 2 Section 3b for the 799 LF section to limit confusion since the proposed treatments also differ.
- The buffer indicated for Wetland enhancement Unit 4 appears to overlap portions of the proposed buffer along the Catawba River. Please note that wetland credits may only be captured once for either the wetland or river. This should be clarified in the Final Mitigation Unit Map, as well as within the narrative of the Mitigation Work Plan.

The SCDNR requests a site visit to further review the Landsford Tract Mitigation Site after receipt of additional data needed to review a final PRM plan.

The SCDNR does not anticipate any objections to the proposed development of the Hutchinson Site provided that the additional permit application information requested above is provided. However, the SCDNR recommends that the permit be held in abeyance until the final PRM plan can be reviewed and approved following the site visit.

Thank you for the opportunity to review this project and provide comments. Should you have any questions or need more information, please do not hesitate to contact me by email at mixong@dnr.sc.gov or by phone at 803.734.3282.

Sincerely,



Greg Mixon
Office of Environmental Programs

C: Kelly Laycock – USEPA
Mark Caldwell – USFWS
Rusty Wenerick - SCDHEC