

III-d | STORMWATER TECHNICAL SUMMARY

Project Double Reed has committed to sustainable stormwater management practices. The project has incorporated a comprehensive stormwater management system to capture, treat, and release rainwater runoff, minimizing its impact on localized surface and groundwaters.

Key Stormwater Management Features:

- **Stormwater Management Basins:** These basins have been strategically proposed on the site to capture and store stormwater runoff, reducing peak flow rates, and preventing flooding.
- **Permeable Surfaces:** The project has explored opportunities to incorporate permeable paving materials, such as porous asphalt or permeable concrete, in parking areas and walkways to allow rainwater to infiltrate the ground.
- **Green Infrastructure:** Green infrastructure elements, such as rain gardens and bioswales, have been integrated into the site design to filter pollutants, reduce runoff volume, and create attractive green spaces.

The project requires site clearing and preparation, adherence to NYSDEC water quality standards, as well as final acceptance and permit issuance under State Pollutant Discharge Elimination System (SPDES), and subsequent filing of a Stormwater Pollution Prevention Plan (SWPPP). Stormwater Best Management Practices (BMPs) have been incorporated to handle the expected increased peak flows from development and further designed to detain release of surface waters at or below a lower rates.

Stormwater basins and associated outfalls have been aligned with existing observable rainfall surface flow regimes and are depicted on the provided Stormwater Plans. The Stormwater Pollution Prevention Plan (SWPPP) for the South Campus considers the natural hydrology with a bypass swale provided along the southern portion of the property which collects and conveys off-site runoff to the same tributary located along the western portion of the site. The approved and constructed Stormwater Management Programs (SMP's) along the northern portion of the tract collect runoff from the developed portion of the tract and discharge this runoff, after treatment, into the existing tributary along the northern property boundary. The modified design for this project has also added a dry swale east of the parking lot. This dry swale collects runoff that sheet flows off the parking lot and a portion of the bypass driveway, through a gravel diaphragm, and into the swale which is provided with two check dams and an outlet structure. The discharge from this swale is connected to the on-site collection system.

The stormwater design for the North Campus detains stormwater flows within several SMP's and maintains four (4) points of discharge to the existing downstream water courses maintaining the natural hydrology of this portion of STAMP.

The temporary laydown yard for the South Campus is provided with a construction ditch with check dams along the western side of the property. Silt fence and/or fiber roll is provided along the southern portion of the laydown yard.

Erosion and sediment control for the temporary laydown yard for the North Campus is provided by the following controls: run-on diversion berms to the east where needed based on topography, broad stone lined swales with check dams spaced in accordance with NYSDEC standards, perimeter silt fence/filter sock, a stabilized construction entrance and grass buffer area between the gravel laydown yard and adjacent ditch.

The South Campus has already been fully disturbed as a result of the prior approval and construction that had commenced. A 5-acre waiver will be required for this site. The North Campus (containing approximately 60 acres in total) will be disturbed beginning with the SMP's, which in total will require a 5 acre waiver due to the extent and number of SMP's. The sub-station area will follow, which will also require a waiver as the area exceeds 5 acres. The western building and adjacent driveways will follow though likely will be concurrent with the sub-station construction which will disturb approx. 22 acres (each building alone is almost 8 acres) which will require a waiver as well. The final construction will involve the eastern building and surrounding driveways disturbing approx. 20 acres and will also require a waiver

As per the NYSDEC stormwater regulations, the basins design has incorporated both the 10-year, 24 hour storm event (for overbank flood protection), as well as the 100-year, 24 hour storm (for extreme flooding events). The peak flow attenuation for both the 10 and 100-year storm events have been integrated into the design. Through progression into final design, collaborations with NYSDEC and Civil Engineers/Subject Matter Experts will continue to explore innovative stormwater management techniques.