

## **INFRASTRUCTURE REQUIREMENTS**

### **Exhibit VIII.C.17.e**

The Resorts World Hudson Valley site is divided into two major drainage areas. The first is the Resorts World Hudson Valley casino and resort and the second is the surface parking and utility services area. This development will create new point sources including parking lots, pedestrian facilities, and rooftops that will be directed to on-site storm water management facilities, green infrastructure, and on-site surface waters including improvements to existing wetlands and streams. Storm water impacts to adjacent properties will be minimalized and in-line with existing drainage patterns.

#### **Drainage Area 1 – Resorts World Hudson Valley Casino and Resort**

This portion of the proposed development will implement green infrastructure for storm water management. These best management practices (BMP) features include rain gardens, bio-retention areas, infiltration basins, and underground sand filters.

This project intends to provide at least 10 percent more than the required water quality volume in an effort to treat the storm water runoff beyond what is required by the New York State *Stormwater Management Design Manual*. After the storm water has been treated by the above measures, it will be conveyed to proposed retention basins with designed outlet control structures. Outlet structures will be designed to de-concentrate flows when discharging to existing wetland areas. The purpose of this system will be to control the post-development peak flow rates. Once the storm water has been treated and reduced to pre-development flow rates, it will be discharged into an existing stream and wetland area for conveyance downstream to the Tin Brook.

Where feasible, the proposed storm water management system will impound storm water for potential reuse on-site for irrigation of lawns and landscaped areas, specifically the proposed Gardens area in the southwest corner of the site.

Geotechnical investigations have determined that high groundwater is present throughout the project site. Storm water measures will be designed to account for these high groundwater levels.

The proposed retention basins will be created by excavating the existing soil to allow the groundwater to maintain the permanent pool elevation in the retention basins. The design intent is to pre-treat the storm water runoff through a “treatment train” approach prior to discharge into the retention basins to minimize any mixing of untreated site runoff with natural groundwater.

The construction costs for the storm water management improvements described above are estimated to be \$2.5 million. The project is estimated to be complete by November 2016. The developer will be responsible for initiating the storm water management improvements and maintenance.

#### **Drainage Area 2 – Surface Parking and Utility Services**

This portion of the project also will provide at least 10 percent more than the required water quality volume in an effort to treat the storm water runoff beyond what is required by the New York State *Stormwater Management Design Manual*. Storm water for this portion of the site will be treated with a retention basin and a designed outlet control structure. The outlet structure will be designed to de-concentrate flows when discharging to existing wetland areas. The purpose of this system will be to control the post-development peak flow rates. Once the storm water has been treated and reduced to pre-development flow rates, it will be discharged into an existing wetland area for conveyance downstream to the Tin Brook.

Where feasible, the proposed storm water management system will impound storm water for reuse on-site for potential irrigation of lawns and landscaped areas.

The proposed retention basin will be created with fill on the downslope side of the ridge of this portion of the site through construction of an embankment.

## **INFRASTRUCTURE REQUIREMENTS**

The construction costs for the storm water management improvements described above are estimated to be \$500,000. The project is estimated to be complete by November 2016. The developer will be responsible for initiating the storm water management improvements and maintenance.

### **Storm Water Management Summary**

Approvals will be needed from the Town of Montgomery, Orange County, New York State, U.S. Army Corps of Engineers (USACE), and New York State Department of Environmental Conservation (NYSDEC) prior to constructing the storm water management improvements.

The Town of Montgomery will review design plans and calculations produced by the design team in accordance with applicable state and local storm water management regulations. The design team will coordinate with the local government to address any design review comments to obtain approvals. No conditions of approval are anticipated to be placed on the development by the local government for this project. The estimated date of local government approval is November 2014.