

# **Engineer's Report – October 2025**

## **Duthie Storage Expansion**

### **Verizon Lane, Lansing, NY**

#### **Executive Summary**

##### **Land Use & Drainage**

The owner of this project, John Duthie of United Storage, is proposing an expansion as part of its existing storage complex located on Tax Parcel Lot 30.-1-16.32. The project plans to construct a 40' x 70' (2,800-SF) building on a vacant ¼-ac lot just southwest of 18 Verizon Lane (Car Ease) and east of 10 Verizon Lane (St. John Design Group). The new building will be a single cold storage building. There will be one overhead door and a man door. The construction will be of similar style, type, and color as the existing building located just to the northeast. The proposed site is comprised of a mixture of wooded brush and open space.

Because the area of disturbance will be less than 1-AC (8,500-SF SF +/-, 0.19-AC), the project does not meet the State or local definition that requires a Full or Basic Stormwater Pollution Prevention Plan (SWPPP). However, temporary construction controls for erosion & sediment management, such as silt fencing, would be used as is required.

Drainage for much of the site, including the future gravel parking area and building rooftop will flow to the west into an existing swale that runs southward into the rest of the complex drainageway. The site is protected from upland off-site runoff from the east by an existing drainage swale that intercepts flow and directs it to the south into the same receiving system. A hydraulic model was run showing the potential runoff impacts from this project which show marginal volume and rate increases for 1, 10, and 100 yr storms.

#### **Stormwater Management Summary**

**Subcatchment Evaluation:** There is one pre-developed (existing) watershed subcatchment (ESC) for this site totaling 8,515-SF (0.196-AC). Generally, existing topography moves in a northeast to southwest direction over relatively flat slopes of 1.0% or less. Flow sheet flows into an existing drainage swale just to the west where it joins with flow from the rest of the storage complex to the southwest and eventually into the Town's common drainage system along Perruville Road and eventually into State Highway 34.

The proposed development will disturb approximately 0.19-AC of land. Drainage areas affected by construction are in a single subcatchment, PSC which matches the shape and size of ESC. Gravel driveway and parking runoff as well as the building rooftop will be directed into the western swale.

**Site Control Methods:** Temporary erosion and sediment controls will be used during construction. There are no planned permanent controls.

**Site Soils:** There is one site soil type in the hydrologic soil group C located throughout the drainage area. Ovid (OaA) is a silt loam with moderately low to moderately high drainage characteristics 0.06 – 0.20 in/hr.

Soils data was obtained from the USDA Soil Conservation Service web soil survey.

**Site Topography:** The site as a whole has an average slope of <1.0% primarily moving downhill from northeast to southwest.

**Site Watershed:** Of the 0.196-acre watershed, the area of disturbance will be approximately 0.19-acres. A single off site grassed channel runs along the site’s eastern border and directs runoff into the Perruville Road receiving system.

**Rainfall:** Rainfall data used in the modeling and analysis was taken from Technical Paper No. 40, Rainfall Frequency Atlas of the U.S. Weather Bureau, published by the U.S. Department of Agriculture. Rainfall data specific to Tompkins County under consideration, for various 24-hour storm events tabled below:

RAINFALL DATA	
STORM	24-HOUR RAINFALL
1-year	1.99 inches
10-year	3.39 inches
100-year	5.82 inches

These values were used in modeling for the evaluation of existing and proposed stormwater run-off conditions.

**Modeling Results Tabled:**

*EXISTING  
EXISTING FLOW CONDITIONS AT DESIGN POINT (DP)*

<i>STORM EVENT</i>	<i>PEAK FLOW (CFS)</i>	<i>TOTAL VOLUME (AF)</i>
<i>1-year</i>	<i>0.080</i>	<i>0.004</i>
<i>10-year</i>	<i>0.035</i>	<i>0.015</i>
<i>100-year</i>	<i>0.960</i>	<i>0.043</i>

*PROPOSED  
WITH GRASSED CHANNEL AND INFILTRATION BASIN IN-LINE  
PROPOSED FLOW CONDITIONS AT DESIGN POINT (DP1)*

<i>STORM EVENT</i>	<i>PEAK FLOW (CFS)</i>	<i>TOTAL VOLUME (AF)</i>
<i>1-year</i>	<i>0.034</i>	<i>0.015</i>
<i>10-year</i>	<i>0.740</i>	<i>0.034</i>
<i>100-year</i>	<i>1.430</i>	<i>0.070</i>

The run-off rates show marginal increases for the 10yr and 100yr storms as modeled.

**Operation**

This will be a 24 hour, 7 day a week operation.

**Transportation**

1. There will be no highway dedication associated with this project.
2. The gravel driveway and parking area will be conjoined with the asphalt entrance leading to the original storage complex.
3. The project will include provisions for seven (7) parking stalls which include one (1) for handicap accessible access, and six (6) standard stalls.
4. An existing entrance off of Perruville Road bring traffic in along a paved driveway (Verizon Lane) into the original storage complex. The new storage building will be accessed by the same driveway. Fire truck turn around should be able to be satisfied by pulling up alongside the proposed building entrance, then continuing into the rest of the storage complex to the east and using the turnaround designed for such purposes within.
5. Additional vehicle traffic into the combined complex (existing and new) will be about 10 cars/day.

**Public Services**

1. Fire protection will be handled by the Town of Lansing.

**Lighting**

Lighting will be of the same type and positioning as that of the other storage buildings owned by United Storage.

### **Utility Services**

The site will be served by standard electrical utilities that will require only minor extension from existing service lines feeding the storage complex to the east. No additional utilities are anticipated. Electricity will feed low level lighting, mini splits for heating and cooling, and standard power outlets.

### **Flood Hazard**

This building will be well above the 100 year flood plain.

### **Agriculture**

This property is not part of an Ag District. There should be no conflict of noise or odors.

### **Sewerage**

This project will not require a sewer system. No waste facilities are planned.

### **Water System**

This project will not require a water connection. No potable water facilities are planned.

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