



ENGINEER'S REPORT
for
**Climate Controlled
Self Storage**

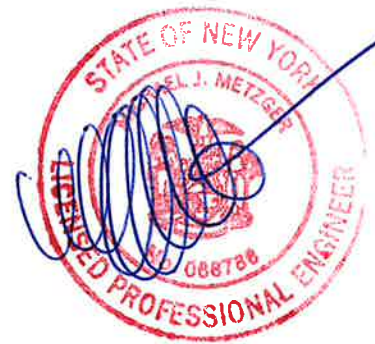
2495 Wehrle Drive
Amherst, New York

September 29, 2023

Prepared for:
416 Homez Inc.
4493 South Buffalo Street
Orchard Park, New York 14127

Project M-2324

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Project Description:

The project consists of the construction of a new 70,500+/- square foot self storage facility located at 2495 Wehrle Drive in Amherst, New York. The project will include driveways, parking and related infrastructure to service the new building. The new development will sit on a 7.92 acre parcel (8.31 including R.O.W) which is currently undeveloped. It should be noted that only 3.5 acres will be developed, the remainder of the parcel will remain undeveloped.

Flood zone:

The site is not located in a 100 year flood zone.

Soils:

The site is shown on the USDA NRCS Web soil survey as having 3 different soil types. The primary soil types are Ovid silt loam (OvA) and Cosad loamy fine sand (Cv) type soils. These soil types are classified as belonging to the hydrologic soil group (HSG) "C". Depth to bedrock is below 80".

The USDA NRCS classifies the predominant soil type (Ovid Silt Loam) as having the following profile:

- 0 - 10" – SILT loam
- 10 - 20" – Clay loam
- 20 -60" – gravelly loam

Seasonal high groundwater is found at 0.5'

Wetlands:

The project area was investigated in March of 2023 by Earth Dimensions, Inc. They indicate that the project area "does not contain any wetlands as defined by the USACE or NYSDEC".

Water service:

The building will be served by two separate water services. A dedicated fire service line will be installed and tapped into the existing 10" water service to the west of the site. A separate domestic service line will be installed by tapping the existing 2" domestic water service to the west of the site. The design flow of the domestic water line be 150 gpd (10 users per day x 15 gallons per person). Both the fire and domestic services will be protected by a Reduced Pressure Zone and/or Double Check Valve Assembly as appropriate. The RPZ and/or DCVA will be designed, installed and tested in accordance with the Erie County Water Authority and Health Department regulations. The building will be protected by a fire sprinkler system. The sprinkler system and domestic water services will be designed by the mechanical engineer selected for the project.

Sanitary sewer:

The sanitary sewer needs will be limited to restrooms and that needed for maintenance of the building. The design flow of the sewer will be 150 gpd (10 users per day x 15 gallons per person). Because of the low flow, no Downstream Sewer Capacity Analysis is required. A new 6" PVC SDR-35 service lateral has been designed to discharge into the existing 8" sanitary sewer main which traverses the site. The details of the sanitary sewer are provided on the plumbing plans for the project. The sanitary sewer lateral has been designed and will be installed and tested in accordance with the Erie County Department of Sewerage and Town of Amherst regulations.

Stormwater management:

The building will be served by a stormwater collection system which will collect roof and surface runoff through a network of piping and catch basins. This network will discharge into an on site underground stormwater detention area. The area has been designed in general compliance with the New York State Department of Environmental Conservation Manual. The detention area features a pretreatment structure, and a controlled outlet structure.

The detention area has been sized to detain the 1, 10, and 100 year storm volumes. Storms up to and including 10 year 24 hour storms are detained and slowly released through a reduced (3" diameter) outlet. Storms larger than the 10 year storm are controlled via weir located inside of the outlet structure.

In addition, two green infrastructure methods have been employed to provide the Green Infrastructure as required by The NYSDEC Stormwater design manual.

Method 1) A bioretention area has been designed to provide runoff reduction volume through the use of a gravel diaphragm, grass filter strip and filter bed as shown on the design plans. The maximum discharge from the bioretention area has been calculated and the underground detention area has been sized to "over detain" this amount to ensure that the post development flows do not exceed the pre development flows.

Method 2) The underground detention area includes an infiltration bed beneath the piping system to allow water to infiltrate into the soil beneath over time.

A complete set of calculations are included in the SWPPP for the project

Erosion and sediment control:

An Erosion and Sediment Control plan has been included in the plan set. In addition, a complete written Stormwater Pollution Prevention Plan has been prepared for the site. This plan includes weekly inspections of the site during construction and a long term maintenance plan.