

New Call-Center Office Building

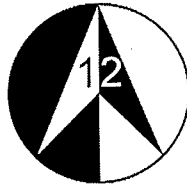
Oneida County Industrial Park

5992 Judd Road

Oriskany, New York

By

Twelve North Engineering



Engineering Report: Site Design

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Purpose

For the spring 2015 Capstone class, the class was asked to design a Call Center. This Call Center is located on Judd Road in Oriskany New York which will employ 300 people in total, with 100 working 8 hour shifts throughout a 24 hour day. The design calls for a three story building 105 feet long by 71 feet wide for a total of 22,365 square feet plus a basement. The site is currently owned by Oneida County, and consists of two adjoining parcels. The parcel located on the west side is wooded and overgrown agricultural land containing swampy areas. The parcel located to the East, consists of roughly 67 acres of mainly overgrown, open agricultural land. The North side is wooded, with a National Grid power transmission row and Oneida County Sewer District Interceptor that crosses the northern corner of the parcel. An abandoned farmstead is located in the Southeast corner of the property and an unnamed stream transects both parcels of land. A phase I and Phase II Environmental Site Assessment was conducted in 2013 and 2014 and it has been demonstrated that no environmental impacts are present in the area planned for this project.

The overall project goal is to provide engineering plans and specifications for a commercial tenant at the site, which takes advantage of the proximity to major transportation routes, excellent location relative to the urban center of Utica, and the presence of government agencies to provide entitlement funding, also situated in Utica, New York.

The Design teams overall goal is to create a site that is not only functional, but also aesthetically pleasing. This should be a site that is easy for maintenance, and one that will also be able to retain its value for several years without redesign or needless additions. Along with being functional, we want the site to be self-sustaining and reuse as many natural resources as possible.

The design is required to allow for ample parking for all employees, as well as easy access from the major transportation routes near the site, including Airport Road and Judd Road. The site must meet all ADA accessibility requirements, along with providing drop off zones for trucks, and allowing for vehicular traffic to flow freely without any requirement for operating in reverse except to depart parking spaces. Along with transportation standards we are to conform to New York State, Town of Whitesboro, and Oneida County building codes and regulations.

Background

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The design team overall goal is to create a site that is not only functional, but also aesthetically pleasing. This should be a site that is easy for maintenance and ground crews to maintain, and one that will also be able to retain its value for several years without redesign or needless additions. Along with being functional, it is a goal to be self-sustaining and reuse as many natural resources as possible.

Our design is required to allow for ample parking for all employees, as well as easy access from the major transportation routes near the site, including Airport Road and Judd Road. The site must meet all ADA accessibility requirements, along with providing drop off zones for trucks, and allowing for vehicular traffic to flow freely without any requirement for operating in reverse except to depart parking spaces. Along with transportation standards we are to conform to New York State, Town of Whitesboro, and Oneida County building codes and regulations.

Basis of Design

Preliminary Design

Local codes were evaluated, to determine the required setback from the roadways surrounding the site, along with wetland and woodland setbacks to narrow down the location for the building. The website that was used to check the Local and States setback codes was ecode360.com, for Whitestown NY the coding that was used for the site setbacks was "200-22.1 Lot frontage width 200 feet minimum Driveway spacing 400 feet minimum Corner lot access Corner subdivision access From minor road Corner lot driveway setback 150 feet (minimum) from Judd Road 150 feet (minimum) from Judd Road" (Figure A.1)

The site location was established in the position that best suites the building and surrounding parking lot. The southeast corner of the lot is where the site is located. This was selected because it provided more than enough room from the setbacks, and also was the flattest area of land which makes it easier to grade and make level. In addition, there was a pre-established roadway leading into the area, and the building was placed so that any sewer systems could be place away from the parking lots.

Next, the parking lot configuration was designed. The design goal was to provide a lot that could be functional and free flowing, as well as aesthetically pleasing. A total of 200 parking spots was decided on for the lot, including at least 6 spots for Handicap Parking as well as special parking locations for carpool and fuel efficient vehicles. The code for parking spots is as follows, Code 200-27 Schedule B - Off-Street Parking "Industrial or manufacturing use 1 for each employee on the maximum working shift". The requirement for Handicap parking spaces is stated on the Americans with Disabilities Act (ADA) website and states that based on the final square footage of our lot that the site needed 6 spaces for Handicap Parking along with Van accessible parking. Figure A.2

Design Phase

The Area to the West of the building open to accommodate a sewer system there as well as electric and water lines. The entrance to the parking lot is at the far West end of the site, so the traffic can have a steady flow to the back of the lot and to the East side of the parking lot. This also allows easy access for delivery trucks to make their stops out behind the building. Small Island are designed on the ends of the parking spots, so that greenery could be planted there for aesthetic reasons. All of the site grounds previously had a slight slope towards the North East. The elevation of the lot was raised a more gradual grade and also slope it towards the porous pavement that was placed on the exterior parking spots. The only problem with raising the lot, was that the elevation in the North West side of the lot had a ten foot drop when it reached the end of the Parking lot, to fill was required in this area to achieve a proper slope.

Final Design

After the completion of the parking lot, utilities and landscaping were added. Lighting poles around the parking lot so that the employees working night shifts could get around the lot easier after and before work. Shrubbery and small trees are provided around the building and in various islands around the parking lot to liven up the look of the lot.

